DEPARTMENT of HEALTH and HUMAN SERVICES

Fiscal Year

2016

Centers for Disease Control and Prevention

Justification of Estimates for Appropriation Committees

MESSAGE FROM THE DIRECTOR

I am pleased to present our budget request for fiscal year 2016. The Centers for Disease Control and Prevention is the nation's health protection agency. We work 24/7 to protect Americans from health and safety threats, both foreign and domestic. Our programs promote quality of life and prevent the leading causes of disease, injury, disability, and death.

We are committed to maximizing the impact of every dollar entrusted to our agency. This budget request maintains critical investments in FY 2015 and continues our efforts to increase public health capacity at local, state, national, and international levels. Our efforts align with the Administration's priorities and support Department of Health Human Services goals to help people live healthy, safe, and productive lives.

Our FY 2016 budget request includes increased investment to:

- Attack the growing problem of antibiotic resistance
- Increase global public health capacity and security
- Reduce deaths due to prescription painkiller abuse and overdose
- Sustain progress in ending the transmission of polio
- Continue to improve our disease fighting tools through advanced molecular detection

Performance improvement is a critical aspect of our work. We regularly measure how our programs serve the public and meet public health aims. As such, this request includes data for how we measure success for each of our programs.

I am confident this budget supports CDC's ability to carry out its critical mission and sustain key efforts to preserve and protect the lives of Americans.

Sincerely,

Thomas R. Frieden, MD, MPH

Director, Centers for Disease Control
and Prevention

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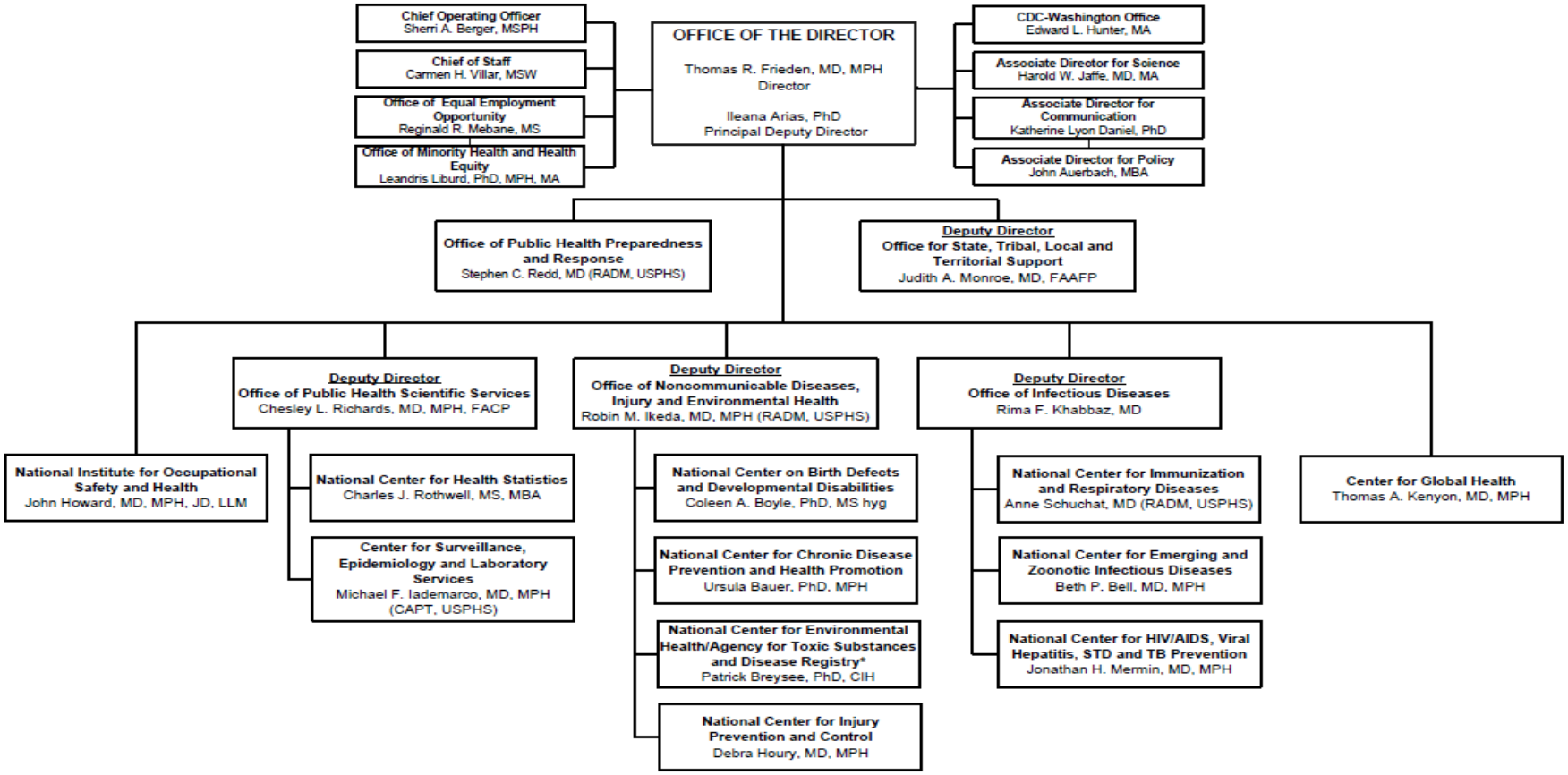
CDC ORGANIZATIONAL CHART

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)



*ATSDR is an OPDIV within DHHS but is managed by a common director's office.

(A) serving as an acting official

APPROVED 12/16/2013

Names Updated 1/6/2015

EXECUTIVE SUMMARY

INTRODUCTION AND MISSION

The Centers for Disease Control and Prevention is an operating division of the Department of Health and Human Services. Since 1946, CDC has worked to keep America safe from health, safety, and security threats, both foreign and domestic. Whether diseases start at home or abroad, are chronic or acute, curable or preventable, human error or deliberate attack, CDC fights disease, and supports communities and citizens to do the same. CDC is the nation's health protection agency — saving lives, protecting people from health threats, and saving money through prevention.

CDC's mission, simply put, is to keep Americans safe and healthy where they work, live and play. Our scientists and disease detectives work around the world to put proven prevention strategies to work, track diseases, research outbreaks, and respond to emergencies of all kinds.

CDC works with partners around the country and world to:

- Protect Americans from infectious diseases.
- Prevent the leading causes of disease, disability, and death.
- Ensure global disease protection.
- Keep Americans safe from environmental and work-related hazards.
- Protect Americans from natural and bioterrorism threats.
- Monitor health and ensuring laboratory excellence.

CDC works 24-7 to save lives and protect people from health threats

These aims form the foundation of CDC's mission and each CDC program contributes through comprehensive public health activities. CDC programs provide partners and Americans with the essential health information and tools they need to make protect and advance their health. CDC's highly trained staff provides critical national leadership to increase the health security of our nation.

CDC is committed to reducing the health and economic consequences of the leading causes of death and disability and helping to ensure our nation's citizens are safer, healthier people.

www.cdc.gov/budget

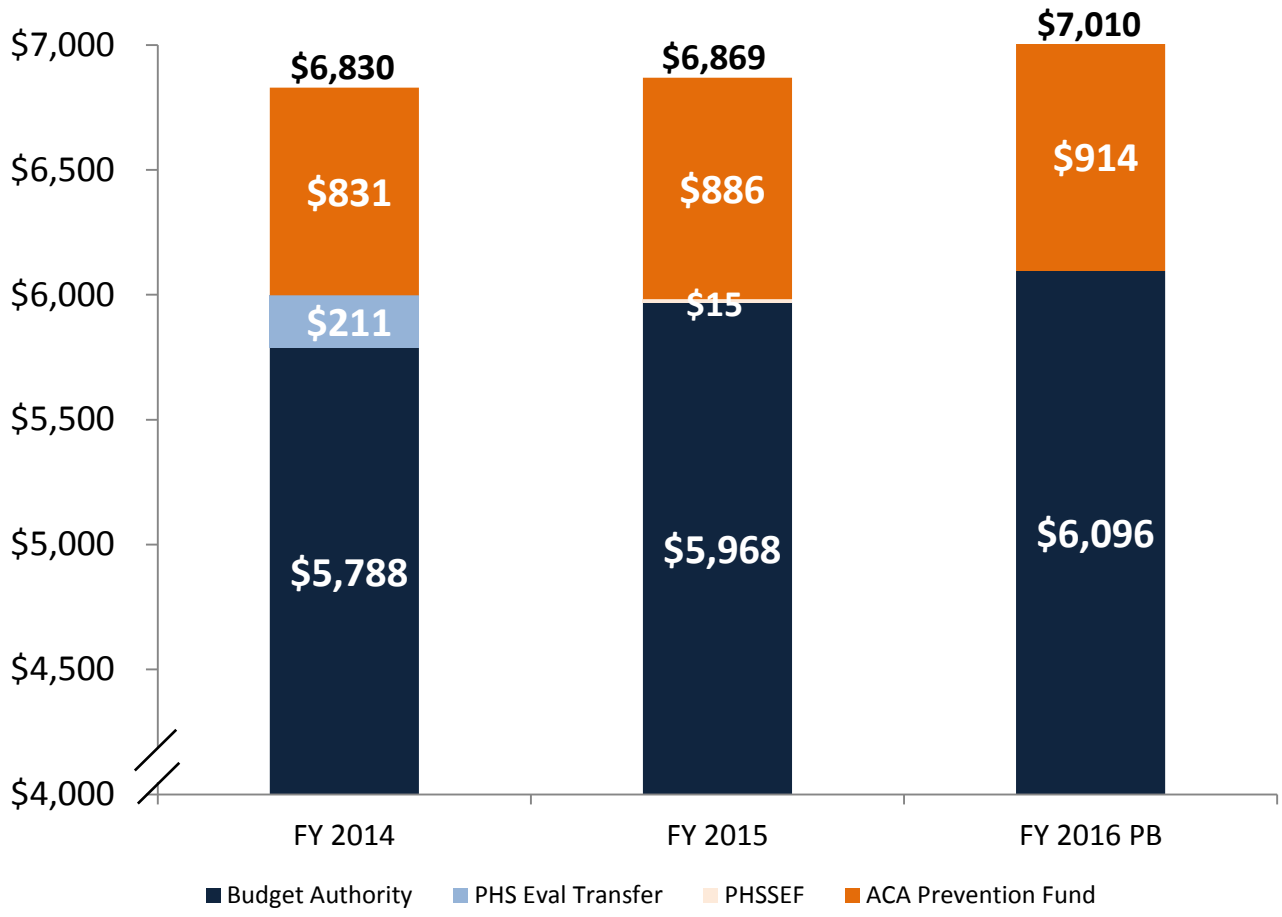
OVERVIEW OF THE BUDGET REQUEST

The fiscal year (FY) 2016 President's Budget request for CDC and ATSDR includes a total funding level of $11,519,365,000 in discretionary budget authority, mandatory funding, and the Affordable Care Act Prevention and Public Health Fund (PPHF). This is an overall increase of $249,953,000 above the FY 2015 Enacted level. The CDC program level request of $7,010,103,000 (excluding mandatory programs except the Prevention Fund) for FY 2016 is an increase of $110,685,000 compared to the FY 2015 Enacted level.

The FY 2016 budget request builds on priorities set forth in CDC's FY 2015 President's budget, proposing strategic new investments and identifying targeted reductions that will allow CDC to advance its core public health mission.

The funding amounts and programmatic approaches described below are changes compared to the FY 2015 Enacted level.

CDC Program Level FY 2014-FY 2016 President's Budget



Initiatives

Combatting Antibiotic-Resistant Bacteria (+$264.3 million)

Antibiotic resistance (AR)—when bacteria do not respond to the drugs designed to kill them—threatens to return us to the time when simple infections were often fatal. Today, AR annually causes more than two million illnesses and 23,000 deaths in the United States. Tomorrow, if this trend continues, could be even worse:

- A simple cut of the finger could lead to a life-threatening infection.

- Common surgical procedures, such as hip and knee replacements, would be far riskier because of the danger of infection.
- Dialysis patients could develop untreatable bloodstream infections.
- Life-saving treatments that suppress immune systems, such as chemotherapy and organ transplants, could potentially cause more harm than good.

The FY 2016 budget request includes an increase of $264.3 million to expand the nation's ability to fight AR, which is critical to address CDC's goal of protecting Americans from infectious diseases. Through the "Combating Antibiotic-Resistant Bacteria (CARB) National Strategy Initiative," CDC and HHS will build on existing critical investments to launch a department-wide response to all threats identified in CDC's Antibiotic Resistance Threat Report. The requested CARB initiative funding will allow full implementation of the surveillance, prevention, and stewardship activities outlined in the CARB National Strategy to reach the goals and prevention targets.

The FY 2016 budget request for CARB will invest in direct action to protect patients and communities. The budget request established "Protect" programs in all 50 states and 10 large cities to scale up effective evidence-based interventions to help reduce inappropriate inpatient antibiotic use by 20%. CDC will also double the number of Emerging Infections Program sites focused on improving national estimates related to healthcare and community AR infections. CDC and its partners will implement proven interventions that reduce the emergence and spread of AR pathogens and that improve appropriate antibiotic use. With this request, CDC will work to prevent current AR threats as well as invest in discovering new interventions—including those based on the microbiome—that could fundamentally alter how we understand and respond to antibiotic resistance and infectious diseases.

Drug Overdose Prevention (+$53.6 million)

Drug overdose deaths have skyrocketed in the past decade, largely because of prescription opioids. Prescription Drug Overdose (PDO) death rates quadrupled since 1999, claiming more than 16,000 lives in 2013 alone. Overdose deaths are only part of the problem—for each death involving prescription opioids, hundreds of people abuse or misuse these drugs. Emergency department visits for prescription painkiller abuse or misuse have doubled in the past few years to nearly half a million. Prescription opioid-related overdoses cost an estimated $20 billion in medical and work-loss costs each year. Stemming this epidemic is essential to CDC's goal of preventing the leading causes of disease, disability, and death. Equally important is the need to address the alarming rise in overdose death from illicit drugs such as heroin.

In FY 2016, CDC will build on state PDO prevention activities initiated in FY 2014–2015, including the PDO Prevention for States program to be launched in FY 2015. The FY 2016 budget request includes $5.6 million to support CDC's efforts to address the troubling rise in overdose deaths from illicit opioids such as heroin. An additional increase of $48.0 million above the $20.0 million provided in FY 2015 will enable CDC to expand the PDO Prevention for States program to fund all 50 states and Washington, D.C. for a truly comprehensive response to the national epidemic. CDC funding will scale up existing state Prescription Drug Monitoring Program (PDMP) programs to improve clinical decision-making and to inform implementation of insurance innovations and evaluation of state-level policies. In addition, the increased investment will support rigorous monitoring and evaluation, and improvements in data quality, with an emphasis on delivering real-time mortality surveillance. CDC also will scale up activities to improve patient safety by bringing together health systems and health departments to develop and track pain management and opioid prescribing quality measures in states with the highest prescribing rates.

Increases

FY 2016 HHS Budget Request

The HHS Budget Request includes $110 million within the Public Health and Social Services Emergency Fund to respond to unanticipated public health emergencies through support for domestic or international activities, such as state and local response and emergency staffing, hospital and containment facilities, infection control, laboratory equipment and supplies, data gathering and analysis, countermeasures, and other potential needs in such an incident. Within the total, there are resources for staff coordination and training, command and control, and other related logistical needs.

PROTECT AMERICANS FROM INFECTIOUS DISEASES

Vaccines for Children – Mandatory Funding (+$128.1 million)

The FY 2016 budget request includes an increase of $128.1 million in mandatory funding for the Vaccines for Children (VFC) Program. This estimate includes an increase for vaccine purchase contract costs and additional quality assurance and quality improvement site visits to VFC-enrolled providers. Taken together with CDC's discretionary immunization activities, these programs provide vaccines and the necessary program support to reach uninsured and underinsured populations. These resources will help support a comprehensive immunization program, based on strong science—from establishing and implementing vaccine policy to monitoring the effectiveness, impact, coverage, and safety of routinely recommended vaccines.

Viral Hepatitis (+$31.5 million)

An estimated 4.4 million Americans are living with chronic hepatitis; up to 60% do not know they are infected and even fewer are receiving appropriate care and treatment. Therapies are available that cure hepatitis C virus (HCV) infection in more than 90% of persons who complete treatment. The FY 2016 budget request includes an increase of $31.5 million for viral hepatitis prevention efforts to support CDC's goal of protecting Americans from infectious diseases. This increase is aligned with the HHS Action Plan for the Prevention, Care, and Treatment of Viral Hepatitis and will be used to stop transmission and prevent related illness and death by:

- Expanding adoption of CDC and U.S. Preventive Services Task Force recommendations for Hepatitis B Virus (HBV) and HCV testing and linkage to care
- Developing monitoring systems and prevention strategies to stop the emerging hepatitis C epidemic among young persons and others at risk
- Enhancing vaccination-based strategies to eliminate mother-to-child transmission of hepatitis B
- Strengthening state and local capacity to detect new infections, coordinate prevention activities, improve quality of care, and track progress toward prevention goals

This increase will also support partnerships between CDC and state and local health departments, universities, medical centers, community-based organizations, and others to achieve prevention priorities and set the nation on a course toward elimination of hepatitis B and hepatitis C.

National Healthcare Safety Network (+$14.0 million)

The FY 2016 budget request includes an increase of $14.0 million for the National Healthcare Safety Network (NHSN). This increase will support NHSN reporting in more than 17,000 healthcare facilities across the continuum of care, including acute care hospitals, dialysis facilities, nursing homes and ambulatory surgical centers. These funds will enable CDC to continue to provide data for national healthcare-associated infection

(HAI) elimination, and guide prevention to targeted healthcare facilities to improve HAI rates. CDC will also support NHSN infrastructure, critical user support, and innovative HAI prevention approaches.

Domestic HIV/AIDS Prevention and Research (+$12.6 million)

The FY 2016 budget request includes an increase of $12.6 million for domestic HIV/AIDS prevention. Part of this increase, $6.3 million, will support efforts to better link persons diagnosed and living with HIV to appropriate care, examine how new biomedical interventions are being used, and facilitate the development of state-wide plans for prevention, care and treatment, and other supportive services. The remaining $6.3 million will be used to improve HIV prevention activities targeted to school-aged youth. HIV/AIDS prevention investments will continue to align activities with the National HIV/AIDS Strategy and promote high-impact prevention that focuses resources on effective, scalable, and sustainable prevention strategies. CDC will also help health department grantees leverage changes in the healthcare system by increasing their capacity to seek reimbursement for HIV preventive services that may be covered under health insurance policies.

Food Safety (+$2.1 million)

The FY 2016 budget request includes an increase of $2.1 million for food safety. Approximately one-half of the requested increase will go to state and local health agencies to enhance vital national surveillance, outbreak detection and response, and food safety prevention efforts. This funding will help to address the critical unmet needs in the nation's food safety system, focusing on priority areas in food safety at CDC and at state health departments, all of which are required provisions of the Food Safety Modernization Act (FSMA).

PREVENT THE LEADING CAUSES OF DISEASE, DISABILTY, AND DEATH

National Violent Death Reporting System (NVDRS) (+$12.3 million)

The FY 2016 budget request includes an increase of $12.3 million to complete expansion of the National Violent Death Reporting System (NVDRS) to include all 50 states and Washington, D.C. This expansion, and increased average awards, will fund all states not previously funded. For the first time, prevention researchers, practitioners, and policymakers will be able to gauge the magnitude, trends, and characteristics of violent deaths at the national, state, and local levels.

Gun Violence Prevention Research (+$10.0 million)

The FY 2016 budget request includes $10.0 million for gun violence prevention research on the causes and prevention of gun violence, focusing on those questions with the greatest potential for public health impact. This activity is in alignment with Now is the Time, which calls for research on gun violence prevention to equip Americans with needed information about this public health issue. These activities will be informed by the research agenda Consensus Report developed by the Institute of Medicine and the National Research Council in 2013 (*Priorities for Research to Reduce the Threat of Firearm-Related Violence*).

Rape Prevention (+$5.6 million)

The FY 2016 budget request includes an increase of $5.6 million for CDC's Rape Prevention and Education (RPE) program to fund up to seven academic or research institutions to help CDC's rape prevention grantees collect data and scientifically evaluate their programs to build the evidence base in sexual violence prevention and scale up evidence-based efforts throughout the RPE program.

Concussion Surveillance (+$5.0 million)

The FY 2016 budget request includes $5.0 million to support CDC's efforts to establish and oversee a national surveillance system to accurately determine the incidence of sports- and recreation-related concussions among youth ages 5-21 years.

Arthritis and Other Chronic Diseases (+$3.5 million)

The FY 2016 budget request includes an increase of $3.5 million for Arthritis and other Chronic Diseases to address the burden of arthritis by increasing access to and availability of evidence-based interventions, conducting surveillance to measure burden, strengthening the science base of effective strategies, and promoting health equity.

PROTECT AMERICANS FROM NATURAL AND BIOTERRORISM THREATS

Strategic National Stockpile (+$36.7 million)

The FY 2016 budget request includes an increase of $36.7 million for the Strategic National Stockpile (SNS), which will allow CDC to replace expiring medical countermeasures and maintain the current preparedness levels. Funds will also support other preparedness related activities such as science and research, response and training operations, development and maintenance of state and local public health capabilities, and activities to strengthen collaboration between public health and healthcare.

CDC Preparedness and Response Capability (+$10.0 million)

The FY 2016 budget request includes an increase of $10.0 million for CDC's Preparedness and Response Capability for the CDC Select Agent Program. This program regulates the possession, use, and transfer of potentially dangerous biological agents and toxins in the United States. In FY 2016, the Select Agent Program will increase by 25% the number of annual inspections and surprise visits for high-risk facilities.

ENSURE GLOBAL DISEASE PROTECTION

Global Health Security Agenda (GHSA) (+$11.6 million)

As evidenced by the 2014 Ebola outbreak in West Africa, epidemic threats arise at unpredictable intervals and from unexpected sources. Because these threats do not recognize national borders, the health of people overseas directly affects America's safety and prosperity, with far-reaching implications for economic security, trade, the stability of foreign governments, and the well-being of U.S. citizens abroad and at home. Global health security efforts are necessary to CDC's goal to ensure global disease protection. If we are to save lives and protect U.S. health security, CDC must accelerate efforts to build the systems and workforce needed to better respond to and manage a range of disease threats.

The FY 2016 Budget request includes an increase of $11.6 million to expand the Global Health Security Agenda. Over the next five years, United States global health security partners commit to working with at least 30 partner countries (containing at least 4 billion people) to prevent, detect, and respond to infectious disease threats, whether naturally occurring or caused by accidental or intentional releases of dangerous pathogens.

Global Public Health Capacity Development (+$10.0 million)

The FY 2016 budget request also includes an increase of $10.0 million to support foundational global public health capacity building activities needed to address ongoing epidemics like HIV and tuberculosis, as well as vaccine-preventable diseases and emerging infectious disease threats. Foundational activities are supportive of the Global Health Security Agenda goals, and include working with ministries of health to develop a well-trained

public health workforce; providing technical assistance to develop disease detection and response systems; and collaborating with in-country partners to improve efficiency and coordination of country-level public health activities.

Polio Eradication (+$10.0 million)

The FY 2016 budget request includes an increase of $10.0 million for Polio Eradication. This increase in global immunization will scale-up CDC's response to ongoing and new polio outbreaks, including the world-wide transition from oral polio vaccine (OPV) to inactivated polio vaccine (IPV). Universal use of IPV is a key strategy necessary to achieve global polio eradication because while there are certain advantages to using OPV, it also carries with it a small risk of vaccine-acquired infections. This increase will allow for continued expansion of environmental surveillance for the detection of circulating polio viruses. Such environmental surveillance helps CDC and partners target programmatic efforts. This increase supports the United States' critical commitment to the Global Polio Eradication Initiative's Polio Endgame Strategic Plan 2013-2018.

KEEP AMERICANS SAFE FROM ENVIRONMENTAL AND WORK-RELATED HAZARDS

Public Health Workforce Capacity (+$15.2 million)

The FY 2016 budget request includes an increase of $15.2 million to support Public Health Workforce Capacity. With this proposed increase, CDC will support up to 667 fellows, which includes almost 80 additional fellows. CDC also will expand staff support for these fellows, enhance access to public health e-learning, increase opportunities for fellows to receive training in population health, and strengthen workforce development for public health surveillance. CDC will accomplish this effort by strategically placing EIS officers, Prevention Effectiveness fellows, Public Health Informatics fellows, Preventive Medicine residents/fellows, and Public Health Associates in high-need areas.

Climate Change (+$10.0 million)

The FY 2016 budget request includes an increase of $10.0 million for climate change. With the proposed increase, CDC will fund state and local health departments through the Building Resilience Against Climate Effects (BRACE) framework. This increase will allow CDC to fund an additional 30 grantees, bringing the total to 48 state and local awards.

MONITOR HEALTH AND ENSURE LABORATORY EXCELLENCE

Advancing CDC Laboratory Safety and Quality (+$20.0 million)

The FY 2016 budget request includes an increase of $10.0 million in Emerging and Zoonotic Infectious Diseases for laboratory capacity and safety. This will enable CDC to maintain its ability to respond to outbreaks, determine unexplained illnesses, support state and local diagnostics, improve pathogen identification of emerging and re-emerging diseases, and maintain the world's most advanced, state-of-the-art infectious disease and environmental public health laboratories. CDC is committed to implementing changes identified in recent laboratory safety reviews needed to protect staff and the CDC community and to safely execute critical diagnostic and research work essential to protecting Americans.

The request also includes an increase of $10.0 million in Public Health Scientific Services to enhance laboratory training, capacity, and oversight. In 2014, CDC carefully reviewed laboratory practices and policies to develop recommendations for improvements in laboratory safety and quality. In addition to enhancing general understanding, implementation, and enforcement of laboratory safety policies and quality systems across the agency's laboratories, training and education were identified for improvement. Examples of improved training

include post-doctoral fellowship training, dedicated hands-on CDC laboratory training space, and expanded distance learning.

Healthcare Surveillance/Health Statistics (+$12.0 million)

The FY 2016 budget request includes an increase of $12.0 million for Healthcare Surveillance/Health Statistics to track the effects of the Affordable Care Act on the healthcare system and on health outcomes. The National Health Interview Survey (NHIS) and the National Ambulatory Medical Care Survey (NAMCS) are the core data systems used to monitor changes in the healthcare system and the effects on the U.S. population.

Community Guide (+$8.0 million)

The FY 2016 budget request includes an increase of $8.0 million for the Community Guide to provide the necessary resources for CDC to meet its statutory responsibility to provide ongoing administrative, research, and technical support for the operations of the Community Preventive Services Task Force.

Foundational Capacities (+$8.0 million)

The FY 2016 budget request includes an increase of $8.0 million for Foundational Capacities to provide support to state and local health departments to strengthen public health practice within the changing environment. This funding will support health departments' efforts to address gaps in foundational capabilities that align with national accreditation standards and are essential to health departments' ability to protect and improve health. These efforts will be coordinated with and complement other CDC efforts, including coordinating agency-wide approach to billing capacity and other fiscal capabilities essential to health department function and success.

Health Statistics (+$5.0 million)

The FY 2016 budget request includes an increase of $5.0 million for Health Statistics to expand electronic death reporting to provide faster, better quality data on deaths of public health importance, including Prescription Drug Overdose deaths. These efforts to improve the timeliness of jurisdiction reporting and to modernize the national vital statistics infrastructure are contributing to developing a system capable of supporting near real-time surveillance.

Decreases and Eliminations

Preventive Health and Health Services Block Grants (-$160.0 million)

The FY 2016 Budget request eliminates the Preventive Health and Health Services Block Grant (PHHSBG). These activities may be more effectively and efficiently implemented through the State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health program, which provides resources to states to coordinate activities across categorical funding streams. When the PHHSBG was first authorized in 1981, there were minimal resources within CDC's budget allocated for categorical programs such as heart disease, diabetes, immunizations, and obesity, and many states did not receive funding from CDC to support prevention of chronic disease. However, since 1981, categorical programs at CDC have grown and can better address these public health threats. Elimination of this program provides an opportunity to find savings, while expanding core public health activities for other CDC priorities.

Racial and Ethnic Approaches to Community Health (-$50.9 million)

The FY 2016 Budget request eliminates funding for the Racial and Ethnic Approaches to Community Health (REACH) program. CDC is committed to ensuring lessons learned from the REACH Program will continue to be integrated into current and future community health models, such as the Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health, in order to reach populations that experience the greatest health disparities.

Immunization Program (-$50.3 million)

The FY 2016 budget request includes a decrease of $50.3 million for the Immunization Program. Health insurance expansion will further increase access to immunizations and is expected to decrease the number of uninsured and underinsured individuals in need of discretionary vaccine for routine immunizations. Since September 2010, new health plans are required to cover vaccines routinely recommended by the Advisory Committee on Immunization Practices (ACIP) without charging a deductible, copayment, or coinsurance. The Immunization Program request level includes up to $8,000,000 to support the capacity of public health departments to bill health insurers for immunization services.

Cancer Screenings (-$41.6 million)

The FY 2016 budget request reduces funding for Breast and Cervical Cancer activities by $37.8 million and the Colorectal Cancer screening activities by $3.8 million. As the Affordable Care Act (ACA) increases access to cancer screening services, which began in 2014, the public health need to provide these clinical services will diminish. The ACA will increase access to cancer screening services for many low-income, underserved women through expanded insurance coverage, similar to the populations covered by CDC's National Breast Cancer and National Cervical Cancer Early Detection Programs.

Occupational Safety and Health – Education and Research Centers (-$27.4 million)

The FY 2016 Budget request eliminates funding for Education and Research Centers (ERCs). Originally created almost 40 years ago, the ERC program has addressed the limited number of academic programs focusing on industrial hygiene, occupational health nursing, occupational medicine, and occupational safety. The ERCs' reach and impact have grown substantially across the nation since the program's inception, increasing awareness of the importance of coursework specializing in these areas. Although the budget does not include funding for the federal portion of these grants, CDC will continue to provide scientific and programmatic expertise to the ERCs as requested.

Occupational Safety and Health—Agriculture, Forestry, and Fishing (-$24.0 million)

The FY 2016 Budget request eliminates funding for the National Occupational Research Agenda (NORA) Agriculture, Forestry, and Fishing (AgFF) sector. Although this program has made positive contributions, given the relation to CDC's mission and the ability to have a national impact on improved outcomes, the AgFF has been proposed for elimination in a limited-resource environment.

Partnerships to Improve Community Health (-$20.0 million)

The FY 2016 budget request reduces Partnerships to Improve Community Health (PICH) activities by $20.0 million. FY 2016 represents the third and final year of the cooperative agreement. Much of the program implementation work will be drawing to a close; therefore, the program can begin to reduce activities. Remaining activities will likely focus on finalizing evaluations, documenting lessons learned, and exploring concrete ways communities can sustain successes under PICH.

Academic Centers for Public Health Preparedness (-$8.0 million)

The FY 2016 budget request reflects the elimination of the Academic Centers for Public Health Preparedness. CDC will continue to support research and training for public health preparedness through the public health preparedness and response research agenda. Eliminating funding for these centers allows CDC to prioritize funding for state and local health departments through the Public Health Emergency Preparedness (PHEP) cooperative agreement.

All Other State and Local Capacity (-$9.4 million)

Since 2002, PHEP cooperative agreements provided more than $9 billion to public health departments across the nation to upgrade their ability to effectively respond to a wide range of public health threats. This reduction would decrease CDC direct assistance to the grantees, including the Career Epidemiology Field Officer Program. CDC received significant funds through the Ebola Emergency funding in FY 2015 to expand domestic preparedness capabilities.

Prostate Cancer (-$13.2 million)

The FY 2016 budget request eliminates funding for prostate cancer activities. While the evidence on prostate cancer screening remains unclear, CDC has conducted extensive research on and developed materials to help doctors and other health providers better communicate with their patients about informed decision making related to prostate cancer screening and treatment. The proposed elimination will not impact CDC's ability to collect data on national prostate cancer incidence through the National Program of Cancer Registries, nor hinder the ability to share resources and lessons learned.

Environmental and Health Outcome Tracking (-$10.9 million)

The FY 2016 request includes a decrease of $10.9 million for Environmental and Health Outcome Tracking activities. The FY 2016 budget request maintains core tracking network activities and functions, but funding and assistance to states will be reduced. CDC will focus on capacity building for existing grantees to ensure that public health actions based on these data continue.

Workplace Wellness (-$10.0 million)

The FY 2016 Budget request eliminates Workplace Wellness activities. CDC will not require resources in FY 2016 to complete remaining activities and meet program goals. CDC will integrate lessons learned from these projects into on-going chronic disease prevention programs.

High Obesity Rate Counties (-$7.5 million)

The FY 2016 Budget request eliminates the High Obesity Rate Counties. This program was of limited duration, will complete their work in FY 2015, and is duplicative of other CDC efforts. CDC will integrate lessons learned from these projects into ongoing chronic disease prevention programs.

OVERVIEW OF PERFORMANCE

As the nation's prevention agency and a leader in improving health around the world, CDC is committed to reducing the leading causes of death, disability and injury. CDC staff work 24/7 around the world to save lives, protect people, and save money through prevention. To achieve maximum public health impact, CDC conducts research; implements strategic, evidence-based programs; and monitors results through ongoing data collection.

CDC's priorities form the core of its public health programs. These programs require the scientific excellence and leadership of our highly trained staff, who are dedicated to high standards of quality and ethical practice. The agency's priorities are:

- Strengthen public health and clinical linkages.
- Protect Americans from infectious diseases.
- Prevent the leading causes of disease, disability, and death.
- Ensure global disease protection.
- Keep Americans safe from environmental and work-related hazards.
- Protect Americans from natural and bioterrorism threats.
- Monitor health and ensuring laboratory excellence.

> *As we continue to expand and strengthen our collection and use of data, we gain greater knowledge and insight about the extent of our biggest health problems, which populations are most affected by them, and what we need to do to solve them. Information is power — and this power makes it possible for us to implement programs that fulfill our promise to keep Americans healthy and our nation strong.*
>
> *– Dr. Tom Frieden, Director, CDC*

Performance in each of these areas and in all of CDC's work is strengthened through the use of rigorous and ongoing performance metrics and program evaluation data to monitor program effectiveness and compare performance to established targets. The accomplishments described below highlight the importance of investing in public health, preventing disease, and protecting health.

Strengthen Public Health and Clinical Linkages and Protect Americans from Infectious Diseases

- Healthcare facilities monitor and prevent healthcare-associated infections (HAI) through CDC's National Healthcare Safety Network (NHSN). As of December 2014, over 14,000 healthcare facilities, including nearly all US hospitals, participate in NHSN for quality improvement. The number of acute care hospitals reporting multi-drug resistant organisms such as Clostridium difficile and Methicillin-resistant Staphylococcus aureus (MRSA) increased to 4,250 in FY 2014. Since 2008, the combination of CDC data systems, guidelines and programs has contributed to significant reductions of HAIs in healthcare settings, including:
    - 46% reduction in central line-associated bloodstream infections
    - 32% reduction in healthcare-associated invasive MRSA infections
    - 10% reduction in hospital-onset *Clostridium difficile* infections between 2011-2013
- CDC has invested in practical interventions to counter the threat of untreatable antibiotic resistant infections. In 2012, the Chicago Prevention Epicenter implemented a successful multicenter prevention approach that demonstrated up to 50% reductions in rates of carbapenem-resistant Enterobacteriaceae (CRE) infection and colonization (where CRE is present in the body but does not cause infection in long term acute care hospitals).
- A recent study conducted by the CDC and the National Institutes of Health, found that two new antibiotic regimens using existing drugs successfully treated gonorrhea infections in a clinical trial.

Researchers found 100% effectiveness of the injectable gentamicin/oral azithromycin combination in curing genital gonorrhea infections, and 99.5% effectiveness of the oral gemifloxacin/oral azithromycin combination. Both combinations cured 100% of infections of the throat and rectum.

Ensure Global Disease Protection

- Since CDC began applying advanced molecular detection (AMD) and enhanced epidemiology methods for nationwide surveillance of *Listeria* infections, CDC has been able to detect seven clusters of illness that would not have been detected by the older methods. The percentage of clusters for which a food source was found increased from 6% in FY 2013 to 28% in FY 2014.

- Over 30 countries have used a CDC-developed HIV Incidence assay for estimating recent infections since it was made commercially available in 2011. The Incidence assay is used to identify HIV transmission hot spots and is an important tool for targeted prevention.

- As a result of CDC's training and assistance to 21 PEPFAR countries with high TB/HIV burden, the percentage of TB patients who were tested for HIV and knew their HIV status significantly increased from 10% in 2005 to 80% in 2013. Additionally, the percentage of HIV-positive TB patients on antiretroviral therapy (ART) increased from 46% in 2011 to 69% in 2013.

- In FY 2014, CDC designed and completed a 22-month study of the effectiveness of insecticide-treated bednets (ITNs) to prevent malaria in an area of Malawi with intense insecticide resistance. The study, partially funded by the President's Malaria Initiative (PMI) showed parasite prevalence declined from 34% to 17% one year after ITNs were distributed to all households in the study area. The incidence of malaria infection was 70% lower among those who used ITNs compared to those who had not.

- In 2014, CDC international Field Epidemiology Training Program (FETP) residents directly supported Ebola preparedness in more than 25 countries. Early response efforts in Nigeria limited the outbreak to 20 laboratory confirmed and probable cases in one of the largest, most densely populated, urban environments in the world.

- Since 2002, CDC has led global efforts to promote the addition of micronutrients to flour through the Food Fortification Initiative. Currently, 80 countries have passed legislation to fortify wheat flour, 12 to fortify maize flour, and five to fortify rice. Africa has seen the most progress where the number of countries fortifying at least 75% of their industrially milled wheat flour with at least iron and folic acid increased from seven in 2011 to 19 in 2014.

Prevent the Leading Causes of Illness, Injury, Disability, and Death

- CDC's first-ever data-release on the use of e-cigarettes among youth garnered more than 1 billion media impressions. CDC staff examined poison control calls related to e-cigarettes for the first time, finding calls jumped from 0.3% in September, 2010 to 41.7% in February, 2014, more than half of which were for children under age five. Summary of this analysis was featured in "Notes from the Field" garnering over 200 million media impressions worth over $1.7 million dollars in publicity value.

- In 2013, CDC launched of the second Tips from Smokers campaign, with a new round of advertisements featuring additional health conditions and population groups. The second round of the campaign generated more than 150,000 additional calls to 1-800-QUIT-NOW quitlines. In 2014, CDC launched the third Tips campaign featuring health conditions such as premature birth, periodontal (gum) disease and tooth loss, and HIV complications. The first nine weeks of broadcast (February 3—April 6) of the third Tips campaign generated more than 250 news stories in print, broadcast, and online media, reaching an

audience of more than 276 million people and generating over $230,000 in advertising value. A second nine week broadcast of this third campaign was launched on July 7.

- CDC has expanded its HIV testing efforts, especially focusing on communities that have a high burden of HIV infection among African Americans and Latinos. CDC-supported health departments performed nearly 3 million HIV tests in 2013, with almost 15,000 people newly identified as HIV positive

- From July 1, 2012 to June 30, 2013 CDC's WISEWOMAN Program provided 47,121 cardiovascular disease (CVD) screenings. During this period the Program reported 9,920 cases of high blood pressure, 6,538 cases of high cholesterol, 4,009 cases of diabetes, and 6,898 smokers among participants.

- Broome County, NY, a CDC Sodium Reduction in Communities awardee, worked with school districts to decrease the amount of sodium in elementary school lunches from 1,500 mg in the 2010-2011 school-year to 1,000 mg in the 2013-2014 school year, an overall total reduction of 33%. Approximately 20,000 unduplicated students per year at 45 elementary schools were impacted in Broome County.

- As of 2014, through the National Diabetes Prevention Program, over 500 organizations in 50 states, the District of Columbia and two U.S. territories are providing the diabetes lifestyle change intervention and participating in the CDC recognition program. Over 5,800 lifestyle coaches have been trained and have delivered the lifestyle intervention to more than 19,000 people.

- CDC's Breast and Cervical Cancer Early Detection Program provided breast and cervical cancer screening to 533,406 low-income, uninsured and underinsured women in 2013, diagnosing 5,982 women with breast cancer and 4,052 women with invasive cervical cancer or high-grade premalignant lesions.

- CDC completed implementation of early case capture (ECC) for pediatric cancer patients in seven central cancer registries. As a result, 97% of ECC cases are now reported within nine months to the central cancer registry and are available for research use and incidence reporting at the state level, less than half the time it takes for routine reporting (18-24 months).

- CDC's Division of Reproductive Health supports state Perinatal Quality Collaboratives (PQC) to improve pregnancy outcomes for women and newborns using continuous quality improvement methods. Both Ohio and New York state PQCs expanded the number of maternity hospitals participating in their respective PQC (to 105 out of 107 in OH; and 98 out of 128 in 97 NY). New York state PQC decreased the number of scheduled deliveries <39 weeks gestation without medical indication from 17.9% in 2012 (baseline) to 3.3% in February 2014. The Ohio PQC also decreased the rate for scheduled deliveries <39 weeks gestation without medical indication from 10% in 2011 to 5.75% in March 2014.

- Early success indicators for CDC's Stopping Elderly Accidents, Deaths & Injuries—an innovative falls prevention pilot project in Colorado, New York and Oregon—show that in one medical group in New York, the number of risk assessments performed on patients ages 65 and older grew from 39% to 97% in five months.

- In FY 2014, Utah piloted a program in five of their CDC school health program target districts to add 25 minutes of physical activity during the school day for students (in addition to PE time). Evaluation results show increased academic achievement in participating schools, even given the small decrease in academic instruction time.

- CDC has invested in efforts to assist U.S. hospitals in becoming Baby-Friendly, a designation based on adherence to the evidence-based Ten Steps to Successful Breastfeeding. As of October 2014, CDC's

promotion of Baby-Friendly hospitals has contributed to 9.4% of all births (~375,000 babies) in the U.S. now occurring at Baby-Friendly hospitals (190 across 45 states), more than double the percent of births at Baby Friendly hospitals in 2010.

Keep Americans safe from environmental and work-related hazards, and natural and bioterrorism threats.

- The West Virginia Public Health Emergency Preparedness-funded Laboratory Response Network-C Level 2 laboratory conducted critical water supply testing in response to the Elk River methylcyclohexaneMethanol (MCHM) chemical spill in January 2014. It tested 581 samples in 30 days, mobilized its public health incident management system, and provided PHEP-funded epidemiology support to enhance public health security.

- In field evaluations of 46 facilities involved in the manufacture or use of engineered nanomaterials, CDC found in 2014 that 85% used containment-based engineering controls and 89% used some form of Personal Protective Equipment (PPE). Both are recommended by CDC's Occupational and Safety Health program, although engineering controls are strongly preferred.

- CDC distributed more than 1,035 radiation emergency tool kits in FY 2014 to public health professionals and clinicians. Recent evaluation research has found that the toolkits were valuable resources for planning (pre-event) and just-in-time (intra-event) use. Since the creation of the toolkits in 2005, CDC has provided more than 28,000 kits to professionals across the nation and internationally to assist clinicians in developing plans and response capacity for radiation emergencies.

Monitor health and ensuring laboratory excellence.

- In October 2014, CDC developed a new, faster lab test for Entervirus D68, increasing testing from 40 specimens daily to nearly 180 specimens daily and enabling results for new specimens to be reported within a few days of receiving them.

- One-half of CDC labs that received training to improve TB testing cut testing costs by 30% in 2013, with continued reductions in 2014. CDC decreased repeat-tests, lowered supply costs, or used less costly molecular testing procedures that enhanced testing techniques.

- Rapid lab testing and coordinated action by CDC and the Indiana State Health Department enabled confirmation and containment of the first MERS corona virus case in the United States within 48 hours of notification (May 2014).

Other CDC Accomplishments

- In FY 2014, electronic media reach of CDC Vital Signs was over 3.5 million potential viewings exceeding its target year-end goal of 2.9 million potential viewings. During FY 2014, CDC published over 240 MMWR Weekly and Serial publications and increased total electronic media reach by 23% since FY 2012 from 18.1 million to 22.2 million during FY 2014.

- CDC.gov continues to maintain high customer satisfaction scores as measured by the American Customer Satisfaction Index. As of December 2014, CDC.gov's satisfaction score of 83 ranks it as a "top performer" among 100 participating federal websites.

- CDC began a water use reduction study in FY 2014 for the Roybal Campus. Changes have already been implemented that project a reduction of 76 million gallons of water use per year. This is over 39% of the total water use for the Roybal Campus and will result in estimated savings of over $1,000,000 annually.

Agency Performance Planning and Management

CDC conducts continuous quality improvement through priority and goal setting, performance measurement, and program evaluation. In recent years, CDC has established a performance management system which is critical to continuous improvement.

CDC's Quarterly Program Review (QPR) is a systematic process for monitoring program priorities, measurable outcomes, strategies, and progress. The QPR process includes written materials and formal meetings between program staff and CDC senior leaders. CDC's QPR process yields useful information that enables leadership and management to make decisions regarding program design and allows for potential shifts in program strategy or resource allocation.

The CDC awards nearly 80 percent of its budget through grants and contracts to help accomplish its mission to promote health and quality of life by preventing and controlling disease, injury, and disability. Contracts procure goods and services used directly by the agency, and grants assist other health-related and research organizations that contribute to CDC's mission through health information dissemination, preparedness, prevention, research, and surveillance.

Many CDC grant announcements require applicants to assess the health burden of their region, state or community. CDC surveillance systems often serve as the basis for the data used in applications. Data systems at CDC provide data at various levels depending upon data collection methodology, including national, state, regional and county level data. While CDC strives to have more health burden data available at the county level, the methodology can be costly and as such, currently a subset of health burden data is available across on the 3100 counties in the United States. CDC has recently re-launched the Community Health Status Indicators website (http://wwwn.cdc.gov/CommunityHealth) where community level health data can be accessed easily by grantees, health departments and the general public to be used in grant applications as well as for planning purposes. Users can examine health data for their county and compare their county with comparable counties around the nation matched on a variety of demographic and predictive factors (i.e., population, educational attainment, housing factors, income, poverty, urbanicity).

CDC considers all data submitted in grant applications during the application review process. Actual award amount may be based off of grantee burden levels in some CDC grants (i.e., higher burden=more money). Once funding is awarded, data submitted by a grantee is used to monitor finances and grantee performance throughout the life of the award period.

Agency Use of Evaluation and Evidence

CDC fully supports the use of evidence and evaluation. CDC supports scientific advances and the use of evidence and data to support program design and budget decisions. CDC continues to focus on the development and use of evidence to enhance all aspects of the Agency's mission.

CDC builds evidence regarding effective programs through its own evaluation, through systematic reviews of existing literature (Community Guide), through the use of rigorous methods to develop vaccination recommendations (ACIP's GRADE), and by finding innovative ways to make data accessible for public health decision making (Data Warehouse, Sortable Stats, Prevention Status Reports).

CDC promotes evidence-based prevention interventions in our grant announcements, shares best practices through websites, searchable databases and other means, and is exploring additional strategies for promoting the use of evidence in practice such as performance-based grant making and recognition awards (Million Hearts).

CDC is increasing its internal capacity to oversee and conduct program evaluation by expanding and enhancing the evaluation training available to employees through CDC University, developing an evaluation fellowship to

expand program evaluation expertise, recruiting external subject matter planning and evaluation experts to "coach" CDC programs on related challenges, and by putting standard program evaluation guidelines and recommendations into place. CDC has also adapted an IOM framework to measure the impact of CDC science and gauge its scientific influence on subsequent events and actions that lead to health improvements.

Alignment to Administration Priorities and Initiatives

CDC is committed to supporting the national priorities set by the Administration. For example, CDC has supported the implementation of the President's National HIV/AIDS Strategy (NHAS) goals of reducing the number of new HIV infections, increasing access to care for people living with HIV, and reducing HIV-related health disparities through domestic HIV programs.

CDC is a key implementer of the Global Health Security (GHS) Agenda because of the agency's unmatched technical expertise, existing country platforms, and strong government-to-government relationships—unique assets critical for successful implementation. Through full implementation of the GHS Agenda, CDC can further accelerate and expand efforts with partner countries and other partners to accelerate progress toward a world safe and secure from infectious disease threats.

CDC is providing support for full implementation of its surveillance, prevention, and stewardship activities to advance the goals of the White House's National Strategy for Combating Antibiotic-Resistant Bacteria (CARB). Through its "detect and protect" strategy, CDC is building a more robust network to "detect" our most serious AR threats and "protect" patients and communities.

In alignment with the First Lady's Let's Move Initiative to combat the childhood obesity epidemic and the President's Task Force on Childhood Obesity, CDC funds school health programs to improve food and beverage options and increase physical activity.

In support of The President's plan to prevent gun violence, *Now is the Time*[1], CDC asked the Institute of Medicine (IOM), in collaboration with the National Research Council (NRC), to convene a committee that would follow the IOM/NRC process to engage diverse stakeholders and identify the most pressing research questions on gun violence, including those questions with the greatest potential public health impact. CDC will conduct research into the causes and prevention of gun violence based on the committee's recommendations. CDC will continue to support analyses of surveillance and other data to document the public health burden of firearm injuries in the US. A recent Morbidity and Mortality Weekly Report examined rates of firearm homicides and firearm suicides in the Nation's 50 largest Metropolitan Statistical Areas.

CDC is committed to HHS Sustainability Efforts in construction of new facilities designed and built to meet Guiding Principles. Moreover, Guiding Principle compliance is embedded in Repairs & Improvements projects for existing facilities across CDC.

In support of the National Prevention, Public Health, and Health Promotion Council (National Prevention Council) chaired by the Surgeon General, CDC helped lead the implementation of the National Prevention Strategy by providing technical and content expertise, participating in stakeholder engagement, and assisting in the development and review of recommendations and actions.

CDC is a co-founding partner of The Million Hearts initiative, a national public-private initiative designed to prevent one million heart attacks and strokes by January 2017. CDC provides leadership and communications support for the initiative, which includes a number of complementing public and private strategies

CDC also provides substantial support to Healthy People (HP) 2020. CDC is committed to the success of the Healthy People process and to assisting in prioritizing and achieving HP 2020 goals and objectives, as well as

[1] http://www.whitehouse.gov/issues/preventing-gun-violence

supplying the bulk of the data used to measure progress. Through engagement in the development process and CDC's integration of HP 2020 measures into our strategic and operational planning efforts, CDC is strategically aligned with and making major contributions to the health objectives for the nation.

CDC actively supports the HHS Action Plan to Reduce Racial and Ethnic Health Disparities by helping to eliminate persistent health disparities in the leading causes of death and disability through effective and scalable public health interventions.

CDC leads key activities for 19 measures in the FY 2016 HHS performance plan. These include:

- improving health care quality and patient safety
- strengthening public health surveillance and epidemiology
- enhancing support of the public health infrastructure at the state, tribal, local, and territorial levels
- addressing obesity through childhood nutrition, food labeling, and physical fitness
- protecting Americans in public health emergencies
- increasing impact in global health
- preventing and controlling tobacco use
- enhancing food safety
- mitigating and preventing infectious and chronic diseases

Building on CDC's contributions to prior Agency Priority Goals, CDC plays a significant role in three FY 2014-2015 Priority Goals, contributing our expertise in surveillance and promotion of evidence-based practices in accomplishing these goals:

- preventing tobacco consumption
- reducing healthcare associated infections
- improving food safety in the United States

ALL PURPOSE TABLE

(dollars in thousands)	FY 2014 Final CA[1]	FY 2015 Enacted[2]	FY 2016 President's Budget	FY16 Request +/- FY15PB
Immunization and Respiratory Diseases	**$782,973**	**$798,405**	**$748,066**	**-$50,339**
Budget Authority	$609,809	$573,105	$537,766	-$35,339
PHS Evaluation Transfer	$12,864	$0	$0	$0
ACA/PPHF	$160,300	$210,300	$210,300	$0
PHSSEF	N/A	$15,000	$0	-$15,000
HIV/AIDS, Viral Hepatitis, STI and TB Prevention	**$1,117,609**	**$1,117,609**	**$1,161,747**	**$44,138**
Emerging and Zoonotic Infectious Diseases	**$389,655**	**$404,990**	**$699,267**	**$294,277**
Budget Authority	$337,655	$352,990	$644,687	$291,697
ACA/PPHF	$52,000	$52,000	$54,580	$2,580
Chronic Disease Prevention and Health Promotion	**$1,186,001**	**$1,198,220**	**$1,058,058**	**-$140,162**
Budget Authority	$740,001	$747,220	$577,854	-$169,366
ACA/PPHF	$446,000	$451,000	$480,204	$29,204
Birth Defects, Developmental Disabilities, Disability and Health	**$129,190**	**$131,781**	**$131,781**	**$0**
Budget Authority[3]	$129,190	$131,781	$63,815	-$67,966
ACA/PPHF	$0	$0	$67,966	$67,966
Environmental Health	**$179,404**	**$179,404**	**$178,500**	**-$904**
Budget Authority	$166,404	$166,404	$141,500	-$24,904
ACA/PPHF	$13,000	$13,000	$37,000	$24,000
Injury Prevention and Control	**$150,447**	**$170,447**	**$256,977**	**$86,530**
Public Health Scientific Services	**$480,989**	**$481,061**	**$538,809**	**$57,748**
Budget Authority	$395,298	$481,061	$474,559	-$6,502
PHS Evaluation Transfer	$85,691	$0	$0	$0
ACA/PPHF	$0	$0	$64,250	$64,250
Occupational Safety and Health	**$332,363**	**$334,863**	**$283,418**	**-$51,445**
Budget Authority	$220,363	$334,863	$283,418	-$51,445
PHS Evaluation Transfer	$112,000	$0	$0	$0
Global Health[2]	**$415,745**	**$446,517**	**$448,092**	**$1,575**
Public Health Preparedness and Response	**$1,367,551**	**$1,352,551**	**$1,381,818**	**$29,267**
Cross-Cutting Activities and Program Support	**$274,649**	**$273,570**	**$113,570**	**-$160,000**
Budget Authority[4]	$114,649	$113,570	$113,570	$0
ACA/PPHF	$160,000	$160,000	$0	-$160,000
Buildings and Facilities	**$23,772**	**$10,000**	**$10,000**	**$0**
Total CDC – Budget Authority (BA)	**$5,788,493**	**$5,998,118**	**$6,095,803**	**$97,685**
Total CDC – BA and PHS Eval Transfers	**$5,999,048**	**$5,998,118**	**$6,095,803**	**$97,685**
Program Level - BA, PHS Eval, PHSSEF & PPHF	**$6,830,348**	**$6,899,418**	**$7,010,103**	**$110,685**
Agency for Toxic Substances and Disease Registry	$74,691	$74,691	$74,691	$0
ATSDR Affordable Care Act (Mandatory)[5]	$0	$18,540	$0	-$20,000
Affordable Care Act- Prevention and Public Health Fund Transfer	$831,300	$886,300	$914,300	$28,000
Vaccines for Children[6]	$3,556,731	$3,981,250	$4,109,307	$128,057
Energy Employees Occupational Illness Compensation Program Act (EEOICPA)	$49,933	$50,099	$55,358	$5,259
World Trade Center (Mandatory)[7,8]	$235,740	$243,350	$267,680	$24,330
PHS Evaluation Transfers	$210,555	$0	$0	$0
Public Health and Social Services Emergency Fund (PHSSEF)	$0	$15,000	$0	-$15,000
Other User Fees	$2,226	$2,064	$2,226	$162
Total CDC/ATSDR	**$10,749,669**	**$11,269,412**	**$11,519,365**	**$249,953**

NOTE: Numbers may not add due to rounding.

[1] FY 2014 level is comparable to FY 2015 to reflect the realignment of $2.367 million from Emerging and Zoonotic Infectious Diseases to Global Health.

[2] FY 2015 Enacted includes $30 million for CR Ebola Funding (PL 113-164) but does not reflect $1.771 billion in one-time emergency funding appropriated in FY 2015 for the U.S. Government response to contain, treat, and prevent the spread of Ebola.

[3] The FY 2014 Health and Development with Disabilities line is comparably adjusted to reflect the transfer of $2.81 million to ACL.

[4] The FY 2014 Crosscutting Activities and Program Support account is comparably adjusted to reflect the transfer of Buildings and Facilities to a separate account.

[5] FY 2015 ATSDR ACA resources are available through FY 2020.

[6] The FY 2014 amount reflects obligations while FY 2015 and FY 2016 are estimates that reflect anticipated transfers from Medicaid.

[7] The FY 2014 represents actual Federal share obligations only. FY 2015 and FY 2016 amounts reflect the Federal share estimated obligations only. NYC share is not included.

[8] The FY 2016 President's Budget Appendix includes erroneous data for the World Trade Center Health Program for FY 2015 and FY 2016; the above estimates are accurate.

PREVENTION AND PUBLIC HEALTH FUND

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget
Improving Public Health Detection and Response	$52.000	$52.000	$114.830
Preventing the Leading Causes of Death and Disabilities	$779.300	$834.300	$746.470
Using Information for Action	$0.000	$0.000	$53.000
Total	**$831.300**	**$886.300**	**$914.300**

Summary

CDC's FY 2016 request from the Affordable Care Act Prevention and Public Health Fund (PPHF) is a total of **$914,300,000.** This request is an overall increase of $28,000,000 above the FY 2015 Enacted level. Strategic use of PPHF dollars helps our nation achieve the shared goals of improving the health of Americans and slowing growth in public and private healthcare costs.

CDC's strategic approach to investing PPHF dollars is to ensure every dollar spent attains the greatest possible impact. To achieve this end, some PPHF program dollars will be invested jointly with programs and activities also supported through CDC's regular appropriation to maximize the benefit of limited resources. In FY 2016, PPHF will support programs and activities throughout CDC that:

- Improve public health agencies' capacities to detect and respond to health threats
- Prevent the leading causes of death
- Improve the collection, analysis, and sharing of health information to inform implementation of prevention programs

Improving Public Health Detection and Response

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget
Epidemiology and Laboratory Capacity Program (ELC)	$40.000	$40.000	$40.000
Public Health Workforce	$0.000	$0.000	$36.250
Environmental and Health Outcome Tracking Network	$0.000	$0.000	$24.000
Healthcare-Associated Infections	$12.000	$12.000	$14.580
Improving Public Health Detection and Response Total	**$52.000**	**$52.000**	**$114.830**

Budget Request

CDC's FY 2016 request of **$114,830,000** from PPHF supports investments that strengthen federal, state, local, tribal, and territorial public health threat detection and response capacity, our nation's first line of defense against health threats. Investments will:

- Improve efficiencies and performance in federal, state, and local public health laboratories
- Support surveillance and health tracking systems
- Fund training that increases state and local public health capacity and develops the next generation of public health leaders

CDC plans to support enhanced personnel capacity (e.g., lab, epidemiological, investigative, and support staff) to better protect Americans in the ten states and large U.S. cities where pan-resistant gonorrhea is expected to emerge.

Through investments made by ACA/PPHF funds, grantees of the Epidemiology and Laboratory Capacity (ELC) and Emerging Infections Program (EIP) cooperative agreements are strengthening and integrating their capacity to detect and respond to infectious disease and other public health threats. Efforts include increasing the use of electronic laboratory reporting, improving their information technology infrastructures, improving program coordination, and expanding their training activities.

ELC/EIP aims to enhance epidemiology capacity by strengthening health departments' ability to shift resources and direct epidemiology personnel to areas of need. Investments will be used to strengthen EIP network infrastructure in states and their partners to ensure successful coordination and implementation of surveillance and studies; modernize laboratory capacity at public health laboratories; and strengthen current health information capability for public health agencies. Overall, enhancing the electronic exchange of information between public health agencies and clinical care entities will be a critical contribution to health reform in the United States, and will allow health departments to engage effectively in an era of health information exchange with evolving electronic health records.

PPHF investments also will support the Environmental and Health Outcome Tracking Network in tracking and reporting environmental hazards and related health problems to inform decisions on where to focus resources and interventions. Investing in these areas will bolster our nation’s public health workforce and improve efficiencies and performance of federal, state, and local public health laboratories across the country.

CDC supports the critical public health role of state health departments to implement and ensure adherence to HAI prevention practices. Investing in this collaborative effort allows states to build on the success of investments in preventing HAIs and ensure improved leadership and coordination of HAI activities by state health departments. Funding will also help states maintain and evaluate sustainable HAI programs that work across the healthcare system to maximize HAI prevention efforts through collaboration with and coordination of regional and national public health and healthcare partners.

CDC strengthens the public health workforce through programs that recruit new talent through on-the-job fellowships, increase access to high quality training (including e-learning), and work with academia to improve education about population health. CDC will continue to focus on high-priority activities like the Epidemic Intelligence Service (EIS) and Public Health Associate Program (PHAP), and will strengthen informatics and population health training, particularly at the intersection of public health and healthcare. CDC will increase the number of fellows in these and other programs (many of which place fellows at state and local health departments) and will provide greater support for public health e-learning, which benefits state and local partners.

Preventing the Leading Causes of Death and Disabilities

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget
Cancer Prevention and Control	$104.000	$104.000	$179.204
Immunization	$160.300	$210.300	$210.300
Tobacco	$105.000	$110.000	$110.000
Diabetes	$73.000	$73.000	$73.000
Heart Disease and Stroke	$73.000	$73.000	$73.000
Birth Defects	$0.000	$0.000	$67.966
Lead Prevention	$13.000	$13.000	$13.000
Million Hearts®	$4.000	$4.000	$4.000
Nutrition/Physical Activity	$35.000	$35.000	$4.000
Hospitals Promoting Breastfeeding	$8.000	$8.000	$8.000
Racial Ethnic Approaches to Community Health (REACH)	$30.000	$30.000	$0.000
Let's Move/National Early Care Collaborative	$4.000	$4.000	$4.000
Workplace Wellness	$10.000	$10.000	$0.000
Preventive Health and Health Services Block Grant	$160.000	$160.000	$0.000
Preventing the Leading Causes of Death Total	**$779.300**	**$834.300**	**$746.470**

Budget Request

CDC's FY 2016 request of **$746,470,000** from PPHF supports cancer prevention and control, tobacco use prevention and cessation, immunization, and other activities that address the leading causes of death and illness. PPHF will be used to address certain risk factors such as poor nutrition, lack of physical activity, and lack of access to vital community and clinical preventive services for diabetes, heart disease, and related chronic diseases, including behavioral interventions, disease screening, and treatment. By targeting these risk factors, CDC seeks to prevent heart attacks, strokes, cancers, and other chronic diseases, which are responsible for 70% of deaths and 75% of U.S. healthcare costs.

PPHF will be used to address birth defects and developmental disabilities. This investment will increase the evidence base for the risk of birth defects associated with maternal health conditions and their treatments during pregnancy. CDC will use funds to reduce disability-associated health disparities and promote the health and well-being of people with disabilities.

In FY 2016, the Immunization Program will remain responsible for the essential public health workforce and systems at the national, state, and local levels that protect all Americans, regardless of health insurance status, from disability and death from vaccine-preventable diseases. CDC will conduct scientific studies that provide the evidence base for national immunization policy, including burden of disease, vaccine effectiveness and safety, economic analyses, and program feasibility. The Immunization Program will continue to be responsible for providing federally purchased vaccines to protect uninsured Americans from preventable diseases and will provide funding to immunization awardees and support scientific and programmatic expertise to further develop, enhance, and maintain Immunization Information Systems.

The focus on reducing cardiovascular disease and other leading causes of death is specifically supported by the diabetes and heart disease programs, cancer prevention and control programs, Million Hearts® initiative, and tobacco programs CDC provides funding to health departments and tribal organizations to assess cardiovascular risk, and provide intervention services to those in need. Preventing tobacco use, which accounts for over 440,000 deaths each year, not only saves lives but also reduces direct health care costs and improves productivity. In FY 2016, CDC will continue to implement strategic, comprehensive communications efforts that will result in significant reductions in initiation and prevalence of tobacco use.

Using Information for Action

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget
Prevention Research Centers	$0.000	$0.000	$25.000
Healthcare Statistics/Healthcare Surveillance	$0.000	$0.000	$12.000
Community Guide	$0.000	$0.000	$8.000
Foundational Capacities	$0.000	$0.000	$8.000
Using Information for Action Total	**$0.000**	**$0.000**	**$53.000**

Budget Request

CDC's FY 2016 request of **$53,000,000** from PPHF supports investments in systems for gathering, analyzing, and communicating health data to inform implementation of effective prevention practices. CDC will use PPHF resources to maintain and expand data collection on our nation's health, wellness, and disease burden, with particular emphasis on certain populations at increased risk of illness. The request also includes funds to support state and local health departments through a new cooperative agreement program to address gaps in foundational capabilities, aligning with national accreditation standards, which are essential to health departments' ability to protect and improve health. Grantees will strengthen the essential skills and capacities that support all programs and activities, including enhancing health departments' business capacity. These efforts will be coordinated with and complement other CDC efforts, including coordinating an agency-wide look at billing capacity and other fiscal capabilities essential to health department function and success.

Expanded collection and analysis of data, including local-level data, will improve the collective understanding of the nation's health status. Decision makers and practitioners can use the public health information to address risk factors for poor health, implement best practices to advance public health, and improve health outcomes. For instance, surveys that pose questions about health insurance coverage, access to care, and burden of care can track the impact of Affordable Care Act implementation on healthcare access and utilization of services to inform future decisions on implementation activities. Similarly, data collection on fitness and dietary behavior can better inform obesity and chronic disease prevention activities currently underway.

BUDGET EXHIBITS

APPROPRIATIONS LANGUAGE

Comparison to FY 2015 Continuing Appropriations Act

Centers For Disease Control and Prevention

Immunization and Respiratory Diseases

For carrying out titles II, III, XVII, and XXI, and section 2821 of the PHS Act, titles II and IV of the Immigration and Nationality Act, and section 501 of the Refugee Education Assistance Act, with respect to immunization and respiratory diseases, **[**$573,105,000**]***$537,766,000*.

HIV/AIDS, Viral Hepatitis, Sexually Transmitted Diseases, and Tuberculosis Prevention

For carrying out titles II, III, XVII, and XXIII of the PHS Act with respect to HIV/AIDS, viral hepatitis, sexually transmitted diseases, and tuberculosis prevention, **[**$1,117,609,000**]***$1,161,747,000*.

Emerging and Zoonotic Infectious Diseases

For carrying out titles II, III, and XVII, and section 2821 of the PHS Act, titles II and IV of the Immigration and Nationality Act, and section 501 of the Refugee Education Assistance Act, with respect to emerging and zoonotic infectious diseases, **[**$352,990,000**]***$644,687,000*: *Provided*, That of the **[**funds available under this heading, $30,000,000 shall be for the Advanced Molecular Detection initiative:**]***amounts available to pay for the transportation, medical care, treatment, and other related costs of persons quarantined or isolated under federal or state quarantine law, up to $1,000,000 shall remain available until expended*.

Chronic Disease Prevention and Health Promotion

For carrying out titles II, III, XI, XV, XVII, and XIX of the PHS Act with respect to chronic disease prevention and health promotion,**[**$747,220,000**]***$577,854,000*: *Provided*, That funds appropriated under this account may be available for making grants under section 1509 of the PHS Act for not less than 21 States, tribes, or tribal organizations: **[***Provided further*, That of the funds available under this heading, $7,500,000 shall be available to continue and expand community specific extension and outreach programs to combat obesity in counties with the highest levels of obesity: *Provided further*, That of the funds provided under this heading, $80,000,000 shall be available for a program consisting of three-year grants of no less than $100,000 per year to non-governmental entities, local public health offices, school districts, local housing authorities, local transportation authorities or Indian tribes to implement evidence-based chronic disease prevention strategies: *Provided further*, That applicants for grants described in the previous proviso shall determine the population to be served and shall agree to work in collaboration with multi-sector partners:**]** *Provided further*, That the proportional funding requirements under section 1503(a) of the PHS Act shall not apply to funds made available under this heading.

Birth Defects, Developmental Disabilities, Disabilities and Health

For carrying out titles II, III, XI, and XVII of the PHS Act with respect to birth defects, developmental disabilities, disabilities and health, **[**$131,781,000**]***$63,815,000*.

Public Health Scientific Services

For carrying out titles II, III, and XVII of the PHS Act with respect to health statistics, surveillance, health informatics, and workforce development, **[**$481,061,000**]** *$474,559,000*.

Environmental Health

For carrying out titles II, III, and XVII of the PHS Act with respect to environmental health, **[**$166,404,000**]***$141,500,000*.

Injury Prevention and Control

For carrying out titles II, III, and XVII of the PHS Act with respect to injury prevention and control, **[**$170,447,000**]***$256,977,000*.**[***Provided*, That of the funds provided under this heading, $20,000,000 shall be available for an evidence-based prescription drug overdose prevention program:**]**

National Institute for Occupational Safety and Health

For carrying out titles II, III, and XVII of the PHS Act, sections 101, 102, 103, 201, 202, 203, 301, and 501 of the Federal Mine Safety and Health Act, section 13 of the Mine Improvement and New Emergency Response Act, and sections 20, 21, and 22 of the Occupational Safety and Health Act, with respect to occupational safety and health, **[**$334,863,000**]***$283,418,000*.

Energy Employees Occupational Illness Compensation Program

For necessary expenses to administer the Energy Employees Occupational Illness Compensation Program Act, $55,358,000, to remain available until expended: *Provided*, That this amount shall be available consistent with the provision regarding administrative expenses in section 151(b) of division B, title I of Public Law 106–554.

Global Health

For carrying out titles II, III, and XVII of the PHS Act with respect to global health, **[**$416,517,000**]***$448,092,000*, of which $128,421,000 for international HIV/AIDS shall remain available through September 30, **[**2016**]** *2017*: *Provided*, That funds may be used for purchase and insurance of official motor vehicles in foreign countries**[**: *Provided further*, That these funds are in addition to amounts provided in Section 137 of Public Law 113-164**]**.

Public Health Preparedness and Response

For carrying out titles II, III, and XVII of the PHS Act with respect to public health preparedness and response, and for expenses necessary to support activities related to countering potential biological, nuclear, radiological, and chemical threats to civilian populations, **[**$1,352,551,000**]**$*1,381,818,000* of which **[**$534,343,000**]***$571,043,000* shall remain available until expended for the Strategic National Stockpile: *Provided*, That **[**in the event the Director of the CDC activates the Emergency Operations Center, **]**the Director of the Centers for Disease Control and Prevention (CDC), or the Administrator of the Agency for Toxic Substances and Disease Registry may detail **[**CDC**]** staff without reimbursement for up to **[**45**]***180* days to support **[**the work**]** *an activation* of the CDC Emergency Operations Center**[**, so long as the Director provides a notice to the Committees on Appropriations of the House of Representatives and the Senate within 15 days of the use of this authority and a full report within 30 days after use of this authority which includes the number of staff and funding level broken down by the originating center and number of days detailed: *Provided further*, That funds appropriated under this heading may be used to support a contract for the operation and maintenance of an aircraft in direct support of activities throughout CDC to ensure the agency is prepared to address public health preparedness emergencies**]**.

Buildings and Facilities

For **[**acquisition of real property**]**equipment, construction, and renovation of facilities, $10,000,000, **[**which shall**]***to* remain available until September 30, **[**2019**]***2020*: *Provided*, That funds **[**previously set-aside by CDC for repair and upgrade of the Lake Lynn Experimental Mine and Laboratory shall be used to acquire a replacement

mine safety research facility.**]** *made available by prior appropriations Acts for CDC for construction and renovation of facilities may also be used, in fiscal year 2016, for the construction of a replacement freezer building in the Fort Collins, Colorado area.*

CDC-Wide Activities and Program Support
(Including Transfer of Funds)

For carrying out titles II, III, XVII and XIX, and section 2821 of the PHS Act and for cross-cutting activities and program support for activities funded in other appropriations included in this Act for the Centers for Disease Control and Prevention, $113,570,000: *Provided*, That paragraphs (1) through (3) of subsection (b) of section 2821 of the PHS Act shall not apply to funds appropriated under this heading and in all other accounts of the CDC: *Provided further, That funds appropriated under this heading and in all other accounts of CDC may be used to support the purchase, hire, maintenance, and operation of aircraft for use and support of the activities of CDC: Provided further*, That employees of CDC or the Public Health Service, both civilian and commissioned officers, detailed to States, municipalities, or other organizations under authority of section 214 of the PHS Act, or in overseas assignments, shall be treated as non-Federal employees for reporting purposes only and shall not be included within any personnel ceiling applicable to the Agency, Service, or HHS during the period of detail or assignment: *Provided further*, That CDC may use up to $10,000 from amounts appropriated to CDC in this Act for official reception and representation expenses when specifically approved by the Director of CDC: *Provided further*, That in addition, such sums as may be derived from authorized user fees, which shall be credited to the appropriation charged with the cost thereof: *Provided further*, That with respect to the previous proviso, authorized user fees from the Vessel Sanitation Program and the *Respirator Certification Program* shall be available through September 30, **[**2016**]** 2017: *Provided further*, That of the funds made available under this heading and in all other accounts of CDC, up to $1,000 per eligible employee of CDC shall be made available until expended for Individual Learning Account; *Provided further, the Director may transfer funds between any of the accounts of CDC with notification to the Committees on Appropriations of both Houses of Congress at least 15 days in advance of any transfer, but no such account shall be decreased by more than 3 percent by any such transfer.*

APPROPRIATIONS LANGUAGE ANALYSIS

Comparison to FY 2015 Consolidated Appropriations Act

Language Provision	Explanation
Emerging and Zoonotic Infectious Disease	
[Provided, That of the funds available under this heading, $30,000,000 shall be for the Advanced Molecular Detection initiative:**]**	Language specifying the use of funds for the purpose of the Advanced Molecular Detection activity is unnecessary.
Provided, that amounts available to pay for the transportation, medical care, treatment, and other related costs of persons quarantined or isolated under federal or state quarantine law, up to $1,000,000 shall remain available until expended.	Isolating and quarantining travelers with highly contagious diseases such as multi-drug resistant tuberculosis protects the health security of travelers and U.S. communities. Under its regulatory authority, CDC issues federal isolation orders under Title III of the Public Health Service Act. To ensure prompt and effective isolation when necessary, CDC has Memorandums of Agreement with 182 hospitals for transportation, evaluation, diagnosis, care, and treatment of travelers who pose a significant risk to public health. The availability of $1,000,000, as an initial set-aside, until expended, will ensure resources to address state and local expenditures for federal isolation orders. It can take several months to years to receive the final invoices for review and negotiation to ensure the government makes fiscally-responsible payments to these partners.
Chronic Disease Prevention and Health Promotion	
[Provided further, That of the funds available under this heading, $7,500,000 shall be available to continue and expand community specific extension and outreach programs to combat obesity in counties with the highest levels of obesity: Provided further, That of the funds provided under this heading, $80,000,000 shall be available for a program consisting of three-year grants of no less than $100,000 per year to non- governmental entities, local public health offices, school districts, local housing authorities, local transportation authorities or Indian tribes to implement evidence-based chronic disease prevention strategies: Provided further, That applicants for grants described in the previous proviso shall determine the population to be served and shall agree to work in collaboration with multi-sector partners:**]**	This FY 2015 Enacted appropriations language, requiring a $7,500,000 program to combat obesity in high-burden counties as well as a separate $80,000,000 chronic disease prevention program, is no longer required in FY 2016.
Injury Prevention and Control	
[Provided, That of the funds provided under this heading, $20,000,000 shall be available for an evidence-based prescription drug overdose prevention program:**]**	Bill language was removed for a Prescription Drug Overdose Prevention Program, as it is unnecessary for the program's continuation.
Global Health	
[2015, and of which $7,500,000 shall remain available through September 30, 2015, to support national public health institutes**]** *2017*	No funding is provided specifically for national public health institutes in the FY 2016 request.
[Provided further, That these funds are in addition to amounts provided in section 137 of Public Law 113-164**]**	This language is specific to an FY 2015 continuing resolution and, therefore, not relevant in FY 2016.
Public Health Preparedness and Response	

Language Provision	Explanation
Provided, That **[**in the event the Director of the CDC activates the Emergency Operations Center, **]**the Director of the Centers for Disease Control and Prevention (CDC), or the Administrator of the Agency for Toxic Substances and Disease Registry may detail **[**CDC**]** staff without reimbursement for up to **[**45**]***180* days to support **[**the work**]** *an activation* of the CDC Emergency Operations Center**[**, so long as the Director provides a notice to the Committees on Appropriations of the House of Representatives and the Senate within 15 days of the use of this authority and a full report within 30 days after use of this authority which includes the number of staff and funding level broken down by the originating center and number of days detailed:**]**	Changes are proposed to the EOC personnel detail language that would permit non-reimbursable details for up to 180 days for greater flexibility during periods of greatest need.
[*Provided further*, That funds appropriated under this heading may be used to support a contract for the operation and maintenance of an aircraft in direct support of activities throughout CDC to ensure the agency is prepared to address public health preparedness emergencies**]**.	This language is recommended for deletion in the Preparedness Account, and modified language is recommended in the CDC-Wide Activities and Program Support Account.
Buildings and Facilities	
[previously set-aside by CDC for repair and upgrade of the Lake Lynn Experimental Mine and Laboratory shall be used to acquire a replacement mine safety research facility.**]**	Language unnecessary for FY 2016.
made available by prior appropriations Acts for CDC for construction and renovation of facilities may also be used, in fiscal year 2016, for the construction of a replacement freezer building in the Fort Collins, Colorado area:	Language is needed to provide CDC with the authority to use previously appropriated funding for design and construction of a replacement freezer on non-federally-owned property at its Fort Collins Colorado Campus. The existing freezer, which will revert back to the leaseholder in November 2016, provides conditioned laboratory support space for long-term storage of critical biological specimens. Without the language, CDC would be unable to meet time-sensitive construction deadlines for the replacement freezer facility prior to the end of the lease.
CDC-Wide Activities and Program Support	
Provided further, That funds appropriated under this heading and in all other accounts of CDC may be used to support the purchase, hire, maintenance, and operation of aircraft for use and support of the activities of CDC:	Language is needed to ensure the agency is able to respond to health security actions, foreign and domestic, often in remote locations and in a timely manner.
Provided further, That with respect to the previous proviso, authorized user fees from the Vessel Sanitation Program and the *Respirator Certification Program* shall be available through September 30, **[**2016**]** 2017:	Under federal regulations (42 CFR Pt 84), the CDC's National Institute for Occupational Safety and Health (NIOSH) tests respirators and conducts quality assurance checks on respirator manufacturer's facilities and products to ensure these products provide their intended protection to U.S. workers. Language is needed to provide CDC with the authority to have collections be available for obligation over two fiscal years. This would allow the program to spend the money received from collections regardless of when the collection was made. This will allow collections obtained late in the fiscal year to still be used in the next fiscal year to certify respirators.

Language Provision	Explanation
Provided further, the Director may transfer funds between any of the accounts of CDC with notification to the Committees on Appropriations of both Houses of Congress at least 15 days in advance of any transfer, but no such account shall be decreased by more than 3 percent by any such transfer.	In limited circumstances, CDC requests this transfer authority in order to improve the provision of services and activities between accounts following Congressional notification. When immediate health threats either domestically or internationally arise, this authority will give CDC the necessary resources and flexibility from across the agency to provide the timeliest response.

AMOUNTS AVAILABLE FOR OBLIGATION [1,2,3]

	FY 2014 Final	FY 2015 Enacted[4]	FY 2016 President's Budget
Discretionary Appropriation:			
Budget Authority [5]	$5,804,303,000	$5,998,118,000	$6,095,803,000
Permissive Transfers [5]	($15,810,000)	$15,000,000	$0
Subtotal, adjusted Appropriation	**$5,788,493,000**	**$6,013,118,000**	**$6,095,803,000**
Mandatory and Other Appropriations:			
Transfers from Other Accounts [4]	$831,300,000	$886,300,000	$914,300,000
Receipts from CRADA	$2,226,000	$2,226,000	$2,226,000
Receipts from Royalties [6]	$792,603	$792,603	$792,603
Appropriation (EEOICPA)	$49,933,000	$50,009,000	$55,358,000
Subtotal, adjusted Mandatory and Other Appropriations	**$884,251,603**	**$939,327,603**	**$972,676,603**
Recovery of prior year Obligations	$11,909,462	$0	$0
Unobligated balance start of year	$155,747,412	$130,419,652	$135,042,486
Unobligated balance expiring	$10,189,842	$0	$0
Unobligated balance end of year	($130,419,652)	($135,042,486)	($137,342,939)
Total Obligations	**$6,720,171,667**	**$6,947,822,769**	**$7,066,179,150**

[1] Excludes Vaccine for Children and World Trade Center Health Program.
[2] Excludes the following amounts for reimbursements: FY 2014 $635M; FY 2015 $635M; and FY 2016 $635M.
[3] Includes Prevention and Public Health Fund (PPHF).
[4] FY 2015 Enacted includes $30 million for CR Ebola Funding (PL 113-164) but does not reflect $1.771 billion in one-time emergency funding appropriated in FY 2015 for the U.S. Government response to contain, treat, and prevent the spread of Ebola.
[5] FY 2014 is comparably adjusted to reflect the $2.8 million transfer of Limb Loss to ACL.
[6] FY 2014 amount represents actual receipts. FY 2015 and FY 2016 amounts are estimates assuming level receipts. FY 2015 and FY 2016 actual may vary.

SUMMARY OF CHANGES

	Dollars	FTEs
FY 2015 Enacted (Program Level)[1]	**$6,899,418**	**10,855**
FY 2016 President's Budget (Program Level)	**$7,010,103**	**10,898**
Net Change	**$110,685**	**43**

	FY 2015 FTE	FY 2015 Enacted[1]	FTE Change	FY 2016 +/- FY 2015
Increases:				
HIV/AIDS, Viral Hepatitis, STI and TB Prevention				
Viral Hepatitis	---	$31,331	---	$31,489
Domestic HIV/AIDS Prevention and Research	---	$786,712	---	$12,649
School Health (HIV) (non-add)	---	*31,081*	---	*$6,296*
Emerging and Zoonotic Infectious Diseases				
Core Infectious Diseases (includes Combatting Antibiotic Resistance and Lab Safety and Quality increases)	---	$225,963	---	$275,562
National HealthCare Safety Network	---	$18,032	---	$14,039
Healthcare Associated Infections	---	$12,000	---	$2,580
Food Safety	---	$47,993	---	$2,096
Chronic Disease Prevention and Health Promotion				
Arthritis and Other Chronic Diseases	---	$23,342	---	$3,515
Environmental Health				
Climate Change (BRACE)	---	$8,613	---	$10,000
Injury Prevention and Control				
Prescription Drug Overdose	---	$20,000	---	$48,000
National Violent Death Reporting System (NVDRS)	---	$11,302	---	$12,268
Gun Violence Prevention Research	---	$0	---	$10,000
Rape Prevention	---	$38,827	---	$5,605
Illicit Opiod Use Risk Factors	---	$0	---	$5,579
Sports Related Concussion Surveillance	---	$0	---	$5,000
Public Health Scientific Services				
Surveillance, Epidemiology, and PH Informatics	---	$273,464	---	$37,544
Lab Safety and Training (non-add)	---	*$0*	---	*$10,000*
Foundational Capacities/Public Health Transformation (non-add)	---	*$0*	---	*$8,000*
Public Health Workforce Capacity (PPHF)	---	$52,200	---	$15,204
Health Statistics	---	$155,397	---	$5,000
Global Health				
Global Public Health Protection	---	$55,119	---	$21,575
Polio Eradication	---	$158,774	---	$10,000
Public Health Preparedness and Response				
Strategic National Stockpile	---	$534,343	---	$36,700
CDC Preparedness and Response Capability (includes Select Agent increase)	---	$157,166	---	$10,000
Other Increases	**---**	**$61,624**	**---**	$78
Total Increases	**N/A**	**$2,626,272**	**N/A**	**$574,483**
Decreases:				
Immunization & Respiratory Diseases	---		---	
Immunization Program Level	---	$610.847	---	-$50,339
Chronic Disease Prevention, Health Promotion, & Genomics				
Racial and Ethnic Approaches to Community Health (REACH)	---	$50,950	---	-$50,950
Breast and Cervical Cancer	---	$206,993	---	-$37,789
Partnerships to Improve Community Health (PICH)	---	$80,000	---	-$20,000
Prostate Cancer	---	$13,205	---	-$13,205
Workplace Wellness	---	$10,000	---	-$10,000

	FY 2015 FTE	FY 2015 Enacted[1]	FTE Change	FY 2016 +/- FY 2015
Nutrition, Physical Activity, and Obesity	---	$47,585	---	-$7,493
Colorectal Cancer	---	$43,294	---	-$3,779
Prevention Research Centers	---	$25,461	---	-$461
Environmental Health	---			
Environmental and Health Outcome Tracking Network	---	$34,904	---	-$10,904
Occupational Safety & Health				
Educational and Research Centers	---	$27,445	---	-$27,445
Agriculture, Forestry, Fishing (AgFF)	---	$24,000	---	-$24,000
Global Health				
CR Ebola Funding (PL 113-164)	---	$30,000	---	-$30,000
Public Health Preparedness & Response				
State and Local Preparedness and Response Capability				
All Other State and Local Capacity	---	$9,415	---	-$9,415
Academic Centers for Public Health Preparedness	---	$8,018	---	-$8,018
Cross-Cutting Activities and Program Support	---		---	
Preventive Health and Health Services Block Grants	---	$160,000	---	-$160,000
All Other Decreases	---		---	
Total Decreases	**N/A**	**$1,382,117**	**N/A**	**($463,798)**
Transfers				
	---	**$0**	**---**	**$0**
Built-In:				
1. Annualization of Jan - 2015 Pay Raise	---	---	---	$2,936
2. FY 2015 Pay Increases	---	---	---	$11,441
3. Changes in Day of Pay	---	---	---	$0
4. Rental Payments to GSA and Others	---	---	---	$154
Total Built-In	**10,855**	**$0**	**0**	**$14,531**
1. Absorption of Current Services	---	---	---	($14,531)
Total	**---**	**---**	**---**	**($14,531)**
Total Increases (Program Level)	**10,855**	**$2,626,272**	**0**	**$574,483**
Total Decreases (Program Level)	**N/A**	**$1,382,117**	**0**	**($463,798)**
NET CHANGE - L/HHS/ED Program Level	**10,855**	**$6,899,418**	**0**	**$110,685**
Other Program Level Changes				
1. Vaccines for Children	---	$3,981,250	---	$128,057
2. World Trade Center	---	$243,350	---	$24,330
3. Energy Employees Occupational Illness Compensation Act (EEOICPA)	---	$50,099	---	$5,259
4. User Fees	---	$2,064	---	$162
Total - Program Level Net Increase	**10,855**	**$4,276,763**	**0**	**$157,808**
NET CHANGE: CDC BUDGET AUTHORITY & PROGRAM LEVEL	**10,855**	**$11,176,181**	**0**	**$268,493**

[1] FY 2015 Enacted includes $30 million for CR Ebola Funding (PL 113-164) but does not reflect $1.771 billion in one-time emergency funding appropriated in FY 2015 for the U.S. Government response to contain, treat, and prevent the spread of Ebola.

BUDGET AUTHORITY BY ACTIVITY

(dollars in thousands) Budget Activity/Description	FY 2014 Final	FY 2015 Enacted[1]	FY 2016 President's Budget
Immunization and Respiratory Diseases - BA	$609,809	$573,105	$537,766
HIV/AIDS, Viral Hepatitis, STI and TB Prevention - BA	$1,117,609	$1,117,609	$1,161,747
Emerging and Zoonotic Infectious Diseases - BA	$337,655	$352,990	$644,687
Chronic Disease Prevention and Health Promotion - BA	$740,001	$747,220	$577,854
Birth Defects, Developmental Disabilities, Disability and Health – BA[2]	$129,190	$131,781	$63,815
Environmental Health - BA	$166,404	$166,404	$141,500
Injury Prevention and Control - BA	$150,447	$170,447	$256,977
Public Health Scientific Services - BA	$395,298	$481,061	$474,559
Occupational Safety and Health - BA	$220,363	$334,863	$283,418
Global Health – BA[1]	$415,745	$446,517	$448,092
Public Health Preparedness and Response - BA	$1,367,551	$1,352,551	$1,381,818
Cross-Cutting Activities and Program Support - BA	$114,649	$113,570	$113,570
Buildings and Facilities - BA	$23,772	$10,000	$10,000
Total CDC, Budget Authority -	**$5,788,493**	**$5,998,118**	**$6,095,803**
Total CDC, FTEs	**10,846**	**10,855**	**10,898**

[1] FY 2015 Enacted includes $30 million for CR Ebola Funding (PL 113-164) but does not reflect $1.771 billion in one-time emergency funding appropriated in FY 2015 for the U.S. Government response to contain, treat, and prevent the spread of Ebola.
[2] FY 2014 is comparably adjusted to reflect the $2.8 million transfer of Limb Loss to ACL.

AUTHORIZING LEGISLATION

(dollars in thousands) Enabling Legislation Citation[2]	Enabling Legislation Status	Allocation Methods	FY 2015 Appropriations Act	FY 2016 President's Budget
Immunization and Respiratory Diseases				
PHSA Title II, §§ 301, 307, 310, 311, 317, 317N, 317S, 319, 319C, 319E, 319F, 322, 325, 327, 340C, 352, Title XVII*, 2102(a)(6), 2102(a)(7), 2125, 2126, 2127, 2821; Immigration and Nationality Act §§ 212 (8 U.S.C. 1182), 232 (8 U.S.C. 1222); Social Security Act § 1928 (42 U.S.C. 1396s)	Permanent Indefinite	Direct Federal/Intramural; Competitive Cooperative Agreements/Grants, including Formula Grants; Contracts; and Other	$798,405	$748,066
HIV/AIDS, Viral Hepatitis, STD, and TB Prevention				
PHSA Title II, §§ 301, 306(a-l), 306(n)*, 307, 308(d), 310, 311, 317, 317E(a-f), 317E(g)*, 317N(a-b), 317N(c)*, 317P(a-c), 318(a-d), 318(e)*, 318(f), 318B*, 322, 325, 327, 352, Title XVII*, 2315, 2320, 2341; Title II of P.L. 103-333; Consolidated and Further Continuing Appropriations Act, 2015, P.L. 113-235	Permanent Indefinite	Direct Federal/Intramural, Competitive Grant/Cooperative Agreements, Formula Grants/Cooperative Agreements, Contracts, and Other	$1,117,609	$1,161,747
Emerging and Zoonotic Infectious Diseases				
PHSA §§ 252, 264, 301, 304, 307, 308(d), 310, 311, 317, 317P, 317R, 317S, 319, 319D, 319E*, 319F, 319G, 321, 322, 325, 327, 352, 353, 361–369, 1102, Title XVII*, 2821*; P.L. 96–517; P.L. 111-5; Immigration and Nationality Act §§ 212, 232 (8 U.S.C. 1182, 8 U.S.C. 1222, 8 U.S.C. 1252)	Permanent Indefinite	Direct Federal/Intramural, Contracts, and Competitive Grants/Cooperative Agreements	$404,990	$699,267
Chronic Disease Prevention and Health Promotion				
PHSA Title II §§ 301, 307, 310, 311, 317*, 317D*, 317H, 317K*, 317L*, 317M, 330E, 399B*–399D, 399E, 399Q*, 399V-3*–399Z*, 1501*–1509*, Title XVII*; Fertility Clinic Success Rate And Certification Act of 1992 (P.L. 102-493); Comprehensive Smoking Education Act of 1984, P.L. 98-474 (15 U.S.C. 1335(a) and 15 U.S.C. 1341); Comprehensive Smokeless Tobacco Health Education Act of 1986 (P.L. 99-252); The Patient Protection and Affordable Care Act of 2010,§ 4201* (P.L. 111-148)	Permanent Indefinite	Direct Federal Intramural; Competitive Cooperative Agreements/Grants, including Formula Grants; and Competitive Contracts	$1,198,220	$1,058,058
Birth Defects and Developmental Disabilities				
PHSA Title II §§ 301, 304, 307, 308(d), 310, 311, 317, 317C(a)*, 317J*, 317K*, 317L*, 317Q, 327, 352, 399M, 399Q*, 399S, 399T, 399V-2, 399AA, 399BB, 399CC; 1102,1110, 1112-1114, Title XI, Title XVII*; The Prematurity Research	Permanent Indefinite	Direct Federal/Intramural, Competitive Grants, Cooperative Agreements and Contracts	$131,781	$131,781

(dollars in thousands) Enabling Legislation Citation[2]	Enabling Legislation Status	Allocation Methods	FY 2015 Appropriations Act	FY 2016 President's Budget
Expansion And Education For Mothers Who Deliver Infants Early Act §§ 3,5 (42 U.S.C. 247b-4f* and 42 U.S.C. 247b-4g)				
Environmental Health				
PHSA Title II §§ 301, 307, 310, 311, 317*, 317A*, 317B*, 317I*, 327, 352, 361, 366, 1102; Title XVII*	Permanent Indefinite	PHSA Title II §§ 301, 307, 310, 311, 317*, 317A*, 317B*, 317I*, 327, 352, 361, 366, 1102; Title XVII*	$179,404	$178,500
Injury Prevention and Control				
PHSA Title II §§ 214, 215, 301, 304, 307, 308, 310, 311, 317, 319, 319D*, 327, 352, 391*, 392*, 393*, 393A*, 393B*, 393C*, 393D*, 394*, 394A*, 399P*, 1102; Title XVII*, Bayh-Dole Act of 1980 (P.L. 96-517); Safety of Seniors Act of 2007 (P.L. 110-202); Traumatic Brain Injury Reauthorization Act of 2014 (P.L. 113-196); Family Violence Prevention and Services Act §§ 303 (42 U.S.C. 10403)*, 314 (42 U.S.C. 10414)*	Permanent Indefinite	Direct Federal/Intramural; Competitive Cooperative Agreements/Grants, including Formula Grants; and Competitive Contracts	$170,447	$256,977
Public Health Scientific Services				
PHSA Title II §§ 241, Title III 301, 304, 306*, 307, 308, 310, 317, 317G, 318, 319, 319A, 353, 391, 399V, 778, 1102, Title XVII*, 2315, 2341, 2521*; P.L. 107-347, Title V (44 U.S.C. 3501 note); Intelligence Reform and Terrorism Prevention Act of 2004 § 7211* (P.L. 108-458); Food, Conservation, And Energy Act of 2008 § 4403 (7 U.S.C. 5311a); P.L. 101-445 § 5341 (7 U.S.C. 5341); The Patient Protection and Affordable Care Act of 2010 (P.L. 111-148)	Permanent Indefinite	Direct Federal/Intramural, Competitive Grants/Cooperative Agreements, Contracts	$481,061	$538,809
Occupational Safety and Health				
PHSA Title II §§ 301, 304, 306, 307, 308(d), 310, 311, 317, 317A, 317B, 319, 327, 352, 399MM, 1102, Title XVII, 2695; Occupational Safety and Health Act of 1970 §§20–22, P.L. 91-596 as amended by P.L. 107-188 and 109-236 (29 U.S.C. 669–671); Federal Mine Safety and Health Act of 1977, P.L. 91-173 as amended by P.L. 95-164 and P.L. 109-236 (30 U.S.C. 811–813, 842, 843–846, 861, 951–952, 957, 962, 963, 964); Black Lung Benefits Reform Act of 1977 § 19, P.L. 95-239 (30 U.S.C. 902); Bureau of Mine Act, as amended by P.L. 104-208 (30 U.S.C. 1 note, 3, 5); Radiation Exposure Compensation Act, §§ 6 and 12 (42 U.S.C. 2210 note); Energy Employees Occupational Illness Compensation Program Act of 2000, as amended (42 U.S.C. §§7384, et seq.); Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001	Permanent Indefinite	Direct Federal/Intramural, Competitive Grant/Cooperative Agreements, Contracts, Other	$334,863	$283,418

(dollars in thousands) **Enabling Legislation Citation**[2]	**Enabling Legislation Status**	**Allocation Methods**	**FY 2015 Appropriations Act**	**FY 2016 President's Budget**
§§ 3611, 3612, 3623, 3624, 3625, 3626, 3633 of P.L. 106-398; National Defense Authorization Act for Fiscal Year 2006, P.L. 109-163; Toxic Substances Control Act, P.L. 94-469 as amended by 102-550, (15 U.S.C. 2682, 2685); Ryan White HIV/AIDS Treatment Extension Act of 2009 § 2695, P.L. 111-87 (42 U.S.C. 300ff-131); James Zadroga 9/11 Health and Compensation Act (2010), P.L.111-347				
Global Health				
PHSA Title II §§ 301, 304, 307, 310, 319*, 327, 340C, 361–369*, Title VVII*, 2315, 2341; Foreign Assistance Act of 1961 §§ 104, 627, 628; Federal Employees International Organization Service Act § 3 (5 USC 3343); International Health Research Act of 1960 § 5; Agriculture Trade Development and Assistance Act of 1954 § 104; 38 U.S.C. § 3968; Foreign Employees Compensation Program (22 U.S.C. 3968); Tom Lantos and Henry J. Hyde United States Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act of 2008 (P.L.110-293); PEPFAR Stewardship & Oversight Act of 2013 (P.L. 113-56); Section 212 of the Consolidated Appropriations Act, 2012 (P.L. 112-74, Division F)	Permanent Indefinite	Direct Federal/Intramural, Competitive Grants/Cooperative Agreements, Direct Contracts, Interagency Agreements	$446,517	$448,092
Public Health Preparedness and Response				
PHSA Title II §§ 301, 307, 310, 311, 319, 319C-1*, 319D*, 319F*, 319F-2*, 319G*, 351A*, 361, Title XVII*, 2801, 2812*	Permanent Indefinite	Direct, Federal Intramural, Cooperative Agreements, including Formula Grants/Cooperative Agreements; and Contracts	$1,352,551	$1,381,818
CDC-Wide Activities and Program Support				
PHSA Title II §§ 301, 304, 306*, 307, 308, 310, 311, 317, 317F*, 319, 319A, 319D*, 322, 325, 327, 352, 361–369, 391*,Title XVII*, 2821*	Permanent Indefinite	Direct Federal/Intramural, Contracts, Competitive Grants/Cooperative Agreements	$273,570	$113,570

[1] Expired/Expiring noted with *

APPROPRIATIONS HISTORY TABLE[1]

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
2006 [2,3]	3,910,963,000	5,945,991,000	6,064,115,000	5,884,934,000
2006 Rescission	--	--	--	(58,848,000)
2006 Supplemental [4]	--	--	--	275,000,000
2006 Supplemental [5]	--	--	--	218,000,000
2006 Section 202 Transfer to CMS	--	--	--	(4,002,000)
2007 [3, 4,6]	5,783,205,000	6,073,503,000	6,095,900,000	5,736,913,000
2008 [3]	5,741,651,000	6,138,253,000	6,156,169,000	6,156,541,000
2008 Rescission [3]	--	--	--	(106,567,000)
2009	5,618,009,000	6,202,631,000	6,313,674,000	6,283,350,000
2009 American Reinvestment & Recovery Act[7]				300,000,000
2009 H1N1 Influenza Supplemental, HHS [8]	473,000,000	--	--	473,000,000
2010 H1N1 Influenza Supplemental, CDC [8]	200,000,000	--	--	200,000,000
2010 Public Health Prevention Fund [9]	--	--	--	191,800,000
2010	6,312,608,000	6,313,032,000	6,733,377,000	6,390,387,000
2011	6,265,806,000	--	6,527,235,000	5,648,970,000
2011 Public Health Prevention Fund	610,900,000	--	--	610,900,000
2012	5,817,412,000	--	5,765,915,000	5,655,670,000
2012 Public Health Prevention Fund	752,500,000	--	848,000,000	809,000,000
2013 Enacted	4,991,523,000	--	5,713,698,000	5,657,023,000
2013 OMB 0.2% Rescission				($11,314,000)
2013 Sequestration	--	--	--	(284,581,000)
2013 Public Health Prevention Fund	903,210,000	--	858,000,000	462,916,000
2014	5,216,509,000	--	5,757,052,000	5,792,542,000
2014 Public Health Prevention Fund	755,110,000	0	839,000,000	831,300,000
2015	5,399,706,000	--	5,999,348,000	5,968,118,000
2015 Public Health Prevention Fund	809,510,000	--	887,300,000	886,300,000
2015 CR Ebola Funding (PL 113-164)	--	--	--	30,000,000
2015 Ebola Response and Preparedness[10]	--	--	--	1,771,000,000
2016	6,095,803,000	--	--	--
2016 Public Health Prevention Fund	914,300,000	--	--	--

[1] Does not include funding for ATSDR

[2] FY 2004, FY 2005, FY 2006, funding levels for the Estimate reflect the proposed Law for Immunization.

[3] Beginning in FY 2006, Terrorism funds WERE directly appropriated to CDC instead of being appropriated to the Public Health and Social Service Emergency Fund (PHSSEF). As a result, FY 2006 House, Senate, and Appropriation totals include Terrorism funds. Terrorism funding is included in CDC Appropriation after 2006.

[4] FY 2006 includes a one-time supplemental of $275 million for pandemic influenza and World Trade Center activities through P.L.109-141, Department of Defense Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act, 2006

[5] FY 2006 includes a one-time supplemental of $218 million for pandemic influenza, mining safety, and mosquito abatement through P.L. 109-234, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006.

[6] The FY 2007 appropriation amount listed is the yearlong Continuing Resolution.

[7] FY 2009 Appropriation amount displays $300M Section 317 funds for American Reinvestment & Recovery Act (P.L. 111-5)

[8] FY 2009 H1N1 influenza supplemental, Supplemental Appropriations Act, 2009 (P.L. 111-32). $473M transferred from HHS's Public Health and Social Services Emergency Fund to CDC; $200M directly appropriated to CDC.

[9] The Affordable Care Act passed on March 23, 2010, after the FY 2010 appropriation. The amounts here reflect CDC's request and final amount allotted from the PPH Fund to CDC from HHS.

[10] Ebola Response and Preparedness is one-time emergency funding appropriated in FY 2015 for the U.S. Government response to contain, treat, and prevent the spread of Ebola.

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APPROPRIATIONS NOT AUTHORIZED BY LAW

(dollars in millions) Program	Last Year of Authorization	Authorization Level	Appropriations in Last Year of Authorization	Appropriations in FY 2015[1]
Sexually Transmitted Diseases Grants (PHSA 318)	FY 1998	Such Sums…	$113.671	$157.310
National Cancer Registries (PHSA 399B)	FY 2003	Such Sums…	N/A	$49.440
National Center for Health Statistics (PHSA 306)	FY 2003	Such Sums…	$125.899	$155.397
WISEWOMAN (PHSA 1509)	FY 2003	Such Sums…	$12.419	$21.114
Asthma Surveillance & Grants (PHSA 317I, 399L)	FY 2005	Such Sums…	$32.422	$27.528
Folic Acid (PHSA 317J)	FY 2005	Such sums…	$2.188	$3.121
Injury Prevention and Control (PHSA 391—394A)	FY 2005	Such Sums…	$138.237	$170.447
Oral Health Promotion (PHSA 317M)	FY 2005	Such Sums…	$11.204	$15.749
Safe Motherhood/Infant Health Promotion (PHSA 317K, 317L)	FY 2005	Such Sums…	$44.738	$45.473
Birth Defects, Developmental Disability, Disability and Health (PHSA 317C)	FY 2007	Such Sums…	$122.242	$131.781
Developmental Disabilities Surveillance and Research Program (Autism) (PHSA 399AA)	FY 2011	$21.000 in FY 2011	$21.380	$23.002
Breast and Cervical Cancer[1] (PHSA 1501-10)	FY 2012	$275.000 in FY 2012	$204.779	$206.993
Johanna's Law (PHSA 317P)	FY 2012	$18.000 in FY 2012	$4.972	$5.500
Epidemiology Laboratory Capacity Grants (PHSA 2821)	FY 2013	$190.000 in FY 2013	$32.424	$40.000
National TB Strategy/Grants (PHSA 317E)	FY 2013	$243.101 In FY 2013	$132.997	$142.256
National Diabetes Prevention Program (PHSA 399V-3)	FY 2014	Such sums…	$10.000	$10.000
Section 317 Immunization (PHSA 317)	FY 2014	Such sums…	$610.847	$610.847

[1] Breast and Cervical Cancer appropriation includes WISEWOMAN funding.

NARRATIVE BY ACTIVITY

IMMUNIZATION AND RESPIRATORY DISEASES

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$609.809	$573.105	$537.766	-$35.339
PHS Evaluation Transfer	$12.864	$0.000	$0.000	$0.000
ACA/PPHF	$160.300	$210.300	$210.300	$0.000
PHSSEF	N/A	$15.000	$0.000	-$15.000
Total Request	**$782.973**	**$798.405**	**$748.066**	**-$50.339**
FTEs	625	625	625	0
Immunization Program Level	**$610.847**	**$610.847**	**$560.508**	**-$50.339**
-Immunization Program - BA	$437.683	$387.683	$337.344	-$50.339
-National Immunization Survey - BA	N/A	$12.864	$12.864	$0.000
-National Immunization Survey - PHS Evaluation Transfer	$12.864	$0.000	$0.000	$0.000
-Immunization Program - PPHF	$160.300	$210.300	$210.300	$0.000
Influenza/Influenza Planning and Response[1]	**$172.126**	**$187.558**	**$187.558**	**$0.000**
-PHSSEF (*non-add*)	N/A	$15.000	N/A	-$15.000

[1] FY 2014 amount does not include $29.124 million in HHS Pan Flu funding (of which $15.3 million is for International Flu activities).

Summary

CDC prevents disease, disability, and death of children, adolescents, and adults through immunization and control of respiratory and related diseases. These activities are key to CDC's goal to protect Americans from infectious diseases.

Through the discretionary Immunization Program and mandatory Vaccines for Children (VFC) Program, CDC improves access to immunization services for uninsured and underinsured populations in the United States and supports the scientific evidence base for vaccine policy and practices. CDC also provides critical epidemiology and laboratory capacity to detect, prevent, and respond to vaccine-preventable, respiratory, and related infectious disease threats as well as preparedness planning for pandemic influenza.

CDC's FY 2016 request of **$748,066,000** for immunization and respiratory diseases, including $210,300,000 from the Affordable Care Act Prevention and Public Health Fund, is $50,339,000 below the FY 2015 Enacted level. The reduction to the 317 Immunization Program reflects increased insurance coverage for immunization services through public and private health insurance expansion.

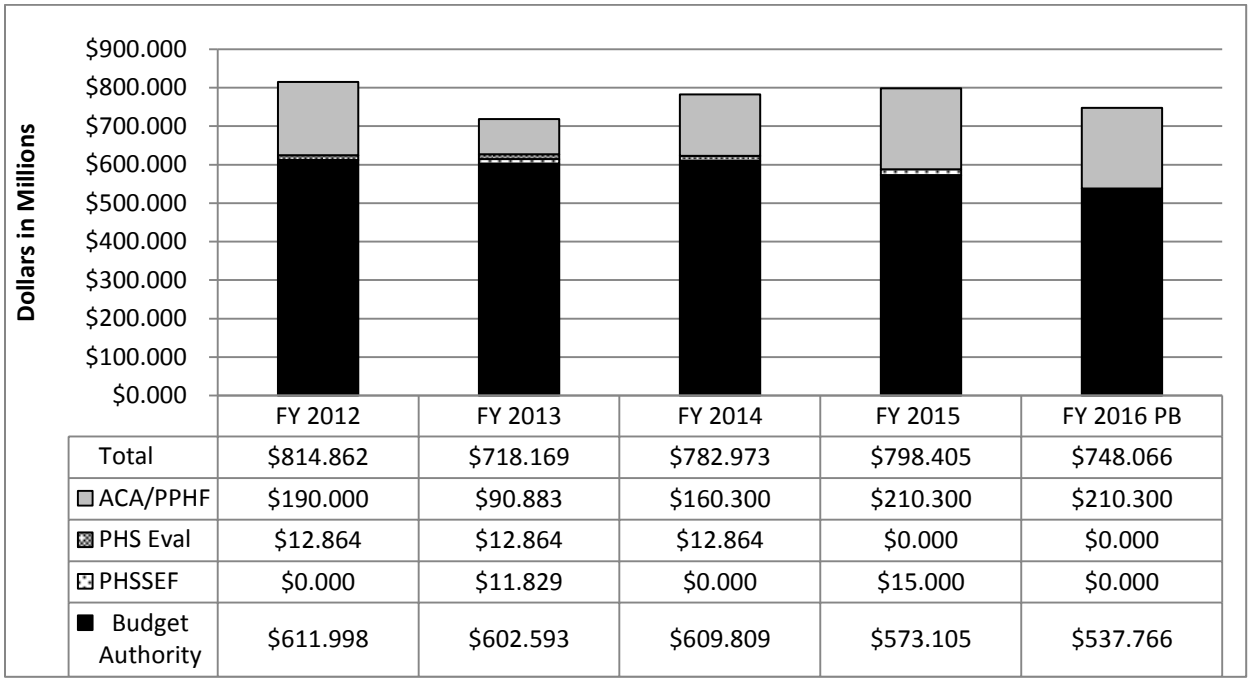
Performance Highlights

- CDC demonstrated rotavirus vaccines are greater than 85 percent effective in preventing severe rotavirus disease in U.S. children with the effectiveness sustained over time. **(Measure 1.2.1i)**
- CDC demonstrated an 88 percent decline in PCV13-type pneumococcal disease among children less than 5 years old in the U.S. **(Measure 1.2.1h)**
- The Partnership for Influenza Vaccine Introduction[1] (PIVI), a CDC-led collaboration between public and private partners, has successfully vaccinated high-risk populations and healthcare workers against influenza in Lao People's Democratic Republic (PDR) since 2012. In 2013, the project expanded to include Nicaragua and focused vaccination efforts on pregnant women. Partners include Lao PDR's Ministry of Health, the WHO Country Office, Walgreens Co., the United Parcel Service (UPS), Nicaragua

[1] http://www.taskforce.org/our-work/projects/partnership-influenza-vaccine-introduction

Ministry of Health, the Pan-American Health Organization (PAHO), bioCSL, Becton Dickinson and Company (BD), the U.S. Department of Defense, and the Task Force for Global Health.

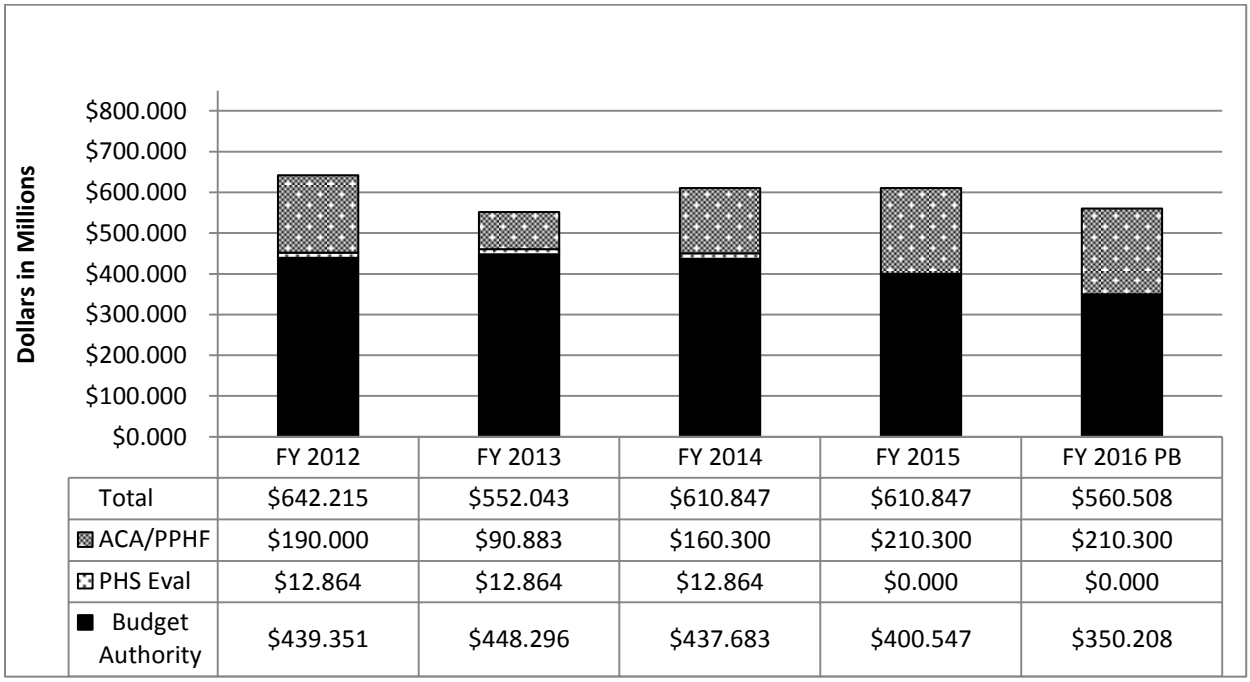
Immunization and Respiratory Diseases Funding History[1]



	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 PB
Total	$814.862	$718.169	$782.973	$798.405	$748.066
ACA/PPHF	$190.000	$90.883	$160.300	$210.300	$210.300
PHS Eval	$12.864	$12.864	$12.864	$0.000	$0.000
PHSSEF	$0.000	$11.829	$0.000	$15.000	$0.000
Budget Authority	$611.998	$602.593	$609.809	$573.105	$537.766

[1] FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

Immunization Program Funding History[1]



	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 PB
Total	$642.215	$552.043	$610.847	$610.847	$560.508
ACA/PPHF	$190.000	$90.883	$160.300	$210.300	$210.300
PHS Eval	$12.864	$12.864	$12.864	$0.000	$0.000
Budget Authority	$439.351	$448.296	$437.683	$400.547	$350.208

[1] FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

Immunization Program Funding History[1]

Immunization Program[1]	
Fiscal Year	Dollars (in millions)
2006	$517.199
2007	$512.804
2008	$527.359
2009	$557.359
2009 (ARRA)	$300.000
2010	$561.459
2011	$488.576
2011 (ACA/PPHF)	$100.000
2012	$452.215
2012 (ACA/PPHF)	$190.000
2013	$461.160
2013 (ACA/PPHF)	$90.883
2014	$450.547
2014 (ACA/PPHF)	$160.300
2015	$387.683
2015 (ACA/PPHF)	$210.300

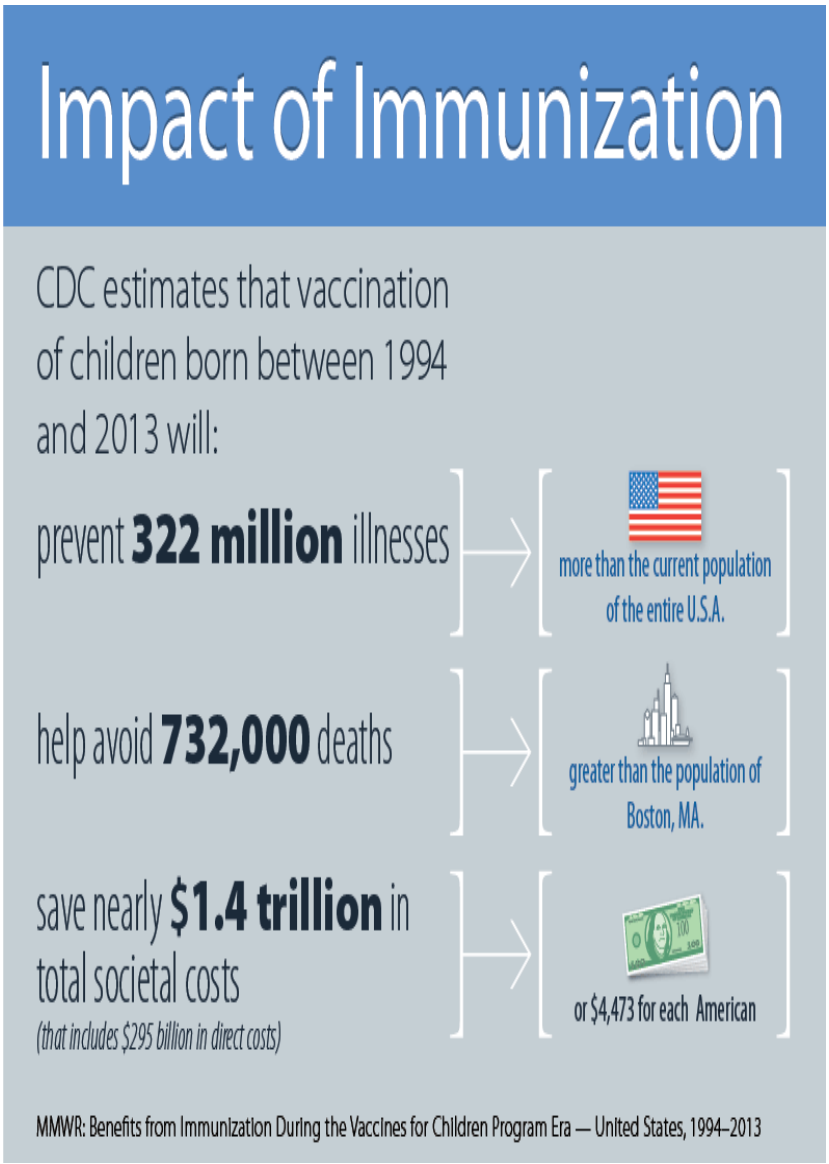
[1] FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

Immunization Program Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$437.683	$400.547	$350.208	-$50.339
National Immunization Survey (non-add)	N/A	$12.864	$12.864	$0.000
PHS Evaluation Transfer	$12.864	$0.000	$0.000	$0.000
ACA/PPHF	$160.300	$210.300	$210.300	$0.000
Total	**$610.847**	**$610.847**	**$560.508**	**-$50.339**

Overview

CDC's national immunization recommendations currently provide guidance for the prevention of 17 vaccine-preventable diseases (VPDs) across the lifespan. The discretionary Immunization Program plays a fundamental role in achieving national immunization goals and sustaining high vaccination coverage rates to prevent death and disability from VPDs.



The Immunization Program provides funds to support the essential public health functions and ensure program effectiveness and scientifically sound immunization policy. A strong public health infrastructure at the national, state, and local levels is vital to sustaining high vaccination coverage levels and low incidence of VPDs. Support also maintains public health preparedness for a response to a vaccine-preventable national emergency, such as a pandemic or biologic attack.

The Immunization Program purchases routinely recommended vaccines to protect at-risk and vulnerable populations not eligible for immunizations through the Vaccines for Children (VFC) Program and to meet urgent public health needs such as controlling VPD outbreaks. The flexibility of the Program is critical: The discretionary Immunization Program allows states to use their purchased vaccines to meet their unique needs and priorities in responding to VPD outbreaks. The Affordable Care Act health insurance-related provisions will improve access to immunization services by requiring new private health plans and most public insurance to cover routinely recommended vaccines without cost-sharing. However, these health insurance provisions do not address the public health functions (e.g., providing a safety net for those who cannot otherwise access immunization services, managing vaccine shortages, monitoring the safety and effectiveness of vaccines and vaccine policies, preventing disease outbreaks and responding early and rapidly should they occur, and

preparing to respond quickly and comprehensively to other urgent vaccine emergencies, such as pandemics) that must be in place to ensure safe and effective national immunization policies and programs, making the discretionary Immunization Program critical in FY 2016 and beyond.

Budget Request

CDC's FY 2016 request of **$560,508,000** for the Immunization Program, including $210,300,000 from the Affordable Care Act Prevention and Public Health Fund, is $50,339,000 below the FY 2015 Enacted level. Health insurance expansion will further increase access to immunizations and is expected to decrease the number of uninsured and underinsured individuals in need of discretionary vaccine for routine immunizations. Since September 2010, new health plans are required to cover vaccines routinely recommended by the Advisory Committee on Immunization Practices (ACIP) without charging a deductible, copayment, or coinsurance. This request includes up to $8,000,000 to support the capacity of public health departments to bill health insurers for immunization services.

For FY 2016, CDC's priorities for the discretionary Immunization Program are to:

- Preserve core public health immunization infrastructure at the local, state, and federal levels
- Maintain an adequate amount of vaccine purchase to provide a vaccination safety net for uninsured adults, and for response to VPD outbreaks and other vaccine urgent needs
- Make strategic investments to enhance the immunization infrastructure and evidence base and to improve efficiency

Preserving Core Public Health Immunization Infrastructure

The discretionary Immunization Program is responsible for the essential public health workforce and systems at the national, state, and local levels that protect all Americans, regardless of health insurance status, from disability and death from VPDs.

CDC conducts scientific studies that provide the evidence base for national immunization policy, including assessing the burden of disease, vaccine effectiveness and safety, economic analyses, and program feasibility. For example, CDC's vaccine effectiveness research provided critical scientific evidence of waning immunity that informed ACIP's recommendation for a booster dose of meningococcal conjugate vaccine at age 16 to assure protection through the high-risk college years.

In addition, CDC collects, analyzes, and reports scientific data about vaccines as they are used in real-world settings and with larger populations to ensure the effectiveness and safety of our national vaccine programs and policies and to inform policy and program changes. This includes:

- Implementing vaccine safety priority studies by strengthening vaccine safety surveillance for rare vaccine adverse events
- Improving adverse-event reporting through electronic reporting
- Developing vaccine safety profiles for each newly licensed vaccine in collaboration with other federal agencies

CDC's National Immunization Survey (NIS) is essential to assessing national progress, documenting programmatic achievements, and identifying disparities in immunization coverage rates. The 2013 NIS-Teen data, for example, showed there were modest increases in vaccination coverage among U.S. adolescents between the ages of 13 and 17 years for all vaccines routinely recommended for preteens and teens. However, progress is occurring at an unacceptably slow pace for human papillomavirus (HPV) vaccination, identifying the need for targeted efforts to improve HPV vaccination coverage among adolescent girls.

Based on this information, CDC provided funding to support several activities focused on improving HPV vaccination coverage. These included: 11 immunization programs funded to use their Immunization Information Systems (IIS) for reminder/recall for girls 11-18 years of age and to conduct a comprehensive communications campaign; an organization funded to develop and maintain a national network comprised of cancer-prevention organizations that have the capacity to engage clinical and immunization partners at a national, regional, state, tribal, territorial, jurisdictional, and local level; and professional medical organizations funded to strengthen the clinician recommendation of HPV vaccine by direct outreach and education around HPV vaccine to their members and audiences. In FY 2016, CDC will continue to fund the NIS to monitor progress and inform programmatic strategies.

CDC supports science-based communications campaigns and other efforts to convey the benefits of vaccines to the public to aid individuals in making informed vaccine decisions to protect themselves and their loved ones. CDC also conducts outreach to educate healthcare providers about current immunization policy and clinical best practices to help them protect their patients and communities from VPDs. CDC developed and will maintain a dynamic provider toolkit[2] for conversations with parents about vaccination that includes evidence-based strategies, print materials, and web-based tools.

In FY 2016, CDC will implement health information technologies to give healthcare providers the necessary immunization information to ensure their patients receive the vaccines they need, when they need them, and will manage vaccine supply disruptions and shortages to ensure the best public health outcomes until vaccine supplies are restored. Funds will also be used to respond to disease outbreaks by:

- Rapidly identifying and investigating cases
- Conducting surveillance and laboratory testing
- Implementing targeted vaccination efforts and other measures to control the spread of disease and prevent future outbreaks

From January 1 to November 29, 2014, CDC received reports of 610 measles cases from 24 states in the United States. This is the highest number of cases reported in the United States, including the largest single measles outbreak, since the Vaccines for Children (VFC) Program was established in 1994. Most of the people who contracted measles were not vaccinated or did not know their vaccination status; 48 brought measles into the United States after becoming infected in other countries. CDC provided epidemiology and laboratory support including advanced molecular diagnostic testing for measles. CDC is prioritizing activities to better define the locations and size of unvaccinated populations that pose high risks of sustaining large measles outbreaks that may threaten maintenance of measles elimination in the United States.

Maintaining an Adequate Amount of Vaccine Purchase

The Immunization Program is responsible for providing federally purchased vaccines to protect uninsured Americans from preventable diseases—and thus protect communities from the dangers of low vaccination rates. CDC estimates that, although it is expected these populations will begin to decrease as implementation of expanded health insurance coverage provisions begin, there will continue to be a need for discretionary vaccines to serve uninsured adults and to provide rapid vaccination response to disease outbreaks and other urgent public health needs. It will be important to maintain a safety net for immunization services. The discretionary Immunization Program is also critical because, unlike the federal VFC Program which has very specific eligibility requirements, discretionary Immunization Program vaccine can be used to vaccinate non-VFC-eligible populations, such as adults or the fully-insured, in a public health emergency. For example, in response to a 2014 measles outbreak, the Ohio immunization program supplied 15,240 doses of discretionary Immunization Program measles, mumps, and rubella (MMR) vaccine to 28 different county health departments. In addition,

[2] http://www.cdc.gov/vaccines/hcp.htm

1,030 doses of discretionary Immunization Program vaccine were distributed in four different counties (five different health departments) for a 2014 mumps outbreak.

In FY 2016, CDC will work collaboratively with its awardees and partners to sustain record-high childhood immunization coverage rates and increase immunization coverage rates for children and adults by improving access to immunizations. Specifically, CDC will work to establish access points at complementary venues such as schools, pharmacies, and retail-based clinics; expand the network of VFC providers through recruitment efforts; purchase and deliver vaccine for at-risk populations; and ensure those with insurance have access to immunization services through an in-network provider.

Making Strategic Investments

In some communities, such as rural areas, health departments serve as a critical access point. Since 2009, CDC has invested funding to expand immunization infrastructure to assist public health clinics that serve fully-insured patients with billing for immunization services. This effort preserves access to life-saving immunizations for fully-insured populations. The purpose of billing is to expand access for fully-insured individuals in areas where there is not adequate in-network provider coverage. As of FY 2014, 38 awardees are developing and/or implementing billing systems in targeted areas within their jurisdictions. CDC will support awardees in this area, including using FY 2014 funds to support approximately 15 awardees for additional billing activities. In FY 2016, the Immunization Program will collaborate with other areas of CDC interested in billing and other public health infrastructure improvements needed in the evolving health care environment. However, while expanded billing capacity in public health departments may help to maintain and improve access to immunization services for the fully-insured, it does not replace the need for discretionary Immunization Program vaccines that provide a critical public health safety net for vaccinating the uninsured and responding to VPD outbreaks and other public health emergencies.

Anticipating the evolving role of public health, CDC strategically directed immunization resources to prepare for the new healthcare environment. CDC made investments in Immunization Information Systems (IIS) that inform and support clinical decision-making and allow interfacing with electronic health records (EHRs) and vaccine ordering systems through a competitive process that provided funds to 56 of the 64 immunization awardees. This helped more than 95% of these 56 CDC awardees to reach full compliance with Health Level Seven (HL7) messaging standards for immunization data transactions. In FY 2016, the Immunization Program will provide funding to immunization awardees and support scientific and programmatic expertise to further develop, enhance, and maintain IIS capable of identifying individuals in need of immunization, measuring vaccination coverage rates, producing reminder and recall notices, and interfacing with EHRs. CDC's immunization services program and the public health informatics program collaborate to support Immunization Program awardees in enhancing their IIS to be compliant with standards and requirements set by the national Electronic Health Records – Meaningful Use (EHR-MU) Program.

Immunization Summary

(dollars in millions)	**FY 2014 Final**	**FY 2015 Enacted**	**FY 2016 President's Budget**	**FY 2016 +/- FY 2015**
Immunization Infrastructure[1]	$241.080	$241.080	$241.080	$0.000
Vaccine Purchase[1]	$123.480	$123.480	$85.980	-$37.500
Extramural Program Operations	$188.824	$188.824	$176.698	-$12.126
Intramural Program Operations	$57.463	$57.463	$56.750	-$0.713
Total	**$610.847**	**$610.847**	**$560.508**	**-$50.339**

[1]See Immunization Grants for more information.

Advancing Public Health Immunization Priorities

Funding Category	FY 2016 Immunization Program Funding
Immunization Infrastructure	Will be awarded to support essential public health immunization workforce and systems at the state and local levels. Funds will be used to: recruit and educate networks of immunization providers; provide continual quality assurance; promote public awareness of new and expanded vaccine recommendations; manage vaccine shortages; and respond to VPD outbreaks. These awards include core infrastructure/operations funding that goes to all awardees.
Vaccine Purchase	Will be allocated through direct assistance to provide federally purchased vaccines to vaccinate non-VFC-eligible uninsured populations and to meet urgent public health needs such as controlling VPD outbreaks.
Extramural Program Operations	Will support national immunization policies and programs, including: disease surveillance; vaccine coverage assessment; post-marketing evaluation of vaccine effectiveness and safety; immunization information technologies; centralized vaccine ordering and distribution systems; payor of last resort; public awareness campaigns and resources; and provider education and tools.
Intramural Program Operations	Will provide national public health expertise in immunization and VPDs to support national, state, and local vaccination program efforts, including expertise in epidemiology and surveillance, laboratory methods and science, immunology, immunization policy, health communications science, vaccine management, and program implementation.

Supporting State and Territorial Immunization Programs

In FY 2016, CDC will provide infrastructure funding to 64 awardees—including all 50 states; Washington, D.C.; five large cities; five territories; and three Freely Associated States—through a non-competitive, formula-based, discretionary cooperative agreement program that provides financial assistance for state and local immunization operations. Through population-based awards and collaboration, the discretionary Immunization Program established a comprehensive immunization system providing:

- Public sector vaccine ordering and distribution
- Continual quality assurance
- Provider recruitment and enrollment in the VFC Program
- Provider education and public awareness focused on new and expanded vaccine recommendations
- Management of vaccine shortages

In addition, CDC will provide its 64 awardees with direct assistance for vaccine purchased from the federal contracts. As part of the new five-year funding cycle that began in FY 2013, CDC adopted a vaccine use policy that Immunization Program–purchased vaccines cannot be used for routine vaccination of fully insured individuals. Assuring that public funds are not subsidizing insured benefits allows CDC to target its resources more effectively to meet public health priorities. In alignment with the vaccine use policy and to assure that public funds are not subsidizing insured benefits, the FY 2016 budget continues to allocate vaccine direct assistance based on the estimated number of uninsured adults within each awardee's jurisdiction. For each fiscal year's allocation of vaccine direct assistance to U.S state and city awardees, CDC uses the most currently available U.S. Census data for uninsured adults ages 19 to 64 years as its base population and allocates vaccine to each awardee based on their proportion of the uninsured adult population, as done since FY 2014. The

allocation to awardees is adjusted as necessary to minimize large fluctuations--supporting an orderly transition to the new vaccine allocation formula, limiting disruption to the Immunization Program, and ensuring that all awardees receive some amount of discretionary vaccine to provide a safety net. CDC monitors spend plans developed by awardees, and makes further adjustments as needed throughout the year so that no vaccine goes to waste. The allocation of vaccine to the five U.S. Territories and three Freely Associated States was not changed.

CDC provides national public health expertise in VPDs that supports the 64 awardees, including expertise in:

- Epidemiology and surveillance
- Laboratory methods and science
- Immunology
- Immunization policy
- Health communications science
- Vaccine management
- Program implementation

Immunization Cooperative Agreements[1, 2, 3]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	64	64	64	64	64	0
- New Awards	0	0	0	0	0	0
- Continuing Awards	64	64	64	64	64	0
Average Award	$7.745	$5.315	$4.350	$5.778	$4.991	-$0.787
Range of Awards	$0.417–$55.710	$0.572–$37.773	$0.456–$26.600	$0.609–$32.983	$0.539-$30.018	N/A
Total Awards	**$557.870**	**$340.138**	**$278.402**	**$369.767**	**$319.428**	**-$50.339**

[1]This table includes Immunization Program budget authority and Prevention and Public Health Funds. It does not include funds from the former program implementation line.

[2]Immunization operations awards and vaccine direct assistance are included in the table. In FY 2013, CDC awarded a new five-year cooperative agreement for Immunization Program funding.

[3]These funds are awarded by formula.

Influenza Planning and Response Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$172.126	$172.558	$187.558	+$15.000
PHSSEF	N/A	$15.000	N/A	-$15.000
Total[1]	**$172.126**	**$187.558**	**$187.558**	**$0.000**

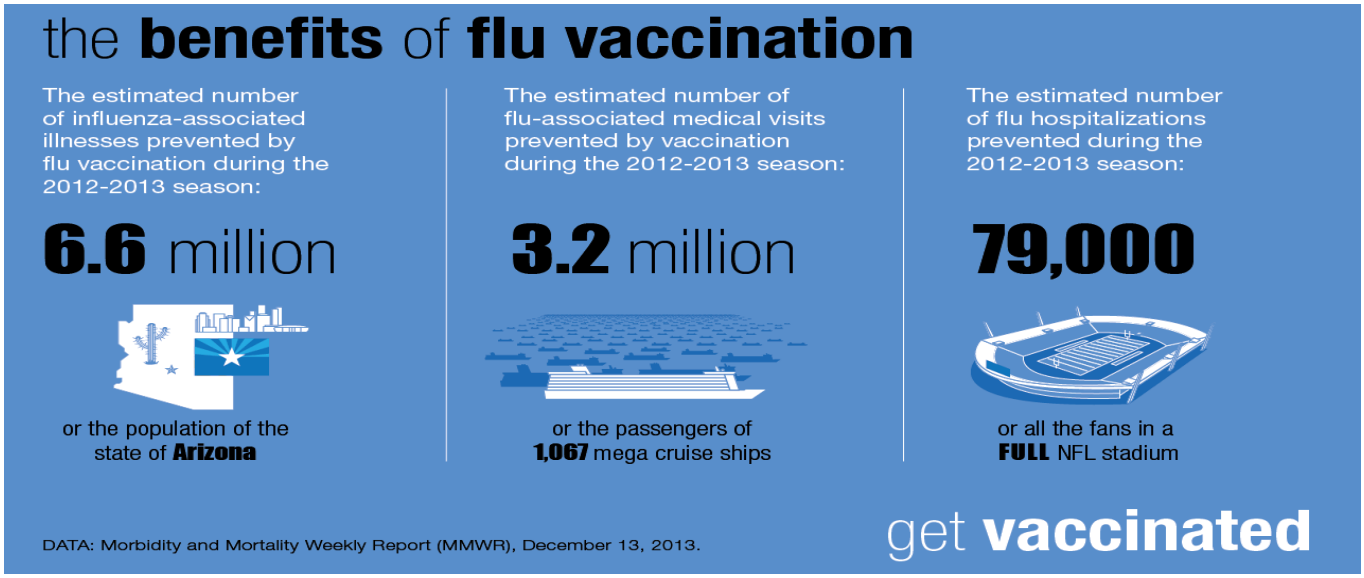
[1] FY 2014 amount does not include $29.124 million in HHS Pan Flu funding (of which $15.3 million is for International Flu activities).

Overview

CDC's influenza planning and response activities ensure a comprehensive response for seasonal influenza as well as the ability to respond to an influenza pandemic. CDC's influenza program works to detect, respond to, and prevent influenza disease that can cause mild to severe illness, and at times, death. Some populations—such as older adults, young children, and people with certain health conditions—are at higher risk for serious influenza complications. Over a period of 30 years, between 1976 and 2006, annual estimates of influenza-associated deaths in the United States ranged from a low of 3,000 to a high of 49,000 people. On average, influenza causes more than 200,000 hospitalizations annually, and a study[3] published in 2007 estimated direct medical costs for hospitalizations and outpatient visits from seasonal influenza-related complications at more than $10 billion annually. Not only can influenza infections be severe, but influenza seasons are unpredictable—requiring constant vigilance from CDC and its domestic and international public health partners. CDC provides leadership and a cutting-edge scientific and programmatic foundation for the diagnosis, prevention, and control of influenza domestically and internationally. CDC's annual seasonal influenza activities improve preparedness by:

- Strengthening surveillance and diagnostic capacity
- Improving public awareness and provider knowledge about influenza and the importance of vaccination, other prevention measures, and early treatment
- Enhancing our international, federal, state, and local partnerships to respond quickly to influenza epidemics

Prevention of seasonal influenza requires an annual reassessment of virus strains contained in the vaccine—an assessment based on CDC surveillance data. The vaccine must be produced and administered annually to account for seasonal variations.



[3] http://download.thelancet.com/flatcontentassets/H1N1-flu/epidemiology/epidemiology-14.pdf

Since 2010, the Advisory Committee on Immunization Practices (ACIP) has recommended influenza vaccine for all Americans aged six months and older. To implement this recommendation, CDC works to educate providers and raise public awareness. CDC makes special efforts to reach high-risk individuals, such as pregnant women, and provides further outreach to subspecialty medical providers to increase vaccination of persons at especially high risk of severe illness or death from influenza. CDC also promotes vaccination at non-traditional venues—such as retail pharmacies—to increase access to vaccine services outside of clinic settings and hours.

Budget Request

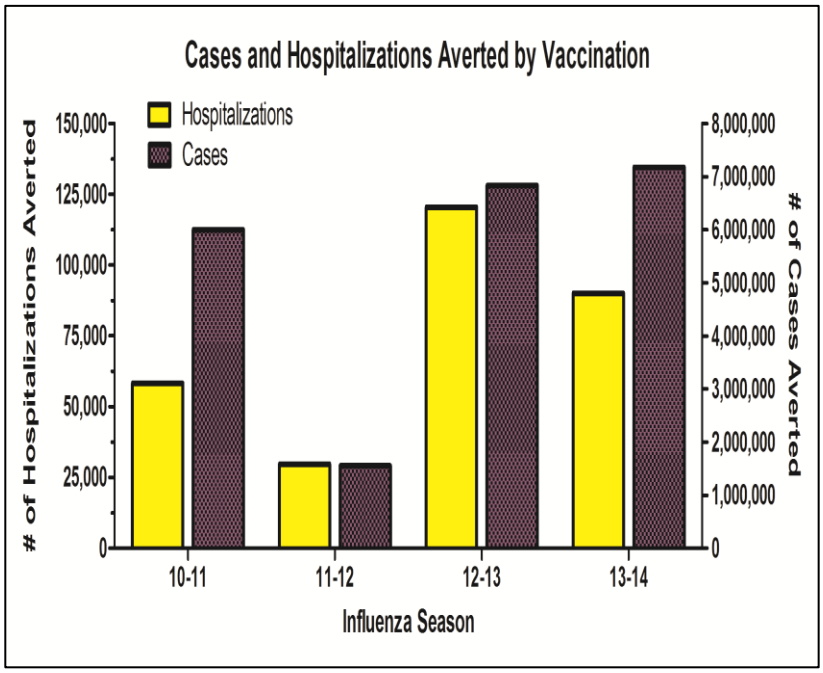
CDC's FY 2016 request of **$187,558,000** for influenza planning and response is level with the FY 2015 Enacted level. FY 2016 funding will support the following activities:

- Influenza Prevention
- Detection and Monitoring of Influenza
- State/Municipality/Territorial Laboratory Capacity Support
- Response to Influenza Pandemics

Influenza Prevention

In FY 2016, CDC will support efforts to prevent influenza through vaccination. CDC focuses on increasing demand with healthcare providers for influenza vaccination each season through investments in health communication with providers and the general public, targeted outreach to high-risk populations, and partnerships with pharmacists as a means to extend the reach of influenza vaccination. Annual vaccination campaigns help reach the Healthy People 2020 influenza vaccination goals, including those for minority and high-risk populations, and they also help build capacity for vaccination efforts in the event of an influenza pandemic.

CDC studies published in June 2013[3] and December 2013[4] estimated influenza illness and hospitalizations averted by influenza vaccination in the United States[4,5]. These studies showed that influenza vaccination programs in the United States produce a substantial health benefit in terms of averted cases, clinic visits, and hospitalizations. However, opportunities for improvement were discovered. It was found that there was a potential for additional disease prevention through increased vaccination coverage, particularly among nonelderly adults, and increased vaccine effectiveness, particularly among the elderly. CDC will continue to examine the level of effectiveness of the influenza program by measuring aversion of illness and death, as well as costs saved to the American public.



[4] http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0066312
[5] http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6249a2.htm?s_cid=mm6249a2_w

To complement national efforts, resources will be available to all 64 immunization awardees to increase demand for seasonal influenza—including school-located vaccination clinics—and to improve influenza coverage rates among priority populations (school-aged children, high-risk adults, and racial and ethnic groups). CDC will measure vaccination coverage, with particular attention to racial and ethnic minority populations with historically low coverage rates. These surveys guide outreach efforts that result in improvement of influenza vaccination rates, particularly among children.

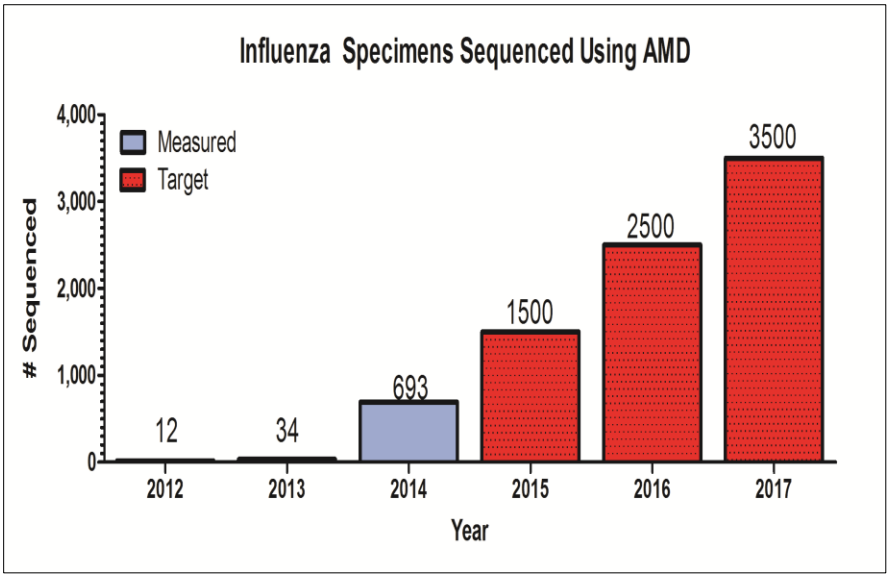
The Partnership for Influenza Vaccine Introduction (PIVI) is a growing CDC-led collaboration between public and private partners. PIVI supplies donated influenza vaccine to low- and middle-income countries that are otherwise ready to establish or expand their influenza vaccination programs, and assists with vaccination program evaluation and sustainability planning. In 2014, PIVI's partners made the Lao People's Democratic Republic (PDR) annual flu vaccination campaign possible for a third year in a row, and expanded vaccination of pregnant women in Nicaragua for a second year in a row. Vaccination donation programs were launched in 2014 in Morocco and Armenia.

Detection and Monitoring of Influenza

Detection and monitoring of influenza involves a network of laboratories at the state level and internationally that are routinely testing samples to:

- Determine severity of the influenza season[6]
- Identify viruses that are causing disease and may pose a pandemic threat
- Determine the effectiveness of the influenza vaccine and other interventions

Ongoing work to improve laboratory and surveillance methods ensures that CDC can adequately respond to unusual cases. To build capacity for influenza surveillance, CDC continues to train public health laboratory workers at state laboratories that have similar responsibilities during foodborne outbreaks.



In FY 2016, CDC will serve as a World Health Organization (WHO) Collaborating Center to rapidly detect, identify, and characterize emerging influenza viruses so vaccine-candidate viruses used to produce vaccines for seasonal and novel viruses are rapidly selected. CDC receives and characterizes approximately 11,000 influenza virus specimens each year. During the 2013/2014 influenza season, CDC was able to fully characterize nearly 700 virus specimens using a new deep sequencing method known as Advanced Molecular Detection (AMD). AMD uses advanced molecular sequencing tools along with cutting-edge information technologies and bioinformatics experts to enable faster and more effective infectious disease prevention and control. The number of influenza virus specimens received and characterized fluctuates by year depending on the severity and burden of the disease. Worldwide characterization of these specimens is essential to the production of each season's influenza vaccine. It also aids

[6] http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

in informing vaccine policies and recommendations as well as decisions regarding potential vaccines for novel viruses with pandemic potential. Effective influenza control depends on shortening the time between identification of novel influenza viruses and delivery of effective vaccines.

CDC will work with domestic and international partners in the intersection of human and animal health to improve surveillance, conduct swift outbreak responses, and complete threat assessments for emerging influenza viruses with pandemic potential. Pandemics emerge when a virus that is predominantly transmitted among animals develops the ability to be transmitted among humans. Each human case of infection with an animal influenza virus represents the potential for a pandemic. CDC will conduct research to understand better the complex factors that determine how and when these novel influenza viruses develop the ability to be transmitted from person to person.

Because novel influenza viruses can emerge anywhere in the world, CDC will support the international monitoring of influenza and evaluate countries' core capacities to conduct surveillance, perform laboratory testing, and prepare to respond to influenza pandemics.

CDC's influenza program funds WHO regional offices as well as partner nations through cooperative agreements. CDC will continue this support by funding more than 40 countries, with emphasis on countries that continue to experience animal outbreaks and human cases of H5N1 and H7N9 influenza. Core activities funded through these agreements include:

- Establishing, expanding, and maintaining influenza surveillance and laboratory capacity
- Developing global and local pandemic plans and influenza prevention policies
- Supporting targeted research projects to address critical needs
- Building the evidence base for decisions on influenza vaccine program expansion

CDC's international support resulted in twice as many countries reporting to WHO FluNet since 2005 when the number of countries from which specimens were processed was 59; as of 2013, 121 countries report to WHO FluNet. CDC will work on expanding virus sample sharing among countries so that vaccines and diagnostic tests for viruses with pandemic potential can be produced.

Domestically, CDC will support the capability of state and local health departments to conduct influenza laboratory testing. CDC will provide training and consultation to maintain the number of public health laboratories able to perform testing for resistance to antiviral medications and to participate in CDC evaluations of new influenza diagnostic tests.

Supporting State/Municipality/Territorial Laboratory Capacity

The Epidemiology and Laboratory Capacity for Infectious Diseases cooperative agreement (ELC) assists states and eligible local public health agencies—strengthening their basic epidemiologic and laboratory capacity to address infectious disease threats. CDC funds 50 states, five municipalities, and one territory through the ELC to conduct influenza surveillance and diagnostic activities with funding from the Influenza Planning and Response budget line.

In FY 2016, public health departments will be funded to improve detection of novel human influenza virus infections, such as the H3N2v and H7N9 influenza virus. Rapid and thorough investigations determined the H3N2v virus caused 308 human cases in the United States in 2012. Collaboration between the state and local health authorities and CDC is essential for risk assessment and response to similar novel viruses. In addition, these funds support seasonal influenza surveillance consisting of eight interrelated systems. This network of systems provides data on:

- Influenza viruses

- Outpatient influenza-like illness
- Influenza-associated hospitalizations
- Influenza-associated deaths
- Geographic distribution of the viruses

The network also forms the foundation for pandemic influenza surveillance.

CDC provides ELC awardees with the reporting websites and other materials necessary to report influenza surveillance data throughout the year from public health laboratories, outpatient influenza-like illness surveillance sites, and vital statistics offices. CDC updates awardees on the current influenza season and any pertinent developments in influenza surveillance during monthly conference calls, yearly in-person meetings, and individually as needed. Awardees also rely on CDC's epidemiologic, laboratory, and programmatic assistance during investigations of outbreaks or unusual cases of influenza (e.g., pediatric deaths, human infections with novel influenza A viruses, and antiviral resistant influenza infections or outbreaks).

Influenza Planning and Response ELC Grants[1, 2]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	56	56	56	56	56	0
- New Awards	0	0	0	0	0	0
- Continuing Awards	56	56	56	56	56	0
Average Award	$0.117	$0.107	$0.107	$0.107	$0.107	$0.000
Range of Awards	$0.016–$0.232	$0.016–$0.232	$0.016–$0.232	$0.016–$0.232	$0.016–$0.232	N/A
Total Grant Awards	**$6.526**	**$6.000**	**$6.000**	**$6.000**	**$6.000**	**$0.000**

[1]This table only reflects Influenza Planning and Response funding that goes out through the ELC, which also funds other infectious disease activities.
[2]These funds are not awarded by formula.

Response to Influenza Pandemics

In FY 2016, CDC will work to ensure the availability and effectiveness of medical countermeasures and equipment in the event of an influenza pandemic. Scientific experts will update or develop guidance that will inform purchasing countermeasure requirements. Examples of countermeasures include antiviral drugs, respirators or masks, and ventilators to assist patients with breathing. CDC also will develop and evaluate solutions to lessen the impact of an influenza pandemic through non-pharmaceutical interventions or actions that people and communities can take to help slow the spread of influenza. In addition, CDC is developing a nationwide system of triage call centers that would be activated during a severe pandemic to provide advice to ill individuals and thereby reduce the burden on hospitals, healthcare facilities, and public health departments. CDC also is collaborating with the National Association of County and City Health Officials (NACCHO), the Association of State and Territorial Health Officials (ASTHO), and national associations that represent pharmacies, pharmacists, and pharmaceutical distributors on efforts to improve antiviral distribution and dispensing at the local level during a pandemic.

CDC will sustain the nation's ability to respond to influenza pandemics by ensuring well-trained staff are in place for pandemic response. CDC will also provide scientific and programmatic expertise to help CDC's Public Health Emergency Preparedness (PHEP) Cooperative Agreement Program and HHS' Hospital Preparedness Program (HPP) Cooperative Agreement awardees meet all hazard requirements of the Pandemic and All Hazards Preparedness Reauthorization Act of 2013. CDC collaborates with awardees to determine their jurisdictional priorities for capability development and sustainment, along with related performance measures. The pandemic influenza capabilities include Public Health Surveillance & Epidemiological Investigation, Public Health Laboratory Testing, Medical Countermeasure Dispensing, and Emergency Operations Coordination. In addition, CDC will support planning efforts among health departments, hospitals, and emergency responders. Coordination among these groups will result in more integrated emergency response plans prior to a public

health disaster to ensure a rapid, efficient, and effective response at the community level. CDC will test its response capabilities with federal, state, and local partners in FY 2015 and FY 2016 with multiple exercises using techniques such as virtual tabletop and functional exercises to evaluate and improve its response plans based on lessons from previous responses and exercises.

Affordable Care Act Prevention and Public Health Fund

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
ACA/PPHF	**$160.300**	**$210.300**	**$210.300**	**$0.000**

In FY 2016, CDC's request of **$210,300,000** from the Affordable Care Act Prevention and Public Health Fund will be used in conjunction with requested budget authority to support immunization activities and advance modernization of CDC's immunization infrastructure and evidence base. CDC will also use these funds to support vaccine purchase, state operations, and communications.

In FY 2016, the Immunization Program will remain responsible for the essential public health workforce and systems at the national, state, and local levels that protect all Americans, regardless of health insurance status, from disability and death from vaccine-preventable diseases. CDC will conduct scientific studies that provide the evidence base for national immunization policy, including assessing burden of disease, vaccine effectiveness and safety, economic analyses, and program feasibility. The Immunization Program will continue to be responsible for providing federally purchased vaccines to protect uninsured Americans from preventable diseases and will also provide funding to immunization awardees and support scientific and programmatic expertise to further develop, enhance, and maintain Immunization Information Systems.

State Table: Discretionary (Section 317)[1,2,3]

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget	FY 2016 +/- FY 2015
Alabama	$4,220,523	$5,610,013	$4,843,407	-$766,606
Alaska	$1,327,869	$1,655,882	$1,500,509	-$155,372
Arizona	$5,654,141	$7,219,254	$6,425,255	-$793,999
Arkansas	$2,404,085	$2,857,199	$2,686,561	-$170,639
California	$26,599,778	$32,983,425	$30,018,106	-$2,965,319
Colorado	$4,422,150	$5,856,363	$5,070,161	-$786,202
Connecticut	$3,238,098	$4,330,516	$3,721,627	-$608,889
Delaware	$984,879	$1,193,879	$1,105,597	-$88,283
District of Columbia (D.C.)	$1,403,607	$1,849,156	$1,607,220	-$241,936
Florida	$14,193,063	$19,078,243	$16,333,165	-$2,745,077
Georgia	$7,866,150	$10,335,698	$9,001,385	-$1,334,313
Hawaii	$1,626,995	$2,007,318	$1,833,913	-$173,405
Idaho	$1,664,657	$2,146,689	$1,896,224	-$250,466
Illinois	$5,393,447	$6,344,907	$6,013,256	-$331,651
Indiana	$4,822,902	$6,324,174	$5,516,190	-$807,985
Iowa	$2,908,022	$3,837,027	$3,331,135	-$505,892
Kansas	$2,505,855	$3,101,248	$2,826,602	-$274,645
Kentucky	$3,604,983	$4,722,140	$4,122,127	-$600,013
Louisiana	$2,616,273	$3,244,399	$2,952,543	-$291,855
Maine	$1,709,560	$2,038,174	$1,911,799	-$126,375
Maryland	$3,916,948	$4,899,550	$4,429,415	-$470,134
Massachusetts	$5,677,344	$7,800,711	$6,569,583	-$1,231,127
Michigan	$8,449,960	$11,500,465	$9,754,458	-$1,746,007
Minnesota	$4,482,996	$5,935,745	$5,139,667	-$796,077
Mississippi	$3,029,524	$3,954,412	$3,461,137	-$493,275
Missouri	$4,592,034	$6,135,257	$5,276,464	-$858,793
Montana	$1,101,539	$1,434,141	$1,257,685	-$176,456
Nebraska	$1,840,748	$2,371,803	$2,096,390	-$275,413
Nevada	$2,356,569	$3,073,710	$2,691,816	-$381,895
New Hampshire	$1,422,481	$1,840,794	$1,621,729	-$219,065
New Jersey	$6,437,266	$8,417,324	$7,357,544	-$1,059,781
New Mexico	$2,322,718	$3,012,755	$2,649,557	-$363,198
New York	$7,998,180	$10,179,752	$9,082,051	-$1,097,701
North Carolina	$7,443,828	$10,043,245	$8,574,217	-$1,469,028
North Dakota	$945,361	$1,233,390	$1,079,921	-$153,469
Ohio	$8,754,034	$11,753,835	$10,071,171	-$1,682,665
Oklahoma	$3,706,945	$5,025,036	$4,274,913	-$750,123
Oregon	$3,271,148	$4,250,551	$3,733,070	-$517,481
Pennsylvania	$8,638,697	$12,057,123	$10,036,415	-$2,020,709
Rhode Island	$1,851,822	$2,665,417	$2,168,715	-$496,701
South Carolina	$3,967,026	$5,236,146	$4,544,607	-$691,539
South Dakota	$1,555,206	$2,169,931	$1,806,688	-$363,244

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget	FY 2016 +/- FY 2015
Tennessee	$5,620,229	$7,575,923	$6,472,216	-$1,103,707
Texas	$20,572,037	$28,064,495	$23,761,993	-$4,302,501
Utah	$2,527,274	$3,198,726	$2,865,933	-$332,793
Vermont	$1,218,482	$1,690,883	$1,413,541	-$277,342
Washington	$8,244,729	$12,341,317	$9,756,996	-$2,584,322
West Virginia	$1,888,192	$2,563,636	$2,178,362	-$385,274
Wisconsin	$5,095,514	$6,966,474	$5,888,876	-$1,077,599
Wyoming	$843,276	$1,082,416	$959,504	-$122,912
Cities				
Chicago	$3,250,962	$4,018,543	$3,666,046	-$352,497
Houston[4]	$2,034,625	$2,393,097	$2,268,344	-$124,753
New York City	$8,016,769	$10,738,329	$9,217,504	-$1,520,825
Philadelphia	$1,767,705	$2,296,254	$2,017,172	-$279,083
San Antonio	$1,508,142	$1,773,855	$1,681,384	-$92,471
Territories				
American Samoa	$506,287	$608,580	$567,243	-$41,337
Guam	$2,087,309	$3,195,631	$2,485,387	-$710,245
Marshall Islands	$2,514,810	$3,871,840	$2,999,059	-$872,781
Micronesia	$5,169,144	$8,535,275	$6,287,803	-$2,247,472
Northern Mariana Islands	$1,520,276	$2,243,962	$1,792,352	-$451,610
Puerto Rico	$3,806,074	$5,298,558	$4,418,975	-$879,583
Republic Of Palau	$456,308	$679,087	$539,161	-$139,926
Virgin Islands	$876,022	$1,032,503	$977,109	-$55,394
Subtotal States	**$244,888,044**	**$323,081,484**	**$280,510,461**	**-$42,571,023**
Subtotal Cities	**$16,578,203**	**$21,220,079**	**$18,850,450**	**-$2,369,629**
Subtotal Territories	**$16,936,230**	**$25,465,437**	**$20,067,089**	**-$5,398,348**
Total States/Cities/Territories	**$278,402,477**	**$369,767,000**	**$319,428,000**	**-$50,339,000**
Total Resources	**$278,402,477**	**$369,767,000**	**$319,428,000**	**-$50,339,000**

[1]CFDA NUMBER: 93.268, Discretionary

[2]This State Table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial awardees). For a more comprehensive view of grant and cooperative agreement funding to awardees by jurisdiction, visit http://wwwn.cdc.gov/FundingProfiles/FundingProfilesRIA/.

[3]Includes vaccine direct assistance and immunization infrastructure/operations grant funding.

[4]Immunization infrastructure/operations grant funding only; vaccine direct assistance for Houston is included with Texas.

State Table: Vaccines for Children[1,2]

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget	FY 2016 +/- FY 2015
Alaska	$10,711,791	$13,250,460	$14,112,491	$862,031
Arizona	$80,306,071	$91,478,193	$97,608,602	$6,130,409
Arkansas	$46,842,934	$52,943,050	$56,491,838	$3,548,788
California	$422,835,814	$478,052,923	$510,096,650	$32,043,727
Colorado	$44,051,071	$50,849,033	$54,255,377	$3,406,344
Connecticut	$32,067,690	$38,506,596	$41,083,267	$2,576,670
Delaware	$9,912,439	$12,353,191	$13,178,974	$825,783
District of Columbia (D.C.)	$9,215,073	$11,565,812	$12,338,815	$773,003
Florida	$209,310,910	$235,490,317	$251,277,417	$15,787,099
Georgia	$118,840,403	$135,089,209	$144,142,762	$9,053,554
Hawaii	$14,677,105	$19,668,359	$20,980,694	$1,312,336
Idaho	$16,226,399	$18,966,955	$20,237,085	$1,270,130
Illinois	$80,860,664	$93,307,347	$99,558,007	$6,250,660
Indiana	$63,249,685	$72,657,520	$77,525,478	$4,867,958
Iowa	$26,891,801	$31,649,954	$33,768,996	$2,119,042
Kansas	$23,009,027	$27,055,973	$28,867,482	$1,811,509
Kentucky	$44,147,114	$50,085,866	$53,442,765	$3,356,898
Louisiana	$64,029,433	$72,117,098	$76,951,619	$4,834,522
Maine	$12,317,804	$15,918,780	$16,981,905	$1,063,124
Maryland	$65,420,005	$74,002,360	$78,962,636	$4,960,276
Massachusetts	$55,942,305	$65,310,889	$69,684,611	$4,373,722
Michigan	$85,312,778	$98,472,482	$105,069,101	$6,596,619
Minnesota	$41,465,150	$48,066,665	$51,286,231	$3,219,566
Mississippi	$38,722,580	$43,992,058	$46,940,413	$2,948,356
Missouri	$53,046,118	$60,511,584	$64,566,599	$4,055,016
Montana	$8,384,393	$10,180,777	$10,861,816	$681,039
Nebraska	$17,466,815	$20,425,956	$21,793,771	$1,367,815
Nevada	$29,873,880	$35,071,438	$37,419,723	$2,348,285
New Hampshire	$8,987,025	$11,415,886	$12,178,628	$762,742
New Jersey	$64,740,239	$75,743,875	$80,815,964	$5,072,088
New Mexico	$33,997,955	$39,768,826	$42,431,908	$2,663,081
New York	$81,680,133	$98,045,786	$104,606,588	$6,560,802
North Carolina	$106,833,120	$121,785,603	$129,946,887	$8,161,285
North Dakota	$6,034,246	$7,489,797	$7,990,527	$500,730
Ohio	$103,648,960	$116,308,889	$124,106,751	$7,797,862
Oklahoma	$54,461,248	$62,882,814	$67,095,260	$4,212,446
Oregon	$30,402,979	$36,120,482	$38,538,200	$2,417,718
Pennsylvania	$77,435,872	$91,300,907	$97,413,419	$6,112,511
Rhode Island	$10,123,715	$12,844,597	$13,702,824	$858,227
South Carolina	$55,736,476	$64,426,511	$68,742,231	$4,315,720
South Dakota	$9,284,479	$11,188,321	$11,936,914	$748,594
Tennessee	$70,026,622	$79,291,220	$84,605,848	$5,314,629
Texas	$362,540,692	$408,954,344	$436,368,238	$27,413,895

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget	FY 2016 +/- FY 2015
Utah	$24,156,801	$28,669,237	$30,588,264	$1,919,027
Vermont	$6,000,936	$8,414,601	$8,975,433	$560,832
Virginia	$59,679,982	$67,164,060	$71,666,651	$4,502,591
Washington	$75,424,480	$89,860,649	$95,874,986	$6,014,337
West Virginia	$19,966,535	$23,273,116	$24,831,734	$1,558,618
Wisconsin	$41,613,587	$47,984,613	$51,199,169	$3,214,556
Wyoming	$5,630,047	$7,072,404	$7,545,078	$472,674
Cities				
Chicago	$45,441,851	$53,644,671	$57,236,008	$3,591,336
Houston[3]	$712,576	$2,613,517	$2,785,156	$171,639
New York City	$124,479,281	$142,187,749	$151,715,697	$9,527,948
Philadelphia	$25,169,625	$30,656,054	$32,706,606	$2,050,553
San Antonio	$612,485	$2,246,412	$2,393,942	$147,530
Territories				
American Samoa	$1,562,898	$1,860,778	$1,984,317	$123,539
Guam	$2,614,555	$3,595,470	$3,831,536	$236,066
Northern Mariana Islands	$1,780,260	$2,250,598	$2,399,448	$148,850
Puerto Rico	$48,192,976	$56,143,626	$59,903,665	$3,760,039
Virgin Islands	$2,030,342	$4,114,640	$4,386,876	$272,236
Subtotal States	**$3,090,929,537**	**$3,552,098,484**	**$3,790,057,748**	**$237,959,264**
Subtotal Cities	**$196,415,818**	**$231,348,403**	**$246,837,409**	**$15,489,006**
Subtotal Territories	**$56,181,030**	**$67,965,113**	**$72,505,843**	**$4,540,730**
Total States/Cities/Territories	**$3,343,526,385**	**$3,851,412,000**	**$4,109,401,000**	**$257,989,000**
Other Adjustments[4]	$213,205,048	$129,838,000	$94,000	$129,932,000
Total Resources[5]	**$ 3,556,731,433**	**$3,981,250,000**	**$4,109,307,000**	**$128,057,000**

[1]CFDA Number: 93.268, Mandatory

[2]This State Table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial grantees). For a more comprehensive view of grant and cooperative agreement funding to grantees by jurisdiction, visit http://wwwn.cdc.gov/FundingProfiles/FundingProfilesRIA/.

[3]Funding for Houston only includes funding for operations, not the cost of vaccines. Funding for Texas includes the cost of vaccines for Houston.

[4] Other adjustments include vaccine that is in inventory at the centralized distribution center but has not been ordered by immunization providers, funds for centralized vaccine distribution activities, developing a new centralized vaccine ordering system, pediatric stockpile, influenza stockpile, stockpile storage and rotation, and program support services.

[5]Total resources for FY 2014 reflect Actuals; total resources for FY 2015 and FY 2016 are based on the OMB-approved FY 2016 VFC PB 10 Year Table.

HIV/AIDS, VIRAL HEPATITIS, SEXUALLY TRANSMITTED INFECTIONS, AND TUBERCULOSIS

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$1,117.609	$1,117.609	$1,161.747	+$44.138
Total	**$1,117.609**	**$1,117.609**	**$1,161.747**	**+$44.138**
FTEs	1,198	1,198	1,207	+9
HIV/AIDS, Viral Hepatitis, STI, and TB				
- Domestic HIV/AIDS Prevention and Research	$786.712	$786.712	$799.361	+$12.649
- Viral Hepatitis	$31.331	$31.331	$62.820	+$31.489
- Sexually Transmitted Infections	$157.310	$157.310	$157.310	$0.000
- Tuberculosis	$142.256	$142.256	$142.256	$0.000

Summary

CDC prevents and controls HIV, viral hepatitis, sexually transmitted infections (STIs or STDs), and tuberculosis (TB) in the United States to attain CDC's overarching goal of protecting Americans from infectious diseases. These efforts aim to achieve the objectives of the *National HIV/AIDS Strategy*[7]; the *HIV Continuum of Care Initiative*[8]; the *HHS Action Plan for the Prevention, Care, and Treatment of Viral Hepatitis*[9]; Healthy People 2020[10]; and the *National Prevention Strategy*.[11] CDC focuses on the populations most affected, including racial and ethnic minorities such as African Americans and Latinos, men of all races who have sex with men (MSM), persons born outside the United States, and sexually active adolescents and young adults. CDC's strategic role is to monitor these infections and related risk factors; implement effective prevention and control programs; and conduct prevention research, demonstration projects, and evaluation efforts to refine prevention approaches. Because HIV, viral hepatitis, STIs, and TB share many social, environmental, behavioral, and biological determinants, CDC's programs open a broader dialogue that includes positive messages about prevention and wellness, rather than only disease incidence or avoidance. CDC also incorporates social determinants of health, which consider socioeconomic status, healthcare service access and quality, and key structural, contextual, and environmental factors in the planning of interventions and programs.

CDC's FY 2016 request of **$1,161,747,000** for HIV/AIDS, Viral Hepatitis, Sexually Transmitted Infections, and Tuberculosis prevention is $44,138,000 above the FY 2015 Enacted level. An increase of $12,649,000 for HIV/AIDS prevention will be targeted to those most at risk for acquiring HIV—including youth and high risk HIV negative persons, and persons at risk for transmitting HIV, particularly those not engaged in care. CDC is also requesting additional funding to develop integrated state-wide plans for HIV prevention, care, treatment, and other supportive services. CDC will continue to align prevention activities with the *National HIV/AIDS Strategy* and to promote high-impact prevention focusing resources on effective, scalable, and sustainable prevention strategies along the HIV continuum of care for persons living with HIV and populations at highest risk for HIV.

In addition, $31,489,000 of the proposed increase is requested for viral hepatitis prevention efforts. This increase will be used to prevent deaths due to viral hepatitis, stop the hepatitis C epidemic among young people, and reduce mother-to-child transmission of hepatitis B—all priorities of the *HHS Action Plan for the Prevention, Care and Treatment of Viral Hepatitis*.

[7] http://www.whitehouse.gov/administration/eop/onap/nhas
[8] http://aids.gov/federal-resources/policies/care-continuum/
[9] http://www.cdc.gov/hepatitis/HHS-ActionPlan.htm
[10] https://www.healthypeople.gov/
[11] http://www.surgeongeneral.gov/initiatives/prevention/strategy/

In FY 2016, CDC will continue to improve program collaboration and service integration[12] (PCSI) across HIV, viral hepatitis, STI, and TB prevention programs. Through PCSI, CDC strengthens collaborative work across disease areas and integrates services at the individual, or client, level, resulting in improved efficiency, cost effectiveness, and health outcomes. CDC publishes information on best practices and encourages HIV, viral hepatitis, STIs, and TB grantees to address related infections and to develop capacities that can be shared across programs. CDC also continues to support HIV, viral hepatitis, STI, and TB control activities in six Pacific Islands jurisdictions through a single cooperative agreement with each jurisdiction to reduce administrative burden on these small areas.

CDC will also continue to leverage the healthcare system to improve the prevention and control of HIV, viral hepatitis, STIs, and TB in the United States, and will continue to support critical public health services at the state and local levels that complement those healthcare system services necessary to ensure overall population health. These activities include surveillance, monitoring, testing, partner services and contact investigations, laboratory services, provider training, operational research, and outreach to populations unlikely to access clinical care.

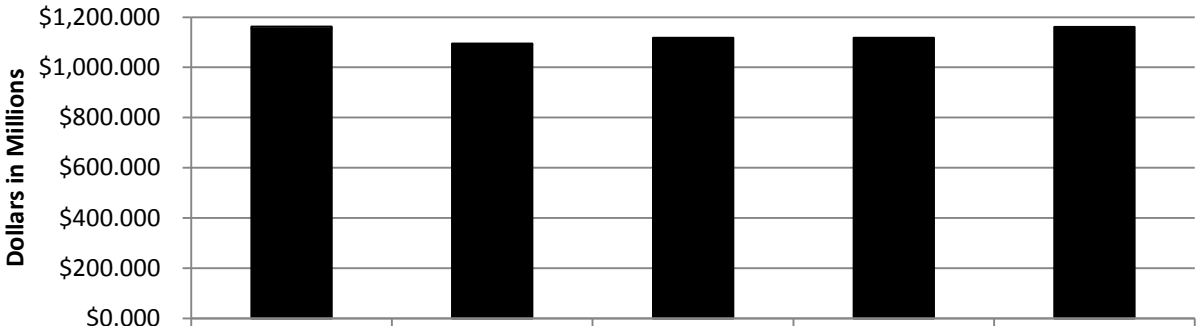
To further improve the efficiency and impact of prevention efforts, CDC initiated epidemic and economic modeling projects. Researchers from Harvard, Emory University, and the University of California-San Francisco will work collaboratively with CDC to develop epidemic and economic models to inform the planning and implementation of interventions targeting HIV, viral hepatitis, STIs, TB, and school health. These models will provide critical information on the potential costs, benefits, and return on investment of specific intervention strategies that can have population-level impact.

Performance Highlights

- Since CDC began applying advanced molecular detection (AMD) methods for tuberculosis (TB) and drug resistance detection, CDC has increased the number of molecular tests of drug resistance for state and local health departments from 41 in 2009 to 575 in 2013. During the first three-quarters of FY 2014, CDC performed 413 molecular tests of drug resistance for state and local health departments.
- CDC has expanded its HIV testing efforts, especially focusing on communities that have a high burden of HIV infection among African Americans and Latinos. Preliminary data show CDC-supported health departments performed nearly 3 million HIV tests in 2013, with almost 15,000 people newly identified as HIV positive.
- A study conducted by the CDC and the National Institutes of Health found that two new antibiotic regimens using existing drugs successfully treated gonorrhea infections in a clinical trial. Researchers found 100 percent effectiveness of the injectable gentamicin/oral azithromycin combination in curing genital gonorrhea infections, and 99.5% effectiveness of the oral gemifloxacin/oral azithromycin combination. Both combinations cured 100% of infections of the throat.

[12] http://www.cdc.gov/nchhstp/programintegration/

HIV, Viral Hepatitis, Sexually Transmitted Infections, and TB Funding History[1]



	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 PB
Total	$1,162.964	$1,095.371	$1,117.609	$1,117.609	$1,161.747
ACA/PPHF	$10.000	$0.000	$0.000	$0.000	$0.000
PHS Eval	$0.000	$3.691	$0.000	$0.000	$0.000
Budget Authority	$1,152.964	$1,091.680	$1,117.609	$1,117.609	$1,161.747

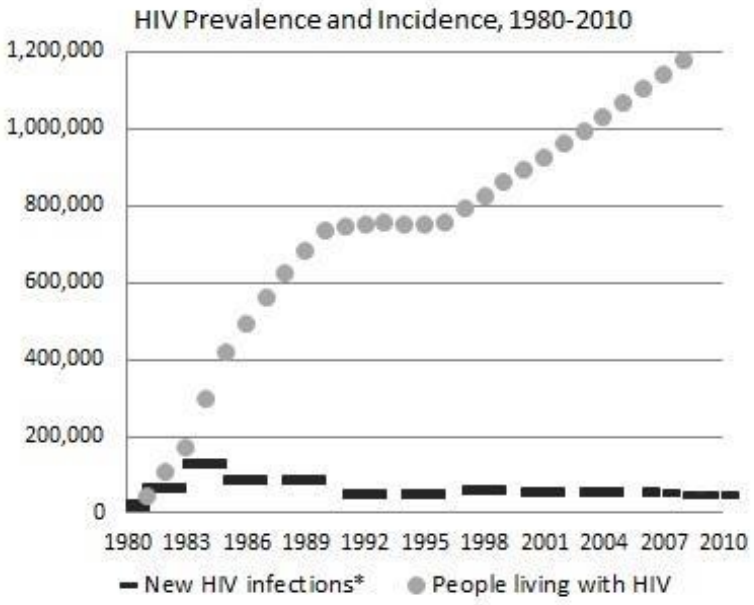
[1] FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

Domestic HIV/AIDS Prevention and Research Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
HIV Prevention with Health Departments	$397.161	$397.161	$397.161	$0.000
HIV Surveillance	$119.861	$119.861	$119.861	$0.000
Improving Program Effectiveness	$103.208	$103.208	$109.561	+$6.353
National, Regional, Local, Community and Other Organizations	$135.401	$135.401	$135.401	$0.000
HIV Adolescent and School Health	$31.081	$31.081	$37.377	+$6.296
Total	**$786.712**	**$786.712**	**$799.361**	**+$12.649**

Overview

CDC is the nation's lead agency in the fight to prevent new HIV infections. More than 1.2 million Americans now live with HIV with some populations disproportionately affected. For example, from 2008 through 2012, rates of new HIV diagnoses increased among persons under the age of 30, with the highest rates among persons aged 20–24 years. In contrast, diagnoses rates decreased or remained stable for children under the age of 13 and adults over the age of 30. Also, while African Americans represent approximately 12% of the U.S. population, they accounted for an estimated 44% of new HIV infections in 2010 among persons aged 13 years and older. African Americans also accounted for 43% of people living with HIV infection through the end of 2011. As the number of persons living with HIV increases due to better, life-prolonging treatments, so does the demand for CDC prevention activities.



*For 1980 to 2005, new HIV infections were estimated using back-calculation methodology. In 2006, new HIV infections were estimated using original incidence surveillance methodology. Estimates from 2007-2010 were estimated using updated incidence surveillance methodology.

These efforts are driven by the *National HIV/AIDS Strategy*[13] (NHAS). The NHAS guides federal agencies in making the most of recent advancements in HIV prevention and treatment, as well as in using prevention and treatment resources most effectively. The three overarching goals of the NHAS are reducing the number of new HIV infections, increasing access to care for people living with HIV, and reducing HIV-related health disparities.

CDC uses a high-impact approach to HIV prevention that incorporates the NHAS action steps and maximizes the effectiveness of current HIV prevention methods. CDC's approach uses the best combination of scientifically-proven, cost-effective, and scalable interventions, appropriate to the population. It includes general HIV prevention education for young Americans. CDC's approach to HIV prevention includes:

- Surveillance and epidemiology to characterize the HIV epidemic and related risk factors

[13] http://www.whitehouse.gov/administration/eop/onap/nhas

- Prevention interventions such as HIV testing, counseling and education for HIV-positive and high-risk HIV-negative persons, partner services, linkage to care, retention and re-engagement in care, and adherence to HIV treatments
- HIV education for school-aged youth
- Training and capacity building for organizations providing HIV education and other prevention services
- Operational research and evaluation

Budget Request

CDC's FY 2016 request of **$799,361,000** for domestic HIV/AIDS prevention and research is $12,649,000 above the FY 2015 Enacted level. This funding will be used to identify and improve prevention strategies for those most at risk for acquiring or transmitting HIV, including at-risk youth, high-risk HIV-negative adults and HIV-positive persons. Part of this increase—$6,353,000—will support efforts to better link persons diagnosed and living with HIV to appropriate care, examine how new biomedical interventions are being used, and facilitate the development of state-wide plans for prevention, care and treatment, and other supportive services. The remaining $6,296,000 will be used to improve HIV prevention activities targeted to school aged youth.

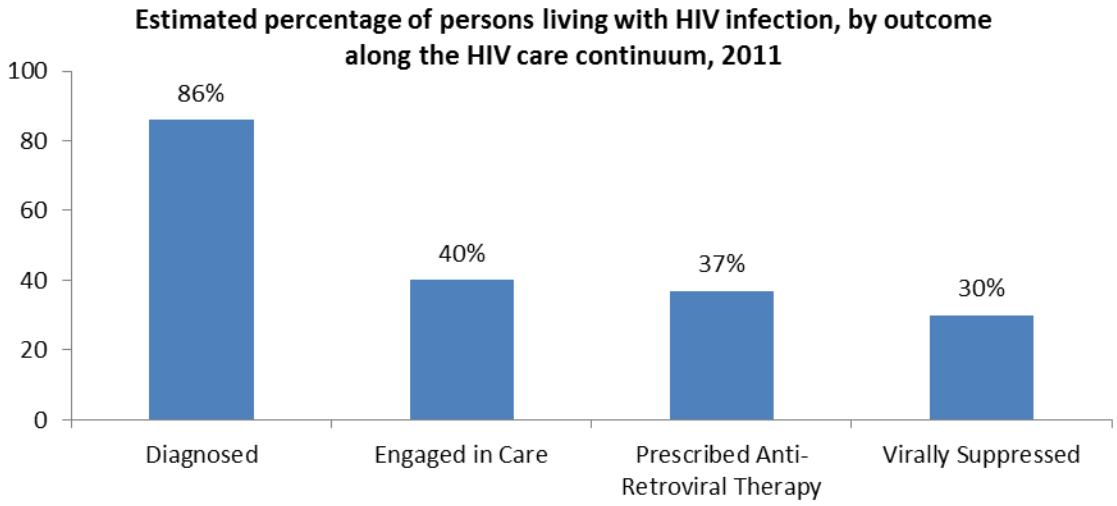
In addition to these increases, CDC will continue to implement High-Impact Prevention[14] (HIP) approaches in its health department programs and Community High-Impact Prevention (CHIP) efforts of capacity-building grantees and community-based organizations. Both HIP and CHIP focus CDC resources on implementing effective, scalable and sustainable prevention strategies for persons living with HIV and populations at highest risk for HIV. CDC will also continue efforts to partner with state, local, and territorial education agencies to monitor youth health behavior, implement HIV and other disease prevention programs, and provide expert guidance to schools and youth organizations on school health services, prevention programs, and safe and supportive school environments. Finally, CDC will continue to dedicate up to $8 million of its HIV resources to help health department grantees leverage changes in the healthcare system by increasing their capacity to seek reimbursement for covered preventive services.

Given that the estimated lifetime costs of treating a single person with HIV infection is $402,000, HIV prevention is cost-saving to society. An analysis by CDC researchers estimated a savings of more than $125 billion in direct medical costs resulting from approximately 350,000 infections averted between 1991 and 2006.[15] Fortunately, we know better than ever before how to prevent HIV among high-risk populations and preserve the health of those infected. For example, in addition to evidence that HIV testing can lead to earlier treatment and longer, healthier lives for those infected, recent data show that people who begin taking antiretroviral drugs early are much less likely to transmit HIV, with up to a 96% reduction in transmission risk.

A recent analysis[16] of progress in moving persons with HIV along the continuum of care indicates that of the estimated 1.2 million people living with HIV infection in the United States in 2011, 86% were diagnosed with HIV. However, only 40% were engaged in HIV medical care; 37% prescribed antiretroviral therapy (ART); and only 30% achieved viral suppression—leaving an estimated 70% that had not achieved viral suppression.

Viral suppression means having very low levels of HIV present in the body. Evidence shows that achieving viral suppression is critical for people living with HIV if they are to maintain their health. Of the estimated 70% of people living with HIV that had not achieved viral suppression, 20% had not been diagnosed, 66% had been diagnosed with HIV but were not engaged in HIV medical care, 4% were in HIV medical care but had not been prescribed ART, and 10% had been prescribed ART but had not achieved viral suppression.

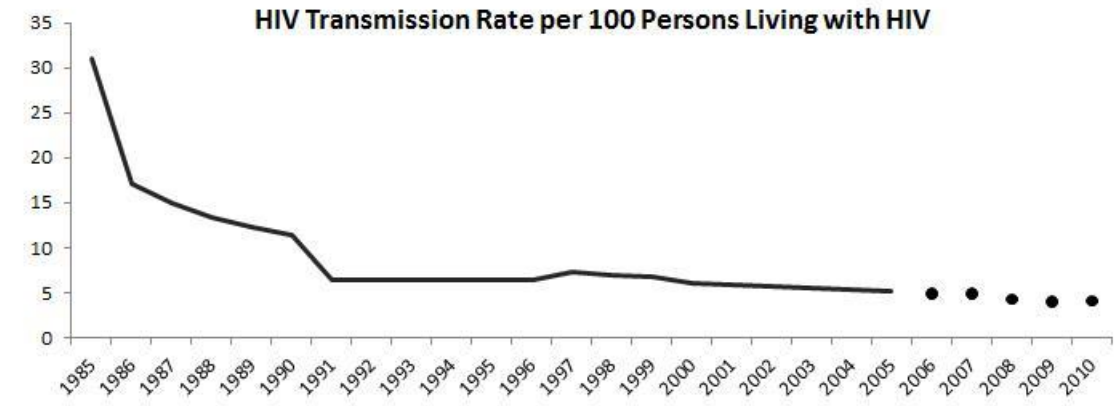
[14] http://www.cdc.gov/hiv/policies/hip.html
[15] http://journals.lww.com/jaids/Citation/2010/08150/Medical_Costs_Averted_by_HIV_Prevention_Efforts_in.22.aspx
[16] http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6347a5.htm?s_cid=mm6347a5_w



All points along the continuum of care need to be strengthened to ensure that all persons living with HIV receive the HIV care and treatment needed to achieve viral suppression. The greatest opportunities for increasing the percentage of persons with a suppressed viral load are reducing undiagnosed HIV infections and increasing the percentage of persons living with HIV who are engaged in care. State and local health departments, community-based organizations, and healthcare providers play essential roles in improving outcomes on the HIV care continuum that increase survival among persons living with HIV, prevent new HIV infections, and help reach prevention and care goals.

HIV Prevention with Health Departments

CDC's FY 2016 request of **$397,161,000** for HIV Prevention with Health Departments is level with the FY 2015 Enacted level. CDC's HIV Prevention with Health Departments cooperative agreements serve as the foundation for HIV prevention nationwide. These programs are a chief contributor to HIV prevention successes in the United States, including reductions in perinatal HIV infections and HIV transmission rates, as well as increases in persons who know their HIV status. CDC's support for state and local health departments encompasses not just funding, but program guidance and technical assistance, including assistance in seeking reimbursement for services that may be covered under health insurance policies (e.g., billing for testing for HIV and related co-infections in healthcare settings, counseling, and vaccination). CDC also assists health departments in monitoring and evaluating their performance, ensuring programs are implementing high impact prevention and meeting the goals of the NHAS.



CDC's HIV Prevention with Health Departments main cooperative agreement prioritizes increasing the number of persons who are aware of their HIV status and improving outcomes along the continuum of HIV care. It does so by increasing the proportion of persons who are linked to care, retained in care, prescribed antiretroviral drugs, and whose HIV infection is suppressed. This has meant supporting strategies most likely to yield the greatest benefit, and shifting resources so that the largest awards go to the jurisdictions with the greatest need as determined by the number of persons living with HIV. This funding shift is being phased in over the five years of the cooperative agreement and will be completed by FY 2016, the final year of the current five-year cycle.

In addition to aligning resources at the national level, CDC will work with state public health departments to ensure they align HIV resources to better match the geographic burden of HIV infections within their jurisdictions. In particular, CDC will work with grantees to ensure they are targeting resources to the geographic areas and populations with the highest burden.

Funding under this cooperative agreement is awarded in two categories, A and B.

Category A funds 61 health departments. Grantees are required to spend 75% of their funding on a defined set of activities with demonstrated potential to substantially reduce new infections:

- HIV testing
- Comprehensive prevention with persons living with HIV
- Policy initiatives to address structural barriers to effective HIV prevention and care

Category A grantees are required to focus testing efforts on populations with relatively high rates of HIV, meet minimum targets for linking persons testing positive to care and providing them with partner services, and distributing condoms. Grantees may use the remaining 25% to support other proven HIV interventions for persons at highest-risk of acquiring the infection. These could include using social media to raise awareness and encourage testing and risk reduction behaviors, as well as activities to support pre-exposure prophylaxis[17] (PrEP) and non-occupational post-exposure prophylaxis (nPEP) services. With these prevention methods, services are offered to educate and support people to take antiretroviral drugs to try to reduce the chance of becoming HIV-infected before (PrEP) or after (nPEP) potential exposure to HIV.

Category A—Core HIV Prevention Programs

Activity	Examples
HIV testing	Texas' re-direction of targeted testing efforts has proven successful: 40% of all testing activities are among MSM, and 81% of all new HIV positives are among MSM.
Prevention with positives	The State of Washington improved both its capacity to locate persons living with HIV who are out of care, and data linkages between core HIV surveillance and the state's Ryan White program.
Policy initiatives	In December 2013, California received clarification that state law allowed local health officers to use local HIV surveillance data to engage patients in Partner Services. This allows California's local health departments to implement surveillance-based Partner Services, in addition to the venue-based Partner Services model.

In FY 2016, CDC will continue to support Category A grantees by evaluating grantee performance against minimum targets and providing feedback and assistance to support continuous programmatic improvement. Performance reporting requirements will remain consistent with HHS efforts to streamline data collection and reduce reporting burden for grantees.

[17] http://www.cdc.gov/hiv/prevention/research/prep/

Category B is a continuation of CDC's Expanded Testing Program. Under Category B, 34 health departments in jurisdictions with large populations disproportionately affected by HIV are funded to conduct additional HIV testing, primarily in health care settings. CDC-funded health department HIV testing activities include:

- Education for health care providers on innovative approaches to reaching populations most at risk
- Professional training on implementing clinical processes that support routine screening
- Scientific and programmatic expertise on developing infrastructure to support linkage to care for persons who test positive
- Oversight to ensure testing services are implemented according to recommendations

In addition, Category B funding supports the purchase of test kits and outreach activities to promote testing, conduct testing at non-clinical venues, and assist individuals who do not access clinical services and engage in care. CDC will direct Category B grantees to use part of their awards to strengthen their capacity to seek reimbursement for HIV preventive services that may be covered under health insurance policies. These services include testing for HIV and related co-infections in healthcare settings. CDC will work with health departments to help them to determine when prevention services may be reimbursable. CDC has issued guidance to grantees to work toward implementing sustainable HIV testing programs that include billing for testing in health department clinics and other health care settings (e.g., emergency departments, community health centers) and exploring the potential for reimbursement in community-based organizations. CDC has encouraged its grantees to work closely with community health centers, emergency departments and in-patient hospital settings to integrate HIV testing into their daily practice flows. Such integration is a prerequisite to implementation of sustainable testing practices that are not dependent on program resources. CDC will continue to provide assistance such as trainings and written resources to further these efforts.

Similar to Category A, Category B grantees are required to focus their testing efforts on populations with relatively high rates of HIV and to meet minimum targets for linking persons testing positive to care and providing partner services.

Category B—Expanded HIV Testing Program

Activity	Examples
HIV testing in health care settings	In Arizona, the HIV Prevention Program and the Maricopa Medical Center adopted a new HIV laboratory diagnostic algorithm that incorporates the use of 4th generation tests. Due to internal success and cost effectiveness of 4th generation HIV testing and protocols, the opt-out HIV testing program was expanded from the original Emergency Department project at Maricopa Medical Center (MMC) to include the Burn Unit Emergency Department. Patients from these screening programs are immediately linked to HIV medical care provided by the local Ryan-White funded HIV clinic.
HIV testing in non-health care settings	The state health department in Florida funded Sembrando Flores, a community-based organization targeting Hispanics and MSM in the Miami-Dade area, to provide HIV testing services. Additionally, the health department implemented Couples HIV Counseling and Testing state-wide with a focus on same-sex couples.

To support the work of state and local health departments, CDC will fund research on HIV testing technologies and interventions. CDC will also fund efforts that promote testing and the implementation of testing-related guidelines. For example, in June 2014, CDC released updated recommendations[18] for laboratory testing to diagnose HIV infection. The updated recommendations allow detection of acute HIV infections that would be missed by tests that only detect HIV antibodies, and can expedite entry of patients into care because of reduced turn-around time for test results. With available funding, CDC will also continue to support ways to address the

[18] http://stacks.cdc.gov/view/cdc/23447

epidemic among MSM by focusing on prevention services and the continuum of care. Additionally, CDC will continue to fund HIV prevention activities for six Pacific Island jurisdictions and support Program Collaboration and Service Integration (PCSI)[19] by encouraging grantees to use their programs to address related infections—including viral hepatitis, other STDs, and TB—and develop capacities that can be shared across programs.

HIV Prevention with Health Departments Grants[1,2,3,4,5]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	67	61	61	61	61	0
- New Awards	67	0	0	0	0	0
- Continuing Awards	0	61	61	61	61	0
Average Award	$5.346	$5.476	$5.593	$5.844	$5.844	$0.000
Range of Awards	$0.159–$34.170	$0.592-$32.959	$0.680–$32.959	$0.715–$34.652	$0.715-$34.652	N/A
Total Awards	**$358.182**	**$334.048**	**$341.179**	**$356.465**	**$356.465**	**$0.000**

[1] CDC supports Category A and B awards for health departments under a single HIV prevention funding opportunity announcement.

[2] Awards described here for FY 2013-FY 2016 do not include funding for Pacific Island jurisdictions as these are funded under another cooperative agreement.

[3] Totals for FY 2014, FY2015, and FY 2016 include funding under Direct Assistance, which is a financial assistance mechanism primarily used to support payroll and travel expenses of CDC employees assigned to state, tribal, local, and territorial health agencies that are recipients of grants and cooperative agreements.

[4] FY 2015 amounts were developed using estimated Category A algorithm-based funding and Category B and C funding from FY 2014. The range will vary due to the ending of Category C funding.

[5] These funds are awarded by formula.

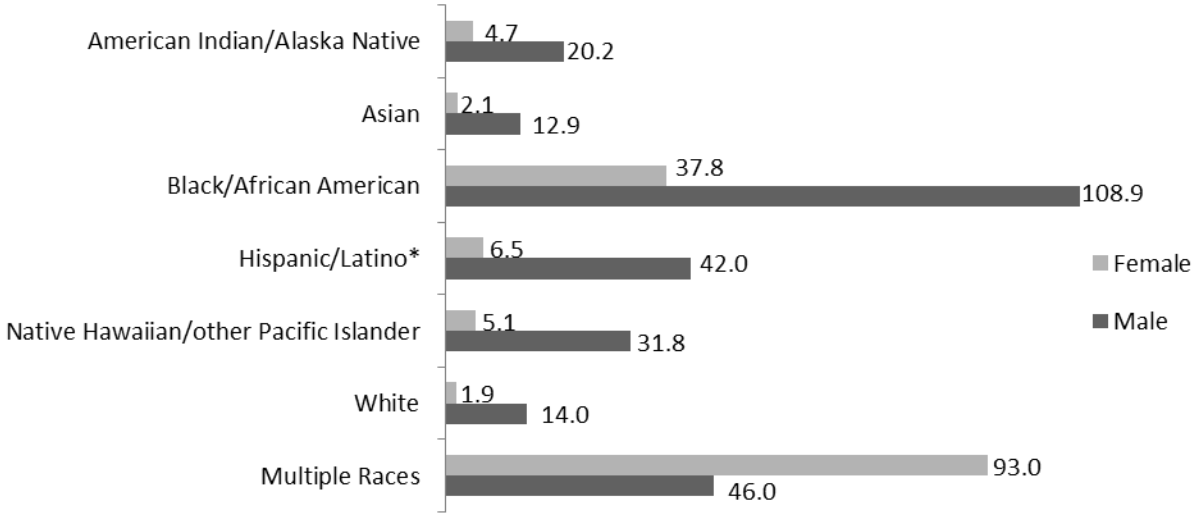
HIV Surveillance

CDC's FY 2016 request of **$119,861,000** for HIV Surveillance is level with the FY 2015 Enacted level. The *National HIV/AIDS Strategy* (NHAS) emphasizes identifying and targeting prevention efforts—including HIV testing—towards populations at greatest risk for acquiring and transmitting HIV. CDC surveillance activities are essential to this effort. The *Continuum of Care Initiative,*[20] announced by the President in 2013, also depends on quality surveillance data to improve the delivery of services to people living with HIV across the entire continuum of care: diagnosis, linkage to care, retention in care, starting and staying on antiretroviral therapy, and suppressing viral load. Surveillance data are used at the local level to inform a feedback loop with providers in order to improve performance on the continuum of care.

- Through its National HIV Surveillance System (NHSS), CDC provides funding and scientific support to health departments across the nation to track new HIV diagnoses and deaths. NHSS enables collection of state- and national-level data on new diagnoses, number of persons living with HIV (prevalence), and estimates of new infections (incidence).
- Through the National HIV Behavioral Surveillance system,[21] CDC collects data from three high-risk populations—men who have sex with men, persons who inject drugs, and heterosexuals at increased risk—on behaviors associated with HIV infection, HIV testing behaviors, access to and use of prevention services, and HIV prevalence.
- CDC's Medical Monitoring Project[22] produces nationally representative data on estimates of clinical and behavioral outcomes for adults receiving medical care for HIV infection.

[19] http://www.cdc.gov/nchhstp/programintegration/About.htm
[20] http://aids.gov/federal-resources/policies/care-continuum/
[21] http://www.cdc.gov/hiv/statistics/systems/nhbs/
[22] http://www.cdc.gov/hiv/statistics/systems/mmp/index.html

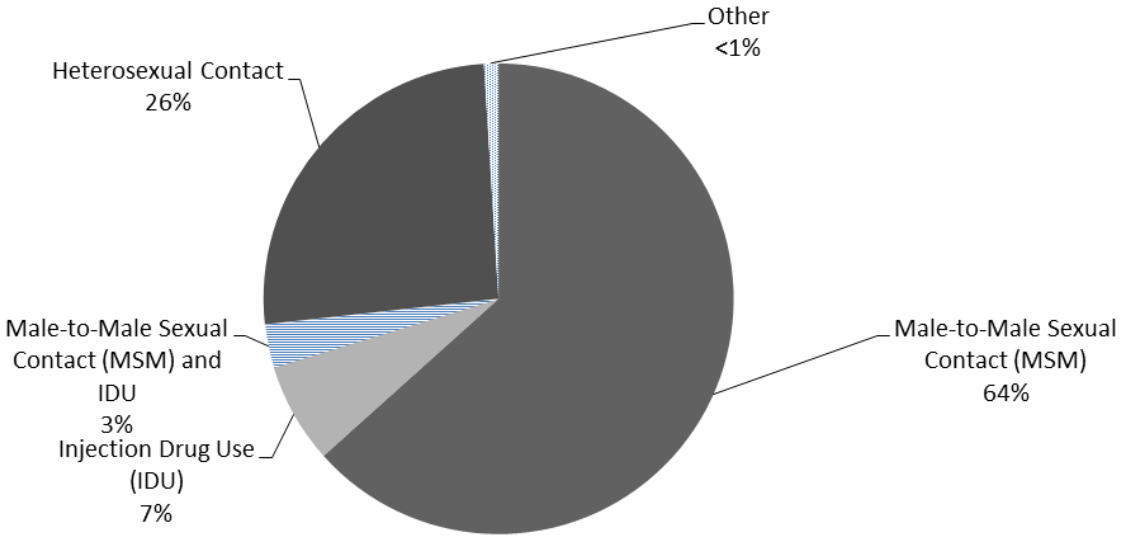
Rates of Diagnoses of HIV Infection among Adults and Adolescents, by Sex and Race/Ethnicity, 2012 - United States (per 100,000 population) [1,2]



[1]Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting. Rates are per 100,000 population.
[2] Hispanics/Latinos can be of any race.

CDC publishes regular surveillance reports and analyses to guide national, state and local prevention and testing programs, social marketing campaigns, and health education efforts directed towards affected populations. For example, NHSS data show that African Americans have substantially higher rates of new HIV diagnoses than whites or Hispanics or Latinos, and that two-thirds of new HIV diagnoses occur among men who have sex with men (MSM).

Diagnoses of HIV Infection among Adults and Adolescents, by Transmission Category, 2012—United States and 6 Dependent Areas [1,2,3]



[1]Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays and missing transmission category, but not for incomplete reporting.
[2]Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.
[3]Other includes hemophilia, blood transfusion, perinatal exposure, and risk factor not reported or not identified.

Similarly, using data derived from both the NHSS and the Medical Monitoring Project, CDC has demonstrated that young people are the group least likely to receive ongoing care and effective treatment.[23] Only 22% of HIV-infected young people from 18-24 are engaged in care, and only 13% are virally suppressed (compared to national figures of 40% and 30%, respectively).

We know that getting and keeping people in medical care saves lives. Medical Monitoring Project data[24] also show that most adults living with HIV and receiving outpatient care were prescribed antiretroviral therapy (90%), and that roughly three in four (74%) had viral suppression at the time of their most recent viral load test.

CDC's surveillance systems also inform other federal programs, and help ensure resources are targeted to the communities that need them most. For example, the Health Resources and Services Administration and the Department of Housing and Urban Development use CDC's data to guide the allocation of over $2 billion in federal funding for HIV care, treatment, and housing programs.

Data-to-Care is a public health strategy that supports the Continuum of Care Initiative. It uses HIV surveillance data to identify HIV-diagnosed individuals not in care so they can be linked to care.

The goals of the Data-to-Care Strategy are:

- Increase the number of HIV-diagnosed individuals who are engaged in HIV care, and
- Increase the number of HIV-diagnosed persons with an undetectable viral load.

In FY 2016, CDC will continue to fund and assist health departments with HIV surveillance and data-to-care models to better support the *Continuum of Care Initiative*. CDC will also continue to fund surveys of HIV-related behaviors among high-risk populations, and collect data on clinical and behavioral outcomes for persons living with HIV.

HIV Surveillance Grants[1,2]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	65	59	59	59	59	0
- New Awards	0	59	0	0	0	0
- Continuing Awards	65	0	59	59	59	0
Average Award	$0.849	$0.975	$0.981	$1.039	$1.039	$0.000
Range of Awards	$0.007-$4.377	$0.112-$5.289	$0.122-$5.332	$0.128-$5.594	$0.128-$5.594	N/A
Total Awards	**$55.185**	**$57.523**	**$57.863**	**$61.281**	**$61.281**	**$0.000**

[1]Totals for FY 2014, FY2015, and FY 2016 include funding under Direct Assistance.

[2]These funds are awarded by formula.

Improving Program Effectiveness

CDC's FY 2016 request of **$109,561,000** for Improving Program Effectiveness is $6,353,000 above the FY 2015 Enacted level. This increase will be used to expand research and analyses to identify and reach people who are most at-risk for acquisition or transmission of HIV, as well as to support the development of integrated state-wide prevention, care, and treatment HIV plans. This work includes efforts to identify better strategies to link persons with HIV to care and to examine how new biomedical interventions—including pre-exposure prophylaxis (PrEP)—are being used. Specifically, CDC will evaluate how well existing strategies to engage persons in care are working in practice, identify new approaches to improve linkage to HIV care, and address barriers to receiving care. CDC will use new tools and technologies, including social media platforms, to provide information about the importance of receiving ongoing care. CDC will also conduct operational research to better understand how to effectively retain persons in care and improve adherence to antiretroviral therapy

[23] http://www.cdc.gov/hiv/policies/npr/

[24] http://www.cdc.gov/hiv/pdf/MMP_2010_surveillancesummary.pdf

regimens, when appropriate. CDC will use these resources to begin to collect data on HIV-diagnosed individuals not receiving medical care, following a recommendation made by the Institute of Medicine. These data will inform new strategies to reengage and retain this population in HIV care. Information will also be shared with federal and state HIV partners to improve their efforts to ensure HIV-infected persons receive the care they need.

CDC will also invest additional resources to improve implementation of prevention strategies, such as PrEP. In 2014, CDC released new clinical guidelines recommending PrEP[25] as one prevention option for patients at substantial risk for HIV infection. PrEP has the potential to alter the course of HIV in the United States if targeted to the right populations and used as directed. The requested increase will help CDC determine how to deliver PrEP and other biomedical interventions to high risk HIV-negative persons in the most cost-effective way.

In FY 2016, approximately $2.5 million will be used to support the states to develop integrated HIV plans to include prevention, care and treatment, and other supportive services such as substance abuse treatment and housing. This effort will build on work begun in 2014 when CDC and the Health Resources and Services Administration encouraged state and local AIDS programs to integrate their HIV planning activities. This effort will help ensure that state and local health departments develop systems of prevention, care and treatment that are responsive to the needs of persons at risk for HIV infection and persons living with HIV.

Finally, CDC will continue investments in other key activities—including research, guidelines development, awareness-building and social marketing campaigns, and collaborations that improve service integration—to benefit both current and future generations.

Research—To achieve the prevention goals put forward in the *National HIV/AIDS Strategy* and improve performance along the continuum of HIV care, CDC supports a broad research portfolio. This portfolio includes:

- Research into new testing technologies and methods for preventing transmission. In 2014, this research resulted in CDC publishing a new HIV testing algorithm[26] that capitalized on fourth-generation tests that identify HIV sooner than older tests.
- Biomedical research into microbicides, alternate modes of delivering medicine to prevent HIV such as vaginal rings and injections, and factors that could increase susceptibility to HIV infection such as sexually transmitted infections and use of hormonal contraception.
- Behavioral research identifying interventions for reducing risk behaviors; supporting linkage to, retention in and reengagement in care; and increasing adherence to HIV medication. Once identified, interventions are added to CDC's *Compendium of Evidence-Based HIV Behavioral Interventions*[27] and those most likely to have the greatest impact are disseminated and supported with training and technical assistance to our HIV prevention partners for program implementation[28]

CDC's research also results in the development of recommendations and guidance based on the latest science. For example, in 2014, CDC released updated recommendations for HIV prevention with positive persons (PWP).[29] This document is a comprehensive compilation of new and longstanding federal recommendations about biomedical, behavioral, and structural interventions to reduce the risk for HIV transmission from persons with HIV by reducing their infectiousness and their risk for exposing others.

[25] http://www.cdc.gov/hiv/prevention/research/prep/index.html
[26] http://www.cdc.gov/hiv/testing/lab/guidelines/
[27] http://www.cdc.gov/hiv/prevention/research/compendium/index.html
[28] http://www.effectiveinterventions.org
[29] http://www.cdc.gov/hiv/prevention/programs/pwp/

Communications Campaigns—CDC raises awareness about the HIV epidemic in the United States and promotes HIV prevention and testing through the *Act Against AIDS* initiative.[30] This initiative seeks to combat HIV-related stigma and normalize testing and other risk reduction behaviors, particularly for populations at high risk for HIV. Having relevant messages targeted to communities most affected also bolsters CDC's other prevention activities.

For example, in 2014, CDC launched *Start Talking. Stop HIV.*,[31] a campaign created by and for gay and bisexual men. The campaign is based on research that shows communication between sexual partners is associated with reduced risk behavior and increased HIV testing and HIV status disclosure. It features messages that engage, inspire, and spark conversations between sexual partners, and provides practical tools and tips for bringing up important HIV prevention topics such as condoms and medicines that prevent and treat HIV, including the use of PrEP, nPEP, and antiretroviral therapy. The campaign initially launched in south Florida and will expand to other cities throughout the year. Also in 2014, CDC launched *We Can Stop HIV One Conversation at a Time*,[32] a campaign for Latinos highlighting the importance of communicating about HIV within social and familial networks, and *HIV Treatment Works*,[33] a campaign targeted to persons living with HIV that communicates the benefits of early treatment, ongoing engagement in care, and viral suppression.

For all campaigns, CDC conducts message testing with the target population so that the ultimate messages are relevant and effective. CDC also updates its prevention messages to reflect increases in prevention options, particularly biomedical options, and will continue to update messages to include the most up-to-date science.

Program Collaboration and Service Integration (PCSI)—In FY 2016, CDC will continue to support PCSI by encouraging grantees in its core HIV, STD, TB and viral hepatitis programs to provide services that can be integrated at the patient, or client, level and to develop capacities that can be shared across programs. For example, CDC's NCHHSTP Atlas[34] provides an interactive platform for accessing data on HIV/AIDS, viral hepatitis, STD and TB. This interactive tool provides CDC an effective way to disseminate data, while allowing users to observe trends and patterns by creating detailed reports, maps, and other graphics. County level data were added to the Atlas in 2013. CDC also continues to encourage HIV prevention and surveillance grantees to strengthen collaboration with other disease programs to expand their impact and improve surveillance. CDC will provide funding and scientific guidance to 24 state and local health departments to ensure the provision of HIV testing, linkage to care, and other related services to TB patients, a group with high rates of HIV. CDC will also fund 59 state and local health departments to address HIV through STD programs.

National, Regional, Local, Community and Other Organizations

CDC's FY 2016 request of **$135,401,000** for National, Regional, Local, Community or Other Organizations is level with the FY 2015 Enacted level.

The NHAS emphasizes investing in prevention at the community level. Community High Impact Prevention (CHIP) focuses resources on effective and sustainable prevention activities tailored to persons at highest risk in the communities most effected by HIV. CHIP has two components:

- Supporting community-based organizations
- Building HIV prevention capacity with health care organizations, health departments, and directly funded community-based organizations

[30] http://www.cdc.gov/actagainstaids/
[31] http://www.cdc.gov/actagainstaids/campaigns/starttalking/index.html
[32] http://www.cdc.gov/actagainstaids/campaigns/oneconversation/index.html
[33] http://www.cdc.gov/actagainstaids/campaigns/hivtreatmentworks/index.html
[34] http://www.cdc.gov/nchhstp/atlas/

Supporting Community-Based Organizations (CBOs)—Since the late 1980's, CDC has formally partnered with community-based organizations (CBOs) to expand the impact and reach of HIV prevention activities in affected communities. Because of their accessibility, history and credibility in the community, CBOs are recognized and remain important partners in providing comprehensive high-impact HIV prevention services to people living with and at greatest risk for HIV infection.

In FY 2015, CDC will fund a new cooperative agreement with CBOs, directing grantees to focus more on HIV testing, linkage to and retention in care, support services for persons living with HIV and for persons at highest risk for acquiring HIV, and other effective interventions. With this new funding cycle, CDC is seeking to develop new and enhance existing strategies for community-based HIV prevention programs. In addition CDC seeks to better align programming to achieve the goals and milestones of the NHAS and CDC's CHIP approach. In FY 2016, CDC will continue to work closely with CBOs to implement these prevention programs that target populations at greatest risk. This cooperative agreement will continue through FY 2019.

In FY 2016, CDC will separately fund a new cooperative agreement with CBOs that serve young men of color who have sex with men, young transgender persons of color, and their partners. Although men who have sex with men (MSM) are a small proportion of the population, they represent the majority of persons diagnosed with HIV. Funded organizations are required to meet minimum testing targets and targets for linking persons testing HIV-positive to care.

HIV Prevention Projects for Community-Based Organizations Grants[1,2,3,4]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	132	131	131	100	100	0
- New Awards	0	0	0	100	0	-100
- Continuing Awards	132	131	131	0	100	+100
Average Award	$0.327	$0.304	$0.294	$0.400	$0.400	$0.000
Range of Awards	$0.202–$0.537	$0.234-$0.495	$0.050–$0.500	$0.350-$0.450	$0.350-$0.450	N/A
Total Awards	**$43.164**	**$39.871**	**$38.451**	**$44.219**	**$44.219**	**$0.000**

[1]Reflects funding for CDC's principal grant program for community-based organizations. In separate programs, CDC also directly funds community-based organizations that focus on young MSM and transgender persons.

[2]The current funding cycle ends in FY 2015. A new funding cycle will begin in FY 2015 and will reflect changes as discussed in the narrative.

[3]Increased funding reflected in FY 2015 and FY2016 is a result of the merge of the flagship CBO funding opportunity announcement with a smaller community-based organization program.

[4]These funds are not awarded by formula.

Building HIV Prevention Capacity—In FY 2016, CDC will provide approximately $23 million in capacity-building assistance funding to support community-based organizations and health departments to implement programs that serve persons along the continuum of care. Capacity building is a key strategy for ensuring the availability of quality, sustainable HIV prevention programs. In FY 2014, a new funding cycle began and will continue through FY 2018. Capacity-building grantees provide assistance on effective strategies to improve HIV prevention including:

- Sustainable, high-impact HIV testing and screening programs
- Comprehensive prevention for persons living with HIV that includes linkage to and retention in care and prevention services
- Tools that assist community-based organizations in using their data to better target and manage patients with the goal of improving viral load suppression rates

HIV Capacity-Building Assistance Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	29	28	23	23	23	0
- New Awards	0	0	23	0	0	0
- Continuing Awards	29	28	0	23	23	0
Average Award	$0.701	$0.665	$1.004	$1.004	$1.004	$0.000
Range of Awards	$0.285-$1.351	$0.252-$1.299	$0.870-$1.405	$0.870-$1.405	$0.870-$1.405	N/A
Total Awards	**$20.329**	**$18.633**	**$23.095**	**$23.095**	**$23.095**	**$0.000**

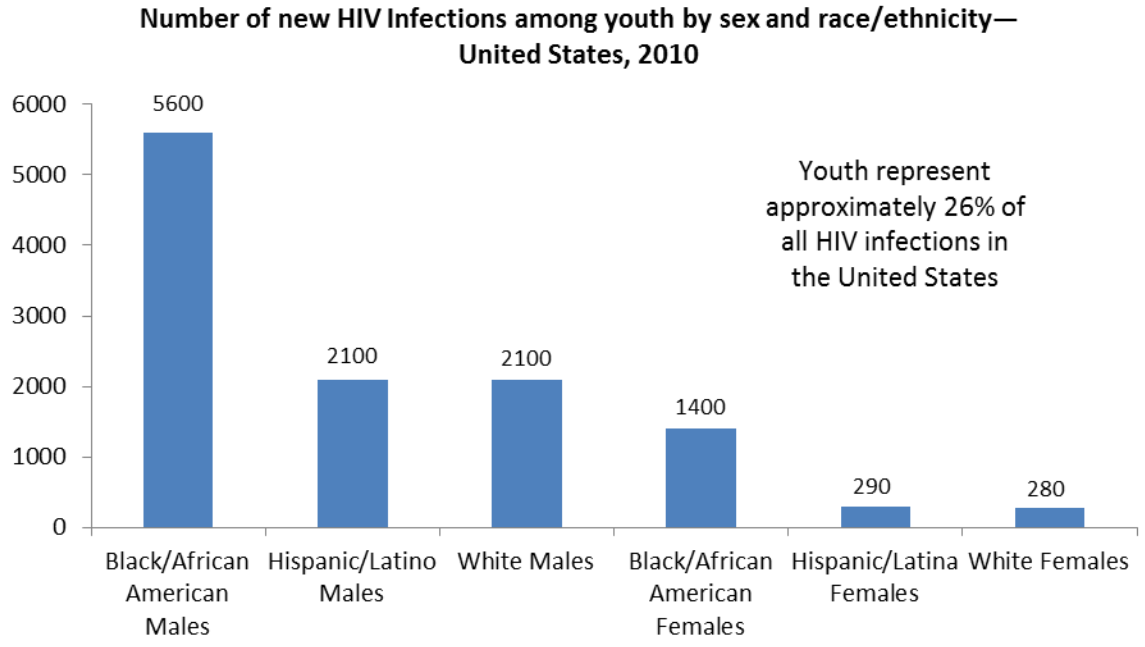
[1]These funds are not awarded by formula.

HIV Adolescent and School Health

CDC's FY 2016 request of **$37,377,000** for HIV Adolescent and School Health is $6,296,000 above the FY 2015 Enacted level. This increase will be used to evaluate and improve school HIV prevention activities and increase outreach strategies and interventions for youth at disproportionate risk for HIV infection.

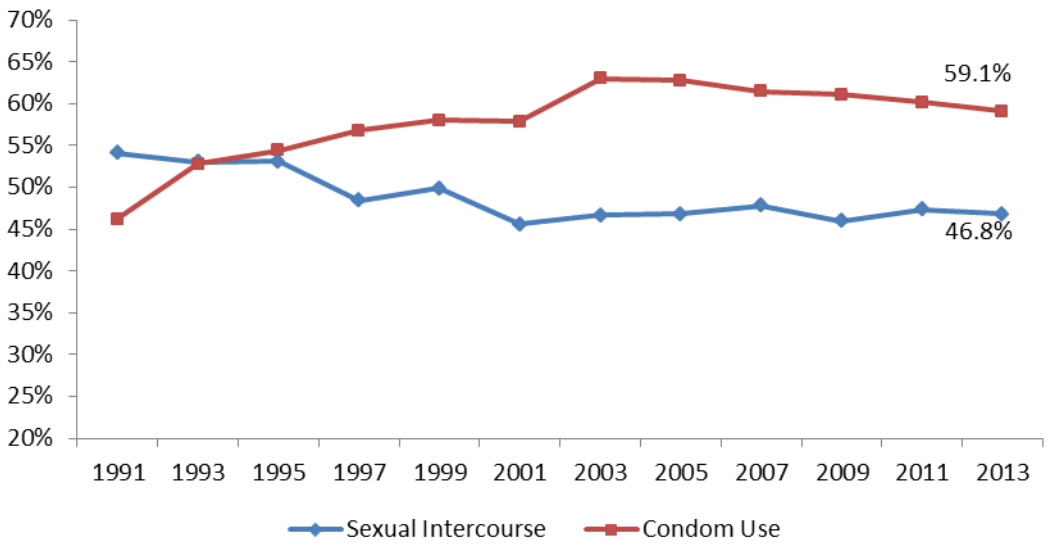
The *National HIV/AIDS Strategy* (NHAS) identifies the education of all Americans about the threat of HIV and how to prevent it as a critical step in reducing new infections in the United States. The NHAS emphasizes that educating young people about HIV before they begin engaging in behaviors that place them at risk for HIV infection should be a priority. To help achieve this goal, CDC's HIV Adolescent and School Health program helps schools implement effective education programs to prevent HIV and other STDs among adolescents that are based on the best-available science. These school-based education programs are also expected to reduce teen pregnancy rates by reducing common risk factors.

Youth have one of the highest rates of HIV diagnosis, with persons aged 13–24 comprising 26% of all new HIV infections in 2010. Some youth are disproportionately affected (see figure below). Effective school-based education programs are needed to make youth aware of their risk for HIV; help delay initiation of sexual activity; increase condom use among those who are sexually active; and decrease other behaviors, such as alcohol and drug use, which contribute to the risk of HIV infection.



The HIV Adolescent and School Health program is unique in the federal government because it provides funding and expert guidance to state and local education agencies to assist schools in implementing HIV and other STD education programs that help adolescents develop healthy behaviors. Establishing healthy behaviors early in life, including accessing health services, is easier and more effective than trying to change unhealthy behaviors during adulthood. This program has contributed to decreases in sexual risk behaviors, as shown in the graph below.

Percentage of High School Students Who Ever Had Sexual Intercourse and Used a Condom during Last Sexual Intercourse, 1991-2013[1]



[1] Condom use is calculated among students who were currently sexually active (i.e., had sex within the past 90 days), National Youth Risk Behavior Surveys, 1991-2013.

CDC's Adolescent and School Health surveillance efforts serve as a resource for adolescent health information and play a critical role in documenting public health trends and challenges. These efforts include direct monitoring of adolescent health risk behaviors, and monitoring school-based HIV prevention activities such as schools' provision of health education, health care services, and safe and supportive environments.

Increased funding in FY 2016 will be used to improve capacity to evaluate the effectiveness of core school-based HIV prevention activities by first strengthening the surveillance system capacity at the state and local levels. This effort will provide additional funding to state and local grantees to increase local-level data collection. In addition, funded local education agencies have identified 19-25 priority schools in their jurisdictions with students that are at the highest risk for HIV infection and other STDs that receive targeted assistance and guidance to help them implement prevention programs. Using state and local data, increased funding in FY 2016 will improve the ability to conduct evaluations of programmatic innovations in these locations. This evaluation effort will compare the schools receiving targeted assistance and their students with schools and students not receiving this support. Findings will be used to inform the development of programmatic guidance and adjust the scope of existing activities based on effectiveness and need.

Additional efforts proposed in FY 2016 will advance the applied research portfolio for adolescent health. Increased funding will be used to conduct policy research to determine the most effective state and local education policies for adolescent health; to design and test interventions that address adolescent sexual risk and protective factors; and to conduct formative research among adolescent MSM to determine appropriate content and optimal dissemination approaches to most effectively reach these youth with prevention messages. Finally, CDC will translate existing and new research into programmatic guidance and guidelines.

These new surveillance, evaluation, and applied research activities will support school-based HIV prevention by:

- Providing state and local education agencies with data and feedback on the relationship between HIV prevention programmatic efforts and student outcomes
- Informing practices and subsequent guidance on how to achieve NHAS aims through effective HIV prevention education for students
- Filling gaps in the evidence base and improving the standards of evaluation of school-based HIV prevention activities

CDC will disseminate evidence-based guidance resulting from these efforts and provide a publicly-accessible library of toolkits and guidance for state, territorial, and local education agencies.

In FY 2016, CDC will also continue to support two major activities for Adolescent and School Health grantees:

Conduct School-based Surveillance—Grantees provide data on six types of health-risk behaviors that contribute to the leading causes of death and disability through the Youth Risk Behavior Surveillance System.[35] National data are also collected on school-based health policies, programs, and practices[36] (*School Health Profiles* and the *School Health Policies and Practices Study*). Such data are not monitored elsewhere in the federal government and provide the most comprehensive national, state, and local information about the health-related behaviors of young people and the steps schools are taking to improve student health. These data enable health departments, education agencies, and community organizations to identify programmatic needs, target resources, establish measurable objectives and goals, and monitor school health progress over time.

In 2013, Boston Public Schools presented YRBS data to the Boston City Council and was able to demonstrate the need for sexual health education and services and identify gaps. The presentation generated community support that led to the passage of a proposed District Wellness Policy requiring schools to teach comprehensive sexual health education and provide sexual health services.

Implement School-based Prevention Programs—CDC's approach to reducing teen sexual risk behaviors includes both universal and targeted interventions, and seeks to ensure that those interventions occur in environments that are safe and supportive for all students. CDC prioritizes funding for those states and cities with high rates of HIV infection, with grantees representing approximately 62% of the HIV diagnoses among 15-19 year olds in the United States in 2009. CDC funds 19 state education agencies and 17 local education agencies to provide young people with the skills and knowledge needed to avoid infection with HIV and other STDs, thereby reducing disease transmission. Each funded local education agency targets support and guidance to schools with students at highest risk for HIV infection and other STDs. Three of these sites also provide more targeted HIV/STD prevention for young men who have sex with men.

School-based HIV/STD prevention program grantees will:

- Increase implementation of evidence-based sexual health education programs in schools to provide adolescents with the essential knowledge and critical skills needed to avoid HIV infection and other STDs
- Create safer and more supportive school environments—characterized by the absence of discrimination, intimidation, taunting, harassment, and bullying—for adolescents at highest risk for HIV
- Increase student access to health services, including HIV counseling and testing, either on site or through referrals to youth-friendly, community-based healthcare providers

[35] http://www.cdc.gov/HealthyYouth/yrbs/index.htm
[36] http://www.cdc.gov/healthyyouth/data/surveillance.htm

In addition, six non-governmental organizations are funded to provide capacity-building assistance to funded state and local education agencies. These technical resources will be aimed at delivering sustainable, effective and efficient initiatives in districts and schools.

HIV Prevention for Adolescent and School Health Grants[1,2]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	N/A	42	42	42	42	0
- New Awards	N/A	42	0	0	0	0
- Continuing Awards	N/A	0	42	42	42	0
Average Award	N/A	$0.221	$0.307	$0.310	$0.310	$0.000
Range of Awards	N/A	$0.100-$0.650	$0.250-$0.320	$0.250-$0.320	$0.250-$0.320	N/A
Total Awards	**N/A**	**$9.287**	**$12.905**	**$13.020**	**$13.020**	**$0.000**

[1] Reflects funding to 19 states (including DC) and 17 local education agencies, as well as six non-governmental organizations providing capacity building assistance.

[2] These funds are not awarded by formula.

Viral Hepatitis Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$31.331**	**$31.331**	**$62.820**	**+$31.489**

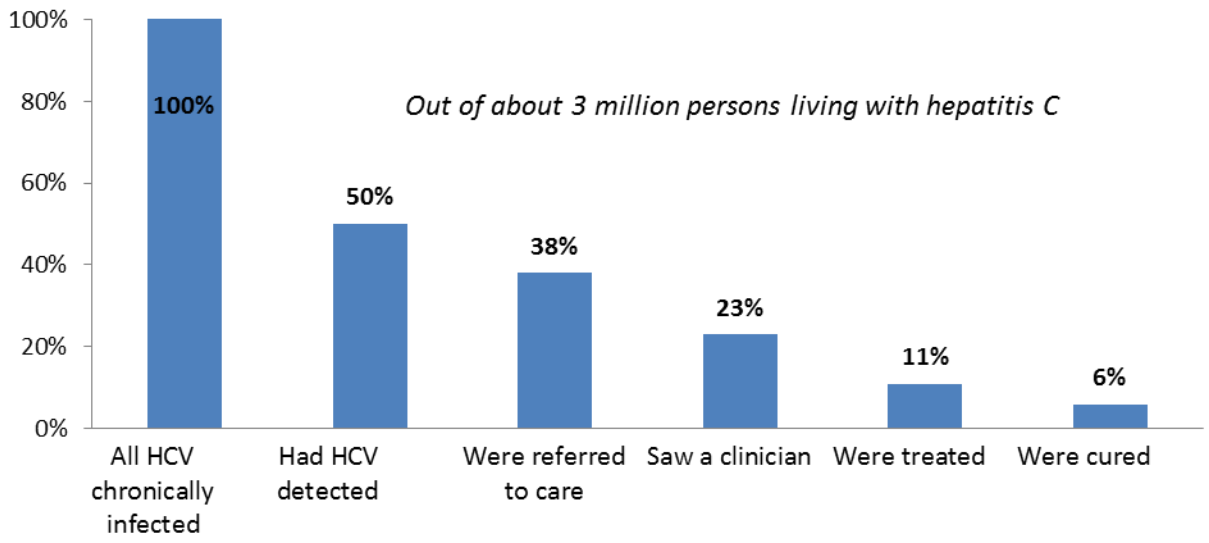
Overview

CDC's hepatitis priorities are aligned with the HHS Action Plan for the Prevention, Care, and Treatment of Viral Hepatitis[37] and include:

- Preventing death from viral hepatitis
- Stopping the epidemic of hepatitis C virus (HCV) infection in young people
- Eliminating mother-to-child transmission of hepatitis B virus (HBV) infection

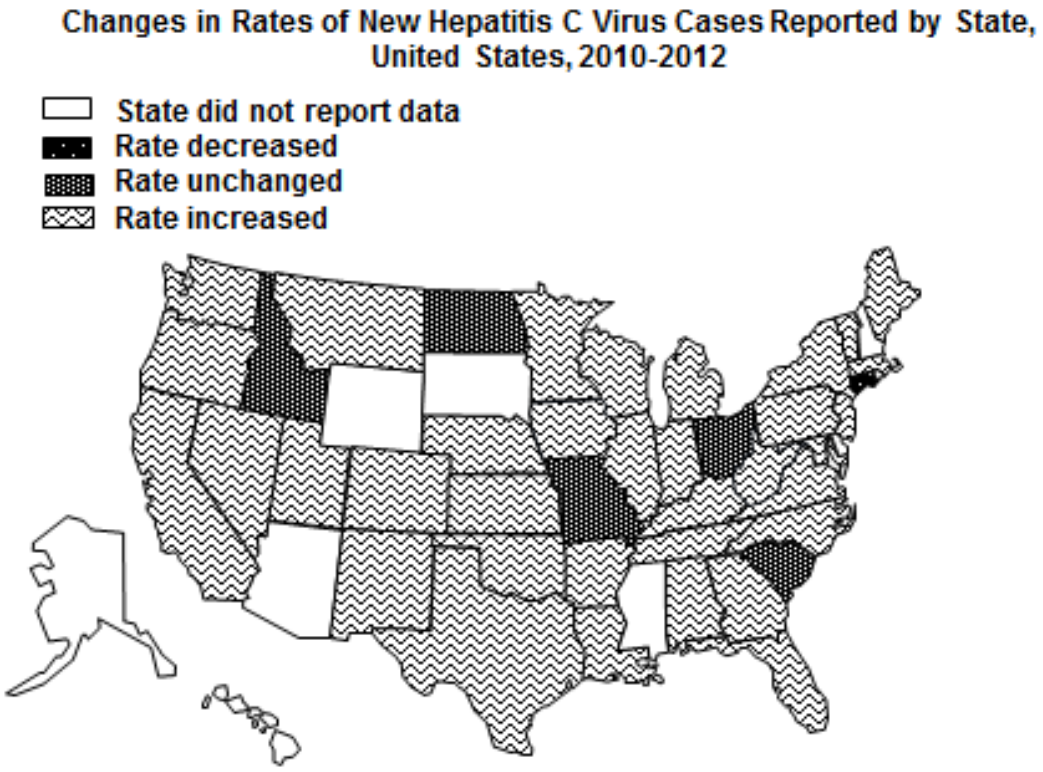
Of particular concern is the increasing number of deaths among the estimated 3 million Americans living with hepatitis C. Therapies are available that cure HCV infection in more than 90% of persons who complete treatment. However, up to 60% of people infected with HCV are unaware of their infection and even fewer are receiving appropriate care and treatment. This low level of awareness contributes to the increasing numbers of HCV-related deaths, which are now almost entirely preventable through HCV testing, care, and treatment. Three of every four people with hepatitis C were born during 1945-1965. Within this birth cohort, American Indians and African Americans are disproportionately affected. Full implementation of CDC and U.S. Preventive Services Task Force (USPSTF) recommendations for HCV testing will avert an estimated 121,000 deaths.

Hepatitis C Virus Continuum of Care



In addition to the existing chronic hepatitis burden, approximately 55,000 new viral hepatitis infections occur each year. From 2010 to 2012, new HCV infections increased by 75% nationwide, most notably among adolescents and young adults. As shown in the map below, of the 41 states that reported data, 35 states had an increase in persons newly infected with HCV.

[37] http://www.cdc.gov/hepatitis/HHS-ActionPlan.htm



Through CDC's implementation of effective vaccination strategies, the annual incidence of hepatitis A virus infection has decreased more than 95% since 1995, and the annual incidence of hepatitis B , particularly among children aged 15 years and younger, has had a 78% decline during the same time period (there is no vaccine to protect against HCV). Despite the progress made as a result of routine childhood immunization, cases of mother-to-child transmission of hepatitis B continue to occur. Of infants infected near the time of birth, 90% develop chronic hepatitis B infection. Left undiagnosed and untreated, nearly one in four of these infants will develop serious liver problems, including liver cancer.

Health disparities for chronic hepatitis B infection also exist for persons born in Asia, Africa, and certain countries in other regions, as well as for those persons with parents born in these areas. HBV affects an estimated 700,000 to 1.4 million people in the United States. Identifying chronically infected persons and linking them to care and treatment remains a major public health challenge.

Budget Request

CDC's FY 2016 request of **$62,820,000** for Viral Hepatitis is $31,489,000 above the FY 2015 Enacted level.

To stop viral hepatitis transmission and prevent viral hepatitis-related illness and death, CDC will use the increase to:

- Expand adoption of CDC/USPSTF recommendations for HBV and HCV testing and linkage to care by health systems and providers to prevent disease and premature death
- Develop monitoring systems and prevention strategies to stop the emerging hepatitis C epidemic among young persons and others at risk
- Enhance vaccination-based strategies to eliminate mother-to-child transmission of hepatitis B
- Strengthen state and local capacity to detect new infections, coordinate prevention activities, provide feedback to providers for quality improvement, and track progress toward prevention goals

CDC will partner with state and local health departments, universities, medical centers, community-based organizations, and others to achieve prevention priorities, placing the nation on a path toward the elimination of hepatitis B and hepatitis C. CDC will continue to collaborate with WHO and other partners to advance viral hepatitis epidemiology, prevention, control, and laboratory diagnostics globally.

Promoting hepatitis testing and linkage to care

Many persons living with HBV or HCV are unaware they are infected. They can have clinically silent infections for decades until developing liver damage, cirrhosis, liver failure, or liver cancer. To increase the identification of persons with HCV infection in the United States, in July 2012, CDC issued new recommendations for HCV screening[38] of persons born between 1945 and 1965. In June 2013, the USPSTF similarly revised its HCV testing recommendations.[39] Both CDC and the USPSTF also recommend screening people at high risk of HCV infection. HCV testing linked to care and treatment is cost-effective, with health benefits comparable to other routine preventive health services.[40] CDC estimates that 800,000 people living with HCV infection meet the "highest" or "high" priority criteria for immediate treatment.

Similarly, CDC and USPSTF have issued recommendations for identifying and managing persons with hepatitis B.[41] These recommendations include testing of persons born in Asia, Africa, the Pacific islands, or countries in other regions with moderate to high rates of hepatitis B. Testing was also recommended for persons born in the United States, including men who have sex with men, and others who were not vaccinated at birth and have at least one parent born in Asia and other areas with high rates of hepatitis B.

CDC continues to develop and evaluate strategies that support implementation of HBV and HCV testing and linkage to care. In FY 2012, CDC funded demonstration sites to test persons for hepatitis C and refer HCV-infected persons to appropriate care and treatment. The success realized through these projects prompted CDC to fund three jurisdiction-level programs in FY 2014 to strengthen the public health and clinical care capacity to track, diagnose, and cure HCV infection. The projects are implementing a package of services provided by a community coalition composed of public health authorities, primary care providers, and academic medical centers. In FY 2014, CDC also began funding three city-wide projects designed to increase identification of foreign-born persons with chronic hepatitis B and link them to care.

With new resources in FY 2016, CDC will improve the continuum of hepatitis C testing, care, and treatment to prevent mortality from hepatitis C, and will develop new prevention strategies to reduce HCV transmission by leveraging FDA-licensed, safe, and curative therapies. CDC will expand its 2014 HCV project from three to eight funded sites in jurisdictions with estimates of high burden of chronic HCV infection. The jurisdictions will bring together a network of partners (e.g., primary care providers, academic medical centers, health departments) who will implement a package of services for target populations experiencing HCV-related health disparities. Key activities include provider training, performance measurement, promotion of electronic health record-based clinical decision tools, and development of strategies to reduce cost and improve patient and provider acceptance of HCV services. The programs in the eight jurisdictions—in conjunction with the surveillance components outlined below—will result in health systems successfully curing 100,000 persons of their HCV infection and averting 30,000 deaths from HCV. CDC will also expand from three to five the number of programs that are expanding access to HBV testing and linkage to care in communities experiencing hepatitis B-related health disparities.

[38] http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6104a1.htm
[39] http://www.uspreventiveservicestaskforce.org/uspstf12/hepc/hepcfinalrs.htm
[40] http://annals.org/article.aspx?articleid=1310557
[41] http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5708a1.htm

To further accelerate adoption of HBV and HCV testing and treatment across the country, CDC will also:

- Support professional education to expand the number of providers prepared to test, manage, and treat HBV and HCV
- Develop collaborations with public health programs, private health systems, and community-based organizations to promote and guide adoption of CDC and USPSTF recommendations
- Conduct prevention research to identify strategies to improve program performance

Collectively, these viral hepatitis prevention programs will improve the health, productivity, and quality of life of individuals and communities by reducing HBV and HCV related disability, mortality, and healthcare costs.

Stopping the emerging hepatitis C epidemic

CDC continually monitors reports of new HCV infections and investigates outbreaks of hepatitis C in health care and other settings. Of particular concern is the emerging epidemic of HCV among young persons associated with drug use. CDC has conducted investigations and published the findings of these studies to promote better targeting of programs. Based on these findings, in FY 2014, CDC funded two projects to identify young persons with new HCV infection, assess risk factors for transmission, and, support and improve linkages to HCV care and treatment services. CDC is also conducting modeling to determine the potential impact of curative hepatitis C treatments on the HCV epidemic among young persons.

In FY 2016, CDC will launch new projects to detect, investigate, and prevent HCV transmission in ten of the states reporting the largest increases in new HCV cases. These projects will apply approaches informed by knowledge gained from the agency's testing and linkage to cure initiatives, its current young adult prevention services projects, and the modeling results. Grantees will promote HCV testing in clinical settings providing services for high risk populations (e.g., emergency departments, rural community health centers, primary care providers treating drug addiction) to assure HCV infected persons are linked to clinical preventive services. To eliminate the risk of mother-child transmission, the identification of HCV infected women of child bearing age will be a particular focus.

To further promote the adoption of HCV education, testing, and prevention, CDC will develop collaborations with drug treatment programs, correctional organizations, and non-governmental organizations. The results of these various activities will guide the development of model community-based projects to eliminate HCV transmission and disease. The integration of HCV treatment with early HCV testing and other prevention services raises the possibility of dramatically reducing and ultimately eliminating HCV transmission.

Updating and promoting hepatitis vaccination recommendations

Mother-to-child transmission of hepatitis B places infants at high risk for HBV-related liver cancer in later life. To stop transmission, HBV testing is recommended for all pregnant women, and hepatitis B vaccine-based strategies are recommended for their newborns beginning immediately after delivery. CDC has published cost-effectiveness data demonstrating the value of screening and treating HBV-infected women to prevent perinatal hepatitis B transmission. CDC-supported public health programs provide case management services to ensure mothers and infants receive these interventions. To help public health agencies focus case management services, CDC is collaborating with four major commercial laboratories and other partners to report the pregnancy status of women with newly diagnosed laboratory-confirmed infectious HBV in all states and public health jurisdictions they serve. This collaboration will help improve progress toward the goal of eliminating chronic HBV infections in the United States resulting from perinatal transmission.

CDC continues to increase and improve case management of approximately 254,000 infants born each year to HBV-infected mothers, placing them at highest risk for developing chronic HBV infection.[42] Unfortunately, hepatitis B vaccine does not prevent mother-to-child transmission of HBV by women with high viral loads.

In FY 2016, CDC will implement new policies to achieve the national goal of eliminating mother-child transmission of hepatitis B. Activities will include collaborations with birthing hospitals to monitor the implementation of vaccination of all newborns in the first three days of life with data shared with hospitals for quality improvement purposes. To prevent failures of vaccination to protect newborns, CDC will study the benefit of extra testing to identify pregnant women with high viral loads and hepatitis B treatment to reduce the amount of virus circulating in the mother's system before delivery. Based on these study findings, CDC will update and implement new prevention policies that bring together maternal HBV testing followed by appropriate antiviral use and newborn vaccination. CDC will also develop new vaccination guidelines for hepatitis A with the goal of eliminating this cause of viral hepatitis.

Improving detection of viral hepatitis and the quality of prevention and care

There is an ongoing need to ensure strategic information is available and used for detecting outbreaks and monitoring progress toward the elimination of viral hepatitis transmission and disease. To improve detection of new infections—including those among young persons—CDC is working with the Council of State and Territorial Epidemiologists (CSTE) to revise state and local reporting criteria. CDC is aware of increased reports of HCV infection among children born to HCV-infected mothers, and is investigating these cases and working with CSTE to develop a case definition for national reporting. CDC has also expanded collaborations with commercial laboratories to improve timely reporting of new infections. CDC continues to seek innovative ways to improve the efficiency, effectiveness, and timeliness of viral hepatitis surveillance at the national, state and local levels.

CDC will help public health partners respond to outbreaks to ensure that potentially-exposed persons are identified, screened, and referred for treatment if indicated. For example, in 2013 CDC helped quickly identify both the source of a new hepatitis outbreak and the means by which it was spread, facilitating a rapid response that contained and greatly minimized the scope of the outbreak. A total of 165 people in 10 states—Arizona (24), California (80), Colorado (29), Hawaii (8), New Hampshire (1), New Jersey (1), New Mexico (11), Nevada (6), Utah (3), and Wisconsin (2)—were confirmed to have become ill from hepatitis A after eating a contaminated frozen fruit mix product purchased at a national discount buyers' club. In addition, work carried out under the Advanced Molecular Detection initiative is enabling the automated comparison of HCV strains isolated from patients to speed detection of related strains and identify sources of outbreaks. CDC plans to use this laboratory tool to also identify and interrupt chains of transmission among persons who inject drugs and other risk populations. Beginning in FY 2016, CDC will launch a web site for all state and local health departments to submit specimens to be analyzed using advanced molecular detection techniques that enable the rapid identification of cases caused by similar viral strains, indicating a common source of infection.

> In a 2012 multi-state HCV outbreak, CDC's viral hepatitis laboratory identified that a single strain of HCV was transmitted to 45 patients by an infected healthcare worker. CDC then helped to identify more than 11,000 persons from 16 healthcare facilities in eight states, ensuring these people were notified about potential exposure and recommended HCV testing.

In line with CDC's Surveillance Strategy, CDC better counts and characterizes cases of viral hepatitis and estimates the burden of disease through the National Notifiable Disease Surveillance System (NNDSS), with supplemental data obtained from funded sites, national surveys, and vital statistics. NNDSS—which serves as the core of viral hepatitis surveillance—was designed to enable states to notify CDC of infectious diseases diagnosed with a single positive laboratory test. However, confirmation of cases of acute and chronic hepatitis B and C

[42] http://www.ncbi.nlm.nih.gov/pubmed/22451702

require additional information beyond a single laboratory test. Because health departments are overburdened and lack the capacity to gather and process reports of viral hepatitis cases, there are concerns about the quality of the viral hepatitis data they report. For example, only 13 states agreed to the publication of the number of laboratory confirmed hepatitis A, B, and C case reports in their jurisdiction. In a limited number of areas, CDC has funded active, enhanced hepatitis surveillance, investigating case reports to ascertain more extensive and complete demographic and infection risk information about patients and disease transmission trends in the community. Currently, CDC supports surveillance in seven sites—Florida, Massachusetts, Michigan, New York, and Washington, as well as Philadelphia and San Francisco—providing these jurisdictions with the capacity to investigate, confirm, and analyze laboratory and clinical reports of viral hepatitis.

CDC also currently supports health departments to convene stakeholders and identify opportunities to integrate viral hepatitis education and prevention services into existing public health programs, particularly to address the needs of underserved populations. CDC funds viral hepatitis prevention coordinators (VHPCs) in 48 states, the District of Columbia, Los Angeles, New York City, and Philadelphia.

With additional funding in FY 2016, CDC will assure all states have the capacity to collect a core set of data to detect new infections and outbreaks, identify health disparities, and assess the implementation and impact of CDC recommendations for vaccination, testing, and linkage to care. These efforts will take full advantage of CDC's on-going efforts to modernize NNDSS as part of the Surveillance Strategy. CDC will provide technical assistance for real-time data collection; implementation of uniform reporting; linkage of clinical and public health data to monitor factors that increase risk of end-stage liver disease and cancer for persons living with viral hepatitis; and rapid detection and control of hepatitis C outbreaks among persons who inject drugs and patients in health care settings.

In FY 2016, CDC will also increase funding for state health departments to strengthen coordination of policy and program development (e.g., data analysis, prevention planning, public education). These funds will also increase the capacity for health departments to collaborate with a broader array of health systems and community-based programs in their jurisdictions to bring together technical expertise and strategic data from public health surveillance and other sources to:

- Identify communities with high prevalence of viral hepatitis
- Provide training to providers and health systems serving these communities to promote delivery of clinical preventive services
- Monitor standard performance measures and feed results back to providers and health systems to improve the targeting and quality of primary and secondary prevention services

Emphasis will be placed on efforts to 1) further improve the design of prevention strategies to include how and where they are implemented with particular emphasis on strengthening the test, care, and cure cascade for hepatitis C; and 2) expand access to preventive services to eliminate health disparities, including for hepatitis B. These efforts are expected to greatly improve the quality and provision of hepatitis testing and treatment, resulting in decreased illness and death, and avoidable healthcare costs.

Viral Hepatitis Cooperative Agreement Grants[1]

(dollars in millions)	FY 2012 Actual[2]	FY 2013 Actual[2]	FY 2014 Final[3]	FY 2015 Estimate[3]	FY 2016 President's Budget[4]	2016 +/-2015
Number of Awards	54	52	52	52	TBD	TBD
- New Awards	0	52	0	0	TBD	TBD
- Continuing Awards	54	0	52	52	TBD	TBD
Average Award	$0.094	$0.097	$0.144	$0.144	TBD	TBD
Range of Awards	$0.019–$0.192	$0.020-$0.250	$0.020–$0.528	$0.020–$0.528	TBD	N/A
Total Awards	**$5.076**	**$5.036**	**$8.456**	**$8.456**	**$17.484**	**+$9.028**

[1]These funds are awarded partially by formula.

[2]Reflects funding for viral hepatitis prevention coordinators only. This table excludes funding for a technical center and for enhanced surveillance, which is conducted in a small number of areas.

[3]Reflects funding for viral hepatitis prevention coordinators and for enhanced surveillance in a small number of areas; excludes funding for a technical center.

[4]A new funding cycle may begin in FY 2016. Estimates are unavailable at this time.

Sexually Transmitted Infections Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$157.310**	**$157.310**	**$157.310**	**$0.000**

Overview

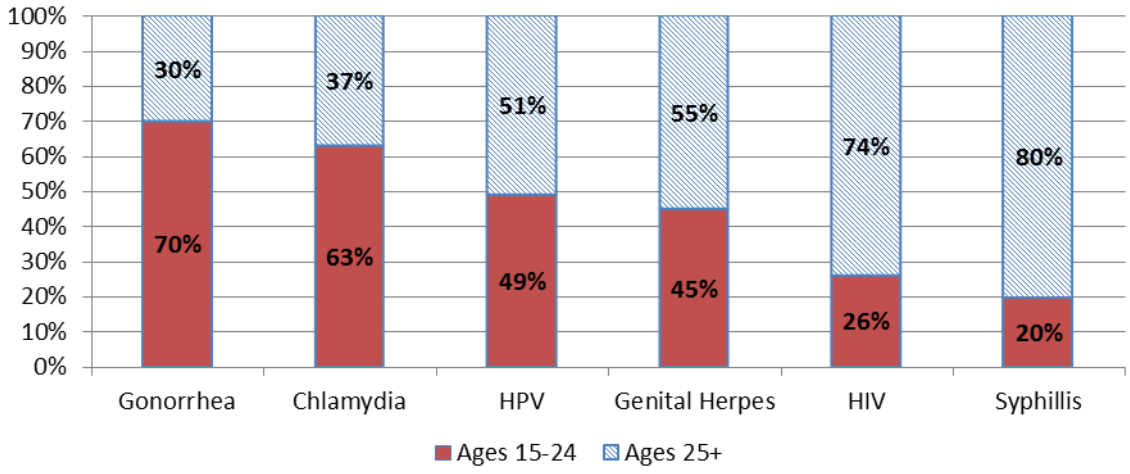
Sexually transmitted infections (STIs), also known as sexually transmitted diseases (STDs), can lead to harmful, associated medical conditions that include poor reproductive outcomes such as pelvic inflammatory disease (PID) and infertility, and increased risk of HIV infection. There are about 20 million new STIs every year, costing the U.S. healthcare system $16 billion in direct medical care costs alone. CDC funds all states and fifteen territorial or local health departments to prevent STIs and their sequelae. Notable CDC accomplishments include preventing 32 million cases of gonorrhea, saving $3.7 billion in medical costs over a 33-year period, and the prevention of 21,000 cases of PID and 4,000 cases of tubal factor infertility annually, which together result in potential healthcare cost savings of $45-$77 million each year. Repeat STIs are a marker for high risk sexual behaviors and can identify individuals who are at risk of acquiring HIV and would benefit from HIV prevention services, including high intensity behavioral counseling and Pre-Exposure Prophylaxis (PrEP).

Budget Request

CDC's FY 2016 request of **$157,310,000** for Sexually Transmitted Infections is level with the FY 2015 Enacted level. CDC will concentrate on the following four priority areas to guide STD prevention and maximize long-term impact.

Adolescents and young adults—Adolescents and young adults represent a disproportionate number of STIs, accounting for half of all new infections. CDC will work with partners to support routine chlamydia screening for all sexually active adolescents and young adults as recommended by CDC—screening that is especially important because infections are often asymptomatic. For example, CDC and the National Chlamydia Coalition are working with the National Committee for Quality Assurance to identify evidence-based strategies to increase chlamydia screening among participating health plans, and develop and promote strategies for improving chlamydia HEDIS rates. CDC will also prevent reinfection with chlamydia and gonorrhea and increase options available to treat partners of infected women by providing assistance to STD prevention programs and primary care providers implementing Expedited Partner Therapy.

Proportion of New Sexually Transmitted Infections among Youth

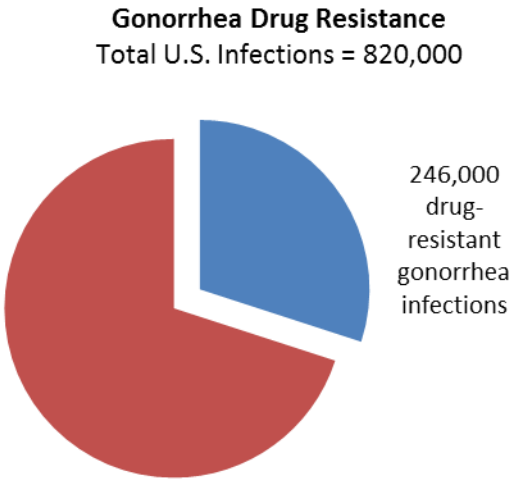


Men who have sex with men (MSM)—CDC will fund state and local health departments to implement local prevention efforts to reduce STD risk among the most vulnerable MSM populations. CDC will assist health departments in conducting internet-based partner services to reach partners possibly exposed to STDs. CDC will also work with federally qualified health centers (FQHCs) and health departments to establish partnerships with primary care providers aimed at implementing recommended STD screening for MSM who are seeking care in FQHCs and linking those at highest risk to HIV prevention services.

CDC recently completed a baseline study to determine human papillomavirus (HPV) prevalence with HPV vaccine types and HPV vaccine history among MSM age 18-26 years. Few men had history of HPV vaccination and data suggest that they may benefit from vaccination. Continuation of this study to evaluate the impact of vaccination among MSM is being explored.

Another ongoing study through CDC's STD Surveillance Network aims to verify the effectiveness of antibiotic treatment for gonorrhea in MSM using laboratory confirmation that a patient was cured. CDC is also working with partners to develop and implement training materials and curricula for clinicians working in HIV care settings accessed by MSM to ultimately improve sexual risk behavior assessments and STI screening rates of MSM, including non-genital testing.

Multi-drug resistant gonorrhea—Gonorrhea is a very complex bacterium that continuously evolves to become resistant to each antibiotic recommended for treatment. CDC will monitor trends in drug-resistant gonorrhea through our Gonococcal Isolate Surveillance Project, a sentinel laboratory surveillance system. CDC will also update and promote treatment guidelines accordingly, and support investigation of new treatments in conjunction with the National Institutes of Health. Targeted activities to tackle drug resistant gonorrhea in the community are described in the Antibiotic Resistance Initiative, found under the Emerging and Zoonotic Infectious Diseases budget request.



Congenital syphilis—Untreated syphilis during pregnancy can result in infant death in up to 40 percent of cases. CDC will strengthen partnerships with healthcare providers, the Health Resources and Service Administration's Maternal and Child Health Bureau, and Title V-funded programs (Maternal and Child Heath Block Grant) to ensure pregnant women receive syphilis testing and timely treatment to prevent babies from being born with this preventable, costly, and debilitating disease.

CDC will also educate and train healthcare providers in the areas of sexual and reproductive health. The agency trains physicians on STD treatment guidelines that highlight special populations, including MSM, adolescents, and incarcerated populations. CDC will also continue development of guidelines for screening and treatment of STDs, STD diagnostics, and laboratory practice. Eleven sites will receive CDC funding to participate in the STD Surveillance Network, a sentinel clinic- and population-based system to monitor STD-related trends.

CDC's STD prevention activities complement the delivery of STD clinical preventive services and are not duplicative of services covered by the Affordable Care Act. CDC awards the majority of its STD prevention funds to state and local health departments through cooperative agreements. The current five-year cooperative agreement cycle began in January 2014. This funding cycle includes important updates and refinements to the program, including a phased-in funding formula to direct prevention resources based on both disease burden and at-risk population. CDC also restructured program components to allow grantees more flexibility to meet

the needs in their jurisdictions. Through the STD program cooperative agreement and the consolidated Pacific Islands cooperative agreement, CDC provides funding and guidance to strengthen program assessment (including surveillance and evaluations) and assurance capacity in all 50 states, as well as 15 territorial and local STD prevention programs. Ultimately, these cooperative agreements will increase identification and treatment of STD cases and reduce STD rates in the United States.

The STD cooperative agreement supports and improves the ability of public health departments to:

- Design, implement, and evaluate state and local STD prevention programs
- Assess and ensure appropriate screening and treatment safety net services at the community level by:
    - Working with community partners to assure low-income women and their partners have access to chlamydia and gonorrhea screening, and treatment to prevent infertility and promote interventions that prevent STDs among sexually active women
    - Screening for and prevention of chlamydia, gonorrhea and syphilis among the uninsured and underinsured, and highly-affected populations, such as adolescents and MSM
- Enhance STD surveillance by leveraging advances in electronic health records and health information exchanges
- Focus on integration of screening for congenital syphilis during antenatal visits
- Monitor antibiotic resistance of gonorrhea
- Conduct contact investigations of exposed sexual partners and outreach services, which may include non-reimbursable testing of exposed partners in non-clinical settings
- Create and deliver relevant health promotion information to providers and the general public
- Address related infections—such as HIV and viral hepatitis—and develop capacities that can be shared across programs that can lead to improvements in effectiveness and efficiencies and furthers program collaboration and service integration (PCSI)

CDC has partnered with Henry Ford Hospital in Detroit, Michigan, to implement rapid point-of-care syphilis and HIV screening among high-risk groups, including MSM, seen in emergency departments and HIV care clinics.

Sexually Transmitted Disease Prevention Cooperative Agreement Grants[1,2,3,4]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate[4]	FY 2016 President's Budget	2016 +/-2015
Number of Awards	65	59	59	59	59	0
- New Awards	0	0	59	0	0	0
- Continuing Awards	65	59	0	59	59	0
Average Award	$1.555	$1.607	$1.610	$1.595	$1.595	0
Range of Awards	$0.043–$6.724	$0.173-$6.278	$0.177–$6.396	$0.180–$6.425	$0.185-$6.607	N/A
Total Awards	**$101.075**	**$94.797**	**$95.044**	**$94.093**	**$94.093**	**$0.000**

[1]Awards include funding to address HIV co-infection.

[2]Awards do not include funding provided under Direct Assistance.

[3]Amounts do not include Gonococcal Isolate Surveillance Project awards.

[4]These funds are awarded by formula.

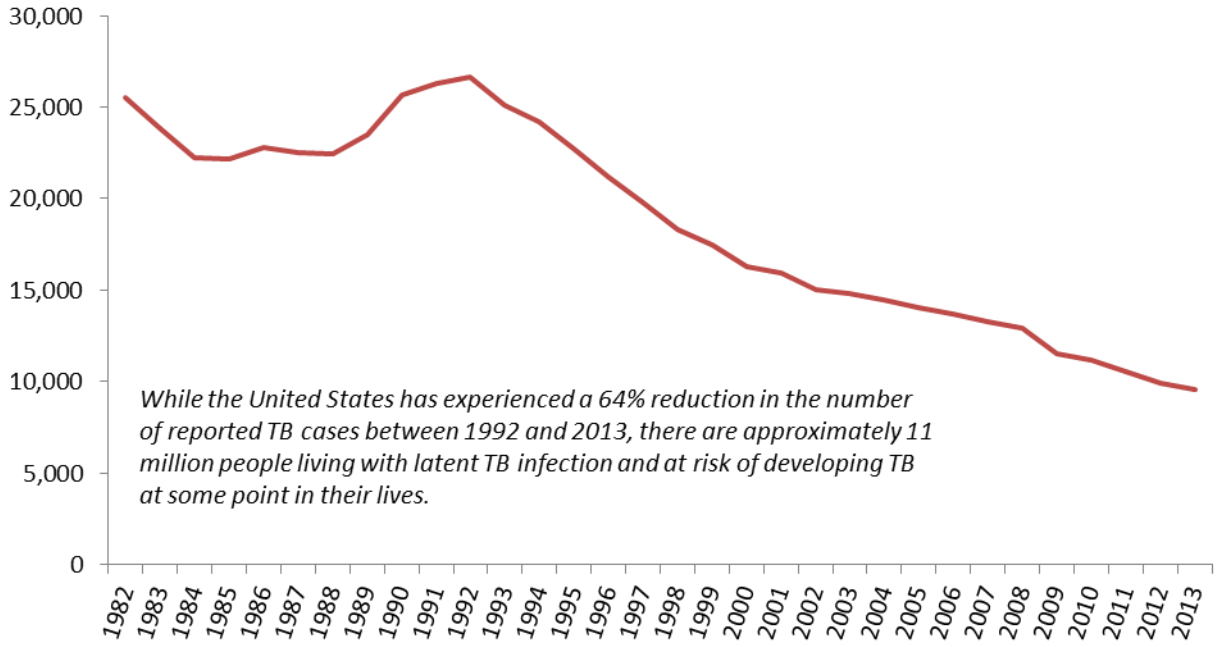
Tuberculosis Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$142.256**	**$142.256**	**$142.256**	**$0.000**

Overview

CDC works 24/7 to protect the United States from tuberculosis (TB)—particularly from threats posed by global and drug-resistant TB—providing TB funding to all 50 states, ten large cities and eight territories. CDC's TB program and its partners in state and local health departments reversed a deadly TB resurgence during the late 1980s and early 1990s caused by decreased funding for TB programs, changes in demographics, and the HIV epidemic. These factors allowed TB to rebound, resulting in approximately 52,000 TB cases that would not have occurred had the downward trend continued. Thanks to a concerted federal, state, and local response, the number of cases of TB disease dropped by 64% from 1992 to 2013, and is at its lowest level since national reporting began in 1953. The United States has one of the lowest TB disease incidence rates in the world; however, the rate at which the number of TB cases is declining has slowed, reflecting ongoing transmission of TB in vulnerable populations, and high numbers (around 11 million) of people who have latent TB infection (LTBI). While people with LTBI are not infectious or symptomatic, they may develop TB disease, especially if they have weakened immune systems, caused by factors such as diabetes or HIV infection. Approximately 75% of U.S. TB disease cases are reactivated LTBI. As a result, CDC must maintain constant vigilance against this age-old disease.

Reported TB Cases United States, 1982 – 2013[1]



[1]Updated as of June 11, 2014

TB is spread through the air from person to person. When a person with infectious TB coughs or sneezes, TB bacteria are expelled into the air. If another person inhales these bacteria, he or she may become infected. However, not everyone infected with TB bacteria becomes sick. People can develop latent TB infection in which they have no symptoms and are not contagious. Without treatment, about 5 to 10% of latent TB-infected persons will develop active TB disease at some time in their lives. For people who develop TB, it is imperative

that they complete the full course of therapy. Inappropriate or interrupted TB treatment can lead to treatment failure, relapse, or drug resistance. Given these challenges and the fact that TB is still endemic in many countries, intensive TB prevention and control programs are needed to protect communities. Key strategies for TB control and elimination include: increasing the percentage of persons newly diagnosed with drug-sensitive TB who complete treatment within 12 months (treatment is longer for persons with drug-resistant cases): increasing the percentage of culture-positive TB patients who receive testing for drug susceptibility: and increasing the percentage of newly-infected contacts of persons with smear-positive TB who complete treatment for latent TB infection.

Budget Request

CDC's FY 2016 request of **$142,256,000** for TB is level with the FY 2015 Enacted level. This budget supports efforts necessary to prevent and control TB in the United States.

To maintain TB control and ultimately eliminate TB from the United States, CDC funds health departments in all 50 states, ten large cities, Washington D.C., Puerto Rico, the Virgin Islands and other territories through cooperative agreements for TB control and laboratory support. All available cooperative agreement funds are distributed according to a formula that is based on case numbers, case complexity, laboratory workload, employee training needs, and program performance. This formula is being fully implemented with the five-year funding cycle beginning in FY 2015. Current performance measures are completion of therapy for persons with TB disease and drug susceptibility testing.

Grantee activities include:

- Investigating and reporting of every case of TB disease
- Genotyping TB bacteria and testing them for drug-resistance
- Ensuring the provision of medical care, laboratory testing, and other services to achieve complete cure of TB patients, which halts further transmission
- Identifying contacts and providing treatment to prevent future TB cases

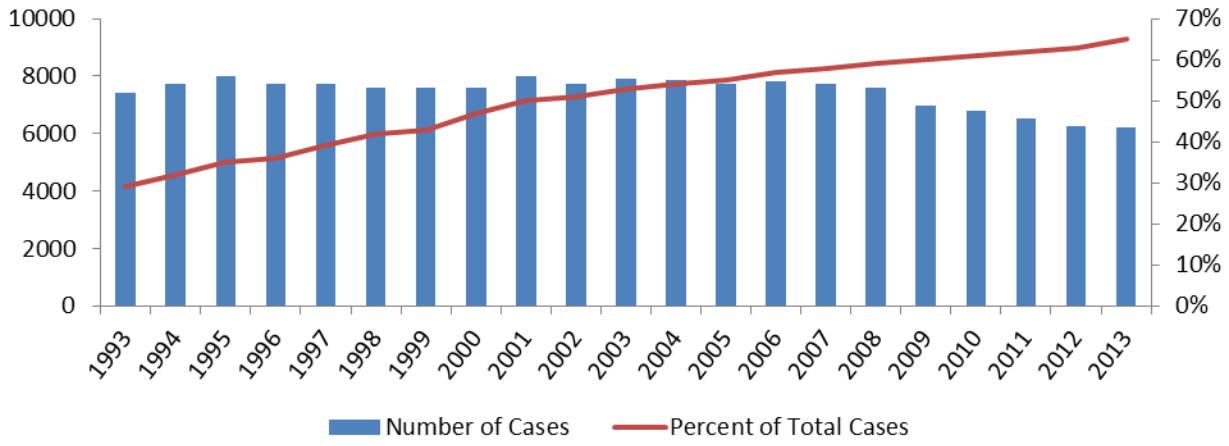
CDC also provides funding to five Regional Training and Medical Consultation Centers (RTMCCs). Given the low incidence of TB disease in the United States, many U.S. health professionals have never seen a TB case during their training and are unfamiliar with TB diagnosis and treatment. Misdiagnosis and failure to appropriately treat TB results in prolonged transmission among families and communities, as well as months of debilitating illness for the patient. To combat this problem, the RTMCCs provide training and health education about TB diagnosis, treatment and other aspects of TB control—such as contact investigations and medical consultation—to physicians who are treating TB patients, particularly those patients with complicated or drug-resistant cases.

In addition to funding cooperative agreements, CDC provides national leadership in responding to challenges to TB elimination by directly engaging in a range of TB prevention and control activities, particularly in supporting large contact investigations that are necessary to control disease outbreaks. For every case of TB identified, state and local TB programs need to evaluate family and community members who may have come in contact with the sick person and provide testing and possibly treatment to ensure the disease does not spread. Annually, public health workers evaluate more than 100,000 people for TB in the United States. State and local health departments may invite CDC staff to visit their jurisdictions to assist with these investigations. From May 2012 to the end of 2014, CDC responded to 12 requests for assistance from local TB programs in prioritizing TB evaluations among vulnerable populations including infants, homeless persons, excessive alcohol users, persons in corrections facilities, and adults with mental illness. For these 12 incidents alone nearly 40,000 people needed to be evaluated for TB due to possible exposure. Three of the recent 12 CDC responses addressed drug-resistant TB.

CDC-funded research improves the evidence base for the diagnosis, prevention and treatment of TB. In clinical research, studies funded through the TB Trials Consortium (TBTC), CDC and other partners are seeking to shorten TB treatment and address the significant limitations of current therapies—including harmful side effects—and improve therapy for children; persons with HIV infection, diabetes, other co-morbidities; and drug-resistant TB. In addition to clinical trials, CDC supports the TB Epidemiologic Studies Consortium (TBESC), which applies epidemiologic, behavioral, economic, laboratory, and operational research to improve programmatic efforts in TB elimination. TBESC focuses on approaches to diagnosing and treating people with LTBI to prevent future cases of TB disease. Research findings provide the evidence base for TB prevention and treatment guidelines, such as the ones recently published for the use and safety monitoring of bedaquiline fumarate[43], the newest drug for the treatment of multidrug-resistant TB. CDC develops and conducts innovative laboratory tests including advanced molecular detection methods that serve the diagnostic needs of TB programs in the United States. For example, CDC developed and implemented the Molecular Detection of Drug Resistance Service, a national clinical referral service that enables CDC and state health departments to rapidly confirm tests for drug-resistant tuberculosis, and provide guidance on selection of an effective drug regimen for curing the patient and stopping transmission. In large, complex outbreaks, CDC uses whole genome sequencing to distinguish between closely related strains of TB, allowing epidemiologists to pinpoint how TB is being transmitted within communities with a high background burden of TB disease.

CDC also provides technical support to the international community to prevent, detect and treat TB, including drug-resistant TB, ultimately reducing the TB burden at home. The majority (64.6%) of domestic TB cases occur in persons born outside this country, reflecting the higher TB prevalence abroad. CDC works in partnership with the World Health Organization, PEPFAR, the U.S. Agency for International Development (USAID), and ministries of health around the world to inform international guidelines, build the capacity of local laboratory systems and TB control programs, and support TB surveillance, epidemiology and infection control. CDC also conducts clinical and operational research to improve global diagnostic and treatment strategies for TB, TB/HIV coinfection, and drug-resistant TB. For example, CDC provides technical support to partner ministries of health to scale-up the use of the new diagnostic test Xpert MTB/RIF (Xpert) while evaluating its performance and improving implementation. Xpert is an automated rapid test that can detect TB and identify patterns in TB DNA that are associated with drug resistance. By using this test, TB programs are able to diagnose patients faster—reducing diagnosis time from two months to a little over an hour—and quickly place them on the right drugs for curing their TB.

Trends in TB Cases in Foreign-born Persons, United States, 1993-2013[1]



[1] Updated as of June 11, 2014.

[43] http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6209a1.htm

A consequence of fewer TB cases in the United States has been less funding and public support for TB programs and an unstable U.S. supply of TB drugs. Since December 2012, CDC has published multiple notices about interruptions in drug and biologics supplies. Anti-TB drugs are old, and the drug supply for TB is dependent upon a handful of U.S. pharmaceutical companies who produce drugs with varying shelf lives and storage requirements. Interruption in the supply of any biologics or drugs used in diagnosing or treating TB impacts nearly every domestic TB program. CDC, FDA, USAID, U.S. drug manufacturers and international partners continue to explore mechanisms to ensure FDA-approved TB drugs and biologics are continuously available to U.S. TB programs. TB drug interruptions put the United States at risk for longer and more costly outbreaks, and ultimately for another resurgence, rolling back decades of progress and putting additional Americans at risk of a preventable and curable disease.

CDC also continues to support improvements in effectiveness and efficiencies that can be gained through program collaboration and service integration (PCSI), encouraging grantees to address related infections and to develop capacities that can be shared across programs, including HIV, STD and viral hepatitis.

TB Prevention and Control Cooperative Agreement Grants[1,2,3,4]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	68	62	62	62	62	0
- New Awards	0	0	0	62	0	-62
- Continuing Awards	68	62	62	0	62	+62
Average Award	$1.344	$1.304	$1.304	TBD	TBD	TBD
Range of Awards	$0.869–$8.599	$0.118-$8.902	$0.118–$8.902	TBD	TBD	N/A
Total Awards	**$91.392**	**$80.860**	**$80.860**	**TBD**	**TBD**	**TBD**

[1] Awards include funding to address HIV coinfection. Awards do not include funding provided under Direct Assistance.

[2] Awards do not include funding for Pacific Islands as those jurisdictions are funded another cooperative agreement.

[3] A new funding formula is being developed and will be implemented in FY 2015.

[4] These funds are awarded by formula.

CDC-Wide HIV/AIDS Funding

Fiscal Year	Domestic HIV/AIDS Prevention and Research (Infectious Disease)	Other Domestic HIV Prevention	Global HIV/AIDS Program[1]	CDC-Wide HIV Total
2006[1]	$651,657,000	$64,008,000	$122,560,000	$838,225,000
2007	$695,454,000	$62,802,000	$120,985,000	$879,241,000
2008[2]	$691,860,000	$40,000,000	$118,863,000	$850,723,000
2009	$691,860,000	$40,000,000	$118,863,000	$850,723,000
2010[3]	$799,270,000	$0	$118,961,000	$918,231,000
2011	$800,445,000	$0	$118,741,000	$919,186,000
2012[4]	$822,633,000	$0	$131,190,000	$953,823,000
2013	$768,635,000	$0	$125,254,000	$893,889,000
2014 Final	$786,712,000	$0	$128,420,000	$915,132,000
2015 Enacted	$786,712,000	$0	$128,421,000	$915,133,000
2016 Request	$799,361,000	$0	$128,421,000	$927,782,000

[1]For 2006 and 2007, CDC-wide HIV/AIDS funding was comprised of activities conducted by the Coordinating Center for Infectious Diseases [including the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP)], the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP), and the National Center for Birth Defects and Developmental Disabilities (NCBDDD). Funding for NCCDPHP and NCBDDD are shown in the "Other Domestic HIV Prevention" column.

[2]In FY 2010, funds supporting hemophilia/HIV activities in NCBDDD and funds supporting oral health/HIV, BRFSS/HIV, and Safe Motherhood/HIV activities in NCCDPHP—previously displayed in the "Other Domestic HIV Prevention" column—were removed from the CDC-Wide HIV/AIDS table. FY 2008 and FY 2009 figures were adjusted to become comparable to FY 2010 figures.

[3]In FY 2012, HIV prevention activities in the Division of Adolescent and School Health were transferred to NCHHSTP. FY 2010 and FY 2011 funding levels have been made comparable to the budget realignment, reflecting a transfer of $40,000,000 from Chronic Disease Prevention and Health Promotion to Domestic HIV/AIDS Prevention and Research. Funding levels prior to FY 2010 have not been made comparable to the budget realignment. FY 2010 funding also includes a $30,400,000 ACA/PPHF allocation.

[4]FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund. Funding levels prior to FY 2012 have not been made comparable to the FY 2016 request.

State Table: HIV Prevention with Health Departments[1,2,3,4]

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	Difference +/- 2015
Alabama	$3,785,032	$3,997,614	TBD	TBD
Alaska	$935,682	$932,341	TBD	TBD
Arizona	$3,971,005	$4,576,378	TBD	TBD
Arkansas	$1,543,753	$1,613,680	TBD	TBD
California	$16,653,704	$17,784,500	TBD	TBD
Colorado	$4,203,388	$4,331,146	TBD	TBD
Connecticut	$4,230,994	$4,246,068	TBD	TBD
Delaware	$1,027,551	$1,020,143	TBD	TBD
Florida	$33,437,066	$35,548,124	TBD	TBD
Georgia	$5,685,406	$5,616,990	TBD	TBD
Hawaii	$1,354,169	$1,300,020	TBD	TBD
Idaho	$758,772	$766,113	TBD	TBD
Illinois	$3,530,848	$3,487,612	TBD	TBD
Indiana	$2,887,658	$3,039,691	TBD	TBD
Iowa	$836,573	$816,872	TBD	TBD
Kansas	$920,924	$907,914	TBD	TBD
Kentucky	$1,449,627	$1,475,335	TBD	TBD
Louisiana	$6,952,962	$6,935,458	TBD	TBD
Maine	$835,163	$815,616	TBD	TBD
Maryland	$6,709,382	$5,461,195	TBD	TBD
Massachusetts	$5,534,272	$5,522,424	TBD	TBD
Michigan	$5,794,990	$5,923,788	TBD	TBD
Minnesota	$2,380,175	$2,413,535	TBD	TBD
Mississippi	$2,809,785	$3,138,212	TBD	TBD
Missouri	$4,021,298	$4,205,657	TBD	TBD
Montana	$932,787	$937,547	TBD	TBD
Nebraska	$1,057,931	$1,061,690	TBD	TBD
Nevada	$2,164,784	$2,245,880	TBD	TBD
New Hampshire	$797,368	$813,484	TBD	TBD
New Jersey	$15,593,450	$16,095,194	TBD	TBD
New Mexico	$1,406,933	$1,323,408	TBD	TBD
New York	$16,978,213	$17,393,614	TBD	TBD
North Carolina	$8,355,391	$8,820,687	TBD	TBD
North Dakota	$711,755	$752,040	TBD	TBD
Ohio	$5,782,100	$6,052,604	TBD	TBD
Oklahoma	$1,564,038	$1,588,825	TBD	TBD
Oregon	$2,148,029	$2,145,092	TBD	TBD
Pennsylvania	$5,646,163	$4,698,243	TBD	TBD
Rhode Island	$1,595,335	$1,575,240	TBD	TBD
South Carolina	$5,914,091	$6,123,497	TBD	TBD
South Dakota	$680,259	$747,204	TBD	TBD
Tennessee	$5,283,664	$5,603,710	TBD	TBD
Texas	$15,522,327	$16,349,752	TBD	TBD
Utah	$1,107,163	$1,122,250	TBD	TBD
Vermont	$ 1,249,417	$1,243,348	TBD	TBD
Virginia	$7,307,305	$7,718,380	TBD	TBD
Washington	$4,087,297	$4,233,140	TBD	TBD
West Virginia	$842,835	$820,140	TBD	TBD
Wisconsin	$2,149,091	$2,159,736	TBD	TBD
Wyoming	$757,673	$759,270	TBD	TBD
Cities				

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	Difference +/- 2015
Baltimore	$5,376,071	$7,087,483	TBD	TBD
Chicago	$9,256,311	$9,917,584	TBD	TBD
Fulton Co., GA	$7,898,040	$8,757,224	TBD	TBD
Houston	$6,760,800	$8,090,905	TBD	TBD
Los Angeles	$15,779,429	$16,521,950	TBD	TBD
New York City	$36,059,910	$37,365,964	TBD	TBD
Philadelphia	$6,922,244	$8,248,202	TBD	TBD
San Francisco	$8,187,710	$7,995,364	TBD	TBD
Washington, D.C.	$5,944,094	$5,963,504	TBD	TBD
Territories				
Puerto Rico	$6,418,198	$7,514,250	TBD	TBD
Virgin Islands	$690,311	$741,808	TBD	TBD
Subtotal States	**$231,885,578**	**$238,260,401**	**TBD**	**TBD**
Subtotal Cities	**$102,184,609**	**$109,948,180**	**TBD**	**TBD**
Subtotal Territories	**$7,108,509**	**$8,256,058**	**TBD**	**TBD**
Total	**$341,178,696**	**$356,464,639**	**TBD**	**TBD**

[1]CFDA NUMBER: 93-940 [Discretionary]

[2]Funding amounts reflect new money and Direct Assistance funding, which is a financial assistance mechanism primarily used to support payroll and travel expenses of CDC employees assigned to state, tribal, local, and territorial health agencies that are recipients of grants and cooperative agreements.

[3]FY 2015 amounts were developed using estimated Category A algorithm-based funding and Category B and C funding from FY 2014. Because Category C funding ends for most grantees in FY 2014, total awards by state beginning in FY 2015 may ultimately differ somewhat from estimates provided here.

[4]This State Table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial awardees). For a more comprehensive view of grant and cooperative agreement funding to awardees by jurisdiction, visit http://wwwn.cdc.gov/FundingProfiles/FundingProfilesRIA/.

State Table: HIV Surveillance[1,2,3]

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	Difference +/- 2015
Alabama	$915,009	$1,073,677	$1,073,677	$0
Alaska	$143,126	$143,126	$143,126	$0
Arizona	$954,996	$988,110	$988,110	$0
Arkansas	$336,269	$336,269	$336,269	$0
California	$2,843,027	$2,689,751	$2,689,751	$0
Colorado	$903,983	$936,949	$936,949	$0
Connecticut	$896,275	$929,376	$929,376	$0
Delaware	$258,030	$286,479	$286,479	$0
Florida	$5,108,238	$5,058,248	$5,058,248	$0
Georgia	$1,776,127	$1,691,113	$1,691,113	$0
Hawaii	$222,183	$255,297	$255,297	$0
Idaho	$175,727	$184,424	$184,424	$0
Illinois	$702,266	$865,461	$865,461	$0
Indiana	$778,521	$778,520	$778,520	$0
Iowa	$194,237	$261,907	$261,907	$0
Kansas	$239,216	$353,759	$353,759	$0
Kentucky	$358,499	$358,499	$358,499	$0
Louisiana	$1,231,210	$1,349,361	$1,349,361	$0
Maine	$165,307	$165,307	$165,307	$0
Maryland	$1,622,381	$2,041,180	$2,041,180	$0
Massachusetts	$1,082,726	$1,094,712	$1,094,712	$0
Michigan	$1,121,155	$1,256,071	$1,256,071	$0
Minnesota	$419,320	$536,774	$536,774	$0
Mississippi	$739,267	$826,567	$826,567	$0
Missouri	$639,794	$765,755	$765,755	$0
Montana	$152,030	$152,030	$152,030	$0
Nebraska	$193,216	$246,870	$246,870	$0
Nevada	$438,615	$471,635	$471,635	$0
New Hampshire	$143,797	$143,797	$143,797	$0
New Jersey	$2,709,464	$2,807,225	$2,807,225	$0
New Mexico	$242,676	$242,676	$242,676	$0
New York	$1,906,287	$2,066,649	$2,066,649	$0
North Carolina	$1,581,566	$1,635,204	$1,635,204	$0
North Dakota	$122,097	$122,097	$122,097	$0
Ohio	$919,116	$919,116	$919,116	$0
Oklahoma	$350,050	$405,845	$405,845	$0
Oregon	$393,040	$426,154	$426,154	$0
Pennsylvania	$813,112	$953,490	$953,490	$0
Rhode Island	$202,406	$288,818	$288,818	$0
South Carolina	$1,006,998	$1,006,998	$1,006,998	$0
South Dakota	$134,032	$134,032	$134,032	$0
Tennessee	$854,205	$854,205	$854,205	$0
Texas	$2,639,073	$2,697,605	$2,697,605	$0
Utah	$252,685	$330,292	$330,292	$0
Vermont	$132,876	$132,876	$132,876	$0
Virginia	$1,353,792	$1,501,785	$1,501,785	$0
Washington	$1,217,277	$1,308,101	$1,308,101	$0
West Virginia	$197,659	$224,475	$224,475	$0
Wisconsin	$401,821	$516,498	$516,498	$0
Wyoming	$123,782	$123,782	$123,782	$0
Cities				

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	Difference +/- 2015
Chicago	$1,385,137	$1,516,906	$1,516,906	$0
Houston	$1,346,082	$1,508,257	$1,508,257	$0
Los Angeles	$2,425,684	$2,425,684	$2,425,684	$0
New York City	$5,331,867	$5,441,619	$5,441,619	$0
Philadelphia	$1,236,870	$1,389,886	$1,389,886	$0
San Francisco	$1,286,099	$1,345,902	$1,345,902	$0
Washington, D.C.	$1,396,836	$1,529,576	$1,529,576	$0
Territories				
Puerto Rico	$1,004,474	$996,898	$996,898	$0
Virgin Islands	$141,105	$187,592	$187,592	$0
Subtotal States	**$42,308,561**	**$44,938,927**	**$44,938,927**	**$0**
Subtotal Cities	**$14,408,575**	**$15,157,830**	**$15,157,830**	**$0**
Subtotal Territories	**$1,145,579**	**$1,184,490**	**$1,184,490**	**$0**
Total	**$57,862,715**	**$61,281,247**	**$61,281,247**	**$0**

[1]CFDA NUMBER: 93-944 [Discretionary]

[2]Funding amounts include new money and Direct Assistance, which is a financial assistance mechanism primarily used to support payroll and travel expenses of CDC employees assigned to state, tribal, local, and territorial health agencies that are recipients of grants and cooperative agreements.

[3]This State Table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial awardees). For a more comprehensive view of grant and cooperative agreement funding to awardees by jurisdiction, visit http://wwwn.cdc.gov/FundingProfiles/FundingProfilesRIA/.

State Table: Sexually Transmitted Disease Prevention[1,2,3,4]

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	Difference +/- 2015
Alabama	$1,794,207	$1,805,623	$1,817,187	+$11,564
Alaska	$395,107	$381,625	$370,911	-$10,714
Arizona	$1,398,294	$1,472,645	$1,535,915	+$63,270
Arkansas	$1,183,490	$1,166,724	$1,154,211	-$12,513
California	$5,511,927	$5,550,275	$5,713,340	+$163,065
Colorado	$1,098,199	$1,137,389	$1,171,161	+$33,772
Connecticut	$756,307	$783,009	$806,029	+$23,020
Delaware	$361,615	$363,428	$365,353	+$1,925
Florida	$4,380,793	$4,430,451	$4,569,902	+$139,451
Georgia	$3,652,213	$3,605,632	$3,571,294	-$34,338
Hawaii	$369,297	$375,079	$380,305	+$5,226
Idaho	$386,792	$368,388	$353,586	-$14,802
Illinois	$2,157,862	$2,214,183	$2,263,397	+$49,214
Indiana	$1,690,169	$1,688,745	$1,689,542	+$797.00
Iowa	$725,156	$712,914	$703,615	-$9,299
Kansas	$782,764	$761,270	$744,369	-$16,901
Kentucky	$963,121	$1,000,386	$1,032,404	+$32,018
Louisiana	$2,191,473	$2,177,129	$2,167,804	-$9,325
Maine	$284,713	$277,986	$272,742	-$5,244
Maryland	$1,268,976	$1,286,960	$1,303,353	+$16,393
Massachusetts	$1,523,176	$1,523,946	$1,526,367	+$2,421
Michigan	$2,642,028	$2,659,706	$2,677,453	+$17,747
Minnesota	$1,056,126	$1,086,697	$1,113,274	+$26,577
Mississippi	$1,371,889	$1,369,585	$1,369,280	-$305.00
Missouri	$1,936,018	$1,877,730	$1,831,678	-$46,052
Montana	$277,153	$263,227	$252,008	-$11,219
Nebraska	$440,652	$444,059	$447,400	+$3,341
Nevada	$699,845	$724,470	$745,702	+$21,232
New Hampshire	$272,228	$270,684	$269,723	-$961.00
New Jersey	$2,921,626	$2,740,177	$2,636,099	-$104,078
New Mexico	$714,223	$689,712	$670,230	-$19,482
New York	$2,681,587	$2,590,274	$2,517,717	-$72,557
North Carolina	$2,859,872	$2,877,183	$2,894,881	+17,698
North Dakota	$237,920	$223,681	$215,787	-$7,894
Ohio	$3,183,928	$3,195,893	$3,209,538	$13,645
Oklahoma	$1,108,848	$1,096,568	$1,087,687	-$8,881
Oregon	$945,832	$912,761	$886,454	-$26,307
Pennsylvania	$2,029,064	$2,073,349	$2,112,435	+$39,086
Rhode Island	$371,979	$356,534	$344,166	-$12,368
South Carolina	$1,382,818	$1,555,175	$1,565,283	$10,108
South Dakota	$1,545,164	$261,503	$254,477	-$7,026
Tennessee	$270,361	$2,134,624	$2,097,376	-$37,248
Texas	$6,396,118	$6,425,623	$6,607,148	+$181,525
Utah	$487,532	$512,708	$534,148	+$21,440
Vermont	$177,046	$178,482	$185,654	+$7,172
Virginia	$1,888,662	$1,951,187	$2,005,228	+$54,041
Washington	$2,325,992	$2,181,535	$2,098,676	-$82,859
West Virginia	$641,576	$601,730	$578,875	-$22,855
Wisconsin	$1,012,014	$1,095,655	$1,177,457	+$81,802
Wyoming	$240,866	$225,907	$217,326	-$8,581
Cities				

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	Difference +/- 2015
Baltimore	$1,329,265	$1,267,866	$1,218,524	-$49,342
Chicago	$2,147,886	$2,108,089	$2,077,613	-$30,476
Los Angeles	$3,488,334	$3,384,080	$3,301,741	-$82,339
New York City	$5,995,598	$5,747,542	$5,668,747	-$78,795
Philadelphia	$2,305,284	$2,162,113	$2,079,992	-$82,121
San Francisco	$1,382,818	$1,296,937	$1,247,677	-$49,260
Washington, D.C.	$1,134,971	$1,081,326	$1,038,186	-$43,140
Territories				
Puerto Rico	$1,281,484	$1,201,897	$1,156,247	-$45,650
Virgin Islands	$184,278	$183,851	$189,234	+$5,383
Subtotal States	**$74,994,618**	**$75,660,206**	**$76,115,947**	**+$455,743**
Subtotal Cities	**$17,784,156**	**$17,047,953**	**$16,632,480**	**-$415,473**
Subtotal Territories	**$1,465,762**	**$1,385,748**	**$1,345,481**	**-$40,267**
Total	**$95,044,351**	**$94,093,909**	**$94,093,909**	**$0**

[1] CFDA NUMBER: 93-977 [Discretionary]

[2] Amounts reflect new assistance and include HIV/STD coinfection funds. Amounts do not include funding under Direct Assistance, which is a financial assistance mechanism primarily used to support payroll and travel expenses of CDC employees assigned to state, tribal, local, and territorial health agencies that are recipients of grants and cooperative agreements.

[3] Amounts do not include Gonococcal Isolate Surveillance Project awards.

[4] This State Table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial awardees). For a more comprehensive view of grant and cooperative agreement funding to awardees by jurisdiction, visit http://wwwn.cdc.gov/FundingProfiles/FundingProfilesRIA/.

State Table: TB Prevention and Control[1,2,3,4]

	FY 2014 Final	FY 2015 Estimate[3]	FY 2016 President's Budget[3]	Difference +/- 2015
Alabama	$1,045,496	TBD	TBD	TBD
Alaska	$392,758	TBD	TBD	TBD
Arizona	$1,273,872	TBD	TBD	TBD
Arkansas	$520,387	TBD	TBD	TBD
California	$8,902,234	TBD	TBD	TBD
Colorado	$528,943	TBD	TBD	TBD
Connecticut	$593,957	TBD	TBD	TBD
Delaware	$267,660	TBD	TBD	TBD
Florida	$6,504,276	TBD	TBD	TBD
Georgia	$2,530,314	TBD	TBD	TBD
Hawaii	$729,596	TBD	TBD	TBD
Idaho	$196,635	TBD	TBD	TBD
Illinois	$1,360,560	TBD	TBD	TBD
Indiana	$686,559	TBD	TBD	TBD
Iowa	$413,717	TBD	TBD	TBD
Kansas	$403,739	TBD	TBD	TBD
Kentucky	$608,598	TBD	TBD	TBD
Louisiana	$1,227,208	TBD	TBD	TBD
Maine	$181,256	TBD	TBD	TBD
Maryland	$1,299,634	TBD	TBD	TBD
Massachusetts	$1,496,082	TBD	TBD	TBD
Michigan	$843,612	TBD	TBD	TBD
Minnesota	$2,085,290	TBD	TBD	TBD
Mississippi	$831,847	TBD	TBD	TBD
Missouri	$593,743	TBD	TBD	TBD
Montana	$181,984	TBD	TBD	TBD
Nebraska	$284,762	TBD	TBD	TBD
Nevada	$638,482	TBD	TBD	TBD
New Hampshire	$231,564	TBD	TBD	TBD
New Jersey	$3,508,346	TBD	TBD	TBD
New Mexico	$356,790	TBD	TBD	TBD
New York	$1,746,556	TBD	TBD	TBD
North Carolina	$1,765,588	TBD	TBD	TBD
North Dakota	$163,397	TBD	TBD	TBD
Ohio	$1,089,677	TBD	TBD	TBD
Oklahoma	$636,376	TBD	TBD	TBD
Oregon	$551,110	TBD	TBD	TBD
Pennsylvania	$884,294	TBD	TBD	TBD
Rhode Island	$329,868	TBD	TBD	TBD
South Carolina	$1,152,291	TBD	TBD	TBD
South Dakota	$275,358	TBD	TBD	TBD
Tennessee	$1,381,945	TBD	TBD	TBD
Texas	$7,736,436	TBD	TBD	TBD
Utah	$330,476	TBD	TBD	TBD
Vermont	$155,826	TBD	TBD	TBD
Virginia	$1,550,712	TBD	TBD	TBD
Washington	$1,401,295	TBD	TBD	TBD
West Virginia	$297,054	TBD	TBD	TBD
Wisconsin	$460,208	TBD	TBD	TBD
Wyoming	$166,255	TBD	TBD	TBD
Cities				

	FY 2014 Final	FY 2015 Estimate[3]	FY 2016 President's Budget[3]	Difference +/- 2015
Baltimore	$261,894	TBD	TBD	TBD
Chicago	$1,268,481	TBD	TBD	TBD
Detroit	$322,035	TBD	TBD	TBD
Houston	$1,716,298	TBD	TBD	TBD
Los Angeles	$4,232,798	TBD	TBD	TBD
New York City	$5,929,982	TBD	TBD	TBD
Philadelphia	$734,378	TBD	TBD	TBD
San Diego	$1,540,507	TBD	TBD	TBD
San Francisco	$846,771	TBD	TBD	TBD
Washington, D.C.	$424,603	TBD	TBD	TBD
Territories				
Puerto Rico	$669,209	TBD	TBD	TBD
Virgin Islands	$118,431	TBD	TBD	TBD
Subtotal States	**$62,794,623**	**TBD**	**TBD**	**TBD**
Subtotal Cities	**$17,277,747**	**TBD**	**TBD**	**TBD**
Subtotal Territories	**$787,640**	**TBD**	**TBD**	**TBD**
Total	**$80,860,010**	**TBD**	**TBD**	**TBD**

[1]CFDA NUMBER: 93-116 [Discretionary]

[2]Amounts reflect new assistance and include HIV/TB coinfection funds. Amounts do not include funding under Direct Assistance.

[3]FY 2015 and FY 2016 estimates are unavailable at this time. A new funding formula is under development and will be implemented in FY 2015.

[4]This State Table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial awardees). For a more comprehensive view of grant and cooperative agreement funding to awardees by jurisdiction, visit http://wwwn.cdc.gov/FundingProfiles/FundingProfilesRIA/.

EMERGING AND ZOONOTIC INFECTIOUS DISEASES

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$337.655	$352.990	$644.687	+$291.697
ACA/PPHF	$52.000	$52.000	$54.580	+$2.580
Total Request	**$389.655**	**$404.990**	**$699.267**	**+$294.277**
FTEs	1,052	1,052	1,052	0
Emerging and Zoonotic Infectious Diseases				
- Core Infectious Diseases (includes Combatting Antibiotic Resistance and Lab Safety and Quality increases)[1]	$218.141	$225.393	$500.955	+$275.562
- National Healthcare Safety Network	$18.032	$18.032	$32.071	+$14.039
- Food Safety	$39.993	$47.993	$50.089	+$2.096
- Quarantine	$31.572	$31.572	$31.572	$0.000
- Federal Isolation and Quarantine (non-add)	N/A	N/A	$1.000	N/A
- Advanced Molecular Detection	$29.917	$30.000	$30.000	$0.000
- PPHF, Epidemiology and Laboratory Capacity	$40.000	$40.000	$40.000	$0.000
- PPHF, Healthcare-Associated Infections	$12.000	$12.000	$14.580	+$2.580

[1] FY 2014 is comparably adjusted to reflect proposed $2.367 million realignment to Global Health.

Summary

CDC works to prevent infections, protect people, and save lives by:

- Reducing illness and death associated with emerging and zoonotic infectious diseases, and
- Protecting people against the unintentional spread of infectious diseases.

CDC's FY 2016 request of **$699,267,000** for Emerging and Zoonotic Infectious Diseases[44], including $54,580,000 from the Affordable Care Act Prevention and Public Health Fund, is $294,277,000 above the FY 2015 Enacted level. The FY 2016 budget request will allow CDC to further reduce healthcare-associated infections, improve food safety, increase lab safety, and invest in antibiotic resistant detection and response activities.

CDC's FY 2016 request includes an increase of $264,328,000 above the FY 2015 Enacted level to expand the nation's ability to fight antibiotic resistance and to fully fund implementation of CDC's responsibilities under the National Strategy for Combating Antibiotic-Resistant Bacteria (CARB). CDC's FY 2016 request also includes a $14,039,000 increase in funding for the National Healthcare Safety Network (NHSN) over the FY 2015 Enacted level. Through broadening data collection on healthcare-associated infections (HAIs) and antibiotic use, CDC will accelerate HAI prevention across the spectrum of care. The request includes an increase of $2,096,000 above the FY 2015 Enacted level for CDC's Food Safety program. CDC will continue to implement provisions of the Food Safety Modernization Act. The FY 2016 request includes an increase of $10,000,000 above the FY 2015 Enacted level for lab safety and quality to modernize CDC's laboratories to function effectively. CDC's FY 2016 request maintains a $30,000,000 investment to build capacity through Advanced Molecular Detection (AMD) in bioinformatics and genomics from the FY 2015 Enacted level. These activities align with CDC's strategic goals to

[44] http://www.cdc.gov/ncezid/

protect Americans from infectious disease, ensure global disease protection, monitor health, and ensure laboratory excellence.

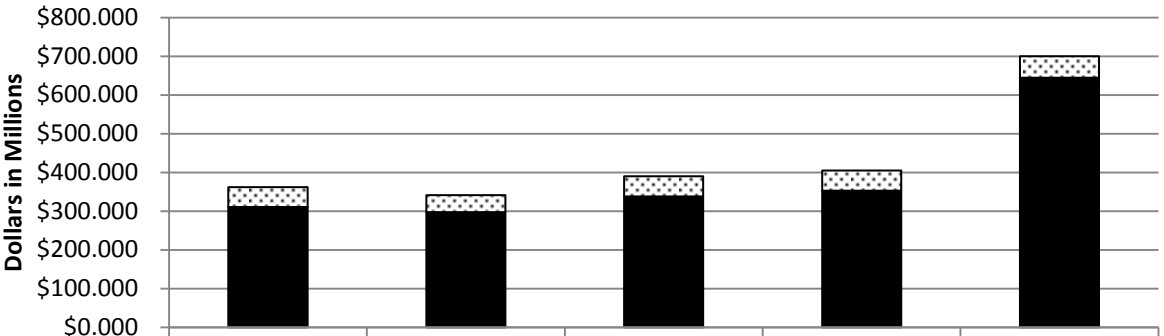
Performance Highlights

- In 2014, CDC released the first large-scale study in over 30 years to determine the HAI prevalence in acute-care hospitals and assess the burden of all hospital-onset HAIs in the United States. CDC's Emerging Infections Program used data from 183 U.S. hospitals to estimate the burden of a wide range of infections in hospital patients and estimated that over 640,000 patients had HAIs in U.S. acute-care hospitals in 2011. The study highlighted the continued need to extend our efforts outside of ICUs and address pathogens such as Clostridium difficile and procedure associated HAIs such as surgical site infections.

- For some time among U.S. public health experts, it has not been if, but rather, when Chikungunya, a mosquito-borne disease that can cause fever and joint pain, would show up on the mainland. Since 2006, CDC began preparing for its arrival by working to strengthen chikungunya surveillance to help public health authorities detect and respond to outbreaks. On July 17, 2014, when the first locally acquired case of chikungunya was reported in Florida, CDC was already working with the Florida Department of Health to evaluate the problem and to prevent further spread by controlling mosquitoes and educating people about ways to avoid mosquito bites. CDC has also been collaborating with the Pan American Health Organization (PAHO) to develop a regional surveillance and response plan, develop and deploy new diagnostic testing tools, and create educational materials. Together, these tools and resources have helped minimize the impact of chikungunya among US citizens and travelers.

- The country's largest grocery retailer is partnering with food safety experts from CDC and the U.S. Department of Agriculture's Food Safety and Inspection Service to decrease pathogens such as Salmonella and Campylobacter in chicken products provided by its suppliers. The new program, announced in December 2014, requires the retailer's poultry suppliers to implement holistic controls from farm to consumer and is designed to significantly reduce potential contamination levels, including fresh whole chickens and chicken parts. It also requires suppliers to validate that the measures they have implemented are effective through specialized testing. All poultry suppliers of this grocery retailer must be in compliance with the new requirements by June 2016.

Emerging and Zoonotic Infectious Diseases Funding History[1,2]



	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 PB
Total	$362.143	$341.396	$389.655	$404.990	$699.267
ACA/PPHF	$51.750	$44.174	$52.000	$52.000	$54.580
Budget Authority	$310.393	$297.222	$337.655	$352.990	$644.687

[1]FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

[2]FY 2013 and FY 2014 are comparable to FY 2015 to account for the Center for Global Health reorganization.

Core Infectious Diseases Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority[1]	**$218.141**	**$225.393**	**$500.955**	**+$275.562**

[1] FY 2014 has been comparably adjusted to reflect proposed $2.367 million realignment to Global Health.

Overview

Protecting Americans and people around the world from constantly-changing infectious diseases involves a cascade of activities that includes laboratory testing, disease tracking, epidemiologic investigations, analysis and reporting, and research and development. These actions must occur at many levels (local, state, and national), because pathogens, diseases, and people move across borders. Since we live in an interconnected world, ensuring capacity and working collaboratively at all levels is essential in protecting individuals from infectious disease threats. CDC invests in a flexible public health system at national, state, and local levels to:

- Build and maintain a sufficient and competent public health workforce
- Create and support disease tracking systems
- Support modern and efficient laboratories with well-trained laboratory staff
- Prepare and equip outbreak investigation and response teams
- Develop and apply tools for effective epidemiologic, statistical, analytic, and communication approaches

CDC is home to the country's leading experts and laboratories in infectious disease prevention and control. CDC's experts and laboratories detect and track a range of microbes and respond to disease threats from those pathogens, such as the first case of Middle East Respiratory Syndrome MERS in the United States in 2014 and the recent global response to the ongoing outbreak of Ebola in West Africa. Through specialized surveillance systems that serve as early warning systems, CDC's experts were and remain able to detect and protect the public from a vast number of infectious diseases.

CDC Contributions to the Ebola Response, West Africa

- Implemented entry screening of returning travelers at five U.S. airports and extensive efforts to ready the healthcare system to safely diagnose and care for Ebola patients.
- Actively and quickly worked to train over 100,000 healthcare workers, both domestically and internationally, on updated infection control recommendations, to ensure that every healthcare worker, regardless of the setting in which they practice, could receive information about Ebola prevention measures.
- Deployed Rapid Ebola Preparedness (REP) teams to work with local health officials and healthcare facilities in assessing their readiness for caring for Ebola patients.
- In the event of a confirmed Ebola case, CDC immediately deployed a CDC Ebola Response Team (CERT) to provide on-the-ground technical assistance and clinical support to the treatment hospital and the healthcare community.

Epidemiology and Laboratory Capacity (ELC) Platform/Emerging Infections Program (EIP)

CDC's multiple approaches to surveillance, control, and prevention of infectious diseases are evident in two of CDC's flagship Cooperative Agreements: the Epidemiology and Laboratory Capacity for Infectious Diseases (ELC)[45] platform and the Emerging Infections Program (EIP)[46]. The ELC operates a nationwide cooperative agreement supporting all 50 states, the six largest local health departments, and U.S. territories and affiliates. ELC focuses investments on building essential epidemiology and laboratory capabilities in all grantees while also providing targeted resources for issues of regional concern. The EIP, a network of 10 state public health departments (CA, CO, CT, GA, MD, MN, NM, NY, OR, and TN) and their academic partners, conducts surveillance, epidemiology studies, and prevention research projects. For example, U.S. estimates of foodborne disease illnesses and deaths are generated using data from EIP surveillance. EIP provides similar data for several other infections (e.g., respiratory diseases, healthcare associated infections, and tickborne diseases). The EIP also helps answer questions about what public health interventions work best. Working with support from the Advanced Molecular Detection (AMD) Initiative, seven EIP sites (CO, CT, GA, MD, MN, NY, and TN) began pilot projects in 2014 to evaluate approaches for incorporating whole genome sequencing, and other AMD techniques, into routine public health practice.

Budget Request

CDC's FY 2016 request of **$500,955,000** for core infectious diseases is $275,562,000 above the FY 2015 Enacted level. This level includes an increase of $264,328,000 to implement CDC's responsibilities under the National Strategy for Combating Antibiotic-Resistant Bacteria (CARB), and $10,000,000 for laboratory safety and quality to maintain CDC's modern laboratories and maximize efficiency. CDC's core infectious diseases budget request includes a number of activities that support surveillance, laboratory, and prevention programs in multiple infectious disease areas. These areas include vector-borne diseases (including Lyme disease), high-consequence pathogens (formerly hantavirus/special pathogens), chronic fatigue syndrome, prion, emerging infections, Antibiotic Resistance (AR), and healthcare-associated infections. The following sections describe select core infectious disease activities.

Vector-Borne Diseases

CDC's vector-borne diseases program[47] is the focal point of the nation's capacity to detect, control, and prevent bacteria and viruses transmitted by mosquitoes, ticks, and fleas. CDC experts combine support to state and local health departments with intramural research, addressing risks to the United States from emerging and invasive pathogens arising anywhere in the world. As the national diagnostic reference center for vector-borne viral and bacterial diseases, CDC will continue to monitor the emergence and epidemic potential of exotic and novel vector-borne threats both domestically and abroad.

Current vector-borne disease priorities:

- **Chikungunya virus:** The invasion of chikungunya virus[48] into the Western hemisphere in December 2013 highlights the importance of global health security and the ongoing need for effective surveillance to track microbes that can rapidly spread around the globe. By December 2014, a million suspect and confirmed cases had been reported from 42 countries throughout the Caribbean and South, Central and North Americas. In addition, almost 2,000 cases have been reported in Puerto Rico, the U.S. Virgin Islands, and American Samoa. Eleven locally-acquired cases of chikungunya have been detected in Florida and over 2,000 travel-associated cases have been identified from 46 states. With the expanding

[45] http://www.cdc.gov/media/releases/2013/p0820-cdc-awards-funding.html
[46] http://www.cdc.gov/ncezid/dpei/eip/
[47] http://www.cdc.gov/ncezid/dvbd/
[48] http://www.cdc.gov/chikungunya/

outbreaks in the Americas, the number of chikungunya cases among travelers visiting or returning to the United States will continue to increase.

- **Dengue:** The global incidence of dengue is continuing to increase as it has for the past several decades. In addition to the 2014 chikungunya outbreak, Puerto Rico reported 6,700 cases of dengue. Several dozen cases of dengue were also reported in southern Arizona associated with a large epidemic in northern Mexico.

- **West Nile virus:** The United States continues to see outbreaks of West Nile virus each year. The virus is established across the country and is here to stay. Although the total number of cases in 2014 was lower than those in 2013, California experienced outbreaks resulting in 750 cases and 27 deaths.

- **Lyme disease:** A recent CDC study found that large commercial laboratories in the Unites States perform 3.4 million Lyme disease tests each year, costing $492 million and yielding an estimated 240,000–444,000 infected patients. This paper is the first of several CDC projects aimed at estimating the true burden of Lyme disease in the United States and shows that Lyme disease cases are likely underreported by a factor of 10.

- **Global health security:** CDC's vector-borne diseases program supports the national Global Health Security Agenda through projects in East Africa and Southeast Asia to improve diagnostics, treatment, and prevention of vector-borne diseases.

- **Newly discovered pathogens:** In the last few years, CDC helped discover four new tick-borne pathogens in the United States: Borrelia miyamotoi, which causes Lyme disease-like symptoms; a novel Borrelia species; an Ehrlichia muris-like bacteria; and Heartland virus. Research continues on how widespread these infections are and who is being infected.

In FY 2016, the United States will confront new threats from domestic and invasive vector-borne pathogens. To address those threats, CDC will:

FY 2016 Vector-Borne Activity Areas	Background and Activities
Assist public health partners	Assist county, state, tribal, and territorial health authorities, as well as international partners[49], to detect, prevent, and control diseases spread by mosquitoes, ticks, and fleas. CDC staff will help local authorities conduct fieldwork and research to explain why and how individuals are at risk for vector-borne diseases and evaluate the efficacy of prevention efforts.
Conduct multi-faceted surveillance	Operate ArboNET,[50] the national surveillance system for arthropod-borne viruses (or arboviruses) like West Nile virus and Chikungunya. This integrated network funds, through ELC cooperative agreements, staff in 49 states, Puerto Rico, and six large municipalities (New York City, Chicago, Philadelphia, Los Angeles County, Washington DC, and Harris County) to conduct human case investigations, collect and test mosquitoes, and perform laboratory analyses. CDC evaluates, updates, and shares this information weekly with state and local partners.

[49] http://blogs.cdc.gov/publichealthmatters/2013/07/dengue-in-angola/
[50] http://diseasemaps.usgs.gov/

FY 2016 Vector-Borne Activity Areas	Background and Activities
	Support TickNET,[51] a network funded through the ELC cooperative agreement of the 16 states with the highest rates of tick-borne diseases, to conduct surveillance and test practical prevention measures for Lyme disease, Rocky Mountain spotted fever, and other tick-borne infections. Evaluate SaludBoricua[52], an online self-reporting surveillance tool developed with academic partners that has recently opened for public participation. SaludBoricua will track acute febrile illnesses including dengue, influenza, chikungunya, and leptospirosis in Puerto Rico. It is based on the Flu Near You[53] platform used in the U.S. The program can help CDC and the Puerto Rico Department of Health track and mitigate dengue outbreaks before they are identified by traditional surveillance methods.
Train and support healthcare providers and laboratories	Expand training and education for healthcare providers, public health professionals, and the public. CDC continues to provide training to state and local health departments, 25 countries, and the PAHO and Caribbean Public Health Agency (CARPHA) regional laboratories to assure capacity in chikungunya epidemiology, diagnostics, and vector control. Reagents for chikungunya diagnostic testing were also distributed to 44 U.S. state or county public health labs, nine federal diagnostic labs, 12 private laboratories, 14 MoH diagnostic labs and the CARPHA (which provides diagnostic support to 24 CARPHA member countries). In March 2014, CDC launched novel, on-line continuing medical education training on severe dengue case management. This course is based on a successful didactic training provided to over 20,000 physicians in Puerto Rico, which is now required for medical licensure by the Puerto Rico Department of Health. The free online training[54] is now available globally to physicians. Continue to support state and global diagnostic laboratories. CDC vector-borne laboratories distribute unique diagnostic reagents and supplies to state laboratories, perform confirmatory testing for difficult or complex cases, and develop new diagnostic methods. These new diagnostics are then provided to U.S. and international laboratories, improving testing speed, accuracy, and quality. For example, a CDC-developed dengue testing kit uses the same readily available equipment as tests for influenza, making it possible for more labs to attain diagnostic capacity. To date, CDC has produced 1,550 dengue testing kits (200 tests per kit) and distributed them to 120 labs around the world, including 32 U.S. labs.
Build capacity through partnerships	A commercial partner is conducting human clinical trials for a CDC-developed dengue vaccine[55] that protects against all four dengue virus types. Currently, two phase 2 trials are underway.

[51] http://www.cdc.gov/ticknet/index.html
[52] https://saludboricua.org/
[53] https://flunearyou.org/
[54] http://www.cdc.gov/dengue/educationTraining/index.htmling/index.html
[55] http://blog.ghtcoalition.org/2013/06/17/working-to-protect-against-the-dangers-of-dengue/

FY 2016 Vector-Borne Activity Areas	Background and Activities
	CDC and partners are testing host-targeted Lyme disease prevention methods, including commercially-licensed rodent bait boxes[56]. The bait box evaluation will be complete in FY 2015. In FY 2016, CDC will work with partners to develop a unique rodent-targeted vaccine designed to stop Lyme disease transmission in the animal host. The rate of reported Rocky Mountain Spotted Fever (RMSF) on the three most highly impacted American Indian Reservations in Arizona is more than 150 times the national rate. People are seven times more likely to die from RMSF in Arizona than in any other part of the United States. CDC implemented a successful RMSF pilot project[57] combining innovative prevention methods with commercial sponsorship to decrease the case incidence by 43% in a pilot community. In FY 2015, CDC will work with tribal partners to expand the lessons learned from this project to the remaining six at-risk American Indian Reservations.

High-Consequence Pathogens

CDC works to protect Americans from rare—but deadly—pathogens like Hantavirus pulmonary syndrome, Ebola and Marburg viral hemorrhagic fevers, rabies, variant Creutzfeldt-Jakob disease, monkeypox, smallpox, and anthrax. Because the pathogens that cause these diseases are so deadly, with many of them considered bioterrorism threats that are regulated as Tier 1 select agents, CDC maintains biosafety level (BSL)-3 and BSL-4 laboratories. These laboratories support epidemiologic investigations, research, and outbreak and prevention efforts to reduce the public health threat of these hazardous and infectious high-consequence pathogens.

CDC provides specialty expertise, training, and laboratory support to state, tribal, local, and territorial health departments as well as to global partners and ministries of health in investigations of:

- Suspected domestic cases of known high-consequence pathogens and of infectious diseases of unknown cause, and
- Outbreaks of high-consequence pathogens, including response activities to prevent the spread of these deadly diseases.

In 2014, as part of its core high-consequence pathogen work, CDC worked within existing partnerships to collectively accomplish the following:

- CDC worked with WHO and other partners in responding to the largest Ebola outbreak ever documented and occurring in several countries in West Africa. CDC also provided guidance to state health departments and U.S. hospitals and physicians on how to prepare for and respond to the potential introduction of Ebola into the United States because of travel to affected countries. Specific laboratory contributions included:
    - Obtained Emergency Use Authorization (EUA) for CDC's molecular Ebola diagnostic assay, reagents, kits, and validation panels shipped to multiple laboratories

[56] http://www.cdc.gov/ticknet/ltdps/ltdps_bait.html
[57] https://www.youtube.com/watch?v=jdnCdM98oCA

- Operationalized and staffed the field diagnostic Laboratory in Bo, Sierra Leone to serve as a national reference center for the country
- Provided training and high-throughput equipment to the South African-led field diagnostic Laboratory in Freetown-Lakka, Sierra Leone to increase their laboratory capacity
- Tested samples from persons under investigation (PUIs) and monitored virus load and antibody response of confirmed patients being treated in the United States
- Collaborated with multiple U.S.-based companies to evaluate prototype rapid point-of-care diagnostic assays for Ebola virus detection Developed guidance for standard operating procedures and protocols for CDC's molecular Ebola diagnostic assays that were also shared with international partners in an International Laboratory Information Packet
- Updated guidance for specimen collection, transport, testing, and shipment for patients with suspected infection with Ebola virus disease in addition to information materials for clinical laboratories about blood-borne pathogen safety

- CDC responded to a cluster of lymphocytic choriomeningitis virus (LCMV) infections transmitted through organ transplantation in Iowa. Testing for LCMV should be considered in organ recipients who develop febrile illness, neurologic changes, or multi-organ dysfunction in the early post-transplant period, especially if multiple recipients from the same donor become ill. This reported cluster was the fifth LCMV organ transplant-associated cluster documented in the United States, with all five clusters occurring in the past decade.

- CDC published guidance from expert panel meetings on the prevention and treatment of anthrax in adults. A proceedings document was also prepared from a clinical utilization workshop to modify the current prevention and treatment of anthrax for a mass event setting.

- CDC collaborated with public health and environmental control officials in an investigation of mass human exposures to bats at a hospital in South Carolina. CDC assisted in providing on-site rabies training at various healthcare facilities throughout the state.

In FY 2016, CDC will continue to support surveillance and rapid response for emerging infectious diseases that remain cornerstones of CDC's public health mission. A key part of this work will be CDC's continuing effort to build the MicrobeNet[58] platform—a centralized web-based reference laboratory for state health departments and international partners to accelerate the rapid detection and identification of pathogens. CDC will continue to invest in developing global health capacity to handle specimens safely and perform initial screening assays, particularly in parts of Africa and Asia that are recognized as emerging disease "hot spots" for outbreaks of some of the world's most dangerous pathogens. CDC will continue to promote a "One Health" approach to address the complex interplay between human health, animal health, and the environment by integrating surveillance and response strategies. Additionally, CDC will continue its work on developing:

- New vaccines and improved diagnostic assays
- Training for healthcare workers in resource poor and other strategic areas to better understand the risks for the spread of deadly pathogens to neighboring countries and beyond
- Medical and public health interventions for these deadly diseases that often have no specific therapies for treatment

In FY 2016, through its core high-consequence pathogen work, CDC will continue to support public health studies related to the Ebola outbreak in West Africa. Activities will include sequence analysis and study of the pathogenic properties of the new West African Ebola virus isolates compared to previous outbreak isolates, and the screening of Ebola anti-viral therapeutics in vitro and in animal models in the BSL-4 laboratories in Atlanta.

[58] https://microbenet.cdc.gov/

Emerging Respiratory Pathogens

CDC works to detect and respond to respiratory disease threats domestically and abroad through disease tracking, epidemiologic investigations and response, and laboratory activities. When unexplained severe respiratory illnesses emerge, public health approaches include identifying the pathogen that is making people sick and implementing appropriate surveillance, prevention, and control measures. In 2014, CDC continued assisting partners abroad and preparing for possible Middle East Respiratory Syndrome (MERS) cases in the United States. Activities included providing trainings for multiple countries on the CDC assay for MERS, participating in research with countries in the Arabian peninsula, laboratory research on the virus, training Customs and Border Protection officers, and providing guidance to healthcare providers, travelers, and airline crews.

CDC also worked with state and local health departments and partners at U.S. borders to increase surveillance and deployed epidemiologists to help in public health investigations in affected countries overseas. These preparedness activities paid off in May 2014 when two imported cases of MERS were rapidly detected after their arrival in the United States—one in Indiana and one in Florida. CDC, state and local public health, and hospital officials rapidly responded to the imported cases and infection control precautions were instituted to prevent onward transmission. Investigations of travel, household, and healthcare contacts of the cases did not find any additional MERS-CoV infections. CDC continues to closely monitor the MERS situation globally and works with the World Health Organization and other partners to understand the risks of MERS-CoV to the public's health, given the potential for this virus to spread further and cause more cases globally and in the United States.

In 2014, the United States experienced a nationwide outbreak of Enterovirus D68 (EV-D68) associated with severe respiratory illness, particularly among children with asthma or history of wheezing. From mid-August through December 2014, CDC tested more than 2,600 specimens for EV-D68, with approximately 36% testing positive. Although first detected in 1962, the significant increase in cases in 2014 strained healthcare systems and caused significant public concern. In response, CDC worked with its public health partners to collect information from states to better understand the virus and associated illness, the size and scope of the outbreak, and the populations affected. CDC helped states enhance their capacity to identify and investigate outbreaks, perform diagnostic and molecular typing tests to detect enteroviruses, and enhance surveillance for enteroviruses to monitor seasonal activity. CDC also developed a new, faster laboratory test for detecting EV-D68. CDC has made the testing protocols publically available on its website[59] and is exploring options for providing test kits to state public health labs. CDC also provided up-to-date information to healthcare professionals, policymakers, general public, and partners in numerous formats, including Morbidity and Mortality Weekly Reports (MMWRs), health alerts, websites, social media, podcasts, infographics, and presentations.

Epidemiologic and laboratory findings are also used to identify and evaluate prevention strategies. CDC continues to monitor the effectiveness of pneumococcal conjugate vaccines in the EIP, demonstrating the dramatic impact of the recently licensed pneumococcal conjugate vaccine (PCV13) in further reducing the risk of invasive bacterial diseases in both children and adults.

In FY 2016, CDC will support epidemiologic and laboratory surveillance for existing and emerging respiratory diseases. Specific activities include:

- Continued funding of EIP sites to monitor respiratory bacterial pathogens, such as Group A and Group B Streptococcus, Legionella pneumophila, and antibiotic resistance
- Developing diagnostic tests to test for many pathogens at the same time (multi-array assays)

[59] http://www.cdc.gov/non-polio-enterovirus/hcp/EV-D68-hcp.html

- Continuing to support planning, surveillance, laboratory testing, and providing technical assistance for MERS
- Ongoing epidemiologic and laboratory activities for non-influenza respiratory viruses that allow CDC to maintain the expertise to respond to emerging viruses such as MERS

Advancing CDC Laboratory Safety and Quality

The FY 2016 budget request includes an increase of $10.0 million for laboratory capacity and safety that will enable CDC to support enhanced laboratory training, improve pathogen identification, and implement changes identified in laboratory reviews. CDC is committed to implementing changes identified in recent laboratory safety reviews needed to protect our staff and the CDC community and to safely execute critical diagnostic and research work essential to protecting Americans.

After a deliberate review of recent laboratory safety incidents, CDC is assessing safety practices at all levels of our agency. CDC is putting in place key actions to address the root causes of recent incidents and to provide redundant safeguards across the agency. These include:

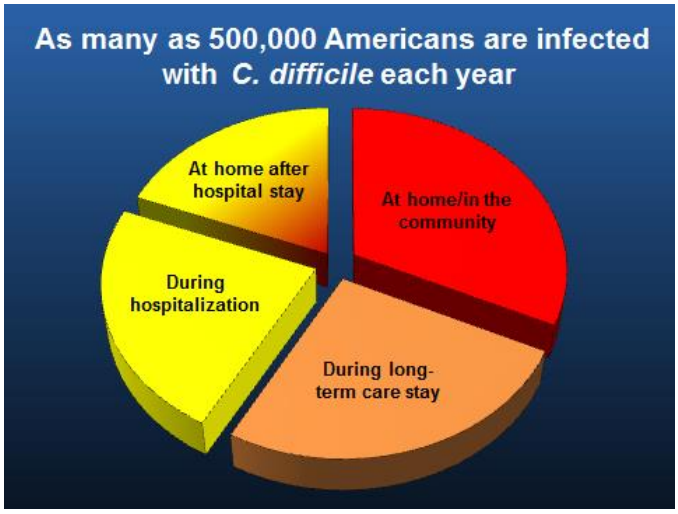
- Creating and reinforcing effective and redundant systems and controls for protocols and procedures, including inactivation and transfer of biological materials and access to laboratories
- Standardizing laboratory quality and safety protocols
- Ensuring adherence to laboratory quality and safety protocols
- Ensuring adequate ongoing training for CDC laboratory staff that will keep pace with advancing technologies and protocol demands
- Developing enhanced competency-based laboratory safety training programs
- Reviewing and monitoring the implementation of training policies and procedures for new and existing staff

Antibiotic Resistance Initiative: Combating Antibiotic-Resistant Bacteria (CARB) National Strategy

The FY 2016 Budget includes $282,621,000—an increase of $264,328,000—to expand the nation's ability to fight antibiotic resistance, which is critical to address CDC's goal of protecting Americans from infectious diseases. The request fully funds CDC's responsibilities under the National Strategy for Combating Antibiotic-Resistant Bacteria (CARB) [60] and implements the recommendations made to address antibiotic resistance by the President's Council of Advisers for Science and Technology[61]. These critical investments will protect patients and communities by implementing interventions that reduce the emergence and spread of AR pathogens. By 2020, the United States, together with partners, will reduce a number of threats, including reducing by 50 percent the incidence of overall Clostridium difficile infection and reducing by 60 percent Carbapenem-resistant Enterobacteriaceae infections acquired during hospitalization.

Implementation of the National Strategy[62] is critical to addressing antibiotic resistance (AR) domestically and abroad. Some AR infections are already untreatable. If CDC does not work to stop these threats now, even minor infections may become life threatening and put at risk our ability to perform routine surgeries or treat diseases like diabetes and cancer. Each year, CDC estimates that over 2 million illnesses and about 23,000 deaths are caused by antibiotic resistance. In addition, almost 250,000 people each year require hospital care for *Clostridium difficile* (*C. difficile*) infections. In most of these infections, the use of antibiotics was a major contributing factor leading to the illness.

[60] http://www.whitehouse.gov/sites/default/files/docs/carb_national_strategy.pdf
[61] http://www.whitehouse.gov/sites/default/files/microsites/ostp/PCAST/pcast_carb_report_sept2014.pdf
[62] http://www.whitehouse.gov/sites/default/files/docs/carb_national_strategy.pdf



This initiative scales up solutions outlined in the National Strategy[63] by building a more robust network to improve detection for all of the AR threats outlined in CDC's AR Threat Report[64] and to protect patients and communities from all of these threats, saving lives and reducing costs. The requested FY 2016 initiative funding will provide support for full implementation of CDC's surveillance, prevention, and stewardship activities outlined in the National Strategy[65] to ensure we can reach the ambitious CARB prevention goals. CDC plans to award more than 85% of the CARB funding to States, communities, healthcare providers, universities, and other groups to implement the National Strategy activities and to effectively address the AR threats facing our country.

FY 2016 AR Initiative	
Major Areas of Proposed Work	**FY 2016 President's Budget**
Stop Spread of AR Pathogens (State Prevention and Stewardship Activities for Healthcare and Community)	$132M
Track AR Threats and Measure Impact (AR Lab & Surveillance)	$112M
Global Partnerships for Prevention and Detection	$20M
Base AR Support	$18M
TOTAL:	**$282M**

Over five years, support for the CARB initiative and the National Strategy[66] will:

- Reduce by 60% carbapenem-resistant Enterobacteriaceae (CRE) infections acquired during hospitalization
- Reduce by 50% the incidence of overall *Clostridium difficile* infection (CDI)
- Reduce by at least 50% overall methicillin-resistant Staphylococcus aureus (MRSA) bloodstream infections
- Reduce by 35% multidrug-resistant Pseudomonas infections acquired during hospitalization
- Reduce by 25% multidrug-resistant non-typhoidal Salmonella infections

[63] http://www.whitehouse.gov/sites/default/files/docs/carb_national_strategy.pdf
[64] http://www.cdc.gov/drugresistance/threat-report-2013/pdf/ar-threats-2013-508.pdf
[65] http://www.whitehouse.gov/sites/default/files/docs/carb_national_strategy.pdf
[66] http://www.whitehouse.gov/sites/default/files/docs/carb_national_strategy.pdf

- Reduce by at least 25% the rate of antibiotic-resistant invasive pneumococcal disease among <5 year-olds
- Reduce by at least 25% the rate of antibiotic-resistant invasive pneumococcal disease among >65 year-olds
- Reduce by 15% the number of multidrug-resistant tuberculosis (TB) infections
- Maintain the prevalence of ceftriaxone-resistant Neisseria gonorrhoeae below 2%
- Expand drug susceptibility testing by at least ten-fold for nearly all pathogens in CDC's AR Threat Report
- Develop critical new interventions that could fundamentally transform how CDC and public health prevent the transmission and emergence of antibiotic resistant infections

Most critically, this FY 2016 initiative will invest in direct action to protect patients and communities by implementing proven interventions that reduce emergence and spread of AR pathogens and improve appropriate antibiotic use. These "Protect" Programs will help reduce inappropriate inpatient antibiotic use by 20% and prevent the spread of AR threats most commonly transmitted in healthcare. (CARB Goal 1)

The FY 2016 increase will support CDC's protection programs and capabilities to:

- Expand and establish "Protect" Programs in 50 states and 10 large cities that will scale up effective evidence-based interventions and implement best practices for preventing AR infections and improving inpatient antibiotic prescribing. Inpatient stewardship actions will build on CDC's March 2014 Vital Signs release[67] to ensure every hospital (and some other types of facilities, such as long-term care) has a stewardship program in place. These "Protect" Programs will focus on reducing inappropriate inpatient antibiotic use by 20% and preventing the spread of AR threats most commonly transmitted in healthcare, including:
    - 50% reduction in overall *C. difficile*
    - 60% reduction in CRE
    - 35% reduction in drug-resistant pseudomonas
    - At least 50% reduction in overall MRSA

  In addition, programs would help prevent the spread of other AR threats included in CDC's AR Threat Report such as[68]: multidrug-resistant Acinetobacter, fluoconozale-resistant Candida, extended-spectrum β-lactamase (ESBL)-producing Enterbacteriaceae, and vancomyocin-resistant Enterococcus. (CARB Goal 1)

[67] http://www.cdc.gov/vitalsigns/antibiotic-prescribing-practices/index.html
[68] http://www.cdc.gov/drugresistance/threat-report-2013/pdf/ar-threats-2013-508.pdf

- Fully implement CDC activities targeting outpatient stewardship and reducing state variations in prescribing. Targeted funding to states where outpatient antibiotic use is highest will support development and implementation of new antibiotic stewardship interventions and refine Get Smart[69] communications and partnerships to optimize reach to professional and private organizations, providers, and the public, helping to reduce inappropriate outpatient antibiotic use by 50%. (CARB Goal 1)

- Expand the screening of immigrants and refugees from high burden TB countries to identify and prevent the spread of more susceptible and resistant TB cases. (CARB Goal 1)

- Prevent multidrug-resistant gonorrhea (GC) by better monitoring treatment of GC and supporting rapid response GC prevention teams. These actions ensure all high-risk jurisdictions have appropriate response capacity to rapidly detect treatment failures, evaluate effectiveness of treatments, determine transmission patterns and risk factors for resistant infections, and evaluate the value of tests-of-cure for surveillance and clinical treatment through implementation and evaluation of routine tests-of-cure. This would ultimately reduce the spread of drug-resistant GC, maintaining the prevalence of ceftriaxone-resistant GC below 2%. (CARB Goal 1)

In FY 2016, CDC will also leverage existing detection programs and capabilities to:

- Double from 10 to 20 the number of CDC's Emerging Infections Program (EIP)[70] sites focused on improving national estimates related to healthcare and community AR infections and expand AR pathogen surveillance to include the three remaining urgent and serious AR threats with no population-based, multistate, active surveillance: vancomycin-resistant Enterococcus, multidrug-resistant Pseudomonas, and extended spectrum β-lactamase producing Enterobacteriaceae. (CARB Goal 2)

- Establish a "Detect" network of up to seven regional laboratories that will serve as a national resource to characterize emerging resistance and rapidly identify outbreaks of AR threats using state-of-the-art methods to characterize known resistance patterns in real time and identify clusters of resistant organisms more quickly. It will also track the spread of AR organisms in communities and through food to people. This will dramatically improve our understanding of which AR threats are most common in the United States, and which will be critical for new drug and diagnostic development. This network will also provide rapid analysis of local, state, and national-level resistance trends, and rapid dissemination of findings. As AR threats change, CDC will tailor the testing protocols of the labs to adapt to new and emerging threats. All of the pathogens in CDC's AR Threat Report[71] will receive resources for enhanced laboratory detection. (CARB Goal 2)

- Integrate these regional laboratories into a domestic and international AR communication network to post "early warning" alerts and report urgent AR results and trends. The regional labs and related communication network will improve the linkage of domestic and international AR lab activities to track urgent and emerging forms of resistance across borders and will also support method development of novel point-of-care diagnostics that could be applied to rapidly detect resistance in patients. (CARB Goal 2)

- Establish an AR isolate library that will be accessible to pharmaceutical companies and researchers testing new antibiotic agents, and biotech and diagnostic companies designing the next generation of clinical tests. (CARB Goal 2)

[69] http://www.cdc.gov/getsmart/
[70] http://www.cdc.gov/hai/eip/index.html
[71] http://www.cdc.gov/drugresistance/threat-report-2013/pdf/ar-threats-2013-508.pdf

- Support the development of next generation rapid susceptibility tests for drug-resistant tuberculosis (TB). (CARB Goal 2)

  Prevent multidrug-resistant salmonella outbreaks by attributing resistant Salmonella infections to specific foods more rapidly and precisely through targeted research in food animal reservoirs, thus helping to reduce infections by 25%. (CARB Goal 2)

- Expand the scope of the National Antimicrobial Resistance Monitoring System (NARMS)[72] to provide more information about antibiotic resistant foodborne pathogens; collect comprehensive and systematic exposure and outcome data on persons from whom the strains came from; and improve attribution. (CARB Goal 2)

- Enhance monitoring of antibiotic-resistance patterns, as well as antibiotic sales, usage, and management practices, at multiple points in the production chain from food-animals on-farm, through processing, and retail meat. (CARB Goal 2)

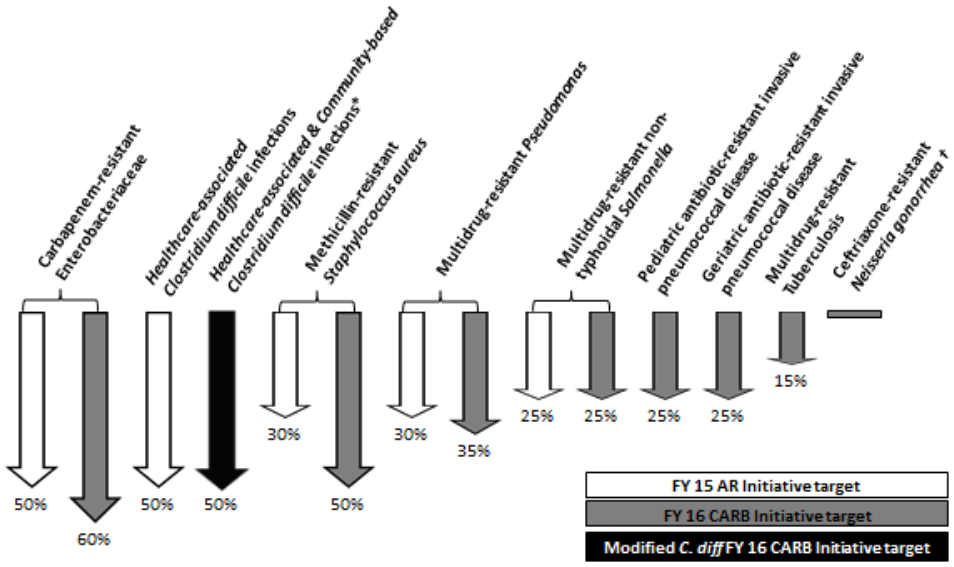
Not only will this initiative prioritize resources to prevent current threats, it will also invest in identifying new interventions—including those based on the microbiome—which could fundamentally alter how we understand and respond to antibiotic resistance and infectious diseases.

- Public Health Microbiome Surveillance would leverage the power of CDC's Emerging Infections Program[73] and other partnerships with healthcare systems to evaluate the impact of the microbiome on the attack rates of drug-resistant infections including CDI, CRE/ESBL, MRSA, certain MDR gram-negative bacteria, Candida, Salmonella, Shigella, Campylobacter, and S. pneumoniae.
  - Work will also evaluate the impact the microbiome[74] has on protecting humans from these infections, and microbiome assessments in selected cohort populations (e.g., healthy infants, college-age women, older adults with expected frequent interactions with healthcare) would be performed to understand key aspects of the natural history of exposure and risk mediated via microbiome disruption (e.g., microbiome re-assessment after new medication exposure like vaccines, symptoms of diarrhea, or influenza-like illness).
  - These data are fundamental to informing novel interventions to mitigate and prevent the spread of AR pathogens and will allow industry and the research community to develop and evaluate new therapies. (CARB Goal 1)

- Identify key factors in the transmission of pathogens from the healthcare environment (e.g., from medical equipment or the contaminated hands of healthcare providers and patients) to help determine "hot spots" in healthcare environments that are driving transmission of resistant pathogens and should be targeted for disinfection or redesigned to decrease the risk. (CARB Goal 1)

- Identify critical new interventions against multidrug-resistant TB that have the potential for cutting the costs of TB programs and preventing the development of active multidrug-resistant TB. (CARB Goal 1)

[72] http://www.cdc.gov/narms/
[73] http://www.cdc.gov/ncezid/dpei/eip/
[74] http://commonfund.nih.gov/hmp/overview



*FY 2016 CARB Initiative target for *Clostridium difficile* infections expands settings tracked to include community-based infections
†FY 2016 CARB Initiative target is to maintain the prevalence of ceftriaxone-resistant Neisseria gonorrhea below 2%

In FY 2016, core AR activities will continue through CDC's Core Infectious Disease line funding to:

- Support CDC's national and international reference laboratories for antibiotic resistance to collect data and isolates of highly resistant pathogens
- Develop new clinical diagnostic tests to detect AR pathogens
- Conduct strain typing and provide international comparisons of strain diversity for important forms of resistance.

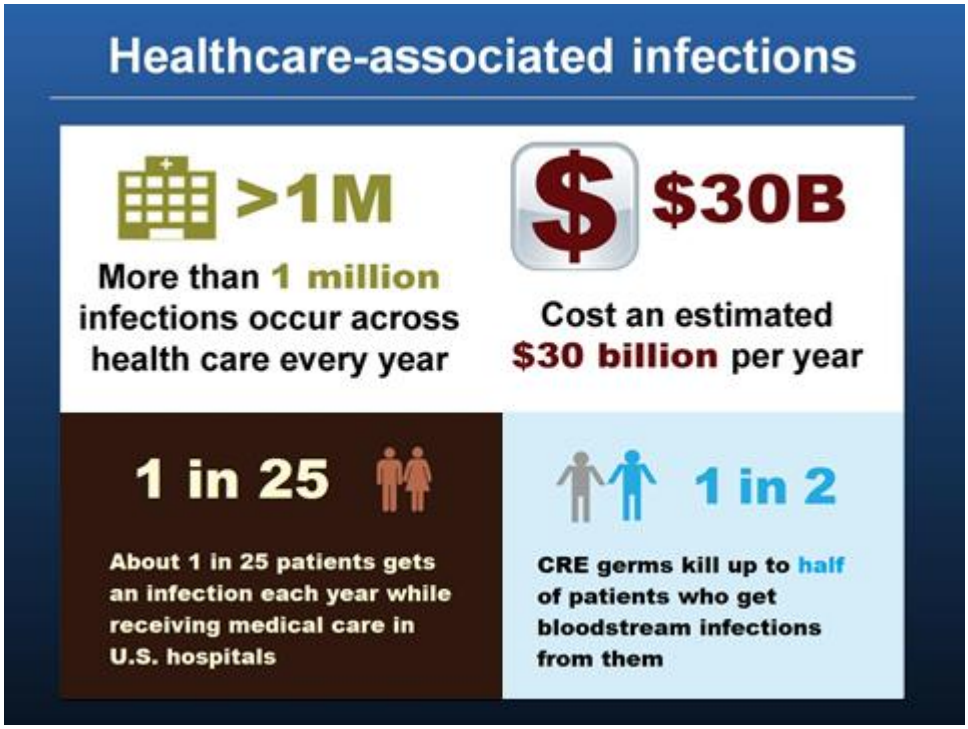
Core funding will also continue to support CDC's subject matter experts and labs that provide assistance to state health departments, clinical diagnostic laboratories, academic researchers, and hospitals to detect new AR threats, test antibiotic susceptibility, and characterize the epidemiology of multidrug-resistant pathogens.

Implementation of the National Strategy[75] is also supported through CDC's National Healthcare Safety Network (NHSN)[76] funding. This funding will expand the use of NHSN's Antibiotic Use and Antibiotic Resistance reporting options to track antibiotic use and AR infections to at least 95% of eligible hospitals. These data allow hospitals to target prevention efforts and assess the quality of antibiotic prescribing to improve how antibiotics are used in U.S. healthcare facilities.

[75] http://www.whitehouse.gov/sites/default/files/docs/carb_national_strategy.pdf
[76] http://www.cdc.gov/nhsn/

Healthcare-associated Infections and Adverse Event Outbreak Response

CDC estimates that at any given time, one in 25 hospitalized patients has a healthcare-associated infection (HAI). It is also estimated that over one million HAIs occur across the healthcare spectrum each year at a cost of over $30 billion. The graphic below illustrates the health and economic burden of healthcare-associated infections.



CDC provides national leadership and expertise in healthcare-associated infection (HAI)[77] prevention, and protects patients across healthcare through outbreak detection and control. CDC identifies emerging threats, provides laboratory testing for outbreaks related to the healthcare environment and contaminated products, develops guidelines for prevention of HAIs and related patient safety threats, and works with partners for prevention implementation. These activities complement and are informed by the National Healthcare Safety Network (NHSN) tracking capabilities described below. Outbreaks of HAIs and healthcare related adverse events are a critical public health problem, and CDC's outbreak investigations provide vital information to assess populations at risk and identify prevention strategies.

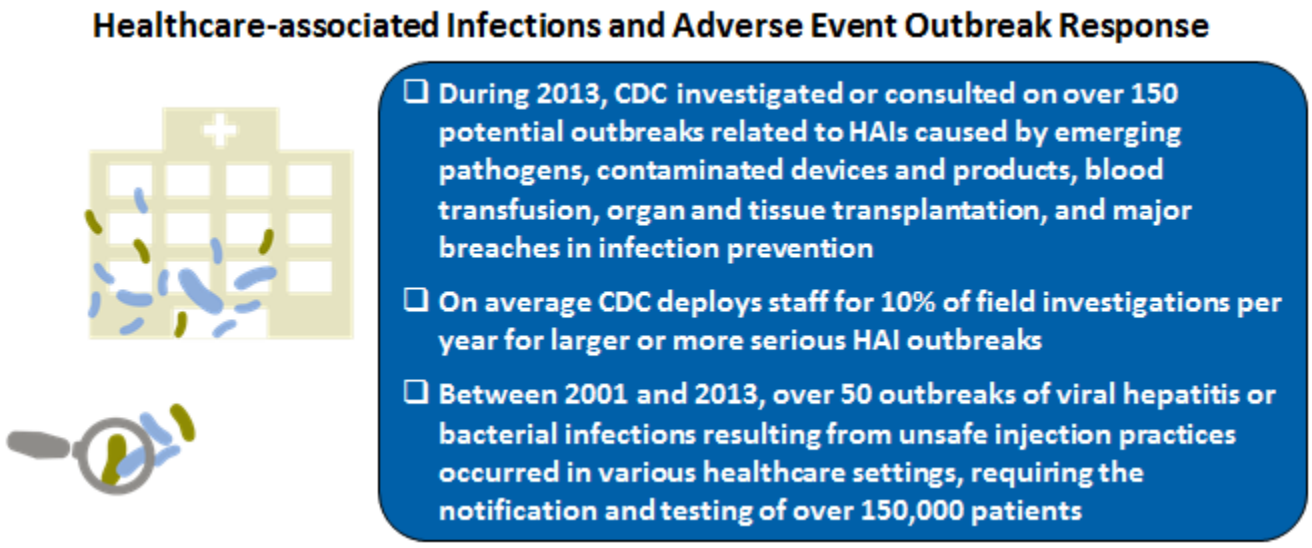
In 2014, CDC conducted HAI outbreak investigations related to the following: Emerging pathogens, contaminated devices and products, blood transfusion, organ and tissue transplantation, and major breaches in infection prevention.

[77] http://www.cdc.gov/hai/

In FY 2016, to prevent the spread of serious or life threatening infections within and between healthcare settings, CDC will:

- Detect and control outbreaks of HAIs across all healthcare settings
- Serve as a national and international reference laboratory for untreatable pathogens, and develop and evaluate new diagnostic tests for HAIs and drug resistant bacteria
- Develop evidence-based infection prevention guidelines to provide the scientific foundation for HAI prevention interventions and support federal initiatives such as the HHS National Action Plan to Prevent HAIs: Roadmap to Elimination and HHS Agency Priority Goals
- Work with federal partners, state and local health departments, and private sector partners to prevent HAIs, target healthcare facilities that need additional assistance using NHSN data, and to implement prevention strategies

The following graphic illustrates CDC's critical role in HAI outbreak investigations. CDC provides technical expertise during and after an outbreak. CDC works closely with policymakers, public health and regulatory agencies on strategies to prevent HAI outbreaks with the aims of improving the quality of care, protecting patients, and saving lives.



National Healthcare Safety Network Budget Request

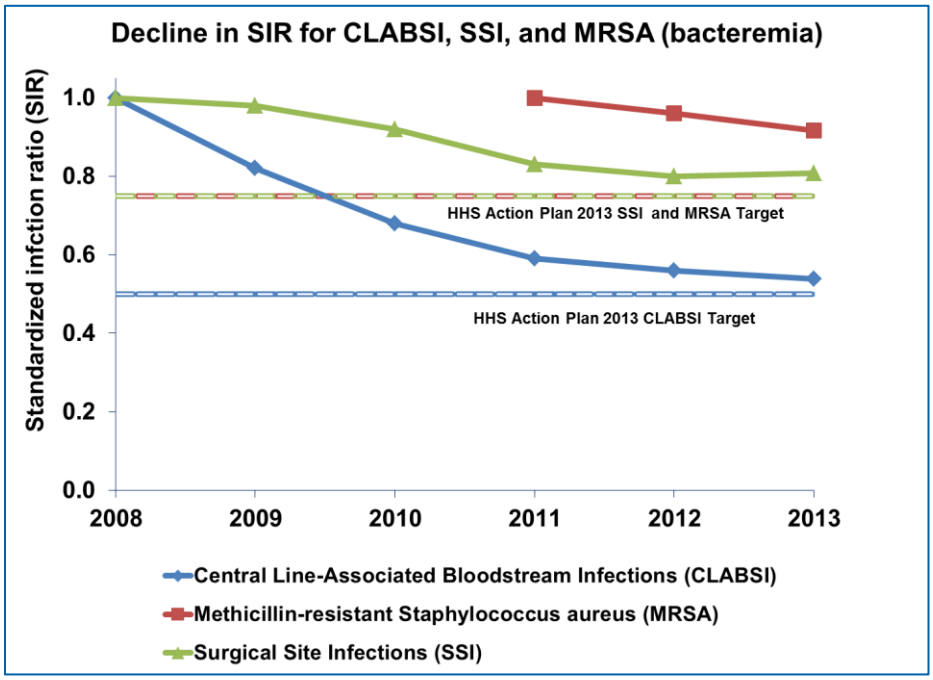
(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$18.032**	**$18.032**	**$32.071**	**+$14.039**

Overview

CDC operates the National Healthcare Safety Network (NHSN)[78] to protect patients by tracking healthcare-associated infections (HAIs) and driving HAI prevention at the local, state, and national levels. NHSN is a comprehensive medical care surveillance and quality improvement system. It's the main HAI reporting system in the United States with more than 14,000 healthcare facilities participating across all 50 states. Specifically, NHSN data and the tools provided by the system are used by:

- Healthcare facilities for real-time quality assessment and local practice improvement, such as initiatives for catheter-associated urinary tract infection (CAUTI) prevention and for tracking antibiotic use (AU) and antibiotic resistance (AR)
- State health departments to implement state public reporting mandates and target prevention efforts where most needed
- The Centers for Medicare and Medicaid Services (CMS) to improve the quality of care through payment incentives, and target prevention efforts of CMS-supported Quality Improvement Organizations (QIOs) and Hospital Engagement Networks (HENs) on facilities with the greatest need
- HHS to track national progress and make decisions on which aspects of healthcare quality should be targeted next (e.g., National Action Plan to Prevent HAIs Agency Priority Goals, the National Strategy for Combating Antibiotic Resistant Bacteria)

The use of NHSN allows facilities to demonstrate significant reductions in central line-associated bloodstream infections (CLABSI), surgical site infections (SSI), and hospital-onset laboratory identified Methicillin-resistant Staphylococcus aureus (MRSA) bacteremia (see graph below).



[78] http://www.cdc.gov/nhsn/

Budget Request

CDC's FY 2016 request of **$32,071,000** for NHSN is $14,039,000 above the FY 2015 Enacted level. The FY 2016 budget request will support NHSN reporting in more than 17,000 healthcare facilities across the continuum of care, including acute-care hospitals, dialysis facilities, nursing homes and ambulatory surgical centers. These funds will enable CDC to continue to provide data for national HAI elimination, and guide prevention to targeted healthcare facilities to improve HAI rates, NHSN infrastructure and critical user support, and innovative HAI prevention approaches. The funds will be used to:

- Expand NHSN's Antibiotic Use and Resistance (AUR) reporting to additional hospital and non-hospital settings for rapid detection of antibiotic resistant pathogens causing HAIs, and track and assess antibiotic use patterns across healthcare facilities to better understand and prevent the spread of potentially untreatable infections in these settings.
- Develop a new surveillance definition for sepsis (a potentially life-threatening inflammatory syndrome associated with severe infection) that is based on automated data collection and can be used to define healthcare quality reporting measures to assess the impact of sepsis prevention and treatment initiatives.
- Drive innovation through collaboration with academic research centers in CDC's Prevention EpiCenters network, which conducts applied research on interventions for infection prevention. The Prevention Epi-centers will continue to conduct a variety of breakthrough research on HAI and AR topics including piloting a new sepsis definition as well as assessing and comparing the impact of treatment and prevention approaches for sepsis.

NHSN Participation

HAI Event	Number of Facilities Enrolled in NHSN in Dec. 2014	Total Expected Number of Facilities Enrolled
ACUTE CARE HOSPITALS	5,850	> 5,000
CLABSI – ICU	3,450	> 3,300
CAUTI – ICU	3,425	
CLABSI – Non-ICU	1,700	> 3,800
CAUTI – Non-ICU	2,250	
SSI	3,900	
MRSA Bacteremia	4,450	
C. difficile infection	4,500	
Antimicrobial Use	60	
Antimicrobial Resistance	0	
DIALYSIS FACILITIES	6,600	> 5,600
LONG TERM ACUTE CARE FACILITIES (LTAC)*	575*	> 400
INPATIENT REHABILITATION FACILITIES (IRF)*	1,250*	> 1,200
AMBULATORY SURGICAL CENTERS (ASC)	1,500	> 5,000
* - LTACs and IRFs are also enrolled as acute care hospitals and are captured in the 5,850 hospitals enrolled figure above		

The table above provides a breakdown of the over 14,000 healthcare facilities currently enrolled in NHSN (note that long term acute-care facilities and inpatient rehabilitation facilities are also enrolled as acute-care hospitals). The column labeled "Expected Number of Facilities" represents the total number of healthcare facilities within the U.S. that are expected to

enroll in NHSN overtime and does not represent targeted enrollment for a specific year. Estimated total for FY 2016 is more than 17,000.

Spurring Prevention by Extending the Reach of NHSN

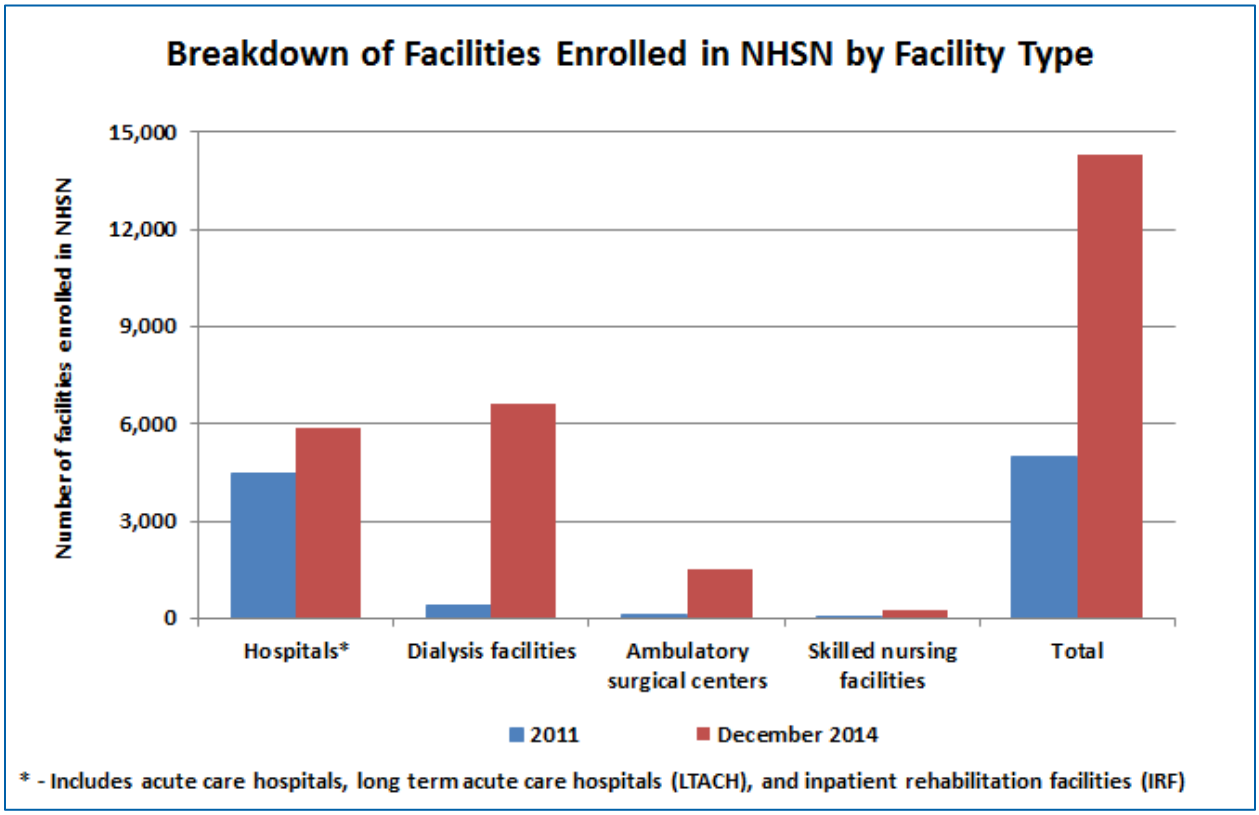
In support of the new National Strategy for Combating Antibiotic Resistant Bacteria and recommendations to address antibiotic resistance by the President's Council of Advisors on Science and Technology, CDC will use its NHSN infrastructure to track antimicrobial resistant infections to target prevention efforts and assess the quality of antibiotic prescribing to improve how antibiotics are used in U.S. healthcare facilities. Measurement of antimicrobial use in hospitals is an integral part of efforts to reduce inappropriate use and stop unnecessary antibiotic exposure, which puts patients at risk of highly resistant infections and secondary complications such as Clostridium difficile (C. difficile) infection.

In FY 2016, CDC will extend the use of the NHSN AU reporting option in all 50 states. CDC will use these data to assess antibiotic prescribing and increase appropriate antibiotic use initially from acute-care hospitals and eventually from long-term acute-care facilities and outpatient facilities. These data will be used to guide local and regional efforts to reduce resistance and provide national benchmarks to compare antibiotic use. CDC will work with CMS to include the NHSN AU reporting option in Quality Reporting rules, which could incentivize and expand implementation and reporting in 2017. To support the goals of NHSN AUR reporting under the National Strategy for Combatting Antibiotic-Resistant Bacteria and recommendations by the President's Council of Advisors on Science and Technology, CDC will extend the use of the NHSN AR reporting option in more than 750 facilities including working with the Department of Defense and the Veterans Affairs to facilitate reporting from their healthcare facilities. Both AU and AR data will be collected using a standardized approach exclusively through electronic capture. CDC will provide an evaluation of antimicrobial use and resistance within healthcare facilities and will facilitate future regional and national assessments of antimicrobial use and resistance. CDC will continue to work with software vendors to further knowledge and implementation of AUR reporting. CDC will also work to develop innovative methods such as mobile application software enabling facilities to easily view and use NHSN AU and AR data to facilitate appropriate antibiotic prescribing choices through active hospital stewardship programs, which best serve the patient and eliminate necessary antibiotic use. These data and new capabilities are crucial to helping clinicians, facilities, public health officials, industry, and the public understand where AR is a problem to better treat and protect patients.

CDC will also use FY 2016 resources to better understand the epidemiology of sepsis to detect and prevent disability and death from this potentially fatal illness. Sepsis is a serious response to an infection that is difficult to predict, diagnose, and treat, and it is associated with higher healthcare costs and longer treatment. Current measurement of sepsis is based on analysis of insurance claims data using various disparate medical diagnostic codes and subjective diagnostic criteria. Moreover, the absence of an objective, clinically meaningful definition can lead to unintended consequences during treatment such as overprescribing antibiotics. To initiate dialogue and collaboration with key stakeholders, in September 2014, CDC hosted a partner meeting with CMS, outside experts, and patients focused on the need to develop a sepsis measure in NHSN. In FY 2016, CDC will work with partners to develop a definitional algorithm for sepsis based on electronic data routinely collected in the patient's electronic health record for reporting to NHSN. CDC will ultimately use these data to track national population-level sepsis rates, assess the impact of prevention and treatment initiatives, and facilitate comparisons between healthcare facilities to identify where the problem exists.

Non-hospital settings in the United States continue to lag behind acute-care hospitals in HAI prevention. In 2016, CDC will continue to provide technical assistance and monitoring of HAIs in facilities that provide dialysis, long-term care, rehabilitation, ambulatory surgeries, and other outpatient procedures. CDC will also continue prevention beyond acute-care hospitals by tracking healthcare personnel influenza immunization coverage in more than 5,000 ambulatory surgery centers (ASC) and outpatient departments nationwide. Furthermore, CDC will continue working with CMS on including healthcare personnel immunization tracking in nursing homes and extend surgical site infection (SSI) reporting to ASCs.

In FY 2016—and in support of the revised targets in the HHS National Action Plan to Prevent HAIs—CDC will continue CLABSI, CAUTI, SSI, MRSA, and C. difficile infection reporting in more than 5,000 hospitals, and bloodstream infection reporting in more than 6,400 dialysis facilities. CDC will provide these data to the CMS Hospital Compare website, giving the public facility-level data on HAI prevention, and enabling healthcare facilities to track and prevent infections locally. It will also allow state health departments and others to track HAIs and drive progress in HAI prevention across healthcare.



The graphic above shows the change in the breakdown of healthcare facilities enrolled in NHSN by facility type between the end of 2011 and December 2014.

Promoting Technology and Innovation through Research

CDC uses epidemiologic and technologic expertise to enhance surveillance methodologies and develop practical tools to advance prevention science for improved patient outcomes. CDC funds innovative applied research through the Prevention EpiCenters network, a collaboration to identify new and better ways to prevent HAIs and related harms to patients, such as severe sepsis. This network of academic partners will continue to fill gaps in the science-base for HAI prevention, antibiotic resistance, and other adverse events associated with healthcare. This work is informed by and provides valuable synergy with CDC's surveillance, outbreak investigations, and HAI expertise. CDC uses this network to address other critical infection problems, such as Clostridium difficile infections, and ventilator-associated pneumonia (VAP). In FY 2016, CDC Prevention EpiCenters will focus on the prevention of severe sepsis outcomes through early detection and diagnosis, characterizing which patients are at risk of developing severe sepsis by studying causes and analyzing when, during delivery of healthcare, patients most often develop sepsis. By understanding the factors that contribute to severe sepsis, CDC will enhance prevention strategies and save lives.

National Healthcare Safety Network Grant[1.2]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	16	6	6	6	20	+14
- New Awards	0	0	0	0	14	+14
- Continuing Awards	16	6	6	6	20	+14
Average Award	$0.172	0.111	$0.499	$0.499	$0.499	$0.000
Range of Awards	$0.005–$0.430	$0.036-0.217	$0.300-0.700	$0.300-0.700	$0.300-0.700	$0.000
Total Awards	**$2.749**	**0.669**	**$2.995**	**$2.995**	**$9.995**	**+$7.000**

[1] Reflects awards supported with CDC's NHSN budget authority.

[2] These funds are not awarded by formula.

In FY 2016, CDC will fund additional awardees through existing cooperative agreement programs, including the ELC, the Prevention EpiCenters program, and public health partnerships to track ward-specific, facility-wide NHSN data on HAIs including those caused by antibiotic resistant pathogens. Through its grantees and in collaboration with CMS, CDC will continue to support HAI prevention efforts in hospitals and other healthcare facilities. Funding will enable state health departments to work through partners—including group purchasing organizations, health insurers, healthcare facilities, patient advocacy and healthcare consumer organizations, quality improvement organizations, professional societies, and state hospital associations—to develop or enhance HAI prevention programs. CDC awards continuation funding through a competitive process. Currently, health departments and Prevention EpiCenters grantees that use these funds to rapidly detect and respond to HAI threats, develop and implement sustainable, replicable HAI prevention strategies, and use CDC data to target facilities most in need of improvement to decrease illness and death associated with healthcare delivery.

Food Safety Budget Request

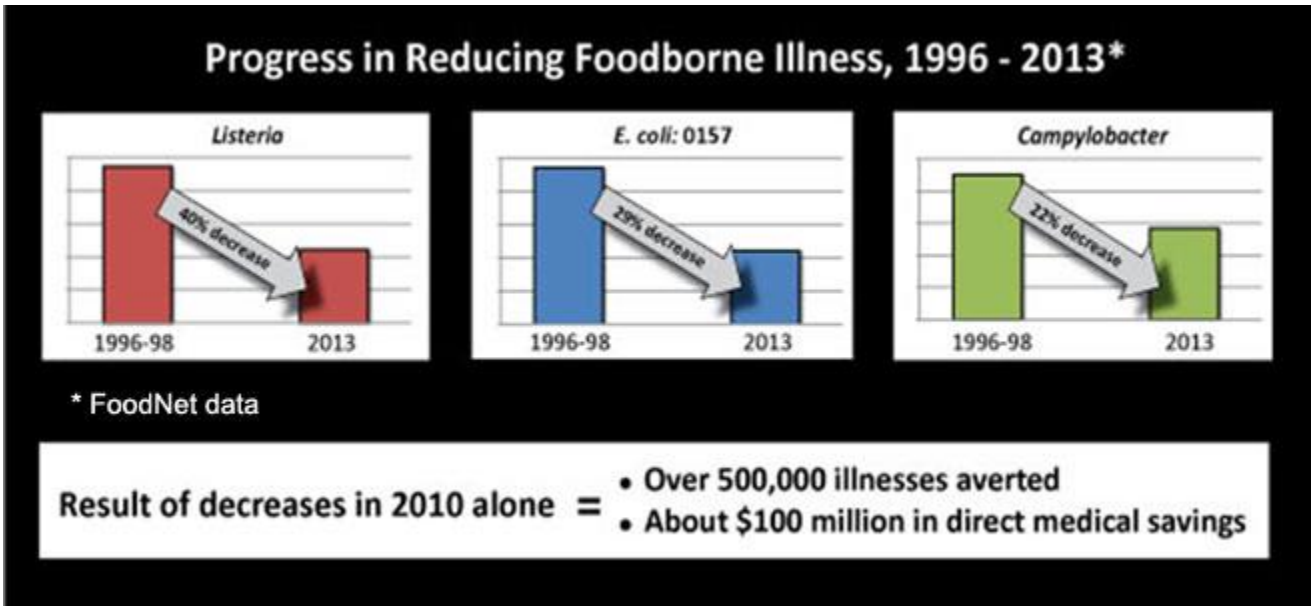
(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$39.993**	**$47.993**	**$50.089**	**+$2.096**

Overview

CDC works to reduce the estimated 48 million illnesses, 128,000 hospitalizations, and 3,000 deaths each year caused by pathogens in contaminated food, and to quantify successes to inform control measures. As shown below, significant progress has been made in reducing human illness caused by three major pathogens. Despite these improvements, changes in our environment, microorganisms, and the food supply affect the occurrence and complexity of foodborne diseases. CDC's unique role in food safety is to:

The number of Americans made ill by contaminated food each year—about 1 in 6 —roughly the same as the combined populations of our nation's 35 largest cities.

- Detect foodborne illnesses
- Work closely with state health departments, and with the Food and Drug Administration (FDA) and USDA's Food Safety and Inspection Service (FSIS) to stop outbreaks
- Track emerging and long-term illness trends to determine problems and progress
- Provide data to federal food safety regulators to improve their rules and regulations
- Provide technology, expert advice, guidance, training, and education for state and local governments, food industry partners, and consumers



Budget Request

CDC's FY 2016 request of **$50,089,000** for food safety activities is $2,096,000 above the FY 2015 Enacted level. Approximately one-half of the requested increase will go to state and local health agencies to enhance vital national surveillance, outbreak detection and response, and food safety prevention efforts. This funding will help to address the critical unmet needs in the nation's food safety system, focusing on priority areas in food

safety at CDC and at state health departments, all of which are required provisions of the Food Safety Modernization Act (FSMA). These priorities are:

- Detect, investigate, and stop foodborne outbreaks
- Drive policy and prevention with data and analysis
- Address challenges of culture-independent diagnostic testing which threaten the function of current surveillance systems by providing the means to continue delivering cultured samples of isolated foodborne pathogens to laboratories for analysis

CDC will achieve these priorities through program activities such as:

- Enhancing and integrating surveillance systems
- Continuing efforts to update the PulseNet System at CDC and in all state health departments

Traditional laboratory culturing of microbes is required for CDC's PulseNet foodborne illness detection system. New diagnostics detect pathogens without using cultured bacteria. Unless PulseNet is modernized, it will soon be unable to detect multi-state outbreaks.

Additional funding will be provided to the Integrated Food Safety Centers of Excellence to enhance regional support for state and local food safety programs. In addition, funding will be provided to these Centers to establish fellowships, stipends, and scholarships to train future epidemiological, research, and food-safety leaders and to address critical workforce shortages. Attributing illnesses to specific food commodity groups will aid in prevention efforts before outbreaks occur.

Faster, better foodborne disease control and prevention

CDC's PulseNet[79] laboratory system has been the most effective tool for detecting foodborne disease outbreaks and correcting problems in the food supply. PulseNet, which is celebrating its 20th year in 2016, uses technology that is rapidly becoming obsolete. PulseNet is not compatible with new tests being adopted in hospitals and clinics to diagnose pathogens as many of the new tests use technologies that do not require an isolate of bacteria (a culture) to be analyzed by PulseNet. Consequently, PulseNet is beginning to lose crucial data that enables the detection of clusters of foodborne illness and tracks foodborne disease outbreaks. Clinics are rapidly adopting non-culture based technologies, which will compromise the PulseNet system's ability to detect and track outbreaks – leading to increased foodborne infections and deaths. In addition, information about antibiotic resistance of pathogens such as *Salmonella* will be lost, reducing CDC's ability to advise regulators on antibiotics that need to be developed as well as how rapidly they need to be developed.

In 2016, CDC will support and improve PulseNet in all 50 States to ensure the completeness and accuracy of detection data. Public health cannot stop or prevent what it cannot detect, and quick detection leads to investigation and control to prevent illnesses, hospitalizations, and deaths.

To modernize PulseNet laboratories, FY 2016 Food Safety funds will be used to:

- Assess the new culture-independent diagnostic tests (CID tests) being adopted in clinical laboratories
- Establish better techniques to recover bacteria from CID test specimens, so that current PulseNet surveillance can continue for the short term
- Evaluate and implement new tools that speed primary data collection and sharing with states and other public health partners

[79] http://www.cdc.gov/pulsenet/

Detecting, investigating and stopping foodborne outbreaks

CDC depends on state and local public health agencies to report foodborne illnesses as they occur and to respond to outbreaks when they are detected. The FY 2016 Budget will continue to support, coordinate, and enhance the state epidemiology, laboratory, and environmental health capacity needed to track foodborne illnesses and detect and respond to outbreaks. CDC efforts include leading approximately 30 multistate foodborne outbreak investigations each year with local, state, and federal agency partners. Together, CDC and states stop outbreaks, prevent illness, and show how improved prevention policies might keep the next outbreak from happening. The FY 2016 Budget will also strengthen tracking and characterization of outbreaks caused by bacteria (with PulseNet) in all 50 states as well as new and known strains of norovirus (with CaliciNet[80] in 28 states). In addition, CDC will strengthen the CDC foodborne diseases reference laboratory, which supports state and global efforts in disease tracking by verifying identification of known pathogens and characterizing new pathogens.

CDC drives improvements in foodborne outbreak detection and response through the Foodborne Diseases Centers for Outbreak Response Enhancement (FoodCORE[81]) program and the Integrated Food Safety Centers of Excellence[82]. FoodCORE develops field-tested practices and procedures that speed up tracking and outbreak response. CDC's five Food Safety Centers of Excellence serve as a resource to other state and local public health programs in improving foodborne disease surveillance and outbreak investigation. In FY 2016, CDC will increase program efforts to:

- Make priority laboratory surveillance activities stronger and faster, including disease tracking in PulseNet, and CaliciNet laboratory systems
- Develop and evaluate best practices for more efficient outbreak detection and response at FoodCORE sites for use at the local, state, and federal levels
- Train public health personnel in other states in best practices for foodborne disease diagnosis, surveillance, pathogen identification, outbreak investigation, and control
- Restore and improve state and local capacity to implement a suite of best practices to monitor foodborne illness and respond to outbreaks
- Guide food safety policy

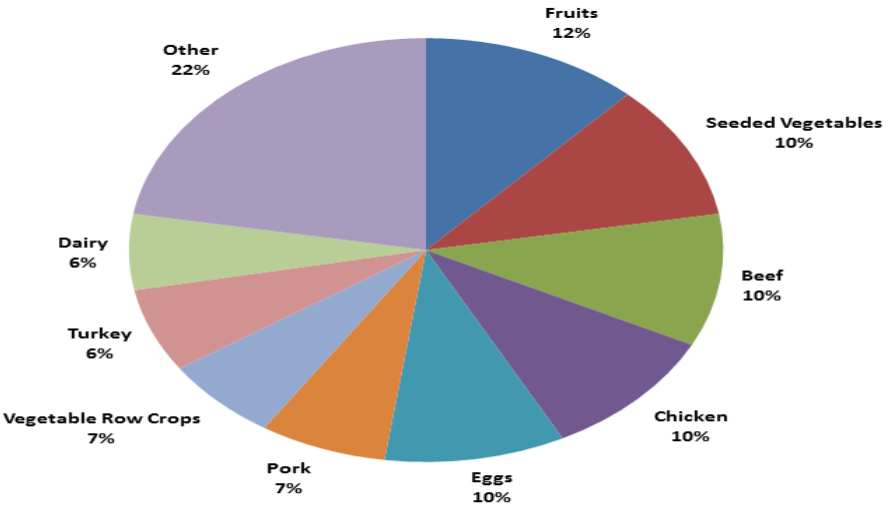
Tracking trends in foodborne infections each year illuminates problems and identifies potential solutions. The funding request for CDC's Food Safety Program will support and enhance laboratory-confirmed illness surveillance, surveys, and studies through Food Net[83], including tracking the impacts that CID tests will have on foodborne surveillance. It will also support, through the National Outbreak Reporting System (NORS)[84], our ability to collect and analyze outbreak data[85] from all states and provide the public with a searchable database[86], that offers insights into the foods, germs, and settings linked to foodborne diseases nationally. These networks contribute data used to measure progress in reaching national food safety goals and support prevention efforts to identify high-risk foods for food regulatory agencies and food industries.

To better identify foods that cause outbreaks, the Interagency Food Safety Analytics Collaboration[87]—a collaboration between CDC, FDA, and USDA/FSIS—conducts studies that help regulators and industry target prevention measures to the highest risk foods to prevent foodborne disease and to measure progress. The pie

[80] http://www.cdc.gov/norovirus/php/reporting.html
[81] http://www.cdc.gov/features/foodcore/
[82] http://www.cdc.gov/foodsafety/centers/
[83] http://www.cdc.gov/foodnet/
[84] http://www.cdc.gov/nors/
[85] http://www.cdc.gov/foodsafety/fdoss/index.html
[86] http://wwwn.cdc.gov/foodborneoutbreaks/
[87] http://www.cdc.gov/foodborneburden/attribution/index.html

chart shows estimates of the illnesses caused by single food categories over the past five years and shows where prevention is most needed.

Causes of Illnesses Attributed to Single Food Categories



Source: CDC's National Outbreak Reporting System (NORS). "Other" includes: Fish, Nuts-Seeds, Grains-Beans, Sprouts, Mollusks, Herbs, Root/Underground, Game, Other Poultry, Fungi, Other Meat, Crustaceans, Oils-Sugars, and Other Aquatic Animals

Division of Foodborne, Waterborne, and Environmental Diseases

In FY 2016 CDC will increase programs efforts to:

- Monitor foodborne pathogens, despite changing diagnostic practices, surveys and studies, in FoodNet and foodborne outbreaks in the National Outbreak Reporting System (NORS)
- Rapidly assess trends in foodborne illness, identify high-risk foods, and assess the effectiveness of prevention strategies, in partnership with FDA and FSIS via the Interagency Food Safety Analytics Collaboration
- Improve the integration, analysis, usability, and sharing of data with food safety partners and the public
- Reduce data gaps and improve linkage across surveillance systems

Food Safety Grant[1,2]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	59	57	57	57	57	0
- New Awards	59	0	0	0	0	0
- Continuing Awards	0	57	57	57	57	0
Average Award	$0.177	$0.19	$0.270	$0.288	$0.360	+$0.072
Range of Awards	$0.010–$0.696	$0.001-$0.875	$0.027-$1.230	$0.029-$1.308	$0.036-$1.636	N/A
Total Awards	**$10.479**	**$10.980**	**$15.520**	**$19.520**	**$20.520**	**+$1.000**

[1]Reflects estimated awards funded by CDC's Food Safety budget authority.

[2]These funds are not awarded by formula.

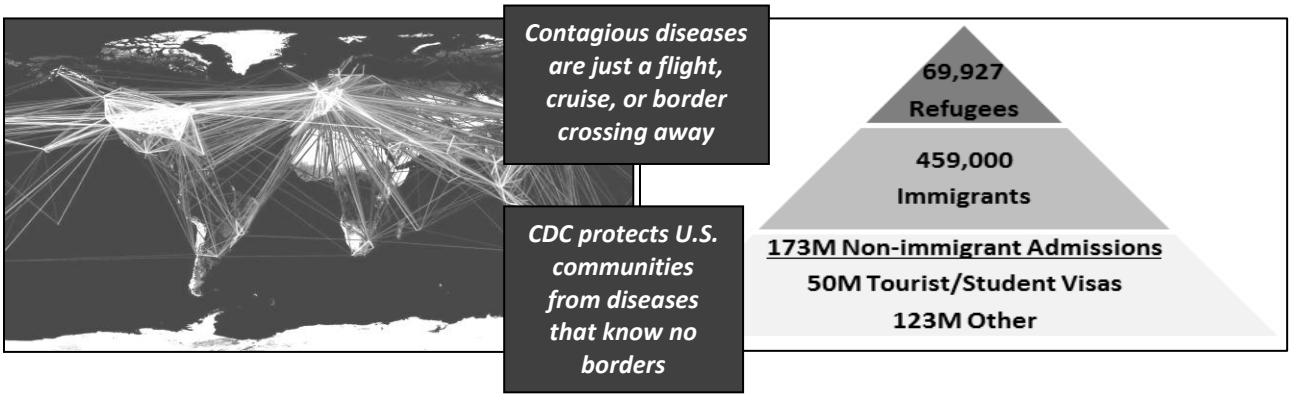
Quarantine and Migration Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$31.572**	**$31.572**	**$31.572**	**$0.000**
Federal Isolation and Quarantine (non-add)	N/A	N/A	$1.000	N/A

Overview

Air travel today allows an infected person to carry a disease from one place in the world to another within 24 hours, which is less time than the incubation periods of many diseases. Infectious diseases among immigrants, refugees, international travelers, and other globally mobile populations pose not only a significant health risk to these individuals and their families, but also a public health risk to the U.S. communities that they visit and/or in which they reside. CDC's global migration and quarantine public health and regulatory activities focus on preventing the spread of infectious disease into the United States.

International Flight Patterns and Arrivals in the United States, 2013



CDC uses specialized knowledge of the complex issues surrounding border and migration health to carry out its unique regulatory responsibilities, to implement cost-effective public health programs, and to leverage non-traditional partnerships for a greater impact through a network of front line responders (e.g., approximately 25,000 Customs and Border Protection agents; 760 physicians; and 3,000 civil surgeons).

As part of its core work, CDC's global migration and quarantine staff have played key roles in response to the recent Ebola outbreak of unprecedented size in West Africa.

- CDC collaborated with the World Health Organization and in-country Ministries of Health to implement strategies to control transmission and spread of the virus from ill travelers. CDC augmented and enhanced the implementation of effective exit screening at points of departure in Guinea, Liberia, and Sierra Leone, including the enforcement of do-not-board procedures for ill travelers and persons who reported a high risk of exposure to Ebola. In 2014, an estimated 80,000 airline travelers were screened.
- Within three days of the request, CDC and DHS implemented comprehensive entry screening of all travelers arriving in the U.S. from Ebola affected countries.

Budget Request

CDC's FY 2016 request of **$31,572,000** for Migration Health and Quarantine is level with the FY 2015 Enacted level. CDC will use these funds in FY 2016 to implement public health programs to protect receiving U.S. communities from infectious diseases, provide cost savings to the U.S. healthcare system, and respond to the needs of people who are traveling around the world or relocating to the United States from another part of the world. Within this amount, up to $1,000,000 is to remain available until expended for quarantine travelers with highly contagious diseases such as multi-drug resistant tuberculosis (MDR-TB) to protect the health security of travelers and U.S. communities.

CDC's FY 2016 Global Migration and Quarantine Public Health Actions

Activities	Examples
Improving the Health of Immigrants, Refugees, and Migrants[88]	• Deliver evidence-based guidelines for medical screening and comprehensive tracking of diseases • Provide information to health departments for medical follow-up • Pilot cost-effective overseas interventions to vaccinate and treat parasitic diseases for refugees (~ 50,000 covered yearly) • Manage field programs in Kenya and Thailand • Monitor occurrence of disease in refugee camps
Public Health at U.S. Ports of Entry[89]	• Operate CDC's 20 Quarantine Stations to ensure that people, animals, and animal products do not spread disease • Distribute life-saving drugs (~90 lives saved yearly) • Respond to major health emergencies • Works with partners at ports of entry and along the US-Mexico border to reduce the spread of disease
Keeping Americans Healthy During Travel and While Living Abroad[90]	• Track and analyze occurrences of disease throughout the world to help U.S. travelers and healthcare providers stay informed • Manage the Travelers' Health website (~30 million page views yearly) • Publish the CDC Health Information for International Travel: The Yellow Book—the gold standard travel medicine reference
Partnering to Improve US-Mexico Health[91]	• Detect, notify, investigate, and respond to illness reports and infectious disease cases along the U.S.-Mexico border

In FY 2016, CDC will fund 31 domestic and international partners through existing cooperative agreements. The awards help protect the health of U.S. communities, migrants, immigrants, refugees, and international travelers; improve the tracking of disease outbreaks and trends; and build epidemiologic and public health capacity.

[88] http://www.cdc.gov/ImmigrantRefugeeHealth/
[89] http://www.cdc.gov/Quarantine/
[90] http://wwwnc.cdc.gov/travel/
[91] http://www.cdc.gov/USMexicoHealth/

Migration Health Grants[1,2]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	31	32	28	28	31	0
- New Awards	20	8	4	0	9	+9
- Continuing Awards	11	24	24	28	22	-6
Average Award	$0.159	$0.147	$0.167	$0.167	$0.167	$0.000
Range of Awards	$0.010–$1.295	$0.010-$1.295	$0.010-$1.295	$0.010-$1.295	$0.010-$1.295	N/A
Total Awards	**$4.928**	**$4.719**	**$4.683**	**$4.683**	**$4.683**	**$0.000**

[1]This table includes awards supported with CDC's Quarantine budget authority.

[2]These funds are not awarded by formula.

Advanced Molecular Detection and Response to Infectious Disease Outbreaks Budget Request

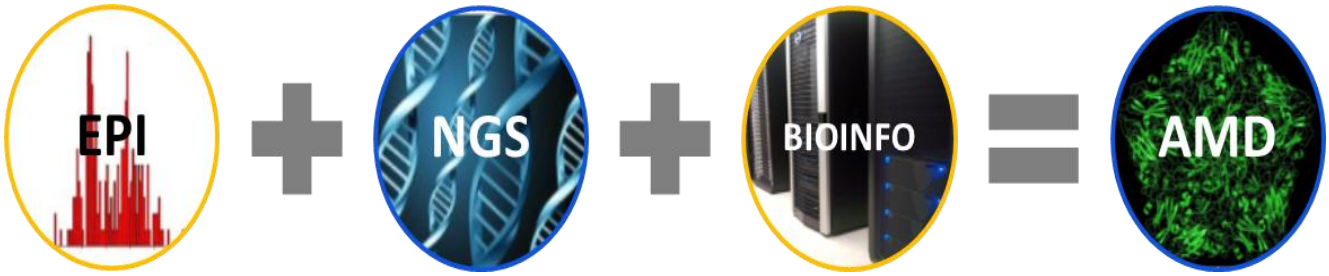
(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$29.917**	**$30.000**	**$30.000**	**$0.000**

Overview

Advanced molecular detection (AMD)[92] combines the latest pathogen identification technologies with enhanced capabilities in bioinformatics and advanced epidemiology to be more effective in understanding, preventing, and controlling infectious diseases. Examples of the public health benefits of AMD include more precise and accurate ways of:

- Diagnosing known and emerging infections
- Detecting and responding to outbreaks
- Understanding, characterizing, and controlling antibiotic resistance
- Developing and targeting prevention measures, including vaccines

Newer, more powerful, pathogen detection technologies—such as whole-genome sequencing— are designed to determine the complete genetic makeup of organisms and deliver massive amounts of data rapidly. Although these Next-Generation Sequencing (NGS) tools carry great potential, sufficient laboratory and bioinformatics capacities and highly skilled staff are essential to extract and interpret the relevant information from the massive amounts of sequencing data.



If the U.S. public health system is not prepared for the shift from culture-based approaches to newer clinical tools and diagnostic tests, the future health of the nation will be at risk, because our current surveillance systems depend on this older technology to detect trends and outbreaks. As the nation's—and perhaps the world's—premier disease detection agency, CDC has begun adapting these new tools and technologies for public health and ensuring America keeps pace with this rapidly changing field.

Budget Request

CDC's FY 2016 request of **$30,000,000** for the crosscutting Advanced Molecular Detection and Response to Infectious Disease Outbreaks is level with the FY 2015 Enacted level. AMD is introducing cutting edge technologies into CDC's public health microbiology and informatics that will fundamentally change and modernize CDC's ability to protect Americans' health. The investment will enable CDC to continue progress on five goals:

[92] http://www.cdc.gov/amd/

FY 2016 AMD Goal Areas	Background and Activities
Improving pathogen identification and detection	CDC is incorporating advanced molecular methods, which will allow CDC to add genomic information to its reference library. This will support development of more accurate "genomic fingerprint" markers compared to current methods, enhancing public health's ability to identify and detect pathogens.
Developing new diagnostics to meet evolving public health needs	CDC is developing its pathogen discovery technologies to adapt to the next generation of rapid, semi- and fully-automated, molecular tests to meet evolving public health needs. CDC will facilitate translation of data for developing better diagnostics for clinical and public health use.
Supporting states to coordinate meeting future bioinformatics and genomic testing needs	Similar to CDC, state public health laboratories will need to expand their use of advanced molecular technologies. CDC is working with partners to build state laboratory and bioinformatics capacity to implement advanced molecular technologies in national networks and thus improve states' ability to respond to outbreaks. CDC is working with APHL to better understand state capacity for AMD technology and analysis.
Implementing enhanced, sustainable, integrated laboratory information systems	CDC is making data more accessible, enabling integration with other data sources and use in complex analyses to identify clusters and changes in pathogens that threaten public health.
Developing tools for the prediction, modeling and early recognition of emerging infectious threats	At the microbe level, CDC is supporting analyses of genomic data to predict potential changes in pathogen transmission, disease severity, and antimicrobial resistance. At the population level, CDC is supporting molecular epidemiologic and geospatial analyses to monitor changes in pathogen evolution and to predict potential emergence of novel or resistant pathogens.

AMD in Action: Identifying Enterovirus D68 in Children with Respiratory Illness

In mid-August 2014, hospitals in Missouri and Illinois notified CDC of an increase in admissions of children with severe respiratory illness. Hospitals confirmed the presence of enterovirus and CDC identified enterovirus D68 (EV-D68) in most of the specimens. Since August, CDC and states have been doing more testing for EV-D68, and have found EV-D68 causing severe respiratory illness in almost all states.

As of December 09, 2014, CDC or state public health laboratories have confirmed a total of 1,149 people in 48 states and the District of Columbia with respiratory illness caused by EV-D68. With support from the AMD initiative, CDC obtained one whole genomic sequence and six partial, nearly completed genomic sequences from viruses representing the three known strains of EV-D68 we have commonly seen this summer and fall. CDC submitted the sequences to GenBank to make them available to the scientific community for further testing and analysis. In addition, CDC's AMD initiative contributed to the development of a new "real-time" lab test, which has fewer and shorter steps than the previous test. For the full story, see - http://www.cdc.gov/non-polio-enterovirus/outbreaks/EV-D68-outbreaks.html.

CDC is advancing these goals by investing in these key cross-cutting categories:

- IT and laboratory infrastructure that supports AMD approaches

- Capital investments in advanced information technologies that are critical in developing informatics capacity necessary for the next generation of public health laboratory analysis

For AMD to succeed, CDC needs continued resources that will support improvements in high-throughput sequencing and laboratory support; high-performance computing and access to cloud resources; scientific data storage, analytics, management and security; and improved access to open source scientific software. Investments in infrastructure must be coupled with updates to policy to ensure that data are stored, managed, and processed in accordance with changing scientific capabilities and best practices.

Current efforts include:

- Increasing sequencing capacity - more than doubling the number of infectious disease programs with access to NGS
- Installing high-speed networking petabyte-scale network storage for scientific data management
- Establishing training and fellowship programs in pathogen genomics and public health bioinformatics

FY 2016 plans will leverage these new capabilities, infrastructure, and resources with efforts that include:

- Developing, validating, and implementing new AMD-based laboratory technologies and assays
- Incorporating AMD technologies into existing state-based infectious disease surveillance programs
- Integrating laboratory-based surveillance infrastructure and systems
- Working with partners to develop and implement consensus standards on data and metadata management, storage, exchange, and criteria for interpretation
- Public health workforce that uses AMD approaches

Training CDC scientists and state public health staff in methods for pathogen genetic sequencing, analysis, and interpretation is one of the most important functions of the AMD Initiative. This will have both immediate and lasting effects. Not only does CDC need additional specialized bioinformatics capacity, but integration of bioinformatics skills in all disciplines of public health.

Current efforts include:

- A CDC/Association of Public Health Laboratories (APHL) Bioinformatics in Public Health Fellowship, which was launched in January 2014 and includes 11 pre- and post-doctoral fellows
- Expansion of CDC bioinformatics capacity though increasing specialized expertise for core support and across program laboratory activities
- Collaboration with Georgia Institute of Technology for a week- long course in infectious disease genomics and bioinformatics for professionals
- Ongoing internal training courses on high-performance computing and bioinformatics applications

CDC plans to conduct a training needs assessment during FY 2015, coupled with an APHL-led survey of state and local public health labs to identify training priorities. By 2016, information from these efforts will be used for curriculum development and delivery, and training opportunities and skills development for public health professionals across the country.

Programs and projects that apply AMD technologies

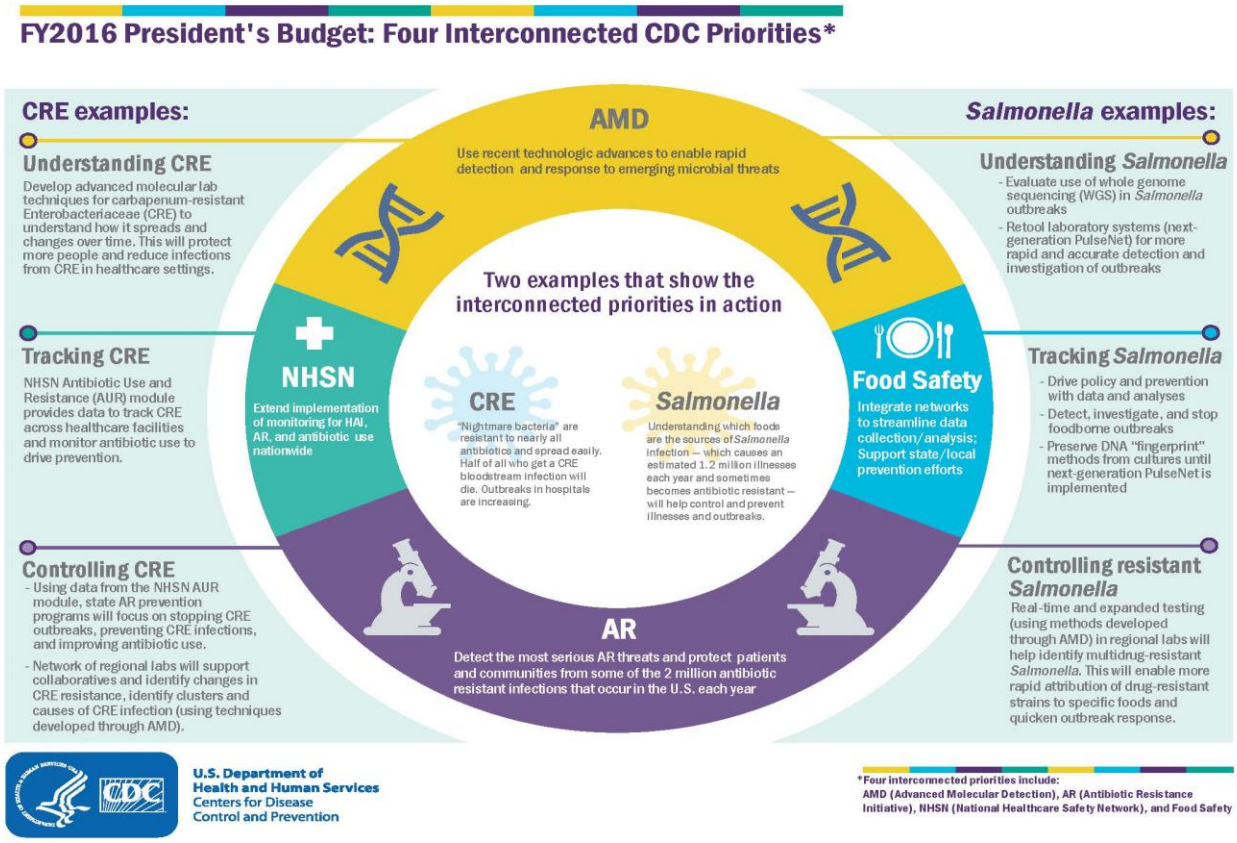
AMD aims to transform public health agencies by incorporating advanced molecular technologies into routine public health practice. Infectious disease programs will develop novel strategies and processes, define

standardized methods, enhance bioinformatic analyses and data visualization, extract actionable public health information, and implement genomics and bioinformatics.

Current efforts include:

- Using genomic epidemiology to improve timeliness and accuracy of epidemiologic response
- Identifying novel technology and developing tools and standardize methods for AMD
- Creating publicly accessible databases of well-characterized references pathogens
- Developing predictive modeling systems
- Implementing AMD technologies in reference laboratory workflow

By FY 2016, at least five laboratory surveillance programs will have initiated state-based activities and transitioned surveillance networks to AMD technologies. Efforts are currently underway to identify interoperable software platforms and database standards, and leverage common infrastructure and methods, across multiple infectious disease surveillance activities.



Affordable Care Act Prevention and Public Health Fund

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$52.000**	**$52.000**	**$54.580**	**+$2.580**

The Affordable Care Act (ACA) Prevention and Public Health Fund (PPHF) includes the following activities:

- ELC $40,000,000
- HAI $14,580,000

Epidemiology and Laboratory ACA/PPHF

Through investments made by ACA/PPHF funds, grantees of the Epidemiology and Laboratory Capacity (ELC) and Emerging Infections Program (EIP) cooperative agreements are strengthening and integrating their capacity to detect and respond to infectious disease and other public health threats, including increasing the use of electronic laboratory reporting, improving their information technology infrastructures, improving program coordination, and expanding their training activities. Specific areas that ELC/EIP aims to enhance are:

- **Epidemiology capacity**—Strengthen non-categorical infectious disease epidemiology support to enhance health departments' timely detection and completeness of outbreak investigation, surveillance systems, information access and sharing with public health partners, coordination across departments, and collaboration with external partners. This support strengthens health departments' ability to shift resources and direct epidemiology personnel to areas of need. It has been critical in recent outbreaks, including those related to multi-state foodborne illness, influenza, arboviral and fungal meningitis.

- **EIP network infrastructure**—Strengthen EIP infrastructure in states and their partners to ensure successful coordination and implementation of surveillance and studies through support of personnel (e.g., supervisory scientists, program managers), education/training of staff, and information technology and exchange efforts.

- **Laboratory capacity**—Modernize, equip, and staff public health laboratories and employ high-quality laboratory processes and systems that provide accurate and timely testing for a broad range of infectious agents. Additionally, this support fosters communication and integration between laboratory and epidemiology functions.

- **Health information systems capacity**—Develop and strengthen current health information capability for public health agencies. This includes modern, standards-based, and interoperable systems that support electronic exchange of information within and between epidemiology and laboratory functions. The information exchanges occur between public health agencies (e.g., systems that support public health surveillance and investigation, laboratory information management systems); among federal, state, and local public health agencies; and between public health agencies and clinical care systems. Overall, enhancing the electronic exchange of information between public health agencies and clinical care entities will be a critical contribution to health reform in the United States and will allow health departments to engage effectively in an era of health information exchange with evolving electronic health records.

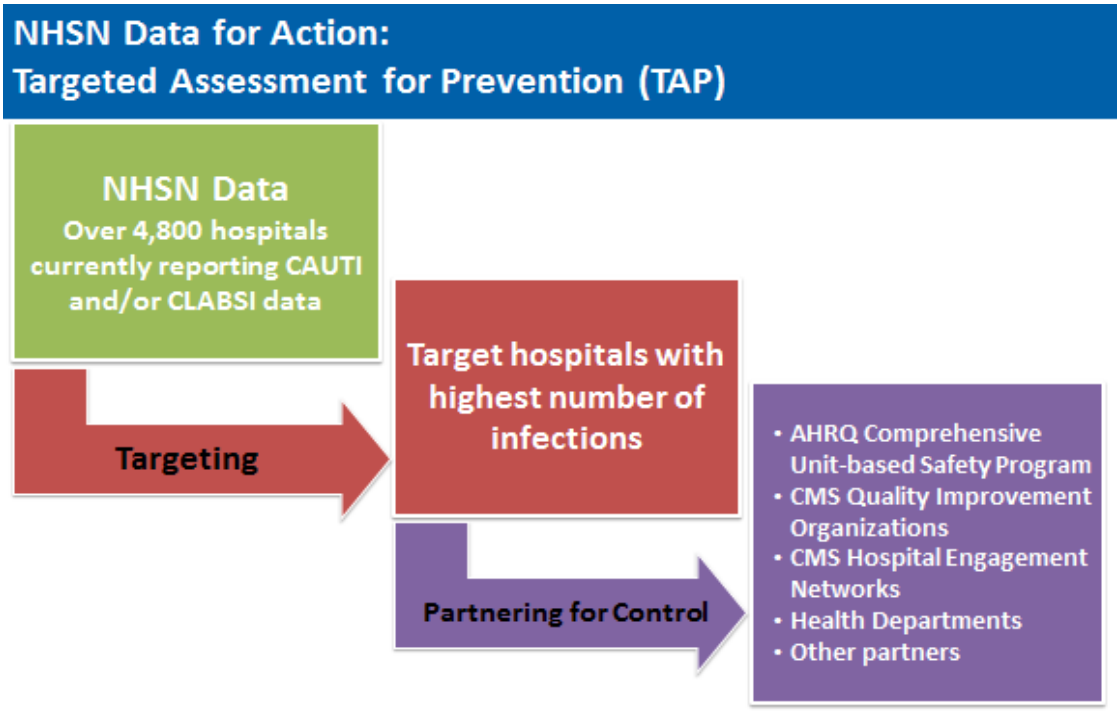
State Healthcare-Associated Infection Prevention

CDC supports the critical public health role of state health departments to implement and ensure adherence to HAI prevention practices. Funding allows states to build on the success of investments in preventing HAIs and ensure improved leadership and coordination of HAI activities by state health departments. Funding will also help states maintain and evaluate sustainable HAI programs that work across the healthcare system to maximize HAI prevention efforts through collaboration with and coordination of regional and national public health and healthcare partners.

The CDC goals for this program are to:

- Continue HAI prevention collaboratives across all healthcare settings (e.g., nursing homes, long-term acute-care facilities, dialysis facilities, rehabilitation facilities)
- Increase state and healthcare facilities' access to and use of data to detect and prevent HAIs, as well as their ability to measure the impact of prevention efforts
- Enhance state capacity for HAI prevention through partnerships, training, outbreak detection and response, and conducting HAI data validation

In FY 2016, CDC will expand work with state and local health departments and other partners to target prevention efforts to healthcare facility and ward levels. This will be accomplished by analyzing surveillance data and linking identified facility-level problems to appropriate prevention solutions (i.e., utilizing existing tools). State Health Departments will facilitate prevention efforts within regions of healthcare facilities that share a patient population.



The Targeted Assessment for Prevention (TAP) strategy allows state agencies, hospitals, and other NHSN users to focus prevention efforts on facilities and locations with excess infections.

ACA/PPHF Healthcare-Associated Infections Grants[1,2]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	50	50	50	50	50	0
- New Awards	0	0	0	0	0	0
- Continuing Awards	50	50	50	50	50	0
Average Award	$0.185	$0.195	$0.195	$0.190	$0.241	+$0.051
Range of Awards	$0.034-$0.670	$0.006-$0.917	$0.006-$0.917	$0.006-$0.917	$0.006-$0.917	N/A
Total Awards	**$9.288**	**$9.738**	**$9.738**	**$9.490**	**$12.070**	**+$2.580**

[1]Grantees include most states, Washington, D.C., and Puerto Rico.

[2]These funds are not awarded by formula.

State Table[1]

Grantee	2014 Enacted	2015 Estimate	2016 Estimate	Difference +/- 2015
Alabama	$1,362,991	$1,436,534	$1,542,807	$106,273
Alaska	$1,610,163	$1,697,043	$1,822,588	$125,545
Arizona	$2,211,064	$2,330,367	$2,502,764	$172,397
Arkansas	$1,383,955	$1,458,629	$1,566,537	$107,908
California	$4,492,668	$4,735,080	$5,085,374	$350,294
Colorado	$2,200,115	$2,318,827	$2,490,370	$171,543
Connecticut	$1,831,119	$1,929,921	$2,072,694	$142,773
Delaware	$798,814	$841,916	$904,199	$62,283
Florida	$2,598,368	$2,738,569	$2,941,164	$202,595
Georgia	$1,500,531	$1,581,495	$1,698,492	$116,997
Hawaii	$1,164,130	$1,226,943	$1,317,711	$90,768
Idaho	$704,927	$742,963	$797,926	$54,963
Illinois	$2,703,853	$2,849,745	$3,060,565	$210,820
Indiana	$1,311,706	$1,382,482	$1,484,756	$102,274
Iowa	$2,394,103	$2,523,282	$2,709,951	$186,669
Kansas	$1,518,673	$1,600,616	$1,719,027	$118,411
Kentucky	$1,008,942	$1,063,382	$1,142,049	$78,667
Louisiana	$1,221,067	$1,286,952	$1,382,159	$95,207
Maine	$1,321,624	$1,392,935	$1,495,982	$103,047
Maryland	$1,832,093	$1,930,948	$2,073,796	$142,848
Massachusetts	$2,395,669	$2,524,933	$2,711,723	$186,790
Michigan	$2,610,383	$2,751,232	$2,954,764	$203,532
Minnesota	$3,334,692	$3,514,623	$3,774,629	$260,006
Mississippi	$1,051,919	$1,108,678	$1,190,696	$82,018
Missouri	$1,025,057	$1,080,366	$1,160,290	$79,924
Montana	$1,079,919	$1,138,188	$1,222,390	$84,202
Nebraska	$1,328,882	$1,400,585	$1,504,198	$103,613
Nevada	$1,034,845	$1,090,682	$1,171,369	$80,687
New Hampshire	$1,391,994	$1,467,102	$1,575,636	$108,534
New Jersey	$1,752,588	$1,847,153	$1,983,802	$136,649
New Mexico	$1,224,034	$1,290,079	$1,385,518	$95,439
New York	$2,711,999	$2,858,331	$3,069,786	$211,455
North Carolina	$1,457,990	$1,536,659	$1,650,339	$113,680
North Dakota	$941,353	$992,146	$1,065,543	$73,397
Ohio	$2,479,659	$2,613,454	$2,806,794	$193,340
Oklahoma	$1,236,130	$1,302,828	$1,399,209	$96,381
Oregon	$2,188,255	$2,306,327	$2,476,946	$170,619
Pennsylvania	$1,516,375	$1,598,194	$1,716,426	$118,232
Rhode Island	$1,410,933	$1,487,063	$1,597,074	$110,011
South Carolina	$1,567,504	$1,652,082	$1,774,301	$122,219
South Dakota	$1,009,961	$1,064,456	$1,143,202	$78,746
Tennessee	$2,950,134	$3,109,315	$3,339,337	$230,022
Texas	$1,436,813	$1,514,339	$1,626,368	$112,029
Utah	$2,058,882	$2,169,973	$2,330,505	$160,532
Vermont	$1,377,487	$1,451,812	$1,559,215	$107,403
Virginia	$1,774,908	$1,870,677	$2,009,067	$138,390
Washington	$2,206,083	$2,325,117	$2,497,126	$172,009
West Virginia	$1,197,282	$1,261,884	$1,355,236	$93,352
Wisconsin	$2,935,442	$3,093,830	$3,322,707	$228,877
Wyoming	$995,687	$1,049,411	$1,127,045	$77,634
Cities				
Chicago	$731,185	$770,638	$827,648	$57,010

Grantee	2014 Enacted	2015 Estimate	2016 Estimate	Difference +/- 2015
Houston	$1,118,297	$1,178,637	$1,265,831	$87,194
LA County	$1,512,179	$1,593,772	$1,711,677	$117,905
New York City	$3,579,929	$3,773,092	$4,052,220	$279,128
Philadelphia	$1,028,164	$1,083,641	$1,163,807	$80,166
Washington, D.C.	$425,372	$448,324	$481,490	$33,166
Territories				
American Samoa	$124,639	$131,364	$141,082	$9,718
Federated States of Micronesia	$105,594	$111,292	$119,525	$8,233
Guam	$562,232	$592,568	$636,406	$43,838
Marianna Islands	$83,897	$88,424	$94,965	$6,541
Marshall Islands	$100,015	$105,412	$113,210	$7,798
Republic of Palau	$240,230	$253,192	$271,923	$18,731
U.S. Virgin Islands	$247,084	$260,416	$279,681	$19,265
Puerto Rico	$504,072	$531,270	$570,573	$39,303
Subtotal States	**$86,853,765**	**$91,540,148**	**$98,312,152**	**$6,772,004**
Subtotal Cities	**$8,395,126**	**$8,848,103**	**$9,502,673**	**$654,570**
Subtotal Territories	**$1,967,763**	**$2,073,938**	**$2,227,365**	**$153,427**
Total Estimated for AR	**NA**	**NA**	**$100,000,000**	**$100,000,000**
GRAND TOTAL	**$97,216,654**	**$102,462,189**	**$210,042,189**	**$107,580,000**

[1]The table includes ELC awards that fund all 50 states as well as select local and territorial/U.S. affiliated grantees. Awards include Prevention and Public Health funding and funding from other than NCEZID.

CHRONIC DISEASE PREVENTION AND HEALTH PROMOTION

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$740.001	$747.220	$577.854	-$169.366
ACA/PPHF	$446.000	$451.000	$480.204	+$29.204
Total Request	**$1,186.001**	**$1,198.220**	**$1,058.058**	**-$140.162**
FTEs	926	926	926	0
Tobacco Prevention and Control	$210.492	$215.492	$215.492	$0.000
ACA/PPHF (*non-add*)	$105.000	$110.000	$110.000	$0.000
Nutrition, Physical Activity and Obesity	$40.085	$47.585	$40.092	-$7.493
High Obesity Rate Counties (*non-add*)	$4.986	$7.500	N/A	-$7.500
ACA/PPHF (*non-add*)	$35.000	$35.000	$4.000	-$31.000
School Health	$15.383	$15.383	$15.383	$0.000
Health Promotion	$19.432	$19.970	$19.970	$0.000
Prevention Research Centers	$25.461	$25.461	$25.000	-$0.461
ACA/PPHF (*non-add*)	$0.000	$0.000	$25.000	+$25.000
Heart Disease and Stroke	$130.037	$130.037	$130.037	$0.000
ACA/PPHF	$73.000	$73.000	$73.000	$0.000
Diabetes	$140.129	$140.129	$140.129	$0.000
ACA/PPHF (*non-add*)	$73.000	$73.000	$73.000	$0.000
National Diabetes Prevention Program	$9.972	$10.000	$10.000	$0.000
Cancer Prevention and Control	$350.323	$352.649	$297.876	-$54.773
ACA/PPHF (*non-add*)	$104.000	$104.000	$179.204	+$75.204
Breast and Cervical Cancer – PL	$206.993	$206.993	$169.204	-$37.789
ACA/PPHF (*non-add*)	$104.000	$104.000	$169.204	+$65.204
WISEWOMAN (*non-add*)	$21.114	$21.114	$21.170	+$0.056
Colorectal Cancer (*non- add*)	$43.294	$43.294	$39.515	-$3.779
ACA/PPHF (*non-add*)	$0.000	$0.000	$10.000	+$10.000
Prostate Cancer (*non-add*)	$13.205	$13.205	$0.000	-$13.205
Oral Health	$15.749	$15.749	$15.749	$0.000
Safe Motherhood and Infant Health	$45.473	$45.473	$45.473	$0.000
Arthritis and Other Chronic Diseases	$26.735	$23.342	$26.857	+$3.515
Community Grants	**$130.730**	**$130.950**	**$60.000**	**-$70.950**
Racial and Ethnic Approaches to Community Health (REACH)	$50.950	$50.950	$0.000	-$50.950
ACA/PPHF (*non-add*)	$30.000	$30.000	$0.000	-$30.000
Partnerships to Improve Community Health	$79.780	$80.000	$60.000	-$20.000
Million Hearts® (ACA/PPHF)	$4.000	$4.000	$4.000	$0.000
Workplace Wellness (ACA/PPHF)	$10.000	$10.000	$0.000	-$10.000
Healthy Weight Task Force Obesity Activities (ACA/PPHF)	$4.000	$4.000	$4.000	$0.000
Hospitals Promoting Breastfeeding (ACA/PPHF)	$8.000	$8.000	$8.000	$0.000

Summary

CDC's FY 2016 request of **$1,058,058,000** for Chronic Disease Prevention and Health Promotion is $140,162,000 below the FY 2015 Enacted level. This includes a decrease of $41,568,000 below the FY 2015 Enacted level for Colorectal, Breast and Cervical Cancer screening programs, reflecting increased coverage for these services through expanded insurance coverage. The FY 2016 Budget also eliminates the Prostate Cancer program. CDC and other federal agencies follow the prostate cancer screening recommendations set forth by the U.S. Preventive Services Task Force, which recommends against PSA-based screening for men who do not have

symptoms. The Budget also eliminates the REACH program and reduces Partnerships to Improve Community Health.

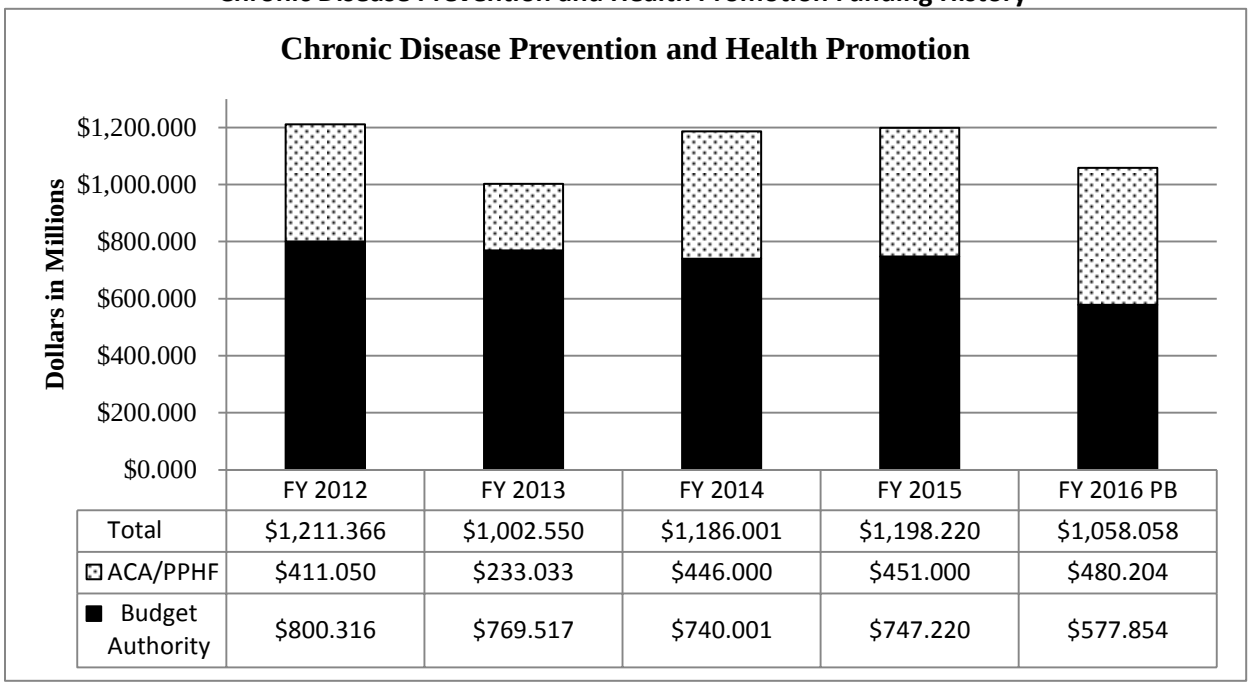
Chronic diseases are among the most prevalent, costly, and debilitating of all health problems—and among the most preventable. CDC leads U.S. efforts to prevent and control chronic diseases and associated risk factors by funding programs in states, tribes, territories, and communities. These chronic disease prevention and health promotion efforts contribute to CDC's overarching goal of preventing the leading causes of disease, disability, and death.

Cross-Cutting Strategies	**Core Activities**
Prevent Chronic Disease	Helping Americans avoid chronic diseases like heart disease, cancer, diabetes, and the suffering, disability, financial costs and premature death they cause.
Promote healthy environments	Strengthening communities to support and reinforce health by promoting tobacco free living, healthy nutrition and physical activity, and overall wellbeing.
Manage chronic conditions	Supporting Americans to better manage their own health and avert disease onset, progression and complications through effective delivery and use of clinical and other preventive services and disease self-management.
Support epidemiology and surveillance	Monitoring and tracking diseases and behaviors to understand the need, describe the burden, design effective programs, and demonstrate the impact of interventions.

Performance Highlights

- From July 1, 2012 to June 30, 2013 CDC's WISEWOMAN Program provided 47,121 cardiovascular disease (CVD) screenings showing:
    - 9,920 cases of high blood pressure
    - 6,538 cases of high cholesterol
    - 4,009 cases of diabetes
    - 6,898 smokers
- Broome County, NY—a CDC Sodium Reduction in Communities awardee—worked with school districts to decrease the amount of sodium in elementary school lunches from 1,500 mg in the 2010-2011 school year to 1,000 mg in the 2013-2014 school year. Approximately 20,000 unduplicated students per year at 45 elementary schools were impacted in Broome County
    - An overall total sodium reduction of 33%
- CDC completed implementation of early case capture (ECC) for pediatric cancer patients in seven central cancer registries
    - As a result, 97% of ECC cases are now reported within nine months to the central cancer registry and are available for research use and incidence reporting at the state level, less than half the time it takes for routine reporting (18-24 months)

Chronic Disease Prevention and Health Promotion Funding History[1]



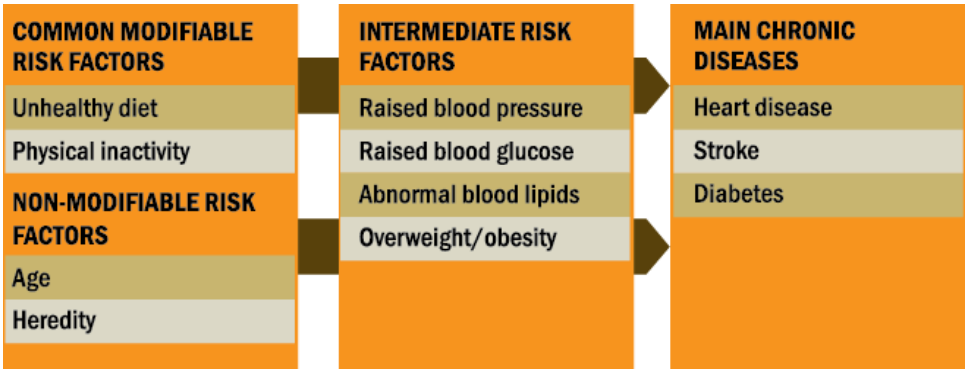
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 PB
Total	$1,211.366	$1,002.550	$1,186.001	$1,198.220	$1,058.058
ACA/PPHF	$411.050	$233.033	$446.000	$451.000	$480.204
Budget Authority	$800.316	$769.517	$740.001	$747.220	$577.854

[1]FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

Overview

Chronic diseases are the leading cause of poor health, disability, and death in the United States. About 50% (117 million) of Americans have at least one chronic illness and about 25% have two or more illnesses. Chronic diseases and conditions, such as heart disease, stroke, diabetes, cancer, obesity, and arthritis are among the most common, costly, and preventable health problems. Chronic diseases disproportionally affect people based on race/ethnicity, education, income level, and geographical location.

Most chronic diseases result from a few key risk factors, including tobacco use, high blood pressure, physical inactivity, poor diets, and excessive alcohol use. Risk factors for chronic disease can and must be addressed at two levels: the individual level (including healthcare intervention) and the population-wide level (including policies and environment that promote health). Risk factors can be addressed through policy and environmental improvements, through early detection and better chronic disease management, and through community programs linked to clinical services. To effectively and equitably address the chronic disease burden, collaborations between health care systems, public health, and communities are needed to address combinations of risk factors and conditions.



To address interrelated diseases and risk factors, CDC developed several complementary cross-cutting programs that, together, support comprehensive strategies for chronic disease prevention and control. Prior to FY 2013, CDC's chronic disease programs operated separately. Based on research showing comprehensive approaches were preferable, feedback from grantees, and direction from Congress, CDC re-examined the separate programs, leading to a new, integrated approach to interrelated public health issues. One piece of that approach comprises cooperative agreements that support interventions to prevent heart disease, stroke, diabetes and obesity, including a focus on nutrition and physical activity. The second component—community-based programs—integrates other chronic diseases and their risk factors, capitalizing on the power of communities to support health.

The Integrated Approach in Action:

Chronic Disease Prevention and Health Promotion Cooperative Agreements

In FY 2014, CDC enhanced this new approach by integrating six additional cooperative agreement programs into this model:

1. State and Local Public Health Actions to Prevent Obesity, Diabetes, and Heart Disease[93], which complements State Public Health Actions with a focus on support at the community level *(Full description of this program provided below)*
2. Comprehensive Approach to Good Health and Wellness in Indian Country[94], an innovate partnership with American Indian tribes and Alaskan Native villages to address their disproportionate burden of chronic disease *(Full description of this program provided below)*
3. Partnership to Improve Community Health[95], which mobilizes community leadership and resources to bring change to the places and organizations that touch people's lives every day—at work sites, schools, community centers, and health care settings—to reduce the burden of chronic disease (*Full description of this Co Ag provided in the Community Health section)*
4. National Implementation and Dissemination for Chronic Disease Prevention[96], which helps communities build and strengthen their ability to implement community health improvement strategies. *(Full description of this program provided in the Community Health section)*
5. Racial and Ethnic Approaches to Community Health[97], which improves linkages between the health care system and minority communities as well as reduces chronic disease risk factors *(Full description of this program provided in the Community Health section)*
6. *Programs to Reduce Obesity in High Obesity Areas*[98], which assists counties with adult obesity rates over 40% through county-level cooperative extension and outreach services *(Full description of this program provided in the Nutrition, Physical Activity, and Obesity section)*

Budget Request

(Funds for these activities are also reflected in Community Health, Heart Disease and Stroke, Diabetes, Nutrition/Physical Activity/Obesity, and School Health sections.)

In FY 2016, these six programs—funded jointly by several Chronic Disease budget lines—will award $244,000,000 to continue advance CDC's chronic disease prevention and health promotion efforts through four cross-cutting strategies:

[93] http://www.cdc.gov/chronicdisease/about/statelocalpubhealthactions-prevcd/index.htm
[94] http://www.cdc.gov/chronicdisease/about/tribalhealthwellness/index.htm `
[95] http://www.cdc.gov/chronicdisease/about/pich/index.htm
[96] http://www.cdc.gov/chronicdisease/about/pichorgs/index.htm
[97] http://www.cdc.gov/chronicdisease/about/reach/index.htm
[98] http://www.cdc.gov/obesity/highobesitycounties/index.html

- Epidemiology and surveillance to monitor trends and evaluate progress
- Environmental approaches that promote health and support healthy behaviors across settings
- Health system interventions to improve the effective use of clinical and other preventive services
- Community resources linked to clinical services to improve management of chronic conditions

Through these cooperative agreements, CDC will concentrate resources on key risk factors and major diseases that contribute substantially to suffering, disability, and premature death among Americans. Together, they form a mutually reinforcing set of activities strategically designed to achieve the overall goals of reducing:

- Rates of death and disability due to tobacco use by 5%
- Prevalence of obesity by 3%
- Rates of death and disability due to diabetes, heart disease, and stroke by 3%

State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity, and Associated Risk Factor and School Health

The *State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity, and Associated Risk Factors and School Health*[99] cooperative agreement implements cross-cutting strategies to promote health and prevent and control chronic diseases and associated risk behaviors. The coordinated approach includes state programs to address the interrelated risk factors and diseases of diabetes, heart disease, stroke, and poor diet, physical inactivity, and obesity. Collectively, the program supports a set of complementary activities and interventions in four cross-cutting strategies: epidemiology and surveillance; environmental approaches; health systems improvements; and community-clinical linkages. The program contains two components:

Basic

This component supports basic strategies resulting in measurable impacts to address diabetes, heart disease and stroke, nutrition and physical activity, obesity, and school health in all 50 states and the District of Columbia. CDC continues to hold states accountable for achieving specific outcomes in the core public health functions related to cross-cutting expertise, such as surveillance, policy, communications, evaluation, and health systems. In FY 2016, grantees will continue to promote food service guidelines in early care and education settings (ECEs), worksites, and communities; promote reporting of blood pressure and A1c measures; and promote awareness of prediabetes among people at risk for type 2 diabetes. Continued collection and analysis of data will allow grantees to evaluate and adjust their activities.

Enhanced

This component builds on and extends activities supported with basic funding to achieve even greater reach and impact. CDC supports states to implement evidence-based and practice-based interventions that improve physical activity and nutrition and reduce obesity, diabetes, heart disease, and stroke. State programs conduct trainings for community health workers and patient navigators; work with pharmacy organizations and health care systems to increase medication therapy management; and work with clinics to increase use of patient-centered medical homes. Additionally, they provide trainings for key stakeholders to expand access to diabetes self-management education (DSME) programs; work with providers on referrals to DSME and CDC-recognized lifestyle change programs for the prevention of type 2 diabetes, and engage payers on reimbursement for the National Diabetes Prevention Program (National DPP) lifestyle intervention.

In FY 2016, CDC will continue to coordinate these efforts through state implementation of a cohesive set of interventions that address interrelated chronic diseases and risk factors. State programs will continue efforts to increase consumption of nutritious food and beverages and physical activity; and improve medication adherence, self-monitoring of high blood pressure, and use of diabetes self-management. These interventions

[99] http://www.cdc.gov/chronicdisease/about/state-public-health-actions.htm

will allow states to increase efficiency and achieve measurable health impacts related to each of the diseases and risk factors.

State Public Health Actions Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/- 2015
Number of Awards	0	51	51	51	51	0
- New Awards (basic)	0	51	51	0	0	0
- Continuing Awards (basic)	0	0	0	51	51	0
- New Awards (enhanced)	0	32	19	0	0	0
- Continuing Awards (enhanced)	0	0	32	51	51	0
Average Award (basic)	$0.000	$0.000	$0.551	$0.551	$0.551	$0.000
Average Award (enhanced)	$0.000	$0.000	$1.422	$1.422	$1.422	$0.000
Range of Awards (basic)	$0.000	$0.502 - $0.745	$0.502 - $0.745	$0.502 - $0.745	$0.502 - $0.745	N/A
Range of Awards (enhanced)	$0.000	$1.000 - $1.700	$0.475 - $3.050	$0.475 - $3.050	$0.475 - $3.050	N/A
Total Awards	**$0.000**	**$67.572**	**$100.000**	**$100.000**	**$100.000**	**$0.000**

[1] These funds are awarded partly by formula.

Expanding CDC's Prevention Efforts in State, Local, and Tribal Governments and Communities

State and Local Public Health Actions to Prevent Obesity, Diabetes and Heart Disease[100] is a four year, $70 million/year program that builds on efforts initiated in 2013, and intensifies work in 21 state and large city health departments (seventeen states and four large cities) to diabetes, heart disease, and stroke and reduce health disparities among adults through a combination of community and health system interventions. States sub-award half of their funds to support implementation activities in four to eight communities in their states. Community strategies build support for lifestyle change, particularly for those at high risk, to support diabetes and heart disease and stroke prevention efforts. Health system interventions and community-clinical linkage strategies improve the quality of health care delivery and preventive services to populations with the highest hypertension and prediabetes disparities. Activities complemented but not duplicated those funded under the State Public Health Actions initiative.

The State and Local Public Health Actions Grants (1422)[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/- 2015
Number of Awards	0	0	21	21	21	0
- New Awards	0	0	21	0	0	0
- Continuing Awards	0	0	0	21	21	0
Average Award	$0.000	$0.000	$3.300	$3.300	$3.300	$0.000
Range of Awards	$0.000	$0.000	$2.600 - $3.520	$2.600 - $3.520	$2.600 - $3.520	N/A
Total Awards	**$0.000**	**$0.000**	**$70.000**	**$70.000**	**$70.000**	**$0.000**

[1] These funds are not awarded by formula.

A Comprehensive Approach to Good Health and Wellness in Indian Country[101] is a five year, $14 million/year initiative aims to prevent heart disease, diabetes, stroke, and associated risk factors in American Indian tribes and Alaskan Native villages through a holistic approach to population health and wellness. The initiative supports efforts by American Indian tribes and Alaskan Native villages to implement a variety of effective community-chosen and culturally adapted policies, systems, and environmental changes. These changes aim to reduce commercial tobacco use and exposure, improve nutrition and physical activity, increase support for

[100] http://www.cdc.gov/chronicdisease/about/statelocalpubhealthactions-prevcd/index.htm
[101] http://www.cdc.gov/chronicdisease/about/tribalhealthwellness/index.htm

breastfeeding, increase health literacy, and strengthen team-based care and community-clinical links. Funds support 11 American Indian tribes and Alaskan Native villages directly and 11 Tribal Organizations, which are authorized by two or more tribes on a reservation, to provide leadership, technical assistance, training, and resources to American Indian tribes and Alaskan Native villages within their Indian Health Service (IHS) Administrative Areas.

Comprehensive Approach to Good Health and Wellness in Indian Country Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	0	0	22	22	22	0
- New Awards (Tribes)	0	0	11	0	0	0
- Continuing Awards (Tribes)	0	0	0	11	11	0
-New Awards (Tribal Orgs)	0	0	11	0	0	0
- Continuing Awards (Tribal Orgs)	0	0	0	11	11	0
Average Award (Tribes)	$0.000	$0.000	$0.200	$0.200	$0.200	$0.000
Average Award (Tribal Orgs)	$0.000	$0.000	$0.800	$0.800	$0.800	$0.000
Range of Awards (Tribes)	$0.000	$0.000	$0.120 - $0.320	$0.120 - $0.320	$0.120 - $0.320	N/A
Range of Awards (Tribal Orgs)	$0.000	$0.000	$0.650 - $1.100	$0.650 - $1.100	$0.650 - $1.100	N/A
Total Awards	**$0.000**	**$0.000**	**$14.000**	**$14.000**	**$14.000**	**$0.000**

[1] These funds are not awarded by formula.

Community Grants Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$100.730	$100.950	$60.000	-$40.950
ACA/PPHF	$30.000	$30.000	$0.000	-$30.000
Total	**$130.730**	**$130.950**	**$60.000**	**-$70.950**
Racial and Ethnic Approaches to Community Health	$50.950	$50.950	$0.000	-$50.950
ACA/PPHF (*non-add*)	$30.000	$30.000	$0.000	-$30.000
Partnerships to Improve Community Health	$79.780	$80.000	$60.000	-$20.000

Overview

The community-based program component of the coordinated model integrates chronic diseases and their risk factors, capitalizing on the power of communities to support health. Awardees funded under the community health programs contribute to support and achieve the overall goals of CDC's comprehensive chronic disease prevention and control efforts by using the following strategies: Address specific chronic disease risk factors (e.g., tobacco use and exposure, poor nutrition, physical inactivity, and lack of access to chronic disease prevention, risk reduction and management opportunities)

The Community Health Program consists of *Partnerships to Improve Community Health Program (PICH)*[102] and *National Implementation and Dissemination for Chronic Disease Prevention*[103]. Grantees under these awards include large and small cities and counties, tribal organizations, and national and community organizations. These awards support cross-cutting programs to prevent and control chronic diseases and improve community health. *Partnerships to Improve Community Health* uses evidence- and practice-based strategies to create or strengthen healthy environments that make it easier for people to make healthy choices and take charge of their health. Governmental agencies and nongovernmental organizations will work through multi-sector community coalitions of businesses, schools, nonprofit organizations, and other community organizations. *National Implementation and Dissemination for Chronic Disease Prevention* supports national organizations and their chapters/affiliates in building and strengthening community infrastructure to use population-based strategies to improve the health of communities. Funded national organizations will work together closely to coordinate strategies and technical assistance to maximize their public health impact.

In FY 2014, *Racial and Ethnic Approaches to Community Health (REACH)*[104] funded the creation of healthier communities by strengthening capacity to implement locally tailored evidence- and practice-based policy, systems and environmental improvement strategies in priority populations experiencing health disparities in chronic diseases and associated risk factors. CDC is committed to ensuring lessons learned from the REACH Program will continue to be integrated into current and future community health models in order to reach populations that experience the greatest health disparities.

Budget Request

CDC's FY 2016 request of **$60,000,000** for community grants is $70,950,000 below the FY 2015 Enacted level. In FY 2016, CDC will support the Partnerships to Improve Community Health and the National Implementation and Dissemination for Chronic Disease Prevention programs. The FY 2016 request eliminates funding for the Racial and Ethnic Approaches to Community Health (REACH) program. The state and tribal coordinated programs and

[102] http://www.cdc.gov/chronicdisease/about/pich/index.htm
[103] http://www.cdc.gov/chronicdisease/about/pichorgs/index.htm
[104] http://www.cdc.gov/chronicdisease/about/reach/index.htm

Partnerships to Improve Community Health Program will incorporate lessons learned from the REACH program into program planning and implementation. The $70 million coordinated cooperative agreement will sub-award half of funds to support implementation activities in four to eight communities in their states. This will help prevent duplication and improve coordination across communities by coordinating funding through States.

Partnerships to Improve Community Health Program

In FY 2016, CDC will reduce the *Partnerships to Improve Community Health Program*[105] by $20 million which supports year three of a three year, initiative to improve health and reduce the burden of chronic diseases through evidence- and practice-based strategies to create or strengthen healthy environments that make it easier for people to make healthy choices and take charge of their health. FY 2016 represents the third and final year of the cooperative agreement. Much of the program implementation work will be drawing to a close; therefore, the program can maintain needed activities drawing on any carryforward, and begin to reduce activities that are no longer needed to achieve the program goals. Remaining activities will likely focus on finalizing evaluations, documenting lessons learned, and exploring concrete ways communities can sustain successes under PICH. The reduction in funding reflects a streamlined approach to reduce duplication and improve coordination across states and communities.

Grantees will work to reduce tobacco use and exposure, improve nutrition, increase physical activity, and improve access to chronic disease prevention, risk reduction, and management opportunities. Projects serve three types of geographic areas: large cities and urban counties, small cities and counties, and American Indian tribes and Alaska Native villages.

Partnerships to Improve Community Health Program[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	0	0	39	39	39	0
- New Awards	0	0	39	0	0	0
- Continuing Awards	0	0	0	39	39	0
Average Award	$0.000	$0.000	$1.200	$1.790	$1.200	-$0.590
Range of Awards	$0.000	$0.000	$0.120 -$3.600	$0.120 -$3.600	$0.120 -$3.090	N/A
Total Awards	**$0.000**	**$0.000**	**$70.000**	**$70.000**	**$50.000**	**-$20.000**

[1] These funds are not awarded by formula.

National Implementation and Dissemination for Chronic Disease Prevention

In FY 2016, CDC will continue to fund *National Implementation and Dissemination for Chronic Disease Prevention*[106] the three year program to support five national organizations and their chapters/affiliates in strengthening community infrastructure to implement population-based strategies to improve the health of communities. Grantees will work with smaller communities and those with limited public health capacity to reduce tobacco use and exposure, improve nutrition, increase physical activity, and improve access to chronic disease prevention, risk reduction, and management opportunities. Additionally, grantees will work closely together to coordinate strategies and technical assistance to maximize their collective impact.

National Implementation and Dissemination for Chronic Disease Prevention[1]

[105] http://www.cdc.gov/chronicdisease/about/pich/index.htm
[106] http://www.cdc.gov/chronicdisease/about/pichorgs/index.htm

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	0	0	5	5	5	0
- New Awards	0	0	5	0	0	0
- Continuing Awards	0	0	0	5	5	0
Average Award	$0.000	$0.000	$1.900	$1.900	$1.900	$0.000
Range of Awards	$0.000	$0.000	$0.500-$3.0	$0.500-$3.0	$0.500-$3.0	N/A
Total Awards	**$0.000**	**$0.000**	**$10.000**	**$10.000**	**$10.000**	**$0.000**

[1] These funds are not awarded by formula.

Diabetes Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$67.129	$67.129	$67.129	$0.000
ACA/PPHF	$73.000	$73.000	$73.000	$0.000
National Diabetes Prevention Program	$9.972	$10.000	$10.000	$0.000
Total	**$150.101**	**$150.129**	**$150.129**	**$0.000**

Overview

About 29.1 million Americans have diabetes[107] and over 200,000 people die each year of related complications. Additionally, CDC estimates that 86 million American adults, more than one in three, has pre-diabetes, a serious health condition that increases the risk of developing type 2 diabetes, heart disease and stroke. CDC focuses on improving health outcomes for people with diabetes by increasing awareness of pre- diabetes

The risk of death for adults with diabetes is 50% higher than for adults without diabetes.

Diabetes prevention and control activities in all 50 states and Washington, D.C. use an evidenced-based approach which supports diabetes self-management education (DSME) and diabetes prevention lifestyle change. In coordination with the nationwide program, the National Diabetes Prevention Program (National DPP) [108] is a lifestyle intervention program that teaches participants strategies for incorporating physical activity into daily life and eating healthy. CDC collaborates with federal agencies, community-based organizations, employers, insurers, and health care professionals to support the National DPP.

Budget Request

CDC's FY 2016 request of **$150,129,000** for Diabetes, including $73,000,000 from the Affordable Care Act Prevention and Public Health Fund, is level with the FY 2015 Enacted level. In FY 2014 and FY 2015, CDC supported the 50 states and Washington, D.C. to implement evidence-based diabetes and chronic disease prevention and control programs. CDC also provided national leadership to impact the overwhelming burden of diabetes and its associated risk factors such as obesity through National DPP. In FY 2015, CDC expanded diabetes and heart disease and stroke prevention efforts through state and local investments in primary prevention and clinical interventions to improve cardiovascular health. This cooperative agreement will continue in FY 2016.

Public Health Activities to Support Diabetes Prevention and Control Efforts in FY 2016

Activities	Examples
Diabetes State Program Support	Continue to fund 50 states and Washington, D.C. to implement improved diabetes prevention efforts with expanded reach and impact. Additional funding will also support the implementation of enhanced strategies that address primary prevention and support the National DPP lifestyle change intervention
Diabetes Prevention	Enhance diabetes prevention efforts by expanding access to lifestyle change programs in community settings to prevent type 2 diabetes as a part of the National DPP

[107] http://www.cdc.gov/diabetes/
[108] http://www.cdc.gov/diabetes/prevention/about.htm

Activities	Examples
Surveillance	Track and monitor trends, identify disparities and document the public health burden of diabetes and its complications through the National Diabetes Surveillance System (NDSS).
Strengthen the science of effective strategies	Conduct research and evaluation to support evidence-based practice and implement public health strategies to prevent and control diabetes (e.g., early detection of undiagnosed diabetes)

Diabetes Prevention Cooperative Agreements

Diabetes control at the state and local level are primarily funded through *State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health*[109]; *State and Local Public Health Actions to Prevent and Control Diabetes and Heart Disease*[110]; and *A Comprehensive Approach to Good Health and Wellness in Indian Country*[111]. These cooperative agreements include a common focus on diabetes prevention, including prevention of type 2 diabetes and its related complications and associated risk factors to form a coordinated response to diabetes and related chronic diseases. Through these cooperative agreements, CDC supports evidence-based diabetes interventions nation-wide, which include:

- Promoting awareness of prediabetes among people at high risk for type two diabetes
- Increasing use of diabetes self-management through healthcare extenders

In FY 2014, Ohio used state funds and leveraged a partnership with The Ohio State University College of Pharmacy to launch a Medication Therapy Management (MTM) program to increase the use of healthcare extenders. They selected four MTM pilot sites (three FQHCs and one retail chain pharmacy) and formed an MTM Consortium consisting of leaders from the six Ohio colleges of pharmacy. Additionally, they developed a website to manage/coordinate project efforts across sites and share resources including a data collection tool for tracking clinical outcomes and gathering data for performance measurement.

Two states, NY and WA, have incorporated use of the 2-1-1 state-wide referral system to promote awareness of pre-diabetes and increase access to evidence-based diabetes prevention interventions. These systems created community-clinical linkages for sharing information and referring participants to nearby CDC recognized lifestyle change programs.

National Diabetes Prevention Program (National DPP)

In FY 2016, CDC's request of **$10,000,000** for the National DPP is level with the FY 2015 Enacted level. The program puts into practice groundbreaking clinical trial findings that type 2 diabetes can be prevented or delayed through lifestyle changes in high-risk adults. The National DPP is an evidence-based intervention program used in communities to help prevent or delay type 2 diabetes. CDC estimates the National DPP could save the U.S. healthcare system $5.7 billion. The program has four components:

[109] http://www.cdc.gov/chronicdisease/about/state-public-health-actions.htm
[110] http://www.cdc.gov/chronicdisease/about/statelocalpubhealthactions-prevcd/index.htm
[111] http://www.cdc.gov/chronicdisease/about/tribalhealthwellness/index.htm

National DPP Components	Activities
Training	Build training infrastructure and support the diabetes prevention workforce by training lifestyle coaches to deliver the program. Since FY 2010, CDC partners trained over 2,300 lifestyle coaches.
Recognition	Maintain quality assurance and provide recognition for organizations that deliver the lifestyle change intervention. Over 400 organizations are undergoing review for CDC recognition.
Intervention	Fund six national organizations to sustain the lifestyle change program. Through these organizations the program has expanded, reaching 48 states, Washington, D.C, and two U.S. territories to prevent type 2 diabetes.
Promotion	Increase participation and better educate the public about type 2 diabetes. CDC is developing a suite of materials for the public, providers, employers, and insurers.

National Diabetes Prevention Program Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	6	0	0	6	6	0
- New Awards	0	0	0	0	0	0
- Continuing Awards	6	6	6	6	6	0
Average Award	$0.875	$0.000	$0.875	$0.875	$0.875	$0.000
Range of Awards	$0.750–$1.003	$0.000-$0.00	$0.750–$1.003	$0.750–$1.003	$0.750–$1.003	N/A
Total Awards	**$6.750**	0	**$0.000**	**$6.750**	**$6.750**	**$0.000**

[1] These funds are not awarded by formula.

Health Disparities Cooperative Agreement

CDC strives to reduce illness, premature death, and eliminate health disparities associated with type 2 diabetes. In FY 2016, CDC will continue several programs to address the elimination of diabetes related health disparities.

CDC competitively awards funding through a five-year cooperative agreement (FY 2014-FY 2019) to six Pacific Island Jurisdictions, the U.S. Virgin Islands, and Puerto Rico to implement public health actions to prevent and control diabetes. These grants allow CDC to work with the grantees and their partners to reach populations who are disproportionately impacted by diabetes and its devastating complications in the U.S. Associated Pacific Islands.

Diabetes Territories Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	6	6	8	8	8	0
- New Awards	0	0	8	0	0	0
- Continuing Awards	0	0	0	8	8	0
Average Award	$0.106	$0.106	$0.106	$0.106	$0.106	$0.000
Range of Awards	$0.058–$0.200	$0.058–$0.200	$0.058–$0.200	$0.058–$0.200	$0.058-$0.200	N/A
Total Awards	**$0.635**	**$0.635**	**$1.075**	**$1.075**	**$1.075**	**$0.000**

[1] These funds are not awarded by formula.

Surveillance

In FY 2016, CDC will continue to fund the National Diabetes Surveillance System (NDSS)[112] to identify key disparities and document the public health burden of diabetes and its complications in the United States. This surveillance system also includes county-level estimates of diagnosed diabetes and selected risk factors for all U.S. counties to help target and optimize resources for diabetes control and prevention. States, tribes, and communities use the information from the NDSS to identify areas of need, guide decision-making, set priorities, plan strategies for interventions, and evaluate the impact of the intervention to assist in making progress toward public health targets and performance goals.

[112] http://www.cdc.gov/diabetes/surveillance/index.htm

Heart Disease and Stroke Budget Request[1]

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$57.037	$57.037	$57.037	$0.000
ACA/PPHF (*non-add*)	$73.000	$73.000	$73.000	$0.000
Total	**$130.037**	**$130.037**	**$130.037**	**$0.000**

[1] WISEWOMAN managed under the Heart Disease and Stroke budget line is funded through the Breast and Cervical Cancer budget line.

Overview

In the United States, total costs associated with heart disease exceed $315.4 billion annually. Surveillance data revealed that 67 million American adults have hypertension, or high blood pressure, a leading risk factor for heart disease and stroke and 34 million do not have their high blood pressure under control. By reducing sodium intake to 2,300 mg/day, 11 million cases of high blood pressure could be prevented each year. CDC works with public and private partners to prevent, detect, and treat risk factors for heart disease and stroke. CDC supports state-based heart disease and stroke prevention[113] activities, the Paul Coverdell Acute Stroke Registry Program[114], Sodium Reduction in Communities Program[115], and the WISEWOMAN program[116].

Budget Request

CDC's FY 2016 request of **$130,037,000** for Heart Disease and Stroke, including $73,000,000 from the Affordable Care Act Prevention and Public Health Fund, is level with the FY 2015 Enacted level. In FY 2014, CDC coordinated national heart disease and stroke prevention efforts by supporting 50 states and Washington, D.C. to implement evidence-based heart disease and stroke prevention programs.

CDC will continue to expand on successes achieved in FY 2014 – FY 2015 through state-based heart disease and stroke prevention and clinical interventions to improve cardiovascular health. Those achievements included:

- Training pharmacist through to teach medication and therapeutic management, adherence coaching, and hypertension management to their patients in four Arkansas communities
- Providing guidance and tools to employers on evidence-based strategies for developing and adopting food service guidelines. This effort doubled the number of worksites that implement food service guidelines (including sodium) from 109 to 200.

• About 600,000 people die of heart disease in the United States every year– that's 1 in every 4 deaths.

• Heart disease is the leading cause of death for both men and women.

• Total costs associated with heart disease in the US exceed $315.4 billion annually.

[113] http://www.cdc.gov/dhdsp/programs/nhdsp_program/index.htm
[114] http://www.cdc.gov/dhdsp/programs/stroke_registry.htm
[115] http://www.cdc.gov/dhdsp/programs/sodium_reduction.htm
[116] http://www.cdc.gov/wisewoman/

Public Health Activities to Support Heart Disease and Stroke Prevention in FY 2016

Activities	Examples
Heart Disease and Stroke State Program Support	Continue to fund 50 states and Washington, D.C. to implement improved heart disease and stroke prevention efforts with expanded reach and impact.
Improve Clinical Performance	Engage non-physician team members (nurses, pharmacists, etc.) in hypertension management Adopt use of self-measured blood pressure monitoring tied with clinical support Leverage the power of health information technology to improve health outcomes
Blood Pressure Control and Cholesterol Management	Improve blood pressure control by increasing medication adherence for more than half of the population with high blood pressure through evidence-based interventions (e.g., patient education, health provider follow-up, etc.) Improve the prevention and control of high blood pressure at the national level by funding all 50 states and the District of Columbia to address risk factors for heart disease and stroke. Increase support of community health workers for high blood pressure self-management through core training and training in blood pressure management.
Sodium Management	Support state and local efforts to reduce sodium consumption and educate the public Build the evidence base to guide sodium reduction strategies through evaluation of ongoing initiatives and enhanced monitoring of sodium intake and outcomes
Heart Disease Risk Factor Management	Improve women's health outcomes by providing preventive services to 40-64 year old underserved women, including blood pressure, cholesterol, and diabetes testing through the WISEWOMAN program. Provide health coaching and evidence-based lifestyle programs to help participants women manage their risk factors for heart disease through
Stroke Quality of Care	Support the Paul Coverdell National Acute Stroke Registry Program to ensure that all Americans receive high quality acute stroke care, reduce deaths, prevent disability, and avoid recurrent strokes.

Heart Disease and Stroke Prevention Cooperative Agreements

Heart disease and stroke prevention and control at the state and local level are primarily funded through coordinated programs described above[117]. These cooperative agreements form the core of the Federal government's public health system response to cardiovascular disease (CVD) and related chronic diseases. Through these cooperative agreements, CDC supports evidence-based CVD interventions nation-wide including:

- Increasing implementation of quality improvement processes in health systems (e.g., electronic health records and health information technology)
- Expanding team-based care to better manage cardiovascular disease
- Increasing use of blood pressure self-monitoring
- Creating supportive nutrition environments

Paul Coverdell National Acute Stroke Registry Program

The Paul Coverdell National Acute Stroke Registry Program is a three-year cooperative agreement competitively awarded to 11 states with over 450 participating hospitals to develop, implement, and enhance systems for collecting data on patients experiencing an acute stroke; to help analyze these data; and to improve quality of care for stroke patients as they move through the health care system. Between 2005-2013, more than 350,000 patients have benefited from hospital participation in the Paul Coverdell National Acute Stroke Registry Program. In FY 2016, CDC will fund the second year of a five-year competitive funding opportunity announcement to continue to build state-based stroke systems of care-coordination. These systems promote all Americans receiving high quality acute stroke care, reduce deaths, prevent disability, and avoid recurrent strokes.

Paul Coverdell National Acute Stroke Registry Program Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	11	11	11	11	11	0
- New Awards	0	0	0	11	0	-11
- Continuing Awards	11	11	11	0	11	+11
Average Award	$0.356	$0.346	$0.356	$0.356	$0.356	$0.000
Range of Awards	$0.275- -$.500	$0.266- -$0.485	$0.275- -$.500	$0.275–$0.500	$0.275–$0.500	N/A
Total Awards	**$3.925**	**$3.807**	**$3.925**	**$3.925**	**$3.925**	**$0.000**

[1] These funds are not awarded by formula.

WISEWOMAN

Heart disease and stroke are the leading causes of death for women in the United States. The Well-Integrated Screening and Evaluation for Women Across the Nation (WISEWOMAN) program[118] focuses on reducing heart disease and stroke risk factors among at-risk women. WISEWOMAN provides preventive services to 40-64 year old underserved women, including blood pressure, cholesterol, and diabetes testing. Women are screened for heart disease and associated risk factors; referred to care when necessary; and provided healthy lifestyle interventions to address poor nutrition, physical inactivity, and smoking.

CDC's FY 2016 request of **$21,170,000** for WISEWOMAN is all from the Affordable Care Act Prevention and Public Health Fund and is level with the FY 2015 Enacted level. In FY 2014, CDC funded WISEWOMAN programs in 20 state health departments and two Alaska Native organizations. Between 2008 and 2013, the WISEWOMAN

[118] http://www.cdc.gov/wisewoman/

program served nearly 150,000 women and provided over 217,000 cardiovascular disease screenings. From July 2012 to June 2013, the WISEWOMAN program reported 9,920 cases of high blood pressure, 6,538 cases of high cholesterol, 4,009 cases of diabetes, and 6,898 smokers among participants. In FY 2016, state programs will complete an estimated 50,000 screenings to assess women's cardiovascular risk, and provide intervention services to those in need. Interventions include:

- Appropriate aspirin therapy for those who need it
- Blood pressure control
- Cholesterol management
- Smoking cessation strategies that tie in with CDC's Million Hearts® initiative

WISEWOMAN Grants[1,2]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	20	21	22	22	22	0
- New Awards	0	21	1	0	0	0
- Continuing Awards	20	0	21	22	22	0
Average Award	$0.852	$0.760	$0.749	$0.760	$0.760	$0.000
Range of Awards	$0.320-$1.627	$0.500-$1.472	$0.472 –$1.600	$0.500–$1.472	$0.500–$1.472	N/A
Total Awards	**$17.040**	**$15.983**	**$16.478**	**$16.900**	**$16.900**	**$0.000**

[1] WISEWOMAN is funded through the Breast and Cervical Cancer budget line.

[2] These funds are not awarded by formula.

Nutrition, Physical Activity, and Obesity Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$5.085	$12.585	$36.092	+$23.507
ACA/PPHF	$35.000	$35.000	$4.000	-$31.000
Total	**$40.085**	**$47.585**	**$40.092**	**-$7.493**

Overview

Obesity has increased substantially over the past few decades. An estimated 36% (78.6 million) of adults and 17% **(**more than 12.7 million**)** of children have obesity. Americans with obesity are at higher risk for developing hypertension, high cholesterol, type 2 diabetes, heart disease, and certain cancers especially earlier in life, and for premature death. Obesity also undermines the US military's ability to recruit and retain service members[119]; it lessens the productivity of the US workforce, and reduces the performance[120] and lowers the self-esteem of US students[121].

- Obesity results in $147 billion in annual health care costs to the U.S. economy
- Medical costs for people who are obese were $1,429 higher than those of normal weight

CDC's Nutrition, Physical Activity, and Obesity [122] Program promotes healthy lifestyles by improving dietary quality to support healthy child development and prevent or reduce chronic disease among adults; increasing health-related physical activity; and, preventing obesity among all population groups. Physical activity reduces risk for heart disease, stroke, high blood pressure, type 2 diabetes, breast and colon cancer, depression, and pre-mature mortality; and is associated with improved academic performance in youth. Healthy eating helps reduce one's risk for developing obesity, osteoporosis, iron deficiency, and dental caries (cavities).

In FY 2014 and FY 2015, CDC's investments resulted in declines in obesity among low-income preschool age children, leveling of obesity among children, and slowing of obesity among adults after decades of increases. However, significant work remains to improve nutrition and increase physical activity levels to decrease future chronic disease rates, improve worker productivity, and reduce healthcare costs.

Budget Request

CDC's FY 2016 request of **$40,092,000** for Nutrition, Physical Activity, and Obesity, including $4,000,000 from the Affordable Care Act Prevention and Public Health Fund, is $7,493,000 below the FY 2015 Enacted level. The FY 2016 Budget request eliminates the High Obesity Rate Counties. This program was of limited duration, completing work in FY 2015. CDC will integrate lessons learned from these projects into ongoing chronic disease prevention programs, such as the sub-awards made to communities through coordinated state programs.

Requested funds will be used to improve dietary quality to support healthy child development and reduce chronic disease; increased health related physical activity for people of all ages; and decrease prevalence of obesity through prevention of weight gain and maintenance of healthy weight.

[119] http://www.missionreadiness.org/wp-content/uploads/MR_Too_Fat_to_Fight-11.pdf
[120] http://www.cdc.gov/healthyyouth/health_and_academics/pdf/pa-pe_paper.pdf
[121] http://www.cdc.gov/healthyyouth/obesity/facts.htm
[122] http://www.cdc.gov/nccdphp/dnpao/

Nutrition, Physical Activity, and Obesity Initiatives for FY 2016

Activities	Examples
Nutrition and Physical Activity State and Community	Fund 50 states and Washington D.C. to improve nutrition, increase physical activity, and prevent obesity; and 32 states to implement additional strategies for greater reach and impact.
Program Support	Promote community based programs to reduce obesity through support of land grant universities and cooperative extension programs in counties with high rates of obesity.
Healthy Food Environments	Expand healthy food and beverage choices and purchases in cafeterias, vending, and concessions and through collaboration with grocers, retailers, industry, and government officials to provide balanced options to consumers.
Active Living	Increase physical activity through worksites and walkable communities to improve the health of American workers and their families, resulting in fewer illnesses, lower health care costs and greater productivity. Collaborate with grantees, partners, and government agencies to strongly recommend that Americans meet the U.S. Dietary Guidelines to reduce their risk of obesity and other chronic diseases.
Monitor and Evaluate Progress	Track and monitor trends, identify disparities, and document the public health burden of poor diet, inactivity, and obesity through CDC's surveillance Systems. Analyze data, create and release the FY 2016 report on Maternal Practices in Infant Nutrition and Care (mPINC), a survey of hospitals' efforts to support maternal and infant health through their performance on key indicators.

Nutrition, Physical Activity, and Obesity Prevention Cooperative Agreements

The Nutrition, Physical Activity, and Obesity Prevention program funds states through the *State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health*[123] cooperative agreement. Through this cooperative agreement, CDC provides training, guidance, assistance, and evidence-based interventions to state health departments to improve their epidemiological and public health capacity. Grantees are supported to implement evidence-based interventions in worksites, early childhood and education centers, state and local government agencies, and communities -- to remove barriers to healthy behaviors and to support breastfeeding, physical activity and provide healthy food and beverage options towards the prevention and reduction of obesity and other chronic diseases. The interventions are supported by *State Public Health Actions*[124] included the following:

- Promote adoption of food service guidelines and nutrition standards which include sodium

[123] http://www.cdc.gov/chronicdisease/about/state-public-health-actions.htm
[124] http://www.cdc.gov/chronicdisease/about/state-public-health-actions.htm

- Promote adoption of physical activity in early care and education centers, and worksites
- Increase access to healthy foods and beverages
- Implement food service guidelines/nutrition standards where foods and beverages are available. Guidelines and standards should address sodium including worksites and early care and education centers
- Implement physical activity in early care and education centers
- Increase access to breastfeeding friendly environments

State programs achievements:

- Twenty of eighty Early Care & Education centers (ECEs) in Iowa developed and/or adopted policies to implement food service guidelines, including sodium (in cafeterias, vending, and snack bars).
- Forty worksites in Michigan completed trading on Designed Healthy Environments at Work (DHEW) have complete DHEW and adopted policies which increased physical activity opportunities for employees. DHEW is an online resource containing tools for worksites to make simple changes, track progress, capture employee feedback, and document achievements.

Reducing Obesity in High Obesity Areas Program

In FY 2014 - 2015, CDC funded Land Grant Colleges and Universities to implement public health strategies to address obesity through cooperative extension and outreach services. This initiative, *Programs to Reduce Obesity in High Obesity Areas* [125] is a competitively awarded cooperative agreement to assist counties with adult obesity rates over 40%. Strategies are targeted to improve nutrition, physical activity, and reach a specific county-level population of persons who are at highest risk for obesity. *State Public Health Actions*[126] is a complementary program that supports state-level work on nutrition, physical activity, and obesity. Grantees from this program and the *State Public Health Actions*[127] program coordinate their activities. Grantees are implementing their strategies in either community-based settings or in childcare centers with the objective of improving physical activity and nutrition and reducing obesity in their areas.

Funding for this program is not proposed for FY 2016. The funding received in FY 2014 and FY 2015, will catalyze Land Grant Institutions and Cooperative Extensions to use their expertise and infrastructure to continue to address obesity in these most burdened counties.

High Obesity Grants[1]

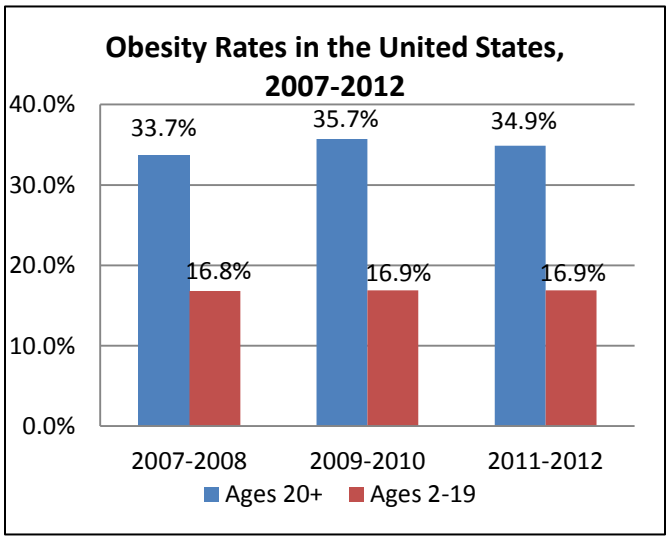
(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	0	0	6	9	0	-9
- New Awards	0	0	6	3	0	-3
- Continuing Awards	0	0	0	6	0	-6
Average Award	$0.000	$0.000	$0.700	$0.750	$0.000	-$0.750
Range of Awards	$0.000–$0.000	$0.000–$0.000	$0.427–$0.985	$0.427–$0.985	$0.000–$0.000	N/A
Total Awards	**$0.000**	**$0.000**	**$4.200**	**$6.750**	**$0.000**	**-$6.750**

[1] These funds are not awarded by formula.

[125] http://www.cdc.gov/obesity/highobesitycounties/index.html
[126] http://www.cdc.gov/chronicdisease/about/state-public-health-actions.htm
[127] http://www.cdc.gov/chronicdisease/about/state-public-health-actions.htm

Monitor and Evaluate Progress

CDC monitors trends, disparities and progress related to obesity prevalence, nutrition, breastfeeding and physical activity. CDC trend data shows that beginning in the 1980's, obesity began rising among U.S. children, adolescents and adults. More recent studies show rates of obesity continue to hold steady among children, with small declines achieved among preschool children. However, disparities continue to exist with higher rates among certain groups including American Indian children.



In FY 2014 - FY 2015, CDC used its surveillance systems to capture progress on effective nutrition and physical activity interventions for key settings, develop best practice recommendations along with supporting materials, and deliver training, tools and resources to state and community grantees and national partners to implement interventions to improve diet, increase physical activity, and prevent and control obesity. In FY 2016, CDC will use its surveillance systems to capture progress on effective nutrition and physical activity interventions for key settings, develop best practice recommendations along with supporting materials, and deliver training, tools, and resources to state and community grantees and national partners to implement interventions to improve diet, increase physical activity, and prevent and control obesity.

School Health Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$15.383**	**$15.383**	**$15.383**	**$0.000**

Overview

Schools play a critical role in helping children develop lifelong, healthy habits by providing quality physical education and physical activity[128] and a healthy school food environment[129]. Physical activity and good nutrition have been shown to have a positive impact on academic achievement. The percentage of children aged 6–11 years in the United States who were obese[130] increased from 7% in 1980 to nearly 18% in 2012. Similarly, the percentage of adolescents aged 12–19 years who were obese increased from 5% to nearly 21% over the same period. Nearly one in three children are at risk for preventable chronic diseases like diabetes and heart disease due to being obese. Approximately one in four children manages a chronic condition on a daily basis that may affect their ability to learn and thrive. CDC's School Health Program funds all 50 states and Washington, D.C. to promote and implement sustainable strategies in schools and school districts, and provide training in effective interventions to improve health outcomes for K-12 students and 17 states to improve the management of student chronic conditions including school health services.

- Each day, 132,000 schools provide a setting to 55 million students to learn about health and healthy behaviors.
- Physical education and physical activity in schools improve health and academic performance.

Budget Request

CDC's FY 2016 request of **$15,383,000** for School Health is level with the FY 2015 Enacted level. CDC's School Health program will support state health departments to enable local school districts to implement high quality, cost-effective, school-based health programs[131] and to disseminate best practices from those programs. In FY 2014-FY 2015, CDC coordinated school health efforts by supporting 50 states and Washington, D.C. to improve health outcomes for K-12 students and improve the management of student chronic conditions through *State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health*[132]. This cooperative agreement will continue in FY 2016.

In FY 2016, CDC will continue to fill critical resource gaps in physical activity programs and food allergy management, building on new guidelines. The American Academy of Pediatrics, Food Allergy Research and Education and the National Association of School Nurses conducted training and dissemination of the Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Centers[133], reaching more than 2,000 physicians and school nurses with this new tool. Next, the Comprehensive Guide[134] provided a framework for effective physical education programs in schools and is the cornerstone of the Let's Move Active Schools Program. In addition to the food allergy guidelines and the CSPAP Guide, CDC also provides extensive training

[128] http://www.cdc.gov/healthyyouth/physicalactivity/facts.htm
[129] http://www.cdc.gov/healthyyouth/nutrition/facts.htm
[130] http://www.cdc.gov/healthyyouth/obesity/facts.htm
[131] http://www.cdc.gov/healthyyouth/npao/strategies.htm
[132] http://www.cdc.gov/chronicdisease/about/state-public-health-actions.htm
[133] http://www.cdc.gov/HealthyYouth/foodallergies/
[134] http://www.cdc.gov/healthyyouth/physicalactivity/cspap.htm

and tools to school food service administrators in support of USDA's *Smart Snacks Program*[135]. *Smart Snacks* requires that all foods sold during the school day meet specified nutrition standards.

Public Health Activities to Support School Health Initiatives in FY 2016

Initiatives	Examples of Activities
School Health State Program Support	Fund all 50 states and Washington D.C. to implement improved nutrition, physical activity, and obesity prevention efforts and 17 states to improve management of chronic conditions in schools
Physical Activity	Expand physical education/physical activity programs and opportunities for students before, during, and after school by providing guidelines and training to state and local education and public health staff
School Nutrition	Improve school nutrition environments on K-12 campuses by adopting USDA School Meal and Competitive Foods Nutrition Standards and Food Marketing Guidelines and by providing training and tools for school and health department staff
Manage Chronic Conditions in Schools	Help schools better identify, track, and support students with chronic conditions who may require daily or emergency management through activities including training on • documenting medication administration and health room visits • training for specific chronic conditions (e.g., food allergies, epilepsy, and diabetes) • improving clear communication between schools and students' medical homes
Research and Translation for the School Settings	Develop, update and disseminate national guidelines and tools for physical activity, physical education, nutrition, and managing chronic conditions in schools; conduct cross-cutting research to show the relationship between health and academics and the importance of evidence-based policies to ensure a healthy and safe school environment

School Health Cooperative Agreement

School Health is funded at the state level through *State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health*[136]. Through this cooperative agreement, CDC implements evidence-based school health interventions to improve health outcomes for K-12 students including:

- Promote practices that increase the quality and quantity of physical education, physical activity and recess; and support implementation of a comprehensive physical activity program.
- Promote policies and practices that create a supportive nutrition environment, including establish standards for all competitive foods; prohibit advertising of unhealthy foods, and promote healthy foods in schools including those sold and served within school meal programs and other venues.
- Implement policies, processes, and protocols to meet daily management and emergency care needs of students with chronic conditions (asthma, food allergies and anaphylaxis, epilepsy, diabetes, and other chronic conditions) and strengthen linkages with student medical home.

[135] http://www.fns.usda.gov/sites/default/files/allfoods_infographic.pdf
[136] http://www.cdc.gov/chronicdisease/about/state-public-health-actions.htm

In FY 2016, CDC will continue to support successful initiatives. Seventeen CDC-funded states working on managing chronic conditions have partnered with national organizations to train school nurses on managing food allergies in schools and enhancing diabetes management; documenting health causes for absenteeism and increasing the number of students with chronic conditions that have a medical home. CDC will support comprehensive school physical activity programs that include quality physical education, required recess for primary school students and physical activity breaks for all students and staff. CDC also guides schools in assessing their health services and policies and practices supporting managing chronic conditions in schools.

National Non-Governmental Organizations

CDC also funds national non-governmental organizations (NGOs) to focus on physical activity and physical education, nutrition, and management of chronic conditions, including food allergies and school health services. These NGOs support state and local health and education departments to ensure that evidence-based interventions increase the impact of programs in all 50 states and Washington, D.C.

CDC funded NGOs achievements included:

- Trained over 2,000 school nurses, pediatricians and allied health professionals in skills, policies and practices to support managing food allergies and/or diabetes case management in schools.
- Provided essential tools, guidance and training to support state implementation of school-based key provisions of the Healthy Hunger Free Kids Act.

In FY 2016, CDC funded NGOs will start a new funding cycle to create and sustain school-based physical activity, nutrition, and health services policies, practices, and environmental influences to improve the health and well-being of youth.

School Health Grants for Non-Governmental Organizations[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	8	7	7	7	5-9	0
- New Awards	0	0	0	0	5-9	+5-9
- Continuing Awards	8	7	7	7	0	-7
Average Award	$0.242	$0.248	$0.247	$0.248	$0.248	$0.000
Range of Awards	$0.242-$0.275	$0.150–$0.300	$0.150–$0.300	$0.150–$0.300	$0.248	N/A
Total Awards	**$1.736**	**$1.736**	**$1.728**	**$1.736**	**$1.736**	**$0.000**

[1] These funds are not awarded by formula.

Health Promotion Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$19.432**	**$19.970**	**$19.970**	**$0.000**

Overview

CDC conducts research to define the public health burden and impact of emerging chronic diseases and identifies how public health can most effectively reduce the disease burden. CDC also develops and promotes cutting-edge approaches to address chronic diseases that will shape how public health responds to chronic disease problems in the future.

Diseases currently being addressed include:

- Healthy Aging and Alzheimer's Disease
- Chronic Kidney Disease
- Excessive Alcohol Use Prevention
- Glaucoma
- Inflammatory Bowel Disease
- Interstitial Cystitis
- Visual Screening Education

Alzheimer's disease is the sixth leading cause of death among U.S. adults and the fifth leading cause of death among adults 65 and older.

Budget Request

CDC's FY 2016 request of **$19,970,000** for Health Promotion activities is level with the FY 2015 Enacted level. CDC will use FY 2016 funding to continue an overarching approach to Health Promotion activities using modest investments to strengthen the science base for the prevention of leading and emerging causes of disease, disability, and death. At this funding level CDC will:

- Advance science and public health response across the health promotion continuum
- Improve surveillance and define the burden of emerging conditions
- Develop effective public health interventions, including tools and resources, to implement prevention strategies for emerging diseases
- Provide leadership through partnerships and collaboration with non-governmental organizations, universities, etc.

CDC will also assess disease and risk factor trends, correlating risk factors (such as the aging of the U.S. population), and future chronic disease threats so that the public health community can prepare for the chronic disease issues of the future.

Public Health Activities to Support Health Promotion Initiatives in FY 2016

Initiatives	Examples of Activities
Healthy Aging and Alzheimer's Disease	Release a new BRFSS data report on caregiving and complete the Guide for Community Preventive Services review of the literature on public health strategies and caregiving to increase knowledge about the public health consequences of caregiving and help inform public health policies and programs.
Chronic Kidney Disease	Enhance surveillance, coordinate state-based demonstration projects, and conduct economic studies on the annual health care cost associated with CKD to provide comprehensive public health strategies for promoting kidney health.

Initiatives	Examples of Activities
Excessive Alcohol Use Prevention	Monitor and reduce youth exposure to alcohol marketing, a key risk factor for underage drinking. Improve public health surveillance on excessive alcohol use, particularly underage and binge drinking, and related harms. Build state and local public health capacity in alcohol epidemiology. Develop and disseminate translation tools to inform public health practice.
Glaucoma	Strengthen glaucoma detection by refining innovative, evidence-based interventions to promote increased access and utilization of eye care among high-risk populations
Visual Screening Education	Ensure broad dissemination of the Project INSIGHT findings to improve eye care access and quality to prevent vision loss and promote eye health at the national, state, and local levels
Inflammatory Bowel Disease	Support the Crohn's & Colitis Foundation of America (CCFA) to estimate IBD prevalence and incidence Assess the impact of clinical practices on managing the disease; Develop evidence- based interventions to improve disease outcomes Better understand the impact of disease on people with IBD.
Interstitial Cystitis	Support a research study to obtain estimates of the prevalence and incidence of Interstitial Cystitis in adult populations; and to define the demographic and clinical characteristics of IC and its impact on health from a population perspective.

Healthy Aging and Alzheimer's disease

Alzheimer's disease is the sixth leading cause of death among U.S. adults and the fifth leading cause of death among adults aged 65 and older. Through the Healthy Brain Initiative[137], CDC funds surveillance efforts and works to translate research into public health practice in states and communities. Building on the Congressionally-mandated "*National Plan to Address Alzheimer's Disease*"[138] *(National Plan),* CDC and partners released "The Public Health Road Map for State and National Partnerships, 2013-2018"[139] *(Road Map)* detailing key roles that state and local public health agencies can play in addressing cognitive impairment and caregiving, and increasing cognitive health awareness among the public and health professionals.

Since FY 2014, CDC has supported 46 states and 2 territories to collect, analyze, and share data from the Behavioral Risk Factor Surveillance System (BRFSS) on Cognitive Decline. The cognitive decline survey questions examine adult perceptions about increased confusion and memory loss. In FY 2015, CDC will release a new grant announcement to work with national partners to disseminate the Road Map at the national, state, and local levels. In FY 2016, CDC and national partners will implement this work. Similarly, the Healthy Brain Research Network, a thematic network of CDC's Prevention Research Centers Program, will help to implement key actions

[137] http://www.cdc.gov/aging/healthybrain/
[138] http://aspe.hhs.gov/daltcp/napa/NatlPlan2013.pdf
[139] http://www.cdc.gov/aging/pdf/2013-healthy-brain-initiative.pdf

from the Road Map focusing on communication and education. CDC also will continue co-leading the *Healthy People 2020* topic areas for "Dementia" and "Older Adults" and continue to fund related surveillance efforts.

Chronic Kidney Disease

Chronic kidney disease (CKD) is the ninth leading cause of death in the U.S. More than 20 million U.S. adults 20 years and older have CKD and most are unaware of their condition. A CDC study showed the annual Medicare expenses attributable to CKD (per person) were $1,700 for stage 2, $3,500 for stage 3, and $12,700 for stage 4 CKD. In FY 2016, CDC will continue to work with partners to improve kidney disease surveillance and develop a state-based screening and demonstration project for detecting high-risk individuals. CDC will also support the National CKD Surveillance System[140] to document the burden of CKD and its risk factors and track progress in CKD prevention, detection, and management.

Excessive Alcohol Use Prevention

Excessive alcohol use[141], including binge and underage drinking[142], is responsible for 88,000 deaths annually. It shortens lives by about 30 years, and, based on 2006 data (currently being updated), costs about $223.5 billion, or $1.90 per drink consumed annually. Binge drinking is responsible for more than half of these deaths. CDC strengthens the science for preventing excessive alcohol use by:

Excessive alcohol use accounts for 1 in 10 deaths among working-age adults ages 20-64 in the U.S.

- Improving public health monitoring of excessive alcohol use and related harms
- Advancing the science for preventing excessive alcohol use.
- Translating recommendations on excessive drinking into public health practice by supporting state adoption of evidence-based interventions on excessive drinking

In FY 2014, CDC monitored and identified strategies to reduce youth exposure to alcohol marketing, supported full-time Alcohol Epidemiologists in two states, and improved public health surveillance on excessive drinking and related harms. . CDC's Prevention Status Reports highlighted the status of policies and practices for preventing or reducing key public health problems, including excessive alcohol use, in all 50 states and the District of Columbia. Each report described the public health problem using public health data, identified potential solutions to the problem drawn from research and expert recommendations, and reported the status of those solutions.

CDC funding in 2016 will support:

- Funding full-time Alcohol Epidemiologists in 3 states
- Identifying strategies to reduce youth exposure to alcohol marketing
- Improving public health surveillance on excessive drinking and related harms updating the estimated economic costs of excessive alcohol consumption, including healthcare and criminal justice expenses and productivity losses

Vision Health

More than 3.4 million Americans aged 40 years and older are either blind or visually impaired, and millions more are at risk for developing vision impairment and blindness, including nearly 2.7 million Americans aged 40 years and older who have glaucoma.

[140] http://nccd.cdc.gov/CKD/
[141] http://www.cdc.gov/alcohol/
[142] http://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm

In FY 2016, CDC will build on successful research and screening efforts. CDC funded the Innovative Network for Sight Research (INSIGHT) study. The vision research network of investigators at Johns Hopkins University, University of Miami, University of Alabama at Birmingham, and Wills Eye Institute assessed factors that affect eye care access and quality. A total of 1,894 persons participated in the screening program, with 21.7% having diabetic retinopathy in at least one eye. Almost half of those screened had other ocular issues; 30 percent screened positive for cataract. CDC also funded the University of Alabama–Birmingham (UAB) and Wills Eye Institute to conduct demonstration projects to improve glaucoma screening, referral, and treatment for high risk populations. The Wills Eye Institute successfully screened over 1600 high risk individuals. Of those screened, 16.9% were identified as having glaucoma. The UAB project screened over 750 patients in predominantly African American communities; 43% of those screened were found to have glaucoma. A project evaluation identified best practices for improving glaucoma screening, referrals, and treatment for populations at greatest risk for the disease.

Inflammatory Bowel Disease

In the United States, as many as 1 million to 1.3 million people suffer from Inflammatory Bowel Disease (IBD)[143]. CDC builds the science base to better understand IBD and factors that predict the disease course. CDC supports an epidemiologic research study to understand the causes of IBD, learn why the course of illness varies among individuals, and determine what factors may improve outcomes. CDC funds the Crohn's & Colitis Foundation of America (CCFA) through a five-year cooperative agreement (FY 2013–17) to research various aspects of the IBD.

In FY 2016, CDC will:

- Analyze surveillance data and enhancing existing data systems to capture IBD data
- Publish and increase the base of scientific evidence on IBD
- Increase applied research capacity through the Ocean State Crohn's and Colitis Area Registry

Interstitial Cystitis

Interstitial Cystitis (IC)[144], or bladder pain syndrome, is more common in women than men. Recent research suggests that up to 12% of women may have early symptoms of IC. CDC's efforts promote public awareness and partnerships; and provide IC education for the public, family members, and health care providers.

In FY 2014, CDC supported the final year of the five-year cooperative agreement to the Interstitial Cystitis Association (ICA). ICA, a national organization serving IC patients and health care providers educate other providers on IC identification, diagnosis, and referral though a health care provider module. ICA also uses web-based resources to educate affected people about self-management and care opportunities.

In FY 2016, CDC will continue funding a new, competitive five-year cooperative agreement (FY 2015-FY 2019) to conduct an epidemiologic research study on IC to continue outreach efforts. Results from this study will increase understanding of the epidemiology of and treatment for the disease.

[143] http://www.cdc.gov/ibd/index.htm
[144] http://www.cdc.gov/ic/

Prevention Research Centers Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$25.461	$25.461	$25.000	-$0.461
ACA/PPHF (*non-add*)	$0.000	$0.000	$25.000	+$25.000
Total	**$25.461**	**$25.461**	**$25.000**	**-$0.461**

Overview

Prevention Research Centers[145] (PRCs) are a network of 26 academic institutions in the U.S. that conduct applied public health research on innovative ways to promote health and prevent disease. PRCs does design, test, and share programs to maximize public health resources and reduce healthcare costs. The PRC network allows CDC and other federal agencies to support specific, short-term research projects, with an emphasis on the leading causes of disease and disability and diseases that disproportionately affect certain populations. PRCs also collaborate with health departments, educational boards, and the private sector on research projects and work closely with community partners to ensure research is relevant and beneficial to their community. An economic analysis of Medicare enrollees that participated in EnhanceFitness[146], a PRC-developed program, found that participants had significantly fewer hospitalizations and lower average healthcare costs. Enhance Fitness [147] is now recommended by the CDC Arthritis program and the Administration for Community Living.

Budget Request

CDC's FY 2016 request of **$25,000,000** for Prevention Research Centers, all from the Affordable Care Act Prevention and Public Health Fund, is $461,000 below the FY 2015 Enacted level. In FY 2014, CDC awarded a new cooperative agreement to 26 academic institutions in 24 states to study how individuals and communities can avoid or counter the risks for chronic illnesses (e.g., heart disease, obesity, and cancer). In FY 2015 - FY 2016, CDC will work with PRCs to build partnerships with public health departments and communities to ensure their public health research has direct application in real-world settings. In FY 2016, CDC will support 26 PRCs with the goal of more quickly leveraging research findings to build a collection of evidence-based public health interventions for use nationwide.

> In 2013, for every $1 invested in PRCs, the PRCs generated an average of $7.99 in additional research funds.

Special Interest Projects (SIPs)

Special Interest Projects (SIPs) allow CDC and other federal agencies to leverage the prevention research expertise of PRCs and their established relationships with community partners to investigate community-based health promotion and disease prevention strategies. In FY 2014, 56 Special Interest Project (SIP) were awarded to 21 of the 26 Prevention Research Centers (PRCs) to design, test, and disseminate effective applied public health prevention research strategies.

PRC investigators align research strategies with public health priorities as outlined in the National Prevention Strategy, CDC's Winnable Battles, etc. Research projects address topics that represent a gap in knowledge or of relevance to CDC's Chronic Disease Prevention and Health Promotion Program's four domains[148] that include:

- Epidemiology and Surveillance;

[145] http://www.cdc.gov/prc/
[146] http://www.projectenhance.org/enhancefitness.aspx
[147] http://www.projectenhance.org/enhancefitness.aspx
[148] http://www.cdc.gov/chronicdisease/about/public-health-approach.htm

- Environmental Approaches;
- Health System Strategies; and
- Community-Clinical Linkages.

Current SIPs focus on the following topics:

- Arthritis
- Aging,
- Dementias and Alzheimer's Disease
- Alcohol Marketing
- Epilepsy
- Cancer
- Falls Prevention
- HIV and Sexual Health
- Nutrition
- Obesity and Physical Activity
- Tobacco Use
- Workplace Health
- Global Health

Prevention Research Centers Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	37	37	26	26	26	0
- New Awards	0	0	26	0	0	0
- Continuing Awards	37	37	0	26	26	0
Average Award	$0.577	$0.490	$0.750	$0.736	$0.736	$0.000
Range of Awards	$0.300-$0.620	$0.272-$0.536	$0.750	$0.736	$0.736	N/A
Total Awards	**$21.349**	**$18.138**	**$19.500**	**$19.136**	**$19.136**	**$0.000**

[1] These funds are not awarded by formula.

Arthritis and Other Chronic Diseases Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$26.735**	**$23.342**	**$26.857**	**+$3.515**

Overview

Arthritis[149] is the most common cause of disability in the United States, with approximately 52.5 million adults reporting arthritis diagnosis[150] and 22.7 million reporting arthritis-attributable activity limitations. CDC's long-term arthritis program goals are to decrease pain and disability and to improve physical, psychosocial, and work function among persons with arthritis. CDC works with 12 state health departments, national organizations (e.g., Arthritis Foundation, National Association of Chronic Disease Directors, Y-USA, and the National Recreation and Park Association) to promote self-management and physical activity interventions in community and clinical service organizations and health care systems.

Nearly two-thirds of people with arthritis are working age adults, younger than 65.

Lupus[151] is a rheumatic autoimmune disease that can cause inflammation and tissue damage to virtually any organ system in the body and result in serious disability, pain, and premature death. It affects women far more than men and it affects African Americans far more than whites. Lupus is difficult to diagnose; therefore, it has been extremely difficult to estimate the severity and corresponding burden on society. CDC-funded population-based registries and cohort studies are increasing public health knowledge about Lupus.

Epilepsy[152], a chronic neurological condition, affects about 2.3 million adults and over 465,000 children from birth to 17 years of age. CDC's Epilepsy Program works with the National Epilepsy Foundation (EF) to strengthen professional and public education about seizures and epilepsies to increase awareness, reduce stigma, and enhance care and safety for people with epilepsy.

Budget Request

CDC's FY 2016 request of **$26,857,000** for Arthritis and Other Chronic Diseases is $3,515,000 above the FY 2015 Enacted level. This increase will allow CDC to fully restore funds to state health departments to expand efforts to disseminate effective arthritis interventions, which were reduced at the FY 2015 Enacted level. In addition, these funds will allow for the continuation of vital surveillance and research on the most effective arthritis interventions and best dissemination channels.

In FY 2016, CDC will address the burden of Arthritis and Other Conditions by:

- Increasing access and availability of evidence-based interventions
- Conducting surveillance to measure burden
- Strengthening the science base of effective strategies
- Increasing awareness and promoting health equity

[149] http://www.cdc.gov/arthritis/
[150] http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6244a1.htm?s_cid=mm6244a1_w
[151] http://www.cdc.gov/arthritis/basics/lupus.htm
[152] http://www.cdc.gov/epilepsy/index.htm

Arthritis Program

In FY 2016, CDC will work closely with grantees to improve and increase self-management attitudes and behaviors among persons with arthritis. CDC's Arthritis Program funds 12 state health departments to expand access to proven arthritis interventions. Specifically, the competitive five-year cooperative agreements (FY 2012–FY 2016) require grantees to embed arthritis interventions that also benefit other chronic conditions, such as the Chronic Disease Self-Management Program[153] and EnhanceFitness[154], in healthcare and community delivery systems. At the end of this project period, CDC expects grantees to reach over 450,000 individuals with arthritis-appropriate, evidenced-based programs and strategies; conduct surveillance and use data to inform priority setting and decision making; and implement health communications campaigns. CDC will continue to work with national organizations, such as the Arthritis Foundation, the National Association of Chronic Disease Directors, YMCA, and the National Recreation and Park Association to make physical activity and self-management education interventions more accessible throughout the country for individuals with arthritis.

In FY 2016, CDC also will release a new funding opportunity announcement to fully restore and continue the important work with national partner organizations to make physical activity and self-management education interventions more accessible throughout the country for individuals with arthritis.

Arthritis State Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	12	12	12	12	12	0
- New Awards	12	0	0	0	0	0
- Continuing Awards	0	12	12	12	12	0
Average Award	$0.425	$0.405	$0.406	$0.425	$0.425	$0.000
Range of Awards	$0.200–$0.500	$0.200–$0.500	$0.209–$0.461	$0.200–$0.500	$0.200-$0.500	N/A
Total Awards	**$5.100**	**$4.869**	**$4.869**	**$3.985**	**$5.100**	**$0.000**

[1] These funds are not awarded by formula.

Lupus Program

In FY 2014, CDC's lupus program activities included:

- Assessing the natural history, treatment, health care access, and risk factors for lupus among African-Americans and Caucasians (Michigan and Georgia) and among Hispanics/Asians (California).
- Developing a public health agenda for lupus to set priorities for lupus resources.
- Researching ways to support lupus self-management, with the aim of developing interventions to address gaps in lupus self-management.

In FY 2015 – FY 2016, lupus program activities will include:

- Publishing results from lupus registries focused on Hispanics and Asians (in California and New York City), which will inform how lupus occurs in these populations.
- Researching how to increase awareness, improve health communication, and enhance knowledge among at-risk individuals and their health care providers.
- Developing a national partnership network to help decrease the length of time from symptoms to diagnosis and to improve self-management of lupus and related comorbidities.

[153] http://patienteducation.stanford.edu/programs/cdsmp.html
[154] http://www.projectenhance.org/enhancefitness.aspx

Lupus Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	5	3	4	4	4	0
- New Awards	2	0	3	1	0	-1
- Continuing Awards	3	3	1	3	4	+1
Average Award	$0.800	$1.075	$0.798	$1.092	$1.092	$0.000
Range of Awards	$0.400-$1.800	$0.750-$1.238	$0.450–$0.999	$0.750–$2.100	$0.750–$2.100	N/A
Total Awards	**$4.000**	**$3.227**	**$3.192**	**$4.366**	**$4.366**	**$0.000**

[1] These funds are not awarded by formula.

Epilepsy Program

CDC supports the Managing Epilepsy Well Network (MEW)[155], through the CDC-funded Prevention Research Centers (PRCs), to conduct innovative research for epilepsy self-management. WebEASE[156] is the first evidence-based online epilepsy self-management program. In 2014, the MEW Network trained 41 healthcare providers representing 26 US states to deliver UPLIFT, a telehealth depression treatment program for adults with epilepsy and depression.

From FY 2014, the Epilepsy Foundation (EF):

- Reached 38,200 middle and high school students and teachers through the Seizures and Youth: Take Charge programs
- Trained 5,600 school nurses with the Managing Students with Seizures curriculum
- Trained 16,067 school staff and personnel with the Seizure Training for School Personnel curriculum
- Trained 1,860 staff in adult care settings to recognize seizures
- Trained 2,411 EMS and law enforcement professionals in seizure awareness and response

In FY 2014 - 2016, CDC will sustain activities in alignment with the IOM recommendations on epilepsy, which will include:

- Epidemiology and surveillance:
    - Conduct population surveys of epilepsy burden (prevalence, comorbidities, quality of life impairment; gaps in access to care, and related factors)
    - Research epilepsy prevalence and incidence, risk factors, outcomes, healthcare needs, and health disparities;
    - Conduct population studies on stigma associated with epilepsy

- Public Health Research:

    - Support the Managing Epilepsy Well (MEW) Network, an association of seven universities and epilepsy stakeholders, through CDC's Epilepsy Program and the Prevention Research Centers Program.
    - Work with the MEW network will work to advance the science on epilepsy self-management by conducting research in collaboration with community stakeholders and people with epilepsy and to broadly disseminate research findings.

- Public Awareness/Communication:

[155] http://web1.sph.emory.edu/ManagingEpilepsyWell/
[156] http://www.epilepsyfoundation.org/livingwithepilepsy/Webease/index.cfm

- Support studies to test new communication methods to combat stigma associated with epilepsy through CDC's Epilepsy Program.

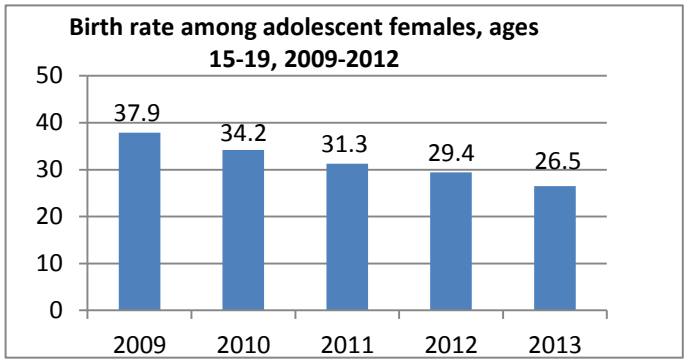
Safe Motherhood and Infant Health Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	2016 +/-2015
Budget Authority	**$45.473**	**$45.473**	**$45.473**	**$0.000**

Overview

The annual cost of unintended pregnancy and birth in the United States is approximately $11 billion. Preterm birth costs the U.S. healthcare system more than $26 billion per year. Unintended births place both mother and child at greater risk for adverse social, economic, and health outcomes. CDC leads national, state, and local initiatives to identify changes and trends in reproductive, maternal, and infant health and maternal mortality by using cutting edge research, surveillance, and science. Through the Pregnancy Mortality Surveillance System, CDC collects information on the causes of pregnancy-related deaths and risk factors associated with those deaths. CDC also collects population-based data on maternal attitudes, experiences, and health before, during, and shortly after delivery and on infant health through its Pregnancy Risk Assessment Monitoring System (PRAMS)[157]. Through the National Assisted Reproductive Technology (ART) Surveillance System (NASS)[158], CDC collects data from clinics in the U.S. that use Assisted Reproductive Technology (ART) to treat infertility.

The U.S. birth rate for teenagers aged 15-19 dropped 10% from 2012 to 2013. The preterm birth rate (less than 37 weeks) was 11.39% in 2013, a decline of 1% from 2012; and the U.S. infant mortality rate decreased 1.5% from 2011 to 2012 to a historic low of 597.8 infant deaths per 100,000 live births. The proportion of sexually active women ages 15-44 years at risk of unintended pregnancy who report using LARC at last sexual encounter increased from 2.1% in 2002 to 5.5% in 2010. Although these are important achievements, much work remains.



Budget Request

CDC's FY 2016 request of **$45,473,000** for Safe Motherhood and Infant Health is level with FY 2015 Enacted level. Within this level, $17,215,000 is included for Teen Pregnancy prevention from CDC appropriations and other sources. CDC will support national and state-based surveillance systems to monitor trends in maternal health and mortality, infertility, and sudden unexpected infant death.

In FY 2014, CDC released the *National Public Health Action Plan for the Detection, Prevention, and Management of Infertility*[159] (Action Plan). The Action Plan informs public health practice to better understand and address issues at a population level that contribute to and are caused by infertility, and that may affect a pregnancy. In collaboration with HHS's Office of Population Affairs, CDC released *Providing Quality Family Planning Services - Recommendations of CDC and the U.S. Office of Population Affairs* that defines what services should be offered in a family planning visit and gives providers the information needed to improve the quality of family planning services.

[157] http://www.cdc.gov/prams/
[158] http://www.cdc.gov/art/
[159] http://www.cdc.gov/reproductivehealth/Infertility/PublicHealth.htm

Since the initiation of the Perinatal Quality Collaboratives in 2010, the California PQC has shown a 55% decline in the number of scheduled deliveries <39 weeks without medical indication; the New York State PQC has shown a 98% decline; and the Ohio PQC has shown a 40% decline.

FY 2015 activities continued to focus on the study of preterm birth to better understand its impact and advance new strategies for prevention by funding six state-based Perinatal Quality Collaboratives to improve the quality of maternity care and health outcomes for women and newborns. CDC will fund nine states for the Sudden Unexplained Infant Death Case Registry that monitors risk factors associated with infant death less than one year and case investigations to develop targeted prevention and intervention strategies and improve medical and legal practices.

Public Health Activities to Support Reproductive, Maternal, and Infant Health for FY 2016

Reproductive, Maternal and Infant Health Strategies	Examples of Activities
Monitor behaviors, health disparities, and health care outcomes	Fund nine states for the Sudden Unexpected Infant Death (SUID) Case Registry[160] to improve data collection on infant deaths and promote consistent reporting of SUID cases Collect data through the National ART Surveillance System (NASS) from U.S. clinics that use ART as an infertility treatment to publish annual ART Success Rates report that contains success rate by clinic Fund three states for data linkages via States Monitoring ART (SMART) collaborative to monitor short- and long-term maternal and child health outcomes of ART treatments (e.g., pregnancy and birth complications, prematurity, birth defects, etc.)
Clinical performance and quality improvement	Fund six state-based Perinatal Quality Collaboratives to identify interventions to improve quality of maternity care and health outcomes for women and newborns
Technical Assistance and Consultation	Conduct national surveillance through Pregnancy Mortality Surveillance System (PMSS)[161] to help clinicians, public health professionals, etc. develop interventions to address pregnancy-related deaths and non-fatal complications Provide technical expertise and support to state health departments, federal agencies, and Ministries of Health to establish and conduct maternal and neonatal mortality surveillance Provide maternal and child health epidemiologists and graduate fellows at 16 state, local, and tribal public health agencies to build state and local level expertise

[160] http://www.cdc.gov/sids/CaseRegistry.htm
[161] http://www.cdc.gov/reproductivehealth/MaternalInfantHealth/PMSS.html

Reproductive, Maternal and Infant Health Strategies	Examples of Activities
Teen Pregnancy Prevention	Conduct research and translate science into practice to reduce sexual risk behaviors and teen pregnancy Develop innovative interventions for 15- to 24-year old young men to reduce their risk of fathering a teen pregnancy Collaborate with health centers and youth serving organizations to implement evidence-based reproductive health services for adolescents and high risk youth

Pregnancy Risk Assessment Monitoring System (PRAMS) Grants

CDC will continue to fund 40 states and New York City, representing approximately 78% of all U.S. live births, to collect and analyze population-based data on maternal attitudes and experiences before, during, and shortly after pregnancy. The PRAMS program helps to:

- Identify women and infants at risk for health problems
- Monitor access to care and services
- Identify changes in behavior and health status
- Measure progress in improving the health of mothers and infants

Pregnancy Risk Assessment Monitoring System (PRAMS) Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	41	41	41	41	41	0
- New Awards	0	0	0	0	0	0
- Continuing Awards	41	41	41	41	41	0
Average Award	$0.143	$0.143	$0.143	$0.143	$0.143	$0.000
Range of Awards	$0.121-$0.190	$0.121–$0.190	$0.121–$0.190	$0.121–$0.190	$0.121–$0.190	N/A
Total Awards	**$5.863**	**$5.863**	**$5.863**	**$5.863**	**$5.863**	**$0.000**

[1] These funds are not awarded by formula.

Tobacco Prevention and Control Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$105.492	$105.492	$105.492	$0.000
ACA/PPHF	$105.000	$110.000	$110.000	$0.000
Total	**$210.492**	**$215.492**	**$215.492**	**$0.000**

Overview

Tobacco use is the leading preventable cause of disease, disability, and death in the United States. One of five U.S. adults and one of four U.S. high school students are current smokers. Smoking and smokeless tobacco use are initiated primarily during adolescence. CDC is the lead federal agency for comprehensive tobacco control and prevention efforts. The National Tobacco Control Program[162] provides funding and technical support to health departments and national networks. The program's primary goals are to eliminate secondhand smoke exposure, promote quitting, prevent initiation, and identify and eliminate disparities. States with strong tobacco control programs have demonstrated achievement of a $55:$1 return[163] on their investment.

States with strong tobacco control programs have demonstrated achievement of a $55:$1 return on their investment

CDC also conducts research and surveillance on tobacco use and translates science into best practices that help states plan, implement, evaluate, and sustain their own programs. In FY 2014, CDC provided updated guidance based on expanded research to states through the release of *Best Practices for Comprehensive Tobacco Control Program*[164], an evidence-based guide to help states plan and establish comprehensive tobacco control programs.

Budget Request

CDC's FY 2016 request of for Tobacco Prevention and Control of **$215,492,000,** including $110,000,000 from the Affordable Care Act Prevention and Public Health Fund, is level with the FY 2015 Enacted level. At this funding level, CDC will implement comprehensive tobacco control and prevention activities and enhance educational efforts. Tobacco cessation quitlines will continue to respond to smokers seeking help to quit, as well as increase tobacco cessation quitline capacity to respond to smokers seeking help to quit.

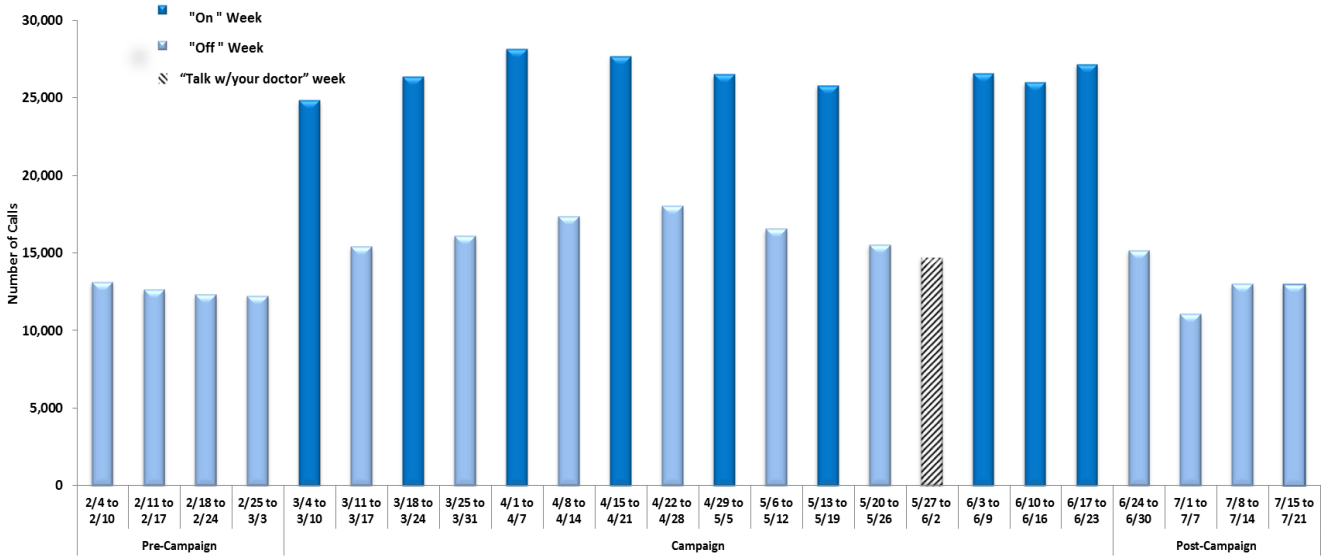
National Tobacco Education Campaign

The Institute of Medicine, National Cancer Institute, and Surgeon General all recommended a national media campaign as part of a comprehensive approach for ending the tobacco use epidemic. CDC warns the public about the consequences of tobacco use through the national tobacco education campaign, *Tips From Former Smokers*[165].

In 2013, CDC launched of the second Tips from Smokers campaign, with a new round of advertisements featuring additional health conditions and population groups. The second round of the campaign generated more than 150,000 additional calls to 1-800-QUIT-NOW quitlines. The campaign has also demonstrated strong cost-effectiveness, costing approximately $393 per year of life saved (well under the widely accepted limit for the cost-effectiveness of a public health program of $50,000 per year of life saved).

[162] http://www.cdc.gov/tobacco/tobacco_control_programs/ntcp/index.htm
[163] http://www.ncbi.nlm.nih.gov/pubmed/23418411
[164] http://www.cdc.gov/tobacco/stateandcommunity/best_practices/index.htm
[165] http://www.cdc.gov/tobacco/campaign/tips/

1-800-QUIT-NOW before, during, and after CDC's 2013 Tips from Former Smokers campaign



In 2014, CDC launched Tips III in two phases. The first nine week phase (February 3—April 6) generated more than 250 news stories in print, broadcast, and online media, reaching an audience of more than 276 million people and generating over $230,000 in advertising value. CDC launched phase 2 of the 2014 campaign on July 7 to run for nine weeks. This phase includes new advertisements featuring health conditions such as premature birth, periodontal (gum) disease and tooth loss, and HIV complications. In FY 2015, CDC will integrate new Tips ads into the national campaign, highlighting macular degeneration and colorectal cancer—two diseases that the most recent Surgeon General's report found were caused by smoking. In FY 2016, CDC will continue to invest in national education efforts to inform the public about the harms of smoking.

National Tobacco Control Program

In FY 2016 , CDC will provide expertise and guidance on tobacco control efforts at the state and local level through the National Tobacco Control Program[166], which funds all 50 states, Washington, D.C., eight U.S. territories, and eight tribal-serving organizations. In addition, CDC will fund national networks to provide guidance to states on reducing tobacco use among certain population groups and address tobacco-related cancer issues. These efforts will continue to advance CDC's strategies to:

- Eliminate death and disease caused by tobacco use, including educating about the danger of tobacco use and promoting quitting
- Enhance surveillance, research, and evaluation
- Build state and local capacity
- Eliminate tobacco-related disparities

In particular, CDC will address tobacco-related disparities by supporting the national networks' expanded reach and information sharing on evidence-based strategies to reduce tobacco use among specific populations. CDC will also focus on disseminating the findings of the 50th Anniversary Surgeon General's report [167]—including specific findings on the nation's tobacco-related disparities—and identifying and informing the public about emerging tobacco control issues (e.g., electronic nicotine-delivery systems).

[166] http://www.cdc.gov/tobacco/tobacco_control_programs/ntcp/index.htm
[167] http://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf

CDC efforts to support smoking cessation services in 50 states, two territories, and Washington, D.C., will maintain and augment the national network of tobacco cessation quitlines to ensure capacity to deal with increases in quit attempts due to national education campaign efforts. Stakeholders will use data from the National Quitline Data Warehouse to evaluate state quitline progress.

CDC will continue conducting and disseminating tobacco prevention research through its Tobacco Laboratory. The Tobacco Laboratory[168] examines toxic and addictive substances in tobacco products, tobacco smoke, tobacco users, and people exposed to secondhand smoke. Priority areas for CDC include sustaining state tobacco prevention, control, and surveillance programs, as well as addressing emerging public health concerns about non-combustible (e.g., electronic cigarettes, snuff, dissolvables, moist and dry snuff, chewing tobacco) and other nontraditional tobacco products (e.g., little cigars, hookahs).

In partnership with the Food and Drug Administration, as well as other national, non-governmental partners, CDC will also continue to explore the public health impacts of emerging products, such as electronic nicotine delivery systems (or ENDS) (including e-cigarettes and related products). CDC's surveillance and epidemiology has already called attention to the alarming increase in the use of ENDS, especially by youth and adult nonusers of conventional tobacco products. In FY 2015, CDC will continue to integrate these emerging products into national surveillance systems and monitor national trends in use, especially ENDS use in conjunction with conventional tobacco products. CDC will also continue to conduct new scientific research to better understand the health effects of ENDS use, including the effect of exposure to ENDS aerosol on bystanders. Furthermore, CDC will continue to provide guidance to states on ENDS and how these products fit into the larger tobacco control framework.

Tobacco Prevention and Control Grants to States

CDC's tobacco prevention and control grants help states prevent tobacco use initiation among youth and young adults, promote cessation, eliminate secondhand smoke exposure, and identify and eliminate tobacco-related disparities. Grantees include all 50 states and Washington, D.C. CDC determined funding based on the state or jurisdiction's population, spending history, and quality of their application.

Tobacco Prevention and Control[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	51	51	51	51	51	0
- New Awards	0	0	0	51	0	-51
- Continuing Awards	51	51	51	0	51	+51
Average Award	$1.181	$1.181	$1.181	$1.181	$1.181	$0.000
Range of Awards	$0.532–$1.872	$0.532–$1.872	$0.532–$1.872	$0.532–$1.872	$0.532–$1.872	N/A
Total Awards	**$60.321**	**$60.321**	**$60.321**	**$60.321**	**$60.321**	**$0.000**

[1] These funds are partially awarded by formula.

[168] http://www.cdc.gov/biomonitoring/tobacco.html

Cancer Prevention and Control Budget Request [1]

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$246.323	$248.649	$118.672	-$129.977
ACA/PPHF	$104.000	$104.000	$179.204	+$75.204
Total	**$350.323**	**$352.649**	**$297.876**	**-$54.773**
Cancer Prevention and Control	**$350.323**	**$352.649**	**$297.876**	**-$54.773**
ACA/PPHF (*non-add*)	$104.000	$104.000	$179.204	+$75.204
Breast and Cervical Cancer – PL	$206.993	$206.993	$169.204	-$37.789
ACA/PPHF (*non-add*)	$104.000	$104.000	$169.204	+$65.204
WISEWOMAN (*non-add*)	$21.114	$21.114	$21.170	+$0.056
Colorectal Cancer (*non-add*)	$43.294	$43.294	$39.515	-$3.779
ACA/PPHF (*non-add*)	$0.000	$0.000	$10.000	+$10.000
Prostate Cancer (*non-add*)	$13.205	$13.205	$0.000	-$13.205

[1] WISEWOMAN is funded through the Breast and Cervical budget line and managed under the Heart Disease and Stroke budget line.

Overview

Cancer affects an estimated one in three Americans, either through their own diagnosis or that of a loved one. Cancer is the second leading cause of death in the United States, resulting in over 600,000 American deaths annually, nearly as many people as the total population of the state of Vermont. Cancer is responsible for more years of life lost than all other causes of death combined. Every year, cancer is responsible for $116 billion in direct medical costs alone. More than half of the cancer deaths in the U.S. are preventable by applying knowledge that we already have such as early screening and detection and lifestyle modifications.

To address this burden, CDC funds cooperative agreements with states, territories, and tribes or tribal organizations to implement four major cancer control programs:

- National Breast and Cervical Cancer Early Detection Program (NBCCEDP)[169]
- Colorectal Cancer Control Program (CRCCP)[170]
- National Program of Cancer Registries (NPCR) [171]
- National Comprehensive Cancer Control Program (NCCCP)[172]

CDC also conducts education, awareness, and applied research related to breast cancer in young women, and prostate, ovarian, skin, and gynecologic cancers. CDC enhances support for these activities with funding awarded to eight academic institutions in the Cancer Prevention and Control Research Network (CPCRN), other academic institutions, and non-governmental organizations.

Budget Request

CDC's FY 2016 request of **$297,876,000** for Cancer Prevention and Control, including $179,204,000 from the Affordable Care Act Prevention and Public Health Fund, is $54,773,000 below the FY 2015 Enacted level.

The FY 2016 budget request includes a decrease of $13,200,000 to eliminate prostate cancer activities. CDC's prostate cancer funding supports applied research and other prostate cancer activities through the Comprehensive Cancer Control Program (CCCP). While the evidence on prostate cancer screening remains unclear, CDC will continue to share resources and lessons learned to support appropriate public health

[169] http://www.cdc.gov/cancer/nbccedp/index.htm
[170] http://www.cdc.gov/cancer/colorectal/
[171] http://www.cdc.gov/cancer/npcr/
[172] http://www.cdc.gov/cancer/ncccp/index.htm

strategies for prostate cancer. The National Program of Cancer Registries (NPCR) will continue to collect national incidence data on cancer cases, including prostate cancer. The request also includes reductions to cancer screening programs including the National Breast and Cervical Cancer Early Detection Program and the Colorectal Cancer Control Program that are now covered through expanded health insurance. Last year, ACA increased the availability of health insurance coverage to millions of people through new state health insurance exchanges and Medicaid. Through ACA, most health plans are now required to cover breast, cervical, colorectal screening without co-pays or deductibles.

Public Health Activities to Support Cancer Prevention and Control for FY 2016

Initiatives	Example of Activities
Screening and Early Detection	Provide lifesaving breast and cervical cancer screening, education, and health promotion to low-income, uninsured, and underinsured women through the NBCCEDP—the only national organized cancer screening program Implement population-based approaches through the CRCCP to increase colorectal screening rates using evidence-based interventions
Surveillance[173]	Collect data on the occurrence of cancer; the type, extent, and location of the cancer; and the type of initial treatment for 96% of the U.S. population through the NPCR
Comprehensive Cancer Control[174]	Unite robust coalitions of key public and private partners to prioritize prevention, targeting the reduction of the highest burden cancers within states, tribes and territories
Research and Dissemination	Collaborate with the Office of the Surgeon General (OSG)-led on the development of the Surgeon General's Call To Action To Prevent Skin Cancer[175] which called for a multi-sector, comprehensive approach to promote skin cancer prevention and reduce exposure to ultraviolet radiation among all Americans
Health[176] Communications	Increase awareness of breast cancer and improve the health and quality of life of young breast cancer survivors and young women[177] who are at higher risk of getting breast cancer

CDC's Cancer Prevention Efforts and the Affordable Care Act

CDC cancer screening programs provide recommended breast, cervical and colorectal cancer screening and diagnostic services to age-appropriate low-income, uninsured, and underinsured adults. The programs also support public health activities such as education and outreach, quality assurance, surveillance, and patient navigation/case management to help ensure people receive quality screening. Because the ACA affords greater access to coverage for these screening services, the size of the populations eligible for the NBCCEDP and CRCCP are expected to shrink. However, estimates have shown that at least 4.5 million women may remain uninsured and eligible for breast or cervical cancer screening through NBCCEDP.

While access to health insurance coverage is essential, it is not the only factor that limits participation in cancer screening. Numerous barriers to screening even among those with insurance will continue to exist, including:

[173] http://www.cdc.gov/cancer/npcr/
[174] http://www.cdc.gov/cancer/ncccp/
[175] http://www.cdc.gov/cancer/skin/call_to_action/?s_cid=dcpc_budget_010
[176] http://www.cdc.gov/cancer/breast/young_women/what_cdc_is_doing.htm
[177] http://www.cdc.gov/cancer/breast/young_women/what_cdc_is_doing.htm?s_cid=dcpc_budget_011

- Patient factors, such as:
    - Education
    - Limited English proficiency
    - Lack of awareness or health literacy
    - Geographic isolation
- Provider or clinical system factors, such as:
    - Lack of physician availability or physician recommendation
    - Absence of reminder systems
    - Not using provider assessment and feedback

In FY 2016 and beyond, CDC's cancer screening programs will continue to complement the benefits provided through ACA by leveraging their extensive capacity and linkages with the clinical care system to increase the use of recommended cancer screenings on a population level, while still providing direct services to people who are not covered by insurance. CDC screening programs will work with healthcare systems, Federally Qualified Health Centers (FQHCs), state Medicaid offices, employers, and private insurers to increase widespread participation in cancer screening through enhanced support for the following evidence-based public health approaches:

- Public education and outreach: Educate men and women about breast, cervical and colorectal screening through traditional small and large media, and newer social media; and increase the use of community health workers and patient navigators to help underserved men and women overcome barriers and get into screening.
- Clinical services and care coordination: Provide screening and diagnostic services to people not covered by insurance, especially in states that do not expand Medicaid eligibility; and support case management and patient navigation to help people who have abnormal test results receive follow-up tests and treatment.
- Quality assurance, surveillance, and monitoring: Assure quality screening for all people by improving health departments ability to monitor cancer screening by, for example, adapting the use of CDC's existing quality assurance tracking systems in other health care settings (e.g. FQHCs) to ensure timely screening, diagnostic follow-up, and treatment initiation occurs especially for underserved or previously uninsured populations.
- Organized systems: Increase more organized, systematic delivery and receipt of screening services within healthcare systems (e.g., Medicaid or state insurance exchanges) by, for example, using population-based screening registries to identify those in need of screening and create active outreach and management systems that promote and facilitate screening, particularly for hard to reach populations.

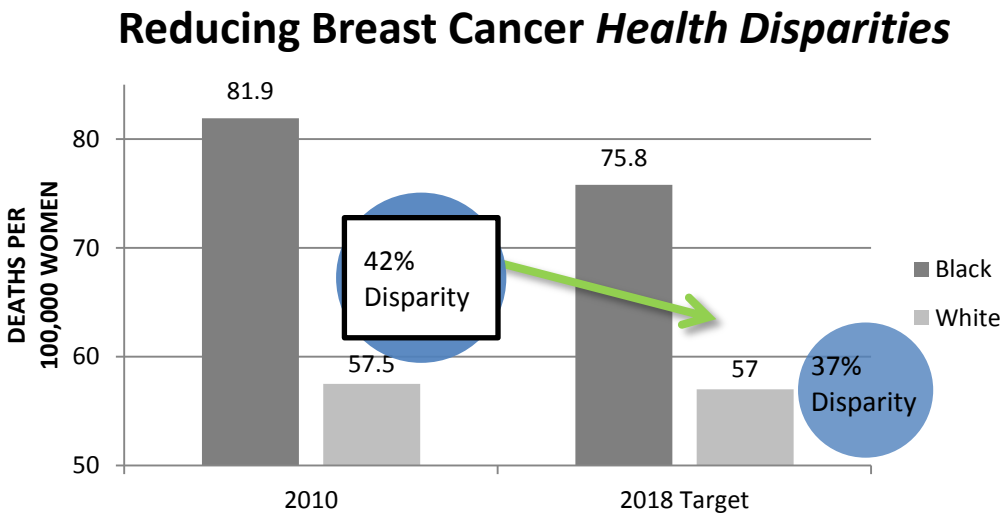
National Breast and Cervical Cancer Early Detection Program

Breast cancer is the second leading cause of cancer deaths among women in the United States. However, the burden of breast cancer is not distributed equally, and disparities exist among certain populations. Excluding certain skin cancers, breast cancer is the most common cancer in women, no matter race or ethnicity and the most common cause of cancer death among Hispanic women.

Persistent lower mammography use among certain minority populations will continue to result in patients receiving a diagnosis of breast cancer at later stages and a potentially slower decrease in breast cancer death rates. One study addressing preventable deaths in the United States has estimated that a 5% increase in mammography use could prevent 560 deaths from breast cancer each year.

The National Breast and Cervical Cancer Early Detection Program is working to address these barriers through evidence-based interventions, targeted outreach to underserved communities, assuring quality screening occurs for all women, and providing direct services to the most vulnerable.

CDC will also assist grantees to expand the use of evidence-based interventions and health promotion practices to reduce barriers to screening and encourage widespread participation in lifesaving cancer screening services. In FY 2014, the Mississippi Breast and Cervical Cancer Program (MBCCP) developed *Praises in Pink*[178] organize activities within houses of worship to educate African-American women about their breast cancer risk and the importance of mammography. A total of 354 trained liaisons representing 571 hosting sites participated in the campaign. This resulted in a 70 percent increase in the number of women who received services through MBCCP in the counties that conducted Praises in Pink activities.



In FY 2014, CDC released a supplement in the journal Cancer [179] titled National Breast and Cervical Cancer Early Detection Program: Two Decades of Service to Underserved Women. It contained 13 new articles evaluating multiple aspects of the NBCCEDP, illustrating the program's considerable value, beyond the original purpose of detecting cancers in underserved women.

In FY 2015 - FY 2016, NBCCEDP will continue funding 50 states and Washington, D.C., five territories, and 11 tribal organizations through a competitively awarded, five-year cooperative agreement (FY 2012-2017). These investments enable grantees to provide breast and cervical cancer screenings and diagnostic follow up services for low-income, uninsured, and underserved women.

National Breast and Cervical Cancer Early Detection Program (NBCCEDP) Grants[1]

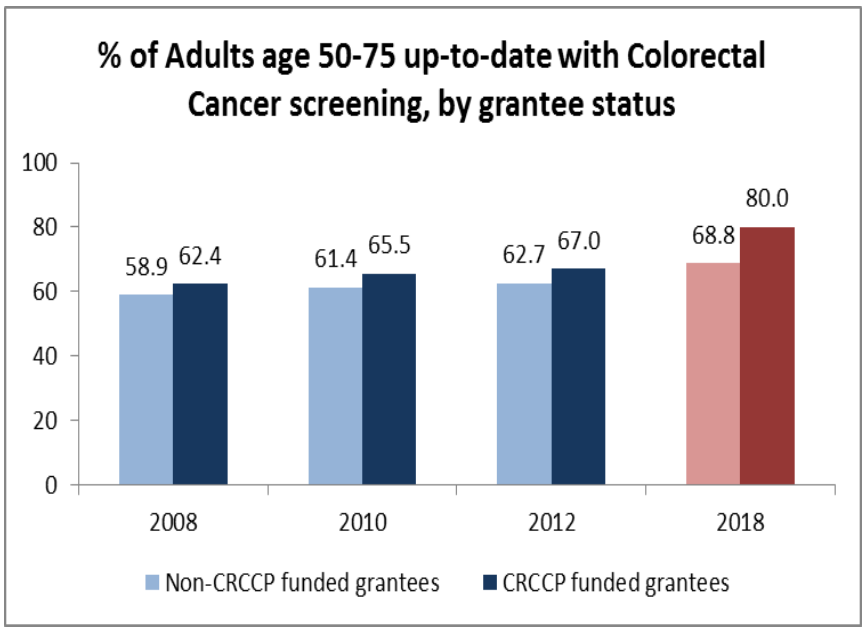
(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	67	67	67	67	67	0
- New Awards	67	67	67	0	0	0
- Continuing Awards	0	0	0	67	67	0
Average Award	$2.355	$2.260	$2.260	$0.238–$8.172	$1.700	N/A
Range of Awards	$0.238-$8.693	$0.238–$8.172	$0.238–$8.172	$0.189–$7.488	$0.189-$6.924	N/A
Total Awards	**$159.259**	**$151.441**	**$151.441**	**$151.441**	**$113.650**	**-$37.791**

[1] These funds are partially awarded by formula.

[178] http://www.cdc.gov/cancer/nbccedp/state.htm
[179] http://onlinelibrary.wiley.com/doi/10.1002/cncr.v120.S16/issuetoc?campaign=woletoc

Colorectal Cancer Control Program

Colorectal cancer is the second leading cause of cancer deaths in the United States for men and women. Every year, about 140,000 Americans are diagnosed with colorectal cancer, and more than 50,000 people die from it. Colorectal cancer screening is a high-impact, cost-effective service. Unfortunately, national screening rates are about 65%, meaning approximately 1 in 3 (23 million) age-appropriate adults are not getting screened. CDC, in collaboration with partners, has committed to the "80% by 2018" initiative to increase national screening rates (see figure).



In FY 2015 - FY 2016, the Colorectal Cancer Control Program (CRCCP)[180] will begin a new five-year cooperative agreement (FY2015 – FY2020) competitively awarded to approximately 29 grantees. The CRCCP will emphasize the promotion of population-level screening through practices such as use of media, client reminders, and patient navigation, among other strategies. Most of the funding will be used to implement interventions to increase overall screening rates. The remainder will provide direct screening and diagnostic follow-up services to low-income, uninsured, or underinsured men and women age 50 to 64.

Since 2009, CDC's CRCCP has worked with the Alaskan Native Tribal Health Consortium (ANTHC) CRCCP to improve screening rates at the Alaska Native Medical Center (ANMC) in Anchorage, Alaska. AHTHC partnered with seven rural regional tribal health organizations that serve approximately 40,224 Alaska Native people. Age-Appropriate screening rates for Colorectal Cancer across the state increased 3.8% each year since CRCCP implementation. Screening rates increased by an average of 73% between 2009 and 2012 in the Regions that partner with the ANTHC CRCCP. The data should also show that Alaska Native adults, ages 50-74, which had ever had a sigmoidoscopy or colonoscopy, achieved a screening rate of 68.1% in 2012. The 68.1% is a vast improvement compared to 50% in 2010.

Colorectal Cancer Control Program (CRCCP) Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	29	29	29	29	29	29
- New Awards	0	0	0	0	0	0
- Continuing Awards	29	29	29	29	29	0
Average Award	$0.885	$0.810	$0.790	$0.790	$0.680	-$0.110
Range of Awards	$0.362-$0.1497	$0327-$1.303	$0.118–$1.300	$0.118–$1.300	$0.116–$1.100	N/A
Total Awards	**$25.676**	**$23.496**	**$22.801**	**$22.801**	**$19.021**	**-$2.960**

[1] These funds are not awarded by formula.

[180] http://www.cdc.gov/cancer/crccp/

National Program of Cancer Registries

Reliable cancer data is critical to improving the health of individuals, populations, and reducing the nation's cancer burden. The National Program of Cancer Registries (NPCR)[181] provides such quality data by funding central cancer registries to collect, manage, and analyze data about cancer cases for 96% of the U.S. population, effectively providing a census of all cancer cases in the nation. This data enables health agencies to report on cancer trends, assess the impact of cancer prevention and control efforts, and participate in research.

In FY 2014, CDC reduced reporting and data turnaround time by half for pediatric cancer patients, decreasing a two year data lag to only nine months. By implementing early case capture (ECC), data for pediatric cases are reported within weeks to seven central cancer registries and 97% are more rapidly available for research, incidence reporting, and public health action at the state level. The shorter lag time also allows researchers to identify individuals for clinical trials—especially for rare cancers—sooner, and update research findings that can inform the success and impact of clinical trials.

In 2013, NPCR was successful in getting cancer reporting from providers to state cancer registries. Receiving this information from state providers is an *objective* included in the Centers for Medicaid and Medicare Services and Office of the National Coordinator for Health IT's *Stage 2 Final Rule for Meaningful Use for Electronic Health Records (EHRs)*[182]. Enhanced use of EHRs will improve the timeliness, completeness and quality of cancer data reported from non-hospital facilities and increase public health programs' ability to plan and target health care interventions designed to reduce cancer incidence or improve early detection. In one year the number of CDC-funded state cancer registries that electronically receive physician cancer reports from Electronic Health Record (EHR)/Electronic Medical Record (EMR) systems increased from a baseline of zero to 13 (28% of registries).

The NPCR is a five-year cooperative agreement represented in 45 states, Washington, D.C., Puerto Rico, and the U.S. Pacific Island jurisdictions. In FY 2015 – FY 2016, CDC will continue to collect vital data about cancer cases and deaths for the U.S. The current funding cycle for this Funding Opportunity Announcement (FOA) runs through 2017. CDC expects to continue maintaining the existing 48 cancer registries that provide high-quality data while expanding electronic reporting to cancer registries and enhancing use of registry data.

National Program of Cancer Registries (NPCR) Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	48	48	48	48	48	0
- New Awards	48	0	48	0	0	0
- Continuing Awards	0	48	0	48	48	0
Average Award	$0.775	$0.769	$0.769	$0.769	$0.769	$0.000
Range of Awards	$0.248-$3.095	$0.275–$3.045	$0.275–$3.045	$0.275–$3.045	$0.275–$3.045	N/A
Total Awards	**$37.215**	**$36.900**	**$ 37.423**	**$37.423**	**$37.423**	**$0.000**

[1] These funds are not awarded by formula.

National Comprehensive Cancer Control Program

The National Comprehensive Cancer Control Program (NCCCP)[183] brings together coalitions of key public and private partners to develop and implement cancer plans and prioritize efforts to reduce the highest burden cancers within their state, territory, or tribal organization. The NCCCP provides the evidence base to develop and implement approaches aimed at primary prevention (e.g., increasing physical activity), detecting cancers

[181] http://www.cdc.gov/cancer/npcr/
[182] http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Stage_2.html
[183] http://www.cdc.gov/cancer/ncccp/

earlier when they are more treatable (e.g., colorectal cancer screening), increasing access to treatment, and improving the quality of life of cancer survivors.

In FY 2014, the Maryland Colorectal Cancer Control Program (MCCCP) supported projects to educate the public and increase colorectal cancer (CRC) screening rates. The screening program is helping to achieve the goal of reducing colorectal cancer incidence and mortality. For example, Mercy Medical Center provided free colorectal cancer screenings to the uninsured of Baltimore, screening more than 300 men and women.

The NCCCP is a five-year cooperative agreement (FY 2012 – FY2017) competitively awarded to 50 states and Washington, D.C., seven tribal organizations, and seven U.S. territories. In FY 2015 – FY 2016, CDC will continue to support NCCCP grantees to maintain and strengthen cancer coalitions of key public and private partners to develop and implement state cancer plans and prioritize efforts to reduce the highest burden cancers in their respective jurisdiction. CDC will support grantees to use systems and environmental change strategies to improve social and physical environments that make adopting healthy behaviors easier, accessing quality clinical care more convenient, and successfully managing post-treatment follow-up more probable.

National Comprehensive Cancer Control Program (NCCCP) Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	65	65	65	65	65	0
- New Awards	65	65	65	0	0	0
- Continuing Awards	0	0	0	65	65	0
Average Award	$0.303	$0.340	$0.337	$0.337	$0.337	$0.000
Range of Awards	$0.147-$0.158	$0.195-$0.722	$0.095–$0.731	$0.095–$0.731	$0.095–$0.731	N/A
Total Awards	**$19.695**	**$22.058**	**$21.906**	**$21.906**	**$21.906**	**$0.000**

[1] These funds are not awarded by formula.

[2] Includes funding from multiple Cancer lines.

Oral Health Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$15.749**	**$15.749**	**$15.749**	**$0.000**

Overview

Tooth decay is one of the most common chronic diseases in children aged 6 to 11 years (53% in primary and permanent teeth) and adolescents aged 12 to 19 years (59% in permanent teeth). CDC's Division of Oral Health[184] leads federal and state initiatives to prevent oral diseases by monitoring health trends, translating research into practice, and advancing safe and effective strategies to improve oral health and reduce dental care expenditures. The two primary population-based strategies to decrease oral disease are community water fluoridation and dental sealants. School-based dental sealant programs reduce tooth decay by about 50% within four years. CDC is targeting high-risk children through school-based dental sealant programs where at least 50% of students participate in free and reduced-cost meal programs.

In 2010 - 2012, 6.3 million new people gained access to fluoridated water, saving an estimated $242 million in dental treatment

Budget Request

CDC's FY 2016 request of **$15,749,000** for Oral Health is level with the FY 2015 Enacted level. CDC funds 21 programs in state health departments[185] to strengthen the nation's oral health infrastructure, extend the use of proven prevention strategies, and reduce disparities in oral healthcare.

In FY 2014, CDC:

- Increased the number of high-risk students receiving dental sealants through schools that offer free and reduced-cost meal programs
- Provided consultation to all 50 states and intensive training to 25 states on expanding community access to optimally fluoridated water systems
- Published new research findings on infection control as it relates to the transmission of tuberculosis and hepatitis B

Every $1 invested in community water fluoridation saves $38 in dental treatment costs.

In FY 2015, CDC:

- Collaborated with Centers for Medicare and Medicaid Services (CMS) and Health Resources and Services Administration (HRSA) to increase access to preventive oral health services, including dental sealants among Medicaid and State Children's Health Insurance Program (SCHIP) beneficiaries.
- Enhanced state leadership and technical expertise nationwide through a partnership with the Association of State and Territorial Dental Directors[186]

In FY 2016, CDC will conduct research, analysis, and translation of national and state-level data on oral disease burden, dental care service use, preventive services, and cost-effectiveness data.

[184] http://www.cdc.gov/oralhealth/
[185] http://www.cdc.gov/OralHealth/state_programs/index.htm
[186] http://www.astdd.org/

Oral Health State Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	20	21	21	21	21	0
- New Awards	0	21	21	0	0	0
- Continuing Awards	20	0	0	21	21	0
Average Award	$0.311	$0.298	$0.284	$0.297	$0.298	$0.000
Range of Awards	$0.235-$0.355	$0.150-$0.370	$0.150–$0.311	$0.228–$0.309	$0.200–$0.350	N/A
Total Awards	**$6.220**	**$5.965**	**$5.965**	**$6.243**	**$6.243**	**$0.000**

[1] These funds are not awarded by formula.

Affordable Care Act Prevention and Public Health Fund

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
ACA/PPHF	**$446.000**	**$451.000**	**$480.204**	**+$29.204**

Overview

The following activities are included:

- Cancer Prevention and Control, $179,204,000 (included in the Cancer Prevention and Control narrative)
- Tobacco Campaign and Quitlines, $110,000,000 (included in the Tobacco Prevention and Control narrative)
- Diabetes Prevention, $73,000,000 (included in the Diabetes narrative)
- Heart Disease and Stroke Prevention, $73,000,000 (included in the Heart Disease and Stroke narrative)
- Prevention Resource Centers, $25,000,000 (included in the Prevention Resource Centers narrative)
- Nutrition, Physical Activity and Obesity, $4,000,000 (included in the Nutrition, Physical Activity and Obesity narrative)
- Million Hearts™®, $4,000,000
- Healthy Weight Task Force/Early Child Care Collaboratives, $4,000,000
- Hospitals Promoting Breastfeeding, $8,000,000

Million Hearts®

Million Hearts®[187] is a national, public-private initiative to prevent one million heart attacks and strokes by 2017. Co-led by CDC and the Centers for Medicare & Medicaid Services, the initiative brings together communities, health care professionals, health systems, nonprofit organizations, federal agencies, and other public and private-sector partners to improve care and empower Americans to make heart-healthy choices. The initiative will result in:

- Improved performance on the "ABCS" of clinical prevention[188]—aspirin when appropriate, blood pressure control, cholesterol management and smoking cessation—to prevent heart attacks and strokes and reduce the number of people needing medical treatment
- Prevention of heart attacks and strokes by making healthy living easier[189]—preventing or quitting tobacco use and reducing salt (sodium) and trans-fat consumption
- Reduced health disparities in the rates of those who experience heart attacks and strokes.

Million Hearts® developed sample evidence-based treatment protocols for improving blood pressure control, including customizable protocols190, for practices and health care systems to select from when caring for patients. In FY 2014, Million Hearts® focused on employing the full potential of electronic health records for improved identification of hypertension. CDC also developed the Million Hearts® Hypertension Control Challenge to identify providers that worked with their patients to achieve hypertension control rates at or above 70%. Across the nine winners—who cared for a total of 8.3 million patients, of which 3.4 million had hypertension—they collectively achieved a control rate of 80%. With FY 2015 investments, CDC and the Association for State and Territorial Health Officers (ASTHO) worked with ten state health agencies to achieve Million Hearts goals by addressing uncontrolled high blood pressure. For example, Ohio has worked to improve detection and management of high blood pressure among African American males in 11 healthcare sites across

[187] http://millionhearts.hhs.gov/index.html
[188] http://circ.ahajournals.org/content/124/16/1795.full
[189] http://www.cdc.gov/stroke/healthy_living.htm
[190] http://millionhearts.hhs.gov/resources/protocols.html

counties. Practices have reported an increase in blood pressure control rates from 69.7% to 73.4%, and an increase in the percent of patients that come to follow-up appointments from 66% to 68.8%.

CDC's FY 2016 request includes $4,000,000 in Prevention and Public Health Fund investments. This support will continue to build on successes working with state health agencies to rapidly improve hypertension control by scaling up successful approaches in additional geographic areas, and supporting expanded use of electronic health records at federally qualified health centers to continue to find those at risk for heart attacks and strokes.

Healthy Weight Task Force Activities/Early Child Care Collaboratives

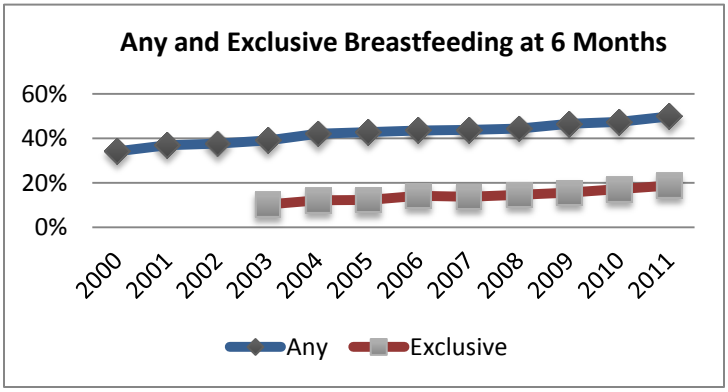
Childhood obesity has more than tripled in the past 30 years, putting our nation's youth at immediate and long-term risk for developing costly, preventable chronic diseases, and early morbidity. Many of the nation's children are already obese by the time they enter kindergarten. Obese youth are more likely to have risk factors for cardiovascular disease, such as high cholesterol or high blood pressure, and to experience more severe forms of obesity as adults.

The FY 2016 budget request includes $4,000,000 from the Prevention and Public Health Fund to continue CDC support for the Let's Move Child Care Initiative. CDC will continue to fund Early Child Care Collaboratives to bring together teams of child care providers and support them with technical assistance, tools, materials, and resources for obesity prevention. In FY 2016, CDC will expand efforts to improve physical activity and nutrition environments in early childhood education (ECE), including limiting screen time and supporting breastfeeding. CDC will provide consultation and in-person training on best practices to ECE directors, providers, and resource and referral service groups.

Hospitals Promoting Breastfeeding

Supporting breastfeeding is a key CDC strategy for improving the health of mothers and infants. CDC is committed to supporting women who choose to breastfeed by supporting recommended breastfeeding practices within hospitals, early care and education, and other community settings. Breastfeeding reduces the risk of infections and Sudden Infant Death Syndrome (SIDS) in infancy, obesity in childhood, and development of type 2 diabetes in adulthood. In addition, breastfeeding reduces the risk of breast and ovarian cancer for the mother resulting in direct medical cost savings[191]. CDC contributed to significant increases in rates of any breastfeeding at 6 months from 37 % in 2001 to 49 % in 2011, and exclusive breastfeeding at 6 months from 10% in 2003 to 19% in 2011. In FY 2016, CDC will provide resources and assistance to hospitals, employers, and national and community organizations to improve breastfeeding practices; conduct national surveillance of breastfeeding; and work with state and community grantees to increase:

- Baby-friendly best practices in hospitals
- Availability of peer and professional lactation consultants
- The percentage of employers providing space and time for nursing mothers to express breast milk



[191] Bartick et al Obstetrics and Gynecology 2013;0:1-9

State Table: State and Local Public Health Actions to Prevent Chronic Disease Program[1,2]

	FY 2015 Estimate Diabetes	FY 2015 Estimate Heart Disease & Stroke	FY 2015 Estimate Nutrition, Physical Activity & Obesity	FY 2015 Estimate School Health
Alabama	$553,538	$653,474	$140,416	$57,621
Alaska	$332,635	$543,324	$117,051	$48,033
Arizona	$877,528	$1,012,229	$462,795	$209,616
Arkansas	$860,508	$798,006	$415,125	$202,160
California	$3,248,900	$3,180,868	$596,691	$293,796
Colorado	$819,456	$934,854	$411,017	$138,933
Connecticut	$737,853	$848,468	$373,956	$169,219
Delaware	$363,828	$566,854	$117,247	$48,113
District of Columbia	$445,588	$574,458	$139,352	$57,184
Florida	$1,116,458	$1,273,484	$527,149	$177,721
Georgia	$468,145	$733,747	$147,932	$60,705
Hawaii	$1,770,338	$1,919,661	$117,718	$48,307
Idaho	$822,404	$724,521	$369,027	$126,684
Illinois	$512,084	$746,505	$129,305	$53,061
Indiana	$838,623	$973,565	$435,127	$197,934
Iowa	$801,777	$747,346	$373,433	$182,605
Kansas	$2,441,325	$2,383,711	$383,823	$188,092
Kentucky	$794,763	$910,109	$410,455	$185,182
Louisiana	$364,362	$602,976	$143,119	$58,730
Maine	$723,583	$821,631	$365,879	$124,583
Maryland	$2,572,511	$2,700,935	$418,557	$190,149
Massachusetts	$2,609,111	$2,723,219	$419,323	$142,863
Michigan	$2,680,967	$2,832,938	$475,558	$216,823
Minnesota	$2,566,604	$2,694,525	$418,070	$189,949
Mississippi	$790,841	$906,215	$419,155	$189,081
Missouri	$826,540	$959,019	$429,325	$195,224
Montana	$718,095	$829,893	$381,936	$173,151
Nebraska	$2,060,033	$2,155,895	$372,205	$127,700
Nevada	$401,463	$553,905	$119,077	$48,865
New Hampshire	$336,297	$536,421	$117,661	$48,283
New Jersey	$1,047,508	$917,675	$463,910	$156,987
New Mexico	$381,391	$601,106	$141,780	$58,181
New York	$2,887,575	$3,046,684	$532,850	$179,539
North Carolina	$2,713,229	$2,865,050	$500,105	$227,225
North Dakota	$412,281	$543,282	$117,022	$48,021
Ohio	$2,205,711	$2,448,928	$127,970	$52,514
Oklahoma	$1,741,835	$1,834,363	$120,154	$49,306
Oregon	$863,168	$763,950	$379,542	$130,190
Pennsylvania	$1,032,909	$1,181,706	$515,491	$173,459
Rhode Island	$2,496,752	$2,593,453	$376,698	$129,023
South Carolina	$2,744,691	$2,620,574	$452,753	$155,016
South Dakota	$315,568	$498,214	$117,163	$48,079
Tennessee	$1,005,544	$883,190	$454,329	$155,667
Texas	$505,227	$847,792	$162,980	$66,881
Utah	$2,488,524	$2,598,150	$373,184	$168,895

	FY 2015 Estimate Diabetes	FY 2015 Estimate Heart Disease & Stroke	FY 2015 Estimate Nutrition, Physical Activity & Obesity	FY 2015 Estimate School Health
Vermont	$383,897	$535,448	$116,963	$47,997
Virginia	$2,219,484	$2,365,737	$463,180	$211,087
Washington	$2,637,845	$2,784,715	$467,195	$213,063
West Virginia	$403,261	$587,792	$137,797	$56,546
Wisconsin	$816,985	$947,223	$423,732	$192,601
Wyoming	$390,199	$519,427	$105,488	$43,288
TOTAL	**$64,149,740**	**$69,827,213**	**$16,297,770**	**$6,713,932**

[1]This state table is a snapshot of selected programs that fund most states (and in some cases local, tribal, and territorial grantees) through State Public Health Actionso Prevent Chronic Disease Cooperative Agreement. For a more comprehensive view of grant and cooperative agreement funding to grantees by jurisdiction, visit http://wwwn.cdc.gov/Fundingprofiles/FundingProfilesRIA/

[2]These amounts include awards made under *State Public Health Actions (1305)* and *State and Local Public Health Actions (1422)*

State Table: National Breast and Cervical Cancer Early Detection Program [1,192]

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget	FY 2016 +/- 2015
Alabama	$3,100,000	$3,100,000	TBD	TBD
Alaska	$2,041,576	$2,041,576	TBD	TBD
Arizona	$2,333,400	$2,333,400	TBD	TBD
Arkansas	$2,444,457	$2,444,457	TBD	TBD
California	$6,965,385	$6,965,385	TBD	TBD
Colorado	$3,928,164	$3,928,164	TBD	TBD
Connecticut	$1,352,877	$1,352,877	TBD	TBD
Delaware	$1,050,849	$1,050,849	TBD	TBD
Florida	$4,983,334	$4,983,334	TBD	TBD
Georgia	$4,071,338	$4,071,338	TBD	TBD
Hawaii	$968,189	$968,189	TBD	TBD
Idaho	$1,648,966	$1,648,966	TBD	TBD
Illinois	$5,972,943	$5,972,943	TBD	TBD
Indiana	$1,941,968	$1,941,968	TBD	TBD
Iowa	$1,869,823	$1,869,823	TBD	TBD
Kansas	$2,569,785	$2,569,785	TBD	TBD
Kentucky	$2,724,892	$2,724,892	TBD	TBD
Louisiana	$2,000,000	$2,000,000	TBD	TBD
Maine	$1,569,032	$1,569,032	TBD	TBD
Maryland	$4,266,212	$4,266,212	TBD	TBD
Massachusetts	$1,822,579	$1,822,579	TBD	TBD
Michigan	$8,693,035	$8,693,035	TBD	TBD
Minnesota	$4,274,527	$4,274,527	TBD	TBD
Mississippi	$2,337,317	$2,337,317	TBD	TBD
Missouri	$2,730,904	$2,730,904	TBD	TBD
Montana	$2,167,744	$2,167,744	TBD	TBD
Nebraska	$2,681,281	$2,681,281	TBD	TBD
Nevada	$2,215,020	$2,215,020	TBD	TBD
New Hampshire	$1,424,956	$1,424,956	TBD	TBD
New Jersey	$2,657,935	$2,657,935	TBD	TBD
New Mexico	$3,075,255	$3,075,255	TBD	TBD
New York	$8,269,773	$8,269,773	TBD	TBD
North Carolina	$3,107,295	$3,107,295	TBD	TBD
North Dakota	$1,453,076	$1,453,076	TBD	TBD
Ohio	$4,138,701	$4,138,701	TBD	TBD
Oklahoma	$1,165,687	$1,165,687	TBD	TBD
Oregon	$2,117,056	$2,117,056	TBD	TBD
Pennsylvania	$2,547,613	$2,547,613	TBD	TBD
Rhode Island	$1,544,551	$1,544,551	TBD	TBD
South Carolina	$2,996,701	$2,996,701	TBD	TBD
South Dakota	$811,626	$811,626	TBD	TBD
Tennessee	$1,187,135	$1,187,135	TBD	TBD
Texas	$6,205,712	$6,205,712	TBD	TBD
Utah	$2,356,418	$2,356,418	TBD	TBD
Vermont	$613,999	$613,999	TBD	TBD
Virginia	$2,450,316	$2,450,316	TBD	TBD
Washington	$4,121,808	$4,121,808	TBD	TBD

[192] CFDA NUMBER: 93.919, DISCRETIONARY

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget	FY 2016 +/- 2015
West Virginia	$3,969,595	$3,969,595	TBD	TBD
Wisconsin	$3,291,870	$3,291,870	TBD	TBD
Wyoming	$677,903	$677,903	TBD	TBD
Territories			TBD	TBD
American Samoa	$238,323	$238,323	TBD	TBD
Guam	$388,254	$388,254	TBD	TBD
Northern Mariana Islands	$185,022	$185,022	TBD	TBD
Palau	$534,975	$534,975	TBD	TBD
Other Grantees			TBD	TBD
Indian Tribes	$6,960,183	$6,960,183	TBD	TBD
University of Puerto Rico	$319,500	$319,500	TBD	TBD
Washington, D.C.	$471,153	$471,153	TBD	TBD
			TBD	TBD
Subtotal, States	**$144,910,578**	**$144,910,578**	**TBD**	**TBD**
Subtotal, Territories	**$2,137,227**	**$2,137,227**	**TBD**	**TBD**
Subtotal, Other Grantees	**$6,960,183**	**$6,960,183**	**TBD**	**TBD**
Total	**$154,007,988**	**$154,007,988**	**TBD**	**TBD**

[1]This state table is a snapshot of selected programs that fund most states (and in some cases local, tribal, and territorial grantees). For a more comprehensive view of grant and cooperative agreement funding to grantees by jurisdiction, visit http://wwwn.cdc.gov/Fundingprofiles/FundingProfilesRIA/

State Table: National Comprehensive Cancer Control Program [1,193]

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget	FY 2016 +/- 2015
Alabama	$297,420	$297,420	$297,420	$0
Alaska	$375,451	$375,451	$375,451	$0
Arizona	$282,412	$282,412	$282,412	$0
Arkansas	$294,094	$294,094	$294,094	$0
California	$0	$0	$0	$0
Colorado	$451,929	$451,929	$451,929	$0
Connecticut	$223,000	$223,000	$223,000	$0
Delaware	$276,176	$276,176	$276,176	$0
Florida	$382,547	$382,547	$382,547	$0
Georgia	$244,349	$244, 349	$244, 349	$0
Hawaii	$257,365	$257,365	$257,365	$0
Idaho	$294,116	$294,116	$294,116	$0
Illinois	$222,057	$222,057	$222,057	$0
Indiana	$277,695	$277,695	$277,695	$0
Iowa	$501,647	$501,647	$501,647	$0
Kansas	$380,585	$380,585	$380,585	$0
Kentucky	$0	$0	$0	$0
Louisiana	$0	$0	$0	$0
Maine	$391,900	$391,900	$391,900	$0
Maryland	$249,854	$249,854	$249,854	$0
Massachusetts	$721,954	$721,954	$721,954	$0
Michigan	$731,443	$731,443	$731,443	$0
Minnesota	$468,877	$468,877	$468,877	$0
Mississippi	$234,300	$234,300	$234,300	$0
Missouri	$251,108	$251,108	$251,108	$0
Montana	$316,140	$316,140	$316,140	$0
Nebraska	$338,877	$338,877	$338,877	$0
Nevada	$252,445	$252,445	$252,445	$0
New Hampshire	$258,919	$258,919	$258,919	$0
New Jersey	$464,800	$464,800	$464,800	$0
New Mexico	$327,964	$327,964	$327,964	$0
New York	$639,000	$639,000	$639,000	$0
North Carolina	$504,465	$504,465	$504,465	$0
North Dakota	$362,792	$362,792	$362,792	$0
Ohio	$353,169	$353,169	$353,169	$0
Oklahoma	$148,000	$148,000	$148,000	$0
Oregon	$499,807	$499,807	$499,807	$0
Pennsylvania	$530,605	$530,605	$530,605	$0
Rhode Island	$324,256	$324,256	$324,256	$0
South Carolina	$318,238	$318,238	$318,238	$0
South Dakota	$234,001	$234,001	$234,001	$0
Tennessee	$304,351	$304,351	$304,351	$0
Texas	$422,463	$422,463	$422,463	$0
Utah	$606,928	$606,928	$606,928	$0
Vermont	$255,033	$255,033	$255,033	$0
Virginia	$229,383	$229,383	$229,383	$0
Washington	$568,660	$568,660	$568,660	$0

[193] CFDA NUMBER: 93.283, Discretionary

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget	FY 2016 +/- 2015
West Virginia	$299,469	$299,469	$299,469	$0
Wisconsin	$279,861	$279,861	$279,861	$0
Wyoming	$252,572	$252,572	$252,572	$0
Washington, D.C.	$198,000	$198,000	$198,000	$0
University of Kentucky	$440,657	$440,657	$440,657	$0
Louisiana State University	$415,523	$415,523	$415,523	$0
CA Public Health Institute	$433,189	$433,189	$433,189	$0
Indian Tribes	$1,827,347	$1,827,347	$1,827,347	$0
American Samoa	$198,000	$198,000	$198,000	$0
Guam	$247,500	$247,500	$247,500	$0
Marshall Islands	$198,000	$198,000	$198,000	$0
Micronesia	$513,583	$513,583	$513,583	$0
Northern Mariana Islands	$95,997	$95,997	$95,997	$0
Palau	$203,666	$203,666	$203,666	$0
Puerto Rico	$0	$0	$0	$0
University of Puerto Rico	$232,037	$232,037	$232,037	$0
Virgin Islands	$0	$0	$0	$0
Total	**$21,905,976**	**$21,905,976**	**$21,905,976**	**$0**

[1]This state table is a snapshot of selected programs that fund most states (and in some cases local, tribal, and territorial grantees). For a more comprehensive view of grant and cooperative agreement funding to grantees by jurisdiction, visit http://wwwn.cdc.gov/Fundingprofiles/FundingProfilesRIA/

State Table: Tobacco Prevention and Control Program [1,194]

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget	FY 2016 +/- 2015
Alabama	$1,326,918	$1,326,918	$1,326,918	$0
Alaska	$1,155,593	$1,155,593	$1,155,593	$0
Arizona	$1,281,398	$1,281,398	$1,281,398	$0
Arkansas	$1,104,566	$1,104,566	$1,104,566	$0
California	$1,873,958	$1,873,958	$1,873,958	$0
Colorado	$1,326,312	$1,326,312	$1,326,312	$0
Connecticut	$1,079,069	$1,079,069	$1,079,069	$0
Delaware	$669,573	$669,573	$669,573	$0
Florida	$1,873,958	$1,873,958	$1,873,958	$0
Georgia	$1,094,478	$1,094,478	$1,094,478	$0
Hawaii	$926,456	$926,456	$926,456	$0
Idaho	$1,141,438	$1,141,438	$1,141,438	$0
Illinois	$1,180,545	$1,180,545	$1,180,545	$0
Indiana	$1,037,549	$1,037,549	$1,037,549	$0
Iowa	$1,011,630	$1,011,630	$1,011,630	$0
Kansas	$1,245,400	$1,245,400	$1,245,400	$0
Kentucky	$1,139,397	$1,139,397	$1,139,397	$0
Louisiana	$1,101,612	$1,101,612	$1,101,612	$0
Maine	$964,561	$964,561	$964,561	$0
Maryland	$1,205,325	$1,205,325	$1,205,325	$0
Massachusetts	$1,558,516	$1,558,516	$1,558,516	$0
Michigan	$1,667,998	$1,667,998	$1,667,998	$0
Minnesota	$1,199,593	$1,199,593	$1,199,593	$0
Mississippi	$1,104,566	$1,104,566	$1,104,566	$0
Missouri	$1,156,691	$1,156,691	$1,156,691	$0
Montana	$963,235	$963,235	$963,235	$0
Nebraska	$1,240,942	$1,240,942	$1,240,942	$0
Nevada	$857,913	$857,913	$857,913	$0
New Hampshire	$1,041,719	$1,041,719	$1,041,719	$0
New Jersey	$1,274,844	$1,274,844	$1,274,844	$0
New Mexico	$1,141,221	$1,141,221	$1,141,221	$0
New York	$1,873,958	$1,873,958	$1,873,958	$0
North Carolina	$1,672,280	$1,672,280	$1,672,280	$0
North Dakota	$1,155,818	$1,155,818	$1,155,818	$0
Ohio	$1,367,009	$1,367,009	$1,367,009	$0
Oklahoma	$1,326,840	$1,326,840	$1,326,840	$0
Oregon	$1,094,341	$1,094,341	$1,094,341	$0
Pennsylvania	$1,289,693	$1,289,693	$1,289,693	$0
Rhode Island	$1,152,217	$1,152,217	$1,152,217	$0
South Carolina	$1,217,809	$1,217,809	$1,217,809	$0
South Dakota	$963,055	$963,055	$963,055	$0
Tennessee	$1,281,398	$1,281,398	$1,281,398	$0
Texas	$1,873,957	$1,873,957	$1,873,957	$0
Utah	$1,215,483	$1,215,483	$1,215,483	$0
Vermont	$1,140,226	$1,140,226	$1,140,226	$0
Virginia	$1,067,226	$1,067,226	$1,067,226	$0
Washington	$1,411,384	$1,411,384	$1,411,384	$0
West Virginia	$1,170,999	$1,170,999	$1,170,999	$0

[194] CFDA NUMBER: 93.919, Discretionary

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget	FY 2016 +/- 2015
Wisconsin	$1,191,136	$1,191,136	$1,191,136	$0
Wyoming	$1,035,311	$1,035,311	$1,035,311	$0
Indian Tribes	$1,865,340	$1,865,340	$1,865,340	$0
American Samoa	$135,000	$135,000	$135,000	$0
Guam	$207,000	$207,000	$207,000	$0
Marshall Islands	$100,000	$100,000	$100,000	$0
Micronesia	$210,000	$210,000	$210,000	$0
Northern Mariana Islands	$145,000	$145,000	$145,000	$0
Palau	$130,000	$130,000	$130,000	$0
Puerto Rico	$625,453	$625,453	$625,453	$0
Virgin Islands	$200,000	$200,000	$200,000	$0
Washington, D.C.	$531,753	$531,753	$531,753	$0
Total	**$65,596,660**	**$65,596,660**	**$65,596,660**	**$0**

[1]This state table is a snapshot of selected programs that fund most states (and in some cases local, tribal, and territorial grantees). For a more comprehensive view of grant and cooperative agreement funding to grantees by jurisdiction, visit http://wwwn.cdc.gov/Fundingprofiles/FundingProfilesRIA/

BIRTH DEFECTS, DEVELOPMENTAL DISABILITIES, DISABILITIES AND HEALTH

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$129.190[1]	$131.781	$63.815	-$67.966
ACA/PPHF	$0.000	$0.000	$67.966	+$67.966
Total Request	**$129.190**	**$131.781**	**$131.781**	**$0.000**
FTEs	224	224	224	0
Child Health and Development	**$64.202**	**$64.232**	**$64.232**	**$0.000**
- Budget Authority	$64.202	$64.232	$48.706	-$15.526
- ACA/PPHF	$0.000	$0.000	$15.526	+$15.526
Health and Development for People with Disabilities[1]	**$50.416**	**$52.440**	**$52.440**	**0**
- Budget Authority	$50.416	$52.440	$0.000	-$52.440
- ACA/PPHF	$0.000	$0.000	$52.440	+$52.440
Public Health Approach to Blood Disorders (BA)	**$14.572**	**$15.109**	**$15.109**	**$0.000**
- Public Health Approach to Blood Disorders (BA)	$3.989	$4.500	$4.500	$0.000
- Hemophilia (BA)	$3.498	$3.504	$3.504	$0.000
- Hemophilia Treatment Centers (BA)	$4.986	$5.000	$5.000	$0.000
- Thalassemia (BA)	$2.099	$2.105	$2.105	$0.000

[1]The FY 2014 Health and Development with Disabilities line is comparably adjusted to reflect the transfer of $2.8 million for Limb Loss to ACL.

Summary

CDC's FY 2016 request of **$131,781,000** for Birth Defects, Developmental Disabilities, Disabilities and Health[195] , including $67,966,000 from the Affordable Care Act Prevention and Public Health Fund, is level with the FY 2015 Enacted level.

CDC programs enhance the potential for full, productive living for a large and diverse segment of the American public:

- 1 in 33 babies are born with a major birth defect—one every 4.5 minutes
- 56 million Americans live with a disability—approximately equivalent to the combined populations of New York and California
- 1 in 6 children have developmental disabilities
- Millions of people are affected by blood disorders like venous thromboembolism, hemophilia, and thalassemia

These programs further CDC's mission of preventing the leading causes of disease, disability, and death, and promote the health of people of all ages. CDC measures the impact of birth defects, disabilities, and blood disorders using cutting-edge surveillance, research, and science. Then, CDC puts these research findings and recommendations into public health action to foster a safer, healthier population. Through this essential work, CDC prevents these conditions where possible and enhances the health and quality of life for individuals who live with them.

[195]http://www.cdc.gov/ncbddd/index.html

Performance Highlights

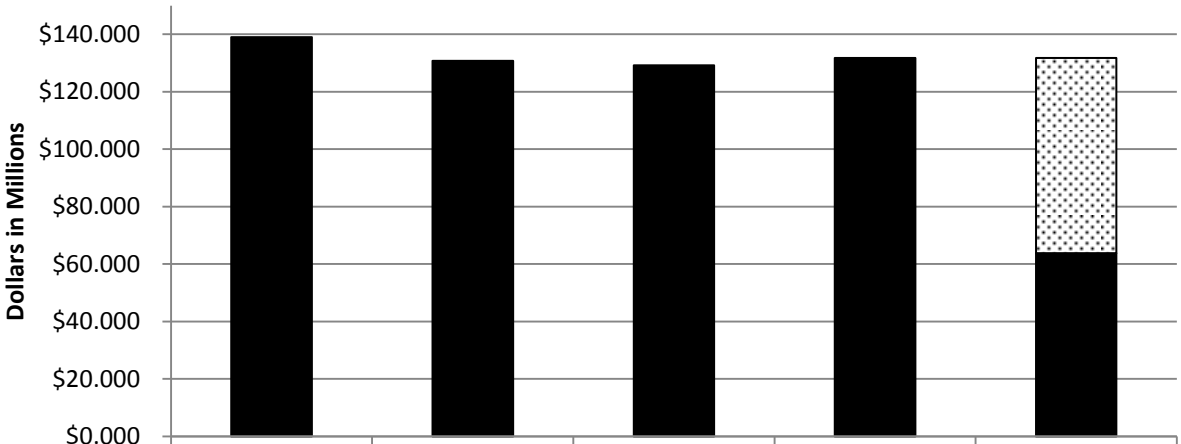
- CDC expanded support for and collaboration on its Treating for Two: Safer Medication Use in Pregnancy Initiative. Treating for Two is a national strategy that aims to prevent birth defects and improve the health of mothers by working to identify the best alternatives for treatment of common conditions during pregnancy and during the childbearing years. CDC's recent research has:
    - Identified the medicines most commonly used by women during the first trimester of pregnancy
    - Found that there is limited information on the safety or risks of medicines listed as safe on many Web sites used by women
    - Confirmed a previous finding that women who used opioids in early pregnancy had an increased risk of having a baby with spina bifida (http://www.cdc.gov/ncbddd/aboutus/annualreport2013/ar-saving-babies.html[196])

- CDC increased public health capacity in 18 states to plan, prepare, and include people with disabilities in health-protecting programs and services. States have identified policy changes that, if implemented appropriately, could lead to better health outcomes for people with disabilities within their state; worked to increase the number of facilities providing preventive healthcare screenings; and assessed state emergency plans to ensure that the needs of people with disabilities are considered during preparedness planning. (http://www.cdc.gov/ncbddd/aboutus/annualreport2013/ar-disabilities.html[197])

- As a result of CDC's Registry and Surveillance for Hemoglobinopathies pilot project, California initiated population-based surveillance for Thalassemia (an inherited blood disorder caused when the body doesn't make enough of a protein called hemoglobin, an important part of red blood cells.) A newly-established committee is using the surveillance data to create fact sheets that educate Californians about the incidence of thalassemia in their state. (http://www.cdc.gov/ncbddd/aboutus/annualreport2013/ar-blood-disorders.html[198])

[196] http://www.cdc.gov/ncbddd/aboutus/annualreport2013/ar-saving-babies.html
[197] http://www.cdc.gov/ncbddd/aboutus/annualreport2013/ar-disabilities.html
[198] http://www.cdc.gov/ncbddd/aboutus/annualreport2013/ar-blood-disorders.html

Birth Defects and Developmental Disabilities Funding History[1,2,3]



	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 PB
Total	$138.992	$130.839	$129.190	$131.781	$131.781
ACA/PPHF	$0.000	$0.000	$0.000	$0.000	$67.966
Budget Authority	$138.992	$130.839	$129.190	$131.781	$63.815

[1]FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

[2]FY 2012 and FY 2013 Health and Development with Disabilities are comparably adjusted to reflect the transfer of $6.7 million for Paralysis Resource Center to the Administration for Community Living.

[3]FY 2012, FY 2013, and FY 2014 Health and Development with Disabilities are comparably adjusted to reflect the transfer of $2.8 million for Limb Loss to the Administration for Community Living.

Child Health and Development Budget Request

(dollars in millions)

	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$64.202	$64.232	$48.706	-$15.526
Autism (non-add)	$22.972	$23.002	$23.002	$0.000
ACA/PPHF	$0.000	$0.000	$15.526	+$15.526
Total	**$64.202**	**$64.232**	**$64.232**	**$0.000**

Overview

Birth defects are common, costly, and critical. They include conditions like fetal alcohol spectrum disorders (FASDs), spina bifida and other neural tube defects, congenital heart defects, and craniofacial defects. Developmental disabilities—including autism and cerebral palsy—involve an impairment in physical, learning, language, or behavioral areas. CDC's core activities in child health and development employ surveillance and science to understand the characteristics of birth defects and developmental disabilities and then use these findings to inform actions to prevent them and enhance the health of people affected by them.

- State-based birth defects surveillance[199], intervention, and prevention programs work to understand the characteristics and prevalence of birth defects and fetal deaths
- National Birth Defects Prevention Network[200], a national network of state and population-based birth defects programs, focuses on assessing the impact of birth defects, identifying strategies for reducing birth defects, and helping families and their providers in secondary disabilities prevention
- Centers for Birth Defects Research and Prevention[201], research centers across the United States that conduct and collaborate on one of largest studies to investigate risk factors for birth defects: the National Birth Defects Prevention Study[202] (NBDPS, births from 1997-2011) and the Birth Defects Study to Evaluate Pregnancy exposureS[203] (BD-STEPS, births from 2014 forward)
- Autism and Developmental Disabilities Monitoring (ADDM) Network[204] studies the number and characteristics of children with autism at different points in time and among different groups to guide research into potential risk factors and to help communities strategically direct outreach
- Centers for Autism and Developmental Disabilities Research and Epidemiology (CADDRE)[205], research centers across the United States that conduct and collaborate on the Study to Explore Early Development (SEED)[206], which is the largest study of its kind in the United States working to identify factors that may put children at risk for autism and other developmental disabilities
- Fetal Alcohol Spectrum Disorder (FASD) Practice and Implementation Centers[207] work to achieve practice and systems-level change by improving the knowledge and skills of healthcare professionals on the prevention, identification, and management of FASDs

[199] http://www.cdc.gov/ncbddd/birthdefects/states/index.html
[200] http://www.nbdpn.org/
[201] http://www.cdc.gov/ncbddd/birthdefects/cbdrp.html
[202] http://www.nbdps.org/
[203] http://www.cdc.gov/ncbddd/birthdefects/bd-steps.html
[204] http://www.cdc.gov/ncbddd/autism/addm.html
[205] http://www.cdc.gov/ncbddd/autism/caddre.html
[206] http://www.cdc.gov/ncbddd/autism/seed.html
[207] http://www.cdc.gov/ncbddd/fasd/training.html#RTCs

Budget Request

CDC's FY 2016 request of **$64,232,000** for Child Health and Development, including $15,526,000 from the Affordable Care Act Prevention and Public Health Fund, is level with the FY 2015 Enacted level. These funds enable CDC to monitor birth defects and developmental disabilities—uncovering their causes and modifiable risk factors, and turning these findings into real-world practice and prevention strategies. CDC's continuing work will focus on eight main areas: birth defects, congenital heart defects, fetal death, fetal alcohol spectrum disorders, folic acid, spina bifida, infant health, and autism.

Birth Defects

Every 4.5 minutes, a baby is born with a birth defect[208] in the United States. Major birth defects are responsible for an estimated $2.6 billion in hospitalization costs each year. Recent CDC accomplishments include: completing studies aimed at helping states increase the impact of newborn screening for critical congenital heart defects; expanding the science-base for safer medication use in pregnancy by reporting on the association between commonly used medications and birth defects; and estimating the impact of optimal pre-pregnancy diabetes control on the prevalence of congenital heart defects.

In FY 2015, CDC will invest in state and local programs that gather data needed to understand how birth defects can be prevented and to improve the lives of people who have them. This includes funding 23 continuing competitive awards to track birth defects, collect and analyze data on risk factors, refer individuals born with birth defects to appropriate medical and social services, and implement prevention strategies to reduce the number of babies affected by major birth defects. In addition, CDC plans to fund one or two new programs to incorporate fetal deaths into an ongoing epidemiological study of risk factors for major birth defects (BD-STEPS[209]) to pilot efforts to understand the preventable risk factors for fetal death.

To better understand how to prevent birth defects, CDC will continue BD-STEPS, which builds upon experience from previous collaborative case-control studies of birth defects, such as the National Birth Defects Prevention Study (NBDPS)[210]. BD-STEPS identifies modifiable maternal exposures in early pregnancy that may increase the risk of birth defects, focusing on:

- Maternal diabetes, obesity, and physical activity
- Chronic maternal medical conditions
- Infertility
- Medication use during pregnancy

CDC's research efforts will support the Treating for Two: Safer Medication Use in Pregnancy Initiative[211], which aims to:

- Expand research to fill knowledge gaps about the risk of birth defects associated with commonly used medications to treat maternal health conditions during pregnancy,
- Evaluate evidence to develop reliable guidance for treating maternal conditions in pregnancy, and
- Deliver this information to support shared decision-making among prescribers, pharmacists, and patients.

To improve the lives of people who have birth defects, CDC will continue working with state-based programs and academic partners to assess health services use, longer-term health outcomes, and healthcare costs for

[208] http://www.cdc.gov/ncbddd/birthdefects/index.html
[209] http://www.cdc.gov/ncbddd/birthdefects/bd-steps.html
[210] http://www.nbdps.org/
[211] http://www.cdc.gov/ncbddd/birthdefects/documents/ncbddd_birth-defects_medicationuseonepager_cdcrole.pdf

individuals with birth defects. The aim is to identify effective interventions that reduce disparities in care and outcomes and to improve the length and quality of life.

In FY 2016, CDC will fund 14 new awardees for state-based birth defects surveillance, research, and prevention activities. CDC will also continue to support state-based birth defects surveillance to learn more about risk factors for birth defects and to inform strategies for improving the outcomes of babies born with birth defects. CDC will maintain efforts to improve understanding of the causes of fetal deaths using the resources of existing birth defects epidemiological studies. In FY 2016, CDC will continue to build the evidence base needed to develop and strengthen birth defects prevention strategies.

All grantee funding will primarily support birth defects surveillance, research, intervention, and prevention activities to advance the aforementioned goals. The majority of FY 2016 grantees will consist of state/territorial health departments and academic research centers.

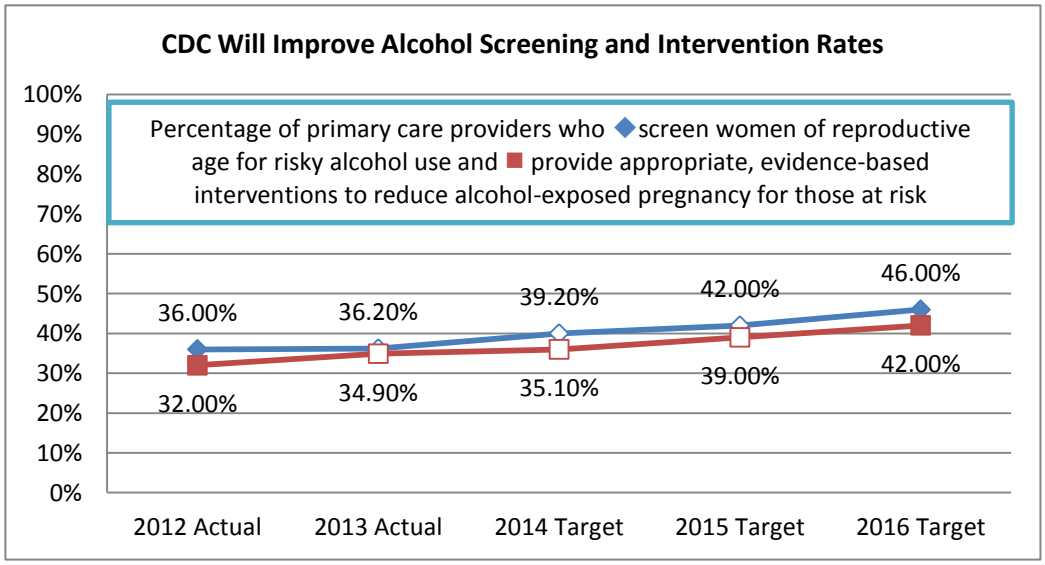
Birth Defects and Surveillance of Fetal Deaths Grants[1,2]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	29	31	25	25	25	0
- New Awards	3	7	3	2	14	12
- Continuing Awards	26	24	22	23	11	-12
Average Award	$0.336	$0.281	$0.314	$0.315	$0.315	**$0.000**
Range of Awards	$0.010–$0.931	$0.005–$0.571	$0.005–$0.765	$0.005–$0.750	$0.005–$0.750	N/A
Total Awards	**$9.744**	**$8.712**	**$7.859**	**$7.875**	**$7.875**	**$0.000**

[1]Included for each program the percentage of funds awarded by formula and non-formula.

[2]These funds are not awarded by formula.

Fetal Alcohol Syndrome



Fetal Alcohol Syndrome (FAS) costs the United States over $4 billion annually; and research estimates that as many as 1 in 500 babies are born with FAS. Prevalence and costs estimates associated with fetal alcohol spectrum disorders (FASDs) likely far exceed these numbers. CDC implemented strategies to reduce risky alcohol use among women who may become pregnant to prevent exposure to alcohol during pregnancy, which can result in FAS or other FASDs. These lifelong conditions can result in physical, behavioral, and learning problems of varying severity.

FASDs are completely preventable if a woman does not drink alcohol during pregnancy, but about 1 in 13 pregnant women report recent alcohol use, and the Indian Health Service estimates that rates are 1 in 2 for American Indian women. In partnership with organizations serving American Indian communities, CDC provides training and implementation support on alcohol screening and brief intervention approaches, including

CHOICES[212], an intervention for preventing alcohol-exposed pregnancy in high risk women before they become pregnant. CDC also recently released new resources including a suite of materials on alcohol use and pregnancy[213] and an alcohol screening and brief intervention implementation guide for primary care practices[214].

In FY 2015, through enhanced collaboration with 13 competitively selected FASD Practice and Implementation Centers[215] medical societies, national partners, and academic institutions, CDC will improve the knowledge and skills of healthcare professionals on the prevention, identification, and management of FASDs. CDC will continue transitioning these training efforts from a regional to a national approach, strengthening FASD expertise and capacity across the nation and improving provider practice. In FY 2016, CDC will continue working collaboratively with grantees to implement national, discipline-specific approaches to enhance FASD-related provider training that lead to practice and systems improvements.

In FY 2016, CDC will fund the 13 competitively selected FAS grants to train medical residents, graduate-level nurses, social workers, and active practitioners. In addition, CDC will implement and evaluate prevention strategies to reduce alcohol-exposed pregnancies. The FY 2014 awards include a continuation of two FY 2013 grantees: Denver Health and Hospital Authority and Board of Regents, and University of Wisconsin System.

Fetal Alcohol Syndrome Grants[1,2]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	14	25[1]	18[1]	13[1]	13	0
- New Awards	1	2	13	0	0	0
- Continuing Awards	13	23	5	13	13	0
Average Award	$0.211	$0.152	$0.239	$0.239	$0.239	$0.000
Range of Awards	$0.203–$0.500	$0.013–$0.500	$0.075–$0.400	$0.239–$0.400	$0.239–$0.400	N/A
Total Awards	**$2.954**	**$3.809**	**$3.809**	**$3.592**	**$3.592**	**$0.000**

[1]The number of awards decreased between 2014 and 2015 because three of the five continuation awards projected in FY 14 are extensions that will not exceed 12-months of funding.

[2] These funds are not awarded by formula.

Folic Acid

CDC will continue efforts to eliminate folic acid-preventable neural tube defects (NTDs)[216] like spina bifida and anencephaly, which are severe birth defects of the brain and spine. Almost all babies born with anencephaly will die shortly after birth, and children with spina bifida often face life-long disabilities. In 2014, CDC published *Population Red Blood Cell Folate Concentrations for Prevention of Neural Tube Defects: Bayesian Model*[217], which showed that blood folate concentrations among women can predict the risk of neural tube defects in a population.

> Over the past 10 years, fortifying enriched cereal grain products with folic acid generated healthcare and education savings of $3.7 billion, saving roughly $100 in cost for every $1 spent adding folic acid. Including parents' ability to work, economic gains exceeded $500 million per year.

In FY 2016, CDC will monitor health disparities and provide information on the benefits of folic acid fortification and utility of optimal blood folate levels for use in program and evaluation.

[212] http://www.cdc.gov/ncbddd/fasd/research-preventing.html
[213] http://www.cdc.gov/ncbddd/fasd/partners-tools.html
[214] http://www.cdc.gov/ncbddd/fasd/alcohol-screening.html
[215] http://www.cdc.gov/ncbddd/fasd/training.html
[216] http://www.cdc.gov/ncbddd/folicacid/index.html
[217] http://www.bmj.com/content/349/bmj.g4554

In FY 2016, CDC will fund up to two competitively-selected grantees to increase folic acid intake among women of reproductive age; support NTD prevention efforts; and enhance training, surveillance, and monitoring of NTDs and blood folate levels. Grantees will be organization(s) working across multiple countries, and/or one governmental organization.

Folic Acid Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	2	2	2	1-2	1-2	0
- New Awards	1	0	0	0	0	0
- Continuing Awards	1	2	2	1-2	1-2	0
Average Award	$0.386	$0.325	$0.298	$0.298	$0.298	$0.000
Range of Awards	$0.100–$0.673	$0.040–$0.609	$0.050–$0.596	$0.050–$0.596	$0.050–$0.596	N/A
Total Awards	**$0.772**	**$0.649**	**$0.477**	**$0.477**	**$0.477**	**$0.000**

[1]These funds are not awarded by formula.

Spina Bifida Surveillance and Research

Despite the successes of folic acid fortification, there are still approximately 1,500 babies born in the United States each year affected by spina bifida[218] . The annual medical care and surgical costs for treating spina bifida exceed $200 million. Additional research is needed to answer questions about risk factors for those neural tube defects that are not preventable with folic acid. CDC works to answer those questions through surveillance and research and will continue to build the science to support strategies to prevent spina bifida through BD-STEPS and other epidemiological studies.

In FY 2016, CDC will fund four competitive spina bifida awards to improve surveillance capacity, better understand the epidemiology, and identify other modifiable causes of spina bifida, including projects studying folate resistant spina bifida, and ways to improve and inform the provision of health care to children with spina bifida. These grants support the identification and implementation of strategies to prevent spina bifida. Grantees will consist of state health departments and academic research centers.

Spina Bifida Surveillance and Research Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	15	15	18	18	18	0
- New Awards	0	0	0	2	14	+12
- Continuing Awards	15	15	18	16	4	-12
Average Award	$0.026	$0.026	$0.027	$0.041	$0.041	$0.000
Range of Awards	$0.250	$0.250	$0.010–$0.110	$0.010-$0.200	$0.010-$0.200	N/A
Total Awards	**$0.390**	**$0.682**	**$0.498**	**$0.599**	**$0.599**	**$0.000**

[1]These funds are not awarded by formula.

Infant Health

Early life experiences can significantly affect a person's health and wellbeing into adulthood. To promote healthy starts to life, CDC will support infant health[219] activities on several fronts:

- Improving early identification of autism and other developmental disabilities
- Supporting birth defects surveillance, research, intervention, and prevention activities

[218]http://www.cdc.gov/ncbddd/spinabifida/index.html
[219]http://www.cdc.gov/ncbddd/jump/child.html

- Developing, implementing, and evaluating prevention strategies around cytomegalovirus (a virus that can cause serious disease in babies who are infected before birth)

In FY 2015, CDC will provide support through a cooperative agreement to develop guidelines for medical home providers to help ensure children identified with hearing loss receive the interventions they need and avoid extended delay in follow-up.

In FY 2016, CDC will fund five competitive infant health awards to conduct infant health activities. Grantees will consist of governmental and non-government organizations.

Infant Health Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	6	6	7	5	5	0
- New Awards	3	2	5	0	0	0
- Continuing Awards	3	4	2	5	5	0
Average Award	$0.089	$0.150	$0.126	$0.165	$0.165	$0.000
Range of Awards	$0.020–$0.250	$0.025–$0.250	$0.025–$0.220	$0.120–$0.220	$0.120–$0.220	N/A
Total Awards	**$0.534**	**$0.900**	**$0.881**	**$0.825**	**$0.825**	**$0.000**

[1]These funds are not awarded by formula.

Infant Health – Hearing Loss

Hearing loss is another infant health issue with significant life-long impacts. Early identification of deaf and hard of hearing children and receipt of interventions improves outcomes and prevents an estimated $200 million in additional education costs each year. By making it easier for healthcare providers to report and receive data about infants needing services, CDC helps all infants with hearing loss get identified early, and giving them better odds at reaching their full potential. CDC also supports research to identify ways to promote infants receiving recommended services and assess the outcomes of children identified with hearing loss.

In FY 2016, CDC will support a one new competitive award to simplify reporting and standardization of hearing screening, diagnostic, and intervention data by expanding the capacity of public health programs to electronically receive and exchange these data.

Infant Health (Hearing Loss) Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	2	3	2	2	1	-1
- New Awards	0	1	0	0	0	0
- Continuing Awards	2	2	2	2	1	-1
Average Award	$0.150	$0.188	$0.150	$0.150	$0.150	$0.000
Range of Awards	$0.100–$0.200	$0.136–$0.225	$0.050–$0.250	$0.050–$0.250	$0.150	N/A
Total Awards	**$0.300**	**$0.654**	**$0.300**	**$0.300**	**$0.150**	**-$0.150**

[1] These funds are not awarded by formula.

Autism

Autism spectrum disorder (ASD) is a group of developmental disabilities often diagnosed in early childhood that can cause significant social, communication, and behavioral challenges over a lifetime. CDC is working to address ASD by:

- Tracking ASD
- Researching risk factors and causes
- Promoting early identification

CDC tracks ASD through the multi-site Autism and Developmental Disabilities Monitoring (ADDM) Network[220], which provides data on the prevalence and characteristics of children with autism and other developmental disabilities. In March 2014, CDC's Autism and Developmental Disabilities Monitoring (ADDM) Network[221] released new data[222] showing that the estimated number of children identified with ASD continues to rise, and that the picture of ASD in communities has changed. More is understood about ASD than ever before[223], including which children are more likely to be diagnosed, at what age they are likely to be diagnosed, and what factors may put children at risk for ASD. However, there remains an urgent need to continue the search for answers and to provide help to people living with ASD. Data from the most recently published ADDM Network report show about 1 in 68 children have been identified as having autism in the United States[224]. CDC will continue to leverage the infrastructure already in place for tracking autism spectrum disorder to understand more about the number and characteristics of children with cerebral palsy. In FY 2015, CDC will release an updated cerebral palsy prevalence report documenting the occurrence of cerebral palsy among children in various communities across the United States, including information on walking ability and co-occurring conditions like autism.

CDC investigates risk factors for autism through the Centers for Autism and Developmental Disabilities Research and Epidemiology (CADDRE)[225]. The CADDRE Network conducts the Study to Explore Early Development (SEED)[226], which is the largest study in the United States working to identify factors that may put children at risk for autism and other developmental disabilities. CDC continues to disseminate materials on early identification and developmental monitoring to healthcare professionals, early childhood educators, and parents of young children. Autism costs an estimated $3.2 million in lifetime costs per child. Early identification and intervention can improve functioning and outcomes for children, and saves an estimated $650,000 per child over their lifetime. Despite this, most children are not diagnosed until after age four, even though developmental concerns before age three are noted for almost 90% of children with autism. Autism is one of the few conditions that has a federal committee tasked with coordinating research efforts: the Interagency Autism Coordinating Committee, (IACC). The IACC identifies research priorities and strategies, and is key to facilitating the exchange of information on ASD activities across Federal agencies, like CDC and NIH, and public organizations and identifying research priorities and strategies.

[220] http://www.cdc.gov/ncbddd/autism/addm.html
[221] http://www.cdc.gov/addm
[222] http://www.cdc.gov/features/dsautismdata/index.html
[223] http://www.cdc.gov/ncbddd/autism/data.html
[224] http://www.cdc.gov/features/dsautismdata/index.html
[225] http://www.cdc.gov/ncbddd/autism/caddre.html
[226] http://www.cdc.gov/ncbddd/autism/seed.html

In FY 2015, CDC anticipates funding up to 22 competitive autism awards to states and universities to enhance surveillance and research for autism and other developmental disabilities, monitor prevalence and contributing risk factors, and better inform policies and programs for prevention and services. These grants will also help evaluate strategies to reduce racial and ethnic disparities in the identification of autism and other developmental disabilities.

In FY 2016, CDC will continue to invest in states to enhance tracking at eight existing sites and to launch two new sites. All 10 sites will track ASD among school-aged children. Six sites will also track ASD among pre-school aged children. The infrastructure built over the past decade, now allows us to know so much more about the prevalence and characteristics of children with autism. Continuing this important work will help shed light on emerging issues, such as the impact of the new DSM-5 diagnostic criteria on prevalence and gaps in early identification of children with ASD. In addition to tracking, sites will conduct analyses of the data to better understand increases over time in the number of children identified with ASD, and carry out education and outreach activities in their local communities. CDC will also continue funding for six sites to conduct epidemiologic research to understand the risk factors that make a person more likely to develop an ASD, which will help us learn more about the causes of ASD.

After experiencing level funding for several years, the number of autism grantees may be decreased by as many as two, due to the increasing costs of grant program administration.

Autism Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	22	20	21	14-22	12-22	-0-2
- New Awards	3	2	2	6-14	4-6	-2-10
- Continuing Awards	19	18	19	8	8-16	+0-8
Average Award	$0.575	$0.591	$0.510	$0.704	$0.706	+$0.002
Range of Awards	$0.025–$1.520	$0.025–$1.050	$0.006–$1.692	$0.120–$1.300	$0.120–$1.300	N/A
Total Awards	**$12.640**	**$12.640**	**$10.193**	**$13.377**	**$13.377**	**$0.000**

[1]These funds are not awarded by formula.

Health and Development for People with Disabilities Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$50.416	$52.440	$0.000	-$52.440
ACA/PPHF	$0.000	$0.000	$52.440	+$52.440
Total	**$50.416**	**$52.440**	**$52.440**	**$0.000**

Overview

CDC's Human Development and Disability program prevents disease and promotes equity in health and development for children and adults with disabilities[227]. There are many types of disabilities, including those affecting:

- Hearing
- Vision
- Movement
- Thinking
- Remembering
- Learning
- Communicating
- Mental health
- Social relationships

Disability is often equated with poor health; however, people with disabilities can, and should, have the same opportunity for good health as people without disabilities. Currently, compared to people without disabilities, people with disabilities are more likely to be obese, smoke, and have more difficulty accessing preventive health services. Disabilities are associated with approximately $400 billion in healthcare costs each year.

CDC works to promote the health of people living with disabilities so they can live, work, and play in their communities. Through public health efforts—such as tracking, research, and health communication and education—we aim to reduce health disparities and the incidence as well as the severity of additional physical or mental health conditions that occur as a result of having a disability. CDC collaborates with a variety of partners and through cooperative agreements to address public health challenges facing the approximately 1 in 5 Americans who have a disability.

Budget Request

CDC's FY 2016 request of **$52,440,000** from the Affordable Care Act Prevention and Public Health Fund for Health and Development for People with Disabilities is level with the FY 2015 Enacted level. CDC will use FY 2016 funds to:

- Invest in surveillance to identify and better understand public health issues associated with human development
- Invest in programs designed to help reduce disability-associated health disparities
- Promote the health and wellbeing of people with disabilities

Disability and Health

Recognizing that challenges are associated with many types of disabilities, CDC works to integrate science and public health practice through a variety of state and nationally-based programs and initiatives. In FY 2015 and 2016, CDC will support the Disability and Health Data System (DHDS)[228] to document and disseminate disability and health data and seek to expand the utility of this innovative resource with enhancements. Data provided by

[227] http://www.cdc.gov/ncbddd/jump/disabilities.html
[228] http://dhds.cdc.gov/

DHDS serves as an essential component in the development of data-driven, fiscally-responsible programs, services, and policies that include people with disabilities. It also assists CDC and states with identifying key health disparities, and helps generate research questions to investigate factors that contribute to differences in health experienced by adults with disabilities.

In FY 2016, CDC will fund 18 state disability and health programs[229]. These competitive grants support health disparities surveillance and health promotion activities by:

- Identifying and reducing disparities in key health indicators among people with disabilities by including people with disabilities in ongoing state disease prevention, health promotion, and emergency response activities
- Increasing healthcare access for people with disabilities
- Addressing environmental barriers, such as inaccessible healthcare facilities and examination equipment
- Providing training and communication to public health and healthcare providers about disability

All 18 states have the same overarching goals, but each customizes activities based on the unique needs and priorities of the state. In FY 2016, the Disability and Health state program funding opportunity announcement will be revised and recompeted for new state awards.

Disability and Health Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	18	18	18	18	18	0
- New Awards	18	0	0	0	18	+18
- Continuing Awards	0	18	18	18	0	-18
Average Award	$0.300	$0.300	$0.300	$0.300	$0.300	$0.000
Range of Awards	$0.200–$$0.300	$0.290–$0.300	$0.290–$0.300	$0.290–$0.300	$0.290–$0.300	N/A
Total Grant Awards	**$5.400**	**$5.400**	**$5.400**	**$5.400**	**$5.400**	**$0.000**

[1]These funds are not awarded by formula.

Public Health Practice and Resource Centers

These resource centers help individuals living with disabilities by providing health information, education, and consultation to healthcare professionals, people with disabilities, caregivers, media, researchers, policymakers, and the public. CDC will continue to collaborate with partners to support a variety of public health practice and resource centers[230] focused on improving the health and quality of life for people with, intellectual disability[231], physical activities for people with disabilities[232], attention deficit/hyperactivity disorder (ADHD)[233], and Tourette syndrome[234].

CDC works to improve outcomes for the approximately 4 million people in the United States over the age of 21 with intellectual disability, the average lifetime costs of which exceed $1 million per person. In FY 2016, CDC will recompete a cooperative agreement via the public health practice and resource centers to provide educational information to people with intellectual disabilities and their caregivers. In FY 2016, there will also be a new National Public Health Practice and Resource Center funding opportunity announcement.

[229] http://www.cdc.gov/ncbddd/disabilityandhealth/programs.html
[230] http://www.cdc.gov/ncbddd/disabilityandhealth/national-programs.html
[231] http://www.cdc.gov/ncbddd/actearly/pdf/parents_pdfs/IntellectualDisability.pdf
[232] http://www.ncpad.org/
[233] http://www.cdc.gov/ncbddd/adhd/
[234] http://www.cdc.gov/ncbddd/tourette/index.html

Legacy for Children

CDC will improve developmental outcomes for children and adolescents by continuing to collaborate with the Administration on Children and Families (ACF) and the Health Resources and Services Administration (HRSA) to reach very young children through incorporation of CDC's Legacy for Children™ program[235] into Early Head Start[236] and Healthy Start[237]. Incorporation of this evidence-based public health intervention will enable Early Head Start and Healthy Start pilot programs to improve child health and development at the earliest developmental stages.

In FY 2016, CDC will continue to work with HRSA towards building Legacy™ Master Trainer capacity in the Healthy Start system to promote sustainability within that infrastructure. CDC will also be evaluating Legacy for Children™ in primary care settings and a Spanish translation of the curriculum.

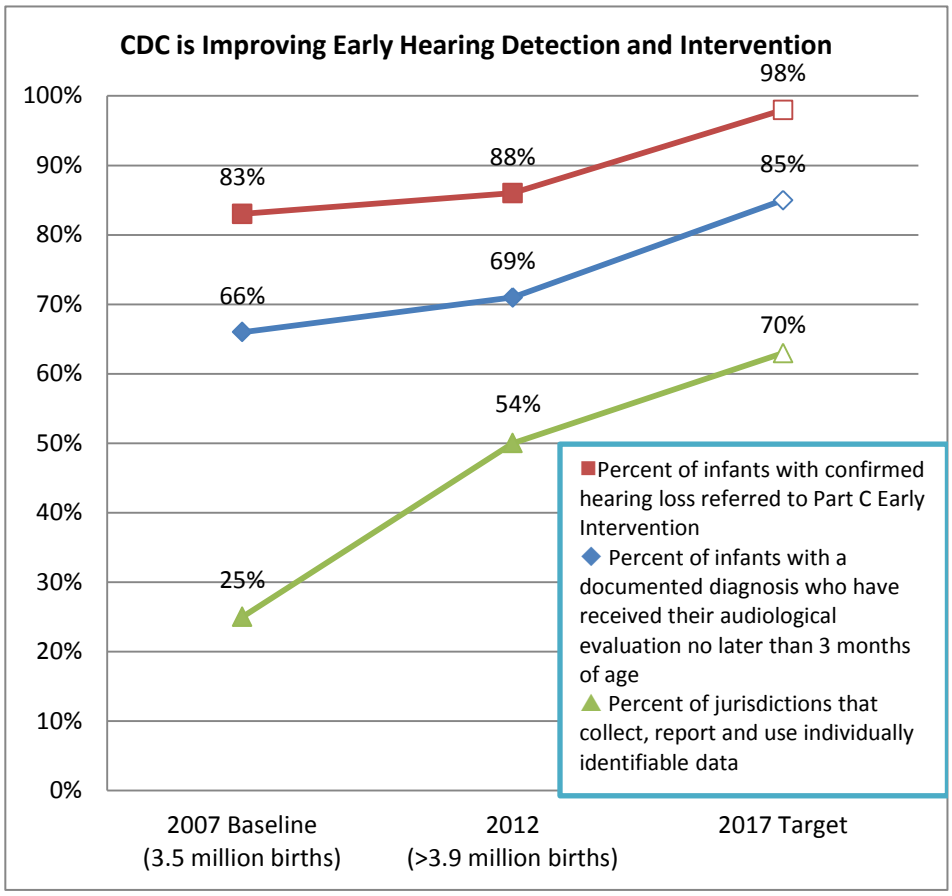
Early Hearing Detection and Intervention

CDC will continue to support the Early Hearing Detection and Intervention (EHDI)[238]program. Working in collaboration with HRSA, CDC funds jurisdictional health departments for the development, maintenance, and enhancement of EHDI Information Systems (EHDI-IS). These EHDI-IS are electronic tracking and surveillance systems that capture information about hearing-related services infants have received and alert health departments about recommended services infants still need. EHDI-IS programs capture and use information to help all deaf and hard of hearing children get identified early and improve their chances of reaching their full potential. Over 95% of infants in the United States are screened for hearing loss, and EHDI programs helped identify over 28,000 infants with hearing loss since 2005. CDC works to ensure all infants receive recommended follow-up. This is an essential activity, because some infants with a possible hearing loss are not receiving the follow-up tests needed to diagnose a permanent hearing loss. CDC funded EHDI-IS directly support necessary follow up and intervention services for individuals with hearing loss.

In addition, in FY 2015, CDC plans to expand its support of activities to help simplify the reporting and standardization of hearing screening, diagnostic, and intervention data by strengthening the ability of public health programs to electronically receive and exchange these data. This will increase the capacity of awardees to collect and exchange data accurately, effectively, and securely between an EHDI-IS and the electronic health record systems that are used by healthcare providers. This will support early identification and appropriate intervention services for all infants with hearing loss.

[235] http://www.cdc.gov/ncbddd/childdevelopment/legacy.html
[236] https://eclkc.ohs.acf.hhs.gov/hslc/tta-system/ehsnrc
[237] http://mchb.hrsa.gov/programs/healthystart/
[238] http://www.cdc.gov/ncbddd/hearingloss/index.html

In FY 2016, CDC will publish a new funding opportunity announcement to provide support and scientific and programmatic expertise to state/territorial public health departments (or their designated entity) for implementation of state/territorial EHDI-IS to ensure deaf and hard of hearing children are identified and receive recommended services. The EHDI program recently underwent an external peer review process to examine and evaluate current activities and potential future approaches. The recommendations, which included prioritizing research on long-term developmental outcomes of deaf and hard of hearing children and focusing on development of individual-level data sets, will help to inform future funding opportunity announcements.



These cooperative agreements improve rates and documentation of newborn hearing screening and follow-up services for all infants born in the United States and helps deaf and hard of hearing children reach their full potential.

Early Hearing Detection and Intervention (EHDI) Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	52	52	52	52	TBD	TBD
- New Awards	0	0	0	0	TBD	TBD
- Continuing Awards	52	52	52	52	0	-52
Average Award	$0.136	$0.136	$0.116	$0.127	TBD	TBD
Range of Awards	$0.083–$0.190	$0.083–$0.190	$0.057–$0.175	$0.081–$0.175	TBD	TBD
Total Grant Awards	**$7.800**	**$7.800**	**$7.036**	**$7.767**	**$7.767**	**$0.000**

[1]These funds are not awarded by formula.

Tourette Syndrome

CDC conducts Tourette Syndrome (TS) research to improve the understanding of TS prevalence, risk and protective factors, health risk behaviors, and quality of life among people affected by TS.

In FY 2015, CDC will publish a new funding opportunity announcement to continue support for the National Public Health Practice and Resource Center on Tourette Syndrome. CDC anticipates funding one award at $800,000. The Resource Center helps individuals living with Tourette Syndrome by providing health information, education, and consultation to healthcare professionals, people with disabilities, caregivers, media, researchers,

policymakers, and the public. As part of a partnership with the Tourette Syndrome Association, CDC supports education for parents, healthcare providers, and teachers in the awareness of a new, evidence-based behavioral treatment for tics, the Comprehensive Behavioral Intervention for Tics (CBIT).

In FY 2016, CDC will continue to conduct research to improve the understanding of TS risk and protective factors and quality of life among people affected by TS. CDC will also continue to support activities within National Public Health Practice and Resource Center on Tourette Syndrome. CDC will also work closely with the Resource Center to develop and implement more strategic outreach efforts in order to reach target populations.

Tourette Syndrome Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	1	1	1	1	1	0
- New Awards	0	0	0	1	0	-1
- Continuing Awards	1	1	1	0	1	+1
Average Award	$0.800	$0.781	$0.800	$0.800	$0.800	$0.000
Range of Awards	$0.800	$0.781	$0.800	$0.800	$0.800	N/A
Total Grant Awards	**$0.000**	**$0.781**	**$0.800**	**$0.800**	**$0.800**	**$0.000**

[1]These funds are not awarded by formula.

Attention Deficit/Hyperactivity Disorder

CDC conducts research to improve the understanding of Attention-Deficit/Hyperactivity Disorder (ADHD) to help determine risk factors, identify best treatments, and inform resources to help people living with ADHD.

In FY 2015, CDC will publish a new three year funding opportunity announcement to continue support for the National Public Health Practice and Resource Center on ADHD. CDC anticipates funding one award at $800,000. The current Resource Center[239] focuses on improving the health and quality of life for people with ADHD by developing and providing evidenced-based health promotion programs and health communication and education resources for professionals and the public regarding ADHD. The Center operates a website and a call center with trained staff to answer questions about ADHD.

In FY 2016, CDC will continue its research to improve the understanding of ADHD and identify best treatments, continue to support the National Public Health Practice and Resource Center on ADHD and thereby informing resources that help people living with ADHD. CDC will also work closely with the Resource Center to develop and implement more strategic outreach efforts in order to reach target populations.

Attention Deficit Hyperactivity Disorder Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	1	1	1	1	1	0
- New Awards	0	0	0	1	0	-1
- Continuing Awards	1	1	1	0	1	+1
Average Award	$0.850	$0.779	$0.800	$0.800	$0.800	$0.000
Range of Awards	$0.850	$0.779	$0.800	$0.800	$0.800	N/A
Total Grant Awards	**$0.850**	**$0.779**	**$0.800**	**$0.800**	**$0.800**	**$0.000**

[1]These funds are not awarded by formula.

[239] http://www.help4adhd.org/

Project to Learn About Youth (PLAY)

The Project to Learn About Youth (PLAY) Mental Health grantees will work in collaboration with CDC and other funded awardees for ADHD and Tourette Syndrome to implement epidemiologic screening and diagnostic procedures targeting children and adolescents with mental disorders (ages 5 to 17).

In FY 2016, CDC will continue to conduct a set of population-based research projects of pediatric neurobehavioral disorders (including ADHD and Tourette Syndrome) that describe:

- Overall prevalence and treated prevalence
- Co-occurrence of internalizing, externalizing, and tic disorders in children
- Current and previous receipt of mental health treatment in children with previously diagnosed mental disorders
- Diversion and misuse of psychoactive medications prescribed for the purpose of treating a mental disorder

Project to Learn About Youth (PLAY) Mental Health Grants[1,2,3]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	0	2	4	3	4	+1
- New Awards	0	2	2	1	0	-1
- Continuing Awards	0	0	2	2	3	+1
Average Award	$0.000	$0.200	$0.275	$0.250	$0.250	N/A
Range of Awards	$0.000	$0.200	$0.250-$0.300	$0.250	$0.250	$0.000
Total Grant Awards	**$0.000**	**$0.400**	**$1.100**	**$0.750**	**$0.750**	**$0.000**

[1] Funding for these awards is supported by multiple funding lines including ADHD, TS, and Child Development.

[2] http://www.cdc.gov/ncbddd/adhd/play.html

[3] These funds are not awarded by formula.

Fragile X Syndrome

Fragile X Syndrome (FXS) is a known cause of intellectual disabilities. CDC partners with clinicians, university researchers, and non-profit research foundations to better understand FXS and co-occurring conditions, life course development, and interventions to improve the quality of life for individuals with FXS and their families. CDC works with these partners to describe the current state of the science and identify gaps in knowledge to better inform the public health research agenda for FXS.

CDC funds the Fragile X Clinical Research Consortium (FXCRC)—a multisite research consortium involving 26 FXS clinical sites across the United States—to build a FXS registry and longitudinal database. Findings from the longitudinal data will lead to a greater understanding of FXS, and will be used to improve the lives and health care of persons with FXS, increase understanding of contributors to adverse or positive outcomes, and may provide information benefiting other groups affected by intellectual disabilities.

FY 2015 is the final year of a pilot study to test the capacity of a consortium of fragile X specialty clinics to collect and analyze longitudinal data. The Fragile X Clinical Research Consortium launched the Fragile X Online Registry With Accessible Research Database (FORWARD), which thus far has demonstrated that longitudinal data can be collected on individuals living with FXS and moving forward these data can be applied to important clinical care and public health research questions.

In FY 2016, CDC will continue to support related Fragile X activities from a recently published new funding opportunity announcement (FOA). The purpose of this FOA is to contribute to the understanding of the natural history of FXS across the lifespan; explore effective strategies to increase participation in the longitudinal

database for minority, underserved, and adults living with FXS; and test approaches to measure cognitive and behavioral function in the FXS population.

These research activities will also lead to an enhanced longitudinal database that can be used to answer clinical care and public health research questions, such as characterizing the impact of interventions and treatments on health outcomes and quality of life.

Fragile X Syndrome Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	0	2	1	1-4	1-4	0
- New Awards	0	0	0	1-4	0	-1-4
- Continuing Awards	0	2	1	0	1-4	+1-4
Average Award	$0.000	$0.375	$0.550	$0.200	$0.200	$0.000
Range of Awards	$0.000	$0.201–$0.550	$0.550	$0.200-$0.350	$0.200-$0.350	N/A
Total Grant Awards	**$0.000**	**$0.751**	**$0.664**	**$0.850**	**$0.850**	**$0.000**

[1]These funds are not awarded by formula.

Muscular Dystrophy

CDC developed a multi-state system of record-review to determine prevalence of Duchenne and Becker Muscular dystrophies[240], age at diagnosis, and quality of life of persons with these dystrophies. In FY 2015, CDC will continue surveillance of the muscular dystrophies through medical record abstraction and examination of administrative databases in order to answer public health and clinical research questions.

In FY 2014, CDC launched a new funding opportunity announcement and awarded a new cohort of eight grantees to:

- Conduct population-based surveillance, longitudinal follow-up, and public health research for muscular dystrophies and neuromuscular disorder(s) using methods based on those from the Muscular Dystrophy Surveillance Tracking and Research Network (MD STARnet)[241]
- Expand the number of surveillance sites to increase the demographic, racial, and ethnic diversity of the MD surveillance system
- Share data with stakeholders to improve health and access to care of people living with these conditions
- Evaluate, modify, and document the methodology and infrastructure of the surveillance system
- Conduct pilot studies that investigate specific MD knowledge gaps and share results with participants and stakeholders

In FY 2016, CDC will continue to support the grantees to conduct population-based surveillance and longitudinal follow-up for muscular dystrophies and neuromuscular disorder(s) using methods based on those from the MD STARnet to answer public health and clinical research questions.

[240]http://www.cdc.gov/ncbddd/musculardystrophy/index.html
[241]http://www.cdc.gov/ncbddd/musculardystrophy/research.html

Muscular Dystrophy Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	4	4	8	8	8	0
- New Awards	0	0	8	0	0	0
- Continuing Awards	4	4	0	8	8	0
Average Award	$0.525	$0.525	$0.500	$0.500	$0.500	$0.000
Range of Awards	$0.450–$0.749	$0.450–$0.749	$0.500–$0.750	$0.500–$0.750	$0.500–$0.750	N/A
Total Grant Awards	**$2.100**	**$2.100**	**$3.210**	**$3.360**	**$3.360**	**$0.000**

[1]These funds are not awarded by formula.

Spina Bifida including the National Spina Bifida Patient Registry

Each year, about 1,500 babies are born with spina bifida (SB)[242], a lifelong condition. SB is a condition that affects the spine and is usually apparent at birth, it can happen anywhere along the spine if the neural tube does not close all the way. The backbone that protects the spinal cord does not form and close as it should. SB is a complex, disabling condition that has a tremendous impact on individuals and families, from difficulty accessing care to high healthcare costs associated with frequent surgeries and hospitalizations. CDC research and programs improve the quality of life of and encourage full participation at every age for those with SB.

The National Spina Bifida Patient Registry (NSBPR)[243], which has data on more than 5,000 children and adults who are living with the condition from 19 U.S. clinics. Data from the NSBPR:

- Describe the population that attends the SB clinics
- Examine associations between outcomes, interventions, demographic variables, and other factors
- Identify best practices
- Establish measures of quality care
- Compare outcomes among participating clinics

In FY 2016, CDC will continue to support national efforts to implement electronic medical records (EMR) for people with SB. CDC will also continue to support the new cohort of 14 awardees (awarded in FY 2014), to support SB clinics that collect and maintain longitudinal data in the NSBPR. Clinic sites will also participate in research projects aimed at improving patient care and outcomes utilizing the NSBPR data.

Spina Bifida Grants[1,2]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	17	17	14	14	14	0
- New Awards	0	0	14	0	0	0
- Continuing Awards	17	17	0	14	14	0
Average Award	$0.065	$0.070	$0.072	$0.072	$0.072	$0.000
Range of Awards	$0.042–$0.070	$0.050–$0.070	$0.072	$0.072	$0.072	N/A
Total Grant Awards	**$1.105**	**$1.190**	**$1.050**	**$1.050**	**$1.050**	**$0.000**

[1]A new, 3-component FOA was competed in FY 2014 to fund a total of 24 awards—including approximately 14 that will support spina bifida clinics, 9 sites that will implement a urologic management protocol for newborns and 1 clinical care network. The 14 awards in FY 2014 and 2015 reflect the one component of the FOA most comparable to the 2013 awards. The 9 urologic and 1 clinical care network awards are not reflected in this table.
[2]These funds are not awarded by formula.

[242]http://www.cdc.gov/ncbddd/spinabifida/index.html
[243]http://www.cdc.gov/ncbddd/spinabifida/nsbprregistry.html

Congenital Heart Defects

Congenital heart defects (CHDs) are conditions that are present at birth and can affect the structure of a baby's heart and the way it works. Collectively, they are the most common type of birth defect. As medical care and treatment have advanced, infants with CHDs are living longer and healthier lives. Most are now living into adulthood. CDC continues to expand work on congenital heart defects[244] through cooperative agreements designed to better understand the survival, healthcare utilization, and longer term outcomes of those affected by congenital heart defects.

In FY 2015, CDC will expand activities in the area of CHDs, especially among adolescents and adults. CDC will competitively fund four to six new awards to improve surveillance among adolescents and adults, initiate a survey among adults with CHDs to assess quality of life and long-term outcomes, and investigate a cohort of children, adolescents, and adults with critical CHDs to determine healthcare use, outcomes, costs, and barriers to care. The new and continuing awards to state health departments, academic sites, or other institutions to:

- Improve understanding of the epidemiology of congenital heart defects across the life span, with emphasis on adolescents and adults
- Prevent congenital heart defect occurrence
- Improve the lives of those born with a congenital heart defect

Funding will primarily support activities to collect, link, and analyze data related to congenital heart defects. CDC will also leverage existing infrastructure to pilot new efforts to assess the potential contribution of electronic health records to congenital heart defect surveillance efforts.

In FY 2016, CDC will continue the projects begun in 2015, and explore other areas of interest, including neurocognitive outcomes. CDC will coordinate the multi-site CHD surveillance with a focus on surveillance among adolescents and adults. The surveillance effort will improve our understanding of the epidemiology of congenital heart defects across the life span, age-specific prevalence, and factors associated with dropping out of appropriate specialty care. CDC will also analyze data from a survey among adults with CHDs to gauge quality of life and other long term outcomes. CDC will use linked data from state-based surveillance programs to assess health care use, outcomes, costs, and barriers to care. These combined efforts are designed to improve the lives of those with congenital heart defects throughout their lives.

Congenital Heart Defects (CHD) Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	4	4	6	7	6	-1
- New Awards	3	0	2	4	0	-4
- Continuing Awards	1	4	4	3	6	+3
Average Award	$0.351	$0.296	$0.325	$0.329	$0.329	$0.000
Range of Awards	$0.045–$0.450	$0.035–$0.396	$0.050–$0.600	$0.050–$0.600	$0.050–$0.600	N/A
Total Grant Awards	**$1.404**	**$1.184**	**$1.952**	**$2.300**	**$2.300**	**+$0.000**

[1]These funds are not awarded by formula.

[244]http://www.cdc.gov/ncbddd/heartdefects/index.html

Public Health Approach to Blood Disorders Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$14.572**	**$15.109**	**$15.109**	**$0.000**

Overview

Blood disorders[245]—including bleeding, clotting, and red blood cell disorders—affect millions of Americans each year. These conditions have serious health consequences and cost billions of dollars in healthcare expenditures annually. There is enormous potential for public health practice to reduce the disease burden and associated healthcare costs. Working with academia, national professional organizations, state and local health departments, and other federal agencies, CDC identifies:

- How often and in what settings blood disorders occur to better understand who is at risk
- Effective prevention strategies
- Ways to reduce complications

CDC develops and promotes education and awareness activities that increase knowledge of the signs and symptoms of blood disorders, improve diagnosis, and increase use of proven treatments that reduce the burden of blood disorders and improve the quality of life for people who have them.

Budget Request

CDC's FY2016 request of **$15,109,000** is level with the FY 2015 Enacted level. CDC will continue to use FY 2016 funds to invest in activities that improve health outcomes for people with blood disorders. CDC's program focuses on specific disorders (Hemophilia, Venous Thromboembolism, Thalassemia, and Sickle Cell Disease) that present the best opportunity to improve the quality of life for people with blood disorders by reducing health care costs, improving health care utilization, maximizing the impact of proven prevention strategies, and continuing to ensure the safety of America's blood supply. CDC will continue to address these critical issues through:

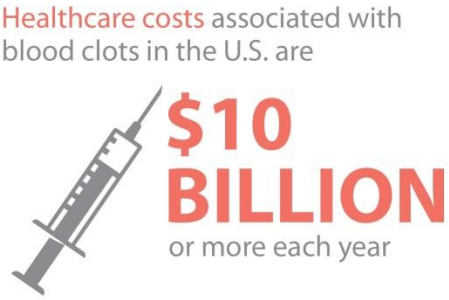
- Data collection and monitoring
- Health promotion and education
- Community outreach
- Primary and secondary prevention

Public Health Approach to Blood Disorders

Non-malignant blood disorders are becoming a national public health priority, based on accumulating evidence. CDC has embraced the development and implementation of a comprehensive set of public health approaches to promote and improve the health of people with blood disorders. These public health activities seek to use proven interventions for Venous thromboembolism (VTE) and Hemoglobinopathies to mitigate adverse health effects. Additionally, these approaches attempt to develop and implement interventions that benefit the entire community of people affected by blood disorders.

[245] http://www.cdc.gov/ncbddd/blooddisorders/index.html

Venous thromboembolism[246] VTE is a serious but preventable condition that includes blood clots in the legs and life-threatening clots in the lungs. It affects an estimated one million Americans each year with annual healthcare costs of up to $10 billion. At least one in 10 of those affected dies, oftentimes before being diagnosed. Almost half of VTEs occur during or soon after a hospital stay or surgery; these are known as healthcare associated VTE (HA-VTE).



In FY 2015, CDC will use lessons learned from these projects to inform what intervention strategies are needed to lower risk and continue efforts to monitor HA-VTE and prevention efforts.

In FY 2015, National Blood Clot Alliance (NBCA) will identify and fill VTE awareness gaps with existing and new tools, launch a digital and social media awareness campaign to improve patient-healthcare professional dialogue, and mobilize an e-patient brigade to drive grassroots efforts that will expand and sustain the program locally.

In FY 2016, CDC will use the findings from the VTE pilot projects to fund new, targeted prevention activities that aid in CDC's comprehensive public health approach to preventing morbidity and mortality associated with VTE. CDC will continue the support of the National Blood Clot Alliance (NBCA) and address the Healthy People 2020 Blood Disorders and Blood Safety focus area[247], which includes reducing the number of adults who develop a VTE in hospitals and increasing the proportion of persons with hemoglobinopathies who receive evidence-based recommended treatments to prevent complications.

Sickle Cell Disease[248] (SCD) is one of the most common inherited red blood cell disorders. SCD affects 90,000 to 100,000 people in the United States, causing episodes of severe pain, organ damage, serious infections, stroke, and repeated hospitalizations. People with the most severe form of SCD have a life expectancy 20-30 years shorter than people without SCD. It is estimated that up to 80% of hospitalizations for SCD are paid for by public insurance programs like Medicaid or Medicare. An estimated 3 million additional Americans have sickle cell trait[249] (SCT) which is not a disease, but having it means that a person has inherited the sickle cell gene from one of his or her parents. SCT affects 1 in 12 Blacks or African Americans in the United States and can be passed onto their offspring, putting a new generation at risk for SCD.

A key to providing high quality care for people with SCD (which is classified as a hemoglobinopathy) is accurate identification, because evidence-based recommendations for treatments differ by disease. CDC and the Association of Public Health Laboratories (APHL) are working with newborn screening experts from six state health departments to develop a Hemoglobinopathy Screening Primer that can be used to guide development of hemoglobinopathy screening programs. The primer will be available on CDC's and APHL's websites in FY 2105, and present best practices for methods of specimen collection, screening methodologies, diagnostic algorithms, quality assurance, quality control, and follow-up reporting.

In FY 2016, CDC will work to support the analysis and dissemination of SCD data previously collected through our work with state departments of health. These data will inform quality improvement opportunities that are needed to promote and improve the health of persons with SCD.

[246] http://www.cdc.gov/ncbddd/dvt/features/keyfinding-hospitalizations-vte.html
[247] http://www.cdc.gov/nchs/healthy_people/hp2020/hp2020_topic_areas.htm
[248] http://www.cdc.gov/ncbddd/sicklecell/documents/scd-factsheet_what-is-scd.pdf
[249] http://www.cdc.gov/ncbddd/sicklecell/documents/sicklecelltraitfactsheet_english.pdf

Public Health Approach to Blood Disorders Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	19	19	5	4	4	0
- New Awards	7	0	31	3	0	-3
- Continuing Awards	12	19	2	1	4	+3
Average Award	$0.470	$0.425	$0.260	$0.260	$0.260	$0.000
Range of Awards	$0.100–$4.000	$0.200–$3.992	$0.150-0.550	$0.150–$0.550	$0.150–$0.550	N/A
Total Grant Awards	**$8.930**	**$8.112**	**$1.300**	**$1.300**	**$1.300**	**$0.000**

[1] These funds are not awarded by formula.

In FY 2014, two awards to the National Hemophilia Foundation (NHF) and Hemophilia Federation of America (HFA) were funded under the Public Health Approach to Blood Disorders line. In FY 2015, continuation of these two awards will be funded under the Hemophilia line. They are accounted for in the FY 2015 and FY 2016 columns in the Hemophilia grant table.

Hemophilia Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	2016 +/-2015
Budget Authority	**$3.498**	**$3.504**	**$3.504**	**$0.000**

Overview

Hemophilia[250] is an inherited life-long bleeding disorder that can cause damage to internal organs and chronic joint disease and pain. About 15-20% of people with hemophilia will develop an inhibitor[251], an antibody to the products used to treat or prevent bleeding, making the treatments less effective, increasing hospitalizations, compromising physical functioning and potentially causing a patient's treatment costs to exceed $1,000,000 a year. Discovering and treating inhibitors early helps improve outcomes and reduce costs.

In FY 2015, the National Hemophilia Foundation (NHF) will begin planning, developing, and implementing health education and programs for people with hemophilia. Additionally, in FY 2015 the Hemophilia Federation of America (HFA) will begin developing and implementing programs to positively impact people with hemophilia.

Budget Request

CDC's FY 2016 request of **$3,504,000** for CDC's hemophilia activities is level with the FY 2015 Enacted level. This funding will continue the support of NHF's health education programs that are designed to prevent joint bleeds and subsequent damage, promote screening for and manage of inhibitors, and increase awareness and screening for women who many have an underlying bleeding disorder. Also in FY 2016, CDC will continue to support HFA's programs to increase awareness about and participation in safe physical activities for people with hemophilia, increase the number of people with hemophilia screened for inhibitors, increase referrals to specialty clinics for bleeding disorders, and raise the quality and/or number of comprehensive clinics dedicated to the diagnosis and treatment of women's bleeding disorders.

Hemophilia Grants [1,2]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	0	0	0	2	2	0
- New Awards	0	0	0	0	0	0
- Continuing Awards	0	0	0	2	2	0
Average Award	$0.000	$0.000	$0.000	$0.325	$0.325	$0.000
Range of Awards	$0.000	$0.000	$0.000	$0.175-0.450	$0.175-0.450	N/A
Total Grant Awards	**$0.000**	**$0.000**	**$0.000**	**$0.650**	**$0.650**	**$0.000**

[1] In FY 2014 two awards to the National Hemophilia Foundation (NHF) and Hemophilia Federation of America (HFA) were funded under the Public Health Approach to Blood Disorders line. In FY 2015, continuation of these two awards will be funded under the Hemophilia line. They are accounted for in the FY 2015 and FY 2016 columns in this Hemophilia grant table.
[2] These funds are not awarded by formula.

[250] http://www.cdc.gov/ncbddd/hemophilia/data.html
[251] http://www.cdc.gov/ncbddd/hemophilia/inhibitors.html

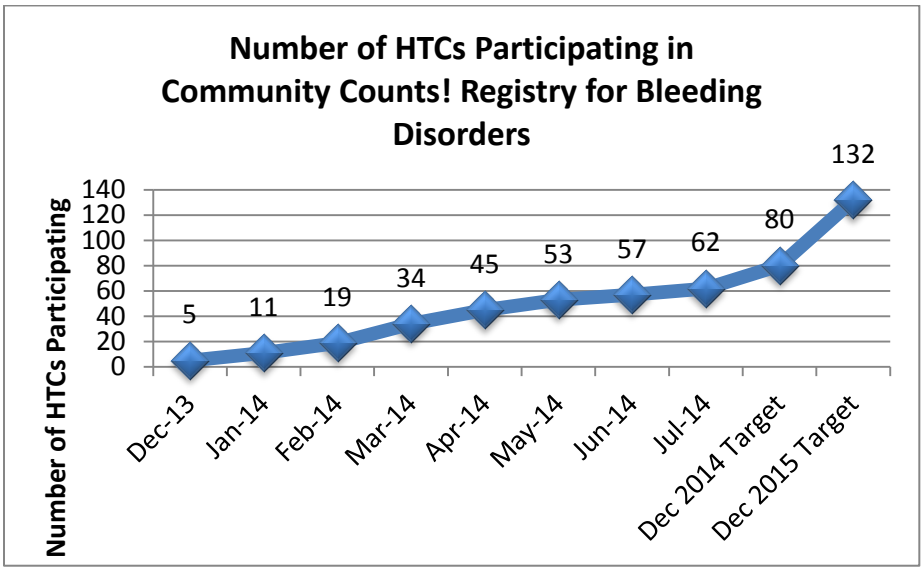
Hemophilia Treatment Centers Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	2015 +/-2014
Budget Authority	**$4.986**	**$5.000**	**$5.000**	**$0.000**

Overview

Hemophilia Treatment Centers[252] (HTCs) are specialized health care centers that bring together a team of doctors, nurses, and other health professionals experienced in treating people with hemophilia. In FY 2014, CDC continued funding the American Thrombosis and Hemostasis Network to lead Community Counts! CDC's Public Health Surveillance for Bleeding Disorders project[253]. HTCs in the United States Hemostasis and Thrombosis Center Network (HTCN) participating in the project collect and submit demographic and clinical data and blood samples for testing and analysis.

In FY 2014, CDC supported the Registry for Bleeding Disorders Surveillance component of Community Counts! This component was established to collect more detailed clinical information related to bleeding disorders and their impact on patients with hemophilia. Throughout FY 2014, the number of HTCs participating in the Registry continued to increase and CDC anticipates an expansion of this registry in FY 2015 as more HTCs secure institutional approvals and integrate the Registry into their clinic practice. In FY 2014, CDC also continued to fund efforts to collect information on patients with bleeding disorders treated outside of the HTC Network. CDC will continue analyzing the information to better understand healthcare utilization of patients with hemophilia receiving treatment outside of HTCs.



In FY 2015, CDC will issue a new funding opportunity announcement that will focus solely on collecting information within the HTC network. As such, the number of awardees will be reduced from three to one.

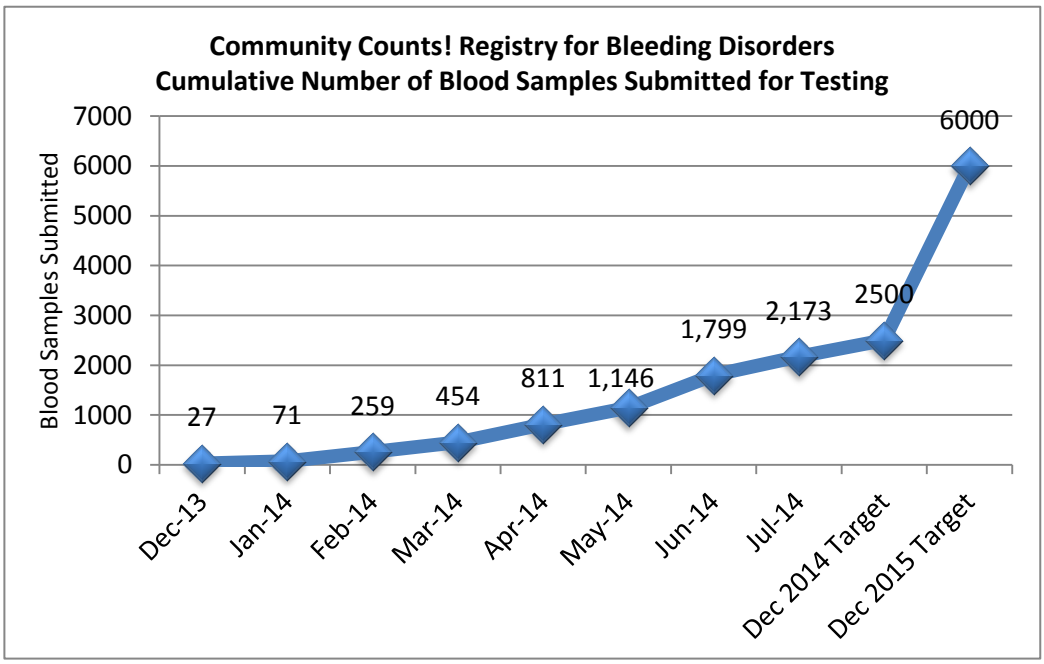
Budget Request

CDC's FY 2016 request of **$5,000,000** for Hemophilia Treatment Centers is level with the FY 2015 Enacted level. In FY 2016, CDC will continue to support the collection and submission of demographic and clinical information

[252] http://www.cdc.gov/ncbddd/hemophilia/htc.html
[253] http://advocacy.hemophilia.org/sites/default/files/ATHN%20Community%20Counts%20Factsheet.pdf

and blood samples from patients receiving care in the HTCN to CDC's Blood Disorders laboratory for analysis and inhibitor screening.

Laboratory



In FY 2014, CDC's Blood Disorders laboratory began receiving blood samples from patients with hemophilia receiving treatment in one the participating HTCs. These HTCs are a part of the Registry for Bleeding Disorders component of the CDC-funded American Thrombosis and Hemostasis Network's (ATHN) "Community Counts! CDC Public Health Surveillance for Bleeding Disorders."[254] The blood samples are screened for inhibitors and blood-borne infectious diseases and stored for future investigations of treatment complications, infectious transmissions, and product safety issues. The number of blood samples submitted and tested has increased monthly and will continue to increase as more HTCs receive institutional approval to participate in the Registry. This long standing support for the national hemophilia treatment network is a critical component of CDC's hemophilia surveillance activities.

In FY 2016, CDC will continue to support hemophilia lab activities by:

- Providing the instrumentation and information technology needed for processing, testing, and storage of blood samples
- Continued funding for NHF's and HFA's activities to implement and evaluate health promotion, education, and wellness programs that reduce or prevent complications for people with a bleeding disorder
- Maintaining critical Blood Disorders laboratory staff

Hemophilia Treatment Centers Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	0	0	3	1	1	0
- New Awards	0	0	0	1	0	-1
- Continuing Awards	0	0	3	0	1	+1
Average Award	$0.000	$0.000	$1.444	$4.332	$4.332	$0.000
Range of Awards	$0.000	$0.000	$0.190-$3.952	$4.332	$4.332	N/A
Total Grant Awards	**$0.000**	**$0.000**	**$4.332**	**$4.332**	**$4.332**	**$0.000**

[1]These funds are not awarded by formula.

[254] http://athn.org/files/ATHN%20CDC%20Flyer%20web.pdf

Thalassemia Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	2016 +/-2015
Budget Authority	**$2.099**	**$2.105**	**$2.105**	**$0.000**

Overview

Thalassemia[255] is a group of genetic red blood cell disorders that cause an anemia beginning at birth and lasting throughout life. Thalassemia patients require lifelong blood transfusions, which places them at higher risk for transfusion-related infections and complication that can result in organ failure and early death, such as iron overload and acute lung injury.

In FY 2015, the evidence-base of current standards of care will be identified and assessed, and the Cooley's Anemia Registry will be reviewed to identify missing information and strategies for collecting that information and identifying patients with thalassemia that are not in the Registry.

Budget Request

CDC's FY 2016 request of **$2,105,000** for Thalassemia is level with the FY 2015 Enacted level. In FY 2016, this funding will support Georgia State University to coordinate projects that will improve our understanding of complications associated with therapeutic blood transfusions used to treat people with a red blood cell disorder, and the Cooley's Anemia Foundation to develop communication strategies and educational tools that improve consumer and provider awareness and knowledge about thalassemia prevention and treatment practices.

Thalassemia Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	0	8	2	2	2	0
- New Awards	0	0	2	0	0	0
- Continuing Awards	0	8	0	2	2	0
Average Award	$0.000	$0.149	$0.282	$0.335	$0.335	$0.000
Range of Awards	$0.000	$0.050-$0.300	$0.100-$0.470	$0.200-$0.470	$0.200-$0.470	N/A
Total Grant Awards	**$0.000**	**$1.900**	**$0.570**	**$0.670**	**$0.670**	**$0.000**

[1] These funds are not awarded by formula.

[255] http://www.cdc.gov/ncbddd/thalassemia/index.html

State Table: Early Hearing Detection and Intervention[1]

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget[2]	Difference 2016 +/-2015
Alabama	$146,580	$147,030	TBD	TBD
Alaska	$156,933	$156,933	TBD	TBD
Arizona	$139,718	$163,933	TBD	TBD
Arkansas	$133,024	$154,440	TBD	TBD
California	$148,800	$148,800	TBD	TBD
Colorado	$149,093	$157,297	TBD	TBD
Connecticut	$170,000	$170,000	TBD	TBD
Delaware	$94,485	$137,047	TBD	TBD
District of Columbia	-	-	TBD	TBD
Florida	$124,430	$145,561	TBD	TBD
Georgia	$155,536	$159,909	TBD	TBD
Hawaii	-	-	TBD	TBD
Idaho	$57,019	$137,801	TBD	TBD
Illinois	$165,348	$169,060	TBD	TBD
Indiana	$152,691	$170,000	TBD	TBD
Iowa	$175,000	$190,000	TBD	TBD
Kansas	-	-	TBD	TBD
Kentucky	$161,365	$166,920	TBD	TBD
Louisiana	$162,446	$166,072	TBD	TBD
Maine	$122,924	$157,334	TBD	TBD
Maryland	$116,076	$146,651	TBD	TBD
Massachusetts	$146,823	$156,470	TBD	TBD
Michigan	$174,500	$175,000	TBD	TBD
Minnesota	$121,309	$130,144	TBD	TBD
Mississippi	$116,032	$153,265	TBD	TBD
Missouri	$89,609	$140,255	TBD	TBD
Montana	$154,182	$154,998	TBD	TBD
Nebraska	$107,104	$142,682	TBD	TBD
Nevada	$123,425	$132,985	TBD	TBD
New Hampshire	$132,496	$164,000	TBD	TBD
New Jersey	$170,048	$172,000	TBD	TBD
New Mexico	$106,111	$134,144	TBD	TBD
New York	$156,338	$156,338	TBD	TBD
North Carolina	$162,203	$163,392	TBD	TBD
North Dakota	$155,703	$155,703	TBD	TBD
Ohio	$89,151	$130,782	TBD	TBD
Oklahoma	$142,750	$142,750	TBD	TBD
Oregon	$162,365	$162,365	TBD	TBD
Pennsylvania	-	-	TBD	TBD
Rhode Island	$146,000	$146,000	TBD	TBD
South Carolina	$91,059	$138,804	TBD	TBD
South Dakota	$138,550	$138,972	TBD	TBD
Tennessee	$153,526	$156,873	TBD	TBD
Texas	$136,688	$170,257	TBD	TBD
Utah	$145,850	$154,950	TBD	TBD
Vermont	$150,000	$150,000	TBD	TBD
Virginia	$106,650	$156,274	TBD	TBD
Washington	$163,963	$173,602	TBD	TBD
West Virginia	-	-	TBD	TBD
Wisconsin	$165,000	$170,791	TBD	TBD
Wyoming	$141,924	$141,924	TBD	TBD

	FY 2014 Actual	FY 2015 Estimate	FY 2016 President's Budget[2]	Difference 2016 +/-2015
Territories				
America Samoa	$139,333	$139,333	TBD	TBD
Guam	$132,669	$132,669	TBD	TBD
Marshall Islands	$81,568	$81,568	TBD	TBD
Micronesia	$86,858	$86,858	TBD	TBD
Northern Marianas	$122,545	$122,545	TBD	TBD
Puerto Rico	-	-	-	-
Palau	$93,175	$93,175	TBD	TBD
Virgin Islands	-	-	-	-
Subtotal, States	**$6,380,827**	**$7,110,508**	**TBD**	**TBD**
Subtotal, Territories	**$656,148**	**$656,148**	**TBD**	**TBD**
Total	**$7,036,975**	**$7,766,656**	**TBD**	**TBD**

[1]This State Table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial grantees). For a more comprehensive view of grant and cooperative agreement funding to grantees by jurisdiction, visit http://wwwn.cdc.gov/FundingProfiles/FundingProfilesRIA/.

[2]FY 2016 state award levels to be determined when awards are re-competed.

State Table: Disability and Health Grants[1,3]

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget[2]	Difference 2016 +/-2015
Alabama	$300,000	$300,000	TBD	TBD
Alaska	$300,000	$300,000	TBD	TBD
Arizona	-	-	TBD	TBD
Arkansas	$299,943	$299,943	TBD	TBD
California	-	-	-	-
Colorado	-	-	TBD	TBD
Connecticut	-	-	TBD	TBD
Delaware	$299,992	$299,992	TBD	TBD
Florida	$300,000	$300,000	TBD	TBD
Georgia			TBD	TBD
Hawaii	-	-	TBD	TBD
Idaho	-	-	TBD	TBD
Illinois	$300,000	$300,000	TBD	TBD
Indiana			TBD	TBD
Iowa	$300,000	$300,000	TBD	TBD
Kansas			TBD	TBD
Kentucky	-	-	TBD	TBD
Louisiana	-	-	TBD	TBD
Maine	-	-	TBD	TBD
Maryland	-	-	TBD	TBD
Massachusetts	$300,000	$300,000	TBD	TBD
Michigan	$300,000	$300,000	TBD	TBD
Minnesota			TBD	TBD
Mississippi	-	-	TBD	TBD
Missouri	-	-	TBD	TBD
Montana	$300,000	$300,000	TBD	TBD
Nebraska			TBD	TBD
Nevada	-	-	TBD	TBD
New Hampshire	$300,000	$300,000	TBD	TBD
New Jersey			TBD	TBD
New Mexico	-	-	TBD	TBD
New York	$300,000	$300,000	TBD	TBD
North Carolina	$300,000	$300,000	TBD	TBD
North Dakota	$300,000	$300,000	TBD	TBD
Ohio	$300,000	$300,000	TBD	TBD
Oklahoma			TBD	TBD
Oregon	$300,000	$300,000	TBD	TBD
Pennsylvania			TBD	TBD
Rhode Island	$300,000	$300,000	TBD	TBD
South Carolina	$299,930	$299,930	TBD	TBD
South Dakota			TBD	TBD
Tennessee	-	-	TBD	TBD
Texas	-	-	TBD	TBD
Utah	-	-	TBD	TBD
Vermont	-	-	TBD	TBD
Virginia	-	-	TBD	TBD
Washington	-	-	TBD	TBD
West Virginia	-	-	TBD	TBD
Wisconsin	-	-	TBD	TBD
Wyoming	-	-	TBD	TBD
Territories				

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget[2]	Difference 2016 +/-2015
America Samoa	-	-	-	-
Guam	-	-	-	-
Marshall Islands	-	-	-	-
Micronesia	-	-	-	-
Northern Marianas	-	-	-	-
Puerto Rico	-	-	-	-
Palau	-	-	-	-
Virgin Islands	-	-	-	-
Subtotal, States	**$5,399,865**	**$5,399,865**	**TBD**	**TBD**
Subtotal, Territories	**$0**	**$0**	**TBD**	**TBD**
Total	**$5,399,865**	**$5,399,865**	**TBD**	**TBD**

[1]This State Table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial grantees). For a more comprehensive view of grant and cooperative agreement funding to grantees by jurisdiction, visit http://wwwn.cdc.gov/FundingProfiles/FundingProfilesRIA/.

[2]FY 2016 state award levels to be determined when awards are re-competed.

[3]http://www.cdc.gov/ncbddd/disabilityandhealth/programs.html

PUBLIC HEALTH SCIENTIFIC SERVICES

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$395.298	$481.061	$474.559	-$6.502
PHS Evaluation Transfer	$85.691	$0.000	$0.000	$0.000
ACA/PPHF	$0.000	$0.000	$64.250	+$64.250
Total Request	**$480.989**	**$481.061**	**$538.809**	**+$57.748**
FTEs	1,010	1,010	1,010	0
Health Statistics	$155.247	$155.397	$160.397	+$5.000
Surveillance, Epidemiology, and Public Health Informatics	$273.464	$273.464	$311.008	+$37.544
Public Health Workforce and Career Development	$52.278	$52.200	$67.404	+$15.204
ACA/PPHF (non-add)	$0.000	$0.000	$36.250	+$36.250

Summary

CDC's Public Health Scientific Services (PHSS) leads, promotes, and facilitates science standards and policies to reduce the burden of diseases in the United States and globally. In 2014, the Office of Public Health Scientific Services led the development and implementation of the CDC Surveillance Strategy[256] with input from other CDC programs and external partners. This Strategy aims to improve surveillance, including health statistics, by addressing data availability, system usability, redundancies, and incorporation of new information technologies. Initial areas targeted for improvement include:

- Modernizing the National Notifiable Diseases Surveillance System (NNDSS) so that data reported comply with HL7 message standards and create momentum toward more efficient and effective electronic data exchange
- Enhancing national and local syndromic surveillance, linking electronic health record data to cloud-based computing environments with new analytic applications and tools
- Accelerating adoption of electronic laboratory reporting to state and local health departments
- Creating true mortality surveillance systems from vital statistics reporting by accelerating the adoption of electronic reporting of death records

In addition to these four initiatives, other activities by PHSS have focused on reducing the administrative burden to state and local health departments, enhancing informatics innovation, creating vendor forums to promote more effective exchanges between CDC programs and the informatics/data vendor community, and creation of a prototype integrated surveillance system portal. Successful implementation of the Surveillance Strategy will ultimately improve the quality and efficiency of data storage, management, analysis, and visualization by increasing the use of common standards and platforms across the agency and with public health departments. The Surveillance Strategy is also addressing the needs, tools, and composition of the public health workforce for informatics and surveillance by both by both traditional on-the-job fellowship programs and training-in-place programs for current public health professionals.

CDC's FY 2016 request of **$538,809,000** for Public Health Scientific Services, including $64,250,000 from the Affordable Care Act Prevention and Public Health Fund, is $57,748,000 above the FY 2015 Enacted level. The request includes an increase of $10,000,000, which will enhance laboratory training, capacity, and oversight**.** The request also includes $8,000,000 to support health departments' efforts to address gaps in foundational capabilities that align with national accreditation standards, which are essential to public health departments' ability to protect and improve health. The request includes an increase of $15,204,000 for Public Health Workforce. At the increased level, CDC will continue to focus on high-priority activities like the Epidemic

[256] http://www.cdc.gov/surveillance/

Intelligence Service (EIS) and Public Health Associate Program (PHAP), and will strengthen informatics and population health training, particularly training at the intersection of public health and healthcare. The FY 2016 Budget also expands electronic death reporting to provide faster, better quality data on deaths of public health importance, including Prescription Drug Overdose deaths. PHSS programs and activities contribute to CDC's strategic goal to monitor health and ensure laboratory excellence.

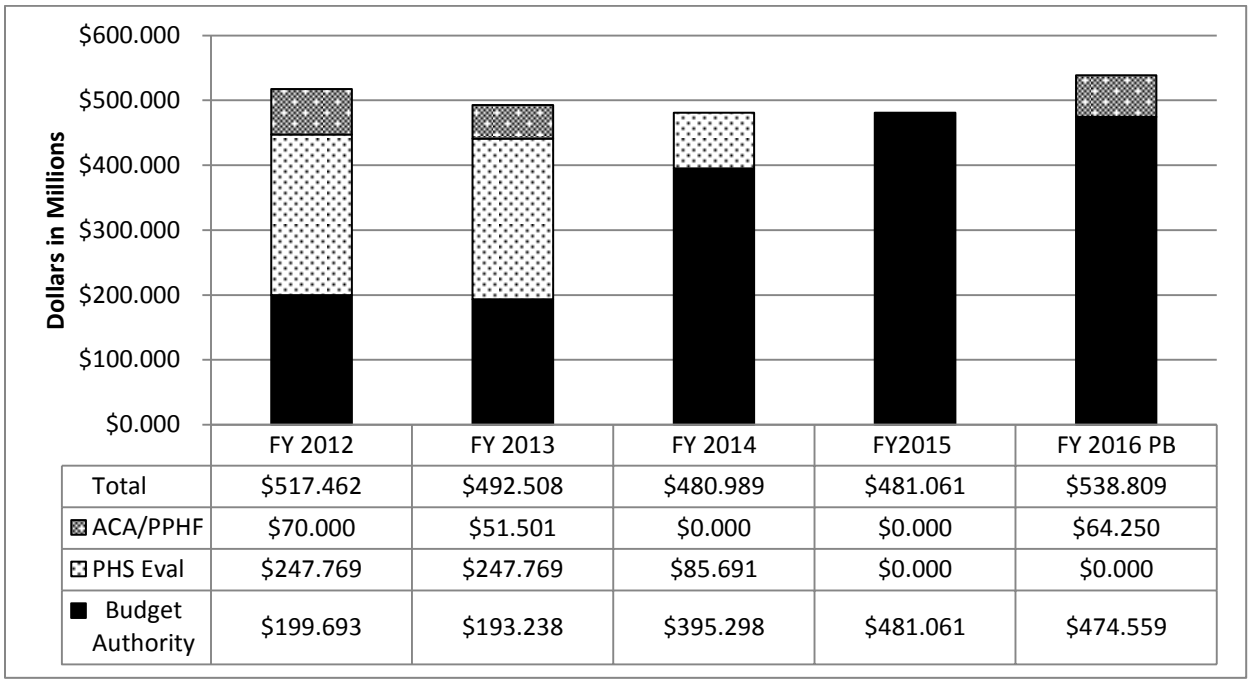
Performance Highlights

- In FY 2014, CDC mobilized Epidemic Intelligence Service (EIS) officers 78 times to provide epidemiologic expertise and support for both domestic (24 states, 4 U.S. territories, 2 federal agencies, and 3 tribal nations) and international needs (15 countries). Notably, EIS officers investigated suspected Chikungunya cases in multiple U.S. territories, identified bearded dragons as the source of a salmonella outbreak in children, reviewed causes of catheter-associated urinary tract infections in a U.S. hospital, analyzed the link between childhood lead poisoning and former lead paint production, and assisted in the large-scale response against Ebola in West Africa.
    - In response to Ebola, as of December 9, 2014, 128 EIS officers (of 158 total EIS officers) have deployed to 14 countries in Africa (Sierra Leone, Liberia, Guinea, Guinea-Bissau, Nigeria, Senegal, Cote D'Ivoire, Democratic Republic of the Congo, Ghana, Mali, Cameroon, Congo, Benin, and The Gambia), six states (New York, Virginia, Texas, Georgia, Illinois, and Ohio), and three CDC Quarantine Stations. Sixty EIS officers have worked in CDC's Emergency Operations Center. Some EIS officers have done multiple deployments, and more deployments are pending. As of Nov. 21, 2014, EIS officers contributed 4,547 days to the Ebola response.

- In FY 2014, electronic media reach of *CDC Vital Signs* was over 3.5 million potential viewings, exceeding its target year-end goal of 2.9 million potential viewings. During FY 2014, CDC published over 240 *MMWR Weekly reports* and 23 Serial publications, such as surveillance summaries and supplements. CDC increased total electronic media reach by 23% since FY 2012 from 18.1 million to 22.2 million during FY 2014.

- In 2014, 73.8% of scientists attending a CDC training workshop reported implementation of new or improved laboratory testing procedures resulting in a reduction of test time or cost as well as more accurate test results.

Public Health Scientific Services Funding History[1]



	FY 2012	FY 2013	FY 2014	FY2015	FY 2016 PB
Total	$517.462	$492.508	$480.989	$481.061	$538.809
ACA/PPHF	$70.000	$51.501	$0.000	$0.000	$64.250
PHS Eval	$247.769	$247.769	$85.691	$0.000	$0.000
Budget Authority	$199.693	$193.238	$395.298	$481.061	$474.559

[1] FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

Health Statistics Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$69.556	$155.397	$160.397	+$5.000
PHS Evaluation Transfer	$85.691	$0.000	$0.000	$0.000
Total	**$155.247**	**$155.397**	**$160.397**	**+$5.000**

Overview

CDC's National Center for Health Statistics[257] (NCHS) is the nation's principal health statistics agency, producing high quality, nationally representative data used to identify emerging health issues and help guide actions and policies to improve health. NCHS uses a variety of data collection mechanisms to obtain accurate information from multiple sources. This process provides a broad perspective to help us understand the U.S. population's health, influences on health, and health outcomes.

Budget Request

CDC's FY 2016 request of **$160,397,000** for health statistics is $5,000,000 above the FY 2015 Enacted level. With this increase, CDC will expand electronic death reporting to provide faster, better quality data on deaths of public health importance, including Prescription Drug Overdose deaths. This budget request will maintain baseline data collections, as described below.

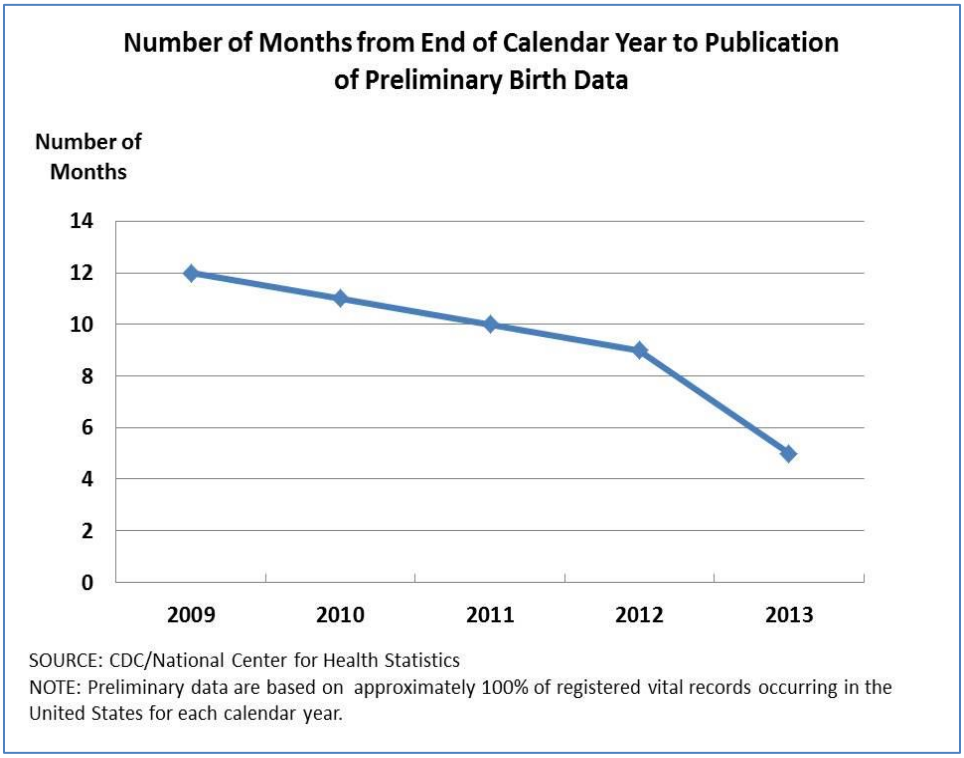
Major Data Collection Systems

Data Collection Systems	Method of Data Collection
National Vital Statistics System	Obtains records from the 57 vital registration jurisdictions (50 states, New York City, District of Columbia, and five U.S. territories) and analyzes information on the 6.5 million birth, death and fetal death events occurring in the United States each year.
National Health Interview Survey	Conducts household interviews (usual sample of approximately 35,000 households annually) to obtain data on health status and conditions, disability, access to and use of health services, health insurance coverage, immunizations, risk factors, and health-related behaviors.
National Health and Nutrition Examination Survey	Visits 15 randomly selected counties each year to assess the health and nutritional status of a nationally representative sample of about 5,000 adults and children by conducting household interviews as well as physical examinations and laboratory tests in mobile examination centers.
National Health Care Surveys	Collects information from health care providers about their organizational structure, the services rendered, and the patients served.

[257] http://www.cdc.gov/nchs

National Vital Statistics System

The National Vital Statistics System[258] (NVSS) provides key information on the U.S. population, including teen childbearing, preterm birth, infant mortality, life expectancy at birth, and the leading causes of death. These critical indicators of well-being are calculated using information from the birth and death certificates filed with the 57 vital registration jurisdictions and sent to CDC, where they are compiled into the NVSS. CDC continually collaborates with the vital registration jurisdictions to improve timeliness of vital statistics to allow prompt identification of problems and evaluation of public health programs and policies. After CDC supported the expansion of the electronic birth registration systems in vital registration jurisdictions in FY 2012 and FY 2013, the efficiency of the collection and analysis of birth data improved. CDC released preliminary 2013 U.S. birth data in May 2014, a record five months after the end of the calendar year. Among other points, these data showed that the preterm birth rate fell for the seventh year in a row to 11.38%, providing timely data to states and other public health partners for planning and evaluating efforts to improve maternal and infant health.



Further improvements in quality and timeliness of birth data will be realized after January 2015 when all 50 states and Washington, D.C. will have adopted the 2003 Revisions of the U.S. Standard Certificate of Live Birth. Nationwide adoption will finally allow for national level estimates on topics of interest to the healthcare community such as the body mass index of the mother at the time of birth, breastfeeding initiation within the first few days of infancy, and source of payment for the delivery. Nationwide adoption of a consistent format will speed the processing of birth data even further than what was achieved in 2013.

Progress with electronic death registration system (EDRS) coverage is slower because of complexities related to linking multiple data providers (e.g., funeral homes, physicians, medical examiners, coroners, local and state health departments) involved in the registration of the deaths. Widespread EDRS use would allow for:

- Faster reporting of final annual mortality data.
- Real-time surveillance of deaths of public health importance.
- Quick matching with birth certificates, assuring that birth certificates of people who recently died are not issued to others for fraudulent purposes.

In FY 2016, CDC will expand electronic death reporting in the vital registration jurisdictions to improve coverage and participation of data providers, allowing for faster access and improved quality of data on deaths of public health importance, including prescription drug overdose deaths. As of November 2014, 41 of the 57 vital

[258] http://www.cdc.gov/nchs/nvss.htm

registration jurisdictions have an operational EDRS and six have a system in development.[259] Of those jurisdictions with a system in place, many still have low numbers of records filed electronically and capture incomplete information on the cause of death. Since FY 2013, CDC has funded nine states to improve physician participation with their EDRS, thereby enhancing the timeliness and quality of their data. Progress has been seen with CDC receiving about 31% of mortality records in 2014 within 10 or less days of the death, compared to 14% in 2012.

These efforts to improve the timeliness of jurisdiction reporting and to modernize the national vital statistics infrastructure are contributing to the development of a system capable of supporting near real-time surveillance. CDC will continue developing the NVSS role in disease surveillance in FY 2016, with the goal of identification and tracking of selected public health events within hours after mortality records are received. CDC is piloting a potential replacement for the 122 Cities Mortality Reporting System, which for decades provided data for U.S. surveillance of pneumonia and influenza mortality. The new NCHS mortality surveillance capability[260] builds on the existing NVSS and provides near real-time access to all death certificate data sent to NCHS by states, providing new opportunities for more frequent (e.g., daily) and more geographically detailed estimates of pneumonia and influenza mortality. CDC is examining this mortality surveillance capability for use with other deaths of public health importance.

National Health Interview Survey

For over 50 years, data collected through personal household interviews in the National Health Interview Survey[261] (NHIS) have been instrumental in tracking health status, healthcare access, and progress toward achieving national health objectives. To facilitate timely access to these data for research and decision-making, CDC continues to release preliminary data on a quarterly basis, prior to release of the full year of data. For instance, in September 2014, the NHIS produced its first estimates of health insurance coverage for January to March 2014, capturing health insurance coverage rates during the last three months of open enrollment through the Health Insurance Marketplace. To promote transparency and understanding of the estimates, CDC collaborated with the Census Bureau on a public discussion of the methodology of the collection and analysis of federal health insurance data. In FY 2015, the full year 2014 NHIS data, including health insurance estimates, will be available.

In FY2016, CDC will launch a new, more efficient NHIS sample that incorporates information on the demographic characteristics of the population from the Decennial Census, and provides a more nimble platform for responding to

To improve the precision of national estimates and increase the number of states for which CDC has key data, CDC successfully expanded the NHIS sample size from 35,000 to approximately 41,000 households in 2013 (supported by FY 2012 Prevention and Public Health Funds). As a result, the 2013 NHIS was able to produce statistically reliable health insurance coverage estimates in 43 states[262], compared to 20 before the sample increase. These and other state-level estimates allow better monitoring of healthcare access and use in order to evaluate, target, and improve health and health-related policies and programs at the national and state levels. CDC also expanded the 2014 NHIS sample (supported by FY 2013 Prevention and Public Health Funds) and anticipates that health insurance estimates will be possible for 50 states and Washington, D.C. when data is released in 2015.

The NHIS continues to be a platform for innovations in survey methodology, including testing of data collections for small populations, who are difficult to sample in sufficient numbers in most national population-based health surveys. CDC partnered with the Census Bureau to develop an innovative, cost-effective method of collecting data to conduct reliable statistical research on Native Hawaiians and Pacific Islanders. In FY 2014, CDC launched

[259] Retrieved December 12, 2014 from http://www.naphsis.org/Pages/ElectronicSystems.aspx
[260] http://www.cdc.gov/flu/weekly/nchs.htm
[261] http://www.cdc.gov/nchs/nhis.htm
[262] http://www.cdc.gov/nchs/data/nhis/earlyrelease/insur201406.pdf

the first ever Native Hawaiian and Pacific Islander (NHPI) NHIS[263]. Because this special survey uses the same NHIS instrument, estimates from the NHPI population can be compared with estimates from other racial and ethnic groups within the same period. This methodological work will inform future opportunities to assess, identify, and address the health and well-being of other small populations on a national scale.

National Health and Nutrition Examination Survey

CDC will conduct the National Health and Nutrition Examination Survey[264] (NHANES) in FY 2016. By combining household interviews with physical examinations and laboratory tests, NHANES collects the only nationally representative data on the prevalence of both diagnosed and undiagnosed conditions in the population, including diabetes, hypertension, and high cholesterol.

To address the scarcity of health information based on physical measurements of Asian persons, CDC began oversampling non-Hispanic Asian persons. Starting with the 2011–2012 NHANES, CDC will continue oversampling non-Hispanic Asians in the 2015-2016 survey. This updated survey design is crucial to the complete investigation of racial and ethnic health disparities, as the Asian-American population has grown by more than 40% in the last decade, and now constitutes about 5% of the U.S. population. The first estimates released in FY 2014 show that in 2011-2012:

- 26% of non-Hispanic Asian adults aged 20 years and older had hypertension
- 14% of non-Hispanic Asian adults had low HDL cholesterol
- 40% of non-Hispanic Asian adults had a high body mass index (BMI greater than 25 kg/m2)
- One in ten non-Hispanic Asian adults had high total cholesterol

In 2015, data will be available from the 2013-2014 NHANES. In addition to routinely collected data, the first nationally representative measurement of vertebral fractures and aortic calcification in the population will be available. Capturing high quality national-level data on the prevalence of vertebral fractures is important because these fractures have been linked to an increased risk of morbidity and mortality, contributing to healthcare costs associated with osteoporotic fractures. With the ability to link NHANES data to U.S. mortality and Medicare data systems, the impact of vertebral fractures on long-term health could be determined.

The flexibility of the NHANES design continues to lend itself to adding new content to measure emerging topics of public health importance. For example, as investigation of health outcomes associated with excess sodium intake continues, national level data are needed on how much sodium Americans actually consume. Following the successful pilot test of a 24-hour urine collection to measure sodium in FY 2013, this test was incorporated as a component in the 2014 NHANES. In 2015, NHANES will publish new estimates of sodium intake making it possible to evaluate the effect of efforts to reduce sodium in the food supply.

National Health Care Surveys

The National Health Care Surveys[265] are a family of nationally representative provider-based surveys covering a broad spectrum of health care settings. Within each setting, data are collected from a national sample of organizations that provide care (such as home healthcare agencies, inpatient hospital units, or physician offices). Within sampled organizations, data are collected from individual patient encounters. The National Health Care Surveys answer questions about:

- Use of healthcare resources
- Quality of healthcare
- Disparities in healthcare services provided to population subgroups

[263] http://www.cdc.gov/nchs/nhis/nhpi.html
[264] http://www.cdc.gov/nchs/nhanes.htm
[265] http://www.cdc.gov/nchs/dhcs.htm

In FY 2016, CDC will conduct the National Hospital Care Survey[266] (NHCS) by obtaining data from administrative sources on inpatient discharges. In addition, sampled hospitals will provide data on visits to emergency rooms, outpatient departments, and ambulatory surgery locations. The emergency department component of the NHCS will obtain data on drug-related emergency department visits using data elements from the Drug Abuse Warning Network (previously conducted by the Substance Abuse and Mental Health Services Administration).

In FY 2016, CDC's National Ambulatory Medical Care Survey[267] (NAMCS) will continue to collect data on care provided in physician offices and community health centers. The National Electronic Health Record Survey, started in 2008 as a supplement to the NAMCS, will continue to provide information on the adoption of electronic health records (EHRs) in ambulatory settings. Data from this survey have captured the increase in physician use of EHRs since implementation of the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009.

Adoption of Electronic Health Records

NCHS data show 78% of office-based physicians report use of an EHR system in 2013. About three quarters of physicians were using a system meeting federal "meaningful use" standards.

As use of EHR systems grows, CDC is developing the capability to accept data from the EHR for the NHCS and NAMCS, thus reducing data collection burden on physicians and hospitals while also improving data quality and timeliness. CDC began conducting pilot studies in 2014 to develop and test procedures to collect data from hospital emergency departments' EHR systems. CDC continues to work with EHR vendors to determine feasibility of an interface for hospital reporting.

In FY 2016, CDC will survey approximately 11,500 residential care communities and 5,000 adult day services centers for the National Study of Long-Term Care Providers (NSLTCP).[268] Along with administrative data collected from home health agencies, nursing homes, and hospices, the NSLTCP provides nationally representative statistical information about the supply and use of paid, regulated, long-term care providers. For example, data collected in the 2012 NSLTCP showed that for residential care communities:

- A higher percentage of residents in communities with 4–25 beds were male, minority, and receiving Medicaid, compared with residents in communities with 26–50 beds and more than 50 beds.
- The prevalence of Alzheimer's disease and other dementias was higher in communities with 4–25 beds (49%) than in communities with 26–50 beds (41%) and more than 50 beds (38%).

CDC will release the second wave of NSLTCP data (2014) and accompanying reports in FY 2015, providing information useful for national and state planning and resource allocation for the aging population.

Survey Design, Data Analysis and Dissemination

CDC continues to conduct statistical research to improve methods of data collection and analysis. In FY 2016, CDC will evaluate and improve its data collection processes through its Questionnaire Design Research Laboratory[269], a laboratory that develops and tests survey instruments for CDC and other Federal agencies, thereby improving the reliability and validity of federal surveys. CDC also conducts methodological work focused on gaps in availability of reliable estimates for smaller geographic areas, including the development and evaluation of small-area estimation techniques[270], such as incorporating auxiliary data to enhance small-area estimation for CDC survey outcomes. Regional variation and geographical context for health outcomes are of interest to researchers and state and local health professionals. The Research Data Center[271] will continue to

[266] http://www.cdc.gov/nchs/nhcs.htm
[267] http://www.cdc.gov/nchs/ahcd.htm
[268] http://www.cdc.gov/nchs/nsltcp.htm
[269] http://www.cdc.gov/qdrl/
[270] http://www.copafs.org/UserFiles/file/seminars/2012FCSM/Session06PavlinaRumchevaFCSMpresentation.pdf
[271] http://www.cdc.gov/rdc/

provide access to confidential CDC data, including state and other geographical identifiers to answer research questions using contextual data for smaller geographical areas. After thorough review of a proposal to ensure confidentiality of survey respondents, researchers can conduct analyses that go beyond information presented in standard health statistics reports.

CDC continues to build on its core data collections through linkage with other data sets,[272] maximizing the scientific value of the Center's population-based surveys. Through linkage of CDC survey data with data from administrative records and other surveys, researchers can study factors that influence disability, chronic disease, health care use, morbidity, and mortality.

CDC will continue to provide analysis and statistical expertise for Healthy People 2020[273] in FY 2016, coordinating efforts to measure progress over the decade by tracking data for more than 1,200 health objectives from about 200 data sources.

Providing Data to Monitor National Health Objectives

About 40% of data used for tracking progress towards Healthy People 2020 objectives come from NCHS surveys.

CDC will continue to promote access and data sharing by making public-use data files and statistical reports easily accessible in a timely manner. In FY 2014, the NCHS website received 12.4 million visits, connecting researchers, policy makers, and other users to data and reports on a variety of health and health-related topics. High- profile reports and journal articles produced by CDC in 2014 using NCHS data include:

- Injury-related emergency department visits by children and adolescents.
- Trends and geographic patterns in drug-poisoning death rates in the United States.
- Physical activity in youth aged 12-15.
- Recent declines in non-marital childbearing in the United States.

Each year, CDC produces *Health, United States*[274], the Secretary's report to Congress on the health of the nation, providing an overview of trends related to health status and its determinants, healthcare, and health insurance. *Health, United States 2013* included a special feature examining the use of prescription drugs, including the number and classes of drugs used, access problems, and deaths from misuse of opioid analgesic drugs.

On-line access systems provide quick access to key health data as well as tools that allow users with varying analytic skills to customize and display data in the way that fits their needs. Examples include:

- Health Data Interactive[275] provides tables with national health statistics for infants, children, adolescents, adults, and older adults.
- Health Indicators Warehouse[276] serves as the federal data hub for national, state, and community health indicators and data.
- VitalStats[277] allows users to examine vital statistics and population data using prebuilt tables and reports or by creating custom tables.
- Data Online Query System (DOQS)[278] allows users to generate and store analyses and provides dynamically generated tables, charts, and graphs using NCHS public-use data. DOQS launched in 2014 with emergency department data from the National Hospital Ambulatory Medical Care Survey. CDC will add more datasets in the future.

[272] http://www.cdc.gov/nchs/data_access/data_linkage_activities.htm
[273] http://www.cdc.gov/nchs/healthy_people/hp2020.htm
[274] http://www.cdc.gov/nchs/hus.htm
[275] http://www.cdc.gov/nchs/hdi.htm
[276] http://healthindicators.gov/
[277] http://www.cdc.gov/nchs/vitalstats.htm
[278] http://www.cdc.gov/nchs/dogs/index.htm

CDC will continue to develop and evaluate methods to address access to state-level data, including the NHIS Online Analytic Real-time System, a tool that will allow general users to produce estimates using both public-use data and data not released due to confidentiality constraints. Ultimately, this tool is targeted to state health departments and other state officials in need of high-quality estimates for individual states for comparison to other states and a national estimate.

Selected 2014 NCHS Data Products

For data users seeking to…	Product
Determine by how much preterm births decreased in a particular state between 2006—2013	Births in the United States, 2013[279]
Learn how U.S. families are experiencing out-of-pocket costs for healthcare	Financial Burden of Medical Care: A Family Perspective[280] Problems Paying Medical Bills: Early Release of Estimates From the National Health Interview Survey, January 2011–June 2013[281]
Conduct analyses of 2013 mortality data to further examine disparities in the leading causes of death	2013 Mortality Multiple Cause Files[282]
Explore trends in physician use of electronic health record systems	Trends in Electronic Health Record System Use Among Office-based Physicians: United States, 2007–2012[283]
Discover how fitness levels among U.S. youth have changed over the last decade	Cardiorespiratory Fitness Levels Among U.S. Youth Aged 12–15 Years: United States, 1999–2004 and 2012[284]

[279] http://www.cdc.gov/nchs/data/databriefs/db175.pdf
[280] http://www.cdc.gov/nchs/data/databriefs/db142.pdf
[281] http://www.cdc.gov/nchs/data/nhis/health_insurance/probs_paying_medical_bills_january_2011_june_2013.pdf
[282] http://www.cdc.gov/nchs/data_access/Vitalstatsonline.htm
[283] http://www.cdc.gov/nchs/data/nhsr/nhsr075.pdf
[284] http://www.cdc.gov/nchs/data/databriefs/db153.pdf

Surveillance, Epidemiology, and Public Health Informatics Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$273.464	$273.464	$283.008	+$9.544
ACA/PPHF	$0.000	$0.000	$28.000	+$28.000
Total	**$273.464**	**$273.464**	**$311.008**	**+$37.544**

Overview

CDC's public health scientific services provide expertise in public heath surveillance systems and informatics, epidemiologic analysis, and laboratory standards and services. CDC supports public health science through various surveillance systems, using external sources of information, and sharing best practices in collecting, managing, and using information among CDC programs and the public health community.

CDC also added functionality to Epi Info™ outbreak investigation software. The design provides health departments rapid data collection using mobile devices, an interface for analyzing and visualizing multiple data sets from their organizational databases, and integration with cloud infrastructure that provides more flexibility and scalability for disease outbreak data collection.

Budget Request

CDC's FY 2016 request of **$311,008,000** for surveillance, epidemiology, informatics, and laboratory science, including $28,000,000 from the Affordable Care Act Prevention and Public Health Fund, is $37,544,000 above the FY 2015 Enacted level. The 2016 Budget includes an increase of $10,000,000, which will enhance laboratory training, capacity, and oversight. The request also includes $8,000,000 to support health departments' efforts to address gaps in foundational capabilities that align with national accreditation standards, which are essential to public health departments' ability to protect and improve health.

The FY 2016 request maintains CDC's capacity to support:

- Timely and accessible public health data to inform decision-making.
- Development of methods to improve data quality.
- Access to information from electronic health records.

Lab Safety Initiative

In 2014, CDC carefully reviewed laboratory practices and policies to develop recommendations for improvements in laboratory safety and quality. In addition to enhancing general understanding, implementation, and enforcement of laboratory safety policies and quality systems across the agency's laboratories, training and education was identified as a functional area with great opportunities for improvement. In FY 2016, CDC plans to expand and improve its laboratory training offerings to ensure the highest quality laboratory science and safety practices to include:

- A 2-year postdoctoral fellowship, the Laboratory Leadership Service (LLS), that will offer intense, applied training in biosafety, quality management systems, and laboratory leadership and management. This is modeled on CDC's successful Epidemic Intelligence Service, and similarly, will include a competency-based curriculum and practical, applied service and learning experiences.
- Dedicated hands-on laboratory space for training CDC laboratory staff, with necessary design features to demonstrate and execute proper laboratory procedures and practices and appropriate safety features, including directional airflow, eyewash station, chemical storage units, and procedure-appropriate Personal Protective Equipment.

- Further, expand in-house training capability through enhanced use of distance learning and technology platforms such as webinars, virtual classrooms, and eLearning.

Surveillance

CDC's public health surveillance and informatics program strengthens the quality and utility of public health surveillance and the ability of state and local public health departments to benefit from and manage advances in electronic health information. The PHSS Budget line funds:

- Two major CDC surveillance systems (Behavioral Risk Factor Surveillance System and the National Notifiable Diseases Surveillance System).
- Operational support for the National Syndromic Surveillance Program and BioSense application.
- Countermeasures Tracking System.
- Public Health Information Network applications.

Surveillance Systems and Applications

Surveillance Systems and Applications	Examples of Activities
Behavioral Risk Factor Surveillance System (BRFSS)	Funds states to collect health status, risk behavior, and preventive health services information, including increasing the percentage of interviews completed by cellular telephone respondents to 27%, which will ensure adequate population coverage for states and selected metropolitan statistical local areas.
National Notifiable Diseases Surveillance System (NNDSS)	Enables all levels of public health (federal, state, local, territorial and international) to share health information to monitor, control, and prevent the occurrence and spread of state-reportable and nationally notifiable infectious and some non-infectious diseases and conditions.
BioSense	Funds states and localities to increase use of public health syndromic surveillance to efficiently, rapidly, and collaboratively monitor and respond to harmful health effects of exposure to disease or hazardous conditions. BioSense is funded through the Public Health Preparedness and Response budget line.
Countermeasures Tracking System (CTS)	Provides federal, state, and local public health agencies the capability to track usage and manage inventory of countermeasures and medical equipment during both day-to-day operations and responses to public health emergencies.
Public Health Information Network	Establishes and supports shared policies, standards, practices, and services that facilitate efficient public health information access, exchange, use, and collaboration among public health agencies with clinical and other partners to better integrate healthcare and public health system and use information effectively to advance population health and well-being.

CDC works in partnership with state and territorial health departments through cooperative agreements to administer the BRFSS. The BRFSS is a dynamic state-based system, which is used to gather a wide array of health information about health issues such as diabetes, heart disease, injury, and immunization, through telephone surveys conducted by the health departments of all 50 states, Washington, D.C., Guam, Puerto Rico, and the U.S. Virgin Islands, with help from CDC. CDC works in partnership with state and territorial health departments through cooperative agreements to administer the BRFSS. The BRFSS is the world's largest continuously conducted telephone health surveillance system, which uniquely provides up-to-date data at state and local levels. States use BRFSS data to identify emerging health problems, establish health objectives and track their

progress toward meeting these objectives, and develop and evaluate public health policies and programs designed to address identified problems. The BRFSS is the primary source of data for local entities, states, and the nation on the health-related behaviors of adults. In FY 2016, CDC will fund an estimated 57 grantees to complete approximately 400,000 BRFSS surveys. There is no prescribed funding formula. Awards are based primarily on the required sample size needed in the state to produce reliable estimates, the type of data collector used by the state (i.e., in-house, university, or private company) and special projects (e.g., mail and web pilots, call-back surveys, etc.).

Behavioral Risk Factor Surveillance System (BRFSS) Grants[1,2,3]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	57	56	56	57	57	0
- New Awards	2	0	0	57	0	-57
- Continuing Awards	55	56	56	0	57	+57
Average Award	$0.247	$0.236	$0.236	$0.232	$0.232	$0.000
Range of Awards	$0.048–$0.458	$0.065–$0.393	$0.050 - $0.329	TBD	TBD	N/A
Total Awards	**$14.100**	**$13.200**	**$13.248**	**$13.200**	**$13.200**	**$0.000**

[1]The BRFSS was funded through budget authority, funding from other CDC programs, and Prevention and Public Health Fund (PPHF) dollars in FY 2014.

[2]Reflects core funding and does not include funding from PPHF and other CDC programs.

[3]These funds are not awarded by formula.

One of the four initiatives of the CDC Surveillance Strategy[285], the NNDSS Modernization Initiative (NMI)[286], provides CDC with the opportunity to update and strengthen the capabilities of this broad reaching national surveillance system. NMI will use new information technologies and message structures to address state and local health department and CDC program concerns regarding data quality and system usability. As part of the modernization effort, CDC also will explore ways to help eliminate duplicative processes and redundancies and retire outdated legacy systems. During FY 2014, CDC began work to:

- Update the Message Mapping Guides (MMGs). These guides support collection, transmission, and analysis of data needed at the national level for public health surveillance. MMGs provide content standardization and an information exchange structure that will establish consistency in the message format used to transmit data from state partners to CDC programs. Using HL7 standards, the accepted standards for transfer of clinical and administrative data, will provide the elements required for seamless integration between systems.

- Improve the CDC Platform and Message Validation, Processing and Provisioning System (MVPS), which will improve the ability of CDC programs to receive, process, store, access, share, and analyze health-related data (including EHR data).

- Provide technical assistance to state and local health departments to implement and upgrade their systems to better support NNDSS.

- In FY 2015, CDC will continue developing MMGs for Mumps, Pertussis, STDs, Syphilis, and Hepatitis and transitioning messages to HL7 with a target of receiving 40% of total messages in this format. By FY 2016, 65% of data reported through NNDSS will be submitted using HL7 message standards. As messages are updated to these standards, a more streamlined and standardized data exchange will

[285] http://www.cdc.gov/surveillance/

[286] http://wwwn.cdc.gov/nndss/script/NNDSS_Modernization_Initiative.aspx

increase data consistency and quality, build a capacity to use data from Electronic Health Records and lead to the retirement of outdated legacy systems.

In FY 2014, NNDSS began a new five-year cooperative agreement using the Epidemiology and Laboratory Capacity Cooperative Agreement that incorporated implementing MMGs as a required activity. These cooperative agreement awards are competitive and subject to the availability of funds. CDC's NNDSS funding provides local and state public health agencies with the means to track, report, and respond to notifiable diseases.

National Notifiable Diseases Surveillance System (NNDSS) Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	63	64	63	63	63	0
- New Awards	7	1	0	0	0	0
- Continuing Awards	56	63	63	63	63	0
Average Award	$0.163	$0.157	$0.163	$0.163	$0.160	$0.000
Range of Awards	$0.010–$0.373	$0.009–$0.362	$0.006-0.331	$0.006–$0.331	$0.006–$0.331	N/A
Total Awards	**$10.343**	**$10.049**	**$10.247**	**$10.247**	**$10.247**	**$0.000**

[1]These funds are not awarded by formula.

Epidemiology

CDC supports evidence-based decision making by providing CDC scientists with access to epidemiological resources, scientific literature, and databases covering multidisciplinary topics related to disease prevention and control. In FY 2014, the Stephen B. Thacker CDC Library provided desktop electronic access for all of CDC staff to more than one million journal articles, books, and databases, thereby providing the foundation for research and programmatic initiatives across the agency and informing public health policy decisions. CDC supports health departments, non-profit hospitals, and others engaged in assessing the health of their communities with epidemiologic tools and resources including health metrics, survey instruments, and web applications. The Community Health Status Indicators project allows counties to track indicators for the leading causes of illness and death and benchmark their progress against demographically similar peer counties across the United States.

Epi Info™

Epi Info™ is a flexible, scalable suite of software tools that provides medical and public health personnel the ability to rapidly create data collection instruments, conduct data analysis and visualization and report data using epidemiologic methods. Epi Info™ is currently supporting Ebola containment efforts in West Africa and provided support to the humanitarian response to unaccompanied children from Central America.

- Multiple staff members have been deployed to West African countries to support data collection in the current Ebola outbreak. They provide support for data management of outbreak data for the affected counties, and building enhancements to Epi Info™, as necessary.
- Staff developed a custom surveillance case report form to collect information about unaccompanied children.

The Community Guide

Decision-makers in communities, businesses, healthcare institutions, and public health agencies at the local, state, and federal level rely on recommendations from the Community Preventive Services Task Force (Task Force)[287] when they want to know what works to improve and protect population health. Task Force

[287] http://www.thecommunityguide.org/about/aboutTF.html

recommendations, which are compiled in The Guide to Community Preventive Services (The Community Guide)[288], identify programs, services, and policies proven effective in a variety of real-world settings—from communities and counties to worksites, schools, and healthcare systems—so that resources can be optimized to protect and improve population health; to reduce future demand for healthcare spending that is driven by preventable disease and disability; and to increase the productivity and competitiveness of the U.S. workforce. Community preventive services evaluated by the Task Force include informational and education programs and services, programs to support healthful lifestyles, organizational and public policies, changes to the built environment, and health systems interventions.

CDC is directed by statute (Public Health Services Act § 399U) to provide ongoing administrative, research, and technical support for the operations of the non-federal, nonpartisan, independent, volunteer Task Force.

In FY 2014, CDC conducted systematic reviews of effective programs, services, and policies for preventing high-priority public health problems including diabetes, health equity (addressing health disparities), obesity, skin cancer, tobacco use, and vaccinations. These systematic reviews form the basis for Task Force recommendations. CDC also provided technical assistance and support, as requested, to a wide range of users from 36 states plus Washington, D.C., (including state health departments, local health agencies, public health, healthcare organizations, community based organizations, and other healthcare providers) to help them identify and implement Task Force recommendations that meet their particular needs. Technical assistance ranged from simple email interactions to intense email, online, and in-person engagement, often involving the development of materials and tools to solve users' unique challenges.

In FY 2015 through FY 2016, CDC will continue to:

- Conduct systematic reviews of the evidence on the effectiveness of community preventive programs, services, and policies
- Expand the reach of The Community Guide website[289]
- Improve users' satisfaction with the usefulness of the website.
- Multiply options for technical assistance in implementing Task Force findings
- Increase dissemination of Task Force findings in public health practice through partnerships and collaborations

Morbidity and Mortality Weekly Report (MMWR)

In FY 2014, *MMWR* launched *MMWR Express*, an iPhone/iPad app highlighting the summary information from the weekly reports, expanded social media presence by increasing Facebook and Twitter postings from one day per week to five days per week, and increased *MMWR Weekly* content. *MMWR* provides critical epidemiological data and recommendations to clinicians, epidemiologists, laboratorians, and other public health professionals through our extensive electronic media reach of web page views, subscriptions, and social media. Total electronic media reach increased by 24% since FY 2012 from 18.1 million to 22.4 million during FY 2014.

In FY 2015 and 2016, *MMWR* expects to include an Android platform app, similar to *MMWR Express* iPhone/iPad app, and enable a seamless reader experience on multiple delivery platforms such as e-readers and mobile devices. CDC will add LinkedIn postings with the same frequency of postings as Facebook and Twitter; expand electronic media growth; and implement publication improvements that can enable accessibility of *MMWR* and increase traffic to *MMWR* website.

[288] http://www.thecommunityguide.org/index.html
[289] http://www.thecommunityguide.org/index.html

Vital Signs

CDC Vital Signs' goal is to broaden *MMWR* readership by making its data and recommendations more relevant and widely available to its target audiences (especially state and local health departments, clinicians, and the general public) through print, broadcast, cable, electronic, and social media. In FY2014, CDC *Vital Signs*' total electronic media reach was over 3.5 million potential viewings, exceeding its target year-end goal of 2.9 million potential viewings. Anticipating media saturation could slow future growth of electronic media reach. Electronic media reach goals are 3.1 million in FY 2015 and 3.4 million in FY 2016.

Public Health Informatics

CDC's informatics program supports public health surveillance by bridging the gap between the public health community and clinical care using advances in information technology and electronic health information. CDC supports interoperability between public health agencies and healthcare in support of CMS' Meaningful Use of Electronic Health Records incentive program[290] by:

- Improving the CDC Platform's Message Validation, Processing, and Provisioning System (MVPS) as part of an integrated surveillance strategy.
- Hosting an innovative applied public health informatics laboratory and research cloud allowing evaluation and use of new software and technology for use within surveillance.
- Providing data management and information exchange services to CDC programs and state and local health departments.

What is the CDC Platform?

The Platform is a unified data and software platform that, once complete, will allow CDC programs to receive, process, store, access, share, and analyze health-related data, including electronic health record (EHR) data, to further the agency's public health goals.

As of June 30, 2014, 49/54 respondents reported readiness to receive MU data, and 46 reported actually receiving data. In addition, 43 (41 states and 2 large local) jurisdictions accept required message standards into the immunization registry production database. In FY 2015, CDC will work to increase the utility and further explore new public health uses of Electronic Health Records- Meaningful Use (EHR-MU) automated laboratory information systems and health information exchanges by supporting standard informatics guidelines and tools in collaboration with other CDC programs. CDC will use these standards to support critical public health functions such as health information exchange, emergency outbreak alerting, and laboratory science practices. By early 2015, CDC's sexually transmitted diseases (STD), hepatitis, mumps, and pertussis programs are expected to receive timely, complete, and high-quality data from certain jurisdictions through the CDC Platform (CDCP). When this important milestone is achieved, CDC will increase the number of conditions and jurisdictions using the CDCP for NNDSS as well as develop new MMGs for case notifications.

[290] http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/index.html

CDC WONDER[291], developed by CDC, is publicly accessible, web-based, menu-driven system that makes the information resources of CDC available to public health professionals, academia and the public at large. It furthers CDC's mission of health promotion and disease prevention by speeding and simplifying access to a wide array of public health data sets and products for state and local health departments, the Public Health Service, and the academic public health community. CDC WONDER is valuable for public health research, decision-making, priority setting, program evaluation, and resource allocation.

CDC Expands Access to Information Key to Public Health Data

In FY 2014, CDC WONDER experienced approximately 17 million visits to their website and generated nearly 3.8 million custom reports for users around the world.

MarketScan®[292] is a unique suite of healthcare-related databases and tools, licensed by CDC from Truven Health Analytics. CDC researchers use the databases and tools to conduct a variety of ongoing research studies. The data available from MarketScan are not otherwise available from other sources or providers in terms of size, scale, data quality, and the ability to explore complex public health research problems longitudinally, regionally, and at the patient level. These databases are critical to a wide-range of CDC programs and activities and are the primary data source for scores of peer-reviewed publications, policy statements, and impact analysis studies.

MarketScan®

Currently, 170 CDC subscribers have access to data used to inform key studies around:

- Exploration of antibiotic use for healthcare associated infections
- Estimating the burden and cost of inpatient, emergency department, and outpatient visits related to waterborne illnesses

Laboratory Standards and Services

CDC's laboratory standards and services provide leadership to improve the quality of public health and clinical laboratory testing and related practices in the in the United States and globally. CDC supports these efforts by:

- Developing evidence-based guidelines
- Supporting standardized test ordering and reporting linked to electronic health records
- Providing laboratory training services and other scientific support to CDC and extramural researchers
- Developing regional networks and other mechanisms strengthening the quality, sustainability, and effectiveness of the nation's public health laboratory system

Public Health Laboratory Testing

One-half of Public Health Labs that received training to improve TB testing in 2013 cut TB testing costs by 20%. They decreased repeat tests and used less expensive molecular testing procedures resulting in enhanced testing techniques.

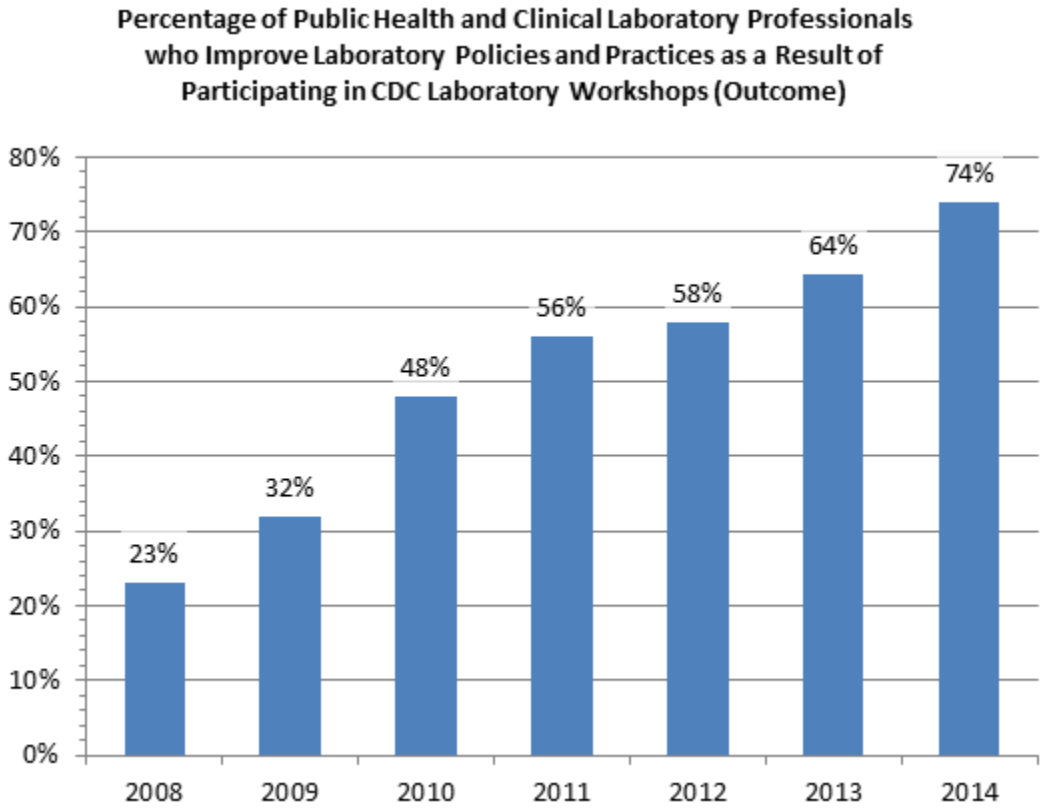
In FY 2014, CDC initiated evaluation of the impact of evidence-based practice guidelines and supported the National Institute of Standards and Technology (NIST) accreditation and validation tool for certifying 2017 Edition Meaningful Use EHR technology. As a result, electronic health record vendors will be able to test the functionality of the EHR to meet the accreditation and regulatory requirements for ordering and resulting laboratory testing. CDC surpassed its target for improvements in practices and policies resulting from laboratory workshops.

In FY 2015, CDC will publish the first-ever comprehensive set of public health laboratory competencies to strengthen laboratory workforce development strategies and activities. CDC will also continue to support

291 http://wonder.cdc.gov/
292 http://intranet.cdc.gov/MarketScan/

implementation of agency-wide policy for specimen management. In FY 2016, CDC will build upon FY 2014 and FY 2015 plans and achievements aimed at strengthening the quality of laboratory testing by continuing to collaborate with federal and professional organizational partners to support harmonization of coding standards and functional requirements used in electronic medical records by all laboratories reporting test results.

In FY 2015, CDC also will launch the Laboratory Leadership Service (LLS), a 2-year postdoctoral fellowship that will offer intense, applied training in biosafety, quality management systems, and laboratory leadership and management. The LLS is modeled on CDC's successful Epidemic Intelligence Service, and similarly, will include a competency-based curriculum and practical, applied service and learning experiences. CDC anticipates matriculating 7 LLS fellows in FY 2015 and 10 in FY 2016. The LLS is an important component of CDC's multi-pronged efforts to strengthen the workforce focused on public health laboratory leadership and management.



The chart above indicates the impact of implementing new training techniques to improve laboratory policies and practices in public health and clinical laboratories around the world (GPRA measure 8.B.3.2). In 2014, 73.8% of the scientists attending a CDC training workshop reported implementation of new or improved laboratory testing procedures resulting in a reduction of test time or cost as well as more accurate test results. The 73.8% change in practice exceeds the 2014 target by 3.8%.

Public Health Workforce and Career Development Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$52.278	$52.200	$31.154	-$21.046
ACA/PPHF	$0.000	$0.000	$36.250	+$36.250
Total	**$52.278**	**$52.200**	**$67.404**	**+$15.204**

Overview

The nation's public health workforce is facing ongoing and emerging challenges—health problems that require multifactorial solutions, use of new technology, collaboration with the health care sector, and the need for continuing education and training. In addition, over 58,000 state and local public health jobs have been lost since 2008. A well-trained public health workforce is critical to ensuring the highest level of efficiency and effectiveness in protecting America's health, a responsibility only the public health system ensure.

CDC supports a competent, sustainable, and empowered public health workforce through programs that:

- Strengthen education, training, and professional development of the public health workforce
- Enhance service, response, and consultation
- Provide leadership in national public health workforce efforts

Budget Request

CDC's FY 2016 request of $**67,404,000** for Public Health Workforce and Career Development, including $36,250,000 from the Affordable Care Act Prevention and Public Health Fund, is $15,204,000 above the FY 2015 Enacted level. At the increased level proposed for Public Health Workforce, CDC will continue to focus on high-priority activities like the Epidemic Intelligence Service (EIS) and Public Health Associate Program (PHAP), and will strengthen informatics and population health training, particularly at the intersection of public health, healthcare, and support almost 80 additional fellows. CDC will increase the number of fellows in these and other programs (many of which place fellows at state and local health departments) and will provide greater support for public health e-learning, which benefits state and local partners.

Epidemic Intelligence Service (EIS) and Ebola Response

EIS has been a critical part of CDC's Ebola response—156 of 158 EIS officers have been involved.

As of Nov. 21, 2014, EIS officers have contributed 4,547 days to the Ebola response—the equivalent of three Presidential terms.

Public Health Associate Program and Ebola Response

Extended CDC's reach at quarantine stations and state/local health departments for the Ebola response effort through an unprecedented deployment of PHAP associates (51 from the Class of 2013) (data as of December 2014)

CDC strengthens the public health workforce through programs that recruit new talent through on-the-job fellowships, increase access to high quality training (including e-learning), and work with academia to improve education about population health. In FY 2014, CDC supported 471 fellows who received in-depth, on-the-job training in applied epidemiology, public health operations and management, informatics, prevention effectiveness, policy, and preventive medicine. Fellows provide service while learning. Sixty-six percent of these fellows were assigned to state and local public health agencies, providing direct on-the-ground service where needed most.

CDC supports the current workforce by offering public health training and continuing education. CDC is the only HHS agency accredited to award seven types of continuing education for health professionals. In FY 2014, over 189,000 learners earned free CDC continuing education units. Ninety-six percent of that was through e-learning (as compared to 93% in FY 2013). CDC provides a central location for quality public health e-learning, training

information, and learning resources through the CDC Learning Connection[293]. This website provides access to CDC TRAIN, a free resource where individuals across public health and health care can identify educational activities to support their professional development. At the end of FY 2014, over 6,600 courses were available to over 102,000 registered learners.

CDC Provides Free Access to Public Health Training

Over 102,000 people—enough to fill at least 1,300 college lecture halls—have registered for CDC TRAIN, a free resource for public health training.

In FY 2015, CDC will focus on enhancing the training of and service provided by Public Health Associates, Epidemic Intelligence Service officers, and other fellows; expanding informatics training, focusing on the needs of state and local public health agencies; and strengthening collaboration with the healthcare sector, particularly for fellow assignments and projects.

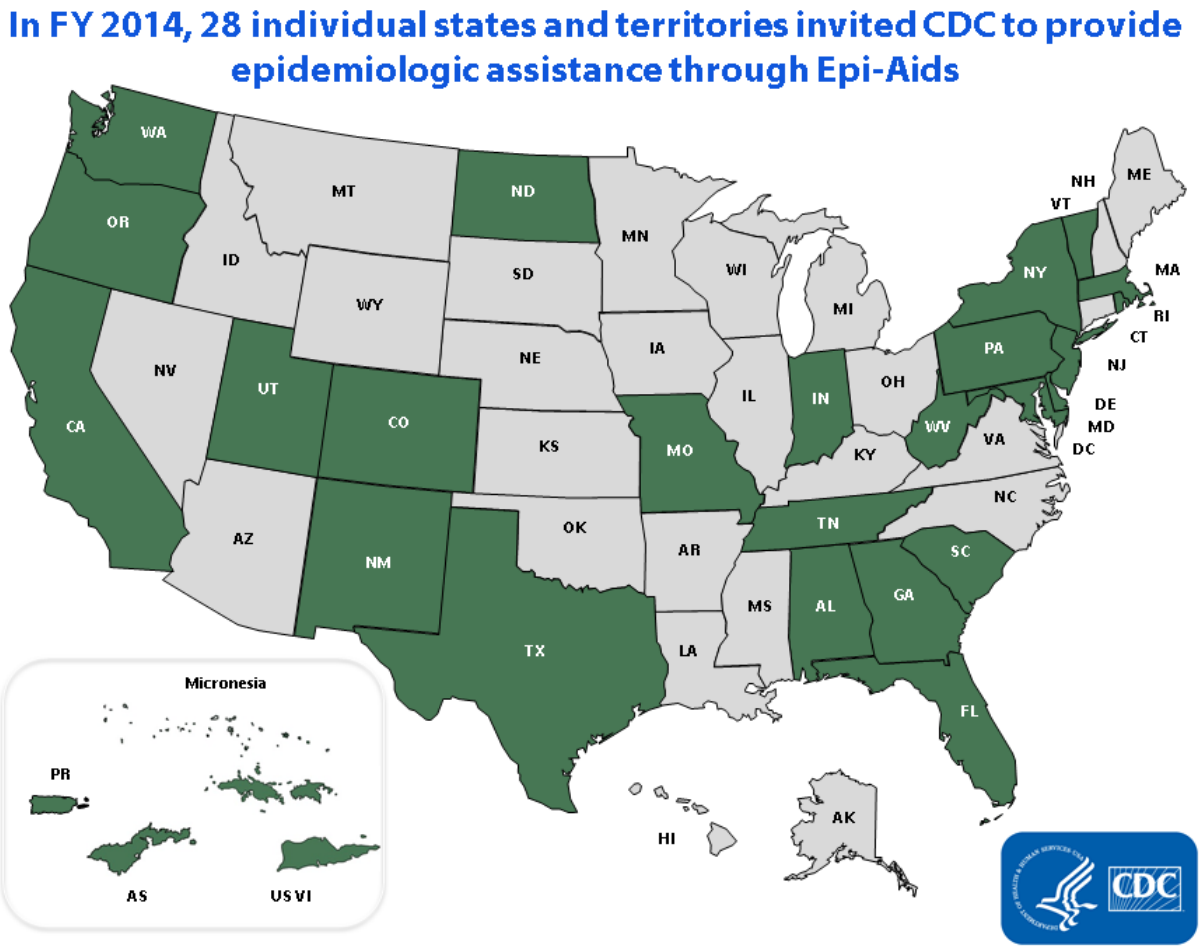
With the increase proposed for FY 2016, CDC will increase the number of fellows, thereby increasing the number of fellows assigned to state and local health departments. CDC will expand staff support for these fellows, enhance access to public health e-learning, increase opportunities for fellows to receive training in population health, and strengthen workforce development for public health surveillance. CDC will accomplish this effort by strategically placing EIS officers, Prevention Effectiveness fellows, Public Health Informatics fellows, Preventive Medicine residents/ fellows, and Public health Associates in high-need areas.

Fellows Supported by Public Health Workforce and Career Development Funding[1]

	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Enacted	FY 2016 Request	2016 +/-2015
Number of Fellows	546	614	471	588	667	+79
- Fellows assigned to STLT agencies	335	401	310	430	487	+57
- Fellows assigned to CDC	211	213	161	158	180	+22

CDC works with academic partners to promote the integration of population health concepts into the curricula of medical and nursing schools and to ensure that public health education is focused on ground-level public health priorities. Through cooperative agreements, CDC funds four national academic associations representing the education of public health professionals, physicians, and nurses: the Association of Schools and Programs of Public Health, Association for Prevention Teaching and Research, Association of American Medical Colleges, and American Association of Colleges of Nursing. Activities focus on improving population health through curricular enhancements, inter-professional exchange, partnerships, and fellowships. At the end of five years, CDC expects awardees to expand by 25% the number of medical and nursing schools that integrate population health concepts into their curricula.

[293] http://www.cdc.gov/learning/



Epidemiologic Assistance through Epi-Aids

- CDC's EIS officers work on the public health frontlines, 24/7, conducting epidemiologic investigations and public health surveillance, nationally and internationally.
- States, territories, tribal governments, federal agencies, and other countries' ministries of health request EIS support through an Epi-Aid.
- In FY 2014, EIS officers conducted 78 Epi-Aids:
    - 44 Epi-Aids in 28 U.S. states and territories
    - 3 Epi-Aids at American Indian reservations
    - 5 Epi-Aids at Federal facilities
    - 7 multi-state Epi-Aids
    - 19 international Epi-Aids in 15 countries

Academic Partners Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	4	4	4	4	4	0
- New Awards	4	0	0	0	0	0
- Continuing Awards	0	4	4	4	4	0
Average Award	$0.325	$0.265	$0.265	$0.254	$0.254	$0.000
Range of Awards[2]	$0.265–$0.385	$0.203–$0.295	$0.203–$0.295	$0.208–$0.300	$0.200–$0.300	N/A
Total Awards	**$1.300**	**$1.062**	**$1.062**	**$1.017**	**$1.017**	**$0.000**

[1]These funds are not awarded by formula.

[2]Total grant award represents the core award; other CDC offices can choose to fund supplemental awards using this cooperative agreement.

The goal of CDC's Strengthening Health Systems through Inter-professional Education (project SHINE) cooperative agreement is to improve population health through innovative and integrated workforce development strategies to strengthen health system effectiveness. This is achieved by having fellows collaboratively engage in information-driven projects focused on community health improvement at the intersection of public health and healthcare. This cooperative agreement has three fellowships under its umbrella: the Applied Public Health Informatics Fellowship, the Informatics Training in Place Program, and the Health Systems Integration Program. Each has fellows assigned to or coming from state and local health departments. Project SHINE is implemented through cooperative agreements with the Association of State and Territorial Health Officials, Council of State and Territorial Epidemiologists, National Association of County and City Health Officials, and the Public Health Informatics Institute.

Strengthening Health Systems through Inter-Professional Education (SHINE)[1,2,3]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	0	4	4	4	4	0
- New Awards	0	4	0	0	0	0
- Continuing Awards	0	0	4	4	4	0
Average Award	$0.000	$0.868	$0.756	$0.756	$0.881	+$0.125
Range of Awards	$0.000	$0.260-$2.420	$0.252–$2.250	$0.252–$2.250	$0.377–$2.375	N/A
Total Awards	**$0.000**	**$3.470**	**$3.024**	**$3.024**	**$3.024**	**$0.000**

[1]Total grant award represents the core award; other CDC offices (e.g., NCIRD, OPHPR) provided supplemental funds awarded to grantees to support Project SHINE 2nd year fellows and training activities using this cooperative agreement.

[2]These funds are not awarded by formula.

[3]FY 2013 awards were supported with core and PPHF funds.

Affordable Care Act Prevention and Public Health Fund

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
ACA/PPHF	**$0.000**	**$0.000**	**$64.250**	**+$64.250**

The following activities are included:

- Community Guide, $8,000,000
- Foundational Capacities, $8,000,000
- Healthcare Surveillance/Health Statistics, $12,000,000
- Public Health Workforce Capacity, $36,250,000 (included in the Public Health Workforce narrative)

Community Guide

CDC's FY 2016 request of $8,000,000 for The Community Guide in the Prevention Fund will provide additional resources for CDC to meet its statutory responsibility to provide ongoing administrative, research, and technical support for the operations of the Community Preventive Services Task Force[294] (*Task Force; Public Health Services Act § 399U*). As described above, the Community Preventive Services Task Force is an independent, nonpartisan, nonfederal, volunteer panel of public health prevention experts. The Task Force is mandated to develop findings and recommendations identifying programs, services, and policies proven effective in reducing disease, death, disability, and injury in a variety of real-world settings, such as communities, worksites, schools, and health plans. Task Force recommendations empower decision makers to:

- Use resources efficiently.
- Protect and improve health.
- Reduce demand for future health care spending driven by preventable disease and disability.
- Increase the U.S. workforce's productivity and economic competitiveness.

Examples of Task Force Recommendation Users, Their Goals, Community Guide in Action Stories, and The Community/Health Impact Achieved

User	Goal	Example of Community Guide in Action	Community/Health Impact
Employers and worksites	To increase productivity and save money	Maryland Businesses Support Worksite Wellness Effort to Combat Chronic Disease[295]	More than 150 businesses made a commitment to workplace wellness options for more than 180,000 employees.
Health systems, health plans, and clinics	To enhance the delivery of clinical preventive services, improve quality of care delivery, and use	Evidence-Based Recommendations Get Minnesotans in the Groove[296]	Over a 3-year period, Minnesota's heart disease rates dropped by 9% and adult smoking prevalence dropped nearly 30%, from 2.1% in 1999 to 16.1% by 2010.

[294] http://www.thecommunityguide.org/about/aboutTF.html
[295] http://www.thecommunityguide.org/CG-in-Action/Worksite-MD.pdf
[296] http://www.thecommunityguide.org/CG-in-Action/PhysicalActivity-MN.pdf

User	Goal	Example of Community Guide in Action	Community/Health Impact
	funds effectively		
State and local health departments and other governmental agencies	To achieve their public health goals and support accreditation of public health departments	An Evidence-Based Approach to Montana's Health Landscape[297]	Within one month, the proportion of children in their home visiting program who experienced asthma-related symptoms dropped from 23% to 7%.
Schools, community health centers, community centers, faith-based organizations, and others	To address the unique needs of their local constituents	The Path to Enhanced Physical Education: Reducing Obesity in Illinois[298]	Enhanced physical education standards based on Task Force obesity recommendations are expected to be implemented in every school in Illinois in the 2015-2016 academic school year.

Foundational Capacities

CDC's FY 2016 request of $8,000,000 will provide support to state and local health departments to strengthen public health practice within the changing environment. This funding will support health departments' efforts to address gaps in foundational capabilities that align with national accreditation standards and are essential to health departments' ability to protect and improve health. The program will be based on two related frameworks that define national expectations for health department capacity and services: the Public Health Accreditation Board's Standards and Measures[299] and the draft framework for Foundational Capabilities and Foundational Areas[300]. Grantees will strengthen the essential skills and capacities that support all programs and activities, including enhancing health departments' business capacity. These efforts will be coordinated with and complement other CDC efforts, including coordinating an agency-wide look at billing capacity and other fiscal capabilities essential to health department function and success.

Healthcare Surveillance/Health Statistics

CDC's FY 2016 request is $12,000,000 for healthcare surveillance/health statistics. In FY 2016, CDC will target the $12,000,000 request in Prevention and Public Health Fund investments toward tracking effects of the Affordable Care Act on the healthcare system and on health outcomes. The National Health Interview Survey (NHIS) and the National Ambulatory Medical Care Survey (NAMCS) are the core data systems used to monitor changes in the healthcare system and the effects on the U.S. population. Starting in 2011, questions were added to the NHIS to augment existing items on health insurance status, affordability of medical care and medications, usual source of medical care, preventive services, emergency room visits, and details about medical visits. For example, this new content in the 2011–2012 survey showed 1 in 3 men had not received recommended clinical services in the past 12 months shown in the NCHS Data Brief.[301] This new content also allowed CDC to show that the percentage of persons under 65 who were in families having problems paying medical bills[302] decreased between the first half of 2011 and the first half of 2013. The FY 2015 Omnibus did not include funds as

[297] http://www.thecommunityguide.org/CG-in-Action/PublicHealth-MT.pdf
[298] http://www.thecommunityguide.org/CG-in-Action/EnhancedPE-IL.pdf
[299] http://www.phaboard.org/accreditation-process/public-health-department-standards-and-measures/
[300] http://www.resolv.org/site-foundational-ph-services/
[301] http://www.cdc.gov/nchs/data/databriefs/db154.htm
[302] http://www.cdc.gov/nchs/data/nhis/health_insurance/probs_paying_medical_bills_january_2011_june_2013.pdf

requested within the Prevention Fund and the new NHIS content will be eliminated in 2016, interrupting the ability to use these data for monitoring trends. FY 2016 Prevention and Public Health Funds are requested to support the new content for the 2017 NHIS.

The NHIS sample will increase to provide stable estimates for some targeted populations, including a greater number of estimates at the state level. With the PPHF- supported NHIS sample size increase, CDC produced health insurance estimates for 43 states in 2012 and 2013 and expects to produce estimates for all 50 states and the District of Columbia in 2014. NHIS data for 2014 will be available mid- 2015.

The NAMCS sample of physicians will expand to permit more precise national estimates. The expansion of the NAMCS sample allows for some state-level estimates for physician office practices and estimates of clinical care provided in physician offices and community health centers. These data will support states' activities to monitor changes in healthcare utilization and evaluate provisions of the ACA to reduce morbidity and mortality from chronic disease and other preventable conditions.

Sample increases and content additions are typically seen in the following calendar year, because of the timing of receipt of funds. Because FY 2014 Prevention and Public Health Funds were not received, CDC provided one-time funding in FY 2014 enabling the NHIS and NAMCS to operate at expanded sample sizes in 2015, and provide state estimates used for planning and decision-making. FY 2015 Enacted level did not include funds for these activities in the Prevention and Public Health Fund, and therefore the 2016 NHIS and NAMCS will return to their typical sample sizes and the additional NHIS content will be eliminated. These activities will reconvene for the 2017 data collections, but at reduced level due to the reduction in the amount of funding requested from the Prevention and Public Health Fund. Sample sizes increases will produce fewer state estimates and not all of the expanded content will be restored to the levels seen in previous years.

State Table: Behavioral Risk Factor Surveillance System

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	Difference +/-2016
Alabama	$249,949	TBD	TBD	TBD
Alaska	$221,435	TBD	TBD	TBD
Arizona	$204,966	TBD	TBD	TBD
Arkansas	$146,343	TBD	TBD	TBD
California	$324,251	TBD	TBD	TBD
Colorado	$298,722	TBD	TBD	TBD
Connecticut	$309,505	TBD	TBD	TBD
Delaware	$151,312	TBD	TBD	TBD
District of Columbia	$289,923	TBD	TBD	TBD
Florida	$240,743	TBD	TBD	TBD
Georgia	$194,266	TBD	TBD	TBD
Hawaii	$225,032	TBD	TBD	TBD
Idaho	$196,013	TBD	TBD	TBD
Illinois	$299,860	TBD	TBD	TBD
Indiana	$223,096	TBD	TBD	TBD
Iowa	$192,389	TBD	TBD	TBD
Kansas	$302,114	TBD	TBD	TBD
Kentucky	$206,299	TBD	TBD	TBD
Louisiana	$301,297	TBD	TBD	TBD
Maine	$270,354	TBD	TBD	TBD
Maryland	$256,181	TBD	TBD	TBD
Massachusetts	$300,330	TBD	TBD	TBD
Michigan	$267,015	TBD	TBD	TBD
Minnesota	$308,861	TBD	TBD	TBD
Mississippi	$228,677	TBD	TBD	TBD
Missouri	$209,162	TBD	TBD	TBD
Montana	$328,674	TBD	TBD	TBD
Nebraska	$272,554	TBD	TBD	TBD
Nevada	$225,736	TBD	TBD	TBD
New Hampshire	$298,218	TBD	TBD	TBD
New Jersey	$308,152	TBD	TBD	TBD
New Mexico	$268,731	TBD	TBD	TBD
New York	$294,720	TBD	TBD	TBD
North Carolina	$293,098	TBD	TBD	TBD
North Dakota	$272,350	TBD	TBD	TBD
Ohio	$191,830	TBD	TBD	TBD
Oklahoma	$245,126	TBD	TBD	TBD
Oregon	$308,101	TBD	TBD	TBD
Pennsylvania	$257,711	TBD	TBD	TBD
Rhode Island	$183,626	TBD	TBD	TBD
South Carolina	$283,261	TBD	TBD	TBD
South Dakota	$163,345	TBD	TBD	TBD
Tennessee	$163,896	TBD	TBD	TBD
Texas	$237,822	TBD	TBD	TBD
Utah	$305,452	TBD	TBD	TBD
Vermont	$222,664	TBD	TBD	TBD

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	Difference +/-2016
Virginia	$194,606	TBD	TBD	TBD
Washington	$298,805	TBD	TBD	TBD
West Virginia	$216,294	TBD	TBD	TBD
Wisconsin	$309,747	TBD	TBD	TBD
Wyoming	$140,993	TBD	TBD	TBD
Territories				
America Samoa	$50,000	TBD	TBD	TBD
Guam	$100,125	TBD	TBD	TBD
Micronesia	$50,000	TBD	TBD	TBD
Palau	$92,123	TBD	TBD	TBD
Puerto Rico	$252,699	TBD	TBD	TBD
Virgin Islands	$0	TBD	TBD	TBD
Subtotal States	$12,703,607	TBD	TBD	TBD
Subtotal Territories	$544,947	TBD	TBD	TBD
Total	**$13,248,554**	**$13,200,000**	**$13,200,000**	**$0**

[1]Table includes budget authority, PPHF, and non-core BRFSS funding from other CDC programs.

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State Table: National Notifiable Diseases Surveillance System (NNDSS)[303,304]

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	Difference +/-2016
Alabama	$225,901	$225,901	$225,901	$0
Alaska	$178,874	$178,874	$178,874	$0
Arizona	$178,818	$178,818	$178,818	$0
Arkansas	$142,208	$142,208	$142,208	$0
California	$229,306	$229,306	$229,306	$0
Colorado	$209,696	$209,696	$209,696	$0
Connecticut	$196,101	$196,101	$196,101	$0
Delaware	$41,219	$41,219	$41,219	$0
Florida	$254,110	$254,110	$254,110	$0
Georgia	$143,376	$143,376	$143,376	$0
Hawaii	$156,688	$156,688	$156,688	$0
Idaho	$73,080	$73,080	$73,080	$0
Illinois	$298,518	$298,518	$298,518	$0
Indiana	$226,180	$226,180	$226,180	$0
Iowa	$303,922	$303,922	$303,922	$0
Kansas	$233,897	$233,897	$233,897	$0
Kentucky	$100,903	$100,903	$100,903	$0
Louisiana	$143,055	$143,055	$143,055	$0
Maine	$144,818	$144,818	$144,818	$0
Maryland	$245,739	$245,739	$245,739	$0
Massachusetts	$208,586	$208,586	$208,586	$0
Michigan	$254,570	$254,570	$254,570	$0
Minnesota	$243,318	$243,318	$243,318	$0
Mississippi	$106,445	$106,445	$106,445	$0
Missouri	$74,569	$74,569	$74,569	$0
Montana	$116,465	$116,465	$116,465	$0
Nebraska	$166,170	$166,170	$166,170	$0
Nevada	$149,025	$149,025	$149,025	$0
New Hampshire	$146,009	$146,009	$146,009	$0
New Jersey	$205,929	$205,929	$205,929	$0
New Mexico	$159,612	$159,612	$159,612	$0
New York	$303,400	$303,400	$303,400	$0
North Carolina	$201,582	$201,582	$201,582	$0
North Dakota	$96,225	$96,225	$96,225	$0
Ohio	$237,350	$237,350	$237,350	$0
Oklahoma	$160,359	$160,359	$160,359	$0
Oregon	$181,665	$181,665	$181,665	$0
Pennsylvania	$200,828	$200,828	$200,828	$0
Rhode Island	$153,199	$153,199	$153,199	$0
South Carolina	$127,484	$127,484	$127,484	$0
South Dakota	$123,537	$123,537	$123,537	$0
Tennessee	$282,107	$282,107	$282,107	$0
Texas	$107,778	$107,778	$107,778	$0
Utah	$229,414	$229,414	$229,414	$0
Vermont	$196,047	$196,047	$196,047	$0
Virginia	$331,443	$331,443	$331,443	$0
Washington	$259,472	$259,472	$259,472	$0
West Virginia	$85,950	$85,950	$85,950	$0

[303] http://www.cdc.gov/exposurereport/
[304] CFDA NUMBER: 93-521 [Discretionary]

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	Difference +/-2016
Wisconsin	$202,372	$202,372	$202,372	$0
Wyoming	$81,787	$81,787	$81,787	$0
Territories	--	--	--	--
American Samoa	$0	$0	$0	$0
Guam	$93,836	$93,836	$93,836	$0
Marshall Islands	$5,947	$5,947	$5,947	$0
Micronesia	$8,809	$8,809	$8,809	$0
Northern Mariana Islands	$8,089	$8,089	$8,089	$0
Puerto Rico	$43,970	$43,970	$43,970	$0
Palau	$22,375	$22,375	$22,375	$0
Virgin Islands	$23,564	$23,564	$23,564	$0
Cities	--	--	--	--
Chicago	$126,386	$126,386	$126,386	$0
District of Columbia	$29,602	$29,602	$29,602	$0
Houston	$145,754	$145,754	$145,754	$0
Los Angeles	$174,504	$174,504	$174,504	$0
New York City	$324,857	$324,857	$324,857	$0
Philadelphia	$120,307	$120,307	$120,307	$0
Subtotal, States	$9,119,104	$9,119,104	$9,119,104	$0
Subtotal, Territories	$206,591	$206,591	$206,591	$0
Subtotal, Cities	$921,411	$921,411	$921,411	$0
Total	**$10,247,105**	**$10,247,105**	**$10,247,105**	**$0**

[1]This State Table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial grantees). For a more comprehensive view of grant and cooperative agreement funding to grantees by jurisdiction, visit http://wwwn.cdc.gov/FundingProfiles/FundingProfilesRIA/.

ENVIRONMENTAL HEALTH

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$166.404	$166.404	$141.500	-$24.904
ACA/PPHF	$13.000	$13.000	$37.000	+$24.000
Total Request	**$179.404**	**$179.404**	**$178.500**	**-$0.904**
FTEs	445	445	445	0
Environmental Health				
- Environmental Health Laboratory	$55.870	$55.870	$55.870	$0.000
- Environmental Health Activities	$45.580	$45.580	$55.580	+$10.000
- Climate & Health (non-add)	$8,613	$8,613	$18,613	+$10.000
- Environmental and Health Outcome Tracking Network	$34.904	$34.904	$24.000	-$10.904
ACA/PPHF (non-add)	*$0.000*	*$0.000*	*$24.000*	*+$24.000*
- Asthma	$27.528	$27.528	$27.528	$0.000
- Childhood Lead Poisoning	$15.522	$15.522	$15.522	$0.000
ACA/PPHF (non-add)	*$13.000*	*$13.000*	*$13.000*	*$0.000*

Summary

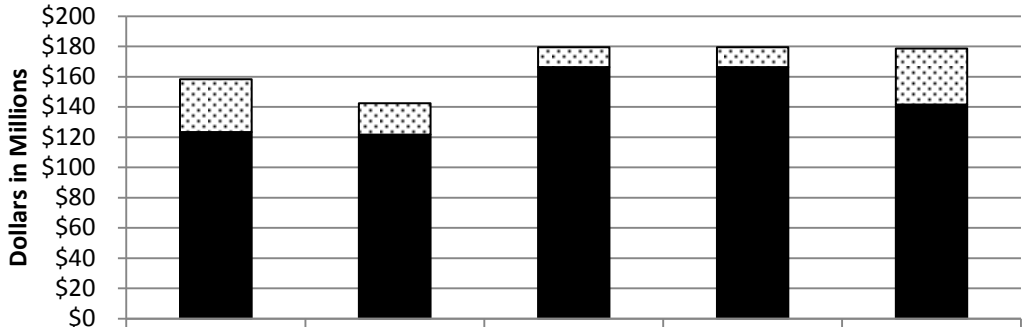
CDC protects America's health from environmental hazards that can be present in the air we breathe, the water we drink, and the world that sustains us. We do this by investigating the relationship between environmental factors and health, developing guidance, and building partnerships to support healthy decision making. These investments contribute to CDC's overall goal of keeping Americans safe from environmental and work-related hazards. CDC's FY 2016 request of **$178,500,000** for Environmental Health, including $37,000,000 from the Affordable Care Act Prevention and Public Health Fund, is $904,000 below the FY 2015 Enacted level, including a $10,000,000 increase for Building Resilience Against Climate Effects (BRACE) and a $10,904,000 reduction to the Environmental and Health Outcome Tracking Network.

Performance Highlights

- CDC distributed more than 1,020 radiation emergency tool kits in FY 2013 to public health professionals and clinicians. Recent evaluation research has found that the toolkits were valuable resources for planning (pre-event) and just-in-time (intra-event) use. Since the creation of the toolkits in 2005, CDC has provided more than 28,000 kits to professionals across the nation and internationally to assist clinicians in developing plans and response capacity for radiation emergencies.
- In FY 2013, CDC developed and improved three lab tests for measuring the most widely used insect repellant and 10 other herbicides and insecticides in order to monitor changes in exposures as a result of EPA use restrictions.
- Since its launch in April 2014, eleven U.S. state or local health departments have registered and agreed to begin reporting foodborne illness outbreak environmental assessment data into CDC's National Voluntary Environmental Assessment and Information System[305] (NVEAIS). NVEAIS standardizes reporting of environmental factors that cause foodborne illness outbreaks so local, state, territorial, and tribal food-safety programs can conduct assessments and better prevent foodborne outbreaks.

[305] http://www.cdc.gov/nceh/ehs/NVEAIS/index.htm

Environmental Health Funding History [1]



	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 PB
Total	$158.233	$142.379	$179.404	$179.404	$178.500
ACA/PPHF	$35.000	$20.740	$13.000	$13.000	$37.000
Budget Authority	$123.233	$121.639	$166.404	$166.404	$141.500

[1]FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

Environmental Health Laboratory Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$55.870**	**$55.870**	**$55.870**	**$0.000**

Overview

The Environmental Health Laboratory[306] improves the detection, diagnosis, treatment, and prevention of diseases resulting from exposure to harmful environmental chemicals and diseases that need advanced laboratory measurement for accurate diagnosis. The lab develops and applies innovative measurement techniques to assess disease risk, determine Americans' exposure levels, and respond to public health emergencies. It also assures the quality of newborn screening tests for early detection of deadly, but treatable diseases. Additionally, the lab standardizes cholesterol tests and diagnostic tests for chronic diseases to ensure results are sufficiently accurate for clinical and research use.

Budget Request

CDC's FY 2016 request of **$55,870,000** for the Environmental Health Laboratory is level with the FY 2015 Enacted level. Requested funds are needed to maintain the world's most advanced, state-of-the-art environmental public health laboratory.

Environmental Health Laboratory's projected contributions in FY 2016:

- Measure more than 300 priority chemicals and nutritional indicators in Americans
- Conduct more than 75 studies of harmful chemical exposures
- Ensure accurate testing in over 2,000 laboratories
- Standardize cholesterol tests and develop new reference tests for chronic disease biomarkers
- Fund up to 13 grantees to investigate harmful exposures and expand newborn screening

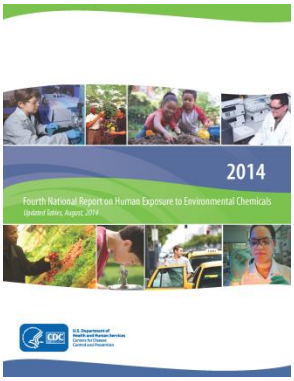
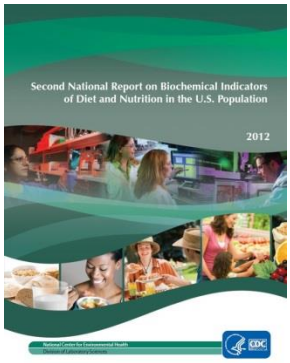
Biomonitoring to Assess Americans' Nutritional Status and Exposure to Harmful Chemicals

CDC uses biomonitoring—measurements in human blood and urine—to identify harmful exposures or nutritional deficiencies in the U.S. population. The Environmental Health Laboratory, the sole source for numerous high-quality laboratory tests, measures more than 300 chemicals and nutritional indicators in Americans. CDC publishes findings in the *National Report on Human Exposure to Environmental Chemicals*[307] and the *National Report on Biochemical Indicators of Diet and Nutrition in the U.S. Population*[308].

In FY 2016, CDC expects to release new biomonitoring results, adding to previously published data for 308 chemicals and 58 nutritional indicators. CDC also expects to collaborate on more than 75 studies to assess environmental exposures in vulnerable population groups or investigate the relationship between environmental exposures and adverse health effects. These studies help determine safe and harmful levels of exposure, identify true hazards, avoid unnecessary regulation, and assess the effectiveness of exposure reduction interventions.

[306] http://www.cdc.gov/nceh/information/health_laboratory.htm
[307] http://www.cdc.gov/exposurereport/
[308] http://www.cdc.gov/nutritionreport/

CDC's Biomonitoring Reports

	National Report on Human Exposure to Environmental Chemicals[309] • The most comprehensive assessment of Americans' exposure to environmental chemicals • Includes biomonitoring data for 300+ chemicals including pesticides, metals, and chemicals in everyday products • Establishes national exposure levels and trends over time • Used by scientists and public health officials to identify harmful exposures • Updated with new biomonitoring results every year
	National Report on Biochemical Indicators of Diet and Nutrition[310] • The most comprehensive assessment of Americans' nutrition status • Regularly updated data for 58 nutrition biomarkers that are important to human health, including fat- and water-soluble vitamins, iron-status indicators, and iodine • Establishes national reference levels and trends over time • Helps physicians, scientists, and public health officials assess inadequate or excess intake of nutrients

Improving Testing Quality and Standardizing Laboratories

CDC uses expert measurement science to continuously improve the accuracy, precision, and cost effectiveness of laboratory tests for environmental chemicals, nutritional indicators, heart disease and stroke, and newborn screening. CDC's efforts reach more than 2,000 domestic and international laboratories, including newborn screening laboratories in all 50 states. In FY 2016, CDC will provide quality assurance materials, conduct trainings, and transfer laboratory testing methods to state, local, research, and clinical laboratories. CDC will help state newborn screening programs use new molecular testing techniques to improve detection of diseases like cystic fibrosis and congenital adrenal hyperplasia. The lab will continue implementing advanced technologies, such as robotics, to increase testing speed, reduce cost, and enable measurement of multiple substances in a single laboratory test. In addition, CDC will continue partnering with private sector companies and manufacturers of laboratory tests to improve the accuracy and precision of test results.

Standardizing Chronic Disease Biomarkers

CDC standardizes tests for important chronic disease biomarker measurements that need improvement in accuracy and precision. The lab develops reference methods and materials to assure the quality of tests in clinical, research, and academic laboratories, including more than 300 million cholesterol tests in the United States each year. Accurate and precise laboratory measurements help doctors better diagnose and determine

[309] http://www.cdc.gov/exposurereport/
[310] http://www.cdc.gov/nutritionreport/

risk for heart disease, improve the diagnosis and treatment of breast cancer, and reduce costs from repeated laboratory testing.

Progress in Standardizing Chronic Disease Biomarkers

FY 2014	FY 2015	FY 2016
Maintained reference methods and provided standardization services for 10 biomarkers: Cholesterol Triglycerides LDL HDL Estradiol Apolipoprotein A1 Apolipoprotein B Testosterone Vitamin D2 Vitamin D3	Maintain reference methods and provide standardization services for 12 biomarkers: Cholesterol Triglycerides LDL HDL Estradiol Apolipoprotein A1 Apolipoprotein B Testosterone Vitamin D2 Vitamin D3 Triiodothyronine Thyroxine	Maintain reference methods and provide standardization services for 14 biomarkers: Cholesterol Triglycerides LDL HDL Estradiol Apolipoprotein A1 Apolipoprotein B Testosterone Vitamin D2 Vitamin D3 Triiodothyronine Thyroxine Sex hormone binding globulin Parathyroid hormone
Completed 50% of development of new, reference-quality tests for measuring size fractions of cholesterol.	Complete 80% of development of new tests for cholesterol size fractions.	Complete 100% of development of new tests for cholesterol size fractions. Apply cholesterol size fraction tests to large cohort studies of cardiovascular disease.
Standardized estradiol measurements in six major research and clinical laboratories.	Standardize estradiol measurements in eight major research and clinical laboratories. Measure estradiol in a nationally representative sample of Americans to help identify population groups at risk for disease.	Standardize estradiol measurements in eight major research and clinical laboratories. Apply new, highly accurate estradiol methods to major research studies and help clinical and research laboratories with establishing better estradiol tests.

In FY 2016, CDC will continue to ensure the quality of clinical tests for chronic disease biomarkers, providing standardization services for two additional biomarkers (sex hormone binding globulin and parathyroid hormone) that will help improve diagnosis of certain cancers, bone diseases, and polycystic ovary syndrome. CDC will complete the development of new tests for cholesterol size fractions which are promising diagnostic markers for heart disease and stroke. CDC will also begin applying the tests to large cohort studies to link biomarkers and lipid particle size with cardiovascular disease risk.

Supporting State-based Laboratory Biomonitoring Programs

Biomonitoring grants help states assess environmental factors that can make people sick. Grantees are chosen competitively based on laboratory expertise, facilities, and local biomonitoring support. In order to assess exposures of concern in local communities, state-based laboratories use CDC funding to purchase laboratory

equipment and supplies; hire and train specialized staff; and conduct fieldwork and data analysis. CDC started a five-year, cooperative agreement cycle in FY 2014 with six grantees: California, Massachusetts, New Hampshire, New Jersey, Virginia, and Utah (as lead member of a consortium, which includes Arizona, Colorado, and New Mexico). In FY 2016, CDC plans to award the third year of funding.

Grants to State-based Laboratory Biomonitoring Programs[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	3	3	6	6	6	0
- New Awards	0	0	6	0	0	0
- Continuing Awards	3	3	0	6	6	0
Average Award	$1.667	$1.667	$0.833	$0.833	$0.833	$0.000
Range of Awards	$1.000-$2.652	$1.00-$2.652	$0.784-$1.00	$0.784-$1.00	$0.784-$1.00	N/A
Total Awards	$5.000	$5.000	$5.000	$5.000	$5.000	$0.000

[1]These funds are not awarded by formula.

Expanding State Newborn Screening for Severe Combined Immunodeficiency

State and territorial newborn screening laboratories receive CDC funding to implement and improve testing for severe combined immunodeficiency (SCID), a deadly disease that is curable if treated soon after birth. Laboratories are eligible if they demonstrate sufficient expertise, facilities, and legal authority to conduct screenings. Grantees use funding to purchase laboratory equipment and supplies; hire and train specialized staff; and conduct population-based screening for SCID. CDC completed a two-year cooperative agreement cycle with Virginia, Georgia, and Oklahoma in FY 2014. In FY 2015, CDC is starting a new cooperative agreement cycle with up to seven states. State and territorial newborn screening programs are eligible for funding if they demonstrate sufficient laboratory expertise, facilities, and legal authority to conduct screenings. In 2016 CDC will award the second year of funding for these grants.

Grants to Implement and Improve SCID Testing[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	2	3	3	7	7	0
- New Awards	0	3	0	7	0	+7
- Continuing Awards	2	0	3	0	7	-7
Average Award	$0.427	$0.281	$0.281	$0.136	$0.136	$0.000
Range of Awards	$0.416-$0.437	$0.269-$0.299	$0.269-$0.299	$0.075-$0.350	$0.075-$0.350	N/A
Total Awards	**$0.854**	**$0.845**	**$0.845**	**$0.950**	**$0.950**	**$0.000**

[1]These funds are not awarded by formula.

Environmental Health Activities Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$45.580**	**$45.580**	**$55.580**	**+$10.000**
- Environmental Health Activities	$45.580	$45.580	$55.580	+$10.000
- *Climate & Health (non-add)*	$8.613	$8.613	$18.613	+$10.000

Overview

Each day, people everywhere experience environmental exposures that can make them sick, cause death, and lead to very costly health conditions. CDC programs funded under Environmental Health Activities monitor environmentally related disease, respond to urgent public health threats, apply environmental health research, provide training and guidance for the nation's environmental health workforce, assist in emergency preparedness and response efforts, and support grants that improve state and local capacity.

Budget Request

CDC's FY 2016 request of **$55,580,000** for Environmental Health Activities is $10,000,000 above the FY 2015 Enacted level. The additional $10,000,000 will be used to fund state and local health departments through the Building Resilience Against Climate Effects framework. The funds will allow CDC to fund an additional 30 grantees, bringing the total to 48 state and local awards.

Environmental Health Activities' projected contributions in FY 2016:

- Train 1,250 state and local officials in environmental emergency response
- Train 500 state and local environmental health specialists in investigating the environmental causes of foodborne illness outbreaks
- Help 7 state health departments collect and analyze data about the environmental causes of foodborne illness outbreaks so they can prevent future outbreaks
- Investigate 25 public health threats from non-infectious agents
- Assist a total of 48 states and cities in addressing the health implications of climate change

Amyotrophic Lateral Sclerosis Registry

The National Amyotrophic Lateral Sclerosis Registry[311]—a joint effort between CDC and the Agency for Toxic Substances and Disease Registry (ATSDR)—is an important resource for scientists to understand, and potentially cure and prevent the disease. Also known as Lou Gehrig's disease, Amyotrophic Lateral Sclerosis (ALS) is a progressive, fatal, neurodegenerative disorder that has no cure and the cause of which is not fully understood. The main goals of the registry are to determine the incidence and prevalence of ALS within the United States, characterize the demographics of those living with ALS, and identify the potential risk factors for the disease.

ALS is not a notifiable disease in the United States. As such, CDC/ATSDR had to develop novel approaches to identify ALS cases. The first approach identifies prevalence cases from existing national administrative databases—Medicare, Medicaid, Veterans Health Administration, and Veterans Benefits Administration. The second method uses a secure web portal to identify cases not included in the national administrative databases and offers persons with ALS the opportunity to take brief, online surveys to help researchers learn more about potential risk factors for the disease. It is possible that these novel approaches could be used—in whole or in

[311] http://wwwn.cdc.gov/als/

part—to determine the prevalence of other non-notifiable conditions (e.g., Parkinson's disease and multiple sclerosis).

In FY 2014, the registry released its first annual report[312] in CDC's *Morbidity and Mortality Weekly Report*. This is the first report to summarize population-based estimates for all ALS cases in the United States. From October 19, 2010 to December 31, 2011, a total of 12,187 persons meeting the surveillance case definition of definite ALS were identified by the registry. This is a calculated prevalence of 3.9 cases of ALS per 100,000 persons in the U.S. general population. ALS was more common among whites, non-Hispanics, and persons aged 60–69 years. To date, patients in all 50 states have enrolled in the registry and the number of enrollees increases each day.

In FY 2015 and 2016, CDC/ATSDR will test the completeness of the registry using active surveillance data collected from three states and eight metropolitan areas, along with facilitating recruitment of registry-enrolled patients for research.[313] CDC/ATSDR may implement a bio-registry component that links specimen data (e.g., blood, saliva, and tissue) to existing registry surveys, offering researchers new insights into the disease. As part of the current bio-repository pilot effort taking place, hundreds of biological specimens (e.g., blood, hair, nails, tissue) have already been collected from registry-enrolled patients. CDC/ATSDR will also release its second and third prevalence reports in FY 2015–2016.

CDC funds several studies[314] each year that analyze and evaluate potential risk factors and the etiology for ALS. There are ongoing research projects funded via contract at Columbia University, the University of Michigan, Dartmouth College, Boston VA Research, Inc., and Harvard University. CDC expects to fund three additional research projects in via grant award in FY 2016. Academic and research institutions are eligible to apply for grants, which are issued competitively with a maximum amount of $400,000 and a project period of one to three years.

ALS Research Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	0	0	0	3	3	0
- New Awards	0	0	0	3	0	-3
- Continuing Awards	0	0	0	0	3	+3
Average Award	$0.000	$0.000	$0.000	TBD	TBD	TBD
Range of Awards	$0.000-$0.000	$0.000-$0.000	$0.000-$0.000	$0.250-$0.400	$0.250-$0.400	N/A
Total Awards	**$0.000**	**$0.000**	**$0.000**	**$1.200**	**$1.200**	**$0.000**

[1]These funds are not awarded by formula.

Build Environment and Health

The Built Environment and Health[315] Initiative helps states and communities integrate health considerations into transportation and community planning decisions. CDC helps states assess the health effects of transportation and planning choices, applies research, tracks environmental public health indicators, and trains health and planning professionals. Activities and research conducted by the Built Environment and Health Initiative are highlighted in the National Prevention Strategy and its progress reports; these activities also support CDC's Winnable Battles to increase physical activity and reduce motor vehicle fatalities.

Since 2005, CDC funding and technical support in 23 states led to the completion of 100 health impact assessments, which represent 25% of all health impact assessments conducted in the United States. Health impact assessment is a process that helps communities reduce health costs by making informed choices about a

[312] http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6307a1.htm?s_cid=ss6307a1_w
[313] https://wwwn.cdc.gov/als/ALSResearchNotificationClinicalTrialsStudies.aspx
[314] http://wwwn.cdc.gov/als/ALSExternalResearchfundedbyRegistry.aspx
[315] http://www.cdc.gov/nceh/information/built_environment.htm

plan, project, or policy before it is built or implemented. These assessments examine how actions will impact health concerns such as obesity, asthma, heart disease, and road traffic injuries. CDC will continue to support health impact assessments and will build tools and checklists to facilitate rapid assessments. In addition, CDC will train 500 planners and health professionals on healthy community design through an online course[316], launch a transportation and health toolkit with the U.S. Department of Transportation, complete a biennial benchmarking report on walking and bicycling, and work with partners to link community design and health metrics.

CDC funds state and local agencies to conduct health impact assessments. CDC began a three-year cooperative agreement cycle in FY 2014 with an average award of $145,000 for six state and local health departments: Arizona, Georgia, Massachusetts, Minnesota, Oregon, and San Francisco, California. These grantees were selected competitively based on the scope of their plans, involvement of multiple community stakeholders, and their ability to sustain efforts after direct CDC funding ends. CDC will award the third year of funding in FY 2016.

Built Environment and Health Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	6	6	6	6	6	0
- New Awards	0	0	6	0	0	0
- Continuing Awards	6	6	0	6	6	0
Average Award	$0.154	$0.154	$0.145	$0.145	$0.145	$0.000
Range of Awards	$0.114-$0.176	$0.114-$0.176	$0.100-$0.175	$0.100-$0.175	$0.100-$0.175	N/A
Total Awards	**$0.924**	**$0.924**	**$0.870**	**$0.870**	**$0.870**	**$0.000**

[1]These funds are not awarded by formula.

Climate and Health

CDC's Climate and Health[317] program leads public health efforts to address health issues associated with climate change. Since 2009, CDC scientists have worked to prepare for the inevitability of climate change and the impact it will have on the health of the U.S. population and healthcare system. Centralizing CDC's climate change expertise in the National Center for Environmental Health has ensured a coordinated approach to incorporating climate change across any disease-specific programs or functions within the agency. In FY 2016, CDC will publish an interim National Climate Assessment, which will provide quantitative estimates on the impact of climate change on human health in the United States. CDC also plans to publish additional guidance documents to assist state public health departments in implementing CDC's Building Resilience Against Climate Effects (BRACE) framework to plan for and respond to climate and weather-related health impacts.

CDC directly funds 16 state and 2 local health departments to implement the Building Resilience Against Climate Effects (BRACE) framework through its Climate Ready State and Cities Initiative. Health Departments at the state, local, tribal, and territorial levels are eligible to apply for CDC funds. The FY 2016 President's Budget proposes an increase of $10,000,000 for BRACE programs which allows CDC to fund up to 50 grantees. Funded state, local, tribal, and territorial health departments forecast climate change health impacts in communities, identify vulnerabilities, and create and implement climate and health adaptation plans. CDC funding improves the readiness of communities to respond to extreme weather events, floods, droughts, increases in climate-related infectious diseases leading to public health impact. For example, New York City, Maine, and Michigan now have systems to identify people at risk of heat-related illness and death during extreme summer weather. In Vermont, public health officials can use a web-based, surveillance system for tick-borne diseases, such as Lyme disease, to track and map ticks.

[316] http://advance.captus.com/Planning/hia2/home.aspx
[317] http://www.cdc.gov/climateandhealth/

Climate and Health Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	18	18	18	18	50	+32
- New Awards	8	10	0	0	50	+50
- Continuing Awards	10	8	18	18	0	-18
Average Award	$0.211	$0.208	$0.208	$0.249	$0.245	-$0.004
Range of Awards	$0.106-$0.250	$0.173-$0.250	$0.173-$0.250	$0.173-$0.250	$0.245-$0.245	N/A
Total Awards	**$3.804**	**$3.618**	**$3.618**	**$4.500**	**$12.250**	**+$7.750**

[1]These funds are not awarded by formula.

Safe Water

The Safe Water program works to prevent illness and health risks from non-infectious and biological contaminants in water. The program[318] focuses primarily, but not exclusively, on drinking water sources that are not regulated by the Safe Drinking Water Act—such as private wells, cisterns, and springs—which serve nearly 45 million Americans. In order to reduce exposures and disease from contaminated water sources, CDC provides epidemiological and other scientific expertise, conducts trainings for public health professionals, investigates the root causes of waterborne illness outbreaks, and conducts water research to characterize risks from contaminants and to identify those at risk. In FY 2014, CDC trained 1,250 public health professionals on emergency water safety issues; conducted 7 investigations of waterborne illness outbreaks; and provided technical assistance to funded state and local public health agencies conducting their own investigations. CDC also estimated contaminant levels in well water; estimated the disease and economic burden of exposure to arsenic in private wells; and evaluated the effectiveness of interventions to prevent harmful exposures related to unregulated water sources.

In FY 2016, CDC will continue providing scientific expertise to prevent or address outbreaks of waterborne illness; improve our understanding of health risks and outcomes from non-infectious drinking water contaminants; and train state, local, and tribal public health staff on issues related to drinking water safety.

In addition to its work to ensure the safety of non-federally regulated drinking water systems, in FY 2014 CDC worked to prevent waterborne illness and other risks associated with recreational water sources by releasing the first national Model Aquatic Health Code[319], which provides voluntary guidance for local and state agencies on the design, construction, operation, and maintenance of pools, spas, and hot tubs. Developed by public health and industry experts, the Model Aquatic Health Code will prevent drowning, injuries, and water illnesses. In FY 2016, CDC will measure the impact of adopting the Model Aquatic Health Code and will continue to support state and local recreational water program needs.

CDC directly funds state and local health departments through Safe Water cooperative agreements. State and local health departments use CDC funding to investigate and address water-related exposure risks for those using non-federally regulated drinking water systems. This includes identifying water systems with elevated levels of arsenic and uranium, and those systems at risk of biological contamination. CDC began a five-year cooperative agreement cycle for 20 states in FY 2015. CDC will award the second year of funding in FY 2016.

[318] http://www.cdc.gov/nceh/hsb/cwh/
[319] http://www.cdc.gov/healthywater/swimming/pools/mahc/index.html

Safe Water Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	18	11	11	20	20	0
- New Awards	0	11	0	20	0	-20
- Continuing Awards	18	0	11	0	20	+20
Average Award	$0.100	$0.145	$0.145	$0.100	$0.100	$0.000
Range of Awards	$0.047-$0.140	$0.050-$0.171	$0.050-$0.171	$0.075-$0.125	$0.075-$0.125	N/A
Total Awards	**$1.807**	**$1.595**	**$1.595**	**$2.000**	**$2.000**	**$0.000**

[1]These funds are not awarded by formula.

All Other Environmental Health Activities

CDC provides national leadership to protect Americans from unhealthy environmental exposures. CDC scientists identify contaminants and toxins that make people sick, investigate environmental sources of contaminants, and eliminate threats to people. CDC scientific and programmatic activities inform policies and practices that prevent health threats.

Responding to Environmental Health Emergencies

CDC's environmental health experts assist in federal and state responses to disease outbreaks and emergencies. CDC's data analysis identifies at-risk people, leading to action by federal, state, and local officials. Public health and emergency management officials rely on CDC's experts and its rapid needs assessment toolkit—Community Assessment for Public Health Emergency Response[320]—to quickly prioritize resources in response to a disaster. CDC's Environmental Health Training in Emergency Response courses[321] teach state and local officials how to restore clean drinking water, dispose of sewage properly, ensure food safety, and prevents the spread of diseases after disasters. In FY 2015, CDC is releasing a new online environmental health training in emergency response course. CDC anticipates at least 1,250 state and local officials will take courses in FY 2016.

Responding to Toxic Health Threats

Environmental health programs at CDC respond to public health threats from non-infectious agents, such as acute toxic poisonings, that can result in severe or fatal illnesses. Epidemiologists and toxicologists in CDC's National Chemical and Radiation Surveillance program identify public health threats and alert state public health authorities. If needed, CDC may investigate further or initiate a rapid response. CDC responded to 29 incidents in FY 2014, including carbon monoxide poisonings in a school and ammonia exposures in a workplace. CDC expects to respond to 25 or more such health threats in FY 2016.

Providing Expertise on Radiation and Health

CDC is the nation's public health authority on radiation. CDC's radiation guidelines[322] help public officials and clinicians prepare and respond to radiation emergencies and treat exposures. CDC's radiation experts assisted in major nuclear disasters, such as the Fukushima Daiichi incident in 2011, and stand ready for a 24/7 response to new threats. In FY 2014, CDC published the 2nd edition of the Population Monitoring Guide in Radiation Emergencies[323] which presents an introduction for public health officials and emergency preparedness planners at the state, tribal, and local levels. In FY 2016, CDC will launch an online training program for personal protective equipment; collaborate with states to promote radon awareness and testing; investigate the best

[320] http://www.cdc.gov/nceh/hsb/disaster/casper.htm
[321] http://www.cdc.gov/nceh/ehs/eLearn/EHTER.htm
[322] http://emergency.cdc.gov/radiation/
[323] http://emergency.cdc.gov/radiation/pdf/population-monitoring-guide.pdf

ways for public health officials to monitor exposure to radiation; and enhance capability for response to radiation emergencies.

Supporting State and Local Environmental Health Professionals

CDC provides training and guidance to help state and local environmental health specialists to be more effective at their jobs. At the state and local level, environmental health workers are on the front lines in preventing illness—ensuring the safety of drinking water and wastewater, restaurants, swimming pools, and other facilities. In FY 2015, CDC is supporting accredited environmental health undergraduate programs and a summer environmental health internship program at CDC, documenting current and needed capacity of the environmental workforce, and supporting environmental health performance standards[324]. In FY 2016, CDC will provide training and guidance for approximately 500 state and local environmental health specialists on investigating the environmental causes of foodborne illness.

Environmental health professionals at local health departments are often responsible for inspecting food establishments and documenting situational factors that lead to foodborne illness outbreaks. Each year, one out of six Americans gets sick from foodborne disease and 3,000 die as a result. State and local health departments participating in CDC's Environmental Health Specialists Network[325] are better equipped to identify and address the root causes of foodborne illness, such as unsafe food handling practices, ill restaurant workers, and lack of a certified kitchen manager at restaurants. In 2015, CDC is promoting use of a new surveillance system[326] that captures environmental assessment data from foodborne illness outbreaks and use of an online training course[327] to improve practices at the state and local levels. CDC is also sharing data and prevention guidance from multi-site studies about factors that affect foodborne illness outbreaks. In 2016, CDC will analyze data on restaurant food safety practices to improve our understanding of the environmental causes of restaurant-related foodborne illness outbreak.

Funding State and Local Health Departments

Environmental Health Services Network cooperative agreements[328] support state and local health departments in investigating and addressing the environmental causes of food and waterborne disease outbreaks. In FY 2016, CDC will fund 8 states and communities for the second year of a five-year cooperative agreement cycle. CDC selected grantees competitively based on their capacity to implement prevention activities and address risks for exposure to unsafe food or water.

Environmental Health Specialists Network[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	10	15	15	8	8	0
- New Awards	0	15	0	8	0	-8
- Continuing Awards	10	0	15	0	8	+8
Average Award	$0.216	$0.155	$0.155	$0.178	$0.178	$0.000
Range of Awards	$0.117-$0.350	$0.075-$0.175	$0.075-$0.175	$0.150-$0.175	$0.150-$0.175	N/A
Total Awards	**$2.160**	**$2.325**	**$2.325**	**$1.425**	**$1.425**	**$0.000**

[1]These funds are not awarded by formula.

[324] http://www.cdc.gov/nceh/ehs/EnvPHPS/default.htm
[325] http://www.cdc.gov/nceh/ehs/EHSNet/
[326] http://www.cdc.gov/nceh/ehs/NVEAIS/index.htm
[327] http://www.cdc.gov/nceh/ehs/eLearn/EA_FIO/index.htm
[328] http://www.cdc.gov/nceh/ehs/EHSNet/partners/index.htm

Environmental and Health Outcome Tracking Network Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$34.904	$34.904	$0.000	-$34.904
ACA/PPHF	$0.000	$0.000	$24.000	+$24.000
Total	**$34.904**	**$34.904**	**$24.000**	**-$10.904**

Overview

The Environmental and Health Outcome Tracking Network[329] is a dynamic, web-based system[330] that tracks and reports environmental hazards and related health problems. Before the use of tracking networks, even simple questions about health and the environment could take months to answer. Tracking data allows public health officials to apply the same disease detection skills used in infectious disease surveillance to locate hazard sources or answer residents' concerns quickly, often within hours. Tracking networks empower public health officials to protect the public's health.

Budget Request

CDC's FY 2016 request of **$24,000,000** for the Environmental and Health Outcome Tracking Network, which is all from the Affordable Care Act Prevention and Public Health Fund, is $10,904,000 below the FY 2015 Enacted level. The FY 2016 budget request maintains core tracking network activities and functions, but assistance to states and development of new methods to improve use of the network will be limited in scope.

Supporting the National Environmental Public Health Tracking Infrastructure

CDC maintains the national tracking network's technological infrastructure. CDC routinely updates and adds data to the tracking network, acquires information technology, creates animated maps that show 10-year disease trends, manages projects that link environmental and health data, establishes data sharing agreements, and hosts data for other public health programs. To date, the tracking network includes 19 datasets, 96 indicators, and 379 health measures, including data on air quality, water, and health outcomes like cancer and birth defects. In FY 2014, the tracking program launched a new health impact assessment tool and added several new content areas, including pesticide poisoning exposure, 70 years of extreme heat projections, access to parks and schools. This increases the number of environmental health threats that can be addressed with data from the network. Each improvement to tracking network data capacity helps state and local governments make more informed decisions to promote the health of their populations. Also in FY 2014, CDC launched an updated "Info by Location" tool on the National Portal, which allows users to access easy-to-understand information on environmental health indicators, such as asthma, air pollution, and smoking. In FY 2016, CDC will work toward increasing data resolution to allow more effective evaluation of information at the local level.

Using Tracking to Improve State and Local Public Health Capacity

Tracking network grants support the information technology that brings together health and environmental data, as well as the people who use the data to identify, evaluate, and target environmental health interventions. In FY 2014, CDC added two states to the tracking network, expanding coverage to over 190 million people—62% of the country's population. However, in FY 2016, due to the proposed reduction in program funding, CDC will no longer be able to fund these two states.

[329] http://ephtracking.cdc.gov/
[330] http://ephtracking.cdc.gov/QueryPanel/EPHTNQuery/EPHTQuery.html

Tracking networks achieve real-world, public health impact. Since 2005, state and local health officials reported using the tracking network 237 times to prevent sickness and the loss of life. Many of these public health actions would not have been possible without data in the tracking network. In FY 2016, CDC will reduce funding to grantees by approximately 30%, which would lead to a reduction in staff and other tracking network infrastructure. As a result, the number of public health actions undertaken using tracking network data is likely to decrease.

Recent Public Health Actions Using the Tracking Network

Activities	Examples
Inform policy, legislation, and regulation	**Minnesota** utilized data demonstrating a significant decrease in second hand smoke exposure among children and adults when deciding to keep laws banning smoking in public places and worksites.
Respond to community, agency, or legislator concerns	**Utah** created a report to inform the governor, state legislature, public health officials, health care providers, and community partners about health issues associated with poor air quality in the state. The report provides context for decision makers who are currently addressing Utah's air quality challenges.
Identify populations at risk or risk factors to better target intervention	**Colorado** determined that elevated levels of uranium in a correctional facility's drinking water posed a low risk to inmates and staff. In light of these findings, the warden educated water users about the exposure and implemented measures to reduce possible health effects.
Address environmental health impact and city planning	**Iowa** tracking data was used by a regional planning organization to develop a land-use model, transportation model, and sustainable community plan. The data helped planners understand current population characteristics and predict how Omaha, NE/Council Bluffs, IA metropolitan area populations may change.
Issue health alerts and advisories	**Vermont** developed two new web applications that enable scientists to approve reports of Lake Champlain blue-green algae conditions posted by citizen volunteers. Validated observations that alert swimmers and boaters of potentially hazardous situations are now provided to the public at more than 60 locations in near real-time.

Funding State and Local Tracking Programs

CDC directly funds state and local tracking programs through competitive cooperative agreements. CDC began a three-year award cycle for 26 state and local programs in FY 2014. Grantees use CDC funding to create their own tracking networks and add data to the national system. CDC will award the third year of funding for this cooperative agreement in FY 2016.

Tracking Network Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	24	24	26	26	24	**-2**
- New Awards	0	0	26	0	0	0
- Continuing Awards	24	24	0	26	24	-2
Average Award	$0.907	$0.596	$0.869	$0.869	$0.581	-$0.210
Range of Awards	$0.561-$1.100	$0.375-$0.715	$0.513-$1.200	$0.513-$1.200	$0.437-$0.617	N/A
Total Awards	**$21.821**	**$14.304**	**$22.605**	**$22.605**	**$13.946**	**-$8.659**

[1]These funds are not awarded by formula.

Asthma Budget Request

(dollars in millions)		FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
	Budget Authority	**$27.528**	**$27.528**	**$27.528**	**$0.000**

Overview

The National Asthma Control Program[331] helps millions of Americans understand, manage, and gain control over their asthma. CDC launched the National Asthma Control Program in 1999 to address the rising prevalence of asthma. In the United States today, nearly 26 million people have asthma, including 7 million children. The disease disproportionately affects African American children, who are twice as likely to be hospitalized and over four times more likely to die from asthma than white children. The National Asthma Control Program seeks to reduce limitations on activity and the number of deaths, hospitalizations, emergency department visits, school days or workdays missed due to asthma.

Budget Request

CDC's FY 2016 request of **$27,528,000** for the National Asthma Control Program is level with the FY 2015 Enacted level. Requested funds are needed for CDC to lead a coordinated, public health effort to understand and address asthma in United States. In addition, these funds support projects on indoor and outdoor air pollution to better understand and evaluate the effects of air pollution on people with asthma. Expansion of health insurance coverage under the Affordable Care Act allows more people with asthma access to health care providers and medication, and CDC supports critical components of comprehensive asthma control. In FY 2016, CDC will continue to offer education and expertise to inform public health action, quantify risks and vulnerabilities to asthma control, and provide funding to state health departments to implement comprehensive asthma control programs.

Implementing a Comprehensive Approach

Comprehensive asthma control aligns the full array of asthma care services across the public health and health care sectors so that people with asthma receive all of the care that they need. CDC does this by implementing a tiered approach to asthma control, using asthma interventions with the strongest evidence of effectiveness, delivered as a comprehensive package. For people with asthma, a comprehensive approach assures availability of and access to guidelines-based medical management[332] and appropriate medication use. For those whose asthma remains poorly controlled, additional steps progressively provide more individualized services, such as self-management education, school and home-based trigger (e.g., dust and cockroaches) reduction, and other environmental management strategies.

Monitoring Asthma Trends

Asthma surveillance is the collection of asthma data at both the national and the state level. Data collection is important to understand asthma trends and identify people who are most at risk of developing asthma or having asthma-related illness. National data sources for asthma include CDC's National Health Interview Survey and Vital Statistics System. CDC epidemiologists use these surveillance systems to analyze asthma prevalence, activity limitation, days of work or school missed, rescue and control medication use, asthma self-management education, physician visits, emergency department visits, hospitalizations due to asthma, and deaths due to asthma. CDC surveillance systems also provide state-specific asthma data. State-specific adult and child asthma prevalence are available from CDC's Behavioral Risk Factor Surveillance System (BRFSS), which also administers

[331] http://www.cdc.gov/asthma/nacp.htm
[332] http://www.nhlbi.nih.gov/health-pro/guidelines/current/asthma-guidelines/index.htm

an in-depth Asthma Call-Back Survey (ACBS). In FY 2016, CDC will continue to support the use of ACBS, as well as publish three AsthmaStats documents to provide national estimates of asthma burden.

Strengthening Community and Clinical Linkages

CDC works closely with health departments and partners to strengthen and expand asthma control efforts in homes and schools, while linking with services offered by health care organizations. Home and school-based efforts might include reducing environmental triggers, taking corrective action against poor indoor air quality, or educating parents, teachers, and students. For example, the CDC-funded New York State Asthma Program uses community health worker visits as an opportunity to provide tips on asthma management and how to reduce asthma triggers. In Buffalo, the effort reduced asthma attacks and symptoms by 67% and increased daily asthma medication use from 83% to 100% among participants. CDC will continue to engage state partners in communities of practice concerning health systems and home- and school-based interventions and promote the collaborative development of guidance documents.

Improving Asthma Care Coordination

Good asthma management requires improving coverage, delivery, and use of clinical and other services. Examples of asthma care coordination include healthcare provider trainings, patient education, and quality improvement initiatives. In Montana, CDC funding supported the development of an asthma-specific software system to coordinate care, track patient outcomes, and ensure better follow up. In FY 2016, CDC will continue to offer tools, methodologies, and guidance documents as technical resources for state and local public health practice related to asthma.

Evaluating and Improving on Program Successes

CDC believes comprehensive asthma control must include an evaluation component. Sound evaluation practices ensure efficient use of resources and help identify what works. For example, when Massachusetts conducted an evaluation of its asthma program it found community health workers were able to effectively connect asthma patients, community organizations, and local health care providers in communities with disparities and high asthma burdens. CDC will disseminate additional modules of the “Learning and Growing through Evaluation” series for state partners, and provide technical assistance based on Practical Strategies for Culturally Competent Evaluation. CDC will also develop and disseminate success stories from state grantees, highlighting public health impact, innovative reimbursement mechanisms, and return on investment.

Funding Cooperative Agreements

State Health Departments

CDC funds state health departments to implement comprehensive asthma control programs. State health departments must focus efforts on geographic areas or communities with a high or disproportionate burden of asthma, particularly among racial and ethnic minorities and low-income groups. In FY 2014, CDC began a five-year, competitive cooperative agreement cycle for 23 states that had received funding previously. Funding decisions were based on the strength of applications, capacity of state programs to implement effective interventions, and use of evaluation and performance measures, among other factors. CDC plans to award the third year of funding in FY 2016.

Asthma Grants to Health Departments[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	40	40	23	23	23	0
- New Awards	0	0	23	0	0	0
- Continuing Awards	40	40	0	23	23	0
Average Award	$0.389	$0.358	$0.604	$0.604	$0.604	$0.000
Range of Awards	$0.191-$0.528	$0.232-$0.486	$0.450-$0.800	$0.450-$0.800	$0.450-$0.800	N/A
Total Awards	**$13.992**	**$12.872**	**$13.896**	**$13.896**	**$13.896**	**$0.000**

[1]These funds are not awarded by formula.

Non-governmental Organizations

CDC funds four non-governmental organizations to develop communication, education, or policy interventions to enhance the management of asthma and indoor air quality, aimed at individuals with asthma, their caretakers, clinicians, and other stakeholders. This partnership allows CDC's National Asthma Control Program to reach a national audience in a coordinated manner. In FY 2014, CDC funded the Allergy and Asthma Foundation of America (AAFA), the Allergy and Asthma Network Mothers of Asthmatics (AANMA), the American Lung Association (ALA), and the National Environmental Education Foundation (NEEF). CDC is publishing a new, competitive Funding Opportunity Announcement in FY 2015. CDC anticipates the new award cycle will be for five years. In FY 2016, CDC will continue supporting four new grantees funded in FY 2015.

Asthma Grants to Non-governmental Organizations[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	4	4	4	4	4	0
- New Awards	0	0	0	4	0	-4
- Continuing Awards	4	4	4	0	4	+4
Average Award	$0.094	$0.094	$0.094	$0.094	$0.094	$0.000
Range of Awards	$0.076-$0.100	$0.076-$0.100	$0.076-$0.100	$0.076-$0.100	$0.076-$0.100	N/A
Total Awards	**$0.377**	**$0.377**	**$0.377**	**$0.377**	**$0.377**	**$0.000**

[1]These funds are not awarded by formula.

Childhood Lead Poisoning Prevention Budget Request

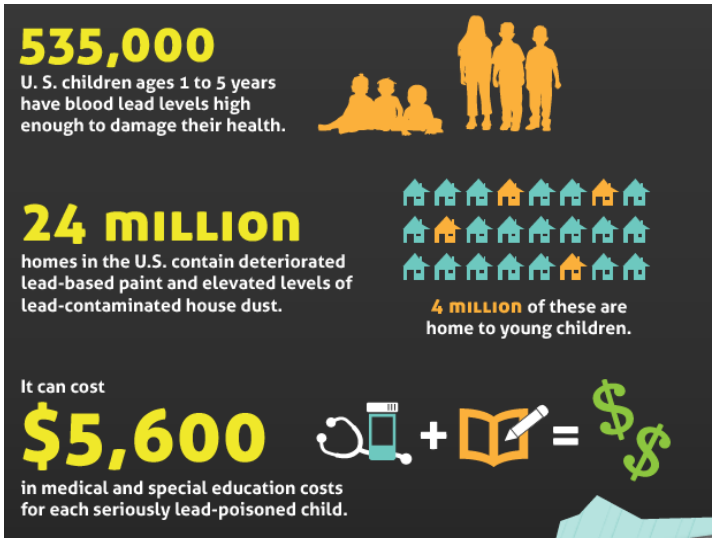
(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$2.522	$2.522	$2.522	$0.000
ACA/PPHF	$13.000	$13.000	$13.000	$0.000
Total	**$15.522**	**$15.522**	**$15.522**	**$0.000**

Overview

The Childhood Lead Poisoning Prevention[333] program provides national expertise, guidance, and surveillance of childhood lead poisoning in the United States. Today, an estimated 535,000 children in the United States have blood lead levels greater than or equal to the reference value of 5 micrograms per deciliter (µg/dL). Of these, levels in 150,000 children are greater than or equal to 10 µg/dL, indicating grave risk for intellectual, behavioral, and academic deficits.

Lead poisoning poses a social and economic burden on families, communities, and the country. Medical and special education expenses alone can equal $5,600 for each child with serious lead poisoning. Low-income and minority children bear an unequal burden from this condition. The primary source of children's lead exposure is their homes. Some 24 million homes in the United States have lead-based paint hazards that can result in childhood lead poisoning—young children live in approximately 4 million such homes. Also, some areas of the United States report that as many as 35% of children with high blood lead levels are exposed via contaminated items like toys, imported cosmetics, pottery, and candy.

Lead poisoning is still a major public health concern in the United States today.



Budget Request

CDC's FY 2016 request of **$15,522,000** for Childhood Lead Poisoning Prevention includes $13,000,000 from the Affordable Care Act Prevention and Public Health Fund and is level with the FY 2015 Enacted level. Funding for the program builds on CDC's past success in reducing children's blood lead levels in the United States. In FY 2016, CDC will fund 35 state and local lead poisoning prevention programs, advise state and local agencies and

[333] http://www.cdc.gov/nceh/information/healthy_homes_lead.htm

stakeholders in lead poisoning prevention, provide epidemiological and laboratory expertise, and monitor trends in childhood blood lead levels[334] for states that provide data.

Data Collection for Action

Lead poisoning is a serious pediatric health problem in the United States, but actions to prevent exposure or respond to elevated blood levels by controlling or eliminating lead in children's environments are well understood. CDC manages national data collection on children with blood-lead levels of concern and provides expert guidance to state and local surveillance programs. CDC partners—such as state and local health departments, community organizations, and social services—use surveillance data to identify children at risk. Partners can then provide blood-lead testing, identify and reduce sources of exposure, and link exposed children to health care. Other federal agencies also rely on CDC data to fulfill their mandate to protect children. For example, the Department of Housing and Urban Development uses CDC lead surveillance data to identify housing properties where multiple children have been lead poisoned and the Environmental Protection Agency uses CDC data to target enforcement actions.

State and Local Cooperative Agreements

Beginning in FY 2014, CDC is funding 29 state health departments, 5 local health departments, and Washington, DC through 3-year, competitive cooperative agreements. These awards emphasize primary prevention of lead poisoning through the elimination and control of lead hazards before children are exposed. Based on CDC-funded data collection, state and local health departments implement primary prevention interventions, including housing rehabilitation, housing and health code enforcement, early childhood programs, and engagement with clinical care. These interventions protect children who live in the highest risk housing in buildings, blocks, and neighborhoods.

Childhood Lead Poisoning Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	0	0	35	35	35	0
- New Awards	0	0	35	0	0	0
- Continuing Awards	0	0	0	35	35	0
Average Award	$0.000	$0.000	$0.314	$0.314	$0.314	$0.000
Range of Awards	$0.000-$0.000	$0.000-$0.000	$0.102-$0.421	$0.102-$0.421	$0.102-$0.421	N/A
Total Awards	**$0.000**	**$0.000**	**$11.000**	**$11.000**	**$11.000**	**$0.000**

[1]These funds are not awarded by formula.

[334] http://www.cdc.gov/nceh/lead/data/index.htm

State Table: Environmental Health Funding[1]

	FY 2012 Enacted	FY 2013 Enacted	FY 2014 Enacted	2014 +/-2013
Alabama	$215,945	$256,690	$24,000	-$232,690
Alaska	--	--	--	--
Arizona	$143,949	$189,135	$572,890	$383,375
Arkansas	$90,000	--	--	--
California	$5,458,088	$4,995,899	$4,269,498	-$726,401
Colorado	$726,802	$734,896	$1,141,956	$407,060
Connecticut	$1,189,500	$956,448	$1,802,416	$845,968
Delaware	--	--	$102,113	$102,113
District of Columbia	$354,877	$1,814,017	$825,963	-$988,054
Florida	$1,699,937	$1,533,163	$2,281,677	$748,514
Georgia	$475,770	$969,866	$1,619,016	$649,150
Hawaii	$585,514	$523,003	$515,000	-$8,003
Idaho	--	--	--	--
Illinois	$698,295	$603,604	$1,827,228	$1,223,624
Indiana	$366,616	$371,777	$9011,800	$530,023
Iowa	$755,465	$731,253	$1,149,864	$418,611
Kansas	$597,010	$435,827	$639,717	$203,890
Kentucky	$425,000	$328,200	$1,331,146	$1,002,946
Louisiana	$1,118,510	$891,813	$684,522	-$207,291
Maine	$1,639,751	$1,320,514	$1,876,701	$556,187
Maryland	$3,184,276	$2,477,037	$2,798,957	$321,920
Massachusetts	$2,030,165	$1,423,564	$3,253,984	$1,830,420
Michigan	$1,216,609	$715,859	$1,876,371	$1,160,512
Minnesota	$2,384,717	$1,536,369	$2,573,577	$1,037,208
Mississippi	$522,241	$464,614	$183,148	-$281,466
Missouri	$1,648,771	$1,222,161	$2,036,341	$814,180
Montana	$379,612	$354,200	$508,000	$153,800
Nebraska	$165,710	$166,675	$6,900	-$159,775
Nevada	$10,000	$10,000	$10,000	--
New Hampshire	$1,302,209	$1,229,864	$2,782,651	$1,552,787
New Jersey	$1,165,371	$926,759	$2,001,472	$1,074,713
New Mexico	$1,639,420	$1,198,414	$2,113,999	$915,585
New York	$4,993,300	$4,149,859	$4,845,641	$695,782
North Carolina	$748,076	$593,661	$200,817	$392,844
North Dakota	$2,851	--	$5,000	$5,000
Ohio	$568,674	$690,742	$1,278,707	$587,965
Oklahoma	$306,272	$534,689	$582,266	$47,577
Oregon	$2,222,574	$1,928,532	$2,466,273	$537,741
Pennsylvania	$1,240,804	$915,343	$1,871,773	$956,430
Rhode Island	$973,879	$920,631	$1,291,717	$371,086
South Carolina	$872,097	$560,300	$750,432	$190,132
South Dakota	--	--	$10,000	$10,000
Tennessee	$350,001	$500,000	$737,682	$237,682
Texas	$492,057	$388,840	$310,669	-$78,171
Utah	$1,521,187	$1,126,147	$2,362,697	$1,236,550
Vermont	$1,241,206	$1,000,261	$1,879,200	$878,939
Virginia	$128,415	$769,654	$1,911,249	$1,141,595
Washington	$3,090,031	$2,515,190	$1,227,733	-$1,287,457
West Virginia	$397,000	$370,862	$210,480	-$160,382
Wisconsin	$1,918,705	$1,355,069	$2,327,783	$972,714
Wyoming	--	--	--	--
Territories				

	FY 2012 Enacted	FY 2013 Enacted	FY 2014 Enacted	2014 +/-2013
American Samoa	--	--		
Guam	--	--		
Marshall Islands	--	--		
Micronesia	--	--		
Northern Marianas	--	--		
Puerto Rico	$441,920	$423,453	$62,359	-$361,094
Palau	--	--		
Virgin Islands	$1,000	--		
Subtotal, States	$53,257,259	$46,701,401	$65,946,677	$19,245,276
Subtotal, Territories	$442,920	$423,453	$62,359	-$361,094
Total	**$53,700,179**	**$47,125,793**	**$66,009,475**	**$18,883,592**

[1]This State Table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial grantees). For a more comprehensive view of grant and cooperative agreement funding to grantees by jurisdiction, visit http://wwwn.cdc.gov/Fundingprofiles/FundingProfilesRIA/

INJURY PREVENTION AND CONTROL

(dollars in millions)		FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
	Budget Authority	$150.447	$170.447	$256.977	+$86.530
	Total Request	**$150.447**	**$170.447**	**$256.977**	**+$86.530**
	FTEs	228	237	246	9
Intentional Injury		**$92.001**	**$92.001**	**$107.611**	**+$15.610**
-	Rape Prevention (non-add)	$38.827	$38.827	$44.432	+$5.605
-	Gun Violence Prevention Research (non-add)	$0.000	$0.000	$10.000	+$10.000
NVDRS		**$11.302**	**$11.302**	**$23.570**	**+$12.268**
Injury Prevention Activities		**$28.950**	**$48.950**[1]	**$107.602**	**+$58.652**
Unintentional Injury		**$8.598**	**$8.598**	**$8.598**	**$0.000**
Injury Control Research Centers		**$9.596**	**$9.596**	**$9.596**	**$0.000**

[1] FY 2015 Prescription Drug Overdose (PDO) funding is reflected under Injury Prevention Activities.

Summary

CDC is the nation's leading authority on violence and injury prevention[335]. CDC keeps Americans safe by researching the best ways to prevent violence and injuries, using science to create real-world solutions to keep people safe, healthy, and productive. This budget supports the prevention of injuries and violent acts that occur outside of the workplace, contributing to CDC's overall goal of preventing the leading causes of disease, disability, and death. CDC's FY 2016 request of **$256,977,000** for Injury Prevention and Control is $86,530,000 above the FY 2015 Enacted level and includes:

- +$22,268,000 to increase support for the President's *Now is the Time*[336] initiative
- +$48,000,000 to allow for expansion of state-level prescription drug overdose (PDO) prevention[337] activities in collaboration with other government agencies
- +$5,579,000 to address the troubling growth in use of illicit opioids
- +$5,000,000 to create a national surveillance system to accurately determine the incidence of sports-related concussions among youth ages 5-21
- +$5,605,000 to fund up to seven academic or research institutions to evaluate CDC's Rape Prevention and Education program

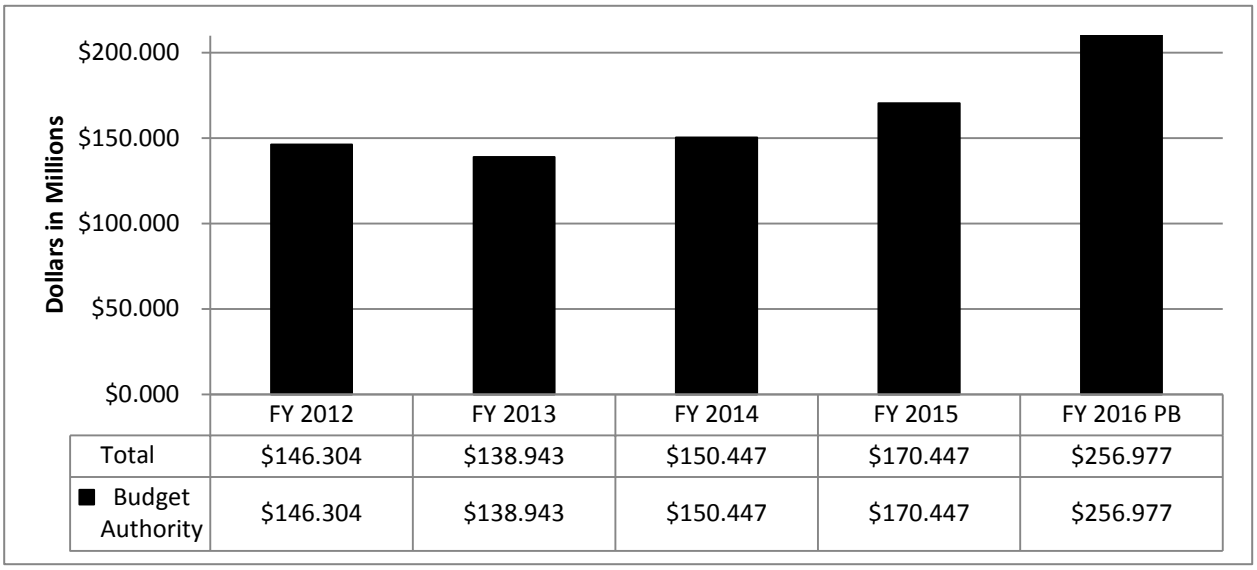
Performance Highlights

- A coordinated approach to preventing youth violence by changing norms and behaviors in the Humboldt Park neighborhood of Chicago suggests that this public health approach is having a significant effect in saving lives. Specifically, early analyses of this work show that between 2010 and 2013, Humboldt Park saw a 38% reduction in the homicide rate, compared with a 14% reduction in the comparison area.
- The Nebraska Department of Health and Human Services, a Core Violence and Injury Prevention Program grantee, was instrumental in evaluating the implementation of the 2012 Nebraska Concussion Awareness Act (LB260) and influencing changes to preventive injury interventions for athletes. Evaluation results informed a decision by the Nebraska State Athletic Trainers Association to make concussion training mandatory for coaches.

[335] http://www.cdc.gov/injury/
[336] http://www.whitehouse.gov/issues/preventing-gun-violence
[337] http://www.cdc.gov/homeandrecreationalsafety/overdose/index.html

- Early success indicators for CDC's Stopping Elderly Accidents, Deaths & Injuries—an innovative falls prevention pilot project in Colorado, New York, and Oregon—show that in one medical group in New York, the number of risk assessments performed on patients ages 65 and older grew from 39% to 97% in five months and that fall risk assessments reduced falls and fall-related injuries like hip fractures and traumatic brain injury that can lead to costly medical services and the inability to care for oneself.

Injury Prevention and Control Funding History[1]



	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 PB
Total	$146.304	$138.943	$150.447	$170.447	$256.977
■ Budget Authority	$146.304	$138.943	$150.447	$170.447	$256.977

[1]FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund

Intentional Injury Prevention Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Rape Prevention (non-add)	$38.827	$38.827	$44.432	+$5.605
Gun Violence Prevention Research (non-add)	$0.000	$0.000	$10.000	+$10.000
Budget Authority	$92.001	$92.001	$107.611	+$15.610
Total	**$92.001**	**$92.001**	**$107.611**	**+$15.610**

Overview

CDC's Intentional Injury Prevention program focuses on primary prevention of youth violence, child maltreatment, teen dating violence, sexual violence, intimate partner violence, suicide, bullying, and firearm-related injuries and deaths nationally. Using a public health approach, CDC provides national leadership in understanding the causes of violence and how to prevent harm. CDC works closely with other government agencies, including those within the Department of Justice, to comprehensively address the risk factors for violence. CDC experts collect and review data on violence, help assess the effectiveness of policies and programs, and issue guidance on evidence-based violence prevention interventions. CDC implements violence prevention interventions through state and local public health agencies, universities, and non-governmental organizations. Recognizing the important role that states have in violence prevention, CDC improves the ability of state health departments to track trends, implement effective interventions, and share successes.

Budget Request

CDC's FY 2016 request of **$107,611,000** for Intentional Injury Prevention is $15,610,000 above the FY 2015 Enacted level. This includes $10,000,000 proposed for gun violence prevention research. With the increase of $5,605,000 to the Rape Prevention and Education (RPE) program, CDC will fund evaluation activities to improve sexual violence prevention nationwide.

In FY 2016, the Intentional Injury Prevention program will:

- Work with high-risk communities across the country to implement evidence-informed youth violence prevention strategies through the National Centers of Excellence in Youth Violence Prevention[338], STRYVE On-Line[339] and technical assistance to local health departments working on youth violence prevention[340]
- Collaborate with all 50 states and five territories to implement evidence-based sexual violence prevention strategies through the Rape Prevention and Education (RPE) program[341]
- Directly support five states in implementing evidence-based child maltreatment prevention strategies and provide training and technical assistance in the form of tailored webinars and resource materials to 20 additional states through the Essentials for Childhood[342] initiative
- Sustain the implementation of evidence-based intimate partner and teen dating violence prevention strategies by supporting ten states through the DELTA FOCUS[343] program
- Continue to provide national data on intimate partner and sexual violence to states and researchers through the National Intimate Partner and Sexual Violence Survey (NISVS)[344] surveillance system

[338] http://www.cdc.gov/violenceprevention/ace/
[339] http://vetoviolence.cdc.gov/STRYVE/home.html
[340] http://www.cdc.gov/violenceprevention/youth-violence-prevention-training-and-TA.html
[341] http://www.cdc.gov/violenceprevention/rpe/
[342] http://www.cdc.gov/violenceprevention/childmaltreatment/essentials/index.html
[343] http://www.cdc.gov/violenceprevention/deltafocus/index.html
[344] http://www.cdc.gov/violenceprevention/nisvs/

- Conduct research into the causes and prevention of gun violence, focusing on those questions with the greatest potential for public health impact

Rape Prevention and Education

The RPE program strengthens sexual violence prevention efforts at the state and local levels. More than one million women report being raped each year and one in five women report having been raped in their lifetime. One in 59 men report having been raped in their lifetime. Rape and other forms of sexual violence are preventable. That is why CDC promotes healthy relationships and supports rape prevention in coordination with state and local partners. The RPE program funds health departments in states, territories, and Washington, D.C. to work with rape crisis centers, state sexual assault coalitions, and others to advance the primary prevention of sexual violence.

The RPE program funds state and local health departments to implement proven, culturally relevant rape prevention and education activities. In FY 2014, CDC began a five-year cooperative agreement cycle for all 50 states, Washington, D.C., and 4 territories. Award amounts were determined based on population after providing base funding of $150,000 per state or $35,000 per territory. Grantees use CDC funding to operate state and community hotlines, implement statewide sexual violence prevention plans, and address local needs. For example, several state health departments are using CDC funding to conduct seminars on college campuses to reduce sexual assault and create a culture where sexual violence is not tolerated. In FY 2016, CDC will award the third year of funding in this cycle to 55 grantees.

Evaluation of rape prevention programs is critical to reducing sexual violence in the United States. Public health must know what interventions work best for a given audience in a given location. CDC supports four studies to evaluate promising sexual violence prevention strategies. Three of these studies (which take place in Rhode Island and Pennsylvania) focus on engaging young men in prevention. The fourth study is evaluating a bystander prevention program among high school youth in New Hampshire. CDC will expand its evaluation of rape prevention programs in FY 2015 and will further strengthen efforts with the $5,605,000 increase proposed in FY 2016. In FY 2016, CDC hopes to fund up to seven academic or research institutions to help CDC's rape prevention grantees collect data and scientifically evaluate their programs, based upon availability of funding.

Rape Prevention and Education Grants[1]

(dollars in millions)	FY 2012 Actuals	FY 2013 Actuals	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	57	57	55	55	55	0
- New Awards	0	57	55	55	55	0
- Continuing Awards	57	0	0	0	0	0
Average Award	$0.602	$0.572	$0.647	$0.647	$0.647	$0.000
Range of Awards	$0.008–$4.067	$0.005–$3.880	$0.036-$3.446	$0.036-$3.446	$0.036-$3.446	N/A
Total Awards	**$34.315**	**$38.256**	**$35.562**	**$35.562**	**$35.562**	**$0.000**

[1]These funds are awarded by formula.

Gun Violence Prevention Research

The President's *Now is the Time*[345] plan calls for research to better understand the causes and prevention of gun violence in the United States. Over 32,000 firearm-related deaths occur each year and more than 81,000 non-fatal firearm injuries from assault or self-harm are treated in hospital emergency departments annually. Together, deaths and injuries due to gun violence account for more than $47.2 billion each year in medical and lost productivity costs to the United States. To address gaps in knowledge about firearm injury prevention, the Institute of Medicine and the National Research Council developed a set of research questions in a 2013

[345] http://www.whitehouse.gov/issues/preventing-gun-violence

Consensus Report.[346] The research questions address youth access to firearms, risk factors for firearm violence, and the risks and benefits of firearm ownership, among other issues. In FY 2016, CDC proposes to fund research to begin examining the questions outlined in the *Consensus Report*.

Domestic Violence and Sexual Violence

The fields of intimate partner violence and sexual violence prevention have made strides in the past two decades to acknowledge the value of primary prevention and to emphasize the need to focus on preventing perpetration of violence. More data and research, however, are needed to support the development of effective preventive interventions.

In FY 2016, the Domestic Violence and Sexual Violence budget will support activities ranging from surveillance to rigorous program and research evaluations to inform prevention. CDC will support eight major investments in this area, including the National Intimate Partner and Sexual Violence Survey (NISVS); Dating Matters® Evaluation; and evaluation of the effectiveness of programs to prevent sexual violence through engaging young men in prevention and bystander intervention. NISVS is the first ongoing survey dedicated solely to describing, monitoring, and providing national and state level data on experiences of intimate partner violence, sexual violence, and stalking among adults in the United States. In FY 2016, NISVS will release a set of data showing state-level prevalence of sexual violence, intimate partner violence, and stalking behavior. Also in FY 2016, CDC will complete implementation of Dating Matters®, a comprehensive teen dating violence prevention initiative with an estimated 100,000 student and adult participants and will continue to follow youth through high school until FY 2018 to monitor the long-term effectiveness of the program. If found to be effective and economical, CDC will disseminate the comprehensive model to communities around the United States.

Child Maltreatment

Essentials for Childhood: Actions to Create Safe, Stable, Nurturing Relationships

CDC is committed to preventing child maltreatment before it begins, thereby eliminating the long-term adverse health effects—such as physical and emotional harm—and associated financial burdens. Children who are maltreated are at higher risk for serious health problems as adults, including smoking, obesity, and heart disease. A recent CDC study found the lifetime estimated financial costs associated with one year of confirmed cases of child maltreatment—physical abuse, sexual abuse, psychological abuse, and neglect—totals $124 billion. Further, CDC research shows Medicaid expenditures associated with child maltreatment costs the Medicaid system an estimated $5.9 billion per year due in part to higher utilization of health care services, including inpatient and outpatient care.

Essentials for Parenting Toddlers and Preschoolers

CDC recently launched a free, online resource that supports parents in raising happy, healthy children. The website's information and engaging videos are based on decades of research on common parenting challenges, like tantrums and whining. The skills, tips, and techniques for parents can help prevent child maltreatment. CDC's resources are available at http://www.cdc.gov/parents/essentials/.

In FY 2013, CDC began a five-year, competitive cooperative agreement in five states—Colorado, California, Massachusetts, North Carolina, and Washington—to implement CDC's comprehensive child maltreatment prevention recommendations. Funded state health departments are implementing strategies based on the best available scientific evidence to improve child well-being and to prevent child maltreatment. An additional 20 unfunded states have elected to participate in Essentials for Childhood due to high interest in the initiative.

In FY 2016, CDC will award the fourth year of funding, with an average award of $175,000 per state, to implement a comprehensive suite of child maltreatment prevention interventions. With state health

[346] Priorities for Research to Reduce the Threat of Firearm-Related Violence

department leadership, communities will promote safe, stable, and nurturing relationships and environments. They will do so by raising awareness of and strengthening commitment to preventing child maltreatment, using data to inform state and local prevention efforts, creating the context for healthy children and families through norms change and programs (e.g., parenting or home visiting programs), and implementing evidence-informed strategies (e.g., improving access to quality child care and early education, and reducing financial obligations for vulnerable families).

Essentials for Childhood Grants[1]

(dollars in millions)	FY 2012[2] Actuals	FY 2013 Actuals	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	0	5	5	5	5	0
- New Awards	0	5	0	0	0	0
- Continuing Awards	0	0	5	5	5	0
Average Award	$0.000	$0.175	$0.175	$0.175	$0.175	$0.000
Range of Awards	$0.000	$0.175	$0.175	$0.175	$0.175	N/A
Total Awards	**$0.000**	**$0.873**	**$0.873**	**$0.873**	**$0.873**	**$0.000**

[1]These funds are not awarded by formula.

[2]Program did not exist in FY 2012.

In addition to the Essentials for Childhood initiative, CDC's budget for Child Maltreatment supports a variety of surveillance and research efforts to strengthen the development, implementation, evaluation, and dissemination of promising child maltreatment prevention strategies across the nation, such as: The Adverse Childhood Experiences (ACE) Study; The National Survey of Children's Exposure to Violence (NATSCEV); Triple P-Positive Parenting Program; and conducting research in Colorado to understand if an integrated service model—one that integrates Temporary Assistance to Needy Families (TANF) services with child welfare services—has an impact on rates of child maltreatment and associated child welfare outcomes.

The ACE Study is one of the largest investigations ever conducted to assess associations between child maltreatment and later-life health and well-being, and findings are used to improve CDC's ongoing child maltreatment prevention efforts. Almost two-thirds of ACE Study participants reported at least one ACE, and more than one in five reported three or more ACEs. The short- and long-term outcomes of these childhood exposures include a multitude of health and social problems, such as suicide attempts, alcohol abuse, sexually transmitted diseases, and elevated risk for intimate partner violence. NATSCEV is the first comprehensive effort to measure children's exposure to multiple forms of violence in the home, school, and community across all age groups, and the first attempt to measure the cumulative exposure to violence over a child's lifetime. Findings have influenced the development of the Department of Justice's Defending Childhood initiative and inform CDC's ongoing work with the ACE Study. CDC is currently conducting a demonstration project in two sites of Triple P-Positive Parenting Program, an evidence-based system of interventions that enhances parental knowledge, skills, and confidence to prevent behavioral, emotional, and developmental problems in children.

Youth Violence Prevention

Preventing Violence in Early Adolescence

In FY 2016, CDC will support communities (through their respective local health departments) to prevent multiple forms of violence affecting children in early adolescence, including peer-to-peer violence, teen dating violence, sexual violence, and bullying. This program will focus on the implementation of comprehensive prevention strategies targeting youth in low-income, high-crime cities and metropolitan areas with the greatest burden/highest number of adolescents at increased risk for violence. Awardees will focus on prevention activities for 11- to 14-year-old youth in high-risk communities, implementing evidence-based strategies to prevent interpersonal violence, including effective implementation strategies identified by CDC's Dating Matters® and Striving to Reduce Youth Violence Everywhere (STRYVE) initiatives. This program will build on

successes achieved through Dating Matters®, where over 10,000 youth received dating violence prevention curricula in the 2013-2014 school year, in conjunction with parent and educator training, and over 800 educators have completed surveys on school climate and dating violence in their schools. Evaluations of these and other programs—including bystander prevention interventions, which work to change social norms and train bystanders to intervene and prevent violence—will inform future activities in this area.

National Centers of Excellence in Youth Violence Prevention

CDC funds six universities to serve as local, regional, and national resources for developing and applying effective violence prevention strategies in communities. These National Centers of Excellence in Youth Violence Prevention (YVPCs, formerly Academic Centers for Excellence) receive funding through competitive, five-year cooperative agreements, currently serving the communities of Baltimore, MD; Chicago, IL; Flint, MI; Richmond, VA; Denver, CO; and Robeson County, NC.

YVPC Success in Chicago, Illinois

The University of Chicago implemented and evaluated a coordinated set of activities to improve community norms and attitudes, neighborhood social organization, and behavior of high-risk adolescents and young adults in elementary and middle school in Chicago's Humboldt Park neighborhood. Early analyses of this work show that between 2010 and 2013 Humboldt Park saw a 38% reduction in the homicide rate, while a comparison area saw a 14% reduction.

In FY 2016, CDC plans to fund a total of five YVPCs for the next funding cycle, allowing an increase in the average award. CDC will continue to work with the YVPCs to build communities' capacities to implement evidence-based youth violence prevention strategies. Universities, due to their strong local ties and academic resources, provide unique opportunities to work within communities to prevent violence.

National Centers of Excellence in Youth Violence Prevention[1]

(dollars in millions)	FY 2012[2] Actuals	FY 2013[2] Actuals	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	6	6	6	5	5	0
- New Awards	0	0	0	3	2	-1
- Continuing Awards	6	6	6	2	3	+1
Average Award	$1.073	$1.040	$1.040	$1.100	$1.240	+$0.140
Range of Awards	$1.073	$1.040	$1.040	$1.040-$1.240	$1.240	N/A
Total Awards	**$6.436**	**$6.238**	**$6.238**	**$5.862**	**$6.232**	**+$0.370**

[1] These funds are not awarded by formula.

[2] In FY 2012 and FY 2013, the National Centers of Excellence in Youth Violence Prevention were known as the Academic Centers for Excellence.

Domestic Violence Community Projects

Domestic Violence Prevention Enhancements and Leadership through Alliances, Focusing on Outcomes for Communities United with States (DELTA FOCUS)

Over the course of a year, more than 12 million women and men are victims of rape, physical violence, or stalking by an intimate partner in the United States. CDC funds state domestic violence coalitions to implement and evaluate intimate violence prevention strategies at the state and local levels. CDC's competitive cooperative agreement program—Domestic Violence Prevention Enhancements and Leadership through Alliances, Focusing on Outcomes for Communities United with States (DELTA FOCUS)—funds 10 state domestic violence coalitions for a five-year period.

DELTA FOCUS emphasizes evaluation, building the evidence base, training and mentoring, and the role of local coalitions in preventing violence. For example, the California Partnership Against Domestic Violence is partnering with the California School Boards Association to develop a guide on dating abuse prevention that will

help education stakeholders draw linkages between dating abuse prevention, sexual harassment prevention, safety planning, and school climate improvement. It will also inform schools about implementing evidence-informed prevention strategies.

CDC-funded coalitions provide prevention-focused training, technical assistance, and funding to local community response centers. In FY 2016, DELTA FOCUS grantees will continue implementing and evaluating intimate partner violence primary prevention strategies. Grantees will address community and societal level factors to prevent intimate partner violence, including increasing gender equity in schools and within faith communities, and educational initiatives to promote healthy relationships.

DELTA FOCUS Grants[1,2]

(dollars in millions)	**FY 2012 Actuals**[2]	**FY 2013 Actuals**	**FY 2014 Final**	**FY 2015 Estimate**	**FY 2016 President's Budget**	**2016 +/-2015**
Number of Awards	N/A	10	10	10	10	0
- New Awards	N/A	10	0	0	0	0
- Continuing Awards	N/A	0	10	10	10	0
Average Award	N/A	$0.391	$0.391	$0.391	$0.391	$0.000
Range of Awards	N/A	$0.344-$0.410	$0.344–$0.410	$0.344–$0.410	$0.344–$0.410	N/A
Total Awards	**N/A**	**$3.907**	**$3.907**	**$3.907**	**$3.907**	**$0.000**

[1] These funds are not awarded by formula.

[2] DELTA FOCUS began in FY 2013. Prior to FY 2013, CDC was implementing a different program entitled DELTA III.

National Violent Death Reporting System Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$11.302**	**$11.302**	**$23.570**	**+$12.268**

Overview

The National Violent Death Reporting System[347] (NVDRS) is critical to CDC's efforts to prevent violence. The system equips funded states, researchers, and CDC to better understand the circumstances surrounding violent deaths. NVDRS is the only state-based surveillance system that pools information from multiple data sources into a usable, anonymous database. These sources include hospitals, state and local medical examiners, coroners, law enforcement, crime labs, and vital statistics. NVDRS covers all types of violent deaths—including homicides, suicides, and child maltreatment fatalities—in all settings and for all age groups. NVDRS data are far more comprehensive than what is available elsewhere. For example, in the case of suicides, NVDRS may include data on whether there was a history of depression or other mental health problems; recent problems with a job, finances, or relationships; or the recent death of a family member.

Budget Request

CDC's FY 2016 request of **$23,570,000** for the National Violent Death Reporting System is $12,268,000 above the FY 2015 Enacted level. This funding supports the President's gun violence prevention plan, *Now is the Time*, by providing nationwide data to better understand how and when firearms are used in violent deaths and to inform future research and prevention strategies. When firearms are used in homicides or suicides, NVDRS collects anonymous data, including the type of firearm used, whether the firearm was stored loaded or locked, and details on youth gun access.

In FY 2016, CDC's NVDRS program will:

- Support all 50 states and Washington, D.C. to collect data as part of the NVDRS system and provide technical assistance to help grantees monitor and report their state data
- Ensure NVDRS data support and are integrated into violence prevention activities by increasing dissemination and use of NVDRS data nationally. Data will be used by states to produce standard analyses on a range of topics (including intimate partner homicides, homicides followed by suicide, and suicides of specific groups such as veterans)
- Link NVDRS data with other data sources, such as child fatality review reports and adult protective services reports

CDC continues to improve the NVDRS system by promoting greater functionality and improved access to data. NVDRS data are available online to the general public through CDC's WISQARS[348] (Web-based Injury Statistics Query and Reporting System).

In FY 2014, CDC expanded the number of states funded to participate in NVDRS from 18 to 32 states. States recognize the importance of the system for understanding violent deaths and to guide prevention efforts. Demand to participate in NVDRS is high—a total of 39 states submitted applications to be part of the system in FY 2014 and CDC was unable to fund all of them given the resources available.

With resources at the FY 2016 request level, CDC will complete expansion of NVDRS to include all 50 states and Washington, D.C. This expansion, and increased average awards, will fund all states not previously funded. CDC

[347] http://www.cdc.gov/violenceprevention/nvdrs/index.html
[348] http://www.cdc.gov/injury/wisqars/

is well-positioned to expand the NVDRS system; beginning in FY 2014 and continuing into FY 2015, CDC has worked hard to reduce the burden of participation for states, streamlined and improved data exchange through adoption and enhancement of a web-based data collection platform, and strengthened CDC's scientific and technical support to states.

For the first time, prevention researchers, practitioners, and policymakers will be able to gauge the magnitude, trends, and characteristics of violent deaths at the national, state, and local levels. These data will inform the development, implementation, and evaluation of violence prevention strategies, which will ultimately save lives. The expansion will allow CDC to provide greater scientific and programmatic support to all states, including enhanced training, orientation for new users, data analysis, dissemination, and evaluation. Funding will also support system enhancements to improve overall data collection, increase system responsiveness, and will allow CDC to better identify and report on national trends of different types of homicides, including mass shootings, as well as trends seen in particular populations.

NVDRS collects and shares data to support decision making at the federal, state, and local levels. For example, through their collaboration on the Utah Violent Death Reporting System (UTVDRS), the Utah Department of Health's Violence and Injury Prevention Program (VIPP) and Domestic Violence Fatality Review Committee (DVFRC) observed that children had witnessed or otherwise were involved in numerous domestic violence homicides, but that they were not routinely referred to the Division of Child and Family Services (DCFS). As a result, the program worked to close a gap in services for the children of domestic violence-related homicide victims. Following recommendations from a symposium that was held, VIPP and DVFRC worked with DCFS to increase immediate referrals to DCFS. The referrals enable the children and families affected by domestic violence-related homicides to receive an assessment and get connected to intervention and follow-up services—such as mental health services—to help cope with the homicide and other domestic violence-related issues.

CDC collaboration with Department of Defense

In the journal article entitled *Precipitating Circumstances of Suicide among Active Duty U.S. Army Personnel Versus U.S. Civilians, 2005-2010,* CDC compared suicide events between active duty U.S. Army and civilian decedents to identify differences and inform military suicide prevention efforts. Scientists linked Army suicide records to NVDRS data, described the decedents' military background, compared precipitators of death captured in NVDRS to those of demographically-matched civilian suicide decedents, and learned that both groups commonly had mental health and intimate partner precipitating circumstances, but that soldier decedents less commonly disclosed suicide intent.

In addition, CDC is collaborating with the Department of Defense (DoD) to link NVDRS and DoD Suicide Event Report (DoDSER) data, which is expected to result in a number of products.

National Violent Death Reporting System (NVDRS) Grants[1]

(dollars in millions)	FY 2012 Actuals	FY 2013 Actuals	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	18	18	31[2]	31[2]	51	+20
- New Awards	0	0	13	0	51	+51
- Continuing Awards	18	18	18	31	0	-31
Average Award	$0.207	$0.203	$0.243	$0.248	$0.362	+$0.114
Range of Awards	$0.098–$0.266	$0.121-$0.256	$0.148-$0.427	$0.151-$0.427	$0.189–$1.100	N/A
Total Awards	**$3.735**	**$3.662**	**$7.549**	**$7.703**	**$18.471**	**+$10.768**

[1]Through FY 2015, funds have not been awarded by formula. If the requested increase for FY 2016 is received and allows for expansion to all 50 states and Washington, D.C., funds are anticipated to be awarded by formula.

[2]Thirty-two states are supported by 31 awards; Maine and Vermont are funded together with Maine as the lead CDC awardee.

Injury Prevention Activities Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$28.950**	**$48.950**	**$107.602**	**+$58.652**

Overview

Injuries kill more than 180,000 people each year—that's one death every three minutes. Violence and injuries affect everyone, regardless of sex, race, or economic status. CDC works to prevent injuries and violence through a host of programs spanning surveillance, development and evaluation of recommendations, and implementation of effective strategies. Areas highlighted below include prescription drug overdose[349], motor vehicle injury[350], youth sports concussion surveillance, and suicide[351]. The Core Violence and Injury Prevention Program[352] (Core VIPP) supports interventions across violence and injury topics, including these areas of focus.

Budget Request

CDC's FY 2016 request of **$107,602,000** for Injury Prevention Activities is $58,652,000 above the FY 2015 Enacted level and includes:

- $68,000,000, an increase of $48,000,000 to support CDC's efforts to address prescription drug abuse
- $5,579,000 to address the growing rate of illicit drug use
- $5,000,000 to establish and oversee a national surveillance system to accurately determine the incidence of sports-related concussions among youth ages 5–21

Prescription Drug Overdose Prevention

Drug overdose deaths have skyrocketed in the past decade, largely because of prescription opioids. Prescription Drug Overdose[353] (PDO) death rates quadrupled since 1999, claiming more than 16,000 lives in 2013 alone. Overdose deaths are only part of the problem—for each death involving prescription opioids, hundreds of people abuse or misuse these drugs. Emergency department visits for prescription painkiller abuse or misuse have doubled in the past few years to nearly half a million. Prescription opioid-related overdoses cost an estimated $20 billion in medical and work-loss costs each year. Stemming this epidemic is essential to CDC's goal of preventing the leading causes of disease, disability, and death.

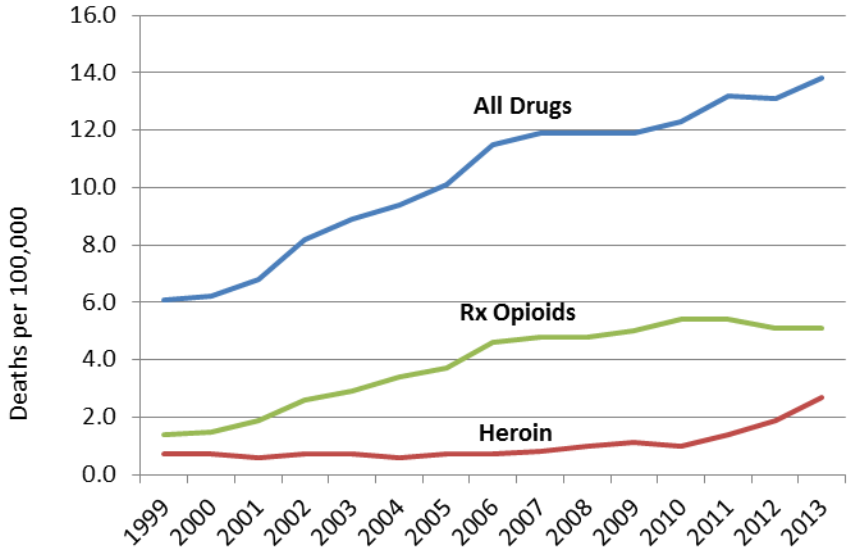
CDC plays an important role in understanding and addressing the causes of the epidemic and has found that higher prescribing of opioid pain relievers is associated with more overdose deaths. In 2012, the U.S. saw the first national drop in prescription opioid deaths since the 1990s. In 2013, prescription opioid deaths remained essentially level with 2012—maintaining the slight decline seen the previous year, but not declining any further. While the public health burden remains dire, this decline helps to signal the way forward to reverse the epidemic.

CDC applies its scientific expertise to help curb the epidemic in three ways:

- Improving data quality and surveillance to monitor and respond to the epidemic
- Supporting states in their efforts to implement effective solutions and interventions
- Equipping healthcare providers with the data and tools needed to improve the safety of their patients

[349] http://www.cdc.gov/homeandrecreationalsafety/overdose/index.html
[350] http://www.cdc.gov/motorvehiclesafety/
[351] http://www.cdc.gov/violenceprevention/suicide/
[352] http://www.cdc.gov/injury/stateprograms/index.html
[353] http://www.cdc.gov/vitalsigns/prescriptionpainkilleroverdoses/index.html

Dramatic Increase in Drug Overdose Death Rates 1999-2013



In FY 2016, CDC will:

- Support all 50 states and Washington, D.C. through the Prescription Drug Overdose Prevention for States program (PDO Prevention for States)
- Increase uptake among providers of safe opioid prescribing guidelines for outpatient settings currently in development and slated for release in 2016
- Maximize the use of state-based Prescription Drug Monitoring Programs (PDMPs) as a public health tool to assist in clinical decision making and in conducting public health surveillance
- Identify and scale up promising prevention practices in the nation's hospitals and health systems, including working to expand and evaluate an innovative model to coordinate care for high-risk opioid patients to ensure they receive safe, effective treatment
- Advance data collection and analysis efforts on overdoses related to heroin use

In FY 2014, CDC began a three-year funding cycle, funding five states with high PDO burdens and demonstrated readiness to accelerate efforts to address the epidemic within their borders—Kentucky, Oklahoma, Tennessee, Utah, and West Virginia—under Prescription Drug Overdose: Boost for State Prevention (Prevention Boost). These five states are implementing innovative insurance strategies, maximizing state-based PDMPs, and evaluating programs and policies directed at prescription drug overdose prevention and heroin overdose prevention, such as policies related to naloxone administration.

Other examples of activities of the funded states include the following:

- Expanding the use of their PDMPs, statewide electronic databases that collect designated data on substances dispensed within their states, as public health surveillance systems
- Improving proactive reporting of PDMP data (i.e., sending a system-automated alert upon detection of inappropriate prescribing or inappropriate patient behaviors)
- Linking PDMP data to health outcome data
- Creating an algorithm within the PDMP system to trigger identification of highest risk patients and providers
- Evaluating the impact of Workers' Compensation interventions to address PDO
- Evaluating the efficacy of state policies such as pain clinic laws and Good Samaritan laws

In FY 2015, CDC received an increase of $20 million to scale up the PDO program targeted to states. With this increase, CDC will launch the PDO Prevention for States program. PDO Prevention for States, a new competitive cooperative agreement program, will capitalize on the infrastructure of the existing Prevention Boost and Core VIPP programs, with a specific focus on those interventions which exhibit the most promise for reversing the PDO epidemic. CDC will fund states through a competitive cooperative agreement and will target states that contribute significantly to the national burden of prescription drug overdose morbidity and mortality. CDC will incorporate each state's burden of PDO, including CDC's mortality data (age-adjusted rate), in the competitive process to test and implement best practices for the identification, treatment, and control of prescription drug abuse. States that receive funding will be required to address opioid prescribing on multiple fronts. States will:

- Address data issues and improve data standards and the ability to share data across state lines and nationally to improve PDO activities
- Establish or expand prescription drug monitoring databases of physicians writing prescriptions for opioids and pharmacists filing prescriptions
- Demonstrate collaboration with a variety of state entities, including law enforcement

To track and ensure progress, CDC will develop performance measures with annual targets for the PDO Prevention for States program. Also, to amplify these state-level interventions, CDC will continue efforts begun in 2014 to develop and implement a suite of evidence-based, tested, and well-aligned communications materials that will be part of a technical package for states' use. Also in FY 2015, CDC will begin rigorous evaluation of this new state-level program that will greatly inform program improvements to ensure the highest public health impact possible as this program continues to grow and expand.

While the majority of CDC activities center on supporting state-level interventions, CDC is also developing safe opioid prescribing guidelines for chronic, non-cancer pain in outpatient settings for release in FY 2016, along with a technical package to guide states in the implementation of safe opioid prescribing through coordinated care. The coordinated care package is based on a major initiative by Group Health Cooperative, a nonprofit healthcare system based in Seattle, to improve care for high-risk opioid patients. Group Health was successful in getting 85% of the chronic, non-cancer pain population enrolled in a coordinated care plan that included treatment goals, medication regimens, frequent monitoring visits, and requirements for urine drug screening. Well-implemented coordinated care programs include provider guidance for treating patients addicted to opioids and helping them avoid heroin as well as other opioids. Pilot implementation of the coordinated care package will begin in 2015 with the expectation of scaling up for wider use and the start of evaluation of the package in 2016.

With resources at the FY 2016 level, CDC will expand the PDO Prevention for States program to fund all 50 states and Washington, D.C. for a truly comprehensive response to the national epidemic. The increased investment will support rigorous monitoring and evaluation and improvements in data quality and monitoring at a national level, with a special emphasis on delivering critical real-time mortality surveillance. CDC also will continue efforts to increase uptake among providers of safe opioid prescribing guidelines for outpatient settings currently in development and slated for release in 2016, as well as implementation of a coordinated care plan technical package that addresses both opioid use and heroin prevention by improving care for high-risk opioid patients. In addition, CDC will leverage existing activities funded through the Bureau of Justice Assistance's Harold Rogers Prescription Drug Monitoring Program by helping states maximize the use of their PDMPs as a public health tool to identify and address inappropriate prescribing.

Of the total amount requested, $5,579,000 will be used to address the rising rate of heroin-related overdose deaths by working to collect near real-time emergency department data and higher quality and more timely mortality data by rapidly integrating death certificate and toxicology information. Many activities to address and prevent PDO have implications to address and prevent heroin use as well. In FY 2016, CDC will strengthen surveillance efforts specific to heroin to further examine the nexus between prescription opioids and heroin. In particular, building on CDC's current work in HHS's Region 1 (Connecticut, Massachusetts, Maine, New

Hampshire, Rhode Island, and Vermont) and New Jersey, CDC will work to improve Emergency Department surveillance for heroin overdoses in states. This surveillance activity will be conducted using either hospital discharge data or syndromic surveillance. CDC also will assess the feasibility of testing heroin case definitions on a national syndromic network. In alignment with the CDC Surveillance Strategy, CDC is exploring ways to leverage existing data systems, such as the National Violent Death Reporting System (NVDRS) platform, to capture details on heroin overdose deaths.

CDC's activities in FY 2016 will be conducted in alignment with HHS's recently established policy and plan for prevention of Opioid-Related Overdoses and Deaths involving and capitalizing on the respective expertise of multiple Operating Divisions and offices. For instance, CDC will apply its scientific expertise to evaluate SAMHSA's proposed prescription drug overdose grant program. Through this SAMHSA grant, states can purchase naloxone, equip first responders in high-risk communities, provide education and the materials necessary to assemble overdose kits, as well as cover expenses incurred from the training dissemination efforts.

Surveillance of Sports- and Recreation-Related Concussions among Youth

A concussion is a type of traumatic brain injury (TBI), which is defined as an injury that disrupts the normal function of the brain. It can be caused by a bump, blow, or jolt to the head or a penetrating head injury. In 2010, in the United States, 2.5 million emergency department visits, hospitalizations, or deaths were associated with TBI, either alone or with other injuries or illnesses. More specifically, in 2009, an estimated 248,000 children (age 20 or younger) were treated in emergency departments for sports- and recreation-related injuries that included a diagnosis of concussion or TBI.

With the proposed increase of $5,000,000 in FY 2016, CDC will establish and oversee a national surveillance system to accurately determine the incidence of sports-related concussions among youth ages 5-21, making CDC fully responsive to the recommendations issued in a 2013 report by the Institute of Medicine (IOM), entitled *Sports Related Concussions in Youth: Improving the Science Changing the Culture*[354]. In planning for and implementing the system, CDC will ensure participation in the CDC Surveillance Strategy and will maximize resources and platforms available through existing mechanisms. The resulting proposed system would capture sports- and recreation-related concussions among 5-21 year olds, including:

- Sports- and recreation-related concussions that are and are not seen by an athletic trainer or healthcare provider
- Sports- and recreation-related concussions, including those that occur in organized sports at the pre-high school and high-school level, and it will attempt to integrate data collected at the college level
- Sports- and recreation-related concussions that do not occur as part of organized sports, including among those playing in youth club sports and in competitive and recreational sports outside of an academic setting as well as those experienced on a playground or while bicycling
- The high level of detail requested by the IOM for sports-related concussions, including demographics, concussion history, symptoms, and circumstances surrounding the injury, such as the use of protective equipment and how the injury occurred

Because there is no existing or workable source for youth data exclusively to accurately collect this information on sports- and recreation-related concussions among youth, CDC will work in partnership with youth athletic organizations, schools, and others to test and develop nationally representative, comprehensive surveillance and reporting models for sports-related concussions and develop survey instruments to identify those who have sustained sports- and recreation-related concussions. The survey instrument will query adults both about sports- and recreation-related concussions they might have experienced as well as those sustained by children in their care. The survey instrument(s) may also capture information regarding other concussions in this target

[23] http://www.iom.edu/Reports/2013/Sports-Related-Concussions-in-Youth-Improving-the-Science-Changing-the-Culture.aspx

population to understand individuals' history of concussions and ensure appropriate categorization/reporting of concussions.

Core Violence and Injury Prevention Program (Core VIPP)

CDC provides funding and technical assistance to states to address violence and injury prevention through its Core Violence and Injury Prevention Program (Core VIPP). The program supports 20 state health departments to strengthen capacity to collect and use data to address local injury priorities, and to protect their residents by putting science into action to save lives and prevent injuries. All 20 currently-funded states receive funding for the base integration component. This component allows states to focus on four priority areas selected based on state needs, while also requiring essential activities—such as surveillance and evaluation—to ensure program effectiveness. States receiving base integration component funding also were eligible to compete for additional funding through expanded Core VIPP components.

Expanded Core VIPP Components

Components	Activities Receiving Additional Funding
Falls in older adults[355]	Three Core VIPP states receive additional funding to prevent falls in older adults by integrating and linking clinical and community-based programs.
Motor Vehicle Child Injury Prevention[356]	Four Core VIPP states receive additional funding for activities to reduce motor vehicle-related injuries among children[357] and teens[358].
Regional Network Leaders	Five Core VIPP states receive additional funding to provide expanded support to both funded and unfunded states within their geographic regions to maximize sharing of information and strategies among states.
Surveillance Quality Improvement	Four Core VIPP states receive additional funding for activities to improve the overall quality of injury data.

In FY 2015, all 20 Core VIPP-funded states will strengthen their injury and violence prevention programs with a focus on the following components:

- Building public health implementation capacity
- Collecting and analyzing data about the burden, protective and risk factors, and interventions
- Implementing and evaluating prevention strategies based on the burden in each state
- Providing education to public health practitioners, state policymakers and the public

In FY 2016, CDC will continue to strengthen the Core VIPP program to be more reflective of violence and injury prevention in a new funding announcement. Strengthening core components will allow states to amplify their efforts as they focus on their state-identified priority areas, which for many states include motor vehicle injury prevention and older adult falls prevention. Such efforts likewise increase each state's capacity to address any increasing or emerging violence or injury-related public health burdens within their borders. CDC will begin a new five-year cooperative agreement cycle in FY 2016.

[355] http://www.cdc.gov/HomeandRecreationalSafety/Falls/index.html
[356] http://www.cdc.gov/motorvehiclesafety/
[357] http://www.cdc.gov/Motorvehiclesafety/Child_Passenger_Safety/index.html
[358] http://www.cdc.gov/Motorvehiclesafety/Teen_Drivers/index.html

Core Violence and Injury Prevention Program Grants[1,2]

(dollars in millions)	FY 2012 Actuals	FY 2013 Actuals	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget[3]	2016 +/-2015
Number of Awards	20	20	20	20	TBD	N/A
- New Awards	0	0	0	0	TBD	N/A
- Continuing Awards	20	20	20	20	TBD	N/A
Average Award	$0.343	$0.342	$0.343	$0.343	TBD	N/A
Range of Awards	$0.150–$0.813	$0.150–$0.803	$0.150–$0.813	$0.150-$0.813	TBD	N/A
Total Awards	**$6.865**	**$6.835**	**$6.865**	**$6.865**	**TBD**	**N/A**

[1] All 20 Core VIPP grantees are funded for the Base Integration Component of Core VIPP. Select states are funded for additional components above the Base Integration Component. See the state table for funding details.

[2] These funds are not awarded by formula.

[3] Decisions on number of awards and funding levels for FY 2016 are yet to be determined. A new Core VIPP FOA will be released in FY 2016, beginning a new 5-year funding cycle.

Motor Vehicle Injuries and Deaths

Motor vehicle crashes[359] are the leading cause of death in the first three decades of Americans' lives. To prevent motor vehicle-related injuries and death, CDC supports and guides state health departments by providing expertise and insight into their motor vehicle injury prevention activities. CDC informs the implementation of effective interventions and program evaluation; helps guide analyses of crash-related injury data; and provides guidance on effective programs such as alcohol ignition interlocks[360] and graduated drivers licensing systems[361].

In 2014, CDC released Motor Vehicle Prioritizing Interventions and Cost Calculator for States (MV PICCS)[362], an interactive online tool that states can use to assess the costs and effectiveness of implementing up to 12 evidence-based interventions designed to prevent crash injuries. This tool assists states in prioritizing high-impact interventions to make tailored resource allocation decisions that maximize lives saved. To augment efforts, CDC collaborates with a number of organizations to prevent motor vehicle-related injuries and deaths, including the National Highway Traffic Safety Administration (NHTSA), the Federal Highway Administration (FHWA), other federal agencies, state health departments, American Indian/Alaska Native tribes, and academic institutions.

CDC's overall strategy to reduce motor vehicle deaths is to focus on intervention areas with high-impact potential:

- Reducing alcohol-impaired driving[363]
- Improving proper restraint use, including seat belt[364] and car seat/booster seat[365] use
- Preventing crashes and injuries among vulnerable populations, including, teens[366], older adults[367], and American Indians and Alaska Natives[368]

Tribal Motor Vehicle Injury Prevention

The Hopi Tribe used CDC funding to improve collaboration with law enforcement to strengthen their existing seat belt law. Also, a successful media campaign raised awareness among tribal members about the importance of buckling up. The campaign, educational efforts, and improved enforcement of the seat belt law led to an increase of 33 percent (from 42% to 53%) in driver seat belt use and an increase of 50 percent (from 30% to 45%) in passenger seat belt use between 2011 and 2014.

[359] http://www.cdc.gov/motorvehiclesafety/
[360] http://www.cdc.gov/Motorvehiclesafety/Impaired_Driving/index.html
[361] http://www.cdc.gov/ParentsAreTheKey/licensing/index.html
[362] http://www.cdc.gov/motorvehiclesafety/calculator/
[363] http://www.cdc.gov/Motorvehiclesafety/Impaired_Driving/index.html
[364] http://www.cdc.gov/motorvehiclesafety/seatbelts/index.html
[365] http://www.cdc.gov/Motorvehiclesafety/Child_Passenger_Safety/index.html
[366] http://www.cdc.gov/Motorvehiclesafety/Teen_Drivers/index.html
[33] http://www.cdc.gov/Motorvehiclesafety/Older_Adult_Drivers/index.html
[34] http://www.cdc.gov/Motorvehiclesafety/native/
[367] http://www.cdc.gov/Motorvehiclesafety/Older_Adult_Drivers/index.html

- In FY 2016, CDC will assist states with the development and implementation of programs to address motor vehicle-related injuries in the key areas listed above. CDC also will focus on improving the safe mobility of older adults by working to better understand the transition from driving to not driving. For instance, CDC is developing a tool for older adults allowing them to quickly assess their current mobility and obtain actionable, tailored feedback on steps they can take to make mobility changes. For tribal motor vehicle injury prevention, CDC is developing a manual of best practices from CDC's successful Tribal Motor Vehicle Injury Prevention Program (TMVIPP). The manual will serve as a resource to tribes on what works to prevent motor vehicle injuries among American Indians and Alaska Natives, a population that has 1.5 to 3 times higher rates of motor vehicle injury and death than other Americans. CDC will increase the reach and impact of the TMVIPP lessons learned by partnering with the FHWA. This partnership will allow CDC to provide technical support, training and other activities that will reduce motor vehicle-related fatalities and injuries in Indian Country and will reach up to 37% of the 566 federally recognized tribes in the United States.

CDC also will continue to guide states by providing expert feedback on planned activities and implementation strategies through Core VIPP. This work is vital since all 20 Core VIPP states identified motor vehicle injury prevention as a priority area. This guidance will build on previous successes; encourage the use of evidence-based interventions, and help states use data to inform decisions.

Suicide Surveillance, Research, and Prevention

CDC provides national leadership in understanding who commits suicide and why and how to prevent suicide and its risk factors. Suicide is the tenth leading cause of death in the United States among all age groups and is estimated to cost $41.2 billion in combined medical and work loss costs[369]. With FY 2016 funding, CDC will expand efforts to prevent suicide by improving surveillance, research, and the development and evaluation of evidence-based strategies. CDC will continue to expand resources and support for fatal and non-fatal surveillance systems for self-directed violence, including collection of data at the national, state, and local levels, which leads to more relevant information for decision makers at the state and local levels. This important data and research will help CDC determine the effectiveness of strategies to prevent suicidal behavior and expand the number of evidence-based prevention activities.

CDC is continuing efforts to evaluate two interventions—LET's CONNECT and The Senior Connection—to promote and strengthen individual, family, and community connectedness, a key protective factor of interest in suicide prevention. LET's CONNECT links adolescents who are identified as at risk for suicidal behavior with natural (e.g. parent, family member) and community mentors. The Senior Connection seeks to link socially-disconnected seniors with a volunteer peer companion. In FY 2016, outcomes of randomized controlled trials will inform the practice of suicide prevention within these two particularly vulnerable populations.

[368] http://www.cdc.gov/Motorvehiclesafety/native/
[369] http://www.cdc.gov/injury/wisqars/index.html

Unintentional Injury Prevention Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$8.598**	**$8.598**	**$8.598**	**$0.000**

Overview

Unintentional injuries are the leading cause of death for individuals ages 1–44 in the United States and are projected to cost more than $81 billion annually in medical costs. CDC's Unintentional Injury program promotes safety by tracking unintentional injuries to identify opportunities for prevention and by developing and evaluating recommendations for effective programs and policies for injury areas including traumatic brain injury[370] and older adult falls[371]. Interventions in these areas are implemented at the state level through various mechanisms including Core VIPP.

Budget Request

CDC's FY 2016 request of **$8,598,000** for Unintentional Injury Prevention is level with the FY 2015 Enacted level. In FY 2016, CDC will conduct surveillance, identify effective interventions, and work toward implementation of strategies to prevent and address injuries including traumatic brain injuries and older adult falls.

Traumatic Brain Injury Prevention

In 2010, an estimated 2.5 million emergency department (ED) visits, hospitalizations, or deaths were associated with traumatic brain injury (TBI) – either as an isolated injury or along with other injuries – in the United States. To reduce TBI, including concussions, CDC conducts surveillance, develops and shares educational materials and clinical guidelines, and supports prevention interventions. Strategies include:

- Improving the understanding of the public health burden of TBI
- Reducing the incidence of TBI through primary prevention
- Improving the recognition and management of mild TBI
- Promoting healthy lifestyles and improving health outcomes of persons living with TBI

TBI prevention activities underway within the Core VIPP states include conducting TBI surveillance and developing state-level estimates of TBI, providing guidance to ensure TBI-related policies are informed by accurate research, and supporting the development and dissemination of the latest science on the risk factors, burden, impact, and outcomes associated with TBI. For example, the Minnesota Core Injury Program designed, refined, and implemented a high school sports concussion surveillance system. Launched in 42 high schools across the Twin Cities metropolitan area, the surveillance effort was streamlined to improve functionality and ease of participation among state high school athletic trainers. During the 2013-2014 school year, the program tracked the occurrences of 730 concussions throughout 36 metro area schools resulting from participation in 12 different sports. This voluntary tracking system provides insight on the incidence of concussions among high school-age youth and the data derived will be used to guide prevention efforts, which includes informing clinicians about concussion treatment.

To ensure the health and safety of young athletes, CDC developed the Heads Up: Concussion in Youth Sports initiative to offer information about concussions to coaches, parents, and athletes involved in youth sports. The Heads Up campaign provides important information on preventing, recognizing, and responding to a concussion and is celebrating its 10th anniversary this year.

[370] http://www.cdc.gov/traumaticbraininjury/
[371] http://www.cdc.gov/HomeandRecreationalSafety/Falls/index.html

Heads Up accomplishments include:

- 215+ million media impressions through print media and TV public service announcements (PSAs)
- More than 6 million print materials distributed
- More than 3 million coaches completed online trainings
- More than 50 Heads Up products developed
- 22,000+ Facebook fans, and growing
- More than 85 organizations signed on as participating organizations
- Close to 40 million social media impressions

In FY 2015, the Heads Up campaign is expanding efforts to evaluate the public health impact of the campaign and build momentum for research and efforts focused on changing social norms around concussion.

In FY 2016, CDC will continue to support TBI prevention efforts related to surveillance and program implementation through the Core VIPP program. CDC will also conduct activities, including partnering with provider groups such as the American Academy of Pediatrics, to encourage the widespread dissemination and uptake of the new pediatric mild TBI guidelines to assist in proper diagnosis and management. Together, these activities will help prevent TBI and mitigate their impact if they occur, thus reducing the burden of these often fatal and life-altering injuries. CDC recognizes the critical need for national TBI surveillance data, including surveillance of sports- and recreation-related concussions, as highlighted in the IOM report on sports-related concussions among youth, discussed under Injury Prevention Activities.

Older Adult Falls

CDC helps older adults stay healthy and independent by using scientific data to identify effective programs and determine optimal strategies to promote widespread adoption of these programs. In addition to studying the public health outcomes from these strategies, CDC is analyzing potential cost-benefits (e.g., reducing medications that may increase fall risk). Older adult falls[372] are preventable when modifiable fall risk factors are identified by healthcare providers and appropriate interventions (e.g., prescribing Vitamin D supplements to improve bone quality and muscle strength) are conducted. While providers report being aware their older patients are at risk for falls, they likewise report a lack of awareness on how to assess fall risk. To address this gap, CDC developed the STEADI (Stopping Elderly Accidents, Deaths and Injuries) toolkit[373]. This toolkit gives healthcare providers the resources they need to assess their patients' risk of falling and address modifiable risk factors, including recommending Vitamin D supplementation and managing patient medications to reduce or eliminate medications that increase fall risk. These resources also help providers refer patients to appropriate fall prevention programs, such as exercise-based programs, or to other medical specialists who play a role in reducing an older adult's fall risk (e.g., physical therapist, occupational therapist, ophthalmologist). CDC will reinforce the efficacy of STEADI to the medical community and will introduce a phased approach—STEADI Step One. STEADI Step One is tailored to primary care physicians and consists of three simple steps: 1) Screen older adults for fall risk; 2) Recommend Vitamin D supplements to support muscle and bone health; and 3) Optimize medications for all patients at risk for a fall. To streamline efforts to incorporate fall prevention within clinical care, CDC is working to develop online training courses, integrate STEADI within provider electronic health records (EHR) systems, and increase the level of engagement of and partnership with the medical community.

Sixteen of the 20 Core VIPP states focus on older adult falls prevention strategies, including Oregon. In 2012, 585 Oregonians age 65 and older died and nearly 8,500 were hospitalized due to a fall. Early success indicators, however, show positive outcomes in Oregon's efforts to address older adult falls within the state's borders. In

[372] http://www.cdc.gov/HomeandRecreationalSafety/Falls/index.html
[373] http://www.cdc.gov/homeandrecreationalsafety/Falls/steadi/index.html

2013, STEADI was piloted in the Oregon Health & Science University (OHSU) primary care clinics, reaching over 500 patients age 75 and older. In support of the fall prevention integration with clinical care, OHSU made modifications to their EHR system to streamline the process of conducting a fall risk assessment and encouraging providers to screen, assess, treat, and refer patients based on the patient's identified risk. Information from the OHSU STEADI EHR implementation is being used to develop a STEADI module that will be available to all users of their EHR system nationwide. To further the widespread impact of STEADI, the HRSA-supported Oregon Geriatric Education Center has trained clinical teams in STEADI for other health systems in the Portland Coordinated Care Organizations and rural clinics across the state.

In FY 2016, CDC will continue to scale up implementation of STEADI Step One within clinical settings. To assess and inform ongoing efforts, CDC will use data from the Centers for Medicare and Medicaid Services to better understand the frequency in which medical providers conduct fall prevention activities like screening, assessments, and follow-up care. These data will support CDC efforts to integrate fall prevention into routine clinical care and to improve the overall quality of care patients receive.

Injury Control Research Centers Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$9.596**	**$9.596**	**$9.596**	**$0.000**

Overview

One person in the United States dies every three minutes from an injury or violent act. Americans under the age of 45 years are more likely to die from violence and injuries than from any other cause. However, not all injuries have evidence-based prevention solutions. CDC's Injury Control Research Centers (ICRCs) research and evaluate ways to improve injury prevention practices and determine the health and economic impacts of injury and violence prevention efforts to fill gaps in the evidence base. ICRCs conduct research on priority injury topics, including prescription drug overdose, traumatic brain injury, motor vehicle injuries, and violence against children and youth. The academic institutions that comprise the ICRCs provide a high caliber of scientific competency, regional and national leadership in the field, and training for future injury researchers and the broader public health community. To develop and share interventions, ICRCs collaborate with state and local health agencies (including Core VIPP grantees), community partners, and other non-governmental organizations. Decision makers across the United States rely on ICRC research to shape federal, state, and local programs and policies.

Current ICRC Projects

State	Grantee	Project
Iowa	University of Iowa	Evaluation of Iowa's Anti-bullying Legislation
Maryland	Johns Hopkins University	Housing Characteristics and Child Injury Risks: A New Tool for Researchers and Policymakers
Michigan	University of Michigan	Prescription Opioid Overdose Intervention for At-Risk Urban Opioid Users
New York	Columbia University	Translating a Falls Program to Urban Seniors
New York	Mt. Sinai School of Medicine	Evaluating TBI behavioral interventions among youth
New York	University of Rochester	Structure, Policy, and Suicide Variability across Communities
North Carolina	University of North Carolina	Preventing Injury and Violence by Connecting Interdisciplinary Research to Programs, Policy and Practice
Ohio	Nationwide Children's Hospital	Evaluating the Effectiveness of State Level Concussion Policies
Pennsylvania	University of Pennsylvania, Developmental ICRC	Injuries and Violence Prevention among Low Resourced Populations
West Virginia	West Virginia University	Interaction of Drugs and Alcohol in Opioid Deaths

Budget Request

CDC's FY 2016 request of **$9,596,000** for Injury Control Research Centers is level with the FY 2015 Enacted level. Currently, CDC supports 10 ICRCs to conduct research and evaluation activities related to health and the economic impact of injury and violence as well as the improvement of injury prevention practices. These include

nine comprehensive ICRCs and one developmental ICRC. Comprehensive ICRCs are research centers with established systems and infrastructure to carry out complex and involved injury research while developmental ICRCs are those capable of researching on a more limited scale but are strengthening and expanding their systems and capabilities to better contribute to the field of violence and injury prevention. Developmental ICRC awards are designed to build core activities such as administration, management, research development, technical assistance, support services, training and education, and outreach to the community. Research activities for the developmental center are more limited than for the comprehensive centers.

In FY 2016, CDC will continue to collaborate with the ICRCs to conduct injury and violence prevention research to fill key gaps in the evidence base for prevention. CDC will provide strategic direction to the ICRCs and to the field of injury prevention research, including priority injury topics such as traumatic brain injury, violence against children and youth, motor vehicle-related injuries, and prescription drug overdose. CDC will share key findings from injury and violence prevention research from the ICRCs to benefit the broader public health community.

Injury Control Research Centers Program Grants[1]

(dollars in millions)	FY 2012 Actuals	FY 2013 Actuals	FY 2014 Final[2]	FY 2015 Estimate[2]	FY 2016 President's Budget[2]	2016 +/-2015
Number of Awards	11	11	10	10	10	0
- New Awards	7	0	3	0	0	0
- Continuing Awards	4	11	7	10	10	0
Average Award	$0.836	$0.795	$0.767	$0.767	$0.767	$0.000
Range of Awards	$0.836	$0.795	$0.450-$0.802	$0.450-$0.802	$0.450-$0.802	N/A
Total Awards	**$9.202**	**$8.741**	**$7.671**	**$7.671**	**$7.671**	**$0.000**

[1]These funds are not awarded by formula.

[2]All ICRC's are funded at an average of $802,300 except for one developmental ICRC which is funded at $450,000.

State Table: Core State Injury Program[1, 2, 3]

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	Difference +/- 2015
Alabama	$0	$0	TBD	TBD
Alaska	$0	$0	TBD	TBD
Arizona	$180,621	$180,621	TBD	TBD
Arkansas	$0	$0	TBD	TBD
California	$0	$0	TBD	TBD
Colorado	$803,029 [b, c, d]	$803,029 [b, c, d]	TBD	TBD
Connecticut	$0	$0	TBD	TBD
Delaware	$0	$0	TBD	TBD
Florida	$250,000	$250,000	TBD	TBD
Georgia	$0	$0	TBD	TBD
Hawaii	$150,000	$150,000	TBD	TBD
Idaho	$0	$0	TBD	TBD
Illinois	$0	$0	TBD	TBD
Indiana	$0	$0	TBD	TBD
Iowa	$0	$0	TBD	TBD
Kansas	$278,623[a]	$278,623[a]	TBD	TBD
Kentucky	$247,814	$247,814	TBD	TBD
Louisiana	$0	$0	TBD	TBD
Maine	$0	$0	TBD	TBD
Maryland	$294,057[a]	$294,057[a]	TBD	TBD
Massachusetts	$427,388[a,b]	$427,388[a,b]	TBD	TBD
Michigan	$0	$0	TBD	TBD
Minnesota	$246,454	$246,454	TBD	TBD
Mississippi	$0	$0	TBD	TBD
Missouri	$0	$0	TBD	TBD
Montana	$0	$0	TBD	TBD
Nebraska	$299,693[d]	$299,693[d]	TBD	TBD
Nevada	$0	$0	TBD	TBD
New Hampshire	$0	$0	TBD	TBD
New Jersey	$0	$0	TBD	TBD
New Mexico	$0	$0	TBD	TBD
New York	$675,000[c,d]	$675,000[c,d]	TBD	TBD
North Carolina	$428,062[a,b]	$428,062[a,b]	TBD	TBD
North Dakota	$0	$0	TBD	TBD
Ohio	$250,000	$250,000	TBD	TBD
Oklahoma	$250,000	$250,000	TBD	TBD
Oregon	$525,000[c]	$525,000[c]	TBD	TBD
Pennsylvania	$250,000	$250,000	TBD	TBD
Rhode Island	$250,000	$250,000	TBD	TBD
South Carolina	$0	$0	TBD	TBD
South Dakota	$0	$0	TBD	TBD
Tennessee	$247,686	$247,686	TBD	TBD
Texas	$0	$0	TBD	TBD
Utah	$332,422[b]	$332,422[b]	TBD	TBD
Vermont	$0	$0	TBD	TBD
Virginia	$0	$0	TBD	TBD
Washington	$449,114 [a,d]	$449,114 [a,d]	TBD	TBD
West Virginia	$0	$0	TBD	TBD
Wisconsin	$0	$0	TBD	TBD
Wyoming	$0	$0	TBD	TBD

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	Difference +/- 2015
Territories				
American Samoa	$0	$0	$0	$0
Guam	$0	$0	$0	$0
Marshall Islands	$0	$0	$0	$0
Micronesia	$0	$0	$0	$0
Northern Mariana Islands	$0	$0	$0	$0
Puerto Rico	$0	$0	$0	$0
Republic Of Palau	$0	$0	$0	$0
Virgin Islands	$0	$0	$0	$0
Total	**$6,834,963**	**$6,834,963**	**TBD**	**TBD**

[1] CFDA NUMBER: 93.136 Discretionary

[2] This State Table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial grantees). For a more comprehensive view of grant and cooperative agreement funding to grantees by jurisdiction, visit http://wwwn.cdc.gov/Fundingprofiles/FundingProfilesRIA/

[3] All Core VIPP grantees receive funding for the Base Integration Component of the Core VIPP program. A select group of states participating in the Base Integration Component were awarded funding for additional components under the Core VIPP program. These included: a- Regional Network Leaders, b - Surveillance Quality Improvement, c -Older Adult Falls Prevention and d -Motor Vehicle Injury Prevention. For more information on these additional components please go to http://www.cdc.gov/injury/stateprograms/index.html

State Table: Rape Prevention and Education[1,2]

	FY 2014 Final[3]	FY 2015 Estimate[3]	FY 2016 President's Budget[3]	Difference +/- 2015
Alabama	$571,090	$519,245	$519,245	$0
Alaska	$212,571	$204,867	$204,867	$0
Arizona	$713,131	$643,797	$643,797	$0
Arkansas	$406,889	$375,261	$375,261	$0
California	$3,432,038	$3,036,359	$3,036,359	$0
Colorado	$593,068	$530,106	$530,106	$0
Connecticut	$464,875	$426,107	$426,107	$0
Delaware	$229,107	$219,367	$219,367	$0
District of Columbia	$203,011	$196,484	$196,484	$0
Florida	$1,806,379	$1,602,442	$1,602,442	$0
Georgia	$1,003,479	$898,392	$898,392	$0
Hawaii	$269,842	$255,086	$255,086	$0
Idaho	$288,102	$271,099	$271,099	$0
Illinois	$1,280,368	$1,141,194	$1,141,194	$0
Indiana	$721,217	$650,888	$650,888	$0
Iowa	$418,381	$385,338	$385,338	$0
Kansas	$401,357	$370,410	$370,410	$0
Kentucky	$532,294	$485,226	$485,226	$0
Louisiana	$549,387	$500,213	$500,213	$0
Maine	$267,028	$252,619	$252,619	$0
Maryland	$658,645	$596,019	$596,019	$0
Massachusetts	$726,840	$655,819	$655,819	$0
Michigan	$1,020,740	$913,533	$913,533	$0
Minnesota	$617,271	$559,740	$559,740	$0
Mississippi	$411,417	$379,230	$379,230	$0
Missouri	$677,620	$612,658	$612,658	$0
Montana	$237,167	$226,434	$226,434	$0
Nebraska	$310,899	$291,089	$291,089	$0
Nevada	$387,916	$358,623	$358,623	$0
New Hampshire	$265,980	$251,700	$251,700	$0
New Jersey	$924,559	$829,193	$829,193	$0
New Mexico	$331,412	$309,076	$309,076	$0
New York	$1,857,194	$1,647,000	$1,647,000	$0
North Carolina	$990,068	$886,637	$886,637	$0
North Dakota	$209,255	$201,959	$201,959	$0
Ohio	$1,166,356	$1,041,220	$1,041,220	$0
Oklahoma	$480,491	$439,800	$439,800	$0
Oregon	$487,514	$445,959	$445,959	$0
Pennsylvania	$1,269,069	$1,131,286	$1,131,286	$0
Rhode Island	$242,730	$231,313	$231,313	$0
South Carolina	$557,490	$507,319	$507,319	$0
South Dakota	$221,728	$212,897	$212,897	$0
Tennessee	$709,087	$640,250	$640,250	$0
Texas	$2,365,302	$2,092,549	$2,092,549	$0
Utah	$393,496	$363,516	$363,516	$0
Vermont	$205,128	$198,340	$198,340	$0
Virginia	$854,883	$768,096	$768,096	$0
Washington	$742,426	$669,485	$669,485	$0
West Virginia	$313,247	$293,148	$293,148	$0
Wisconsin	$651,018	$589,332	$589,332	$0

	FY 2014 Final[3]	FY 2015 Estimate[3]	FY 2016 President's Budget[3]	Difference +/- 2015
Wyoming	$199,655	$193,541	$193,541	$0
Territories				
American Samoa	$0	$0	$0	$0
Guam	$39,622	$35,000	$35,000	$0
Marshall Islands	$1,683	$0	$0	$0
Micronesia	$2,734	$0	$0	$0
Northern Mariana Islands	$36,242	$35,000	$35,000	$0
Puerto Rico	$478,238	$437,825	$437,825	$0
Republic Of Palau	$0	$0	$0	$0
Virgin Islands	$37,804	$35,000	$35,000	$0
Subtotal States	**$34,850,216**	**$31,501,263**	**$31,501,263**	**$0**
Subtotal Territories	**$596,323**	**$542,825**	**$542,825**	**$0**
Total	**$35,446,539**	**$32,044,088**	**$32,044,088**	**$0**

[1] CFDA NUMBER: 93.136 Discretionary

[2]This State Table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial grantees). For a more comprehensive view of grant and cooperative agreement funding to grantees by jurisdiction, visit http://wwwn.cdc.gov/Fundingprofiles/FundingProfilesRIA/

[3]Beginning in FY 2014, RPE grantee awards included base funding of $150,000 for all 50 states, D.C., and Puerto Rico, and $35,000 for territories. RPE grantees within the 50 states, Washington, D.C., and Puerto Rico also received additional funds beyond their base funding based on population. The RPE funding formula was revised by the Violence Against Women Reauthorization Act of 2013.

State Table: National Violent Death Reporting System[1,2]

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	Difference +/-2015
Alabama	$0	$0	TBD	TBD
Alaska	$153,000	$153,000	TBD	TBD
Arizona	$314,098	$314,098	TBD	TBD
Arkansas	$0	$0	TBD	TBD
California	$0	$0	TBD	TBD
Colorado	$243,500	$243,500	TBD	TBD
Connecticut	$185,486	$185,486	TBD	TBD
District of Columbia	$0	$0	TBD	TBD
Delaware	$0	$0	TBD	TBD
Florida	$0	$0	TBD	TBD
Georgia	$332,000	$332,000	TBD	TBD
Hawaii	$148,000	$151,000	TBD	TBD
Idaho	$0	$0	TBD	TBD
Illinois	$314,000	$314,000	TBD	TBD
Indiana	$286,000	$286,000	TBD	TBD
Iowa	$150,000	$162,000	TBD	TBD
Kansas	$194,000	$194,000	TBD	TBD
Kentucky	$230,500	$230,500	TBD	TBD
Louisiana	$0	$0	TBD	TBD
Maine	$194,347*	$194,347*	TBD	TBD
Maryland	$303,000	$303,000	TBD	TBD
Massachusetts	$229,000	$229,000	TBD	TBD
Michigan	$352,500	$352,500	TBD	TBD
Minnesota	$216,425	$216,425	TBD	TBD
Mississippi	$0	$0	TBD	TBD
Missouri	$0	$0	TBD	TBD
Montana	$0	$0	TBD	TBD
Nebraska	$0	$0	TBD	TBD
Nevada	$0	$0	TBD	TBD
New Hampshire	$144,606	$144,606	TBD	TBD
New Jersey	$247,000	$247,000	TBD	TBD
New Mexico	$204,500	$204,500	TBD	TBD
New York	$427,000	$427,000	TBD	TBD
North Carolina	$322,000	$322,000	TBD	TBD
North Dakota	$0	$0	TBD	TBD
Ohio	$352,500	$352,500	TBD	TBD
Oklahoma	$231,000	$231,000	TBD	TBD
Oregon	$230,000	$230,000	TBD	TBD
Pennsylvania	$307,500	$335,000	TBD	TBD
Rhode Island	$135,000	$135,000	TBD	TBD
South Carolina	$236,000	$236,000	TBD	TBD
South Dakota	$0	$0	TBD	TBD
Tennessee	$0	$0	TBD	TBD
Texas	$0	$0	TBD	TBD
Utah	$209,000	$209,000	TBD	TBD
Vermont	$0*	$0*	TBD	TBD
Virginia	$291,781	$291,781	TBD	TBD
Washington	$174,805	$241,000	TBD	TBD
West Virginia	$0	$0	TBD	TBD
Wisconsin	$236,000	$236,000	TBD	TBD

	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	Difference +/-2015
Wyoming	$0	$0	TBD	TBD
Territories				
American Samoa	$0	$0	$0	$0
Guam	$0	$0	$0	$0
Marshall Islands	$0	$0	$0	$0
Micronesia	$0	$0	$0	$0
Northern Mariana Islands	$0	$0	$0	$0
Puerto Rico	$0	$0	$0	$0
Republic Of Palau	$0	$0	$0	$0
Virgin Islands	$0	$0	$0	$0
Total	**$7,549,548**	**$7,703,243**	**TBD**	**TBD**

[1] CFDA NUMBER: 93.136 Discretionary

[2] This State Table is a snapshot of selected programs that fund states (and in some cases local, tribal, and territorial grantees). For a more comprehensive view of grant and cooperative agreement funding to grantees by jurisdiction, visit http://wwwn.cdc.gov/Fundingprofiles/FundingProfilesRIA/

* Maine and Vermont are funded together, with Maine as the lead state under the award.

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
NIOSH Discretionary Total	$332.363	$334.863	$283.418	-$51.445
Budget Authority	*$220.363*	*$334.863*	*$283.418*	*-$51.445*
PHS Evaluation Transfer	*$112.000*	*$0.000*	*$0.000*	*$0.000*
EEOICPA – Mandatory[1]	$49.933	$50.099	$55.358	+$5.259
World Trade Center – Mandatory[1,2]	$235.740	$243.350	$267.680	+$24.330
Total	**$618.036**	**$628.312**	**$606.456**	**-$21.856**
FTEs	1,137	1,137	1,137	0
Occupational Safety and Health				
- National Occupational Research Agenda	$112.000	$114.500	$90.500	-$24.000
- Other Occupational Safety and Health[3]	$220.363	$220.363	$192.918	-$27.445

[1] Reductions in FY 2014 and FY 2015 reflect the sequester of mandatory funds.

[2] The FY 2016 President's Budget Appendix includes erroneous data for the World Trade Center Health Program for FY 2015 and FY 2016; the above estimates are accurate.

[3] The FY 2014 and FY 2015 Other OSH structure is comparably adjusted to reflect FY 2016 proposed budget structure.

Summary

CDC's Occupational Safety and Health[374] efforts help protect the nation's 155 million workers and provide the only dedicated federal investment for research needed to prevent injuries and illnesses that cost the United States $250 billion annually. This work supports CDC's goal to Keep Americans safe from environmental and work-related hazards. The National Institute for Occupational Safety and Health (NIOSH) was established by the Occupational Safety and Health Act of 1970 and is the only federal entity responsible for conducting research and making recommendations for the prevention of work-related injury and illness. Research efforts are aligned under the National Occupational Research Agenda (NORA), which uses partnerships to maximize the impact of occupational safety and health research. CDC's Other Occupational Safety and Health activities involve areas such as surveillance, Health Hazard Evaluations, and basic laboratory research. CDC also receives mandatory funding for the Energy Employees Occupational Illness Compensation Program Act and the World Trade Center Health Program.

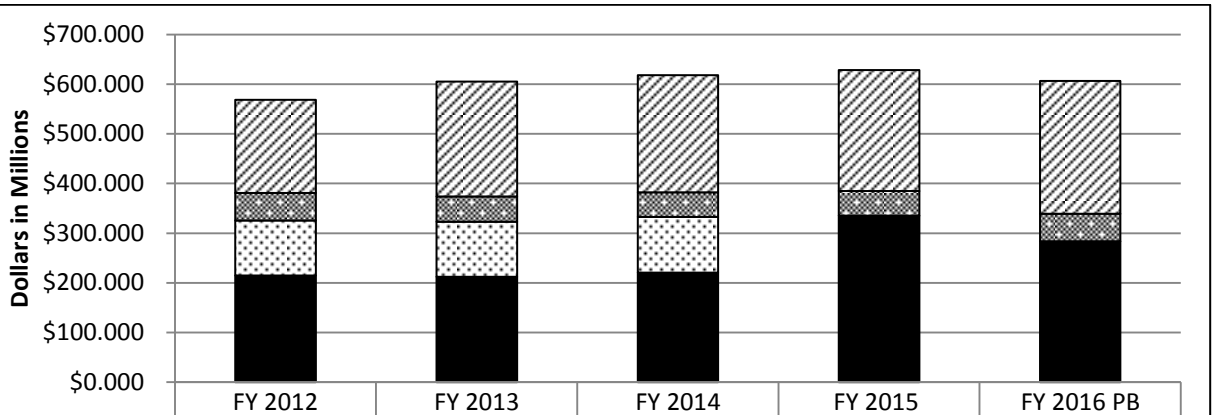
CDC's FY 2016 request of **$606,456,000** for NIOSH, including funding from all discretionary and mandatory sources, is $21,856,000 below the FY 2015 Enacted level. This FY 2016 request includes $267,680,000 in mandatory funding for the World Trade Center Health Program, maintaining the addition of certain cancers to the list of related conditions and the program inclusion of responders from the Shanksville, Pennsylvania, and Pentagon sites. The FY 2016 request also includes $55,358,000 in mandatory funding for the Energy Employees Occupational Illness Compensation Program Act. The FY 2016 request of $283,418,000 in discretionary funds for Occupational Safety and Health is a decrease of $51,445,000 from the FY 2015 Enacted level, and proposes elimination of funding for the NORA Agriculture, Forestry and Fishing sector and Education and Research Centers.

[374] http://www.cdc.gov/niosh/

Performance Highlights

- In 2014, field evaluations of 46 facilities involved in the manufacture or use of engineered nanomaterials, CDC found that 85% used containment-based engineering controls and 89% used some form of Personal Protective Equipment (PPE). Both are recommended, although engineering controls are strongly preferred.
- The Mine Safety and Health Administration (MSHA) recognized published data from CDC demonstrating that "Black Lung" remains an important problem for underground and surface coal miners. MSHA also recognized new technology developed by CDC to measure coal mine dust exposures in real time. CDC's contributions influenced MSHA's rulemaking to establish new regulations to prevent diseases in miners caused by coal mine dust exposure.
- Since its release in June 2013, the NIOSH Ladder Safety Smartphone app has been downloaded more than 22,000 times and was a finalist for the 2014 HHS Innovates Award. The app provides graphical guidance on safe ladder use and includes a patented innovation that allows users to set safe ladder angles more accurately and quickly than other methods.

National Institute for Occupational Safety and Health (NIOSH) Funding History[1, 2, 3]



	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 PB
Total	$568.199	$604.723	$618.036	$628.312	$606.456
WTC	$187.560	$230.680	$235.740	$243.350	$267.680
EEOICPA	$55.358	$50.984	$49.933	$50.099	$55.358
PHS Eval	$110.724	$110.724	$112.000	$0.000	$0.000
Budget Authority	$214.557	$212.335	$220.363	$334.863	$283.418

[1] FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

[2] Reductions in FY 2013 reflect the sequester of both mandatory and discretionary funds, and reductions in FY 2014 and FY 2015 reflect the sequester of mandatory funds.

[3] All years for World Trade Center (WTC) Health Program represent federal share only.

National Occupational Research Agenda (NORA) Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
PHS Evaluation Transfer	$112.000	$114.500	$90.500	-$24.000
Agriculture, Forestry, Fishing (non-add)	$24.000	$24.000	$0.000	-$24.000
Total	**$112.000**	**$114.500**	**$90.500**	**-$24.000**

Overview

The National Occupational Research Agenda[375] (NORA) is a research framework for NIOSH and the nation. This partnership program is designed to stimulate innovative research and improved workplace practices, while also addressing emerging issues. NORA provides guidance to the occupational safety and health community on research priorities within the following industry sectors:

- Agriculture, Forestry, and Fishing (proposed for elimination in FY 2016)
- Construction
- Healthcare and Social Assistance
- Manufacturing
- Mining
- Oil and Gas Extraction
- Public Safety
- Services
- Transportation, Warehousing, and Utilities
- Wholesale and Retail Trade

All intramural and extramural projects CDC funds under NORA must be consistent with research-to-practice principles, such as focusing on research with a high probability for short- or long-term impact; bringing innovative interventions to the commercial market; transferring knowledge and products to employers, workers, and policymakers; and evaluating programs using qualitative or quantitative data.

NORA research identifies health and safety risks and recommends prevention measures. Recent accomplishments include:

- The NIOSH Alert, "Preventing Occupational Exposures to Antineoplastic and Other Hazardous Drugs in Health Care Settings" was updated on September 2014. Approximately 8 million U.S. healthcare workers are potentially exposed to hazardous drugs. The update adds 27 drugs and provides guidance on personal protective equipment and engineering controls for various scenarios that may be encountered when handling hazardous drugs.
- In FY 2014, the NIOSH Dampness and Mold Assessment Tool was used by the School District of Philadelphia to prioritize renovations in school buildings. This computer-based tool provides valuable information for motivating remediation, prioritizing intervention, and evaluating remediation effectiveness.
- A free smartphone application for ladder safety was downloaded 28,902 times between June 2013 and October 2014. This smartphone app was integrated into the CDC/Occupational Safety and Health Administration (OSHA) national campaign to prevent falls in construction.

[375] http://www.cdc.gov/niosh/nora/

- On Workers' Memorial Day, April 28, 2014, OSHA, along with CDC and other stakeholders, formally announced *National Safety Stand-Down to Prevent Falls in Construction*.[376] The *Stand-Down* is part of a broader prevention campaign and is a voluntary event for construction-related employers to speak directly to employees about fall hazards and reinforce the importance of fall prevention requirements. As of June 12, 2014, data indicated that 729,032 workers were engaged through the stand-downs and that there were 186,324 page views on the stand-down web page.
- More than 5,700 healthcare workers completed the free NIOSH online violence recognition course between August 2013 and November 2014, obtaining continuing education credit. This course was built upon research illustrating that nurses were infrequently trained on their risk for workplace violence and prevention measures, despite the risk violence poses to healthcare workers.

Budget Request

CDC's FY 2016 request of **$90,500,000** for NORA is a $24,000,000 decrease from the FY 2015 Enacted level and reflects elimination of the Agriculture, Forestry and Fishing (AgFF) program. AgFF is one of ten NORA industry sectors. Although this program has made positive contributions, given the relation to CDC's mission and the ability to have a national impact on improved outcomes, the AgFF has been proposed for elimination in a limited-resource environment. CDC will use FY 2016 funds to address high priority occupational hazards in the other nine industry sectors, as well as emerging issues that may require new approaches to prevention, such as nanotechnology. Examples of high-priority occupational hazards include mining hazards (see "Mine Safety" below); chemicals used or generated in healthcare establishments; noise in manufacturing; and stress in police officers, firefighters, and other public safety occupations.

Mine Safety and Health

CDC funding supports the NORA mining sector to address key areas such as disaster prevention and response, respiratory-dust hazards, communication and tracking, oxygen supply, refuge alternatives, and training. CDC's Mining Research program also collaborates with partners in industry, labor, academia, and government to conduct research on health hazards, safety hazards, and disaster prevention in mining.

In April 2014, the U.S. Department of Labor's Mine Safety and Health Administration announced the release of a final rule to lower miners' exposure to respirable coal mine dust in all underground and surface coal mines. The new rule reduces the overall dust standard from 2.0 to 1.5 milligrams per cubic meter of air and cuts in half the standard from 1.0 to 0.5 for certain mine entries and miners with pneumoconiosis. The rule went into effect on August 1, 2014. FY 2016 funding will be used to expand CDC's Coal Worker's Health Surveillance Program to include surface coal miners, as required by the rule. Required health surveillance also added a lung function test called spirometry to the screening that is offered to coal miners.

Safer Mines

CDC has partnered with a machining manufacturer to develop and test a stand-alone respirable coal mine dust collector through a contract that fulfills the MINER Act technology mandate. This is a new technology to reduce worker respirable dust exposures in an effort to eliminate coal workers pneumoconiosis.

In FY 2016, CDC will continue a project in Spokane, WA designed to characterize the burden of disease and opportunities for health promotion among western miners. Researchers will conduct health surveillance, including assessments of respiratory and cardiovascular function, and develop strategies to formally integrate worker health promotion into an occupational health surveillance program. This work will have a significant and direct impact on improving the health of metal and nonmetal mineworkers, as formal health surveillance and

[376] https://www.osha.gov/StopFallsStandDown/index.html

health promotion systems do not currently exist for this industry. It will also provide critical data to inform research planning for the development of exposure assessment methods and engineering controls in these mines.

A six-year history of mining research funding and FTE by type of mine research, in particular the proportion of resources dedicated to coal and metal/non-metal research, is presented below.

Mine Research Funding (in millions) and FTEs[1]

	Total Mining		Coal		Metal/Non-metal		Stone, Sand, & Gravel	
Fiscal Year	Funding	FTE	Funding	FTE	Funding	FTE	Funding	FTE
2010	$53.705	235	$30.323	132	$14.248	62	$9.134	41
2011	$52.687	237	$26.702	126	$14.523	59	$11.462	52
2012	$52.360	220	$26.719	122	$14.962	56	$10.679	42
2013	$49.638	208	$21.701	110	$15.115	57	$12.822	41
2014	$51.657	201	$22.710	97	$16.446	63	$12.501	41
2015	$51.857	197	$22.702	93	$16.605	65	$12.550	39

[1]CDC Investment in the mining sector is driven by demand factors, including surveillance and injury data and the sector population.

Nanotechnology

As a part of the manufacturing sector program, CDC provides national and international leadership on evaluating and controlling worker exposure to nanoparticles and nanomaterials. Nanotechnology is the manipulation of matter on a near-atomic scale to produce new structures, materials and devices. The technology promises scientific advancement in many sectors such as medicine, consumer products, energy, materials and manufacturing. Nanomaterials are defined as materials that have a length scale between 1 and 100 nanometers. Workers within nanotechnology-related industries have the potential to be exposed to uniquely engineered materials with novel sizes, shapes, and physical and chemical properties. Because of their distinctive physical and chemical properties, little is known about what possible health effects these properties may have on workers.

In FY 2016 CDC will invest $11 million in a complete research program that will help businesses and government agencies develop effective nanotechnology risk-management programs. CDC's Nanotechnology Research Center will continue to work with private sector partners to conduct field investigations. These investigations will provide evidence of effective interventions to control worker exposure, with specific prevention recommendations for employers that will support responsible development of the technology, resulting in sustainable economic growth and job creation through increased investments in nanotechnology. These activities build on advancements achieved to date under the CDC nanotechnology research program. Critical issues still to be addressed include predictive hazard assessment, worker surveillance, and risk management.

Examples of recent nanotechnology safety research activities include:

- Providing new recommended exposure limits and risk management practices to control work-related exposures to carbon nanotubes and carbon nanofibers to reduce certain work-related lung effects
- Developing guidance on engineering controls and safe practices for handling engineered nanomaterials in research laboratories and developing partnerships with private companies to evaluate manufacturing process controls

- Publishing *Current Strategies for Engineering Controls in Nanomaterial Production and Downstream Handling Processes*[377], which discusses approaches and strategies to protect workers from potentially harmful exposures during nanomaterial manufacturing, use, and handling processes. This resource is intended to be used as a reference by plant managers and owners who are responsible for making decisions regarding capital allocations, as well as health and safety professionals, engineers, and industrial hygienists who are specifically charged with protecting worker health in this new and growing field.

NORA Grant Funding

CDC funds occupational safety and health research grants that address a wide range of NORA topics, including hazards for home healthcare workers and fall protection for construction workers. CDC uses a competitive, peer-reviewed process to award grants. Grantees are typically located in academic settings. These grants add to the occupational safety and health scientific evidence base and contribute to translating research into practice to prevent injury, disease, and death in the workplace. The reduction in the number of grants after FY 2015 reflects the proposed elimination of the Agriculture, Forestry and Fishing grants.

NORA Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	130	113	111	115	90	-25
- New Awards	25	25	19	35	39	+4
- Continuing Awards	105	88	92	80	51	-29
Average Award	$0.44	$0.51	$0.50	$0.480	$0.383	N/A
Range of Awards	$0.057-$5.750	$0.057–$5.750	$0.020–$5.750	$0.020–$5.750	$0.020-$5.750	N/A
Total Grant Awards	**$57.490**	**$57.490**	**$54.994**	**$55.240**	**$34.479**	**-$20.761**

[1] These funds are awarded partially by formula.

[377] http://www.cdc.gov/niosh/docs/2014-102/

Other Occupational Safety and Health Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority[1]	$220.363	$220.363	$192.918	-$27.445
Education and Research Centers (non-add)	$27.445	$27.445	$0.000	-$27.445
Total	**$220.363**	**$220.363**	**$192.918**	**-$27.445**

[1] The FY 2014 and FY 2015 Other OSH structure is comparably adjusted to reflect FY 2016 proposed budget structure.

Overview

CDC's Other Occupational Safety and Health activities cut across NORA industry sectors, providing tools for state-based occupational safety and health programs. These activities include the Health Hazard Evaluation (HHE) program, which responds to requests to determine if workers are exposed to workplace hazards, and CDC's efforts to conduct and support occupational safety and health surveillance. A recent HHE program accomplishment was the finding of a high rate of carpal tunnel syndrome in a poultry processing plant, which received national media attention and helped support OSHA activities, including expanded enforcement and updated guidelines for the industry.

The Personal Protective Technology program is also included in Other Occupational Safety and Health activities. An estimated 20 million workers who use Personal Protective Equipment (PPE) will benefit from CDC's research on respirators and other personal protective technologies. Through audits and certified respirator decisions, CDC improves the quality and inventory of respiratory protection for workers in multiple industries. In FY 2014, CDC completed 560 certified respirator decisions, including 396 new approvals, and 311 complete respirator audits.

CDC also lead the national effort to support the use of PPE in the Ebola response by completing initial testing on PPE ensembles used in West Africa to provide additional heat stress mitigation guidance and responded to 110 PPE inquiries since August 1, 2014 to support the Ebola response.

A six-year history of the funding and FTEs supported by Other Occupational Safety and Health Research, broken down by industry and location, is presented below.

Research for Other Occupational Safety and Health, by Industry and Location

(Dollars in Millions)

Industry	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY2014[1]	Primary Location of Work in FY 2014	FTEs[2]
Construction	$3.33	$3.12	$3.84	$4.10	$4.12	$4.29	OH, WV, WDC, GA	24
Healthcare and Social Assistance	$3.86	$3.17	$3.03	$3.04	$2.72	$5.09	OH, WV, GA, PA	31
Manufacturing	$7.95	$6.79	$7.46	$9.65	$8.83	$8.71	OH, WV, GA, PA	52
Mining	$1.20	$2.14	$2.22	$1.37	$1.47	$2.34	GA, WV, WA	9
Oil and Gas	$0.33	$0.26	$0.27	$0.39	$0.36	$0.34	CO, WV, OH	2
Public Safety	$2.45	$3.54	$3.33	$3.20	$3.84	$5.93	OH, WV, GA, PA	37
Services	$4.51	$4.43	$5.14	$3.55	$2.59	$2.41	OH, WV, GA	16
Transportation, Warehousing and Utilities	$3.30	$2.20	$2.40	$2.64	$2.39	$1.91	AK, OH, WV, GA	13
Wholesale and Retail Trades	$0.99	$1.27	$1.23	$1.23	$0.92	$0.77	OH, WV, GA	5
Cross-cutting or multiple Sectors	$53.77	$53.75	$51.41	$52.40	$50.64	$64.71	AK, CO, GA, OH, WV, WDC, PA	327
Total	$83.85	$84.71	$83.84	$82.52	$78.40	$96.50	AK, CO, GA, OH, WV, WDC, PA	516

[1] In FY 2014, the Personal Protective Technology disease line was moved to a non-add under Other Occupational Safety and Health disease line.

[2] FTEs are based upon FY 2014 employees, but staffing has remained stable over this period of reporting.

Budget Request

CDC's FY 2016 request of **$192,918,000** for Other Occupational Safety and Health is $27,445,000 below the FY 2015 Enacted level and includes elimination of funding for the Education and Research Centers (ERCs). Originally created almost 40 years ago, the ERC program addressed the limited number of academic programs focusing on industrial hygiene, occupational health nursing, occupational medicine, and occupational safety. The ERCs' reach and impact have grown substantially across the nation since the program's inception, increasing awareness of the importance of coursework specializing in these areas. Although the FY 2016 request does not include funding for the federal portion of these grants, CDC will continue to provide scientific and programmatic expertise to the ERCs as requested.

CDC will use FY 2016 funding to support the Total Worker Health™ (TWH™) Program. This program supports ground-breaking research in the area of workplace safety, health, and well-being within the context of a changing economy and shifting workplace and population demographics. It also promotes the adoption of proven best-practices that address health risks from both the work/organizational environment and from individual behaviors and health conditions. The TWH™ Program includes an intramural component and an extramural component, the latter comprised of four Centers of Excellence to Promote a Healthier Workforce. Both components will conduct research on the integration of health protection and health promotion to advance overall worker health and safety. They will also translate the research into ready-to-use toolkits and guidance, and use traditional and social media to communicate the latest knowledge on promising practices to our partners and stakeholders. In 2014, TWH™ expanded its research, training, and capacity building efforts through launching the first International Symposium, adding eight new partners in the Affiliate network, and actively engaging over 12,000 participants. The very popular Total Worker Health in Action e-newsletter and associated blogs reach over 60,000 subscribers on a quarterly basis, advancing workplace safety and health solutions and strategies to employers and organizations around the world.

FY 2016 funding will also be used to support public health tools, such as state-based surveillance, Health Hazard Evaluations, and exposure assessment research. CDC will continue providing funding and expertise necessary for states to understand and prevent work-related risks. CDC will fund 14 states to build state health department capacity to conduct occupational safety and health surveillance and to develop intervention and prevention programs. These investments will also support nine state surveillance programs that track and target interventions for state-specific priorities, such as occupational fatalities, silicosis, and hospital worker injuries.

Since falls are the leading cause of death in the construction industry, CDC and its partners re-launched the *National Campaign to Prevent Falls in Construction*[378] in FY 2013. Below are some recent highlights from four of the eight state grantees.

State Based Grantee Highlights—Campaign to Prevent Falls in Construction

Grantee	Highlights
California Department of Public Health	Published new Fall Prevention Tailgate Training Materials (16 bilingual cards) and a new web topic page 'Preventing Worker Injuries and Deaths from Falls'. Two of the award winning digital stories (Preventing Falls through Skylights, Preventing Falls in the Solar Industry) continues to be highlighted on the joint OSHA and NIOSH Fall Prevention Campaign at www.osha.gov/stopfalls/.

[378] http://www.cdc.gov/niosh/construction/stopfalls.html

Grantee	Highlights
New Jersey Department of Health & Senior Services	Conducted evaluation research to determine barriers to the use of fall protection in small residential construction companies. Results confirm that falls remain a concern among small residential construction workers in NJ. Barriers to the use of fall protection equipment include availability, lack of training, ease of use and lack of employer oversight. Staff are working on outreach materials and ways to collaborate with local organizations and universities to train Hispanic workers, in small residential construction companies, on fall protection.
Kentucky Occupational Safety and Health Surveillance Program University of Kentucky, College of Public Health	The Kentucky FACE Report entitled "Roofer Dies after Gust of Wind Knocks Him and a Co-Worker off Roof" was disseminated to 10,000 companies on the list-serve and posted to the website. The report was downloaded from our website 292 times in February 2014 alone.
Massachusetts Occupational Health and Safety Surveillance Program	The Department of Public Safety e-blasted information on fall prevention, campaign information, and the national Stand-Down day to over 20,000 licensed contractors. The campaign was also advertised on 7 digital/electronic billboards along major highways in the state for April through September, 2014.

With funds requested for FY 2016, CDC will respond to requests for assistance through the Health Hazard Evaluation program[379] to determine if workers are being exposed to hazardous materials or harmful conditions and whether these exposures are affecting worker health. In FY 2014, CDC conducted 225 workplace evaluations through the Health Hazard Evaluation program. This is the nation's sentinel program for identifying emerging or previously unrecognized occupational health threats. CDC will evaluate workplace environments and employee health by reviewing records and conducting on-site environmental sampling, performing epidemiologic surveys and medical testing, and making recommendations to reduce workplace hazards.

Reporting exposure results to individuals and industry quickly and inexpensively—without compromising scientific quality—is essential. Toward that end, CDC will conduct intramural and extramural research to develop direct reading instruments and techniques that can be deployed readily in the field or easily read without further sample processing. These direct-reading methods allow for faster identification of hazards and more rapid intervention to protect the safety and health of workers. CDC will develop new methods to measure dusts, gases and vapors, aerosols, noise, radiation, and other hazards in the workplace. These methods provide occupational health professionals with fundamental tools that produce reliable, replicable results.

In FY 2016, CDC will provide funding for Personal Protective Technology[380] (PPT) Program activities that support PPT research, conformity assessment, and respirator certification activities. Funding will also support evaluation of product performance for personal protective equipment used by 20 million workers in all industry sectors to protect them from job hazards. CDC will conduct intramural and extramural research on PPT, including research to advance state-of-the-art technology to understand and improve protection, usability, comfort, fit, and user acceptance, with an emphasis on personal protective equipment for fire fighters and healthcare workers, as well as escape technology for miners. CDC will develop PPT standards and test methods and will pursue continuous improvement of the respirator certification program to support new requirements and requirements under development. These new standards update the agency's requirements for testing and certification of respiratory protective devices to keep workers safe.

[379] http://www.cdc.gov/niosh/hhe/HHEprogram.html
[380] http://www.cdc.gov/niosh/programs/ppt/

CDC funds grants for occupational safety and health activities that provide research and tools for public health professionals and other partners. CDC also funds state-based grants to build occupational safety and health capacity. Examples of other grants in this category include statistical method development for analyzing industrial hygiene data and analysis of work-related injury, disease, and death surveillance data from U.S. workers. CDC uses a competitive, peer-reviewed process to award grants. Grantees are typically located in academic settings or state health departments. The reduced awards and funding in FY 2016 reflect the elimination of the Educational Research Center grants.

Other Occupational Safety and Health Grants[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	69	65	56	57	39	-18
- New Awards	20	12	7	23	5	-18
- Continuing Awards	49	53	49	34	34	0
Average Award	$0.54	$0.58	$0.678	$0.698	$0.330	N/A
Range of Awards	$0.011-$1.921	$0.020-$1.746	$0.037-$1.755	$0.050-$1.800	$0.050-$1.519	N/A
Total Grant Awards	**$37.400**	**$33.400**	**$37.952**	**$39.800**	**$12.874**	**-$26.926**

[1] These funds are awarded partially by formula.

Energy Employees Occupational Illness Compensation Program Act (EEOICPA) Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
EEOICPA – Mandatory	**$49.933**	**$50.099**	**$55.358**	**+$5.259**

[1] The reductions in FY 2014 and FY 2015 reflect the sequester of mandatory funds.

Overview

The Energy Employees Occupational Illness Compensation Program Act (EEOICPA) is a mandatory federal program that provides compensation to Department of Energy employees or survivors of employees who have been diagnosed with a radiation-related cancer, beryllium-related disease, or chronic silicosis because of their work in producing or testing nuclear weapons. CDC conducts dose reconstructions to estimate an employee's occupational radiation exposure for certain cancer cases, considers and issues determinations on petitions for adding classes of workers to the Special Exposure Cohort, and provides administrative support to the Advisory Board on Radiation and Worker Health (Advisory Board). The Department of Labor uses CDC's estimates in making compensation determinations. In FY 2014, CDC:

- Completed 2,600 dose reconstructions and submitted them to the Department of Labor
- Received six Special Exposure Cohort petitions
- Supported 28 meetings of the Advisory Board, its Subcommittees, and Work Groups
- Based on the recommendations of the Advisory Board, the HHS Secretary added 110 classes of employees to the Special Exposure Cohort as of September 30, 2014

Budget Request

CDC's FY 2016 estimate of **$55,358,000** in mandatory funding for EEOICPA is a $5,259,000 increase from the FY 2015 Enacted level. As mandated by EEOICPA, CDC will use this funding to:

- Estimate 2,600 radiation dose reconstructions to support the Department of Labor's adjudication of claims
- Evaluate an estimated 12 petitions to add classes of employees to the Special Exposure Cohort
- Provide administrative and technical support for the Advisory Board as it reviews technical documents and procedures used for dose reconstruction
- Publicize—to the extent possible—information it has acquired related to radiation exposure at facilities involved with nuclear weapons production, testing, and disposal
- Support health effects research using these data

In accordance with EEOICPA, in FY 2016, CDC will complete radiation dose reconstructions for all claims requiring such information to permit final adjudication of the claim. CDC will use radiation monitoring information provided by the Department of Energy and any relevant information provided by claimants to develop a dose reconstruction report. CDC expects the number of dose reconstructions completed each year to decrease to 2,600 in FY 2016.

CDC will also evaluate petitions to add classes of employees to the Special Exposure Cohort and to present the evaluation reports to the Advisory Board, which makes recommendations to the HHS Secretary concerning whether a class of employees should be added to the Special Exposure Cohort. CDC determines whether a petition qualifies for evaluation and, if so, develops an evaluation report. SEC-related work has increased in response to the need to conduct more long-term evaluations, consider multiple classes of workers included in an individual petition, and re-evaluate previous petitions/reports as new information becomes available. CDC

will engage the Advisory Board to assist in reviewing Special Exposure Cohort evaluation reports and the scientific validity and quality of dose reconstruction efforts.

World Trade Center Health Program Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
World Trade Center – Mandatory[1,2,3]	**$235.740**	**$243.350**	**$267.680**	**+$24.330**

[1] The reductions in FY 2014 and FY 2015 reflect the sequester of mandatory funds.

[2] The FY 2016 President's Budget Appendix includes erroneous data for the World Trade Center Health Program for FY 2015 and FY 2016; the above estimates are accurate.

[3] Federal portion of WTC Health Program.

Overview

The September 11, 2001 terrorist attacks in New York City, at the Pentagon in Arlington, Virginia, and in Shanksville, Pennsylvania required extensive response, recovery, and cleanup activities. Thousands of responders and survivors were exposed to toxic smoke, dust, debris, and psychological trauma. The James Zadroga 9/11 Health and Compensation Act of 2010 (P.L. 111-347[381]) created the World Trade Center (WTC) Health Program[382] to provide healthcare benefits to eligible responders and survivors beginning on July 1, 2011. Pursuant to this statute, the WTC Health Program provides monitoring and treatment benefits to eligible responders and survivors, conducts research on WTC-related health conditions, and maintains a health registry to collect data on victims of the September 11, 2001 terrorist attacks. By October 2014, the WTC Health Program had enrolled a total of approximately 70,400 eligible responders and survivors. In FY 2014, the WTC Health Program paid claims for eligible treatment, including medication, for more than 20,600 of these responders and survivors.

WTC Health Program Enrollment

	Sept. 30, 2013	Dec. 31, 2013	March 31, 2014	June 30, 2014	Sept. 30, 2014
New Members since July 2011[1]	4,268	5,919	6,733	7,556	8,660
Total Members[2]	65,366	66,978	67,788	68,606	69,878

[1]New members enrolled under the Zadroga Act requirements (adjustments are made each quarter to account for member records changes), including Pentagon and Shanksville, PA responders who are counted with Nationwide Members if they live outside of the New York City metropolitan area.
[2]New members and members enrolled prior to 7/1/2011 (adjustments are made each quarter to account for member records changes).

WTC Health Program Paid Claims

Healthcare Services[1]	Sept. 30, 2013	Dec. 31, 2013	March 31, 2014	June 30, 2014	Sept. 30, 2014
Members who had monitoring or screening exams	25,563	26,133	27,292	26,573	22,363
Members who had diagnostic evaluations[2]	13,374	14,158	13,982	16,300	17,016
Members who had out-patient treatment	15,220	15,365	15,559	16,823	16,721
Members who had in-patient treatment	128	133	185	260	318
Members who received medications	16,274	17,014	16,730	16,927	17,612

[1]Based on claims for services that were paid during the previous 12-month period (numbers fluctuate between quarterly updates due to annual submitted claims).
[2]For determining if a member has a WTC condition and for certifying that health condition.

[381] http://www.gpo.gov/fdsys/pkg/PLAW-111publ347/pdf/PLAW-111publ347.pdf
[382] http://www.cdc.gov/wtc/index.html

Budget Request

CDC's FY 2016 estimate of **$267,680,000** in mandatory funding for the WTC Health Program is $24,330,000 above the FY 2015 Enacted level. Funds support the treatment of cancer, as well as the increase in enrollment, including responders from the Shanksville, Pennsylvania and Pentagon sites, who became eligible to enroll in the WTC Health Program in May 2013. The Budget includes nearly $300 million in FY 2016, including the New York City's contribution, in mandatory funding for the World Trade Center Health Program to support health services for responders and survivors enrolled in the Program. The WTC program provides quality care to the responders and other individuals affected by the events of September 11, 2001. HHS estimates that there are sufficient resources to continue the program through the end of FY 2016.

Mandatory funding will support:

- Monitoring and treatment services, including services for certain types of cancer, for responders and survivors in the WTC Health Program
- Infrastructure costs for the Clinical Centers of Excellence (CCEs) and the Nationwide Provider Network (NPN) to support clinical activities
- Infrastructure costs for the Data Centers
- Extramural research projects
- Outreach and education projects
- WTC Health Registry activities
- WTC Health Program Scientific/Technical Advisory Committee

The WTC Health Program provides monitoring and treatment services via a fee-for-service model of delivery. In FY 2016, CDC will continue contracts with seven CCEs and the National Provider Network to provide administrative and member services that support the provision of health care benefits, and three contracts with Data Centers to provide data collection and analysis. CDC will also renew the intra-agency agreement with the Centers for Medicare and Medicaid Services (CMS) to reimburse the CCEs and the NPN for clinical services provided to the WTC Health Program members. The WTC Health Program provides healthcare benefits through CCEs, which work as a clinical consortium, and the NPN according to standardized medical monitoring protocols and programmatic policies and procedures across the clinical sites. This standardization and the fee-for-service model enable the WTC Health Program to track claims-level data for monitoring and treatment, analyze the data for program compliance, and report on spending at a more detailed level across the WTC Health Program. The WTC Health Program also engages with labor representatives and members of the New York City community to ensure awareness of emerging issues.

CDC will use FY 2016 funds to continue research projects and epidemiologic studies to help answer critical questions about physical and mental health conditions related to the September 11, 2001 terrorist attacks. Additionally, a portion of the FY 2016 funds will continue the cooperative agreement with the New York City Department of Health and Mental Hygiene for the WTC Health Registry activities. The WTC Health Registry will continue to provide a central, unified database to help assess health effects among persons impacted by exposures to the WTC disaster.

Funds will also support the WTC Health Program Scientific/Technical Advisory Committee (Advisory Committee). Upon request from the WTC Program Administrator, the Advisory Committee will make recommendations regarding additional eligibility criteria, the addition of new health conditions to the list of covered conditions, and research priorities. The Advisory Committee plays a critical role in the WTC Health Program, as evidenced by the addition of cancers to the List of WTC-Related Health Conditions in October 2012.

GLOBAL HEALTH

(dollars in millions)	FY 2014 Final[1]	FY 2015 Enacted[2]	FY 2016 President's Budget	FY 2016 +/- FY 2015
Total Request	**$415.745**	**$416.517**	**$448.092**	**+$31.575**
Total Request (includes CR Ebola Funding)	$415.745	$446.517	$448.092	+$1.575
FTEs	1,089	1,089	1,094	+5
Global HIV/AIDS	**$128.420**	**$128.421**	**$128.421**	**$0.000**
Global Immunization	**$200.358**	**$208.608**	**$218.608**	**+$10.000**
-Polio Eradication	$150.524	$158.774	$168.774	+$10.000
-Measles and Other Vaccine-Preventable Diseases	$49.834	$49.834	$49.834	$0.000
Parasitic Diseases and Malaria	**$24.369**	**$24.369**	**$24.369**	**$0.000**
Global Public Health Protection	**$62.598**	**$55.119**	**$76.694**	**+$21.575**
CR Ebola Funding (PL 113-164)	**$0.000**	**$30.000**	**$0.000**	**-$30.000**

[1] FY 2014 has been comparably adjusted to reflect proposed $2.367 million realignment from EZID and Center for Global Health reorganization.
[2] FY 2015 Enacted includes $30 million for CR Ebola Funding (PL 113-164).

Summary

CDC engages internationally[383] to protect the health of the American people and save lives worldwide. CDC supports efforts around the globe to detect epidemic threats earlier, respond more effectively, and prevent avoidable catastrophes, supporting CDC's overarching goal of ensuring global disease protection. With scientists and health experts embedded in countries around the globe, CDC works with partners to adapt scientific evidence into policies and public health actions—strengthening public health capacity and improving health outcome in partner countries.

CDC's FY 2016 request of **$448,092,000** for Global Health is an increase of $31,575,000 above the FY 2015 Enacted level. CDC proposes an increase of $21,575,000 to the Global Public Health Protection budget line to expand the Global Health Security Agenda (GHSA) and accelerating progress in preventing the spread of global health threats. The FY 2016 budget also includes an increase of $10,000,000 in the Polio Eradication program above the 2015 Enacted level. For its overseas operations, the agency will be working with relevant U.S. government entities to explore opportunities to continue increasing the effectiveness and efficiency of its overseas operations, including alignment with the Foreign Affairs Manual[384].

CDC's request for Global Health aligns with national and international strategic goals:

- The Global Health Security Agenda[385]
- The U.S. Government's National Security Strategy[386]
- President's Emergency Plan for AIDS Relief[387]
- President's Malaria Initiative[388]
- National Strategy for Countering Biological Threats[389]
- The HHS Global Health Strategy[390]

[383] http://www.cdc.gov/globalhealth/index.html
[384] http://www.state.gov/m/a/dir/regs/fam/
[385] http://www.cdc.gov/globalhealth/security/ghsagenda.htm
[386] http://www.whitehouse.gov/sites/default/files/rss_viewer/national_security_strategy.pdf
[387] http://www.pepfar.gov/
[388] http://www.pmi.gov
[389] http://www.whitehouse.gov/sites/default/files/National_Strategy_for_Countering_BioThreats.pdf
[390] http://www.globalhealth.gov/global-programs-and-initiatives/global-health-strategy/

- Global Polio Eradication Initiative[391]
- Measles & Rubella Initiative (measles elimination)[392]

Performance Highlights

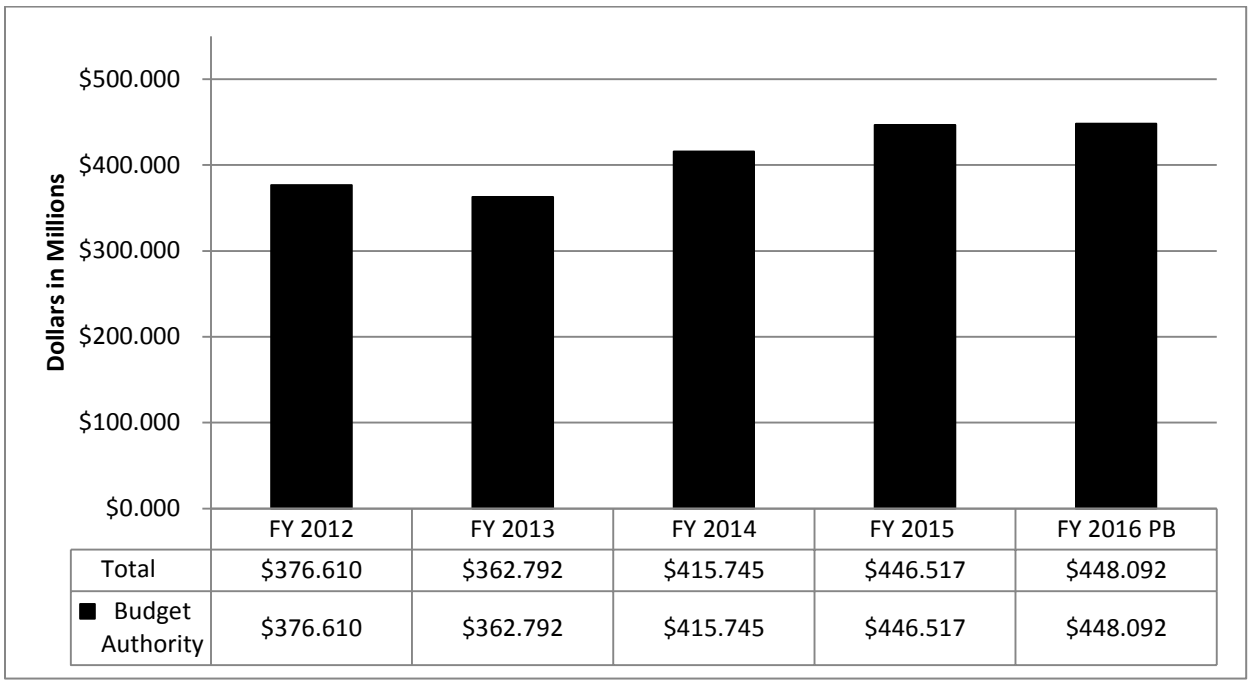
- As part of the Ebola crisis response, CDC's Field Epidemiology Training Program (FETP) residents participated in the rapid response for the first case in Nigeria, and participated in investigation of all suspected cases as well as contact registration and monitoring of 900 contacts.

- CDC has contributed significantly to the near eradication of polio. Type 3 wild poliovirus has not been detected in the world since November 2012. Southeast Asia, including India, was certified polio-free in March 2014, making 80% of the world's population polio-free. Transmission slowed dramatically during 2014 in Africa and Nigeria specifically. Eleven and a half million children were reached with polio vaccine in 2014, which includes nearly 1.5 million children reached with the introduction of inactivated polio vaccine, largely in Southeast Asia.

- As a result of CDC's training and assistance to 21 PEPFAR countries with high TB/HIV burden, the percent of TB patients who were tested for HIV and knew their HIV status significantly increased from 10% in 2005 to 80% in 2013. Additionally, the percent of HIV-positive TB patients on antiretroviral therapy (ART) increased from 46% in 2011 to 69% in 2013.

[391] http://www.polioeradication.org/
[392] http://www.measlesrubellainitiative.org/learn/about-us/

Global Health Funding History[1,2,3]



	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 PB
Total	$376.610	$362.792	$415.745	$446.517	$448.092
■ Budget Authority	$376.610	$362.792	$415.745	$446.517	$448.092

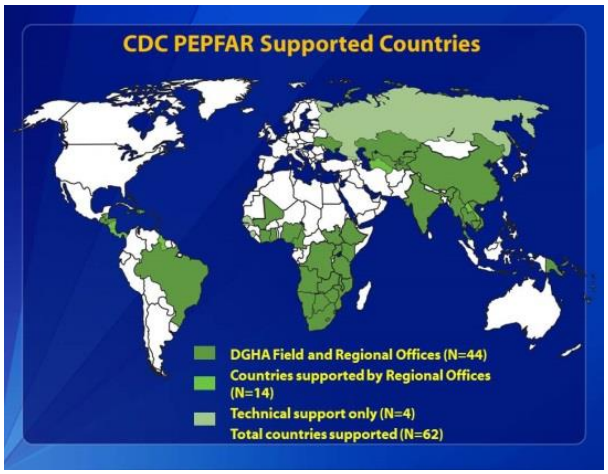
[1] FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.
[2] FY 2013 and FY 2014 amounts are comparable to FY 2015 to account for the Center for Global Health reorganization.
[3] FY 2015 Enacted includes $30 million for CR Ebola Funding (PL 113-164)

Global HIV/AIDS Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$128.420**	**$128.421**	**$128.421**	**$0.000**

Overview

CDC plays an essential role in implementing[393] the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). CDC uses its expertise in public health science and long-standing partnerships with ministries of health (MOH) and other global partners to build strong national programs and sustainable public health systems. The programs and systems meet the needs of each country in effectively responding to the HIV/AIDS epidemic. CDC provides HIV/AIDS scientific and programmatic support[394] and mentoring through its headquarters in Atlanta and its 44 PEPFAR program offices in Africa, Asia, Central America, South America, and the Caribbean.



Since the beginning of the AIDS epidemic, more than 78 million people have been infected with HIV. According to UNAIDS[395], at the end of 2013, an estimated 35 million people were living with HIV, including 3.2 million children and 2.1 million adolescents. U.S. government support of life-saving antiretroviral (ART) treatment and large-scale implementation of combination prevention programs is preventing new infections, saving lives, improving health, and protecting families and communities.

- CDC contributed to many PEPFAR achievements, including provision of ART for 7.7 million people (as of September 30, 2014). That is a four and a half-fold increase from 2008.
- Over the past two years, PEPFAR also provided antiretroviral medications to over 1.5 million HIV-positive pregnant women to prevent mother-to-child transmission and improve maternal health.
- As of September 30, 2014, PEPFAR has supported more than 6.5 million voluntary medical male circumcision procedures in Eastern and Southern Africa to reduce the risk of HIV transmission.

Despite these tremendous achievements, AIDS remains a leading cause of death in many countries and continues to be a leading cause of mortality among women of reproductive age. With PEPFAR, CDC will aggressively scale-up core HIV prevention and treatment programs. By focusing resources on high-burden regions and populations within each country to maximize impact, we can stop the epidemic.

CDC's Global HIV/AIDS priorities are to:

- Rapidly scale-up high impact HIV treatment, care, and prevention programs to halt new infections and save lives
- Strengthen core health systems that contribute directly to essential HIV interventions, including high-quality laboratory capacity and health information and surveillance systems

[393] http://www.cdc.gov/globalaids/global-hiv-aids-at-cdc/default.html
[394] http://www.cdc.gov/globalaids/
[395] http://www.unaids.org/en/resources/campaigns/2014/2014gapreport/factsheet/

- Strengthen the capacity of ministries of health and indigenous institutions to direct and implement effective HIV programs
- Lead and implement the HIV impact assessments initiative to enhance PEPFAR's data-driven approach to programmatically and geographically align resources for maximal and measurable impact
- Conduct site-monitoring, program quality assurance, and expenditure analysis to assure ever-greater program effectiveness, accountability, and transparency

Budget Request

CDC's FY 2016 request of **$128,421,000** for global HIV/AIDS is level with the FY 2015 Enacted level. CDC also receives interagency funding transfers from the Department of State's Global Health Programs appropriation to implement PEPFAR. Requested funds allow CDC to use its technical expertise in public health science and long-standing relationships with MOH to accelerate progress toward achieving an AIDS-free generation. In FY 2016, CDC will work with partners to scale-up HIV prevention and treatment services where needed most, ensure high-quality HIV/AIDS services through monitoring, and strengthen health systems capable of detecting, managing, and responding to the epidemic.

Scaling-Up HIV Prevention and Treatment Services

CDC's HIV combination prevention approach consists of three strategies to reduce new infections and save more lives:

- Antiretroviral treatment for HIV-positive people
- Prevention of mother-to-child transmission of HIV
- Voluntary medical male circumcision

These evidence-based interventions are effective at reducing the number of AIDS-related deaths and preventing new infections. CDC provides on-site guidance to MOH and other organizations to expand and improve combination HIV prevention services. In FY 2016, CDC will train local health professionals, share protocols and approaches, and help local partners design programs that reach high-risk and vulnerable populations.

Ensuring High Quality HIV/AIDS Services

In FY 2016, CDC will continue working with host countries to improve program quality and move towards long-term sustainability. Continuous improvement ensures high quality service delivery and sound management of resources needed to sustain reductions in morbidity, mortality, and transmission of HIV. To support high-quality programs, CDC will implement the interagency Site Improvement through Monitoring System, which provides information needed to ensure that people receive high-quality services. CDC also will lead HIV impact assessments. These assessments will provide data on the quality and impact of HIV care, treatment, and prevention services and will help to program limited resources more efficiently. Such information is needed to improve control of country epidemics.

CDC, in collaboration with the Office of Global AIDS Coordinator, strengthened laboratory networks in partnership with Becton Dickinson and Company, Roche Diagnostics, and Siemens Healthcare Diagnostics and leveraged shared funds and in-kind assistance worth $45 million.

Strengthening Health Systems

Partner countries must have strong health systems to fully address the HIV epidemic. Strong systems include high-quality laboratory services and systems, modern disease tracking systems, health information systems, and a well-trained workforce. In FY 2016, CDC experts will help PEFPAR countries design, manage, and evaluate these essential public health systems. CDC will continue working with countries to implement and maintain high-quality laboratory systems, including certified laboratories that are essential to

monitoring public health and assessing program impact for HIV/AIDS. As HIV treatment programs mature and more HIV positive individuals are eligible for treatment, tracking patient response to treatment is critical. CDC will also assist countries with planning and evaluating health system resources to optimize country-level investments by providing guidance, tools, and mentoring to ministries of health and other in-country partners.

Global Immunization Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$200.358**	**$208.608**	**$218.608**	**+$10.000**
Global Immunization	**$200.358**	**$208.608**	**$218.608**	**+$10.000**
-Polio Eradication	$150.524	$158.774	$168.774	+$10.000
-Measles and other vaccine-preventable diseases	$49.834	$49.834	$49.834	$0.000

Overview

CDC's global immunization program[396] protects the health of Americans and global citizens. In part due to the introduction of new and underused vaccines and strengthened vaccine delivery mechanisms, the number of children dying each year fell below 8.8 million in 2013 for the first time in documented history. Since 1988, polio cases have dropped by more than 99% and 80% of the world's population is now polio-free. Measles deaths have decreased 75% as compared to 2000. CDC is committed to building on the successes of the Global Polio Eradication Initiative[397] and Measles and Rubella Initiative[398] to achieve global polio eradication, measles elimination, and sustain the gains made by these programs for the introduction of new and underused vaccines.

CDC and Global Immunization Initiatives

	Goals and Aims				
What CDC Provides	Eradicating polio	Reducing global deaths from measles and rubella	Ending epidemic meningitis in Sub-Saharan Africa	Accelerating the introduction of pneumococcal and rotavirus vaccines and region-specific vaccines such as cholera and typhoid	Strengthening immunization systems in priority countries through technical assistance, monitoring and evaluation, social mobilization, and vaccine management
Epidemiological and laboratory surveillance expertise for vaccine-preventable disease	✓	✓	✓	✓	✓
Expertise for immunization policy development	✓	✓	✓	✓	✓
Immunization campaign planning, implementation, monitoring, and evaluation	✓	✓	✓	✓	★
Outbreak risk assessment, preparedness, and response for vaccine-preventable disease	✓	✓	✓	✓	★
Immunization system strengthening	✓	✓	✓	✓	✓
Expertise for introducing new vaccines	✓	★	★	★	✓
Training to improve the host country's ability to address vaccine preventable diseases	✓	✓	✓	✓	✓

★Indicates program-added Goals and Aims during FY 2015.

[396] http://www.cdc.gov/globalhealth/immunization/
[397] http://www.polioeradication.org
[398] http://www.measlesrubellainitiative.org

Vaccines are one of the most cost effective and lifesaving public health interventions. CDC's global immunization activities focus on children under five years of age, adolescents, and adults in developing countries who are at the highest risk for illness and death from polio, measles, and other vaccine-preventable diseases. CDC's global immunization program also protects Americans at home by responding to vaccine-preventable diseases where they occur and preventing importations. Although strong immunization programs in the U.S. have reduced the domestic disease burden, the nation remains at risk because vaccine-preventable diseases continue to circulate elsewhere. Preventing diseases where they are circulating is the only way to truly protect Americans from the threats they pose because diseases only are an airplane ride away.

Immunizations also save money by preventing costly diseases. For example, an outbreak of imported measles in Utah in 2011 with only nine cases cost nearly $300,000 for treatment and response. Furthermore, global polio eradication is expected to save up to $50 billion by 2035[399] in treatment costs, immunization program costs, and costs associated with lost productivity.

Local, Rapid Response

In Nigeria, Afghanistan, and Pakistan, CDC helped create district-level response teams and trained officials how to use real-time data for decision-making. As a result, local vaccine teams are now able to reach nomadic people and scattered settlements previous efforts missed.

Budget Request

CDC's FY 2016 request of **$218,608,000** for global immunization is $10,000,000 above the FY 2015 Enacted level. This $10,000,000 increase in global immunization will scale-up CDC's response to ongoing and new polio outbreaks, including the worldwide transition to inactivated polio vaccine (IPV). Universal use of IPV is a key strategy necessary to achieve global polio eradication because while there are certain advantages to using OPV, it also carries with it a small risk of vaccine-acquired infections. The switch to IPV eliminates that risk. This increase will allow for continued expansion of environmental surveillance for the detection of circulating polioviruses. Such environmental surveillance helps CDC and partners target programmatic efforts. This increase supports the United States' critical commitment to the Global Polio Eradication Initiative's Polio Endgame Strategic Plan 2013-2018.

Polio Eradication

CDC is the U.S. lead scientific agency[400] in the global effort to eradicate polio[401]. CDC contributed substantially to the more than 99% decline in global polio cases from more than 350,000 cases reported in 1988 to 416 cases reported in 2013, by providing scientific and programmatic expertise, improving national ownership and accountability, expanding the successful Stop Transmission of Polio[402] (STOP) program, sustaining environmental surveillance, and guiding the development and execution of the polio eradication endgame strategy.

Polio remains endemic in Afghanistan, Nigeria, and Pakistan, yet the effort continues to show progress. Recently, CDC reported that no type 3 wild poliovirus infections have been detected globally since November 2012, suggesting that transmission has likely been interrupted; thus, it is believed that only type 1 wild poliovirus is circulating. Continued monitoring is needed before CDC can certify eradication of the type 3 wild poliovirus, particularly given the limitations of monitoring in Pakistan, Nigeria, and other high-risk areas. Pakistan's polio circulation remains uncontrolled and accounts for 85% of the global case count as of December 2014. CDC is working with partner organizations as well as donor governments and the U.S. Department of State to assist Pakistan with implementing program improvements that have worked in Nigeria and elsewhere. Nigeria's program has sustained quality improvement achieved in 2013, and the most recent case of wild polio

[399] http://www.sciencedirect.com/science/article/pii/S0264410X10014957
[400] http://www.cdc.gov/polio/why/
[401] http://www.cdc.gov/polio/
[402] http://www.cdc.gov/polio/stop/

was detected in July 2014, providing cautious optimism that Nigeria may achieve interrupted circulation in coming months. The outbreaks in 2013 have slowed in 2014, and if Nigeria stops polio circulation, a polio-free Africa by mid-2015 is achievable. India and its World Health Organization (WHO) region, South-East Asia, were certified as polio-free in March 2014. India's success shows that eradication is possible even in challenging circumstances.

CDC will continue to collaborate closely with WHO, The United Nations Children's Fund (UNICEF), Rotary International, Bill and Melinda Gates Foundation, other U.S. government agencies, and MOH in FY 2016 to achieve polio goals. CDC and its partners must:

- Detect and track the spread of polio through multiple surveillance methods
- Improve the quality of supplemental immunization activities
- Strengthen routine immunization services
- Respond to, and aggressively stop, polio outbreaks
- Verify data used to certify polio eradication in all WHO regions

Providing Scientific and Programmatic Expertise

CDC provides epidemiologic, laboratory, and programmatic support to countries, WHO, and UNICEF to develop, monitor, and evaluate programs and strengthen national level surveillance. In 2013, CDC conducted the primary research on inactivated polio vaccine's impact on immunogenicity in order to develop the recommendations for the introduction of IPV at the country level. CDC will continue to provide expertise in virology, diagnostics, and laboratory procedures in FY 2016. In addition, CDC will provide quality assurance, diagnostic confirmation, and genomic sequencing of samples obtained worldwide.

Improving National Ownership, Oversight, and Accountability

In FY 2016, CDC scientists will continue to work with local health officials and community leaders to develop and implement strategies to interrupt circulation of wild poliovirus. Based on best practices developed in India, CDC established several important benchmarks to improve the performance of polio programs and achieving greater efficiency. These benchmarks streamline decision making for program officials, by making clear who is accountable for achieving results while empowering program officials to respond rapidly to events on the ground. CDC also worked with donors to provide grants that required greater investment of national resources. These grants encourage greater accountability for results because they will become loans if performance benchmarks are not met. Finally, establishment of Emergency Operations Centers to guide use of CDC-developed dashboards through the country and state levels have produced the dramatic turnaround in quality in Nigeria, and CDC plans to implement similar measures as appropriate to meet polio eradication goals.

Building on the Success of STOP

Together with WHO, CDC coordinates the STOP program. STOP trains and deploys public health professionals to improve vaccine-preventable disease surveillance and to help plan, implement, and evaluate vaccination campaigns. STOP places staff resources in countries of higher-risk for poliovirus transmission to support critical national immunization functions. STOP has trained and deployed more than 2,000 public health professionals to work on polio surveillance, data management, campaign planning and implementation, program management, and communications in high-risk countries. In FY 2016, CDC will train more than 250 public health professionals through STOP, and further expansion to meet the demand in all high-risk countries may be feasible with the proposed increase in budget.

Sustaining the Environmental Surveillance Strategy

In FY 2016, expanded sewage sampling activities established in 2015 will continue in the Middle East, Nigeria, and across West, Central, and East Africa, and the proposed increase will allow CDC to scale up the program for better coverage. Environmental surveillance was instrumental in alerting officials in 2013 to the circulation of poliovirus in these regions before any paralysis symptoms occurred and was how wild poliovirus was detected in Brazil immediately before the 2014 World Cup. The detection allowed a full-scale response by Brazil before any paralytic cases of polio occurred. Sewage sampling will continue being used to document that viruses caused by oral polio vaccine are disappearing—a key step to polio eradication as oral polio vaccine is gradually replaced by the injectable vaccine.

Guiding the Polio Eradication Endgame Strategy

As the world nears polio eradication, CDC is critical in the execution of the comprehensive Polio Eradication Endgame Strategy for 2013–2018.[403] Starting January 2015 and continuing through FY 2016, the CDC Director will hold the Chair of the Polio Oversight Board, which consists of the heads of agency for the implementing partners of the Global Polio Eradication Initiative and provides strategic direction and managerial oversight for the global program. In FY 2016, CDC will work within the Global Polio Eradication Initiative partnership to reach several benchmarks:

- Interruption of wild poliovirus in endemic countries
- Introduction of inactivated poliovirus vaccine into the routine childhood vaccination schedule in every country worldwide
- Certification-standard surveillance down to the first subnational level in all countries
- Implementation of bio-containment safeguards for all wild polioviruses

Measles and Rubella, New Vaccine Introduction, and Immunization System Strengthening

CDC provides funding and on-the-ground expertise to reduce global deaths from measles, reduce the number of rubella infections and babies born with congenital rubella syndrome, introduce new vaccines such as rotavirus, pneumococcal, human papilloma virus (HPV), and hepatitis B, and strengthen immunization systems in low to middle income- countries. From 2000-2013, there has been a 72% decrease in reported measles incidence and a 75% reduction in estimated measles deaths. During the same time frame, an estimated 15.6 million deaths were prevented by measles vaccination, a number equivalent to nearly four times the total number of children born in the U.S. each year. In addition, supplemental, disease-specific immunization campaigns—such as for polio, measles, and rubella—improve immunization delivery systems for all recommended vaccines.

Guiding U.S. and Global Efforts

CDC is the U.S. lead scientific agency[404] for the Measles and Rubella Initiative. Immunization campaigns are a core component for delivering these vaccines and have served as a platform that is leveraged for providing other public health interventions in combination with the delivery of immunizations. Since 2001, in addition to targeting these two infections, the initiative supported distribution of more than:

- 41 million insecticide-treated bed nets for malaria prevention
- 144 million doses of de-worming medicine
- 207 million doses of polio vaccine
- 289 million doses of vitamin A

[403] http://www.polioeradication.org/resourcelibrary/strategyandwork.aspx
[404] http://www.measlesrubellainitiative.org/learn/about-us

Specific to measles and rubella, CDC experts help countries set up their own laboratories and disease tracking systems. CDC also operates one of three specialized laboratories in a global network for measles and rubella. Today, the global network includes more than 690 laboratories and provides the foundation for expansion and support to other vaccine-preventable diseases such as rotavirus, Japanese encephalitis, yellow fever, HPV, and invasive bacterial diseases such as pneumococcus. In FY 2016, CDC will continue to provide training for laboratorians and vaccinators, and will purchase laboratory supplies and measles-containing vaccine for countries in Africa and Southeast Asia to increase immunization coverage and reverse the increase in measles deaths experienced in 2013. CDC also will develop disease burden estimates needed to guide the introduction of rubella-containing vaccine into routine immunization systems and support use of typhoid and cholera vaccines in outbreak settings.

Providing Scientific and Programmatic Expertise

CDC provides scientific expertise and consultation to WHO, UNICEF, and MOH to strengthen immunization systems and prepare for new vaccine introduction. For example, routine immunization systems were strengthened to facilitate the introduction of rotavirus vaccine as well as to pilot an oral cholera vaccine in Haiti in mid-2013. Successful introduction of new vaccines in developing countries requires strong immunization programs that deliver high quality, effective vaccines. Strong immunization programs sustain the gains of polio and measles initiatives and efficiently partner with other public health program areas, integrating other interventions, such as promotion of insecticide-treated bed nets, vitamin A supplementation, and screening and treatment for HIV. In FY 2016, CDC will continue integrating interventions with immunization activities. CDC also will work with countries to support appropriate use of vaccines in outbreak settings, remove systemic barriers to increase vaccine coverage, and use risk assessment tools to predict and manage outbreak risk.

Ensuring High Vaccination Coverage

As a partner of the Measles and Rubella Initiative, CDC remains committed—along with WHO, UNICEF, American Red Cross, United Nations Foundation, and Global Alliance for Vaccines and Immunization—to reducing the global disease burden of measles, rubella, and congenital rubella syndrome. Achieving the goal of reducing global measles-related deaths from 112,000 in CY 2012 to 37,100 in FY 2016 will require high levels of population immunity. In FY 2016, CDC will support this goal by ensuring high vaccination coverage with two doses of measles- and rubella-containing vaccines. As part of this work, CDC will guide planning for the introduction of a second dose of measles-and-rubella-containing vaccines in countries working toward this goal. CDC will also monitor disease trends using laboratory-based surveillance and will evaluate programmatic efforts to develop and maintain plans for outbreaks and case management. CDC will build public support for these vaccines through social mobilization campaigns and will conduct research needed to support cost-effective and improved vaccination and diagnostic tools.

Global Immunization Cooperative Agreements

CDC's global immunization cooperative agreements enable UN agencies and other partners to direct polio eradication efforts, reduce measles and rubella mortality, and strengthen immunization systems. The FY 2015 partners were WHO, UNICEF, UN Foundation, and PAHO. In FY 2016, CDC will focus on providing key scientific analysis and laboratory support while funding four awards through single eligibility cooperative agreements. CDC will select recipients based on their ability to plan and execute program objectives in high-risk countries where polio, measles, and other high impact vaccine-preventable diseases remain endemic or a threat. CDC expects to maintain the number of cooperative agreements between FYs 2015 and 2016 but also expects to increase award amounts to provide greater flexibility in staffing and travel. Such flexibility is needed to adapt to changes on the ground as they occur.

Global Immunizations Cooperative Agreements[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	5	5	4	4	4	0
- New Awards	1	2	0	0	0	0
- Continuing Awards	4	3	4	4	4	0
Average Award	$22.398	$16.896	$25.800	$27.285	$28.285	+$1.000
Range of Awards	$0.425–$55.081	$0.400–$36.058	$0.400–$36.058	$8.000–$48.000	$7.000–$49.000	N/A
Total Awards	**$112.000**	**$84.480**	**$103.200**	**$109.140**	**$113.140**	**+$4.000**

[1] These funds are not awarded by formula.

Parasitic Diseases and Malaria Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$24.369**	**$24.369**	**$24.369**	**$0.000**

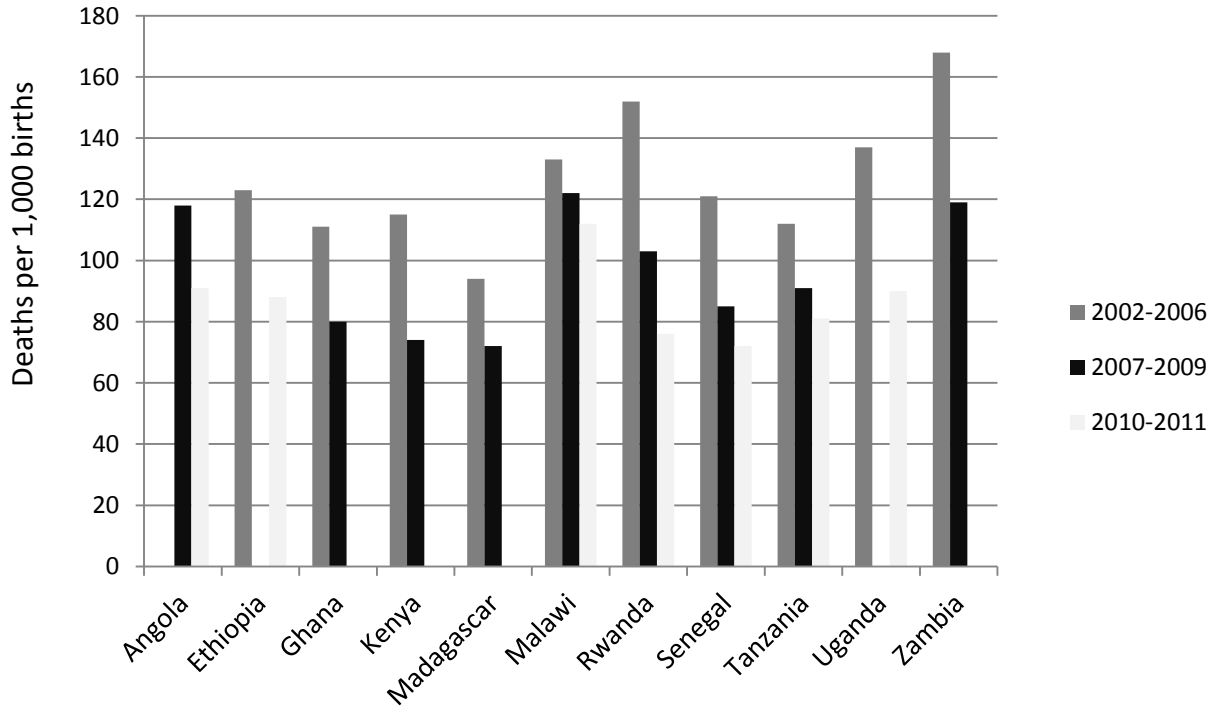
[1] FY 2014 amounts are comparable to FY 2015 and FY 2016 to account for the Center for Global Health reorganization.

Overview

Parasitic infections cause a tremendous burden of disease. Of all parasitic diseases, malaria causes the most deaths globally. Nearly half of the world's population—3.4 billion people—live in areas at risk of malaria transmission. Malaria kills approximately 660,000 people each year, most of them young children in sub-Saharan Africa. The Neglected Tropical Diseases (NTDs), which have suffered from a lack of attention, include parasitic diseases such as lymphatic filariasis, onchocerciasis, and Guinea worm disease. NTDs affect more than 1 billion people largely in rural areas of low-income countries, and kill an estimated 534,000 people worldwide every year. Parasitic infections also affect persons living in developed countries, including the United States.

CDC supports prevention, control, elimination, diagnosis, and treatment of a wide range of parasitic diseases that threaten the health of individuals in the United States and globally. CDC's parasitic diseases and malaria program draws on the expertise of highly trained medical officers, epidemiologists, public health advisors/analysts, statisticians, health scientists, entomologists, and laboratory scientists based at CDC headquarters and in the field. These public health professionals around the globe provide reference diagnostic services, advice on case management of parasitic disease, laboratory and epidemiological research, and health program monitoring and evaluation. CDC applies knowledge and experience gained from helping to eliminate malaria in the United States towards elimination of parasitic diseases worldwide. CDC brings this expertise to its role as co-implementer for the President's Malaria Initiative.

Deaths among children less than five years of age decreased by 16–50% in the President's Malaria Initiative countries surveyed



Budget Request

CDC's FY 2016 request of **$24,369,000** for parasitic diseases and malaria is level with the FY 2015 Enacted level. Within this total, $10,660,000 is provided for malaria prevention efforts. In addition to funding requested through direct appropriation, CDC will leverage funds it receives from the United States Agency for International Development (USAID), the Bill and Melinda Gates Foundation, and other non-federal sources for the prevention and control of parasitic diseases and malaria. Requested funds are needed for CDC to continue providing vital scientific leadership in the United States and around the world to prevent, control, and eliminate parasitic diseases and malaria.

Global Malaria

CDC is a global leader[405] in preventing and treating malaria. CDC provides scientific expertise to 34 endemic countries to improve laboratory systems, case management, diagnostics, prevention programming, and data collection. CDC also jointly implements the Presidents Malaria Initiative[406] with the USAID in 19 focus countries.

Working with Ministries of Health and Local Partners

CDC works with MOH and other partners to prevent and control malaria and other parasitic diseases. In FY 2016, CDC will help MOH and partner countries conduct laboratory-based research and epidemiological evaluations in support of malaria control interventions. These interventions include insecticides and insecticide-treated nets, indoor residual spraying, durable wall linings, preventive treatment of pregnant women, novel drugs, vaccines, and delivery systems. Other areas of focus for CDC include studying how malaria cases are diagnosed and treated and developing new prevention approaches that can be adopted by WHO, MOH, and other partners. CDC will also develop and evaluate new rapid and simple field methods to test the quality of antimalarial drugs.

Maintaining a Global Reference Insectary

CDC maintains a global reference insectary[407] to support progress in controlling parasitic diseases, including malaria. The insectary allows CDC researchers to increase understanding how mosquitos and other insect vectors that transmit disease; informs how to manage and mitigate insecticide resistance; and facilitates successful field implementation of vector-control interventions. In FY 2016, CDC will increase testing of long-lasting insecticide-treated mosquito nets for durability and retention of insecticidal effectiveness, monitor levels of insecticide resistance among mosquitoes in President's Malaria Initiative countries, and assess new vector control methods and insecticides.

Implementing and Providing Scientific Leadership to President's Malaria Initiative

CDC provides scientific leadership and advice to the U.S. Global Malaria Coordinator and is a co-implementer of the President's Malaria Initiative with primary responsibility for monitoring and evaluation, surveillance, and operations research activities in the 19 focus countries in Africa, as well as in the Greater Mekong Sub-Region (i.e., Cambodia, Laos, Myanmar, Thailand, Vietnam, and China's Yunnan Province). In FY 2016, CDC experts will provide scientific evidence and evaluation to help implement the next five-year plan for the President's Malaria Initiative. Central to this effort is continuing development of the evidence on insecticide resistance, antimalarial resistance, bed net durability, and effectiveness of additional malaria control efforts, such as mass screening and treatment. With CDC assistance, these national malaria prevention and control programs will continue to scale up and implement cost-effective interventions, such as intermittent preventive treatment in pregnancy, insecticide-treated bed nets, indoor residual spraying, and artemisinin combination therapy (the use of two or more drugs with different modes of action in combination is now recommended to provide adequate cure rate

[405] http://www.cdc.gov/malaria/malaria_worldwide/cdc_activities/index.html
[406] http://www.cdc.gov/malaria/malaria_worldwide/cdc_activities/pmi.html
[407] http://www.cdc.gov/malaria/tools_for_tomorrow/research_resources.html

and delay development of resistance). CDC's efforts help accelerate progress towards President's Malaria Initiative targets related to intervention coverage and reductions in malaria-related mortality.

Neglected Tropical Diseases

CDC conducts activities to reduce illness, disability, and disfigurement caused by neglected tropical diseases (NTDs).[408] CDC focuses on the control or elimination of lymphatic filariasis (elephantiasis is the end-stage disease), onchocerciasis (river blindness), blinding trachoma, schistosomiasis (bilharzia), and three soil-transmitted helminthes (intestinal worms), as well as the eradication of Guinea worm. CDC provides expertise in surveillance, diagnostics, monitoring, and evaluation to U.S. government agencies, MOH programs, and global partners—including assisting WHO on development of policy and guidelines and in verifying elimination of disease transmission within targeted geographic areas. CDC also conducts operational research to improve program delivery. For example, CDC and partners developed methods to assess whether lymphatic filariasis infection levels are below the threshold to sustain transmission. CDC developed a standardized Transmission Assessment Survey (TAS) training curriculum, which WHO-adopted as the global curriculum. CDC facilitated nine TAS trainings to participants from over 51 countries assisting them to make critical program decisions about stopping mass drug administration. In addition to the TAS, CDC has been instrumental in the development, implementation, and operational research for post-treatment surveillance, the next step towards documenting elimination of diseases as countries prepare for WHO verification.

Progress toward Guinea worm eradication

Progress continues towards eradication of Guinea worm disease as 148 cases were reported in 2013, decreased from the 542 cases reported in 2012. CDC continues to provide morphological and genetic testing of specimens and conducts biologic, environmental, and epidemiologic investigations with partners to support the global Guinea Worm Eradication Program.

CDC conducts operational research to improve measurement of program impact. For example, in FY 2014 CDC implemented integrated surveys assessing the impact of mass drug administration across multiple NTDs and other diseases of public health interest. One critical tool for integrated surveys was CDC's development and validation of a highly sensitive multiplex immunoassay that detects antibodies for more than 35 viral, bacterial, and parasitic diseases as well as assessment of vaccination coverage, using a single small blood sample.

CDC plays a critical role in the development and validation of improved diagnostics for NTDs. CDC's diagnostic tool development for NTDs focuses on affordable, sensitive, specific, user-friendly, rapid, and equipment-free tests that are easily delivered to those who need it. In FY 2014, CDC collaborated with partners to validate a more accurate, easier to run, cheaper test for onchocerciasis, lymphatic filariasis and trachoma.

In FY2016, CDC will assist countries in Africa, Asia, and the Americas to conduct transmission assessment surveys for lymphatic filariasis and other NTDs; assist MOH to implement efficient methodologies that assess progress towards elimination, control, or management of NTDs and associated long-term disability; and develop and evaluate new diagnostic tools and methods for demonstrating interruption of NTD transmission.

[408] http://www.cdc.gov/globalhealth/ntd/diseases/index.html

Parasitic Diseases in the United States

CDC detects, helps to treat, and prevents sickness and death in the United States from parasitic infections.[409] CDC maintains the national parasitic disease reference laboratories, including an online, interactive diagnostic resource[410], and coordinates the national surveillance system for notifiable parasitic diseases. Diagnostic capacity for parasitic diseases at the state-level has declined in recent years. States and counties rely on these CDC systems to monitor, accurately diagnose, and treat parasitic diseases. CDC also provides 24/7 expert consultation to health departments, physicians, hospitals, and laboratories that treat or diagnose infected people.

Providing Real-Time Assistance

CDC added video capability to its parasitic disease consultation system to allow scientists at CDC to view the glass slides via electronic images from microscopes in other countries. This improves real-time assistance to physicians and healthcare providers.

In 2013, CDC national reference labs tested more than 8,500 specimens from U.S. residents and government overseas staff for parasitic diseases and responded to 464 tele-diagnosis inquiries. CDC also responded to 2,518 requests for reference diagnostic assistance via e-mail, phone, or mail. CDC expects the demand for its reference laboratory and consultation services to continue in FY 2016 due to increases in global interconnectedness (e.g., travel, imports), domestic parasitic infections, and declining state laboratory capacity.

CDC prevents, treats, and monitors malaria among U.S. travelers and visitors. The agency responded to over 6,000 inquiries via its 24/7 hotline in 2013, many of them urgent requests related to life-saving diagnosis and treatment. CDC also develops parasitic disease and malaria prevention guidelines published in the Health Information for International Travel[411]—an annual reference guide for U.S. citizens traveling overseas. In FY 2016, CDC will continue identifying Americans most at risk for parasitic infections, provide diagnostic support, and provide otherwise unavailable life-saving drugs for treatment to healthcare providers. CDC will also improve awareness, prevention, and control of parasitic diseases, including issuing alerts on malaria prevention for travelers, and providing guidance on how to prevent transmission of parasitic diseases.

[409] http://www.cdc.gov/parasites/npi.html
[410] http://www.cdc.gov/dpdx/
[411] http://wwwnc.cdc.gov/travel/page/yellowbook-home-2014

Global Public Health Protection Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$62.598**	**$55.119**	**$76.694**	**+$21.575**
Global Public Health Protection	**$62.598**	**$55.119**	**$76.694**	**+$21.575**

[1] FY 2014 amounts are comparable to FY 2015 and FY 2016 to account for the Center for Global Health reorganization.

Overview

CDC provides epidemic intelligence and response capacity for international disease threats and develops country-level capacities to ensure emergency preparedness and response to incidents of local, national, and international importance. Building capacity within countries to address on-going epidemics and detect and respond to disease outbreaks and other public health emergencies at their source holds the most promise for saving lives, protecting the global and U.S. economies, and preventing the spread of diseases across borders. CDC works with partners to build strong, nimble, and sustainable public health systems by focusing on the foundational capacities of applied epidemiology, surveillance, laboratory systems, public health research and evaluation, as well as health information systems. CDC ensures global health protection by:

- Responding to public health emergencies, including complex humanitarian emergencies
- Strengthening public health capacity throughout the world, including a commitment to workforce training through CDC's Field Epidemiology Training Program (FETP)
- Providing technical assistance to MOH to develop strategic, coordinated approaches to emerging and on-going public health threats
- Advancing implementation of International Health Regulations (IHR) and the GHSA

Containing and preventing infectious disease outbreaks are a top national security priority. Building on our long-standing commitments to improve public health capacity through workforce development and improving laboratory and surveillance systems, CDC has made implementing the GHSA a top priority. The 2014 Ebola epidemic in West Africa, Middle East Respiratory Syndrome Coronavirus (MERS-CoV), and novel avian influenza in Asia underscore the very real challenges and need for global response and responsibility. To contain threats like these at their sources, improved public health capacity is urgently required globally and in particular for major transportation hubs and vulnerable nations with the least capacity to handle an outbreak.

Budget Request

CDC's FY 2016 request of **$76,694,000** for Global Public Health Protection is $21,575,000 above the FY 2015 Enacted level. An increase of $10,000,000 supports foundational global public health capacity building activities needed to address on-going epidemics like HIV and tuberculosis as well as vaccine-preventable diseases and emerging infectious disease threats, including those posed by antimicrobial resistance. Foundational activities include working with MOH to develop a well-trained public health workforce; providing technical assistance to develop disease detection and response systems; and collaborating with in-country partners to improve efficiency and coordination of country-level public health activities.

The FY 2016 Budget request also includes an increase of $11,575,000 to expand the Global Health Security Agenda (GHSA). Over the next five years, United States global health security partners commit to working with at least 30 partner countries (containing at least 4 billion people) to prevent, detect, and respond to infectious disease threats, whether naturally occurring or caused by accidental or intentional releases of dangerous pathogens.

In addition to its direct appropriation, CDC received Emergency Funding in FY 2015 to support the Ebola Response, National Public Health Institutes (NPHIs), and GHS activities. The emergency funding provides a critical and catalytic investment for CDC to improve the ability of countries to prevent, detect, and respond to infectious disease threats. The requested increase in FY 2016 will help CDC expand foundational activities allowing CDC to build on projects aligned with the GHSA.

Global Health Security Agenda (GHSA)

Launched February 13, 2014, the GHSA brings the United States and partners around the world together to protect populations from pandemic threats, economic loss, instability, and loss of life. In FY 2014, $63 million of global health and other infectious disease funding aligned with the goals of the GHSA. The $11 million in FY 2016 increase will build on foundational capacity support needed to further the goals of the GHSA to prevent, detect, and respond to infectious disease threats and to address on-going epidemics. Epidemic threats to national security arise at unpredictable intervals and from unexpected sources. Because these threats do not recognize national borders, the health of people overseas directly affects America's safety and prosperity, with far-reaching implications for economic security, trade, the stability of foreign governments, and the well-being of U.S. citizens at home. If we are to save lives and protect U.S. health security, CDC must accelerate efforts to build out the systems and workforce needed to better respond to and manage a range of disease threats.

CDC will build upon successful efforts and expedite progress to prevent the introduction and spread of global infectious disease threats by setting a new course to close gaps in select countries. With the support of WHO, the 194 States Parties to the International Health Regulation have been working to enhance national, regional, and global public health security. Through CDC's commitment to improving Global Health Security (GHS), CDC will continue to work closely with countries to assess current capacity and determine how best to support the systems and workforce necessary to detect and respond to infectious disease threats. To support implementation, CDC will continue to work with countries targeted with Ebola emergency funds and, with FY 2016 funds, will select other high-priority countries to establish five-year strategic plans that identify country-specific priorities and strategies. CDC will provide dedicated staff on the ground in each country and at headquarters to oversee implementation. Because each country will be starting with a different baseline of capacity, the level of investment to meet GHS goals will vary from country to country. Successes from CDC's GHS activities will demonstrate proof-of-concept to other donor countries, showing the impact a catalytic investment can have in improving health security and subsequently encouraging significant commitments from other donors.

Low-income country partners will contribute at least 10% (in-kind or financial) of total costs during the first year, with countries averaging 50% by 2025. Middle-income countries will contribute at least 10% (in-kind or financial) of total costs during the first year, and more than 90% by 2025. After establishing a new baseline of capacity, U.S. investments will be reduced to a maintenance level as participating nations assume greater financial responsibility to sustain their own global health security activities. To improve effectiveness and efficiency of USG resources, an agency or multiple agencies will be responsible for specific GHS measures and performance outcomes.

	Global Health Security Agenda Goals
PREVENT avoidable outbreaks	Prevent the emergence and spread of **antimicrobial drug resistant** organisms
	Prevent the spillover of **zoonotic diseases** into human populations
	Promote national **biosafety and biosecurity** systems
	Promote **immunization** to deter outbreaks of vaccine preventable diseases
DETECT threats early	Strengthen **national laboratory systems**
	Strengthen global networks for **real-time biosurveillance**
	Promote practices for rapid, transparent disease **reporting**
	Train and deploy an effective **public health workforce**
RESPOND	Develop **emergency operations centers** and emergency management systems

rapidly and effectively	Promote **multi-sectorial response** to public health emergencies
	Improve global access to **medical countermeasures and health personnel** during emergencies

CDC will fund awards through both competitive and non-competitive agreements, with a focus on MOH, academic institutions, and private sector entities.

	Global Health Security Agenda Accomplishments
PREVENT avoidable outbreaks	Thailand: Established a pilot **antimicrobial resistance surveillance system** that will allow monitoring on a population-basis for 5 of 7 priority AMR pathogens as well as creation of surveillance indicators that can better measure disease incidences and trends.
	Vietnam: Established a **regional animal zoonotic disease station** to serve all animal rabies surveillance activities in the Phu Tho province.
	South Africa: Conducted a **biothreat and vulnerability assessment** at the biobank/laboratory in Skukuza to identify opportunities for biosafety and biosecurity upgrades in FY 2015.
DETECT threats early	Thailand: Strengthened **molecular diagnostic capacity** for Zika and Chikungunya through training and follow-up activities to enhance communication and support between laboratory and surveillance systems.
	India: Provided **microbiological laboratory training** for detection of selected priority enteric pathogen and implemented interventions to improve cholera diagnostics.
	Jordan: Provided **training on MERS-CoV** to 102 healthcare workers and infection control practitioners to enhance hospital capacity for containment of MERS-CoV infection.
RESPOND rapidly and effectively	Vietnam: CDC and FBI instructors completed Joint Chemical, Biological, Radiological, Nuclear and Explosive (CBRNe) Response and Investigations Workshops for the Ministry of Public Security, Ministry of National Defense, and MOH to increase inter-sectoral (public health and law enforcement) **collaboration for the response to CBRNe incidents and investigations**. This workshop led to the three ministries planning to increase communication and cooperation and to share protocols.
	Jordan: **Incident Command Systems (ICS) and Standard Operating Procedures (SOPs) training** was provided to 12 MOH EOC surge staff.

Global Public Health Capacity Development

CDC protects the health and well-being of Americans and people around the world by building public health capacity in other countries, enabling those countries to address on-going epidemics; prevent, detect, and respond to emerging infectious disease threats; and to respond effectively to public health emergencies. The $10,000,000 increase for FY 2016 will support CDC's foundational efforts to improve public health capacity in countries around the world. CDC will expand workforce-training efforts and expand technical support to MOH and other in-country partners to improve public health surveillance, epidemiology, program implementation, and other core capacity areas in support of the USG's GHSA.

The successful response to an Ebola importation in Nigeria in 2014 is illustrative of CDC's approach. CDC has invested in Nigeria to address HIV/AIDS and as part of the global effort to eradicate polio. CDC's existing presence on the ground coupled with an already trained workforce, emergency response capacities, and the availability of laboratory diagnostics in Nigeria made it possible to contain the spread of Ebola to 20 confirmed or probable cases in one of the largest, most densely populated urban environments on the African continent.

Yet, Ebola is just one of many infectious disease threats. Recent experience has shown that such threats can emerge anywhere; MERS-CoV in the Middle East, novel influenza in Asia, and Chikungunya in the Americas are all recent examples of this. Therefore, in addition to responding to the Ebola disease outbreak in Africa, CDC also must continue and expand foundational public health capacity building in countries spanning multiple regions of the world. CDC requests this funding in FY 2016 to accelerate efforts to build systems and workforce capacity in

additional regions of the world, including Central Asia, the Middle East, Asia and the Americas, expanding the impact of our programs and improving overall preparedness, which will result in faster responses.

In FY 2016, CDC will continue to train the global public health leaders of tomorrow, develop epidemiologic and surveillance workforce capacity, and support the systems essential for effective outbreak response in more than 40 countries through our network of workforce training programs. CDC's tiered FETP model with beginner (six-month), intermediate (nine-month), and advanced (two-year) programs has proven successful for ensuring epidemiologists are available at all public health workforce levels. Through FETP, CDC will strengthen workforce capabilities needed to respond to national and global priorities, including emerging new diseases, polio elimination, and immunization activities. CDC also will expand FETP distance learning and self-paced training modules to reach more trainees. CDC's FETP approach includes a goal to transition full responsibility to the MOH. CDC works with ministries to gradually transfer responsibility and costs, ensuring country programs can sustain the program after CDC staff are no longer present. Countries with now fully independent FETPs include Australia, Mexico, and Peru. Others receiving limited CDC support and making progress to becoming fully independent include Brazil, Ghana, Philippines, and Zimbabwe.

In addition to workforce training, In FY 2016, CDC also will continue working with countries to implement integrated, strategic, and more efficient public health systems. CDC's approach includes working with countries to produce and use data to make better decisions about how to prioritize scarce resources to address health threats. A consolidated, data-driven public health approach coupled with stronger local outbreak detection and response capabilities offers a sustainable solution for building global public health capacity to increase public health impact and is important for achieving global health security.

Global Disease Detection and Emergency Response

CDC's Global Disease Detection[412] (GDD) program is comprised of 10 strategically positioned centers, an operation center at CDC headquarters, and international partner networks. CDC also provides outbreak response to countries requesting assistance. In 2013, CDC responded to 268 global disease outbreaks via GDD Centers and through coordination with the GDD Operations Center and other CDC programs. These outbreaks included H5N1 and H7N9 influenza, MERS coronavirus, Crimean-Congo hemorrhagic fever, dengue fever, and meningitis. CDC also discovered one newly identified species of the Orthopox family in 2013.

Populations affected by natural disaster, war, famine, and civil strife are especially vulnerable to diseases. This vulnerability is compounded when health and other government infrastructure has been damaged or is not functioning effectively. CDC's international emergency response programs provide humanitarian assistance based on requests from other USG agencies, United Nations agencies, and non-governmental organization partners. In 2013, CDC provided assistance to over 145 humanitarian missions in 35 countries, including response to the Syrian Refugee crisis and Typhoon Haiyan in the Philippines. In 2014, CDC continued to provide assistance in outbreak detection and response related to Syria refugee populations throughout the Middle East region and provided support to overall response to the Ebola outbreak in West Africa.

CDC collaborates with international and non-governmental relief organizations to provide data-driven, evidence-based public health intervention and guidance during humanitarian emergencies to decrease associated illness and death. CDC will strengthen strategic relationships with these entities to improve response times and effectiveness of interventions.

Based on previous experience, CDC anticipates GDD and emergency response programs will provide rapid response to at least 100 disease outbreaks during FY 2016, which may include such threats as febrile encephalitis, novel influenza, viral hemorrhagic fever, and cholera. CDC will expand and enhance core public health capacities in rapid outbreak response, strengthen surveillance and national laboratory systems, and train

[412] http://www.cdc.gov/globalhealth/gdder/gdd/default.htm

public health and other professionals in GDD Centers. Many of these activities will be carried out in direct coordination, and in response to requests from, our United Nations partner organizations (including WHO, UNICEF, and United Nations High Commissioner for Refugees). In addition to providing direct support through emergency response and disease detection, CDC works to mitigate the public health impact of humanitarian and public health emergencies by supporting research to guide public health decision making.

CDC's GDD centers in China, Egypt, Guatemala, Kenya, and Thailand detect dangerous pathogens through focused, population-based disease tracking. CDC's GDD centers in Bangladesh, India, and South Africa are strengthening their national surveillance and laboratory systems to begin conducting population-based surveillance. CDC will provide rapid health and nutrition assessment; disease tracking; epidemic investigation; disease prevention and control; program evaluation; and emergency preparedness training to assist MOH, other USG agencies, and non-governmental partners.

In FY 2016, CDC will fund 39 awards through both competitive and non-competitive agreements to increase capacity to detect and control emerging infectious disease outbreaks and to prevent or reduce illness, injury, and death related to humanitarian emergencies. CDC awards agreements through funding opportunity announcements with an objective review process, and a single-eligibility justification cooperative agreement with the MOH in a particular country or a United Nations agency. Examples of partners include Emory University; Georgia Institute of Technology; iMMAP; International Rescue Committee; WHO; UNICEF; United Nations High Commissioner on Refugees; Antares; Herzog Hospital; Columbia University; Association of Schools of Public Health; and American Society of Microbiology.

Global Disease Detection and Emergency Response Cooperative Agreements[1]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	36	36	33	33	39	+6
- New Awards	6	8	3	10	6	-4
- Continuing Awards	30	28	30	23	33	+10
Average Award	$0.252	$0.328	$0.332	$0.332	$0.281	-$0.051
Range of Awards	$0.002–$1.993	$0.002–$2.008	$0.002–$2.008	$0.002–$2.008	$0.002-$2.008	N/A
Total Awards	**$9.085**	**$11.796**	**$10.958**	**$10.958**	**$10.958**	**$0.000**

[1] These funds are not awarded by formula.

PUBLIC HEALTH PREPAREDNESS AND RESPONSE

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$1,367.551	$1,352.551	$1,381,818	+$29.267
Total Request	**$1,367.551**	**$1,352.551**	**$1,381,818**	**+$29.267**
FTEs	619	619	619	0
Public Health Preparedness and Response				
- State and Local Preparedness and Response Capability	$661.042	$661.042	$643.609	-$17.433
- Public Health Emergency Preparedness Cooperative Agreement (non-add)	*$643.609*	*$643.609*	*$643.609*	*$0.000*
- Academic Centers for Public Health Preparedness (non-add)	*$8.018*	*$8.018*	*$0.000*	*-$8.018*
- All Other State and Local Capacity (non-add)	*$9.415*	*$9.415*	*$0.000*	*-$9.415*
- CDC Preparedness and Response Capability	$157.166	$157.166	$167.166	+$10.000
- Strategic National Stockpile	$549.343	$534.343	$571.043	+$36.700

Summary

CDC's Public Health Preparedness and Response activity works 24/7 to protect the safety, security, and health of the United States from public health threats, foreign and domestic, intentional and naturally occurring. CDC provides life-saving responses to chemical, biological, radiological, and nuclear threats, as well as other disasters, outbreaks, and epidemics. These activities are essential to CDC's goal to protect Americans' health and safety by:

- Supporting state and local health department preparedness activities
- Responding to public health emergencies
- Ensuring an available supply of medical countermeasures
- Overseeing and regulating laboratories that import and possess the most deadly pathogens and toxins
- Providing comprehensive situational awareness
- Working 24/7 to respond to calls from medical professionals and the general public
- Building international Emergency Operation Center capacity and enhancing global health security

CDC's FY 2016 request of **$1,381,818,000** for Public Health Preparedness and Response is $29,267,000 above the FY 2015 Enacted level. This request includes a $36,700,000 increase to the Strategic National Stockpile (SNS) which will allow CDC to replace expiring medical countermeasures, maintaining current CDC capabilities to respond to public health threats and protect Americans in public health emergencies. The request also includes a $10,000,000 increase to CDC Preparedness and Response Capability for the Select Agent Program to improve and increase regulation and oversight of select agents and toxins. The request includes a $17,433,000 decrease in funding, which eliminates the Academic Centers for Public Health Preparedness and All Other State and Local Capacity sublines. The FY 2016 Budget maintains funding for the state and local preparedness grants.

The HHS Budget includes $110 million within the Public Health and Social Services Emergency Fund to respond to unanticipated public health emergencies through support for domestic or international activities, such as state and local response and emergency staffing, hospital and containment facilities, infection control, laboratory equipment and supplies, data gathering and analysis, countermeasures, and other potential needs in such an incidence. Within the total, there are resources for staff coordination and training, command and control, and other related logistical needs.

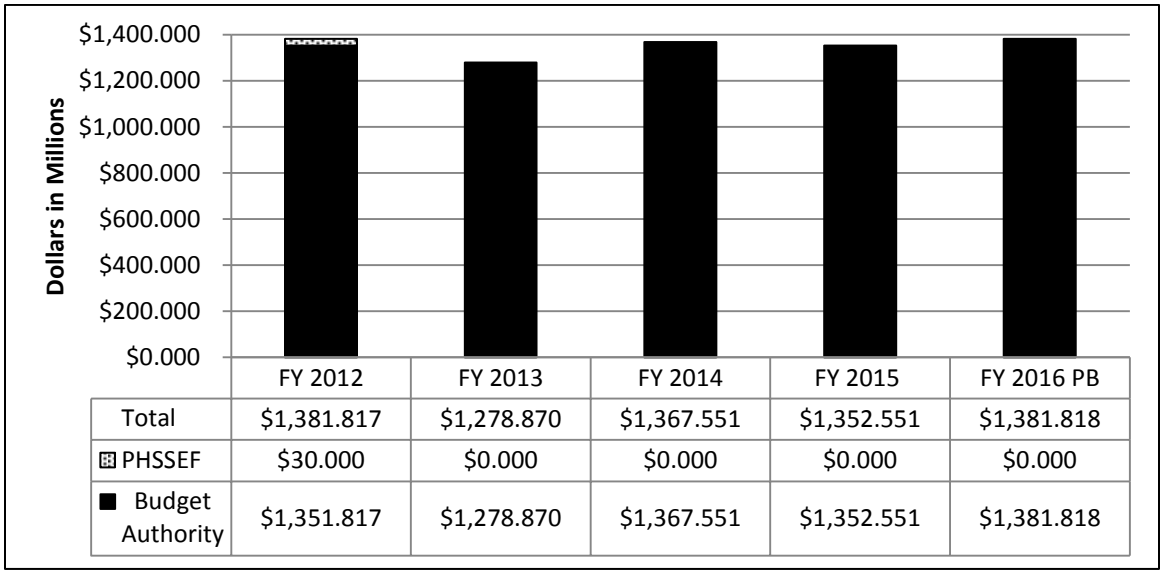
Performance Highlights

- In FY 2014, CDC implemented a nationwide anthrax preparedness project to support a full 60-day response to a large-scale anthrax exposure, including an end-to-end review of plans and capabilities used in such an emergency. Project deliverables included a tabletop exercise, detailed deployment strategies to account for allocation of critical SNS assets, and an updated annex to CDC SNS response plan that covers the full scope and duration of an anthrax response.

- Public health emergency preparedness programs in Georgia, Massachusetts, and Indiana enhanced their state-level epidemiology and surveillance capabilities by supporting domestic contact investigations of individuals potentially exposed to the Middle East Respiratory Syndrome Corona Virus (MERS-CoV) while traveling on international and domestic commercial aircrafts. In partnership with CDC, these state health departments followed up with approximately 265 passengers who had contact with the first two imported cases of MERS-CoV to ensure further transmission had not occurred.

- Since 2012, CDC added three nationwide retail chains as partners committed to finding efficient means of providing medical countermeasure dispensing through their stores in communities across the nation during a public health emergency. These partnerships provide a scalable resource for local public health agencies to help meet challenging mass dispensing requirements and help build more resilient communities. Several new and existing private sector partners will be exercising these dispensing capabilities in late FY 2014 and early FY 2015.

Public Health Preparedness and Response Funding History [1, 2]



	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 PB
Total	$1,381.817	$1,278.870	$1,367.551	$1,352.551	$1,381.818
PHSSEF	$30.000	$0.000	$0.000	$0.000	$0.000
Budget Authority	$1,351.817	$1,278.870	$1,367.551	$1,352.551	$1,381.818

[1] FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

[2] FY 2012 includes funds from the Public Health and Social Services Emergency Fund (PHSSEF).

Strategic National Stockpile 10-Year Funding History

Fiscal Year	Dollars (in millions)
2007	$496.348
2008	$551.509
2009	$570.307
2010	$595.661
2011	$591.001
2012	$533.792
2013	$477.577
2014	$549.343
2015	$534.343
2016 PB	$571.043

State and Local Preparedness and Response Capability Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$661.042**	**$661.042**	**$643.609**	**-$17.433**
- Public Health Emergency Preparedness Cooperative Agreement (non-add)	*$643.609*	*$643.609*	*$643.609*	*$0.000*
- Academic Centers for Public Health Preparedness (non-add)	*$8.018*	*$8.018*	*$0.000*	*-$8.018*
- All Other State and Local Capacity (non-add)	*$9.415*	*$9.415*	*$0.000*	*-$9.415*

Overview

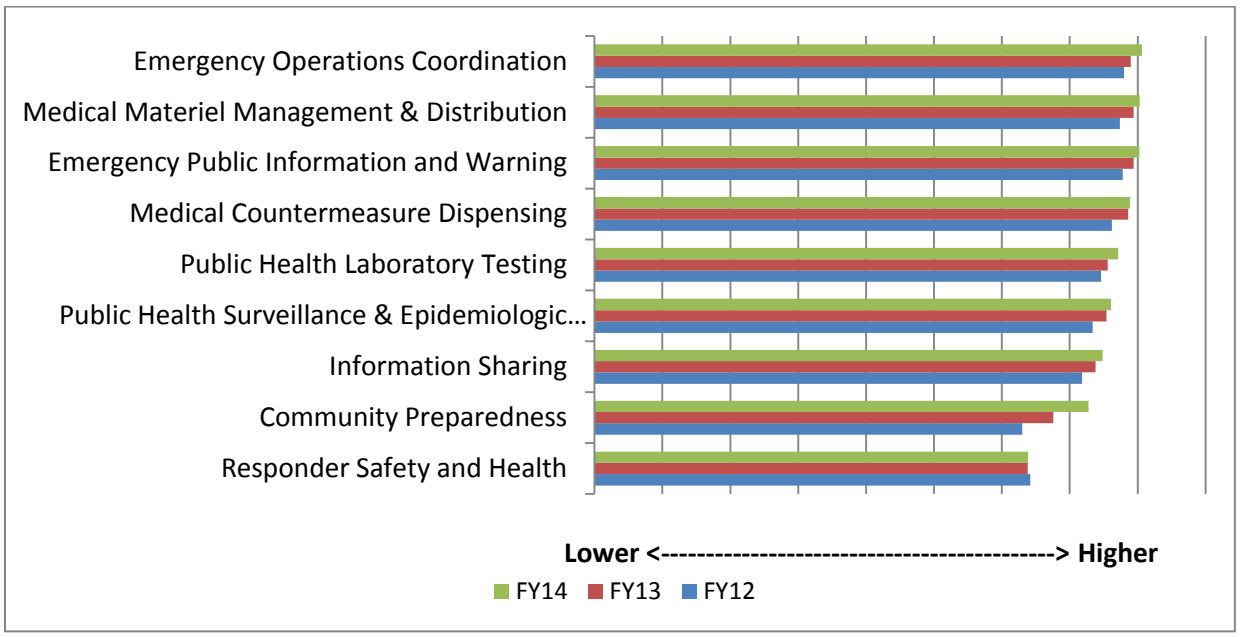
CDC advances the health security of the nation by helping communities prepare for, respond to, and recover from all hazards, including chemical, biological, radiological, and nuclear threats; as well as natural disasters, outbreaks, and epidemics. Whether the hazard is naturally occurring (Ebola, Middle Eastern Respiratory Syndrome), accidental (West Virginia chemical spill) or intentional (Boston, Massachusetts bombing), effective public health emergency response depends on maintaining and constantly improving the capability of state and local health departments to respond to public health emergencies. As directed by Presidential Policy Directive (PPD) 8: National Preparedness [413] and the Pandemic and All-Hazards Preparedness Reauthorization Act of 2013 (PAHPRA),[414] CDC's State and Local Preparedness and Response Capability supports national readiness by investing in state, local, and territorial public health systems. Through its Public Health Emergency Preparedness (PHEP) cooperative agreement,[415] CDC advances public health system capability development and strengthens the ability of jurisdictions to respond to public health threats and build resilient communities. PHEP cooperative agreement investments have funded:

- The purchase and development of nearly 75% of state, local and territorial electronic disease surveillance systems (EDS); current state, local, and territorial EDS maintenance investments are estimated at $10.0 million annually
- From October 27, 2014 to January 11, 2015, domestic Active and Direct Active Monitoring[416] of over 6,800 persons deemed at low, some, or high risk exposure to Ebola in 50 states, the District of Columbia, and Puerto Rico
- An estimated 81% of the cost to develop state, local and territorial public health emergency management capability (such as establishing local emergency operations centers)
- Over 80% of the cost to develop state, local and territorial public health risk communication capability

Trends in public health preparedness capabilities of PHEP awardees demonstrate how CDC investments have measurable impact. The PHEP cooperative agreement supports 15 key public health preparedness capabilities identified in Public Health Preparedness Capabilities: National Standards for State and Local Planning.[417] Divided into two tiers, the 15 capabilities serve as a framework for state and local public health preparedness. The chart below show how over the past three years, PHEP awardees improved capacity in nearly all Tier 1 public health preparedness capabilities. PHEP awardees are assisted in their efforts to improve their performance by CDC subject matter experts who share knowledge, useful practices, and lessons learned—along with the tools and resources needed to advance, sustain, develop, measure, and identify preparedness capability gaps.

[413] http://www.dhs.gov/presidential-policy-directive-8-national-preparedness
[414] http://beta.congress.gov/bill/113th-congress/house-bill/307?q=%7B%22search%22%3A%5B%22113-5%22%5D%7D
[415] http://www.cdc.gov/phpr/coopagreement.htm
[416] http://www.cdc.gov/vhf/ebola/exposure/qas-monitoring-and-movement-guidance.html
[417] http://www.cdc.gov/phpr/capabilities/DSLR_capabilities_July.pdf

Tier 1 Public Health Preparedness Capabilities: Three-Year Trends



Budget Request

CDC's FY 2016 request of **$643,609,000** for State and Local Preparedness and Response Capability is $17,433,000 below the FY 2015 Enacted level. The request funds the Public Health Emergency Preparedness cooperative agreements for state, local, and territorial grantees at the FY 2015 Enacted level. The $17,433,000 reduction reflects elimination of the Academic Centers for Public Health Preparedness and All Other State and Local Capacity budget lines.

The FY 2016 budget request reflects the elimination of the Academic Centers for Public Health Preparedness. CDC will continue to support research and training for public health preparedness through the research agenda of the OPHPR Science Office. Eliminating funding for these centers allows CDC to prioritize funding for state and local health departments through the Public Health Emergency Preparedness (PHEP) cooperative agreement and puts boots-on-the-ground to respond to every day and catastrophic health emergencies. Since 2002, PHEP cooperative agreements provided more than $9 billion to public health departments across the nation to upgrade their ability to effectively respond to a wide range of public health threats. This overall reduction would decrease FY 2016 CDC assistance to the grantees, including the Career Epidemiology Field Officer Program. However, CDC received significant funds through the Ebola Emergency funding in FY 2015 to expand domestic preparedness capabilities.

CDC recognizes the impactful scientific research and workforce development activities conducted by the Academic Centers in support of preparedness and response over the past six years. Moving forward, CDC will focus its efforts on sharing Preparedness and Emergency Response Research Centers (PERRC) research findings with the preparedness community and evaluation of promising PERRC and Preparedness and Emergency Response Learning Centers (PERLC) products. CDC will support research and training for public health preparedness through the OPHPR extramural research agenda.

The All Other State and Local Capacity budget line provided separate funding for CDC's programmatic oversight, subject matter guidance, and strategic management of the Public Health Emergency Preparedness (PHEP) program. These costs would be funded directly out of the PHEP budget line.

Public Health Emergency Preparedness (PHEP) Cooperative Agreements

Since 2002, the PHEP cooperative agreement has provided more than $9 billion to public health departments across the nation to develop and upgrade their capacity to effectively respond to a range of public health threats. Preparedness activities funded by the PHEP cooperative agreement are targeted specifically for the development of emergency-ready public health departments that are flexible and adaptable. CDC directs state and local PHEP awardees to use their PHEP cooperative agreement funding to build and sustain their public health preparedness capabilities according to the standards described in CDC's *Public Health Preparedness Capabilities: National Standards for State and Local Planning*[418] document. These standards meet or exceed Public Health Accreditation Board standards and measures for preparedness.

Data from the PHEP FY 2014 funding applications indicate that:

- Awardees planned to allocate approximately one-third of FY 2014 funding to local health agencies and tribal entities
- 41 awardees planned to allocate FY 2014 PHEP funds to local health agencies
- 20 awardees planned to allocate FY 2014 PHEP funds to tribal entities

Current PHEP guidance requires awardees to review their preparedness status annually. This annual review identifies gaps and strategic priorities requiring additional funding or CDC technical assistance (providing strategy, best practices, identifying resources, and training exercises). These reviews compile information from a variety of sources including:

- Jurisdictional risk assessments
- Incident after-action reports and improvement plans
- Site visit observations conducted by CDC
- Other jurisdictional priorities and strategies

Collectively, this information allows state and local awardees to prioritize their preparedness investments, ensuring federal preparedness funds are invested effectively to strengthen preparedness and response systems nationwide.

Public Health Emergency Preparedness Grants (All PHEP awards combined) [1,2,3]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	62	62	62	62	62	0
- New Awards	0	0	0	0	0	0
- Continuing Awards	62	62	62	62	62	0
Average Award	$9.991	$9.431	$9.867	$9.867	$9.867	$0.000
Range of Awards	$0.325-$42.840	$0.323-$39.704	$0.325-$42.354	$0.324-$42.364	$0.324-$42.364	N/A
Total Grant Awards	**$619.448**	**$584.697**	**$611.750**	**$611.750**	**$611.750**	**$0.000**

[1] Individual grantee funding levels may change depending on programmatic decisions made when calculating funding for the Cities Readiness Initiative, LRN-C Level 1 funding, and other programs funded through the PHEP cooperative agreement.

[2] FY 2015 and FY 2016 estimates are based on currently anticipated funding. Recalculations may be necessary based on additional strategic planning for future years.

[3] These funds are awarded by formula.

PHEP awards encompass three areas: base funding, the Cities Readiness Initiative (CRI), and Level 1 Laboratory Response Network Chemical Laboratories (LRN-C).

[418] http://www.cdc.gov/phpr/capabilities/DSLR_capabilities_July.pdf

PHEP Award Areas

Funding	Activity
Base	Funding to 62 public health awardees (50 states, 8 territories, and 4 directly funded localities) to improve jurisdictional preparedness capability according to 15 nationally recognized standards contained within Public Health Preparedness Capabilities: National Standards for State and Local Planning[419]
Cities Readiness Initiative (CRI)	Funding to build and sustain medical countermeasure dispensing and distribution capability for 72 high-population metropolitan statistical areas deemed at greater risk for public health threats and containing nearly 60% of the population of the United States
Laboratory Response Network Level 1 Chemical Laboratories (LRN-C)	Funding for ten Level 1 (most advanced) chemical laboratories that function as surge capacity laboratories for the CDC and are capable of rapidly detecting and characterizing chemical threat agents

PHEP Base

In FY 2016, PHEP base funding ensures public health departments are emergency-ready. Base funding supports the National Response Framework (NRF)[420], which guides how the nation responds to infectious disease outbreaks; natural disasters; biological, chemical, and radiological incidents; and acts of terrorism. As mandated by Section 319C-1 of the Public Health Service (PHS) Act, CDC allocates funding to 62 awardees according to a base-plus-population formula, which includes a guaranteed minimum amount. PHEP awardees allocate funding to local and tribal health departments to support:

- Preparedness staff such as laboratorians and epidemiologists
- Preparedness resources such as redundant (more resilient) communication systems, training and preparedness exercise programs
- Development of public health preparedness capabilities
- Other essential services

The program demonstrates increased preparedness using performance measures and related evaluation and assessment data, as well as evidence-based benchmarks. CDC has also aligned all preparedness standards with the Public Accreditation Health Board (PHAB), ensuring that funds invested in achieving the *Public Health Preparedness Capabilities: National Standards for State and Local Planning* support PHAB preparedness-related standards. In FY 2015, PHEP will provide technical guidance and programmatic support to States interested in pursuing accreditation. FY 2016 guidance to PHEP grantees will include CDC's standard language regarding accreditation, which allows grantees to work with CDC to determine how grant funds can support appropriate accreditation activities, while still meeting the objectives of the award.

[419] http://www.cdc.gov/phpr/capabilities/DSLR_capabilities_July.pdf
[420] http://www.fema.gov/media-library-data/20130726-1914-25045-246/final_national_response_framework_20130501.pdf

Public Health Emergency Preparedness Grants (Base Funding Subtotal) [1,2,3,4]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	62	62	62	62	62	0
- New Awards	0	0	0	0	0	0
- Continuing Awards	62	62	62	62	62	0
Average Award	$8.948	$8.444	$8.842	$8.817	$8.817	$0.000
Range of Awards	$0.325–$36.176	$0.323-$39.704	$0.325-$36.934	$0.324-$35.792	$0.324-$35.792	N/A
Total Grant Awards	**$554.803**	**$523.510**	**$548.182**	**$546.682**	**$546.682**	**$0.000**

[1] Individual grantee funding levels may change depending on programmatic decisions made when calculating funding for the Cities Readiness Initiative, LRN-C Level 1 funding, and other programs funded through the PHEP cooperative agreement.

[2] These amounts are included in 'All PHEP awards combined' grant table.

[3] FY 2015 and FY 2016 estimates are based on currently anticipated funding. Recalculations may be necessary based on additional strategic planning for future years.

[4] These funds are awarded by formula.

Cities Readiness Initiative (CRI)

The Cities Readiness Initiative (CRI) supports local medical countermeasure (MCM) distribution and dispensing planning in the nation's 72 largest metropolitan statistical areas (MSA), which contain nearly 60% of the U.S. population. This capability for large metropolitan public health departments to respond to a large-scale event requiring distribution and dispensing of MCMs is essential, and CDC continues to prioritize this PHEP funding allocation. CDC will fund MSAs in all 50 states using a population-based formula to strengthen their ability to quickly and effectively distribute and dispense MCMs from the Strategic National Stockpile in response to emergencies.

Public Health Emergency Preparedness Grants (CRI Subtotal) [1,2,3,4]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	54	54	54	54	54	0
- New Awards	0	0	0	0	0	0
- Continuing Awards	54	54	54	54	54	0
Average Award	$1.006	$.942	$0.986	$0.986	$0.986	$0.000
Range of Awards	$0.170–$5.612	$0.170-$5.159	$0.170-$5.368	$0.169-$5.368	$0.167-$5.368	N/A
Total Grant Awards	**$54.299**	**$50.842**	**$53.222**	**$53.222**	**$53.222**	**$0.000**

[1] Individual grantee funding levels may change depending on programmatic decisions made when calculating funding for the Cities Readiness Initiative, LRN-C Level 1 funding, and other programs funded through the PHEP cooperative agreement.

[2] These amounts are included in 'All PHEP awards combined' grant table.

[3] FY 2015 and FY2016 estimates are based on currently anticipated funding. Recalculations may be necessary based on additional strategic planning for future years.

[4] These funds are awarded by formula.

Laboratory Response Network Level 1 Chemical Laboratories (LRN-C)

The Laboratory Response Network (LRN) is a coordinated network of public health and other laboratories focused on providing timely, highly reliable laboratory tests on biological and chemical threats—both intentional and unintentional—to inform decisions that must be made to protect the public. CDC supports both LRN-B laboratories for biological agents, and LRN-C laboratories for chemical agents, as each requires unique scientific expertise, facilities, and safety procedures to mount effective response. LRN-B and LRN-C are both supported by base funding. CDC reserves a specific amount to support the specialized equipment, reagents, and methodologies required to support surge capacity testing in the most advanced LRN-C labs. LRN-C laboratories are designated Level 1, 2, or 3 depending on laboratory capabilities.

LRN-C Laboratory Capabilities

Designation	Capabilities
Level 1	These laboratories, which serve as surge-capacity laboratories for CDC, are able to detect not only the toxic chemical agents that Level 2 laboratories can detect but also can detect exposure to an expanded number of chemicals, including mustard agents, nerve agents, and other toxic industrial chemicals.
Level 2	Chemists in these laboratories are trained to detect exposure to a number of toxic chemical agents. Analysis of cyanide, nerve agents, and toxic metals in human samples are examples of Level 2 activities.
Level 3	These laboratories work with hospitals and other first responders within their jurisdictions to maintain competency in clinical specimen collection, storage, and shipment.

In FY 2016, the PHEP cooperative agreement will directly fund ten Level 1 LRN-C laboratories that will improve states' ability to detect and respond to toxic chemical agents, including mustard agents, nerve agents, and other dangerous industrial chemicals. With this support, states allocate funding to staff and equip laboratories; maintain critical instrumentation; train staff and conduct proficiency testing; and support participation in local, state, and national exercises. Level-1 chemical laboratories serve as a resource for other local and state laboratories and provide national surge capacity for CDC during major public health security incidents.

Public Health Emergency Preparedness Grants (LRN-C Subtotal) [1,2,3,4]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	10	10	10	10	10	0
- New Awards	0	0	0	0	0	0
- Continuing Awards	10	10	10	10	10	0
Average Award	$1.035	$1.035	$1.035	$1.185	$1.185	$0.000
Range of Awards	$0.808–$1.603	$0.808-$1.603	$0.808-$1.603	$0.925-$1.835	$0.925-$1.835	N/A
Total Grant Awards	**$10.345**	**$10.345**	**$10.345**	**$11.845**	**$11.845**	**$0.000**

[1] Individual grantee funding levels may change depending on programmatic decisions made when calculating funding for the Cities Readiness Initiative, LRN-C Level 1 funding, and other programs funded through the PHEP cooperative agreement.

[2] These amounts are included in 'All PHEP awards combined' grant table.

[3] FY 2015 and FY2016 estimates are based on currently anticipated funding. Recalculations may be necessary based on additional strategic planning for future years.

[4] These funds are awarded by formula.

Development of Outcome-Oriented Performance Measures

In July 2014, CDC transitioned from primarily assessing medical countermeasure (MCM) planning to also measuring operational readiness. The new assessment, the MCM operational readiness review (ORR), will more effectively measure a jurisdiction's ability to execute any large-scale response requiring distribution and dispensing of MCMs. The ORR builds on the MCM planning progress PHEP awardees made over the years and will help identify MCM response operational capabilities as well as areas that may require more targeted technical assistance.

PHEP awardees also use funding to address self-identified needs. In FY 2016, public health departments will continue to determine their jurisdictional priorities for capability sustainment through use of the HHS Capabilities Planning Guide, risk assessment tools, and opportunities for improvement identified through exercises and performance measurement findings.

PHEP Highlights

Jurisdiction	Highlight
Alaska	The Alaska Department of Health and Social Services led the yearlong coordination and operation of the Health and Medical portion of a seven-day, nationally recognized full-scale exercise. The exercise, based on a catastrophic earthquake scenario involved Federal agencies (HHS, Department of Defense, Department of Homeland Security, and FEMA) and state and local partners and provided the opportunity for Alaska to practice all elements of their PHEP-funded response plans.
California	A PHEP-funded risk-based initiative involving four southern California public health departments (L.A. and Orange Counties, Long Beach, and Pasadena) that make up the Los Angeles-Long Beach-Anaheim metropolitan statistical area (MSA) resulted in the development of the Health Hazard Assessment and Prioritization (HHAP) tool used to conduct a whole-community, public health focused assessment of 62 potential southern California hazards.
Florida	The Florida Department of Health is responding to the introduction of Chikungunya virus within the United States. Systems and personnel funded through PHEP are being used to directly support ongoing epidemiology and surveillance activities as well as the production of a community awareness and educational video designed to reduce public risk of exposure.
Georgia, Massachusetts and Indiana	PHEP programs in Georgia, Massachusetts, and Indiana enhanced state epidemiology and surveillance capability within their states by supporting domestic contact investigations of individuals potentially exposed to the Middle East Respiratory Syndrome Corona Virus (MERS-CoV) while traveling on international and domestic commercial aircrafts. These state health departments, in partnership with CDC, followed up with approximately 265 passengers who had contact with the first two imported cases of MERS-CoV to ensure that further transmission had not occurred.
Marshall Islands	The Marshall Islands are installing 10 additional PHEP-supported Demand Assigned Multiple Access (DAMA) sites on the outer Islands. DAMA sites comprises of satellite phone, fax and computer technology installed at schools or community centers to ensure emergency information sharing and situational awareness capability. Majuro, the capital of the Marshall Islands, used DAMA to warn an outer island of impending King Tides which allowed residents to prepare and enact safety measures ahead of impact, ultimately preventing any loss of life.
Texas	The first confirmed case of Ebola in the U.S. was in Dallas County, TX. The Texas Department of State Health Services supported this response by establishing state and county emergency planners partnerships, implementing an emergency medical services transportation plan for known or suspected Ebola patients, and training 160 healthcare workers on personal protective equipment use and infection control practices appropriate for caring for Ebola patients.
West Virginia	The West Virginia PHEP-funded laboratory conducted critical water supply testing in response to the Elk River Methylcyclohexanemethanol (MCHM) chemical spill in January 2014. The West Virginia laboratory tested 581 samples in 30 days, mobilized their public health incident management system and provided PHEP-funded epidemiology support to enhance public health security.

CDC is awarding a total of $145 million in FY 2015 emergency funding to the current 62 Public Health Emergency Preparedness (PHEP) cooperative agreement awardees to support accelerated Ebola public health preparedness

planning and response. The threat of Ebola virus disease (EVD) is a top national public health priority. To protect the nation, CDC is providing supplemental funding to the current 62 Public Health Emergency Preparedness (PHEP) cooperative agreement awardees to support accelerated state and local public health preparedness planning and operational readiness for responding to Ebola. The funding is intended to:

- Support accelerated public health preparedness planning for EVD within state, local, territorial, and tribal public health systems
- Improve and assure operational readiness for EVD,
- Support state, local, territorial, and tribal Ebola public health response efforts, and
- Assure collaboration, coordination, and partnership with the jurisdiction's healthcare system to assist in the development of a tiered system for EVD patient care.

CDC Preparedness and Response Capability Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$157.166**	**$157.166**	**$167.166**	**+$10.000**

Overview

CDC's Preparedness and Response Capability supports critical infrastructure and cross-cutting research to facilitate prevention of and rapid response to public health emergencies by:

- Directing public health response efforts
- Detecting sources of disease outbreaks and food-borne illnesses
- Developing tests to rapidly detect biological, chemical, and radiological agents
- Regulating laboratories handling the most dangerous infectious agents and toxins
- Developing risk and emergency communication strategies
- Conducting health hazard evaluations and assesses threats from hazardous substances
- Creating emergency response plans
- Developing and maintains secure information technology systems that monitor potential threats
- Managing deployments for CDC responders both domestic and internationally

Budget Request

CDC's FY 2016 request of **$167,166,000** for CDC Preparedness and Response Capability is $10,000,000 above the FY 2015 Enacted level for the CDC Select Agent Program. In FY 2015, the Select Agent Program received an estimated $16.6 million, not including Working Capital Fund expenses and other associated costs. This program regulates the possession, use, and transfer of potentially dangerous biological agents and toxins in the United States and is instrumental in implementing the CDC Director's initiative to create a culture of safety in all laboratories handling dangerous pathogens and toxins. In FY 2016, the Select Agent Program will increase by 25% the number of annual inspections and surprise visits for high-risk facilities.

At this level, CDC will support:

- An additional $10 million to improve and increase regulation and oversight of select agents and toxins
- Emergency Management Program (including CDC's Emergency Operations Center)
- Laboratory Response Network
- BioSense

Regulation of Biological Agents and Toxins

The CDC Select Agent Program, in collaboration with the U.S. Department of Agriculture/Animal and Plant Health Inspection Services/ Agriculture Select Agent Services (known as the Federal Select Agent Program[421]), has been delegated responsibility for the regulation, possession, use, and transfer of potentially dangerous biological agents and toxins in the United States (7 CFR Part 331, 9 CFR 121, and 42 CFR part 73) and is instrumental in implementing the CDC Director's initiative to create a culture of safety in all laboratories handling dangerous pathogens and toxins. CDC's Import Permit Program (IPP)[422] regulates the importation into

[421] http://www.selectagents.gov/
[422] http://www.cdc.gov/od/eaipp/

the United States of infectious biological agents, infectious substances, and vectors that can cause human disease (42 CFR 71.54) and processes more than 1,600 permits annually.

The FY 2016 Budget increase of $10 million will allow CDC to upgrade import permitting and select agent databases to rapidly capture data. CDC will continue regulating select agents, toxins, and imported material and inspect the 317 registered entities with the Federal Select Agent Program and those facilities receiving imported materials. CDC anticipates that the request will allow its Select Agent Program to increase inspections by 25% in FY 2016 (for an anticipated 235 inspections).

Controlling Access to Select Agents and Toxins

In the past ten years, the CDC Select Agent Program performed 1,844 laboratory inspections and restricted 264 persons from accessing select agents and toxins, and there have been zero thefts of these potentially dangerous biological agents.

CDC uses two databases for tracking select agents and toxins and permitting infectious biological agents, infectious substances, and vectors that can cause human disease. The National Select Agent Registry (NSAR) is a joint national database used by the Federal Select Agent Program containing critical information regarding the status of facilities possessing, using, and transferring select agents and toxins. This information includes the select agent and toxins at each facility, along with the individuals approved for access to these agents and the laboratory biosafety and security information for these agents. CDC's Import Permit database maintains critical information on permits issued to import infectious biological agents, infectious substances, and vectors of human disease into the United States. The upgrade in the select agent databases will improve program efficiency and provide more up-to-date information. Furthermore, by upgrading the import permit system, it will allow for integration with the International Trade Data System as required by the SAFE Port Act of 2006. These upgrades to the import permit system will also facilitate critical biomedical research by removing administrative delays at the borders.

In addition to regulatory oversight of domestic laboratories, CDC will continue to advance the Global Health Security Agenda's biosecurity systems targets by working with international partners to strengthen laboratory systems and networks. CDC's onsite consultation, training, and other outreach efforts to international partners helps improve those nations' laboratory biosafety and security capabilities, making people around the world safer from unintentional or accidental release of these deadly pathogens.

Emergency Management Program

The Emergency Management Program (EMP) ensures better coordination of experts responding to small-scale outbreaks and large-scale public health emergencies. Public health emergencies demand immediate attention. It is critical to continually improve processes and procedures so that they can be implemented anytime to ensure CDC's public health and medical expertise are available to respond quickly to any emergency. CDC was the first federal agency fully accredited by the Emergency Management Accreditation Program[423] (EMAP).

CDC is committed to the following goals in FY 2016:

- Provide public health and medical expertise for an estimated 20,000 inquiries from hospitals, health departments, international agencies, other countries, airlines, cruise ships, and the general public
- Support global health security by providing fellowship opportunities that develop the emergency management capacity of international partners
- Sustain professional credentialing from the EMAP

CDC's approach to public health preparedness, response, and recovery is rooted in scientific evidence. CDC will study factors that lead to rapid, complete community recovery following disasters to determine if specific

[423] http://www.emaponline.org

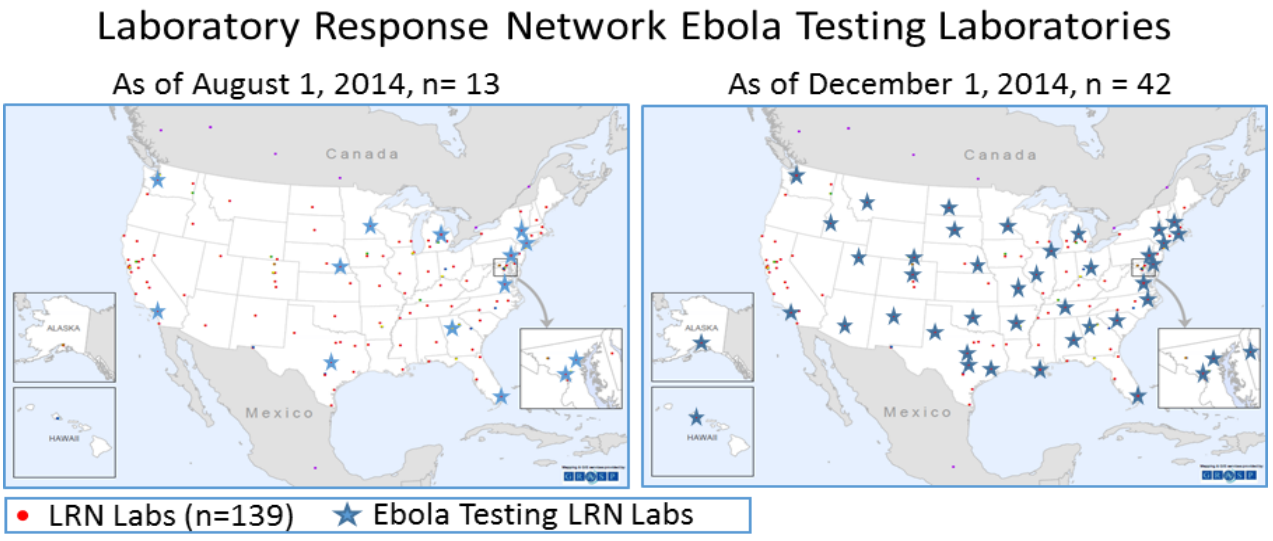
policies or interventions contribute to better physical and mental health outcomes. CDC will examine responder organizations to see which factors aid in, or detract from, a coordinated response across the public health system.

In response to 9/11 and subsequent anthrax attacks, CDC established its Emergency Operations Center (EOC) in 2003. Since inception, the CDC EOC has been activated for numerous events, most recently:

Event	Highlight
Ebola (July 2014 – Present)	During the first 121 days of the Ebola response, CDC staff triaged 4,660 Ebola-related phone calls, tracked 4,260 tasks, recruited and assigned functional roles to 1,676 people, produced 48 situational reports, deployed 478 staff domestically and internationally, and assured the accuracy of 159 scientific documents. CDC also processed over 50 mapping and graphing product requests, critical to applying information and resources needed to stay updated and save lives.
Un-Accompanied Children (June – August 2014)	During activation, CDC deployed 24 individuals to provide consultation on medical screening, disease surveillance, and other elements of public health response.
Middle Eastern Respiratory Syndrome Coronavirus (MERS) (May –June 2014)	During activation, CDC deployed 51 individuals to support public health officials in states such as Florida and Indiana when MERS cases were confirmed in the United States.

Laboratory Response Network Assay Development and Proficiency Testing

To support the Laboratory Response Network (LRN), CDC provides standard assays and protocols, training, and quality assurance for testing biological and chemical threat agents. In FY 2016, CDC will improve detection of tularemia and smallpox by developing and deploying improved assays, which also bolster CDC's testing capability for unknown emerging pathogens. In addition, CDC's fully implemented Quality Management System will support the completion of FDA's submission requirements of a new assay for the detection of Rickettsia species (parasite that causes typhus, Rocky Mountain spotted fever, and other tick-, flea-, and lice-borne diseases).



In response to the West Africa Ebola outbreak, CDC collaborated with the Department of Defense (DoD) to equip select LRN laboratories around the United States with the ability to quickly and accurately test specimens for the outbreak strain of Ebola virus. Prior to the current outbreak only two LRN laboratories were capable of performing an Ebola test – the DoD United States Army Medical Research Institute of Infectious Diseases and CDC laboratories. By August 1, 2014, CDC provided the DoD assay to 13 LRN public health laboratories (PHL), chosen based on geography and the number of travelers arriving from West Africa. As of December 1, 2014, 42 LRN laboratories completed proficiency testing with the DoD Ebola assay, and CDC continues to work to assure that LRN laboratories acquire and maintain capacity to handle Ebola specimens.

BioSense

CDC's BioSense[424] is a secure, cloud-based, platform providing state and local public health departments and federal agencies the ability to monitor all-hazards events using emergency department (ED) data. Users of the system watch for changes in potential health problems before they become widespread outbreaks, and can also track and monitor the progression of ongoing outbreaks. BioSense provides additional value by allowing public health departments to assist their clinical partners with meeting the Centers for Medicare and Medicaid Services Meaningful Use requirements for syndromic surveillance[425].

Enhancing BioSense is one of four major initiatives developed in the CDC Surveillance Strategy to improve overall surveillance operations. The National Syndromic Surveillance Program (NSSP) formalizes the BioSense Enhancement Initiative by:

- Supporting timely exchange of syndromic data and information for nationwide and regional situational awareness and enhanced response to hazardous events and disease outbreaks
- Improving the functioning of the BioSense system
- Strengthening the National Syndromic Surveillance Community of Practice
- Improving the quality, representativeness, and use of the data

In 2015, CDC will award a new BioSense cooperative agreement funding up to 25 state and local health departments. The cooperative agreement builds capacity for syndromic surveillance and improves local, state, regional, and national situational-awareness.

BioSense Grants [1,2]

(dollars in millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Final	FY 2015 Estimate	FY 2016 President's Budget	2016 +/-2015
Number of Awards	35	34	34	25	25	0
- New Awards	35	0	0	25	0	-25
- Continuing Awards	0	35	34	0	25	+25
Average Award	$0.200	$0.196	$0.196	$0.250	$0.250	$0.000
Range of Awards	$0.100–$0.300	$0.100–$0.275	$0.118–$0.260	$0.100-$0.400	$0.100-$0.400	N/A
Total Grant Awards	**$7.082**	**$6.738**	**$6.695**	**$7.084**	**$7.084**	**$0.000**

[1] These funds are not awarded by formula.

[2] FY 2015 and FY2016 estimates are based on currently anticipated funding.

The BioSense's community of users[426] continues to grow beyond just program grantees. To capitalize on this growth, the NSSP is working to increase population coverage and improve the representativeness of its syndromic surveillance data by increasing the percentage of Emergency Department (ED) visits reported to BioSense. CDC's 2014 assessment of this measure determined that a baseline of 45% of ED visits across the

[424] http://www.cdc.gov/biosense
[425] http://www.cdc.gov/ehrmeaningfuluse/Syndromic.html
[426] https://sites.google.com/site/biosenseredesign/

nation provided syndromic surveillance data to BioSense. In FY 2016, the NSSP has set a target of receiving syndromic surveillance data from 65% of the nation's ED visits. CDC will also explore inclusion of additional data sources in BioSense, such as ambulatory care.

Strategic National Stockpile Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$549.343**	**$534.343**	**$571.043**	**+$36.700**

Overview

The Strategic National Stockpile[427] (SNS) manages and delivers life-saving medical countermeasures (MCMs) during a public health emergency. It is the largest federally owned repository of pharmaceuticals, critical medical supplies, Federal Medical Stations (FMS)[428], and medical equipment available for rapid delivery to support federal, state, and local response to health security threats. If a biological, chemical, radiological, or nuclear event occurred on U.S. soil tomorrow, the SNS is the only federal resource readily available to respond once state and local MCM supplies are depleted.

A Sizable Asset for Preparedness

Strategic National Stockpile (SNS) medical countermeasures are held in large, strategically placed warehouses across the country and fill more than 133,995 pallets. Laid flat, these pallets would cover more than 31 football fields, or 41 acres of land. Included in that expanse of product is enough vaccine to protect every single American from smallpox, one of many threats addressed by the critical medicines and medical supplies in the SNS.

Budget Request

CDC's FY 2016 request of **$571,043,000** for the SNS is $36,700,000 above the FY 2015 Enacted level. At this level CDC will be able to replace expiring countermeasures, maintaining current CDC capabilities to respond to public health threats and protect Americans in public health emergencies. Through collaboration and participation in the Public Health Emergency Medical Countermeasures Enterprise (PHEMCE), CDC will continue to align SNS holdings and procurement plans with the recommended PHEMCE strategy. Should PHEMCE requirements change or the commercial pricing for required MCMs increase sufficiently to impact SNS capability, then CDC will coordinate with PHEMCE to develop strategies to meet PHEMCE guidance with available funding.

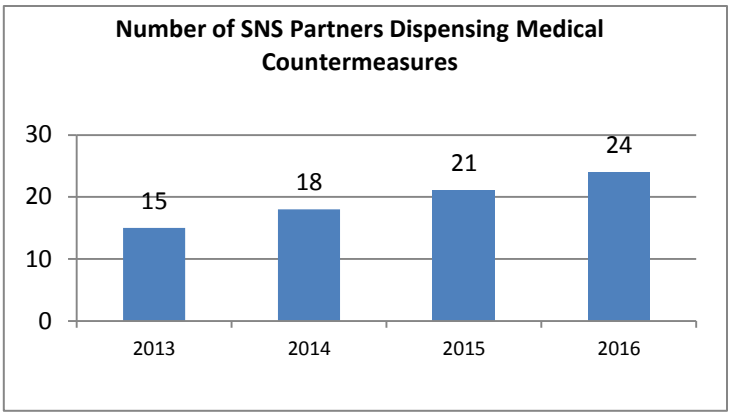
Strategic procurement and stockpiling of MCMs is necessary to protect Americans' health and save lives. Some MCMs are not commercially available due to small supplies and limited use. Additionally, U.S. pharmaceutical supply chains run on a just-in-time model, often containing no more than a 30-day-supply of pharmaceuticals under normal conditions. As a result, commercially-available products may not exist in necessary quantities or be positioned in ways that allow rapid distribution and use during public health emergencies.

CDC ensures SNS assets are available and ready for use by:

- Procuring, storing, maintaining, and replacing MCM assets, valued in excess of $6.3 billion
- Supporting PHEMCE with subject matter expertise and data to inform strategic MCM requirements and procurement decisions
- Providing guidance, training, exercise support, and assistance to state and local partners who will receive and dispense MCMs in an emergency response
- Establishing and strengthening public-private partnerships to integrate private resources into public health response plans for effective dispensing of MCMs

[427] http://www.cdc.gov/phpr/stockpile/stockpile.htm
[428] http://blogs.cdc.gov/cdcworksforyou24-7/2012/11/up-and-running-in-48-hours-how-federal-medical-stations-help-people-after-natural-disasters-like-hurricane-sandy/

- Fostering dialog and developing guidance and tools[429] for the integration of healthcare partners into public health response planning
- Providing timely, accurate, and relevant information to clinicians to respond to emerging threats and public health emergencies.



CDC collaborates with PHEMCE to prioritize and adjust the SNS formulary based on current threats and funding. PHEMCE is responsible for defining and prioritizing requirements for public health emergency MCMs, as well as establishing deployment and use strategies for SNS products. Furthermore, CDC works with PHEMCE in developing a five-year budget plan, taking into consideration the requirements and costs of SNS products. This Multi-Year Budget provides a platform for CDC evaluation and reporting of the impact of proposed formulary changes. CDC's five-year projections are also part of the SNS Annual Review process to identify projected funding shortfalls or available funding for new procurement in future fiscal years, which lead to PHEMCE recommendations for CDC procurement strategy as reported in the SNS Annual Review Report. Should SNS be unable to maintain current preparedness capabilities in FY 2016 due to changes in commercial pricing or PHEMCE requirements, PHEMCE recommends that CDC reduce the planned procurement of anthrax vaccine to address the difference.

Strategic National Stockpile Support for the U.S. Response to Ebola

CDC expanded personal protective equipment (PPE) holdings in the Strategic National Stockpile to support public health and healthcare partners who may receive an Ebola patient without sufficient PPE available. Procurement was conducted without disrupting the commercial market, and CDC engaged with commercial manufacturers and suppliers of PPE to direct available PPE to hospitals with the greatest need.

In FY 2016, nearly 87% of requested SNS funds are projected to go toward purchasing and maintaining MCMs designed to help respond to and recover from public health events. The remaining funds will support other preparedness related activities such as:

- Science and research
- Response and training operations
- Development and maintenance of state and local public health capabilities
- Activities to strengthen collaboration between public health and healthcare.

CDC will continue to provide training and exercise support in FY 2016 to sustain and improve state and local capabilities critical to the effective dispensing of stockpiled MCMs. In FY 2014, SNS staff trained 1,258 individuals at the federal, state, and local level through 57 training opportunities. Additionally, a new self-paced online training course provided a detailed overview of SNS plans and capabilities for another 734 individuals. SNS also supported 28 MCM dispensing exercises at the federal, state, and local levels, utilizing SNS training materials under realistic conditions.

[429] http://www.cdc.gov/phpr/healthcare/about.htm

CDC will continue to expand and strengthen partnership agreements[430] with government, private, faith-based, and community-based organizations in FY 2016. Under these agreements, partners explore and implement options to commit their resources and staff to dispensing MCM to defined populations such as company employees and their families, or hotel guests in the case of hospitality industry partners. Partners may also open their doors for public dispensing to further reduce the burden on public health resources. These partnerships for MCM dispensing will enhance community resilience and business continuity efforts while strengthening CDC's capacity to support a public health response with efficient distribution channels.

Finally, to ensure stockpiled products can be used safely and effectively, CDC reviews federal response plans and guidance for state and local partners as an ongoing preparedness activity. CDC implemented a project in FY 2014 to improve nationwide anthrax preparedness through the evaluation of capabilities to support a full 60-day response to a large-scale anthrax exposure. This project comprises an end-to-end review of the plans and capabilities of CDC and our partners. The project resulted in the completion of an updated annex to CDC SNS response plans in July 2014, which covers the full scope and duration of an anthrax response. The final steps for this project include the development of updated guidance and technical assistance resources, and engagement with state and local partners to communicate important changes and improvements, so they can be incorporated in preparedness activities and response plans at the state and local level. These steps are scheduled for completion in FY 2015.

SNS FY 2016 Activities and Goals

Activities	Goals
Procure, store, maintain, and replace MCMs	• Implement enhancements to SNS inventory management system to improve reporting capabilities and communication with partners • Execute prioritized procurement plan to maintain critical MCM capabilities with available funding
Support PHEMCE	• Improve inventory modeling and projections to support better and faster decision making • Deliver an annual report to PHEMCE on the status of SNS material to ensure tracking of identified priorities
Provide guidance, training, exercise support, and assistance	• Train over 1,000 individuals at the state and local level to support distribution and dispensing of SNS assets • Provide effective and thorough evaluation of state and local capabilities to receive and use SNS assets
Public/private partnerships	• Establish three new strategic partnerships with public, private, and community-based partners • Support current partners in developing operational strategies to support state/local public health emergency MCM distribution and dispensing
Public health/healthcare collaboration	• Host two new engagements to identify locality and sector specific challenges • Publish new tools or guidance for planning and integration of healthcare resources and requirements in a response • Host 12 public health/clinical care focused conference calls/ webinars through the Clinician Outreach and Communication Activity media platform

[430] http://www.cdc.gov/phpr/partnerships/story_closedPODs.htm

State Table: Public Health Emergency Preparedness (PHEP) Program Funding [1,2]

	FY 2014 Final	FY 2015 Estimate[3]	FY 2016 President's Budget[4]	Difference +/- 2015
Alabama	$8,942,768	$8,918,423	$8,918,423	$0.000
Alaska	$4,184,642	$4,201,193	$4,201,193	$0.000
Arizona	$11,813,013	$11,779,908	$11,779,908	$0.000
Arkansas	$6,655,456	$6,640,549	$6,640,549	$0.000
California	$42,353,785	$42,363,937	$42,363,937	$0.000
Colorado	$9,767,690	$9,741,466	$9,741,466	$0.000
Connecticut	$7,767,333	$7,749,182	$7,749,182	$0.000
Delaware	$4,389,690	$4,385,056	$4,385,056	$0.000
Florida	$29,286,410	$29,305,955	$29,305,955	$0.000
Georgia	$16,048,555	$15,998,448	$15,998,448	$0.000
Hawaii	$4,886,947	$4,879,923	$4,879,923	$0.000
Idaho	$5,035,533	$5,027,470	$5,027,470	$0.000
Illinois	$16,859,738	$16,808,368	$16,808,368	$0.000
Indiana	$11,449,455	$11,416,417	$11,416,417	$0.000
Iowa	$6,786,225	$6,770,685	$6,770,685	$0.000
Kansas	$6,771,315	$6,756,734	$6,756,734	$0.000
Kentucky	$8,501,165	$8,479,033	$8,479,033	$0.000
Louisiana	$8,926,605	$8,903,349	$8,903,349	$0.000
Maine	$4,723,346	$4,716,633	$4,716,633	$0.000
Maryland	$11,284,482	$11,254,744	$11,254,744	$0.000
Massachusetts	$13,011,199	$13,116,231	$13,116,231	$0.000
Michigan	$16,674,466	$16,760,739	$16,760,739	$0.000
Minnesota	$11,160,972	$11,274,246	$11,274,246	$0.000
Mississippi	6,731,287	$6,716,196	$6,716,196	$0.000
Missouri	$10,947,076	$10,916,633	$10,916,633	$0.000
Montana	$4,345,574	$4,340,493	$4,340,493	$0.000
Nebraska	$5,373,285	$5,363,910	$5,363,910	$0.000
Nevada	$6,755,814	$6,741,895	$6,741,895	$0.000
New Hampshire	$4,829,901	$4,823,222	$4,823,222	$0.000
New Jersey	$15,670,954	$15,626,142	$15,626,142	$0.000
New Mexico	$6,651,186	$6,781,623	$6,781,623	$0.000
New York	$19,786,659	$19,961,533	$19,961,533	$0.000
North Carolina	$14,927,445	$14,878,184	$14,878,184	$0.000
North Dakota	$4,184,642	$4,201,193	$4,201,193	$0.000
Ohio	$18,044,394	$17,986,014	$17,986,014	$0.000
Oklahoma	$7,806,407	$7,787,125	$7,787,125	$0.000
Oregon	$8,051,668	$8,031,961	$8,031,961	$0.000
Pennsylvania	$19,685,365	$19,620,862	$19,620,862	$0.000
Rhode Island	$4,516,142	$4,510,835	$4,510,835	$0.000
South Carolina	$9,712,762	$9,817,480	$9,817,480	$0.000
South Dakota	$4,184,642	$4,201,193	$4,201,193	$0.000
Tennessee	$11,288,993	$11,256,374	$11,256,374	$0.000
Texas	$37,454,872	$37,323,179	$37,323,179	$0.000
Utah	$6,637,036	$6,622,610	$6,622,610	$0.000
Vermont	$4,184,642	$4,201,193	$4,201,193	$0.000
Virginia	$14,930,741	$15,010,991	$15,010,991	$0.000
Washington	$12,128,478	$12,093,634	$12,093,634	$0.000
West Virginia	$5,355,717	$5,346,335	$5,346,335	$0.000
Wisconsin	$11,520,997	$11,683,618	$11,683,618	$0.000
Wyoming	$4,184,642	$4,201,193	$4,201,193	$0.000

	FY 2014 Final	FY 2015 Estimate[3]	FY 2016 President's Budget[4]	Difference +/- 2015
Cities/Counties				
Chicago	$9,819,821	$9,807,076	$9,807,076	$0.000
Los Angeles County	$19,841,884	$19,795,478	$19,795,478	$0.000
New York City	$18,534,641	$18,495,973	$18,495,973	$0.000
Washington, D.C.	$6,347,131	$6,344,070	$6,344,070	$0.000
Territories				
American Samoa	$364,263	$363,986	$363,986	$0.000
Guam	$487,027	$486,219	$486,219	$0.000
Marshall Islands	$308,091	$379,745	$379,745	$0.000
Micronesia	$424,542	$424,004	$424,004	$0.000
Northern Marianas	$360,109	$359,849	$359,849	$0.000
Palau	$324,598	$324,492	$324,492	$0.000
Puerto Rico	$7,270,658	$7,252,206	$7,252,206	$0.000
Virgin Islands	$423,124	$422,592	$422,592	$0.000
Subtotal, States	$547,244,111	$547,294,310	$547,294,310	$0.000
Subtotal, Cities/Counties	$54,543,477	$54,442,597	$54,442,597	$0.000
Subtotal, Territories	$9,962,412	$10,013,093	$10,013,093	$0.000
Total	**$611,750,000**	**$611,750,000**	**$611,750,000**	**$0.000**

[1] This state table is a snapshot of selected programs that fund all 50 states (and in some cases local, tribal, and territorial grantees). For additional information (data available through FY 2013): http://wwwn.cdc.gov/fundingprofiles/fundingprofilesria/

[2] CFDA NUMBER(s): 93-069 [Discretionary]

[3] Individual grantee funding levels may change depending on programmatic decisions made when calculating funding for the Cities Readiness Initiative, LRN-C Level 1 funding, and other programs funded through the PHEP cooperative agreement.

[4] FY 2016 estimates are based on current anticipated funding. Recalculations may be necessary based on additional strategy planning for FY 2016.

CDC-WIDE ACTIVITIES AND PROGRAM SUPPORT

(dollars in millions)		FY 2014 Final[1]	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
	Budget Authority	$114.649	$113.570	$113.570	$0.000
	ACA/PPHF	$160.000	$160.000	$0.000	-$160.000
	Total Request	**$274.649**	**$273.570**	**$113.570**	**-$160.000**
	FTEs	2,294	2,294	2,294	0
CDC-Wide					
- Public Health Leadership and Support		$114.649	$113.570	$113.570	$0.000
- Preventive Health Block Grant Program	ACA/PPHF	$160.000	$160.000	$0.000	-$160.000

[1] The FY 2014 Cross-Cutting Activities and Program Support is comparably adjusted to reflect the transfer of Buildings and Facilities line to a separate account.

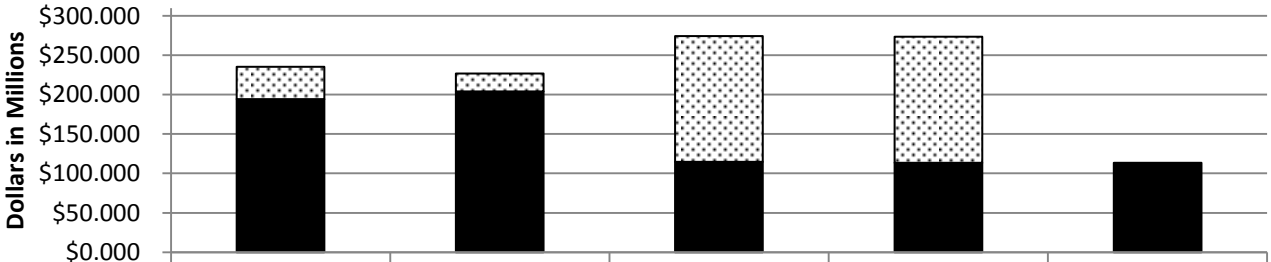
Summary

CDC's FY 2016 request of **$113,570,000** for CDC-Wide Activities and Program Support is $160,000,000 below the FY 2015 Enacted level. This request continues the proposed elimination of Preventive Health and Health Services Block Grant. The remaining activities support a range of mission-critical activities and programs across CDC.

Performance Highlights

- The Office for State, Tribal, Local and Territorial Support supported health departments in increasing the capacity and performance of the public health system
    - 36% of the U.S. population is now served by an accredited health department (60 total; 7 state, 53 in local areas)
    - Using CDC's Prevention Status Reports as a tool, CDC and states raised awareness about and increased use of evidence-based policies and practices on key public health issues from 2011 to 2013 (green ratings +10% ; yellow ratings +2%)
    - Preliminary results of the National Public Health Improvement Initiative during its last year (FY 2014) indicate significant improvements in grantee health departments' capacity and service to the public and positive impact on health, providing further evidence that investments in improving foundational public health infrastructure and service quality have positive returns.
- The CDC-INFO contact center answered over 300,000 inquiries in FY 2014, on topics including seasonal flu, Ebola, MERS-CoV, cyclospora, and fungal meningitis.

CDC-Wide Funding History[1]



	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 PB
Total	$235.549	$226.973	$274.649	$273.570	$113.570
ACA/PPHF	$41.200	$22.585	$160.000	$160.000	$0.000
Budget Authority	$194.349	$204.388	$114.649	$113.570	$113.570

[1] FY 2012 and FY 2013 are comparably adjusted to reflect the FY 2014 BSS transfer to implement the Working Capital Fund.

[2] The FY 2014 Cross-Cutting Activities and Program Support is comparably adjusted to reflect the transfer of Buildings and Facilities line to a separate account.

Public Health Leadership and Support Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	**$114.649**	**$113.570**	**$113.570**	**$0.000**

Overview

The Public Health Leadership and Support line funds CDC's Office of the Director, urgent and emergent public health response activities, and offices that provide agency-wide support and leadership, and technical support to health organizations and officials in the field. These funds are essential to CDC's ability to manage with efficiency, transparency, and accountability. In addition to day-to-day agency management, these funds are used to provide technical support to health organizations and officials in the field. Some offices providing agency-wide support are also partially or fully funded by the Public Health Scientific Services (PHSS) budget.

Budget Request

CDC's FY 2016 request of **$113,570,000** for public health leadership and support is level with the FY 2015 Enacted level. Some activities described below are partially or fully funded by public health scientific services (PHSS).

Office of the Director

Funds requested in FY 2016 will support CDC's public health leadership to the nation through several offices that provide services agency-wide. The Office of the Director also manages funding for urgent and emergent threats. In FY 2014, this funding supported:

- Ebola response
- Global Health Security Agenda (GHSA) pilot programs in Uganda and Vietnam
- Rapid Evaluation of Means to Reduce the Increase In Fungal Disease Caused by Coccidiodomycosis
- Middle-East Respiratory Syndrome response

Office for State, Tribal, Local and Territorial Support (OSTLTS)

CDC's Office for State, Tribal, Local and Territorial Support (OSTLTS) improves the capacity of state, tribal, local, and territorial (STLT) public health departments to manage and improve performance and deliver high quality programs and services to protect the public's health. Strategies include improving the performance and accountability of STLT health departments through national accreditation and improving the quality, performance, and organizational methods of STLT health departments operations, programs, and services. OSTLTS works with stakeholders such as health departments and national public health organizations to identify and implement improvements in services and support to the field, and to identify and address current and emerging challenges in the public health system. OSTLTS also facilitates cross-cutting activities to collaborate with STLT health officials to inform CDC's public health activities and conduct joint problem-solving and decision-making.

In addition to supporting health departments every day, OSTLTS provides ready-to-use tools and surge capacity for supporting health departments in protecting the public's health during emergencies. For example, during the 2014 Ebola response, OSTLTS' facilitated CDC and Indian Health Service collaboration on information delivery to tribes through subject matter expertise, existing relationships, public health law technical assistance and mechanisms for communicating with health departments. Additionally, OSTLTS Public Health Associates embedded in health departments complimented and supported the efforts of CDC and health departments.

Recent OSTLTS Support to Public Health Departments and Organizations[431]

Activities	Examples
Improve health department performance through support of national accreditation standards	306 health departments (HDs)—2 tribal, 29 state and 275 local—formally applied for national accreditation through the Public Health Accreditation Board. Of these, 60(serving 36% of the U.S. population) have achieved accreditation. Data suggest hundreds more are preparing to meet the national standards and seek accreditation. (January 2014)
Monitor state use of policies and practices to address priority public health problems	States and Washington, D.C. are using CDC's 2013 Prevention Status Reports[432] (PSRs) to benchmark performance, inform strategic planning, and set priorities. Reach of the 2013 PSRs exceeded 30,000 downloads as of November 2014.
Improve the efficiency and effectiveness of health department program and services	Among prior recipients of CDC's National Public Health Improvement Initiative health department grantees, 85% of the grantees (n=62/73) demonstrated increased efficiencies and/or effectiveness through quality improvement initiatives (, Aug. 2014). The percentage reflects cumulative results of performance from September 2011 – April 2014 (and funded with FY 2011, 2012, and 2013 appropriations). A comprehensive program report will be available in 2015. • Preliminary results include: Arkansas increased patients completing latent TB treatment by 26% and concurrently decreased delayed diagnosis and missed follow-ups. • Oklahoma decreased early elective deliveries by 66%. • Alaska Native Tribal Health Consortium increased referrals to the tobacco cessation program by 12%. All patients referred received services.
Build capacity to use public health law	Trained 6,880 people in public health law from January through mid-November 2014. Provided tools such as legal strategies states can use to address prescription drug misuse/abuse and system innovations such as accountable care organizations and social impact bonds (2014)
Infuse public health knowledge across the health system	More than 26,000 people are subscribed to the weekly "*Did You Know*?" feature containing health data and health activity implementation examples; 137 organizations syndicate the feature on their websites (October 2014), resulting in more than 1.3 million page views via syndication. The State, Tribal, Local, and Territorial Public Health Professionals Gateway—a source for information, tools, and resources for practice—had 401,357 page views (January through October 2014); 23,500 subscribed to *"Have You Heard?: Facts from the Field*" which features public health successes achieved by state and local governments, national coalitions, community-based organizations, and others (as of October 2014).

[431] Activities are funded through both PHLS and PHSS budget lines and cannot be separated.
[432] http://www.cdc.gov/stltpublichealth/psr/index.html

Activities	Examples
Build capacity to improve population health through national, nonprofit organizations	Funded and collaborated with the National Association of County and City Health Officials and the Association of State and Territorial Health Officials in producing national profile surveys of more than 2,600 state, territorial, and local health departments on their performance, service, and functional capacities. The assessments are the only sources of comprehensive information for decision makers about organization and the financial, workforce, and information technology resources of health departments across the public health system.

Office of the Chief of Staff

The Office of the Chief of Staff provides support to the Director and manages all executive secretariat functions across CDC.

Office of the Chief of Staff Activities

Activities	Examples
Controlled correspondence	The focal point for the analysis, technical review, and final clearance of all correspondence addressed to, signed by, or signed on behalf of the CDC Director.
Review/clearance of non-scientific documents	Serves as the focal point for the analysis, technical review, and final clearance of non-scientific policy documents that require Agency clearance and/or CDC Director approval.
Government Accountability Office/ Office of Inspector General engagements and recommendations	Works collaboratively with CDC, Government Accountability Office (GAO), and Office of the Inspector General (OIG) staff to facilitate GAO/OIG audits and evaluations (engagements), including entrance conferences, pre-briefs, information requests, exit conferences and review/comment on draft reports.

Communications Office

The Communications Office provides support to all CDC programs to provide accessible, accurate, relevant, and timely health information and interventions to protect and promote the health of individuals, families, and communities.

Communication Activities

Activities	Examples
Develop and produce communication materials	Produces broadcast, audio, and video material; writer-editor services; multi-lingual services; audio and video public service announcements, and related content.
Ensure media accuracy	Reviews CDC data, research, guidelines, and actions presented through various media channels.
Manage new media	Manages CDC's internet, intranet, Twitter, Facebook, and other social media sites.
Consult with CDC programs	Develops strategies to help CDC employees communicate more effectively with partners and the public.
Manage CDC’s national toll-free contact center	Provides timely, accurate, and consistent science-based information on a variety of disease prevention and health promotion topics.

Policy Office

The Policy Office provides agency-wide support to:

- Lead CDC's public health and health care collaboration activities
- Coordinate the public health response to the Affordable Care Act (ACA)
- Monitor public health implications at federal, state, and local levels and disseminate key information inside and outside CDC
- Build relationships with external organizations to advance public health

Science Office

The Science Office provides leadership in advancing the quality and integrity of CDC science, and provides agency-wide leadership on scientific and medical matters. The Science Office:

- Develops policies related to intramural and extramural research to ensure CDC science activities and staff maintain the highest standards of scientific integrity and ethics
- Provides oversight of scientific clearance of CDC publications and promotes best practices in external peer review
- Promotes and strengthens a common scientific culture for enhanced information exchange internally and externally including activities such as:
    - Public Health Grand Rounds[433]
    - Vital Signs[434]
    - CDC Science Clips[435]

Office of Minority Health and Health Equity

The Office of Minority Health and Health Equity includes the Office of Women's Health and the Diversity Management Program, and provides leadership for CDC-wide policies, strategies, planning and evaluation to eliminate health disparities.

Office of Minority Health and Health Equity Activities

Activities	Examples
Monitor and Report	Monitors and reports on the health status of vulnerable populations and the effectiveness of health protection programs
Decision Support	Provides decision support to CDC in allocating resources to surveillance, research, intervention, and evaluation programs
Official Reports	Coordinates CDC's response to Executive Orders and HHS health disparity initiatives
Strategic Partnerships	Initiates strategic partnerships with governmental, non-governmental, national, and regional organizations
Guidance and Oversight	Provides guidance and oversight to the agency-wide implementation of the CDC Diversity Plan

[433] http://www.cdc.gov/about/grand-rounds/
[434] http://www.cdc.gov/vitalsigns/
[435] http://www.cdc.gov/phlic/sciclips/

Office of Equal Employment Opportunity

The Office of Equal Employment Opportunity provides agency leadership on all matters related to equal employment opportunity (EEO), alternative dispute resolution, and reasonable accommodations. This office:

- Provides oversight for EEO complaints processing
- Ensures alternative dispute resolution is available to all CDC and ATSDR employees for resolving conflict or disputes informally and confidentially
- Maintains a work environment in which persons with disabilities receive full and fair consideration for any job for which they apply
- Provides reasonable accommodation to employees with disabilities in order to perform their essential job functions

Office of Infectious Diseases

The Office of Infectious Diseases (OID) provides agency-wide leadership to promote and facilitate science, programs, and policies to reduce the burden of infectious diseases in the United States and globally. OID includes the office of the Deputy Director for Infectious Diseases and, as a stand-alone unit, the Influenza Coordination Unit. OID works to:

- Support internal and external partners to advance infectious disease prevention programs and priorities
- Provide national and global leadership and expertise in preventing and controlling infectious diseases by developing a strong foundation for advancing public health research
- Build capacity with partners throughout the world to protect Americans at home and abroad
- Provide strategic leadership to and enhance coordination among CDC's three infectious disease national centers

CDC's infectious disease national centers provide national and global leadership and expertise in preventing and controlling infectious diseases, ensuring a strong foundation for advancing public health research and building capacity with partners throughout the world. OID's national centers include:

- National Center for Emerging and Zoonotic Infectious Diseases (NCEZID)
- National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP)
- National Center for Immunization and Respiratory Diseases (NCIRD)

Office of Noncommunicable Diseases, Injury and Environmental Health

The Office of Noncommunicable Diseases, Injury and Environmental Health (ONDIEH) provides agency-wide strategic direction and leadership for the prevention of noncommunicable diseases, injury, disabilities, and environmental health hazards in the United States and globally. This office works to:

- Strengthen noncommunicable diseases, injury prevention, disabilities, and environmental health-related science and program impact
- Enhance integration and inclusion of noncommunicable diseases, injuries, disabilities and environmental health across CDC and within the larger public health community
- Increase collaboration and innovation across noncommunicable diseases, injury prevention, disabilities and environmental health

The Office of Noncommunicable Diseases, Injury and Environmental Health national centers provide national and global leadership and expertise in preventing and controlling noncommunicable diseases, ensuring a strong foundation for advancing public health research and building capacity with partners throughout the world. ONDIEH's national centers include:

- National Center on Birth Defects and Developmental Disabilities (NCBDDD)
- National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)
- National Center for Environmental Health/Agency for Toxic Substances and Disease Registry (NCEH/ATSDR)
- National Center for Injury Prevention and Control (NCIPC)

CDC Washington Office

The CDC Washington Office (CDC/W) provides support to CDC on legislative and policy issues. CDC/W also represents the agency in Washington, D.C. to the Department of Health and Human Services, other agencies, and the Washington, D.C. policy community. CDC/W is the main point in CDC for receiving requests for information and assistance from Congress. CDC/W works closely with the Office of the Director, program leadership, policy offices, and CDC's Appropriations, Legislation, and Formulation Office to respond to those requests.

CDC Washington Activities

Activities	Examples
Congressional relations	Builds Congressional relations, including notifying Congress of breaking public health developments and providing technical reviews as requested by Congress on public health policy and legislative initiatives
Tracks and analyzes legislation	Tracks and analyzes legislation impacting CDC programs and coordinates preparation of CDC testimony and witnesses for hearings
External relations	Builds relations with government agencies and other organizations to advance policy agendas, with an emphasis on federal agencies

Office of the Chief Operating Officer

OCOO offices support CDC by administering the agency's budget, grants, facilities, physical security, workforce health and wellness, human resources, and information technology programs. The OCOO office oversees many functions supported by the Working Capital Fund. The Public Health Leadership and Support line funds the Business Integrity and Strategic Management Unit; the Appropriations, Legislation, and Formulation Office; and the OCOO Office of the Director.

Business Service Offices in OCOO

Business Service Offices	Summary
Business Integrity and Strategic Management (BISM) Unit	The Business Integrity and Strategic Management (BISM) Unit leads strategic management, risk management, and fiscal integrity activities for CDC's business operations
Human Resources Office (HRO)	HRO provides a full range of human resources advisory, consulting, and information services to meet the needs of employees and managers at CDC and ATSDR. HRO consists of five core offices responsible for carrying out human resources operational and strategic programs: • CDC University • Client Services • Executive and Scientific Resources • Strategic Programs • Workforce Relations
Office of Safety, Security, and Asset Management (OSSAM)	CDC's Office of Safety, Security, and Asset Management (OSSAM) provides services to the agency in the areas of: • Safety • Security • Buildings and facilities • Property • Transportation • Health and wellness • Sustainability
Office of the Chief Financial Officer (OCFO)	OCFO provides leadership for the agency's budgetary and accounting initiatives including administration of CDC's Working Capital Fund. The office works to ensure CDC accomplishes its public health mission through agency-wide fiscal accountability and oversight. OCFO also provides congressional support through the Appropriations, Legislation, and Formulation Office, which is funded by PHLS.
Office of the Chief Information Officer (OCIO)	OCIO coordinates information program, policy, management, technology, security, and projects through the following organizations: • Enterprise IT Portfolio Office • Acquisition Program Management Office • Enterprise Architecture • Freedom of Information Act Requester Service Center • Information Technology Service Office • Management Analysis and Services Office • Management Information Systems Office • Office of the Chief Information Security Officer
Procurement and Grants Office (PGO)	Each year, approximately 80% of CDC's overall budget is distributed via contracts, grants, and cooperative agreements to partners throughout the world to promote health, prevent disease, injury, and disability, and prepare for new health threats. PGO is responsible for the stewardship of these funds, providing excellent service to CDC partners and stakeholders.

CDC FY 2014 Public Health Leadership and Support Obligations

The Joint Explanatory Statement accompanying the Consolidated Appropriations Act, 2015 (P.L. 113-59) included requirements for CDC to provide a Public Health Leadership and Support Detail that includes specific breakouts and details by budget activity with object class data for each activity.

FY 2014 Public Health Leadership and Support: Summary by Object Class

OC	Description	Total
11	Compensation Summary	$36,692,749
12	Personnel Benefits	$11,070,799
21	Travel and Transportation of Persons	$2,562,642
22	Transportation of Things	$133,110
23	Rent, Telecommunication, Other Comm. & Utilities	$5,294,985
24	Printing and Reproduction	$278,269
25	Consulting & Other Services	$38,915,565
26	Supplies & Materials	$665,586
31	Equipment	$2,802,327
41	Grants	$5,902,919
42	Insurance Claims	$6,313
	Working Capital Fund	$10,323,735
Grand Total		$114,649,000

Affordable Care Act Prevention and Public Health Fund

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
ACA/PPHF	**$160.000**	**$160.000**	**$0.000**	**-$160.000**

Preventive Health and Health Services Block Grant

The FY 2016 budget request eliminates the Preventive Health and Health Services Block Grant (PHHSBG) program.

These activities may be more effectively and efficiently implemented through the State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health[436] program, which provides resources to states to coordinate activities across categorical funding streams, as well as Affordable Care Act Prevention and Public Health Fund investments. Elimination of this program provides an opportunity to find savings, while enhancing functionality for core chronic diseases. When the PHHSBG was first authorized in 1981, there were minimal resources within CDC's budget allocated for categorical programs such as heart disease, diabetes, immunizations, and obesity, and many states did not receive funding from CDC to support prevention of chronic diseases. However, since 1981, categorical programs at CDC have grown to over $1 billion annually and the PHHSBG now represents a much smaller percentage of state budgets when compared to total available CDC funding.

[436] http://www.cdc.gov/dhdsp/programs/spha/

Buildings and Facilities Budget Request

(dollars in millions)	FY 2014 Final	FY 2015 Enacted	FY 2016 President's Budget	FY 2016 +/- FY 2015
Budget Authority	$23.772	$10.000	$10.000	$0.000

Summary

CDC's FY 2016 request of **$10,000,000** for buildings and facilities is level with the FY 2015 Enacted level.

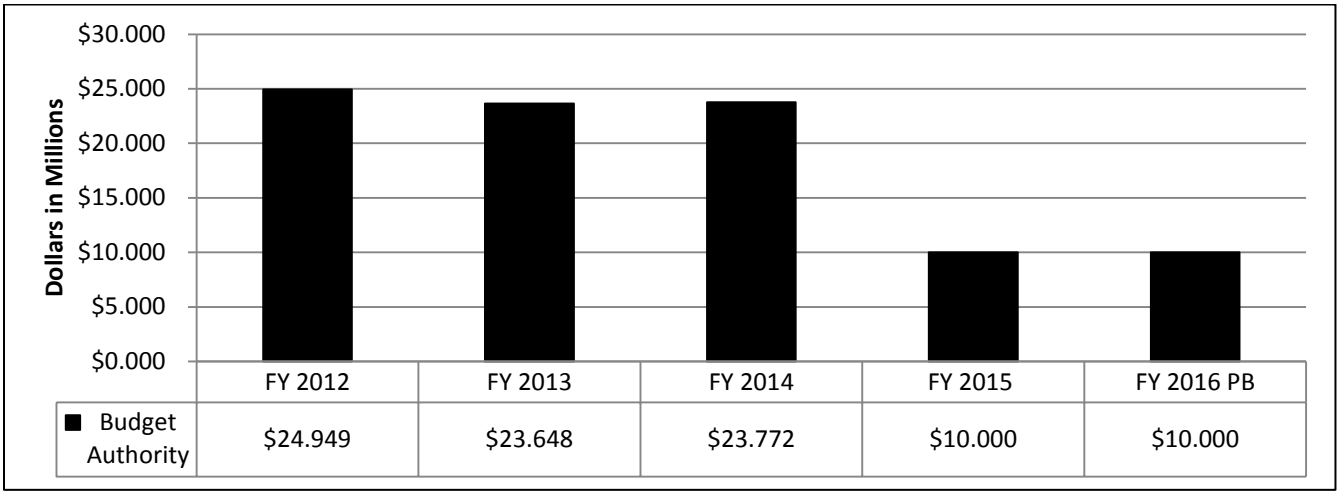
Buildings and Facilities (B&F) funding supports capital projects and the National Repair & Improvement (R&I) program. Capital projects funded through B&F include major renovations to existing buildings in the owned inventory. R&I projects restore or improve a primary building system or real property components to effective use, including roofs, chillers, boilers, water and air conditioning systems, elevators, foundations, windows, and built-in laboratory equipment including chemical fume hoods, biological safety cabinets, sterilizers, and autoclaves.

Capital leases, utilities, and operations and maintenance contracts for CDC building and facilities are funded through the Working Capital Fund.

Performance Highlights

- The Roybal Campus Master Plan 10 year plan was updated, providing CDC with a comprehensive facilities planning tool for the headquarters campus.
- CDC initiated a 2 year space plan study of owned and leased facilities as part of continuing efforts to increase building utilization rates.
- CDC received an HHS Green Champions "Good Neighbor" award for working with the City of Atlanta to share Green Building practices, as well as received LEED Gold Certification on building 107 in Chamblee, GA.
- CDC prepared a Program of Requirements and a Project Development Study of a new site with existing facilities, available on the Cincinnati open real estate market, that would meet the NIOSH facility requirements for accommodating NIOSH research activities in the future with limited renovation and/or construction.
- Overall, CDC reduced leased square footage of buildings and structures by approximately 500,000 gross square feet—nearly 11.5 acres or 88 Boeing 747s—from FY 2011 through FY 2013. This includes eight leases in Atlanta and Fort Collins in FY 2013, saving over $1,000,000 in recurring annual costs.

Buildings and Facilities Funding History



	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 PB
Budget Authority	$24.949	$23.648	$23.772	$10.000	$10.000

Overview

CDC established the buildings and facilities (B&F) program over 20 years ago to replace, sustain, improve, and repair existing facilities and to construct new facilities to meet CDC's mission. The principal B&F activity is mission support, serving approximately 15,000 CDC staff—FTE and non-FTE—who occupy CDC-controlled space around the world.

Budget Request

CDC's FY 2016 request of **$10,000,000** for Buildings and Facilities is level with the FY 2015 Enacted level. This request will support critical repairs and improvements (R&I) to ensure continued condition improvement through new budgetary resources, and carryover funds. As many non-Atlanta campuses are approaching a half century or more in age— such as the National Institute for Occupational Safety and Health (NIOSH) Cincinnati research campus—R&I and capital needs are expected to increase in the outyears. CDC anticipates recovering prior year B&F funds to help support Condition Index (CI) sustainment at a level above 90.

CDC regularly updates its Sustainable Design and High Performance Building Guidelines to reflect changes in federal, state, and local requirements and statutes; changes in technology or industry standards; and adjustments to CDC goals and priorities. Potential projects generated by building assessments are incorporated into the annual facilities business plans. CDC continues to meet or exceed annual energy conservation, water conservation, and sustainable practices performance targets.

In FY 2016, CDC will continue to focus on sustainability with all facilities design, construction, and maintenance. CDC will make a number of upgrades and changes to operations in the coming year that reflect best practices in environmental responsibility. CDC also plans to upgrade several facilities with the goal of lowering energy consumption and costs using:

- HVAC and related systems, at campuses nationwide, and
- Cooling roof coatings for several buildings to ensure better insulation

Currently, CDC has more than $35,000,000 in pending projects, which could be supported with the FY 2016 request and carryover balances.

CDC Capital Investment Review Board (CIRB) Project categories

Category	Definition
Emergency	An area of contingency planning that supports items that may fall into other categories but may not have been identified previously due to urgent and critical nature of an event, crisis, etc.
Fire & Life Safety	Engineering projects that improve or sustain Safety, Fire & Life Safety Code compliance through repairs and improvements.
Security	Projects that improve or sustain the condition and functionality of physical and IT security features of an asset. This category includes automated control systems that currently reside within the IT security architecture.
Condition Index	The Federal Real Property Council asset performance metric Condition Index (CI) is a well-known and widely used general measure of a constructed asset's condition at a specific point in time. CI is the ratio of the asset's repair needs to its Functional Replacement Value. R&I projects are prioritized to maintain an asset's CI.
Program Support	Customer-driven projects that support specific mission-related activities to sustain or improve scientific and research support systems and activities, installation of scientific equipment, reasonable accommodations requests, and similar activities.

Category	Definition
Space Utilization	Initiatives undertaken to increase space utilization of an asset and promote efficiency of use. Examples include: building demolition/disposal, special studies, space alterations that promote increased utilization, and alterations necessary for hoteling/teleworking.
Other	Specific activities that support B&F, such as strategic and campus-level planning, project development studies, building evaluation reports, facilities-related National Environmental Policy Act and Historic Preservation Act compliance, and similar projects.

Repairs and Improvements Projects[1,2]

Project Category	FY 2014 (# and estimated cost)	FY 2015 (# and estimated cost)	FY 2016 (# and estimated cost)
Emergency	1 project; $1,000,000	1 project; $1,000,000	1 project; $1,000,000
Fire & Life Safety	23 projects; $7,103,146	2 projects; $2,000,000	15 projects; $5,364,000
Security	5 projects; $1,150,000	1 project; $100,000	5 projects; $617,500
Condition Index	85 projects; $14,960,627	48 projects; $22,582,920	68 projects; $19,109,000
Program Support	22 projects; $2,562,500	7 projects; $7,000,000	14 projects; $4,935,000
Space Utilization	1 project; $1,891, 903	N/A	2 projects; $675,000
Other	13 projects; $4,645,000	5 projects; $2,650,000	8 projects; $4,145,000
Total	150 projects; $33,313,176	64 projects; $35,332,920	113 projects, $35,845,000

[1] Data as of December 1, 2014

[2] This table is subject to revision

Federal Real Property Council Performance Metrics

Nationwide Repairs and Improvements (R&I) Program		
FRPC Measure	**Impact**	**Explanation**
Mission Dependency		
Mission Dependency	Positive	R&I funds are used for mission-critical and mission-dependent facilities in accordance with CDC's Condition Index (CI) Sustainment strategy. Repair funds are used to sustain buildings in an operational status. Improvement funds are used to modify space to bring it into compliance with current codes and reduce over-utilized space.
Facility Utilization		
Utilization Status	Positive	R&I funds are used for laboratories and other critical facilities in accordance with CDC's asset business plans.
Utilization Rate	Positive	R&I funds are used to restore assets to a condition allowing their continued effective designated use and to improve an asset's functionality or efficiency, thus maintaining or improving the utilization of the asset.
Facility Condition	Neutral	R&I funding supports CDC's sustainment and improvement strategy to maintain a portfolio CI of 90 or better.
Sustainment and Improvement Strategy	Neutral	A strategy of capital replacement of non-performing assets with R&I funding at appropriate levels and prioritization of critical assets and projects allows CDC to achieve a portfolio-wide CI of 90 over the 2010–2020 planning horizon.
Facility Cost		
Operations and Management (O&M) Cost	Neutral	CDC anticipates an unquantified impact on O&M costs resulting from appropriate R&I funding. Appropriate R&I appropriations and the Working Capital Fund ensure plants and equipment are operated and maintained in accordance with manufacturers' warranties and maximizes energy and operating efficiencies.

The proposed buildings and facilities construction projects are funded through budget authority with the exception of the Boiler Plant Decentralization project in Pittsburgh, Pennsylvania, which CDC plans to finance by employing an energy savings performance contract (ESPC) or utility energy service contract (UESC) that will dramatically improve efficiency at the facility.

Fort Collins Freezer Building

CDC plans to use carryover funding to replace a freezer building in Fort Collins, Colorado, that is scheduled to be returned to Colorado State University in 2016. The estimated cost for proposed construction is $5,600,000, which will be funded out of prior year balances. The replacement freezer will support emerging, zoonotic, and infectious disease research after the lease expires for the current laboratory. CDC is pursuing a lease extension with the University in the interim.

NIOSH Facilities

CDC completed the planning phase—including program requirements and a project development study—for consolidation of the NIOSH Cincinnati Research Facilities (Taft, Taft North, and Hamilton buildings) into one central location. NIOSH Cincinnati is currently located on two campuses, eight miles apart. These facilities are 60 years old and have significant deficiencies in both space configuration and the condition of building systems. A new, central location would reduce recurring costs associated with operating two separate campuses. CDC will conduct environmental condition and impact analyses as well as engineering and interior layout evaluations of potential buildings and properties. CDC is also developing cost estimates for design/renovation of existing buildings in case a new location is not cost effective.

WORKING CAPITAL FUND

CDC FY 2016 WORKING CAPITAL FUND TABLE [1,2]

(dollars in thousands)

CDC Programs	FY 2015 Budget Estimate	FY 2016 Budget Estimate
Immunization and Respiratory Diseases	$46,664	$46,664
HIV/AIDS, Viral Hepatitis, STI and TB Prevention	$51,432	$51,432
Emerging and Zoonotic Infectious Diseases	$61,182	$61,182
Chronic Disease Prevention and Health Promotion	$41,420	$41,420
Birth Defects, Developmental Disabilities, Disability and Health	$9,970	$9,970
Environmental Health	$22,880	$22,880
Injury Prevention and Control	$9,121	$9,121
Public Health Scientific Services	$54,906	$54,906
Occupational Safety and Health	$29,946	$29,946
Global Health	$40,740	$40,740
Public Health Preparedness and Response	$46,165	$46,165
CDC Wide Activities	$18,953	$18,953
CDC Program Total	**$433,377**	**$433,377**
Other CDC Funding Sources		
Agency for Toxic Substances and Disease Registry	$9,432	$9,432
Energy Employees Occupational Illness Compensation Program Act (EEOICPA)	$3,688	$3,688
Health Reform - Prevention and Public Health Fund (PPHF)		
Vaccines for Children	$22,105	$22,105
World Trade Center	$12,049	$12,049
Intra-Departmental Delegation of Authority (IDDA)		
PEPFAR	$30,884	$30,884
Other IDDA and IAAs	$17,258	$17,258
Other CDC Programs Contributions Total	$95,417	$95,417
Total CDC Programs Contributions	$528,793	$528,793

[1] FY 2015 and FY 2016 estimates are based on the Board approved budget of $528,793,351 and then distributed to each line on a pro-rata basis. The estimates do not include adjustments for increases or decreases to program lines, including emergency appropriations, that will result in a change to the consumption and subsequent bill.

[2] FY 2015 estimate does not reflect change in consumption supporting Ebola response.

Summary

In the FY 2012 appropriation bill for Labor, Health and Human Services, Education and Related Agencies (LHHS), Congress authorized CDC to establish a Working Capital Fund (WCF) to achieve greater efficiency and transparency in support of agency-wide business services. The WCF is a revolving fund with extended availability and serves as the funding mechanism for centralized business services support across CDC. Services rendered under the WCF are performed at pre-established rates to cover the full cost of business operations. In the FY 2014 LHHS appropriation bill, Congress authorized CDC to transfer amounts appropriated for business services for fiscal year 2014 to the Working Capital Fund to facilitate implementation. Unobligated balances of amounts appropriated for business services for FY 2013 have been transferred to the WCF as authorized in Public Law 112–74 in FY 2014. CDC completed the one-time transfers to other CDC appropriations.

Overview

In a WCF environment, business service offices (BSOs) provide services to CDC programs. The WCF bills programs for the services consumed based on pre-established rates.

FY 2016 WCF Operating Budget

The WCF Governance Board, described below, approves the annual operating budget for the WCF. If there are unforeseen requirements (e.g., mandated systems upgrades) requiring additional support, the Board will vote on how to fund these requirements during the fiscal year. During calendar year 2015, the WCF board will approve the final operating budget for FY 2016.

The WCF operational budget includes the following:

- Service line budgets
- Restricted reserves
- Unrestricted reserves

The WCF is not constrained by the fiscal year cycle. Restricted reserves include amounts that will be used for capital Information Technology (IT) infrastructure investments and accrued annual leave, while unrestricted reserves can be used for a variety of investments including any unforeseen, one-time cost during the fiscal year. As of the end of FY 2014, the WCF held $27.0 million in unrestricted reserves.

Objectives

Objectives of the WCF include:

- Achieve greater capability of business services by developing and reviewing rates and reporting on the cost of services rendered. WCF rates are intended to reflect the total cost of service provision, which promotes full cost recovery for each service within the Fund. CDC's WCF will be included as part of HHS' annual CFO audit.

- Realize greater transparency by allowing CDC Center directors, as the majority-voting members on the Board, to determine the scope of WCF services, associated rates, and service levels.

- Increase awareness and accountability for usage of business services resulting in a financial incentive for customers. Providing insight into how consumption impacts costs will promote more efficient use of program funding.

- Effectively plan for and finance long-term capital investments. As the WCF structure allows for the accumulation of funds for future capital investments, the WCF will finance mission-critical investments and improvements over time.

Governance Structure

The WCF Governance Board provides a structured governance process for all aspects of budgeting for the WCF. The Board ensures senior level engagement and oversight, and promotes transparency. CDC Center directors serve as the majority of voting members on the WCF Governance Board and preside over the Fund's budget. The Board determines the prices and rates, aligning business services support with program needs.

Scope

The WCF encompasses a portfolio of business services in the major categories described below.

Categories	Services
Human Resources	Services include developing and managing the recruitment, hiring, and selection of CDC employees and contractors. Additional services include the management of CDC's human resources program and policies. Prior to FY 2014, these services were funded by the Public Health Leadership Support (PHLS) direct appropriation.
Safety, Security and Asset Management Services	Safety and Security services include providing global and physical security to CDC employees located at headquarters, employees travelling overseas, employees assigned overseas, and foreign visitors to CDC campuses. Additional services include developing policy and training for the Agency staff on occupational safety, lab safety, and hazardous waste disposal. Asset Management services include conducting real property and space management activities; operating and maintaining CDC's facilities; rent and related costs; and managing operating and capital leases, utilities, operation and maintenance contracts; and the administrative costs of the Office of Safety, Security, and Asset Management. Additional services include developing CDC policy and procedures for logistics management, including accountable property, supplies, transportation, and shipping. Repairs and improvements and buildings and facilities capital projects are not included in the WCF service portfolio and will continue to be funded from the Buildings and Facilities budget line.
Financial Management and Oversight Services	Services include the administration of CDC's budget and related financial and accounting functions to ensure compliance with regulatory and legislative requirements; providing leadership, guidance, and advice on operational budget and financial matters; and travel related audit and payment services. Activities are coordinated with HHS, OMB, and Congress.
IT Services, Support, and Infrastructure	Services include maintenance of personal computing hardware and software; customer service support; administration of mainframe, infrastructure software, application, and server hosting; and oversight of networking and IT security.
Procurement and Grants Services	Services include the management and coordination of CDC acquisition, assistance, and management activities; and the coordination and administration of contracts, purchase orders, grants, and cooperative agreements.
Management Analysis Support Services	Services include agency policy development, management, and consultation activities; management of the internal controls program; and management of federal advisory committee activities. Additional compliance services include monitoring and oversight of agency and program measures in the area of sustainability.
Centralized Administrative Services	Services encompass administrative services provided in support of CDC programs that are not aligned to specific service providers including Department mandates.

Internal Controls

The OMB Circular A-123 and GAO Standards for Internal Controls in the Federal Government define the framework for WCF's internal controls. The WCF internal control assessment process details activities to be performed by various stakeholders to ensure potential risks are identified, monitored, and mediated throughout the process. The WCF internal control assessment process aligns with CDC's internal controls program and is designed to help the WCF meet the following internal controls objectives:

- Effectiveness of WCF operations
- Reliability of financial reporting
- Compliance with applicable laws and regulations

CDC will monitor operational and financial performance of the WCF. In addition to operational reporting, the WCF will also report on the Fund's financial status and activities as part of CDC financial statements. In accordance with the CFO Act, WCF financial performance will be audited on an annual basis as part of HHS' CFO audit. Financial metrics will serve as key inputs into the evaluation of efficiency of WCF operations.

Retained Earnings

The WCF will maintain a balance of retained earnings that is not constrained by the fiscal year cycle. Retained earnings in the Fund are comprised of restricted and unrestricted retained earnings.

Restricted Retained Earnings

Restricted retained earnings include funding for IT capital investments and accrued annual leave for WCF employees. In addition, the Fund will retain a sufficient amount of reserves to pay accrued annual leave for all employees of the WCF.

Unrestricted Retained Earnings

Unrestricted retained earnings include funding used to finance unforeseen, one-time costs. Examples include costs associated with providing enhanced service levels and costs associated with discontinuing services. In an effort to stabilize rates throughout the fiscal year, unrestricted retained earnings may also be used to absorb the impact of unanticipated price fluctuations that service providers may experience during the year.

CDC's WCF will target a goal of two to four percent of WCF annual operating revenue to maintain as retained earnings. Throughout the fiscal year, the level of unrestricted retained earnings will be monitored to ensure that the level of reserves remains in compliance with the policy.

REIMBURSEMENTS AND TRUST FUNDS

(dollars in millions)	FY 2014 Estimate	FY 2015 Estimate	FY 2016 Estimate
Reimbursements and Trust Funds	$422.000	$635.120	$635.120
Total	**$422.000**	**$635.120**	**$635.120**

Authorizing Legislation: PHSA §§ 214, 301, 306(b)(4), 311, 353; Consolidated Appropriations Act, 2012 (P.L. 112-74)

Summary

CDC's FY 2016 request of **$635,120,000** for reimbursements and trust funds is an increase of $213,120,000 above the FY 2014 level.

(dollars in millions)	FY 2014 Estimate	FY 2015 Estimate	FY 2016 Estimate
Reimbursements and Trust Funds	**$422.000**	**$635.120**	**$635.120**

CDC's reimbursable activities provide scientific and programmatic expertise to other agencies and organizations. CDC has a long history of partnering with other federal agencies in the shared interest of improving public health and prevention programs. Examples of these activities include:

- CDC will continue its longstanding agreements with other agencies of the Public Health Service, HHS, and others associated with CDC's health statistics studies. CDC will continue to provide scientific and programmatic expertise in areas such as genetic diseases, laboratory tests, investigations, development of worker safety guidance, and training and model screening programs.
- CDC will continue the association between the Epidemiology Program at Department of Veterans Affairs (VA) and the National Center for Health Statistics (NCHS). NCHS will perform searches of the National Death Index (NDI) for VA in research and surveillance studies. The Epidemiology Program conducts research and surveillance studies on the health of veterans to understand the causes and patterns of their health and illnesses. The data and research findings from these studies help VA health professionals improve healthcare practices for veterans. The findings also help VA leadership and Congress improve health policies for veterans.
- CDC will continue to work with the U.S. Agency on International Development (USAID) on various projects including the Emerging Pandemic Threats (EPT) program. The EPT program emphasizes early identification of, and response to, dangerous pathogens in animals before they can become significant threats to human health. These efforts are critical to the sustainability of long-term pandemic prevention and preparedness. They will help develop better predictive models for identification of future viral and other biological threats.
- In addition to reimbursable agreements and user fees, CDC receives funds from Cooperative Research and Development Agreements (CRADAs) to enhance and facilitate collaboration between the agency's laboratories and various partners. CDC provides research personnel, laboratory facilities, materials, equipment, supplies, intellectual property, and other in-kind contributions, and uses the income from CRADAs to continue to improve programs.

SUMMARY TABLE

(dollars in millions)	FY 2015 Estimate	FY 2016 Estimate
Department of Agriculture 6 Agreements: NHANES Dietary Recall Component, 2011-2012 NHIS Food Security Status Questions. 1 Agreement to support the Outbreak, Plant Health Inspection, and Food Safety and Inspection Services. APHIS IT Support	$6,180	$6,180
Department of Commerce 5 Agreements: Federal Interagency Forum on Aging-Related Statistics, National Death Index, Support for the Production of the America's Children Report and Other Related Publications.	$1,250	$1,250
Department of Defense 1 Agreement: National Death Index. 25 Agreements to Support the Design and Deployment of the Healthcare Safety Network & Electronic Disease Surveillance System for Saudi Arabia National Guard. Various agreements with the Navy for the Border Infectious Disease Surveillance Project (BIDS). Survey and diagnose cases of Febrile Respiratory Illnesses (FRI) on the Mexican border; clothing and studies. 13 Agreements to Support the Design and Deployment of the Healthcare Safety Network & Electronic Disease Surveillance System for Saudi Arabia National Guard. Various agreements with the Navy to Border Infectious Disease Surveillance Project (BIDS). Survey and diagnose cases of Febrile Respiratory Illnesses (FRI) on the Mexican border; clothing and studies. Biosurveillance Management/Training 1 Agreement for two projects regarding Japanese encephalitis and yellow fever vaccination studies. SNS Vaccine (Smallpox/AVA) Biomedical Research 5 Agreements: Laboratory testing for Schistosmiasis and Parasitic disease. Also, Supporting Afghanistan Uplift Program, and Biological Emergent Threats (includes numerous/various modifications).	$98,582	$98,582
Department of Energy 6 Agreements regarding Occupational and Environmental Risk; Waterborne Contamination and Diseases. 1 Agreement to assist with Energy Related Analytical Epidemiologic Research, and School Associated Violent Death Studies. 1 agreement. Carry-over from FY 2013. 1 agreement. To Advance the Health Protection Program at Los Alamos National Laboratory (LANL)	$19,578	$19,578
Department of Health and Human Services To carry out activities under Section 241 of the Public Health Services (PHS) Act. 115 Agreements to perform various projects, provide ongoing participation in clinical laboratory improvement, develop questions for the National Health Interview Survey. Also, 1 agreement for a Prescription Drug Overdose evaluation. 15 Children's and Aging Forums, Vital Statistics Program and NHANES.	$255,361	$255,361
Department of Homeland Security 39 Agreements for Design & Development of Rapid Methods for AMR Susceptibility Testing for Potential BT Agents. 3 Agreements for biothreat agents and assay validation samples - CARRYOVER from 2013 1 agreement. Carry-over from FY13. NIOSH Health research project BIOASSAYS Near Team Project Validation of DHS Biological Dector System (E.G., Bioplex, generations -3 Biowatch, Public Health Actionable Assays 9PHAA)	$5,749	$5,749
Department of Housing and Urban Development 1 Agreement: Support for the Production of the Older Americans Report: Key Indicators of	$5	$5

(dollars in millions)	FY 2015 Estimate	FY 2016 Estimate
Well Being Report and Other Related Publications. Green Housing Study 1 agreement to continue implementation of compact impact mitigation		
Department of Interior 1 agreement to continue implementation of compact impact mitigation	$500	$500
Department of Justice 1 agreement. VICTIM COMPENSATION FUND (VCF) ENROLLMENT AND ELIGIBILITY MEDICAL AND CLAIMS INFORMATION 1 agreement. Carry-over from FY13. Law enforcement office motor vehicle crash and struck-by fatality investigations	$556	$556
Department of Labor 1 Agreement: Support for the Production of the America's Children Report and Other Related Publications.	$25	$25
Department of State 5 Agreements: Laboratory testing for Schistosmiasis and Parasitic disease. Also, Supporting Afghanistan Uplift Program, and Biological Emergent Threats (includes numerous/various modifications).	$14,578	$14,578
Department of Veterans Affairs 1 Agreement for the salaries, benefits, travel, training, and program administration costs to provide the Department of Veteran's Affairs in California with an Epidemic Intelligence Service (EIS) Officer from July 1, 2013-June 30, 2015 (24 months across 3 FY). IAA is processing and will be modified in FY 15 to augment by $135,534. 1 Agreement for the salaries, benefits, travel, training, and program administration costs to provide the Department of Veteran's Affairs in California with an Epidemic Intelligence Service (EIS) Officer from July 1, 2014-June 30, 2016 (24 months across 3 FY). 1 Agreement. Provide Technical Training and Quality Control Review to Technicians Participating in Spirometry Data Collection 1 Agreement with VA to assist with a “Pandemic Influenza Nurse Triage Line”	$2,112	$2,112
Centers for Medicaid and Medicare Services (CMS) 2 Agreement to Collaborate with CMS on public health issues. 2 Agreements for the prevention of HAIs The purpose of this MOU between the CMS Center for Medicare and Medicaid Innovation (CMMI) and the Centers for Disease Control and Prevention (CDC) to define the mutually agreed upon reporting structure for CDC staff managing the CMMI Health Care Innovation Awards (HCIA) and State Innovation Models (SIM) award recipients. Refer to IA-13-38/ 12-CC-12-008-CUC1-01 for the intra-agency agreement authorizing the temporary assignment of CDC staff to CMMI to assist with the post-award management of HCIA recipients.	$19,802	$19,802
Environmental Protection Agency 4 Agreements for Threat Agent Method Development; Surveillance of Human Health and Water Quality and Panels for Ricin and Abrin EPA Technical Assistance 1 Agreement. EPA/NIOSH sampling and analysis method development for chemicals in various matrices. 3 Agreements to Collaborate Studies Occupational and Environmental Risk; Waterborne Contaminant and Diseases.	$40,009	$40,009
Federal Emergency Management Agency 4 Agreements for Emergency Responses; and Public Health Assessment of Air Quality in Temporary Housing. 1 Agreement for Emergency Responses; and Public Health Assessment of Air Quality in Temporary Housing.	$300	$300
Food and Drug Administration 3 Health & Nutrition Exam Survey, Resource Data Center	$865	$865

(dollars in millions)	FY 2015 Estimate	FY 2016 Estimate
Non-Federal Agencies 4 Agreements: Oral HPV Testing with Ohio State University, Asthma Supplement to the National Ambulatory Medical Care Survey with MERCK, SLAITS with Annie Casey Foundation.	$500	$500
National Institutes of Health 38 Q-bank database, National Death Index, Collection and Analysis of Mental Health Data, Federal Forum on Child and Family Statistics, Federal Interagency Forum on Aging Statistics, National Survey of Family Growth, Cycle 6, Analytic Services from the National Committee on Vital and Health Statistics, Improving Economic Measures on NHIS, Consumer-Centric Health Care Questions and the National Health Interview Survey, SLAITS/Children's Health Survey, National Health Care Quality Report, NHIS Questions on Children's Mental Health, SLAITS Survey of Children with Special Health Care Needs, Dietary Supplement and Nutritional Biochemistry Component, Stroke Warning Signs, NHANES Allergy Component, Diabetes questions, Kidney Component, National Adult Immunization Survey, Arthritis Supplement, Administration of the National Home Health Aid Survey/National Home and Hospice Care Survey, Assessing Mass Casualty & Bioterrorism, Augmenting the NCHS Surveys for Cancer Care Surveillance, Critical Pediatric Resources Availability.	$31,300	$31,300
Other 56 Agreements for surveillance and Standardization of Genetic Testing. In addition numerous/various agreements with others such as USAID, WHO, UN, Peace Corp, Exec Office of the President, FBI, Department of Education, Department of Transportation, NASA, Census Bureau, John Hopkins, Coast Guard, Consumer Product Safety, State of Oregon, National Cancer Institute and State Department of Health in Florida, Wisconsin, Wyoming, Iowa, Mississippi, Louisiana and Hawaii, etc. Further, agreements that have to with funding for the President's Malaria Initiative and Emerging Pandemic Threats, as well work in tuberculosis; maternal and child health; immunization; neglected tropical diseases; and water, sanitation and hygiene. Also, agreements for viral hepatitis work as well as the Emerging Pandemic Threats program.	$116,193	$116,193
User Fees	**$7,250**	**$7,250**
TOTAL	**$635,120**	**$635,120**

PERFORMANCE

IMMUNIZATION AND RESPIRATORY DISEASES

Section 317 Immunization Program and Program Implementation and Accountability

Performance Measure for Long Term Objective: Ensure that children and adolescents are appropriately vaccinated.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
1.2.1c: Achieve and sustain immunization coverage in children 19 to 35 months of age for one dose of MMR vaccine. (Intermediate Outcome)	FY 2013: 92% (Target Exceeded)	90%	90%	Maintain
1.2.1h: Achieve and sustain immunization coverage of at least 90% in children 19-35 months of age for at least 4 doses of pneumococcal conjugate vaccine (Intermediate Outcome)	FY 2013: 82% (Target Not Met	90%	90%	Maintain
1.2.1i: Achieve and sustain immunization coverage of at least 80% in children 19- to 35-months of age for 2-3 doses of rotavirus (Intermediate Outcome)	FY 2013: 73% (Target Exceeded)	73%	74%	+1
1.2.2a: Achieve and sustain immunization coverage of at least 80% in adolescents 13 to 15 years of age for 1 dose of Tdap (tetanus and diphtheria toxoids and acellular pertussis) (Intermediate Outcome)	FY 2013: 87% (Target Exceeded)	87%	90%	+3
1.2.2b: Achieve and sustain immunization coverage of at least 80% in adolescents 13 to 15 years of age for 1 dose of meningococcal conjugate vaccine (MCV4) (Intermediate Outcome).	FY 2013: 78% (Target Exceeded)	81%	84%	+3
1.C: Number of states (including the District of Columbia) achieving 65% coverage for 1 birth dose of hepatitis B vaccine (19–35 months of age) (Output)	FY 2013: 44 (Target Exceeded)	50	50	Maintain
1.D: Number of states (including the District of Columbia) achieving 30% coverage for influenza vaccine (6–23 months of age) (Output)	FY 2013: 43 (Target Exceeded)	45	47	+2
1.E: Number of states (including the District of Columbia) achieving 25% coverage for ≥ 3 doses of human papillomavirus vaccine (13–17 years of age) (Output)	FY 2013: 48 (Target Met)	51	51	Maintain

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
1.F: Number of states (including the District of Columbia) achieving 45% coverage for ≥ 1 dose of Tdap vaccine (13–17 years of age) (Output)	FY 2013: 51 (Target Met)	51	51	Maintain
1.G: Number of states (including the District of Columbia) achieving 45% coverage for ≥ 1 dose of meningococcal conjugate vaccine (13–17 years of age) (Output)	FY 2013:51 (Target Exceeded)	51	51	Maintain

Performance Measures for Long Term Objective: Increase the proportion of adults who are vaccinated annually against influenza and ever vaccinated against pneumococcal disease.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
1.3.1b: Increase the percentage of adults aged 65 and older who are vaccinated against pneumococcal disease (Intermediate Outcome)	FY 2012: 60% (Target Not Met)	76%	79%	+3
1.3.2b: Increase the percentage of pneumococcal vaccination among non-institutionalized high-risk adults ages 18 to 64 (Intermediate Outcome)	FY 2012: 30% (Target Not Met)	39%	42%	+3
1.3.3a: Increase the percentage of adults aged 18 years and older who are vaccinated annually against seasonal influenza (Intermediate Outcome)	FY 2013: 42% (Target Not Met)	53%	56%	+3

Performance Trends: Immunization continues to be one of the most cost-effective public health interventions. CDC supports the implementation of state-based immunization programs making vaccines available to vulnerable children, adolescents, and adults. Since the adoption of this strategy in 1962, the United States has experienced record high childhood vaccination levels and record low levels of vaccine-preventable diseases (VPDs). In 2009, for each birth cohort vaccinated against 13 diseases (diphtheria, *haemophilus influenzae* type b, hepatitis A, hepatitis B, measles, mumps, pneumococcal, pertussis, polio, rotavirus, rubella, tetanus, and varicella) in accordance with the routine childhood immunization schedule, the United States saved 42,000 lives, $13.6 billion in direct medical costs and prevented 20 million cases of disease. Overall, an estimated $3.00 is saved in direct medical costs for every $1.00 invested in vaccines for VPDs (Table 1)[437.]

Table 1: Cost-effectiveness of Childhood Vaccines

Vaccine:	Cost Savings: for every $1 spent on an individual vaccine
Diphtheria-Tetanus-acellular Pertussis (DTaP)	saves $47.80
Measles, Mumps, and Rubella (MMR)	saves $23.30
Inactivated Polio (IPV)	saves $8.60
Haemophilus influenza type b (Hib)	saves $4.90

[1] Zhou F, et al. Economic Evaluation of the Routine Childhood Immunization Program in the United States, 2009. Pediatrics: 3 Mar 2014.

Hepatitis B	saves $2.40
Varicella	saves $2.00
Pneumococcal (PCV7)	saves $1.50
Childhood series (9 vaccines) [438]	saves $10.00

CDC achieved levels near or above national (Healthy People 2020) targets for most of the routinely recommended childhood vaccinations. Since FY 2008, measles, mumps, and rubella (MMR) vaccinations have met or exceeded 90 percent coverage rates, and CDC will maintain this performance target in FY 2016. Rotavirus vaccine coverage increased by 14 percentage points from 59 percent in FY 2010 to 73 percent in FY 2013. Coverage of pneumococcal conjugate vaccine (PCV) decreased slightly from 83 percent in FY 2010 to 82 percent in FY 2013 (Measures 1.2.1). Despite this, CDC demonstrated an 88 percent decline in PCV13-type pneumococcal disease among children less than five years old in the U.S. Although CDC did not meet targeted coverage rates for PCV, strategies to improve the fourth dose of PCV coverage are in place and are similar to those used to improve the uptake of other vaccines and CDC expects similar gains in the future. Strategies include provider assessment and feedback, use of reminder notifications, immunization information systems, and regular assessment of coverage levels in the National Immunization Survey.

CDC demonstrated rotavirus vaccines are greater than 85 percent effective in preventing severe rotavirus disease in U.S. children, with the effectiveness sustained over time.

Source: http://cid.oxfordjournals.org/content/early/2013/03/05/cid.cit164

CDC exceeded targets for both adolescent performance measures in FY 2013. Tetanus, diphtheria and pertussis (Tdap) vaccine coverage increased from 74 percent in FY 2010 to 87 percent in FY 2013, exceeding its FY 2013 target by seven percentage points (Measure 1.2.2a). Meningococcal conjugate vaccine (MCV4) coverage increased from 65 percent in FY 2010 to 78 percent in FY 2013, exceeding its FY 2013 target by four percentage points (Measure 1.2.2b). This is a result of CDC's efforts to promote awareness of adolescent immunization recommendations, by providing education and training to both public and private providers to bolster adolescent vaccination rates.

The number of states achieving targeted coverage levels for childhood and adolescent vaccinations continues to increase, contributing to overall sustained or improved vaccination coverage. For select adolescent vaccinations, almost every state achieved targeted coverage levels in FY 2013. In many instances, CDC exceeded its targets and is on track to meet or exceed FY 2016 targets (Measures 1.C-1.G).

During the past decade, vaccination coverage levels among older adults increased slightly as CDC implemented national strategies and partnered with state and local public health departments to promote adult immunization among healthcare providers and state and local governments. CDC targets are based on HP 2020 goals; however, CDC did not meet the coverage targets for adult pneumococcal adult vaccination. Vaccinations for adults 65 and older have fluctuated within the range of 60 to 62 percent over the past four years (Measure 1.3.1b). The percentage of pneumococcal vaccinations among high-risk adults increased from 17 percent in FY 2009 to 28 percent in FY 2010 and to 30 percent in FY 2011, which exceeded the CDC target by nine percentage points. CDC did not meet the vaccination target in FY 2012, although the percentage of high risk adults

Seasonal Influenza vaccinations in 2012-2013 prevented approximately 6.6 million influenza illnesses, 3.2 million medically attended illnesses, and almost 80,000 hospitalizations.

Source: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6249a2.htm?s_cid=mm6249a2_w

[438] Includes DTaP, Hib, hepatitis A, hepatitis B, MMR, PCV7, IPV, rotavirus, and varicella vaccines; hepatitis A and rotavirus vaccines are cost-effective, but not cost saving.

vaccinated remained at 30 percent (Measure 1.3.2b). Measure 1.3.3a reflects the universal influenza vaccination recommendation and aligns with CDC's ACIP updated recommendation (as of 2010) for the seasonal influenza vaccine. From FY 2011 to FY 2013, seasonal influenza vaccinations increased slightly by two percentage points.

Addressing barriers to adult immunization and increasing adult vaccination rates requires different strategies from those used to bolster childhood coverage. Adult vaccination recommendations are typically not included in the routine adult preventive care schedule. Further, efforts to increase adult vaccination coverage must include a variety of providers, including general practice doctors, OB-GYN practitioners, other specialists and pharmacists. CDC's efforts to improve adult vaccination coverage rates include:

- increasing patient and provider education to improve demand
- implementing system changes in practitioner office settings to reduce missed opportunities for vaccinations
- enhancing evidence-based communication campaigns to increase public awareness about adult vaccines and recommendations
- expanding the reach of vaccination programs including new venues such as pharmacies and other retail clinics

Performance Measures for Long Term Objective: Improve vaccination safety and effectiveness

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
1.5.2: Increase the number of associations between vaccines and adverse health events evaluated to ensure the safety of vaccines used in the U.S. (Outcome)	FY 2013: 411 pairs (Target Exceeded)	431 pairs	441 pairs	+10
1.H: Percentage of Vaccine Events Reporting System (VAERS) reports received electronically (Output)	FY 2014: 28% (Target Not Met)	35%	37%	+2

Performance Trends: A strong vaccine safety monitoring system is essential to ensure that the nation's vaccines are safe. CDC is the nation's lead public health agency responsible for providing a safe, effective vaccine supply for all licensed vaccines approved for use in the United States. CDC's vaccine safety findings and recommendations inform the vaccine policy decisions of other federal agencies and the Department of Health and Human Services (HHS) advisory committees, advance vaccine safety science through published findings in medical and scientific literature, and inform the public of vaccine safety concerns through CDC's website, partnerships, and public health messages. CDC's Vaccine Safety Datalink System (VSD) and Vaccine Adverse Event Reporting System (VAERS) are vital for rapid detection and accurate assessment of vaccine risks, and allow for monitoring the relationships between adverse health events and vaccines.

In FY 2013, the vaccine-adverse event pair findings increased to 411 over FY 2012 findings (Measure 1.5.2). CDC findings include:

- an increased risk for febrile seizures in young children following simultaneous vaccination with trivalent inactivated influenza vaccine (TIV) and 13-valent pneumococcal (PCV-13) vaccine in the 2010-2011 influenza season
- a lower increased risk of seizures with measles-containing vaccines when administered at 12 to 15 months of age

- receiving trivalent inactivated influenza vaccine during pregnancy is not associated with increased risk of adverse events in the 42 days after vaccination, supporting its safety for the mother
- the number of immunogens a child receives from vaccination in the childhood series is not associated with neurodevelopmental disorders
- an association between rotavirus vaccine and a one in 20,000 chance of intussusception
- no associated significant adverse health outcomes with human papillomavirus (HPV) vaccine in a recent evaluation

From 2001 to 2012, the number of diseases for which there are childhood vaccines increased from 10 to 16 and the number of reports submitted to VAERS more than doubled from 15,000 to 33,000, due in part to increased ease of reporting and electronic submission. As such, CDC tracks adverse events reported electronically and early detection of possible vaccine-adverse events. HHS received approximately 32 percent of adverse events reported electronically in FY 2012, but only 29 percent in FY 2013 and 28 percent in FY 2014 (Measure 1.H). CDC anticipates a significant increase in electronic reporting to VAERS following a shift in manufacturer reporting from paper to electronic submission. Incorporating a standardized data structure for electronic reporting by vaccine manufacturers in collaboration with the U.S. Food and Drug Administration (FDA) is expected to further improve reporting upon completion by FY 2017. Increased electronic reporting improves program decision-making by increasing the timeliness, quality, and quantity of VAERS reports, especially those from healthcare providers and vaccine manufacturers. CDC and FDA continue to develop and implement automation initiatives and IT enhancements that are expected to increase electronic reporting to VAERS and early detection of events.

Influenza Planning and Response

Performance Measures for Long Term Objective: Protect Americans from infectious diseases – Influenza.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
1.6.1: Increase the number of public health laboratories monitoring influenza virus resistance to antiviral drugs (Output)	FY 2014: 21 (Target Exceeded)	21	21	Maintain
1. K: Number of jurisdictions with at least 1.5 state/local health department laboratorians or influenza coordinators trained and funded through Epidemiology and Laboratory Capacity (ELC) grant. (output)	FY 2014: 54 (Baseline)	54	54	Maintain
1.L: Number of influenza diagnostic kits and virus reference panels distributed domestically and internationally (Output)	FY 2013: 1978 (Target Not Met)	2,100	2,100	Maintain
1.M: Number of virus specimens received and fully characterized using deep sequencing from global National Influenza Centers for use in determining vaccine strain selection annually[1](Output)	FY 2014: 215 (Baseline)	1,000	2,000	+1,000

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
1.O. Increase the percentage of influenza partner countries with a Severe Acute Respiratory Infection (SARI) surveillance system that demonstrate the capacity to improve flu detection and response by conducting syndromic surveillance for flu and other respiratory pathogens.(Output)	FY 2014: 40% (Preliminary Baseline)[2]	50%	60%	+10
1.P. Percentage of influenza partner countries reporting data routinely into WHO FluNet. (Output)	FY 2013: 81% (Baseline)	90%	90%	Maintain

[1] CDC updated this budget output for the 2016 OMBJ

[2] Final baseline data will be available in February 2015.

Performance Trends: As a World Health Organization Collaborating Center for Influenza, CDC enhances global capacity to monitor influenza viruses and inform vaccine policy and treatment recommendations. CDC exceeded the FY 2014 target of 18 domestic public health programs monitoring influenza virus resistance to antiviral drugs, continuing a significant increasing trend from the 2009 baseline of three (Measure 1.6.1). Resistance monitoring results in more rapid detection and reporting to the affected states, and allows for more timely data for case investigations. Timeliness is critical to identify and contain possible clusters of resistant strains and prevent transmission.

Domestic Surveillance

CDC enhances state and local capacity to gather influenza epidemiology and laboratory data essential for systematic and accurate surveillance of seasonal and novel influenza viruses by providing training and resources to its grantees. In FY 2014, 54 jurisdictions had at least 1.5 state/local health department jurisdiction or influenza coordinators trained and funded through the ELC (Measure 1.K).

Through CDC's Influenza Reagent Resource, CDC distributes its flu diagnostic kits to all qualified state and local public health laboratories engaged in virologic surveillance testing to ensure the availability of timely diagnostic resources domestically and globally. This significantly reduces the financial burden for states. In FY 2012, CDC provided 2,245 influenza diagnostic kits and virus reference panels (Measure 1.L). In FY 2013, CDC provided 1,978 kits and panels. Changes to the distribution process (from a "push to a pull" approach) resulted in 125 fewer WHO kits being distributed in FY 2013. FY 2014 results will be available in March 2015.

CDC receives and characterizes approximately 11,000 influenza virus specimens each year. This number fluctuates annually based on the severity and burden of the disease. CDC characterizes virus specimens via "deep sequencing", shortening the interval between the identification of novel influenza viruses and the delivery of effective vaccines. It also aids in informing vaccine policies and recommendations as well as decisions regarding prospective vaccines for novel viruses with pandemic potential. CDC Worldwide characterization of these specimens is essential to the production of each season's influenza vaccine. It also aids in informing vaccine policies and recommendations as well as decisions regarding prospective vaccines for novel viruses with pandemic potential. CDC Worldwide characterization of these specimens is essential to the production of each season's influenza vaccine. During the 2013/2014 influenza season, CDC received and fully characterized 215 virus specimens using deep sequencing from the global National Influenza Centers for use in vaccine strain selection, more than double the 2012/2013 influenza season. CDC expects this number to significantly increase by FY 2016 (measure 1.M).

Global Surveillance

CDC strengthens Global Health Security by equipping partner nations' capacity to improve and sustain their influenza detection and response capabilities through timely reporting into the Severe Acute Respiratory Infection (SARI) surveillance system and WHO FluNet. With more than 40 countries currently receiving CDC assistance, the ultimate goal is to move them toward complete country-owned influenza surveillance and response programs with minimal ongoing US support. Preliminary FY 2014 data indicate approximately 40 percent of influenza partner countries demonstrated the capacity to improve flu detection and response by conducting syndromic surveillance for flu and other respiratory pathogens (Measure 1.O). Though CDC expects this percentage to increase to 60 percent in FY 2016, targets may change upon availability of final FY 2014 data in February, 2015. CDC's efforts to strengthen international influenza monitoring, evaluation, lab testing, and pandemic preparedness have resulted in twice as many countries reporting to WHO FluNet, increasing from 40 percent in FY 2005 to 81 percent in FY 2013 (Measure 1.P).). CDC anticipates these gains will be sustained with minimal US support as countries achieve capacity to detect and respond to outbreaks. CDC will adjust targets upon further assessment of how increased funding will impact performance.

HIV/AIDS, VIRAL HEPATITIS, SEXUALLY TRANSMITTED INFECTIONS, AND TUBERCULOSIS

Domestic HIV/AIDS Prevention and Research

NHAS Performance Measures and CDC Contextual Indicators for Long Term Objective: Reduce new HIV infections

Contextual Indicators	Most Recent Result	FY 2020 Target
2.1.1: Decrease the annual HIV incidence (Outcome)	FY 2010: 47,500	36,450
2.1.2: Reduce the HIV transmission rate per 100 persons living with HIV (Outcome)	FY 2010: 4.15	3.2
2.1.3: Increase the percentage of people living with HIV who know their serostatus[1] (Outcome)	FY 2011: 86.0%	90.0%

[1] Some results have been updated based on improved methodologies

NHAS Performance Measures and CDC Contextual Indicators for Long Term Objective: Reduce new HIV infections

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 Target +/- FY 2015 Target
2.1.8: Reduce the proportion of persons with an HIV diagnosis at later stages of disease within three months of diagnosis (Outcome)[1]	FY 2012: 24.0% (Target Exceeded)	19.1%	18.9%	-0.2
2.1.7: Increase the proportion of adolescents (grades 9-12) who abstain from sexual intercourse or use condoms if currently sexually active (Outcome)[2]	FY 2013: 86.3% (Target Not Met)	86.9%	N/A[2]	N/A[2]

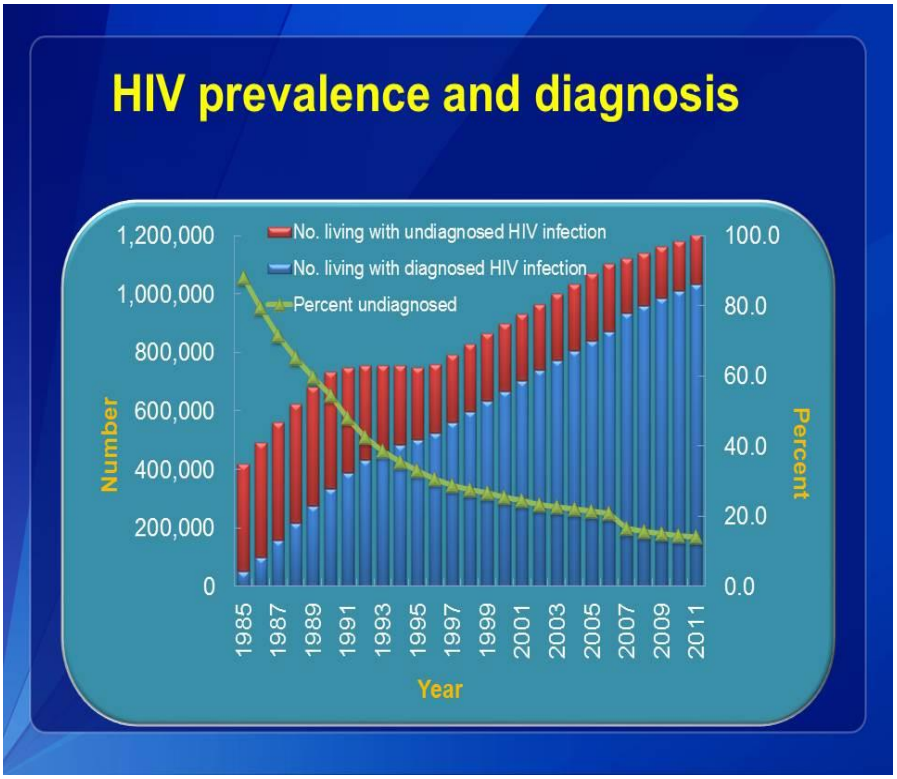
[1] Per the HHS Secretary's memo (04/11/2012) on implementing a common set of core indicators to be implemented across federal agencies, CDC revised this indicator definition in the FY 2014 President's Budget to conform with the cross–agency definition.
[2] Targets and results are set and reported biennially.

NHAS Performance Measure and CDC Contextual Indicator for Long Term Objective: Increase access to care and improve health outcomes for people living with HIV

Contextual Indicators	Most Recent Result	FY 2020 Target
2.2.1: Increase the proportion of newly diagnosed patients linked to clinical care within three months of their HIV diagnosis (Contextual Indicator)	FY 2012: 80.8% (Historical Actual)	85.0%

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 Target +/- FY 2015 Target
2.2.2: Increase the percentage of HIV-infected persons in CDC-funded counseling and testing sites who were referred to Partner Services to confidentially notify and provide HIV testing and prevention services to partners who may be infected (Outcome)	FY 2012: 84.0% (Target Exceeded)	83.5%	85%	+1.5
2.2.3: Increase the percentage of HIV-infected persons in CDC-funded counseling and testing sites who were referred to HIV prevention services to reduce risk of HIV transmission to others (Outcome)	FY 2012: 75.8% (Target Exceeded)	77.0%	80.0%	+3.0
2.2.4: Increase the number of states that report all CD4 and viral load values for HIV surveillance purposes (Output)	FY 2014: 40+D.C. (Target Exceeded)	40	42	+2
2.2.6: Reduce the number of new AIDS cases among adults and adolescents per 100,000 population (Outcome)	FY 2012: 10.7 (Target Exceeded)	11.1	10.9	-0.2

Performance Trends: Since the advent of improved HIV treatments in the mid-1990s, the numbers of people with HIV who develop AIDS and die of AIDS-related complications have dropped dramatically. The number of deaths among people with AIDS decreased from more than 50,000 a year in 1995 to approximately 16,000 in 2011. However, this success means that the number of people who have the virologic potential to transmit HIV and the number of people in need of HIV care and treatment is growing.



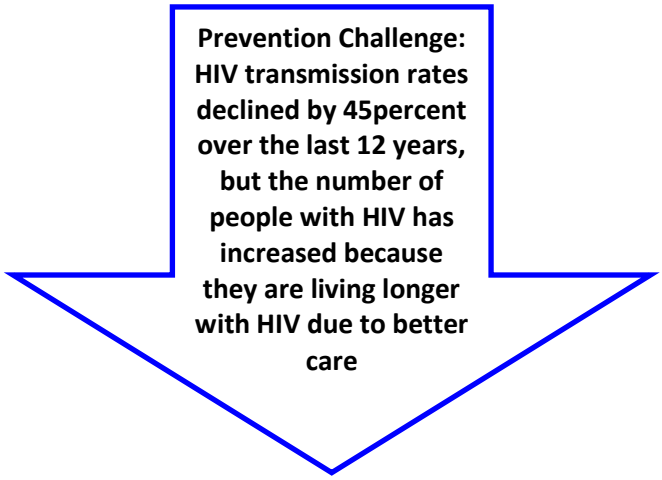
The estimated number of people living with HIV increased 15 percent from 2006 to 2011 to a total of 1,201,100 people. To reduce HIV transmission, it is necessary to:

- Expand HIV testing to reduce undiagnosed HIV infection;
- Ensure that people living with HIV receive partner services and risk reduction interventions and are linked and retained in medical care;
- Ensure that persons with HIV receiving medical care receive and adhere to effective HIV treatment; and
- Reduce the risk of acquiring HIV among uninfected persons.

Preventing a single case of HIV infection saves an estimated $402,000 in lifetime HIV medical care and treatment costs for infections that are diagnosed early.[439] About 50,000 people contract HIV each year, and while the estimated lifetime medical care and treatment costs for these individuals total up to $19 billion, prevention has significantly reduced the nation's HIV treatment costs. Between 1991 and 2006, HIV prevention and treatment efforts in the United States averted an estimated 350,000 HIV infections and saved more than $125 billion in direct medical costs.[440] A 2011 study assessed the cost effectiveness of CDC-funded prevention programs conducted by health departments and found that they are cost-saving.[441] Reducing the number of HIV infections ensures significant cost-savings for the federal government, which spent an estimated $15.6 billion on healthcare for people living with HIV in 2013.[442]

Despite this progress, the number of new HIV infections, HIV-related morbidities, and disparities experienced by racial and ethnic minorities, low income persons, gay and bisexual men and others at increased risk remain unacceptably high. In July 2010, the Administration released the National HIV/AIDS Strategy (NHAS) which established new priorities for preventing HIV infection, improving the health of people living with HIV, and reducing HIV-related disparities. In December 2013, the administration released a report showing promising progress for eight of nine national goals, although significant challenges remain.

Reducing HIV incidence is a shared NHAS and CDC priority. HIV incidence declined significantly from approximately 130,000 cases per year in the mid-1980's to approximately 47,000 cases per year in 2010 due to numerous federal, state, local government and community response efforts (Contextual Indicator (CI) 2.1.1)). While the annual number of new HIV infections has remained relatively stable for the past decade, HIV incidence declined among certain groups (e.g., injection-drug users), but increased among young men who have sex with men (MSM). CDC's analysis of HIV incidence data from 2008 to 2010 reveals signs of an encouraging decrease in new HIV infections among heterosexual black women, which contributed to an overall decrease among heterosexual women.



Ensuring that people with HIV are aware of their serostatus and are diagnosed earlier in the course of infection are key strategies for improving the health of those infected and for preventing HIV transmission to others. Data for 2013 indicate all CDC-funded health department HIV testing programs conducted nearly 3 million HIV tests

[439] Farnham PG, et al. Updates of lifetime costs of care and quality-of-life estimates for HIV-infected persons in the United States: Late versus early diagnosis and entry into care. JAIDS 2013. 64:183-189. .

[440] Farnham P, et al. Medical costs averted by HIV prevention efforts in the United States, 1991—2006. JAIDS 2010. 54:565-7.

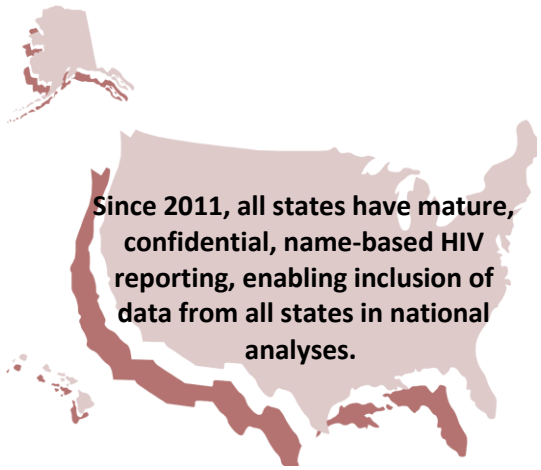
[441] Lasry, A., et al., A model for allocating CDC's HIV prevention resources in the U.S. Health Care Manag Science, 2011. 14(1): 115-124.

[442] http://kff.org/global-health-policy/fact-sheet/u-s-federal-funding-for-hivaids-the-presidents-fy-2014-budget-request/

and further increased routine HIV testing in health care and community settings while identifying about 15,000 previously undiagnosed cases of HIV infection.. HIV testing prevents new HIV infections and reduces medical care costs. For example, CDC's Expanded Testing Initiative prevented 3,381 new HIV infections in its first three years and saved an estimated $1.2 billion in direct medical costs.[443] Those living with HIV who know their serostatus increased from 80.9 percent in 2006 to 86.0 percent in 2011 (CI 2.1.3). This means six out of seven people living with HIV in 2011 knew their status. In 2012, 24.0 percent of persons diagnosed with HIV were diagnosed late in the course of infection, an improvement over 2011 results (Measure 2.1.8).

When an individual tests positive for HIV, appropriate medical care and confidential partner notification services and other prevention services are critical to reducing the risk of future HIV transmission. CDC data from 19 state and local jurisdictions with laboratory reporting of CD4 and viral load test results demonstrate progress on increasing linkage to care compared to an earlier national estimate. From 2006 to 2012, the overall percentage of people diagnosed with HIV who were linked to care within three months of diagnosis increased from an estimated 65.0 percent to 80.8 percent (CI 2.2.1). The significant gains were realized from 2006 to 2009; data for 2009-2011 show a slight decline in linking to care persons diagnosed with HIV. This decline is affected by the changes in the areas and the number of areas that provide data. CDC will be better able to assess national progress as more state and local jurisdictions consistently provide complete CD4 and viral load data in the coming years. CDC also increased referrals to Partner Services for people diagnosed with HIV in publically-funded HIV testing sites from 77.4 percent in 2011 to 83.2 percent in 2012, exceeding the 2012 target (Measure 2.2.2). CDC also increased referrals for these individuals to other HIV prevention services from 64 percent in 2011 to 75.8 percent in 2012 (Measure 2.2.3). Since FY 2010, referrals to Partner Services have increased 14 percentage points while referrals to other HIV prevention services have increased 13 percentage points. CDC prioritized these services in its new health department funding agreement that began in FY 2012, and is providing expert advice and assistance to grantees to further improve performance in these areas.

CDC monitors HIV through the National HIV Surveillance System, using the data to direct prevention efforts and provide researchers, policymakers, and the public with a timely understanding of HIV trends in the United States. HIV and AIDS case surveillance data meet high standards for completeness of reporting. CDC is also working in collaboration with state and local health departments to better monitor the effects of HIV medical care through expanded reporting of CD4 and viral load test results. For FY 2014, 40 states and the District of Columbia required reporting of all CD4 and viral load values, exceeding the target (Measure 2.2.4). CDC programs seek to reduce progression from HIV infection to AIDS and monitor disease progression using surveillance data. The AIDS rate dropped from 12.3 per 100,000 population in 2009 to 10.7 per 100,000 in 2012 (Measure 2.2.6).



Scientific reviews document that school health programs can positively impact health-risk behaviors, health outcomes, and educational outcomes. CDC-led studies demonstrate that school health programs can also be cost effective. For example, every dollar invested in school-based HIV, sexually transmitted infections (STI), and pregnancy prevention efforts saves $2.65 in medical and social costs. These efforts address NHAS imperatives to provide age-appropriate HIV and STI education for all Americans. The percentage of students who ever had sexual intercourse decreased significantly from 54.1 percent in 1991 to 47.4 percent in 2011. Condom use during most recent sexual intercourse among sexually active students increased from 46.2 percent in 1991 to 59.1 percent in 2013. CDC did not meet its FY 2013 target for the percentage, of adolescents in grades 9 to 12 abstaining from sexual intercourse or using condoms if

[443] Hutchinson A et al. 2012). Return on public health investment: CDC's Expanded HIV Testing Initiative. JAIDS 2012. 59: 281-6.

currently sexually active. However, the change from FY 2012 is minimal, dropping slightly from 86.8 percent in FY 2012 to 86.3 percent in FY 2013 (Measure 2.1.7). CDC strategies to improve performance for this measure focus on strengthening the health infrastructure of state and local education agencies and addressing critical health issues including HIV/AIDS, STIs, and teen pregnancy prevention in schools. In the long term, CDC estimates the proportion of adolescents in grades 9 to 12 who abstain from sexual intercourse or use condoms if sexually active will increase as a result of these strategies.

Viral Hepatitis

Performance Measures for Long Term Objective: Reduce the rates of viral hepatitis in the United States

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 Target +/- FY 2015 Target
2.6.1: Reduce the rate of new cases of hepatitis A (per 100,000 population) (Outcome)	FY 2012: 0.5 (Target Exceeded)	0.4	0.4	Maintain
2.6.2: Reduce the rate of new cases of hepatitis B (per 100,000 population) (Outcome)	FY 2012: 0.9 (Target Exceeded)	0.8	0.8	Maintain
2.6.4: Increase the number of state and local health departments reporting viral hepatitis data of sufficient quality to be included in national surveillance reports (Output)	FY 2012: 14 (Target Not Met)	14	16	+2

Performance Trends: In the United States, hepatitis A, B, and C viruses (HAV, HBV, and HCV) are the main causes of viral-induced hepatitis. An estimated 3.5 million – 5.5 million people are chronically infected with HBV or HCV, and at elevated risk for cirrhosis, liver cancer, and early death. In FY 2016, CDC proposes a significant increase in its investment in viral hepatitis activities to advance work on national goals to prevent illness and death from viral hepatitis, stop the epidemic of HCV infection in young people, and advance strategies to eliminate hepatitis A and B. These activities are expected to yield tangible improvements in CDC's viral hepatitis performance measures, including, as a first step, increasing the number of states with surveillance data available for program evaluation. Because grantees will not be awarded until the latter part of FY 2016, future targets for the viral hepatitis performance measures will reflect the expected results of these efforts.

Before the 1996 implementation of Advisory Committee on Immunization Practices (ACIP) recommendations for hepatitis A immunization, an estimated 271,000 infections and 100 deaths occurred as a result of acute liver failure attributed to HAV each year. Through the implementation of effective immunization strategies, nationwide HAV incidence decreased approximately 95 percent since 1995. The 2012 rate of 0.5 cases per 100,000 approaches the Healthy People 2020 target of 0.3 cases per 100,000. CDC expects that expansion of 2006 recommendations for routine hepatitis A vaccination, which now include children in the United States aged 12–23 months, will be needed to reduce hepatitis A rates further (Measure 2.6.1). Although hepatitis A vaccination coverage is increasing in the United States among children 19-35 months, the proportion of children who were fully vaccinated was only 55% in 2013, the lowest coverage level for any vaccine in the infant immunization schedule. Most adults are susceptible to hepatitis A, through lack of childhood exposure or vaccination, and are vulnerable to infection

In 2013, a total of 165 people in 10 states were confirmed to have become ill from hepatitis A after eating a contaminated frozen fruit mix product purchased at a national discount buyers club. 95 (58%) of those ill were between 40 – 64 years of age. 11 children age 18 or under were also ill; none were previously vaccinated.

particularly during food-borne outbreaks of hepatitis A (box): adults with hepatitis A have the highest risk for liver failure and death. An update of ACIP recommendations for hepatitis A vaccination is an opportunity to present new strategies to improve vaccination coverage and guide the use of hepatitis A vaccination in response to disease outbreaks.

As a result of implementation of hepatitis B vaccination strategies, declines in hepatitis B incidence have occurred among all age groups, but are greatest among children under 15 years of age. Hepatitis B incidence is well below the Healthy People 2020 target of 1.5 cases per 100,000, and the 2012 rate of 0.9 cases per 100,000 is the lowest rate of new cases ever recorded (Measure 2.6.2). However, the results of these declines have not been equal across all groups, for example, relatively high rates remain for persons aged 30-39 years (2.17 cases/100,000 population), males (1.17 cases/100,000 population), and non-Hispanic, African Americans (1.1 cases per 100,000 population).

The number of persons with chronic HBV infection in the United States remains high—estimated to be 1.2 million. People with hepatitis B can spread the virus to others and are at risk of serious health problems themselves. Of major concern are the infants born to pregnant women with chronic (or acute) HBV because those infants are at increased risk for perinatal HBV transmission. If infants are infected with HBV, they have a 90% chance of developing lifelong HBV infection, and therefore have a 25 percent risk of premature death from liver failure and/or liver cancer. Elimination of mother-to-child transmission of HBV is one of the goals of the national viral hepatitis action plan[444] and is the priority for CDC funded Perinatal Hepatitis B Prevention Programs (PHBPP). Emerging data suggest PHBPP are improving their rate of success in preventing infant HBV. CDC is supporting PHBPP by facilitating laboratory reporting of HBV infected pregnant women by national commercial laboratories, and encouraging administration of the first dose of hepatitis B vaccine routinely before hospital discharge, as recommended by ACIP, and a new National Quality Forum hepatitis B birth dose coverage quality measure.

CDC continues to pursue opportunities for reducing new HBV infections in populations other than children. For example, in 2011, CDC provided technical analyses to the ACIP to expand recommendations for adult hepatitis B vaccination to include persons with diabetes aged 19–59, given the increased risk of HBV infection in this population. Because patients with chronic HBV infection in the United States place healthcare personnel (HCP) at risk for HBV exposure in the workplace, in 2013 CDC provided guidance to address the challenge of evaluating hepatitis B protection among HCP vaccinated in infancy and childhood, and updated recommendations for post-exposure prophylaxis for exposed HCP.[445] In 2014, the U.S. Preventive Services Task Force issued updated recommendations for Screening for Hepatitis B Virus Infection in Non-pregnant Adolescents and Adults.

Improvements in surveillance and monitoring are needed to rapidly detect and prevent new infections, as well as to assure that infected persons receive appropriate care and treatment to avoid premature death. For example, of persons with hepatitis C who do not receive needed care and treatment; approximately one million will die from HCV-related complications; unfortunately, at a time of safe and curative therapies for hepatitis C, up to 60% of the estimated 3 million Americans living with HCV do not know they are infected and even fewer are receiving appropriate care. To improve strategies for HCV testing and linkage to care which previously were based on the ascertainment of risks for infection, CDC recently expanded the recommendations to include routine one-time screening for all persons born during 1945-1965; this population has a five-fold greater

[444] U.S. Department of Health and Human Services, Office of the Assistance Secretary for Health, Office of HIV/AIDS and Infectious Disease Policy. Action Plan for the Prevention, Care, and Treatment of Viral Hepatitis (2014-2016). Washington, DC: U.S. Department of Health; April 2014.

[445] Centers for Disease Control and Prevention (CDC). CDC guidance for evaluating health-care personnel for hepatitis B virus protection and for administering post-exposure management. MMWR 2013;62(No. RR-10).

prevalence of HCV infection than other adults. This approach (in addition to risk-based screening) will reduce hepatitis C related deaths by 121,000.[446]

From 2010 to 2012, 35 states had an increase in new HCV infections. The current volume of viral hepatitis testing overwhelms the existing surveillance capability of most state and local health departments. Adding to the challenges of surveillance, screening for the presence of HCV requires two tests: one test to detect a history of infection and if positive, a second test to determine current infection. State and local health departments have limited capacity to access the large volume of viral hepatitis laboratory data, process the incoming data (including sorting the multiple records that exist for persons living with hepatitis B or C given the complexity of hepatitis testing), ensure the quality of the data, investigate cases, and assure infected persons are linked to care and treatment.

CDC provides technical assistance to states for improving viral hepatitis surveillance; however, only limited funding is provided to enable enhanced surveillance to obtain more complete demographic information on individuals with acute and chronic viral hepatitis infection. Current funding recipients are Florida, Massachusetts, Michigan, New York, Washington, Philadelphia, and San Francisco. For 2012, only 13 states and one locality agreed to publication of the number of laboratory confirmed hepatitis A, B, and C case reports in their jurisdiction. Greater effort is needed to improve the quality of viral hepatitis surveillance data, particularly to track the burden of chronic infection and access to preventive services. (Measure 2.6.4)

Sexually Transmitted Infections

Performance Measures for Long Term Objective: Reduce pelvic inflammatory disease in the United States

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 Target +/- FY 2015 Target
2.7.1: Reduce pelvic inflammatory disease in the U.S. as measured by initial visits to physicians in women aged 15-44 years (NDTI) (Outcome)	FY 2013: 88,000 (Target Met)	87,208	86,423	-785
2.7.2a: Reduce the percentage of high-risk women aged 16–20 infected with chlamydia (Outcome)[1]	FY 2013: 13.3% (Target Not Met)	11.93%	11.75%	-0.18
2.7.2b: Reduce the percentage of high-risk women aged 21–24 infected with chlamydia (Outcome)[1]	FY 2013: 9.4% (Target Not Met)	8.46%	8.32%	-0.14
2.7.4a: Reduce the rate of gonorrhea per 100,000 population in women aged 16–20 (Outcome)	FY 2013: 551.9 (Target Exceeded)	538.1	524.6	-13.50
2.7.4b: Reduce the rate of gonorrhea per 100,000 population in women aged 21–24 (Outcome)	FY 2013: 513.8 (Target Exceeded)	512.8	507.7	-5.1
2.7.4c: Reduce the racial disparity of gonorrhea in women aged 16–24 (is black: white) (Outcome)	FY 2013: 11.1:1 ratio (Target Exceeded)	10.6:1 ratio	10.1:1 ratio	-0.5

[446] Smith BD, et al; Centers for Disease Control and Prevention. Recommendations for the identification of chronic hepatitis C virus infection among persons born during 1945-1965.MMWR 2012 Aug 17;61(RR-4):1-32. Erratum in: MMWR 2012 Nov 2;61(43):886.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 Target +/- FY 2015 Target
2.7.5: Increase the proportion of gonorrhea patients who are treated with a CDC-recommended antibiotic regimen for gonorrhea (Outcome)	FY 2012: 80.8% (Historical Actual)	85.0%	87.5%	+2.5
2.7.6a: Increase the proportion of sexually active women aged 16–20 enrolled in Medicaid health plans who are screened for chlamydial infection (Outcome)	FY 2012: 53.0% (Target Not Met)	61.1%	62.5%	+1.4
2.7.6c: Increase the proportion of sexually active women aged 21–24 enrolled in Medicaid health plans who are screened for chlamydial infection (Outcome)	FY 2013: 64.1% (Target Not Met but Improved)	65.4%	66%	+0.6
2.7.6b: Increase the proportion of sexually active women aged 16–20 enrolled in commercial health plans who are screened for chlamydial infection (Outcome)	FY 2013: 42.3% (Target Not Met)	43.1%	43.5%	+0.4
2.7.6d: Increase the proportion of sexually active women aged 21–24 enrolled in commercial health plans who are screened for chlamydial infection (Outcome)	FY 2013: 51.2% (Target Not Met but Improved)	52.1%	52.7%	+0.6

[1] In FY 2013 CDC improved the calculation of data for these measures, increasing the stability of estimates over time

Performance Measures for Long Term Objective: Eliminate congenital syphilis

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 Target +/- FY 2015 Target
2.9.1: Reduce the incidence of primary & secondary syphilis in women aged 15–44 (per 100,000 population) (Outcome)	FY 2013: 2.1 (Target Exceeded)	1.7	0.80	-0.90
2.9.2: Reduce the incidence of congenital syphilis (per 100,000 live births) (Outcome)	FY 2013: 8.7 (Target Exceeded)	6.7	6.2	-0.5
2.9.3: Increase percentage of pregnant women screened for syphilis at least one month before delivery (Outcome)	FY 2012: 85.0% (Target Exceeded)	84.0%	84.0%	Maintain

Performance Trends: CDC's new 5-year cooperative agreement with state, local, and territorial STD programs began in FY 2014. CDC will continue to review the measures and targets above, as well as all new measures for the cooperative agreement. CDC will propose revisions, updates, and new measures for the FY 2017 President's Budget.

CDC assures the provision of quality sexually transmitted infection (STI) services in both the public and private sectors through technical and

financial assistance and training. CDC establishes screening recommendations and works with partners and healthcare providers to encourage adherence to these standards. Monitoring progress in screening and reducing disease burden informs programmatic priorities and resource allocation.

Screening improvements and investments in other STI prevention strategies will not only avert infections and improve national health outcomes but will prove cost-effective due to the high, and increasing, economic burden associated with STIs and their sequelae.[447] Published estimates of the cost-effectiveness of Chlamydia screening in sexually active young women range from $2,500–$37,000 per QALY.

CDC's long-term objectives are to reduce pelvic inflammatory disease (PID) and eliminate congenital syphilis. PID is a major cause of infertility, ectopic pregnancy, and chronic pelvic pain. Infections due to Chlamydia trachomatis and Neisseria gonorrhea are major causes of PID. The number of initial visits to physicians in women aged 15–44 years diagnosed with PID decreased from 100,000 in 2009 (baseline) to 88,000 in 2013 (Measure 2.7.1).

Reported chlamydial infections rates among women have increased annually since the late 1980s, when the United States established public programs for screening and treatment of women to avert PID and related complications. In part, this reflects expanded chlamydia screening activities, the use of increasingly sensitive diagnostic tests, and increased emphasis on case reporting from providers and laboratories, and improvements in reporting systems. However, the increase may also reflect a true increase in morbidity. Data from a randomized controlled trial of Chlamydia screening in a managed care setting suggested that screening programs can lead to as much as a 60 percent reduction in PID incidence (Measures 2.7.1-2.7.6).

In previous years, CDC restricted the Chlamydia prevalence estimates for females entering the National Job Training Program to those states with greater than 100 tests among females aged 16-24 years. However, since estimates are stratified by age (16-20 and 21-24 years), in FY 2013 CDC began applying the same restriction (greater than 100 tests) within each age group, which will improve the stability of estimates over time (Measures 2.7.2a and 2.7.2b).

CDC is collaborating with the health care sector to increase adherence to existing recommendations and developing tools for providers to increase awareness and assist with Chlamydia screening implementation. In FY 2012, the median Chlamydia test positivity rate among women aged 16–24 years was 11.0 percent among those who were tested during visits to selected family planning clinics (range: 5.5 percent to 19.4 percent). Chlamydia test positivity among women aged 16–24 years screened in family planning clinics increased in most HHS regions during 2007–2012.

- Among sexually-active women aged 16–20 years enrolled in Medicaid health plans, Chlamydia screening rates decreased from 53.5 percent in 2012 to 53.0 percent in 2013 (Measure 2.7.6a).

- Among sexually-active women aged 21–24 years enrolled in Medicaid health plans, Chlamydia screening rates increased from 63.6 percent in 2012 to 64.1 percent in 2013 (Measure 2.7.6c).

- Among sexually-active women aged 16–20 years in commercial plans, Chlamydia screening rates increased from 41.4 percent in 2012 to 42.3 percent in 2013 (Measure 2.7.6b).

- Among sexually-active women aged 21–24 years in commercial plans, Chlamydia screening rates increased from 49.2percent in 2012 to 51.2 percent in 2013 (Measure 2.7.6d).

[447] Chesson HW, et al. The estimated direct medical cost of sexually transmitted diseases among American youth, 2000. Perspectives on Sexual and Reproductive Health 2004, 36(1): 11–19. Also: Maciosek, M, et al. Priorities Among Effective Clinical Preventive Services: Results of a Systematic Review and Analysis. American Journal of Preventive Medicine, 2006; (31) 1, 52–61.

Following a 74 percent decline in the rate of reported gonorrhea during 1975–1997, the overall gonorrhea rate decreased to 98.1 cases per 100,000 population in 2009—the lowest rate since recording of gonorrhea rates began. From 2009 to 2013, the rate has increased slightly to 106.1 per 100,000 populations, with a total of 334,004 cases reported in the United States in 2013. A decrease in gonorrhea rates from 2012–2013 was observed among all persons aged 15-19, and women aged 20-24.In FY 2013, among women aged 16-20, the rate of gonorrhea per 100,000 population was 551.9 and among women aged 21-24, the rate of gonorrhea per 100,000 population was 513.8. The black: white ratio among gonorrhea in women aged 16-24 was 11:1 in 2013 (Measures 2.7.4a-c). Antimicrobial resistance remains an important consideration in the treatment of gonorrhea. In FY 2014, CDC added a new measure tracking the proportion of gonorrhea patients who are treated with a CDC-recommended antibiotic regimen for gonorrhea. In FY 2012, 80.8 percent of gonorrhea patients received treatment with a CDC-recommended antibiotic regiment (Measure 2.7.5).

In 2013, the primary and secondary syphilis rate among women aged 15-44 remained at the FY 2011 and 2012 rate of 2.1 cases per 100,000. CDC has set a FY 2016 target of 0.80 (Measure 2.9.1).

Congenital syphilis is a preventable disease which could be eliminated through consistent and effective antenatal screening and treatment of infected pregnant women. Elimination of congenital syphilis would contribute to reductions in lost pregnancies and preterm/low birth weight infants. After an 18 percent increase in the rate of congenital syphilis during 2006-2008, the rate of congenital syphilis continues to decrease. From 2008-2013, rates decreased from 10.3 to 8.7 cases per 100,000 live births, exceeding the 2014 target of 9.9 per 100,000 live births (Measure 2.9.2). In 2013, a total of 348 cases were reported, a decrease from 358 cases in 2011. As a result of data from 2009-2013, CDC has set a target of 6.2 for FY 2016.

Tuberculosis

Performance Measures for Long Term Objective: Decrease the rate of cases of tuberculosis (TB) among U.S.-born persons in the United States

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 Target +/- FY 2015 Target
2.8.1: Decrease the rate of cases of tuberculosis among U.S.-born persons (per 100,000 population) (Outcome)	FY 2013: 1.2 (Target Exceeded)	1.2	1.2	Maintain
2.8.2: Increase the percentage of newly diagnosed TB patients who complete treatment within 12 months (where <12 months of treatment is indicated) (Outcome)	FY 2011: 89.0% (Target Exceeded)	88.0%	88.0%	Maintain
2.8.3: Increase the percentage of culture-positive TB cases with initial drug susceptibility results reported. (Outcome)	FY 2013: 96.6% (Target Exceeded)	95.0%	95.0%	Maintain
2.8.4: For contacts to sputum acid-fast bacillus smear-positive TB cases who have started treatment for newly diagnosed latent TB infection, increase the proportion of TB patients who complete treatment. (Outcome)	FY 2011: 66.5% (Target Not Met)	70.0%	79.0%	+9.0

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 Target +/- FY 2015 Target
2.T: Number of state public health laboratories participating in the TB Genotyping Network (Output)	FY 2013: 50 (Target Met)	50	50	Maintain

Performance Trends: Effective control efforts by CDC and its 68 state and local partners contributed to the lowest number of U.S. Tuberculosis (TB) cases since national reporting began in 1953. Data indicate 9,582 cases in 2013, or 3.0 per 100,000 population and 1.2 for U.S. born population (Measure 2.8.1). Reflecting program effectiveness, the United States consistently ranks among the lowest TB incidence countries in the world.

TB drug resistance is increasing globally; the World Health Organization (WHO) estimates that around 450,000 cases of drug-resistant TB occurred in 2012. However, the number of drug resistant cases in the United States remains stable at less than one percent of all cases (approximately 100 cases per year). CDC monitors key TB controls, including treatment completion within one year, timely laboratory reporting, and testing of all TB patients for HIV to ensure coordinated care and other prevention activities. CDC works with state and local TB programs to monitor performance on these indicators, ensuring that essential prevention, control, and laboratory activities contribute to elimination (defined as a case rate of less than one case per million population). TB treatment completion is the most effective way to reduce the spread of TB and prevent its complications. Therefore, increasing the proportion of patients who complete treatment is the highest priority for CDC's TB Elimination program. In 2011, 89 percent of patients completed a curative course of treatment for TB (Measure 2.8.2), which exceeded the target of 87.5 percent. This is a considerable increase over the 1994 baseline of 67.6 percent and is credited with keeping U.S. rates of drug-resistant TB low. Because completion of therapy is critical for reducing TB incidence, and it is harder for vulnerable populations, (i.e., persons with HIV or diabetes or who are affected by homelessness, incarceration, or substance abuse, CDC's TB funding formulas are weighted to provides additional resources to programs that serve a larger proportion of them. CDC also provides on-site assistance, upon request, to state and local health departments who are addressing TB outbreaks to assure all contacts are evaluated and that people with TB disease complete therapy. CDC supports efforts in public health laboratories to test for drug resistance and use Advanced Molecular Detection tools to genetically map TB specimens to develop a database to better understand and halt the spread of the disease. In 2013, 96 percent of culture-positive TB cases underwent initial drug susceptibility testing, exceeding the 95 percent target (Measure 2.8.3). CDC continues to meet its target of 50 participating state public health laboratories in the TB Genotyping Network (Measure 2.T). Other laboratories also contributed to these efforts, including facilities in Washington, D.C., Puerto Rico, and the Pacific Islands.

Treatment for latent TB infection, another important priority, can prevent a person from developing active TB disease, protect their close contacts from being infected, and, ultimately, protect a community from TB. CDC supports state and local TB programs in their efforts to locate, diagnose, and treat contacts who may have been exposed to a person with TB disease. In 2011, 66.5 percent of contacts to sputum acid-fast bacillus smear-positive TB cases who started treatment for newly diagnosed latent TB infection completed a treatment regimen (Measure 2.8.4). Although below target, both CDC and TB programs are working to increase this statistic. For example, research funded by CDC through the TB Trials Consortium identified a new regimen for treatment for latent TB infection (LTBI) that requires three months of treatment, instead of nine, and therefore, is more likely to be completed. CDC published new guidelines for the regimen and has been evaluating their implementation in programs. CDC will continue to focus on how treatment of LTBI affects national efforts to eliminate TB.

Additionally, CDC continues to explore the economic impact of LTBI and TB disease screening and treatment. Direct medical costs of LTBI screening and treatment are approximately $261 to $390 per person (2010 dollars). The direct medical cost of curing TB disease is approximately $17,000 per case of

The estimated direct medical cost of curing TB disease is $17,000 to $430,000 per case, depending on drug susceptibility.

drug-susceptible TB disease treated by directly observed therapy. Costs rise for multi-drug resistant cases of disease to $134,000 for treatment, diagnostics, case management, hospitalization, etc., and if costs for productivity loss during treatment are included, the cost is almost doubled to $260,000. For an extensively drug-resistant TB case, the cost for direct treatment is $430,000 per case and $554,000 when productivity loss during treatment is included.

EMERGING AND ZOONOTIC INFECTIOUS DISEASES

Core Infectious Diseases

Performance measure for Long Term Objective: Build and Strengthen health information systems capacity in state and local health departments.

Measure	Most Recent Result	FY 2015Target	FY 2016 Target	FY 2016 +/- FY 2015
3.5.2: Increase the percentage of laboratory reports on reportable conditions that are received through electronic means nationally (Outcome)[1]	FY 2014: 67% (Target Exceeded)	70%	75%	+5

[1]Targets reflect ACA/PPHF funding.

Performance measure for Long Term Objective: Protect Americans from Infectious Diseases—Vector-borne.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
3.E: Establish state TickNet sites to collect and submit data for Lyme and other tick-borne diseases (Output)	FY 2014: 17 (Target Exceeded)	16	16	Maintain

Performance measure for Long Term Objective: Reduce the spread of antimicrobial resistance.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
3.2.3: Decrease the proportion of hospitals with carbapenem-resistant *Klebsiella spp*. or *Escherichia coli* (E.*coli*) healthcare-associated infections (Outcome)	CY 2013: 6.01% (Target Exceeded)	6.5%	5.7%	-0.8

Performance measures for Long Term Objective: Protect Americans from death and serious harm caused by medical errors and preventable complications of healthcare.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
3.3.3: Reduce the central line-associated bloodstream infection (CLABSI) standardized infection ratio (SIR)[1] (Outcome)	CY 2013: 0.54 (Target Not Met but Improved)	0.35[2]	0.33	-0.02
3.3.2a: Reduce the incidence (per 100,000 population) of healthcare associated invasive Methicillin-resistant *Staphylococcus aureus* (MRSA) infections[3] (Outcome)	CY 2013: 18.34 (Preliminary data)[4]	10.83[5]	10.83	Maintain

[1]The Standardized Infection Ratio (SIR) is calculated by dividing the actual (observed) infections by the expected infections using data gathered through the CDC National Healthcare Safety Network (NHSN).

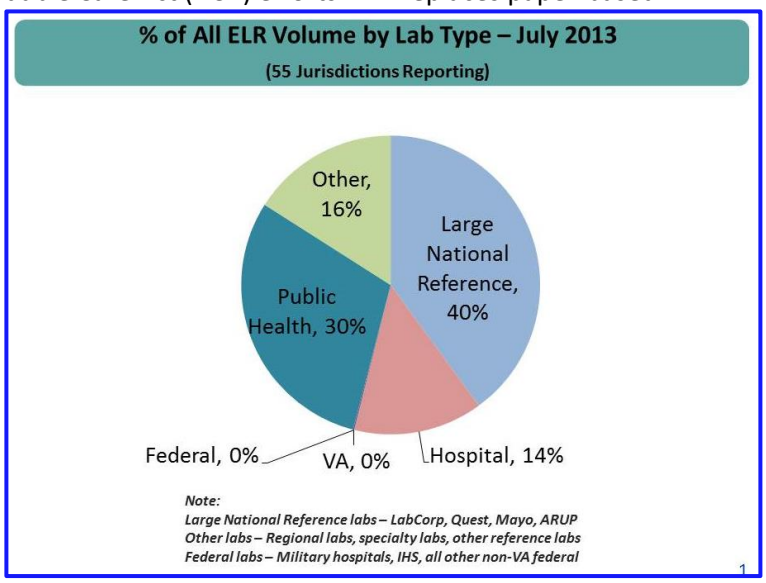
[2]New baseline will be established in 2015 per the updated HHS HAI Action Plan.

[3] The incidence is calculated by dividing the number of infections over the number in the surveillance population.

[4] Final data will be available by January 31, 2015.

[5]New baseline will be established in 2015 per the updated HHS HAI Action Plan and measure methodology will be revised to be more nationally representative.

Core Infectious Performance Trends: Advancing national implementation of Electronic Laboratory Reporting (ELR) is a priority in CDC health reform and Affordable Care Act (ACA) efforts. ELR replaces paper-based reporting, which accelerates reporting to public health labs; reduces the reporting burden on clinicians, hospitals, and commercial laboratories; and decreases errors as well as duplicate reporting. Due to the substantial time savings from ELR over paper-based reporting, ELR yields clinical and public health cost savings and promotes rapid control of infectious disease outbreaks. Quicker identification of illnesses enables a more rapid public health response and results in mitigating outbreaks and averting continual spread of illness. This produces less of an economic burden on healthcare and public health. Targeting laboratories that handle large volumes of total lab reports will substantially improve public health surveillance through increased use of ELR for reportable results from each jurisdiction's highest reporting labs. As of CY 2014, electronic laboratory reports accounted for 67 percent of laboratory reports for reportable conditions received, which is a five percent increase from the previous year. (Measure 3.5.2).



Vector-borne Performance Trends: Tick-borne diseases have increased in the United States for most of the last decade. Lyme disease is the most commonly reported vector-borne disease and the seventh most-commonly reported infectious disease in the country. One of the more serious tick-borne diseases, Rocky Mountain spotted fever (RMSF), can be rapidly fatal if not detected early. Reducing the impact of tick-borne diseases requires increased capacity to better identify risks and respond effectively using tailored prevention strategies. TickNET is a collaborative public health effort established by CDC in 2007 to foster coordinated surveillance, research, education, and prevention of tick-borne diseases. TickNet sites increase local and national capacity and collaboration for improved reporting and analysis of state and regional trends in tick-borne diseases. These sites also facilitate multi-state field evaluations of interventions aimed at reducing disease burden. For example, a placebo-controlled trial was conducted in 2011-2012 in TickNET sites in CT, MD, and NY to evaluate the efficacy of yard-based pesticide applications to reduce tick-borne disease in humans. This study spurred additional efforts with TickNET collaborators to evaluate novel prevention options and to better understand tick-borne disease risk in the home environment. CDC uses the results from these evaluation efforts to inform program strategy and aid in the establishment of national prevention goals based on validated intervention methods and approaches. CDC is committed to prioritizing consistent funding to the 16 states with the highest incidence of Lyme disease through our TickNET program. Since FY 2010, CDC has consistently met or exceeded the target number of TickNet sites, with 17 sites funded in FY 2014 (Measure 3.E). Additional one-year temporary funding, enabled CDC to fund an extra site in FY 2014 instead of the projected 16 sites. Funding to additional sites is always provided on a one-year basis as monies are available.

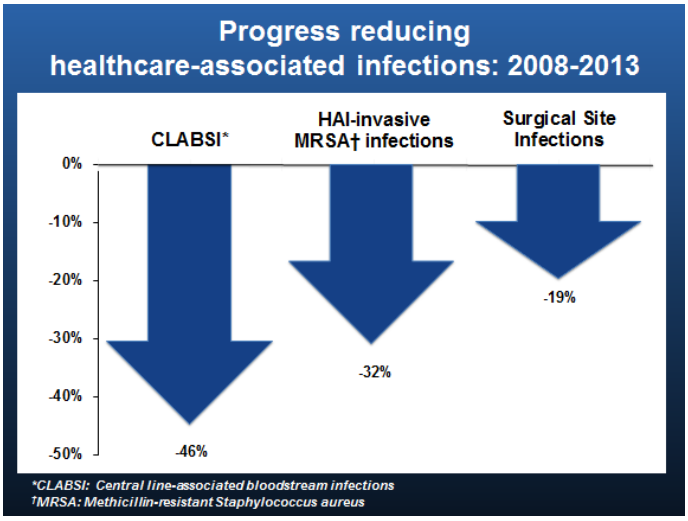
To detect the spread and prevent outbreaks of, one of the newest emerging arboviral threats in the Western Hemisphere since December 2013, CDC is equipping labs to test samples and teaching clinicians to spot cases in travelers who may bring the virus onto American soil.

Antimicrobial Resistance Performance Trends: CDC is a leader in the fight to combat antimicrobial resistance. Antimicrobial resistance is emerging as one of the world's most pressing public health threats, and it is increasing in scope. In response, CDC is enhancing its focus on the most critical and immediate antimicrobial resistance problems through its new National Strategy for Combating Antibiotic-Resistant Bacteria[448].

Carbapenem-resistant Enterobacteriaceae (CRE) are resistant to almost all drugs. These pathogens pose immediate infection threats to vulnerable, hospitalized patients, with bloodstream infections and contribute to 40 percent of infected patients' deaths. Infections spread rapidly between healthcare settings because infected patients often receive medical care in more than one hospital and in long-term care facilities such as nursing homes. *Klebsiella pneumoniae* spp and *Escherichia coli (E.coli)* are the most common carbapenem-resistant pathogens found in central line-associated bloodstream infections (CLABSI), catheter-associated urinary tract infections (CAUTI), and surgical site infections (SSI). Through collaboration with state health agencies and other partners, CDC uses the "Detect and Protect"[449] strategy to assess the type and prevalence of antibiotic resistant pathogens and protect patients through a regional prevention approach that contains the spread of these emerging threats.

In CY 2013, 6.01 percent of hospitals reporting into CDC's National Healthcare Safety Network (NHSN) reported carbapenem-resistant *Klebsiella* spp or *E. coli* infections (Measure 3.2.3). CDC's data collection methodology changed for CY 2012 when CDC expanded the measure to include all hospitals (acute care and long-term acute care facilities) reporting at least one healthcare-associated infection (CLABSI, CAUTI, or SSI) with emerging carbapenem-resistance in *Klebsiella* spp or *E.coli* to NHSN. This change in scope allows for a more accurate and comprehensive assessment of where CRE infections are occurring by including more hospitals and more types of healthcare-associated infections. CDC expected the number of healthcare associated infections reported in CY 2013 to increase due to implementation of 2013 Inpatient Prospective Payment System reporting rules. While exceptional, CDC does not expect similar results until FY 2016 as reporting mechanisms are streamlined and as more rules may be implemented. Therefore, the FY 2015 target remains 6.5%. CDC will propose additional measures and/or revise existing measures to take effect in FY 2016 that better reflect CDC's expectations in reducing the spread of antimicrobial resistance.

Healthcare-Associated Infections (HAIs) Performance Trends: CDC provides national leadership in healthcare-associated infection (HAI) prevention and provides the scientific foundation for state and federal healthcare oversight. CDC aggressively combats HAIs in all healthcare settings where patients receive clinical care. CDC's evidence-based guidelines are the standard of care for HAI prevention and are used by researchers, clinicians, federal partners, state and local health departments, and private sector partners to prevent HAIs and target healthcare facilities that need additional assistance. HAIs, such as CLABSI, CAUTI, SSI, and invasive methicillin-resistant *Staphylococcus aureus* (MRSA) infections, are largely preventable with adherence to CDC guidelines. While dramatic reductions in CLABSI, MRSA, and select SSIs[450] have been demonstrated, more work is



[448] http://www.whitehouse.gov/sites/default/files/omb/memoranda/2014/m-14-13.pdf
[449] http://www.cdc.gov/hai/pdfs/cre/CDC_DetectProtect.pdf
[450] http://www.cdc.gov/hai/pdfs/stateplans/factsheets/us.pdf

needed to focus CAUTI and *Clostridium difficile* infection (CDI) prevention efforts. CDC data is used to target facilities that need enhanced implementation of CDC's evidence-based prevention practices, and to leverage state and federal partner resources to advance prevention progress.

Reducing HAIs across healthcare settings supports national progress toward the HHS National Action Plan to Prevent Healthcare Associated Infections: Roadmap to Elimination (National HAI Action Plan)[451] and the HHS Agency Priority Goal. Between CY 2008 and CY 2013, CLABSIs decreased 46 percent to a 0.54 Standardized Infection Ratio (SIR) nationally in U.S. hospitals (Measure 3.3.3). While the overall SIR falls short of the National HAI Action Plan 2013 reduction goal (0.50), CDC met the target for all intensive care units (including pediatric and neonatal ICUs). CLABSI reporting from hospitals wards and other non-ICU locations is still growing with mostly voluntary reporting from facilities (CMS IPPS facilities will be required to report CLABSI data from wards beginning January 2015), and existing prevention efforts are being refined for use outside of ICUs. CDC is further working to prevent CLABSI in all locations by using HAI data to identify specific hospitals and locations that can benefit from enhanced infection control practices and expertise. Preliminary data show that the national incidence of healthcare-associated invasive MRSA infections (hospital onset and invasive healthcare-associated MRSA in other healthcare settings, such as dialysis centers), decreased 32 percent between CY 2008 and CY 2013 (final data pending until January 31, 2015). FY 2016 targets are level with FY 2015 targets since CDC is in the process of revising the MRSA measure to be more nationally representative (Measure 3.3.2a).

Measures for both CLABSI and MRSA are included in the National HAI Action Plan; however the measures of the current Action Plan were only set through December 2013. The results of national efforts to achieve these targets became available in fall of 2014. For this reason, HHS proposed new HAI targets through December 2020 using data from January 2015 as the baseline. Targets established for CLABSI and MRSA for FY 2016 and beyond will align with those proposed in the new Action Plan.

Food Safety

Performance measures for Long Term Objective: Protect Americans from infectious diseases – foodborne illnesses.[1]

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
3.1.1b: Reduce the incidence of infection with three key foodborne pathogens: *Escherichia coli* O157:H7 (Outcome)	FY 2013: 1.15 (Target Not Met)	0.85	0.80	-0.05
3.1.1c: Reduce the incidence of infection with three key foodborne pathogens: *Listeria monocytogenes* (Outcome)	FY 2013: 0.25 (Target Met)	0.23	0.23	Maintain
3.1.1d: Reduce the incidence of infection with three key foodborne pathogens: *Salmonella species* (Outcome)	FY 2013: 15.15 (Target Not Met, but Improved)	12.98	12.67	-0.31
3.F: Cumulative number of states providing reports of confirmed norovirus outbreaks to Calicinet (Output)	FY 2014: 28 (Target Not Met)	28	30	+2

[1] CDC aligns its Food Safety targets with national targets for Healthy People 2020 objectives. The unit of measure for 3.1.1b, 3.1.1c, and 3.1.1d is the number of cases per 100,000 people.

[451] http://www.health.gov/hai/prevent_hai.asp#hai_plan

Performance Trends: Concerted prevention efforts by CDC, regulatory partners, and private industry have resulted in significant progress in reducing the incidence of major foodborne infections over the last 15 years. For example, between 1996-1998 baseline and FY 2013, the incidence of *Escherichia coli* (*E. coli*) O157:H7 and *Listeria* decreased. CDC will continue to work closely with the Food and Drug Administration (FDA), the United States Department of Agriculture (USDA) Food Safety and Inspection Service (FSIS), state and local agencies, and food industries to prevent and control outbreaks by quickly implementing effective interventions.

CDC did not meet its *E. coli* O157:H7 FY 2013 incidence target of 1.00 cases per 100,000 people (Measure 3.1.1b). Ongoing or widespread foodborne outbreaks where several food items may be the possible sources of contamination may play a part in the increasing incidence of *E. coli* infection. Intensive and long-term efforts from CDC, FDA, FSIS and food industries will be required to reduce the incidence of *E. coli* moving forward.

CDC met its 2013 target of 0.25 cases per 100,000 people for the reduction of *Listeria* infections (Measure 3.1.1c). This reflects an overall decrease in infections since 2011 of 0.03 cases per 100,000 people. Previous efforts by the processed meat/hotdog industry proved important in reducing *Listeria* contamination. Recent successes might be attributed to CDC's *Listeria* Initiative, an enhanced surveillance program in 47 states and Washington D.C., to improve outbreak detection and decrease response time. Since the introduction of the *Listeria* Initiative, outbreaks of *Listeria* have decreased during most years. However, continued occurrence of deadly *Listeria* outbreaks indicates the need to continue implementation of the *Listeria* Initiative in all states. As part of CDC's Advanced Molecular Detection (AMD) Initiative, CDC, National Institutes of Health (NIH), FDA, USDA, and state partners added a new component to the *Listeria* initiative: sequencing and analyzing of clinical and environmental *Listeria monocytogenes* isolates sent to PulseNet, using Whole Genome Sequencing methods in near real-time. This collaborative effort helps CDC to identify outbreaks of listeriosis more rapidly, supports related investigation efforts to detect additional cases, and determines the source of infection. Since September of 2013, CDC has sequenced more than 800 samples of *Listeria* and sent them to NIH for analysis.

Although an improvement from FY 2012, CDC did not meet its FY 2013 target of 13.62 cases per 100,000 for the *Salmonella* infection rate (Measure 3.1.1d). *Salmonella* remains the most commonly reported infection in FoodNet and the most common cause of large multistate outbreaks. *Salmonella* is a difficult pathogen for CDC, regulatory agencies, and industry to control and prevent. With more than 2,000 serotypes that can cause human illness from many different food and animal sources, predicting where and when *Salmonella* will be found is challenging. CDC will continue coordinating public health surveillance and foodborne outbreak investigations to inform important actions including:

- FDA's proposed Food Safety Modernization Act (FSMA) required rules to reduce illnesses caused by *Salmonella* and other pathogens in produce and in processed foods;
- USDA's efforts to improve the safety of poultry products, including its proposed *Salmonella* reduction rule;
- Food industry's' new strategies to reduce *Salmonellla* contamination in food, particularly in chicken, which is an important contributor of *Salmonella*-related illnesses; and
- Consumers' increased knowledge and awareness of their role in food safety.

With CDC assistance, 2 nation-wide food retailers developed purchase specification agreements with their food suppliers to reduce *Salmonella*. Each also developed innovative pathogen reduction methods.

CDC also collaborates with FDA and USDA to measure progress towards reducing *Salmonella* from all sources. Collectively, CDC anticipates these activities will result in reductions in the incidence of *Salmonella* illnesses in the U.S. over the coming years.

CDC uses the CaliciNet[452] national surveillance system to detect and characterize norovirus outbreaks by supporting state and territorial public health laboratories. Although CDC did not meet the target of 32 states in FY 2014, CaliciNet received data on 1,053 norovirus outbreaks from 28 states and from cruise ships, including 163 (15%) foodborne outbreaks (Measure 3.F). To consolidate resources, CDC established five CaliciNet Regional Outbreak Support Centers[453] in 2011 to analyze outbreaks from the 22 states that do not participate in CaliciNet. The Regional Outbreak Support Centers reported 134 outbreaks (12% foodborne) in 2014.

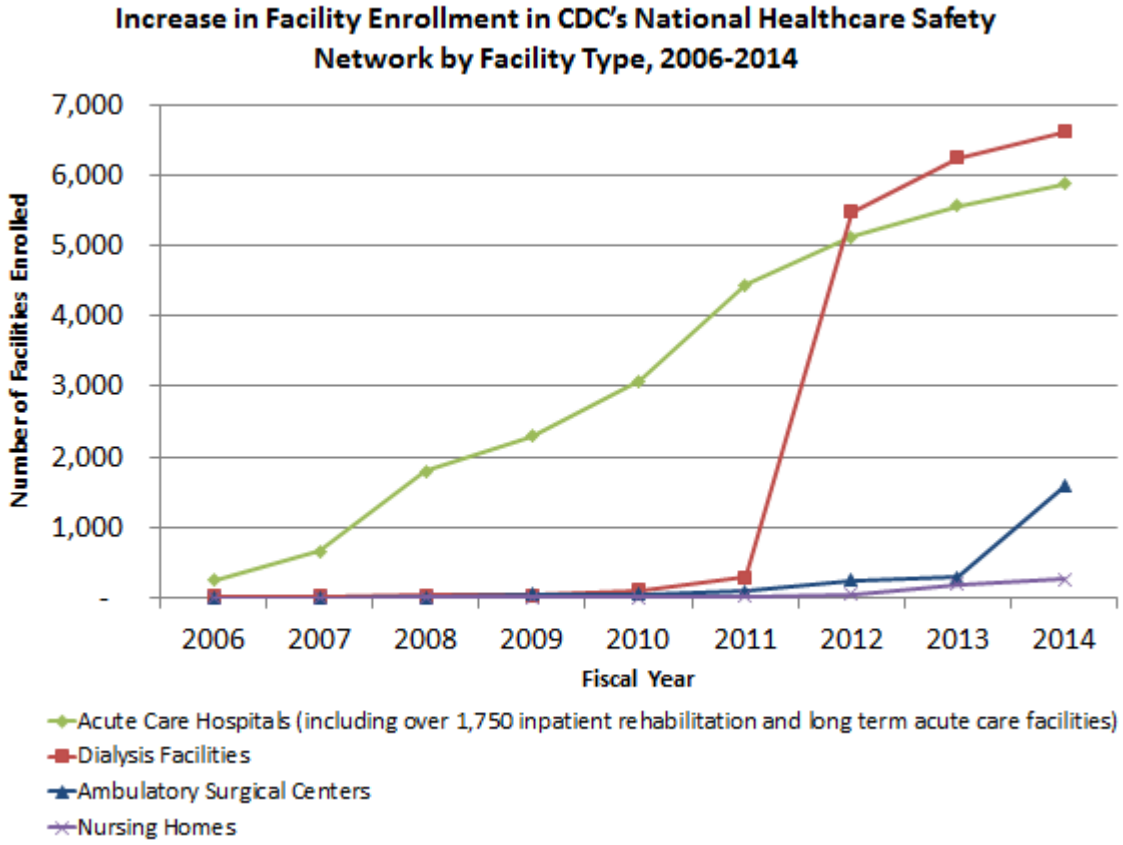
National Healthcare Safety Network

Performance measure for National Healthcare Safety Network

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
3.3.4: Increase the number of hospitals and other selected health care settings that report into the National Healthcare Safety Network (NHSN) (Output)	FY 2014: 14,450 (Target Exceeded)	17,000	19,000	+2,000

Performance Trends: CDC's National Healthcare Safety Network (NHSN) is a comprehensive medical care surveillance and quality improvement system to detect HAIs and drive HAI prevention at the local, state, and national levels. CDC exceeded its FY 2014 target to increase the number of facilities reporting to NHSN (Measure 3.3.4). CDC extended tracking capacity from 12,400 facilities by December 2013 to 14,450 facilities by December 2014. This includes reporting from more than 5,800 acute care hospitals, over 6,600 dialysis facilities, over 1,600 ambulatory surgical centers, and over 270 nursing homes.

[452] http://www.cdc.gov/norovirus/reporting/calicinet/
[453] http://198.246.124.22/norovirus/reporting/calicinet/participants.html



Since FY 2012, CDC has nearly tripled the number of healthcare facilities reporting data for HAI prevention and is positioned to exceed its FY 2015 target and meet its FY 2016 target. To simplify reporting for healthcare facilities and improve the accuracy of data reported, CDC promotes electronic reporting of HAI data by increasing the number of facilities using electronic data sources to detect and report HAIs. NHSN informs CDC's strategic efforts to provide timely, accurate, and valid data across healthcare settings that can be used at the local, state, and national levels to assess HAI trends, improve the quality of care, benchmark progress, and target HAI prevention. NHSN data are used by partners, such as the Centers for Medicare and Medicaid Services (CMS), to fulfill quality reporting and improvement programs, by FDA to improve medication and product safety, and by the Agency of Healthcare Research and Quality (AHRQ) to evaluate implementation strategies.

Quarantine and Migration

Performance measures for Long Term Objective: Prevent the importation of infectious diseases to the U.S. in mobile human, animal and cargo populations

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
3.4.2: Increase the proportion of applicants for U.S. immigration screened for tuberculosis by implementing revised tuberculosis technical instruction (TB TI). (Outcome)	FY 2013: 84% (Target Exceeded)	100%	100%	Maintain

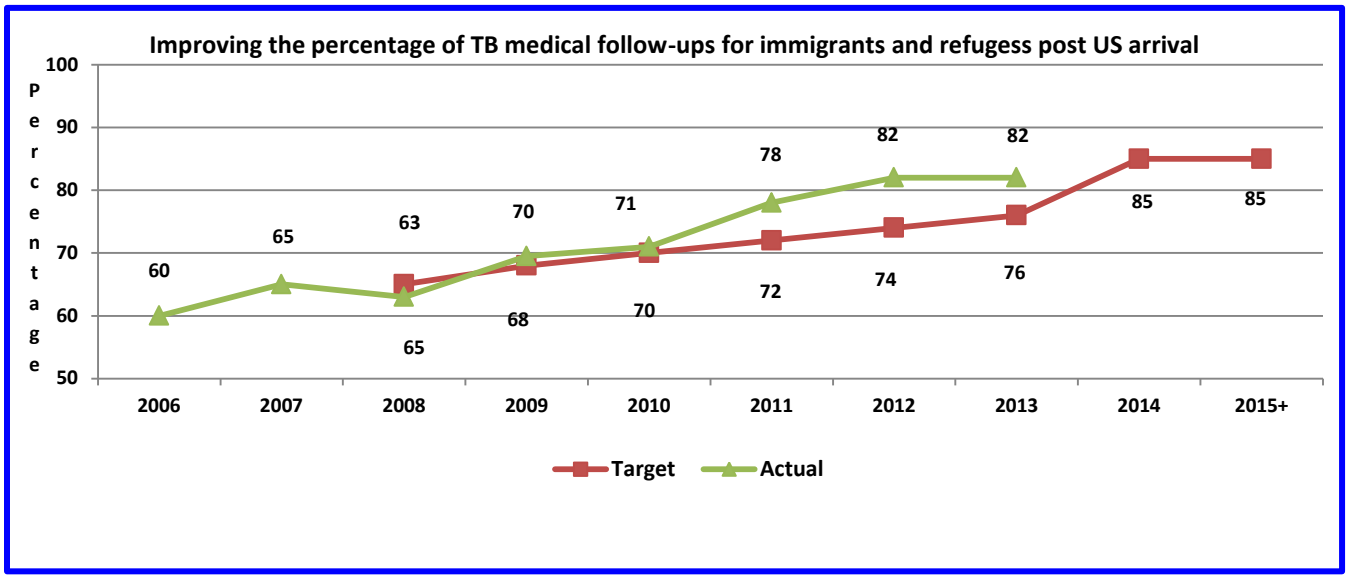
Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
3.4.4: Increase of the percentage of immigrants and refugees with a "Class A or B medical notification for tuberculosis" who undergo medical follow-up after arrival in U.S (Outcome)	FY 2013: 82% (Target Exceeded)	85%	85%	Maintain

Performance Trends: CDC reduces morbidity and mortality among immigrants, refugees, travelers, expatriates, and other globally mobile populations, and prevents the introduction, transmission, and spread of communicable diseases. To address infectious disease health risks associated with international travel and migrating populations, CDC carries out regulatory responsibilities and implements cost-effective public health programs.

CDC ensures that immigrants and refugees receive required medical screening, health education, and disease treatment before coming to the U.S. Development of evidence-based guidelines for required medical screening of one million immigrants and 80,000 refugees annually prevents importation of infectious diseases into the United States.

Since 2008, CDC has increased the number of tuberculosis cases detected and treated overseas by 200 percent and saved greater than $20 million in annual U.S. health care costs.

CDC provides scientific guidance, in the form of technical instructions, for physicians around the world carrying out required medical screening for U.S. immigration applicants. CDC revised the tuberculosis technical instructions (TB TI) in 2007 to update testing algorithms to detect and treat more TB cases before arrival to the U.S. These efforts contribute to decreasing the burden of TB in the U.S. among foreign-born populations. CDC has exceeded its targets since 2008 and screened 84 percent of U.S.-bound immigrants per the 2007 TB TI during FY 2013 (Measure 3.4.2).



CDC provides actionable information on reportable illness among refugees and immigrants to state and local health departments for treatment and follow-up care, annually delivering 100,000 electronic notifications within five days of arrival. Since FY 2009, CDC has exceeded its targets for immigrants and refugees with a “Class A or B medical notification for TB" who underwent medical follow-up after arrival in the U.S. (Measure 3.4.4). Class A

conditions[454] render applicants inadmissible and require a waiver for entry; Class B conditions are admissible but might require treatment or follow-up. In FY 2013, CDC increased medical follow-ups to 82 percent. CDC will maintain performance levels as of FY 2014, continuing to decrease the burden of TB among foreign-born populations and achieving significant U.S. health care cost savings.

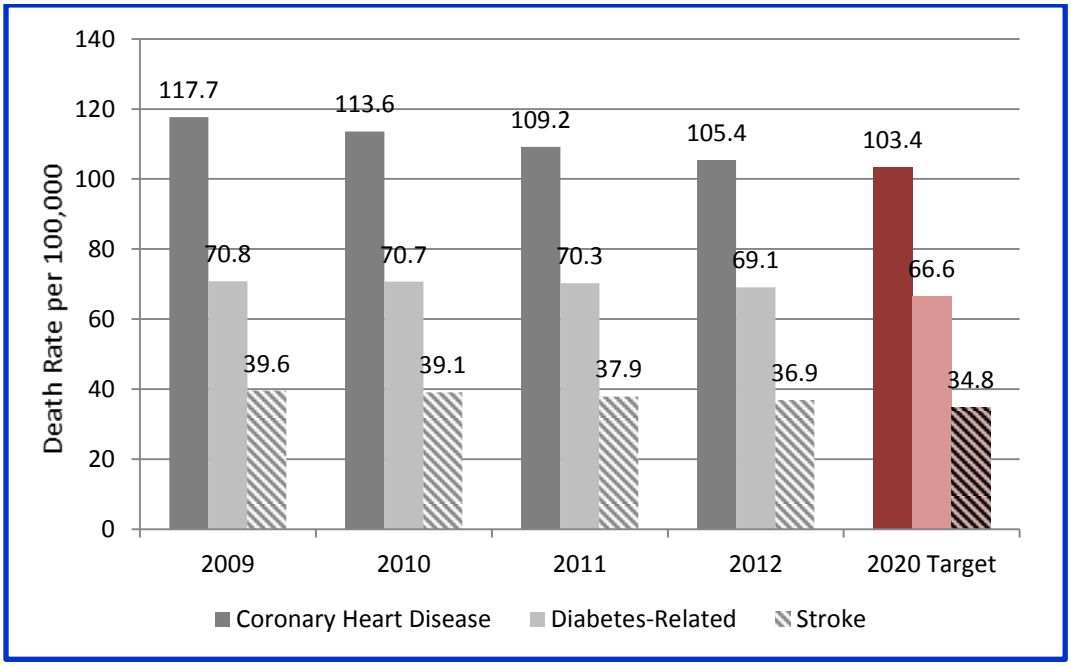
[454] http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6207a1.htm

CHRONIC DISEASE PREVENTION AND HEALTH PROMOTION

Chronic Disease Prevention and Health Promotion

Chronic diseases are the leading causes of death and disability in the United States, and account for 70% of all deaths annually (almost 1.7 million). These diseases also cause major limitations in daily living for approximately one out of every ten people. The contextual indicators below track long-term health outcomes influenced by CDC's Chronic Disease Prevention and Health Promotion program.

Figure 1: Age-Adjusted Deaths Due to Coronary Heart Disease, Diabetes, and Stroke, 2007 - 2012 Results with 2020 Targets[455]



Contextual Indicator	Most Recent Result	FY 2020 Target
Coronary Heart Disease: Reduce the annual age-adjusted rate of coronary heart disease deaths (per 100,000 population).	FY 2012: 105.4	103.4
Stroke: Reduce the annual age-adjusted rate of stroke deaths (per 100,000 population).	FY 2012: 36.9	34.8
Diabetes: Reduce the annual age-adjusted rate of diabetes-related deaths (per 100,000 population).	FY 2012: 69.1	56.5

Over the past decade, CDC has worked to improve cardiovascular health and reduce coronary heart disease and stroke mortality through its support of cross-cutting public health strategies and leveraging resources to develop partnerships that promote healthy lifestyle behaviors, environments and communities. CDC has also established relationships between clinical practices and the community to improve healthcare quality.

[455] http://healthypeople.gov/2020/topicsobjectives2020/default.aspx; NVSR tables have been published; however the final reports for 2011 and 2012 have not.

From 2000 to 2012, the annual age-adjusted death rate for coronary heart disease steadily declined from 186.9 to 105.4 per 100,000. During the same timeframe, the annual age-adjusted rate of stroke deaths declined from 60.8 to 36.9 per 100,000. From 2005 to 2012, the age-adjusted rate of diabetes-related deaths also declined from 77.0 to 69.1 per 100,000. This trend is the first time in a decade the rate has significantly improved. Prior to 2005, the diabetes-related death rates consistently ranged between 76.0 per 100,000 and 78.0 per 100,000.

CDC attributes these successes to improvements in contributing factors including: reductions in per capita cigarette smoking, improvements in the integration of clinical and other preventive services, expansion of clinical and community-based resources, support for self-management of chronic diseases and conditions, and advancement of environmental approaches to promote health and reinforce healthy behaviors. CDC's inter-related programs focus not only on specific diseases, but also on those risk factors that contribute to chronic diseases and conditions at all stages of life.

Tobacco Prevention and Control

Performance Measures for Long Term Objective: Reduce death and disability among adults due to tobacco use.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
4.6.2: Reduce per capita cigarette consumption in the U.S. per adult age 18+. (Outcome)	FY 2013: 1,129 (Target Not Met but Improved)	903	821	-82
4.6.3: Reduce the proportion of adults (aged 18 and over) who are current cigarette smokers. (Intermediate Outcome)	FY 2013: 17.8% (Target Exceeded)	17.0%	16.0%	-1
4.6.4: Increase proportion of the U.S. population that is covered by comprehensive state and/or local laws making workplaces, restaurants, and bars 100% smoke-free (no smoking allowed, no exceptions). (Intermediate Outcome)	FY 2013: 49.1% (Target Not Met but Improved)	58.5%	58.7%	0.2
4.6.5: Reduce the proportion of adolescents (grade 9 through 12) who are current cigarette smokers. (Intermediate Outcome)	FY 2013: 15.7%[1] (Target Exceeded)	15.7%	N/A[2]	N/A[2]
4.C: Number of calls received by Tobacco Cessation Quitlines. (Output)	FY 2013: 1,384,777 (Target Not Met but Improved)	1,500,000	1,500,000	Maintain
4.D: Number of persons provided cessation counseling and/or medications by Tobacco Cessation Quitlines. (Output)	FY 2013: 430,505 (Target Not Met)	499,500	499,500	Maintain
4.G: Number of requests from state health departments and other organizations (e.g. local health departments) for advertising campaign materials through the Media Campaign Resource Center. (Output)	FY 2014: 1,134 (Target Exceeded)	1000	1000	Maintain

[1] YRBS data. CDC discontinued use of NYTS data in FY 2014 for interim YRBS reporting years due to growing variance in data reported between the two data sets.

[2] Targets and results are set and reported biennially.

Per capita cigarette consumption among adults in the US declined from 1,507 to 1,129 between FY 2008 and FY 2013, revealing that current smokers are smoking fewer cigarettes.

Performance Trends: Reducing tobacco use is a CDC priority. It is also an HHS Agency Priority Goal (2014-2015) to which CDC, Food and Drug Administration, National Institutes of Health, Substance Abuse and Mental Health Services Association, and others contribute[456]. Effective tobacco control programs, implemented through evidence-based tobacco control policies, significantly prevent and reduce tobacco use.

CDC estimates cigarette consumption will continue to decrease through FY 2016. Additionally, the percentage of current adult smokers decreased from 20.6% in 2009 to 17.8% in FY 2013 (Measure 4.6.3). Cigarette use among adolescents declined sharply from 1997 to 2003; however, the rate of decline slowed over the last decade, fluctuating between 20.0% and 23.0% from 2003 to 2007, and then declining from 19.5% to 15.7% from 2009 to 2013 (Measure 4.6.5). By achieving a smoking rate of 15.7% in 2013, which is the lowest teen smoking rate recorded since data collection began in 1991, the United States has met its national Healthy People 2020 objective of reducing adolescent cigarette use to 16% or less. However, even though CDC met the national objective, CDC set its 2015 target to sustain progress toward reducing teen smoking prevalence.

The percentage of the United States population covered by comprehensive state and/or local laws that make workplaces, restaurants, and bars 100% smoke-free has increased significantly since FY 2005. Between FY 2005 and FY 2013, the population covered by smoke-free laws increased by 35.4 percentage points so that 49.1% are now covered (Measure 4.6.4). On average, smoke-free policies in states and communities contribute to a 17% reduction in heart attack hospitalizations. While progress has been made, 50.9% of the population is still exposed to secondhand smoke with only 27 states having comprehensive smoke-free indoor air laws as of March 31st, 2014.

In addition to providing evidence to inform policy, system, and environmental changes, CDC also provides direct assistance to tobacco users through National Tobacco Quitlines.[457] In 2012, CDC launched the first ever national tobacco prevention media campaign, Tips from Former Smokers,[458] on national TV, radio, print, digital and out-of-home media to have former smokers share the real consequences of smoking and encourage smokers to quit. The campaign generated 207,519 additional calls (a 132% increase) to 1-800-QUIT NOW compared to corresponding weeks in 2011, achieving a total of more than 365,000 calls to the Quitlines between March and June 2012. In FY 2012, the tobacco Quitlines received 14% more calls and provided cessation counseling and/or medications to 10% more people than in FY 2011 (Measures 4.C and 4.D), contributing to an estimated 1.6 million new quit attempts among U.S. adult smokers. CDC launched the Tips II campaign in FY 2013, with a new round of advertisements featuring additional health conditions and population groups. Initial evaluation results indicate the second round of the campaign generated more than 150,000 additional calls to 1-800-QUIT-NOW quitlines.

In 2014, CDC launched Tips III in two phases. The first nine week phase (February 3—April 6) generated more than 250 news stories in print, broadcast, and online media, reaching an audience of more than 276 million people and generating over $230,000 in advertising value. CDC launched phase two on July 7, 2014 to run for nine weeks. This phase included new advertisements featuring health conditions such as premature birth, periodontal (gum) disease and tooth loss, and HIV complications.

In FY 2015 and FY 2016, CDC set flat targets because CDC will launch a single campaign in each of those years, which will not include additional funds states might spend to promote Quitlines outside of the Tips campaign.

[456] http://www.performance.gov/
[457] http://www.cdc.gov/tobacco/quit_smoking/cessation/nqdw/index.htm
[458] http://www.cdc.gov/tobacco/campaign/tips/

The 2014 Surgeon General's Report[459] recommends sustaining campaigns such as Tips at a high frequency and exposure 12 months a year for at least a decade to end the tobacco epidemic.

Requests for tobacco cessation advertising materials more than doubled over the past year, largely due to the National Tobacco Education Campaign launched in March 2012. In FY 2014, health departments and other organizations made 1,134 requests for materials, over a third more requests than in FY 2013. CDC expects requests for advertising campaign materials to increase slightly in FY 2016. However, CDC does not expect as many requests as it received in FY 2014 based on the number of campaigns that will be implemented (Measure 4.G).

Examples of the materials CDC provided include the Tips from Former Smokers campaign, the Heart Stopper[460] (2011) and Destiny[461] (2012) Public Service Announcements from the Office of the Surgeon General, and many state and community contributions to the Media Campaign Resource Center.

Nutrition, Physical Activity, and Obesity

Performance Measures for Long Term Objective: Promote evidence-based interventions to improve nutrition, increase physical activity, and reduce obesity.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
4.11.7: Increase the proportion of infants that are breastfed at 6 months. (Intermediate Outcome)	FY 2011: 49.4% (Target Not Met but Improved)[1]	58.9%	60.6%	+1.7
4.11.8: Increase the contribution of vegetables to the diets of the population aged 2 years and older (cup equivalents per 1,000 calories). (Intermediate Outcome)	FY 2009: 0.83 (Baseline)	1.01	N/A[2]	N/A[2]
4.11.9: Increase the proportion of adults (age 18 and older) that engage in leisure-time physical activity. (Intermediate Outcome)	FY 2013: 69.7% (Target Exceeded)	72.5%	73.2%	+0.7
4.11.10a: Reduce the age-adjusted proportion of adults (age 20 years and older) who are obese. (Intermediate Outcome)	FY 2012: 34.9% (Target Exceeded)	N/A[2]	33.2%	N/A[2]
4.11.10b: Reduce the proportion of children and adolescents (ages 2 through 19) who are obese. (Intermediate Outcome)	FY 2012: 16.9% (Baseline)	N/A[2]	15.7%	N/A[2]
4.12.1: Increase in the number of states with nutrition standards for foods and beverages provided in early care and education centers. (Output)	FY 2013: 26 (Target Exceeded)	36	38	+2
4.12.4: Increase the number of states with physical education standards that require children in early care and education centers to engage in vigorous- or moderate-intensity physical activity. (Output)	FY 2013: 7 (Target Not Met but Improved)	16	18	+2

[459] http://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf
[460] http://www.surgeongeneral.gov/videos/2010/12/heart-stopper.html
[461] http://www.surgeongeneral.gov/videos/2012/03/next-generation.html

[1] Rates reported in the National Immunization Survey for 2009 and beyond are based on a dual-frame sample that includes respondents surveyed on landline or cellular telephones.
[2] Targets and results are set and reported biennially.

Performance Trends:

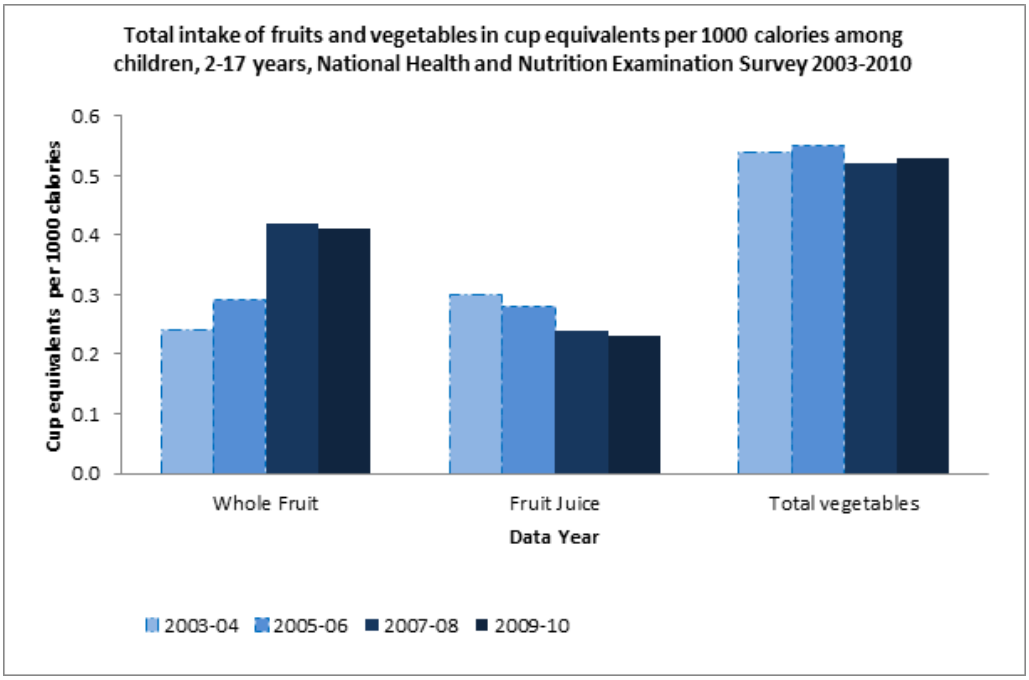
Breastfeeding: The percent of infants who are breastfed at six months (Measure 4.11.7) rose from 44.4% in FY 2008 to 49.4% in FY 2011. Breastfeeding duration will continue to increase as CDC assists more hospitals to adopt standards consistent with the Ten Steps to Successful Breastfeeding[462] and achieve the Baby-Friendly[463] designation. In the 18 years since the first US hospital achieved Baby-Friendly designation, nearly 2 million US babies have been born at Baby-Friendly hospitals. As of October 2014, 9.4% of all births (~375,000) in the US occur at the 190 hospitals across 45 states that are designated as Baby-Friendly, double the percentage of births at Baby-Friendly hospitals in 2010.

In 2014, nearly 375,000 births in the US occurred at one of 190 Baby-Friendly hospitals across 45 states

Early Care and Education (ECE): Annually, more than 11 million children under age six spend an average of 30-40 hours in non-parental care. In FY 2011, five states met national physical education standards (Measure 4.12.4) and nine states met national nutrition standards (Measure 4.12.1). By FY 2013, with investments and assistance from CDC, two additional states met the physical education standards and 17 additional states met the nutrition standards, a significant increase from FY 2011. CDC continues to lead operations of the Let's Move! Child Care initiative, which has reached over 500,000 children through 15,000 providers. ECE network partners have reached an additional 1.2 million children as part of their commitment to achieve national obesity prevention best practices.

Healthy Eating: Between CY 2003 and CY 2010, children's fruit intake increased 12%, due to increases in whole fruit intake. However, in FY 2009, mean daily intake of total vegetables (age adjusted, cup equivalents per 1,000 calories) among children in the US (2-18 years) was only 0.83—less than one cup (Measure 4.11.8). CDC worked with states to increase access to affordable fruits and vegetables in communities, schools, and child care centers. To reach national goals, CDC is working with cafeterias, concessions, and vending operators to encourage worksites, schools, and early care and education centers to provide healthier food options. FY 2011 results will be available by July 31, 2015.

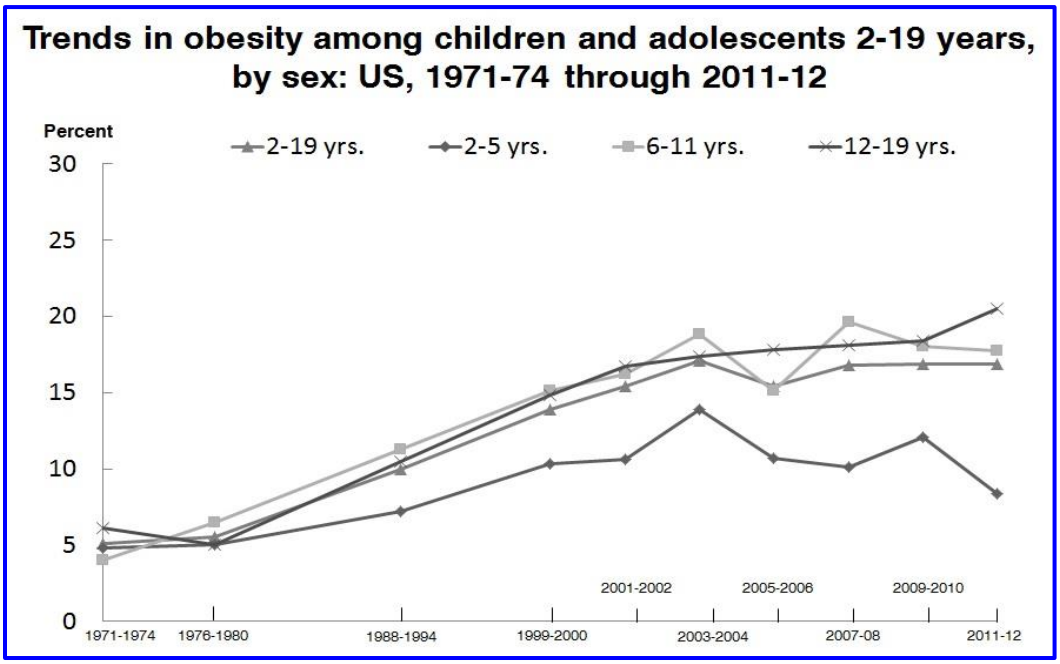
[462] http://www.cdc.gov/breastfeeding/pdf/strategy1-maternity-care.pdf
[463] http://www.unicef.org/programme/breastfeeding/baby.htm



Active Living: With the support of CDC investments and assistance, the proportion of adults who engage in leisure-time physical activity increased from 63.8% in FY 2008 to 69.7% in FY 2013, meeting the FY 2013 target but slightly lower than FY 2012 results (Measure 4.11.9). The proportion of adults that meet current aerobic physical activity guidelines increased from 43.5% in 2008 to 49.9% in 2013, reducing the risk for many chronic diseases. Safe and easy places for physical activity, such as sidewalks, parks, and schools, may help further increase physical activity among adults. CDC's 2014 State Indicator Report on Physical Activity shows that physical activity among adults and youth is higher in some states than others. Twenty-seven states have state-level Complete Streets policies, making streets safer for pedestrians and bicyclists. In addition, 34 states provide guidance to school districts on walking or biking to and from school.

Obesity: Obesity increases the risk of many diseases, including: heart disease, type 2 diabetes, stroke, high blood pressure, osteoarthritis, and some cancers. After decades of increasing rates, recent data show a plateau in obesity rates among adults. In FY 2012, 34.9% of adults were obese, a decrease from 35.7% in 2010, although still slightly greater than 33.8% in 2008 or the 2006 rate of 32.7% (Measure 4.11.10a). The percentage of all children and adolescents (ages two to 19 years) that were obese was 16.9% in FY 2012 (Measure 4.11.10b). Over the past thirty years, obesity rates among adolescents and children have steadily increased. In more recent years, however, obesity rates among adolescents age 12-19 have continued to increase while obesity rates among children ages 2 through 11 have decreased.

Obesity prevalence among children ages 2-5 years dropped significantly from 14% in 2003-2004 to 8% in 2011-2012.



School Health

Performance Measures for Long-Term Objective: Improve the health and well-being of youth and prepare them to be healthy adults.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
4.12.5: Increase the number of states that have developed and adopted a state-level multi-component physical education policy for schools.[1] (Output)	FY 2012: 6 (Historical Actual)	N/A[1]	12	N/A[1]
4.12.6: Increase the percentage of schools that do not sell less healthy foods and beverages (soda pop or fruit drinks, baked goods, salty snacks, candy).[1] (Outcome)	FY 2012: 56.2% (Historical Actual)	N/A[1]	70.0%	N/A[1]

[1]Targets and results are set and reported biennially.

Performance Trends: While obesity rates among adolescents ages 12-19 have been steadily increasing since 1980, obesity rates among children ages 6 to 10 have dropped since 2008. However, the 2012 Youth Risk Behavior Survey shows that approximately 30% of high school students are overweight or obese and forms the basis for CDC's Healthy Schools Program continued focus on childhood obesity prevention.

More than 90% of our nation's children spend an average of six hours a day, five days a week at school, making this an essential setting to reverse the steady increase in childhood obesity and to promote health for all students.

CDC promotes effective strategies for improving dietary quality, physical activity, and reducing obesity in youth including: increasing the quality and quantity of physical education provided in K-12 schools and improving the nutritional quality of foods available to children on school campuses.

- Physical Education: Measure 4.12.5 tracks the establishment of policies that align with CDC's School Health Guidelines to Promote Healthy Eating and Physical Activity[464] and the recommendations of the American Heart Association and SHAPE America. The multi-component physical education policy composition ensures that schools provide comprehensive, quality physical education to students. In FY 2012, six states established the requisite number and composition of multi-component policies, a 20% increase over baseline. Given the policy-orientation of the measure, progress will likely be incremental in the first years of program implementation. By FY 2016, CDC expects this number to more than double. FY 2013 results will be available in March, 2015.

A 2014 Utah pilot program in 5 CDC school health target districts showed that adding 25 minutes of physical activity during the school day increased academic achievement.

- Nutrition Environment: Foods sold outside of the school food service program (competitive foods) are widely available through a variety of venues and are the primary source of low nutrient high calorie foods (junk foods) in schools. Students attending schools that sell junk foods and sugar-sweetened beverages have lower intake of fruits, vegetables, and milk at lunch and higher daily percentage of calories from total fat and saturated fat. For Measure 4.12.6, CDC will leverage implementation of USDA's "Smart Snacks in Schools" and the Local Wellness Policy Rule authorized under The Healthy Hunger-Free Kids Act of 2010[465]. Measure 4.12.6 is based on Institute of Medicine (IOM) standards that extend beyond the USDA requirement, and tracks the percentage of schools limiting student purchases to any of the following snack foods or beverages from vending machines, school stores, canteens, or snack bars: candy, salty snacks that are not low in fat, baked goods that are not low in fat, and soda pop or fruit drinks that are not 100% juice. In FY 2012, 56.2% of secondary schools sold only nutritious foods outside of the school food service program. The FY 2016 target of 70% represents a 24% increase in the number of schools selling only healthier foods.

Heart Disease and Stroke

Performance Measures for Long Term Objective: Reduce risk factors associated with heart disease and stroke.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
4.11.5: Increase the age-adjusted proportion of persons age 18+ with high blood pressure who have it controlled (<140/90).[1] (Intermediate Outcome)	FY 2012: 48.9% (Target Not Met but Improved)	N/A[1]	56%	N/A[1]
4.11.6: Reduce consumption of sodium in the population aged 2 years and older (milligrams per day).[1] (Intermediate Outcome)	FY 2012: 3,478 (Target Not Met)	N/A[1]	2,900	N/A[1]
4.N: Increase the number of blood pressure screenings provided by the WISEWOMAN program. (Output)	FY 2012: 47,121 (Target Not Met)	50,000	50,500	+500
4.O: Increase the total number of evidence-based tools disseminated to promote sodium and hypertension reduction and awareness. (Output)	FY 2014: 108 (Target Exceeded)	119	137	+18

[1]Targets and results are set and reported biennially.

[464] http://www.cdc.gov/healthyyouth/npao/strategies.htm
[465] http://www.fns.usda.gov/school-meals/healthy-hunger-free-kids-act

Performance Trends: Hypertension affects one in three adults, and is a modifiable risk factor for heart disease, stroke, and other chronic diseases. It also contributes to one out of every seven deaths in the U.S., including nearly half of all cardiovascular disease-related deaths. Although CDC did not meet its target for the proportion of adults with high blood pressure who have it controlled in FY 2012, the results demonstrate steady improvement compared to FY 2008 (45.0%) and FY 2010 (46.0%) (Measure 4.11.5). With the continued efforts of the CDC/Centers for Medicare and Medicaid Services (CMS) Million Hearts®™ Initiative, federal, state, local, and public/private efforts are coalescing to promote the "ABCS" of clinical prevention (aspirin when appropriate, blood pressure control, cholesterol management, and smoking cessation). FY 2013 results will be available by March 31, 2015.

From July 1, 2012 to June 30, 2013 the WISEWOMAN Program provided 47,121 cardiovascular disease (CVD) screenings to at-risk women with a focus on reducing CVD risk factors.

Broome County, a CDC Sodium Reduction in Communities awardee, worked with school districts to decrease the amount of sodium in elementary school lunches from 1,500 mg in the 2010-2011 school-year to 1,000 mg in the 2013-2014 school year, an overall total reduction of 33%. This impacted approximately 20,000 individual students per year at 45 elementary schools in Broome County.

In 2013, CDC, the American Heart Association, and the American College of Cardiology issued a science advisory recommending that U.S. practices and health systems adopt and use evidence-based hypertension control protocols. CDC's Million Hearts®™program developed a customizable protocol based on the newly revised evidence-based hypertension control protocols. This protocol can improve hypertension control by clarifying titration intervals and treatment options, expanding the type of staff that can assist in follow-up with patients, and serving as a clinical decision support tool at the point of care when embedded into Electronic Health Records.

About 90% of Americans consume more sodium than is recommended for a healthy diet. Dietary sodium intake remained relatively unchanged between FY 2010 and FY 2012; the average intake in 2011-2012 was 3,478 milligrams per day, much higher than the recommended 2,300 milligrams per day (Measure 4.11.6).

In FY 2014, CDC disseminated 108 evidence-based tools to promote sodium and hypertension reduction; with anticipation of exceeding the FY 2014 target and continuing a trend of disseminating more tools annually since 2009 (Measure 4.O). Examples include:

- Guides for sodium reduction in hospitals, schools, worksites, and congregate populations; and fact sheets for consumers and parents;
- Fotonovelas in English and Spanish intended for integration into community health worker programs that are related to controlling blood pressure in Hispanic/Latino communities.

Complementing these evidence-based tools, CDC also disseminated products translating research into practice, including:

- Heart Disease Data Trends and Maps/Interactive Atlas of Heart Disease and Stroke;
- The Salt e-update, a bi-weekly email communication to approximately 400 stakeholders sharing current work in the field of sodium reduction.
- Salt e-updates translated into Chinese and disseminated to Chinese stakeholders, including China CDC, the Chinese Ministry of Health, and the Chinese food industry
- Hypertension Control: Action Steps for Clinicians
- Cardiovascular Health: Action Steps for Employers
- Self-Measured Blood Pressure Monitoring: Action Steps for Public Health Practitioners

Diabetes

Performance Measures for Long Term Objective: Improve prevention, detection, and management of diabetes.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
4.11.3: Increase the proportion of the diabetic population with an A1c value less than 7%[1,2] (Outcome)	FY 2012: 48.2% (Target Not Met)	N/A[1]	56.8%	N/A[1]

[1] Targets and results are set and reported biennially.

[2] This measure uses data that is based on four-year averages to improve the precision of the estimates through larger sample sizes. Most recent results for FY 2012 reflect data from 2009-2012. Targets are based on Healthy People 2020, which were set in 2010.

Performance Trends: The higher one's hemoglobin A1c (A1c), the higher the risk of developing complications related to diabetes. In general, for every percentage point reduction in A1c levels (e.g., from nine percent to eight percent), the risk of developing eye, kidney, or nerve disease decreases by 40%. National Health and Nutrition Examination Survey data show that from 2009-2012, approximately 48.2% of the diabetic population had an A1c value less than seven percent, a decline of five percentage points from 2007-2010 results. Recent trials have demonstrated that aggressive glycemic management or blood sugar control is not beneficial in some groups of persons with diabetes; therefore the current measure of an A1c less than 7 percent may not apply in all situations. Clinicians are moving toward a patient centered approach for managing diabetes that factors in a patient's lifestyle and other comorbid conditions.–Likewise, clinical organizations have increasingly encouraged individualizing A1c target values. Discussions with Healthy People 2020 are underway with to determine if new targets would be appropriate.

As of December 2014, more than 19,000 people have received diabetes lifestyle intervention training from over 5,800 lifestyle coaches through the National Diabetes Prevention Program.

CDC-funded states engage health systems to increase access to and delivery of care for people with diabetes to prevent complications. For example, they help local health departments become American Association of Diabetes Educators (AADE)-accredited sites that offer diabetes self-management education and collaborate with trained community health workers in Federally Qualified Health Centers. From 2009 to 2010, the proportion of persons with diagnosed diabetes that received diabetes education increased from 56.8% to 58.0%. Recent data indicate that patient self-management of diabetes co-morbidities (blood pressure and cholesterol, in addition to blood sugar) improved 19% from 1988 to 2010. Independently, more than half of individuals with diabetes met the respective management goal for each co-morbidity.[466]

CDC estimates show that 86 million American adults, or 1 in 3 persons over age 20 have prediabetes, and 9 out of 10 people with prediabetes do not know they have it. Through the National Diabetes Prevention Program, CDC and over 500 partner organizations throughout the US have reached more than 19,000 people through 5,800 trained lifestyle coaches with evidenced-based lifestyle interventions to prevent Type 2 diabetes.

[466] http://care.diabetesjournals.org/content/early/2013/02/07/dc12-2258.full.pdf+html

Cancer Prevention and Control

Performance Measures for Long Term Objective: Improve health outcomes related to cancer.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
4.9.1: Decrease the incidence rate of late-stage breast cancer diagnosis in women ages 50 to 74 (per 100,000). (Intermediate Outcome)	FY 2011: 101.5 (Target Exceeded)	99.5	99.5	Maintain
4.9.2: Increase the percent of adults age 50 to 75 receiving colorectal cancer screenings.[1,2] (Intermediate Outcome)	FY 2012: 65.1%[3] (Target Not Met)	N/A[1]	70.0%	N/A[1]
4.9.4: Increase the percentage of CDC-funded state cancer registries that electronically receive physician cancer reports from Electronic Health Record (EHR)/Electronic Medical Record (EMR) systems. (Output)	FY 2014: 28% (Target Exceeded)	32.0%	38.0%	+6%
4.K: Number of breast cancer screenings provided by the National Breast and Cervical Cancer Early Detection Programs (NBCCEDP). (Output)[2]	FY 2013: 353,486 (Target Exceeded)	301,492	301,492	Maintain
4.L: Number of breast cancer cases detected by National Breast and Cervical Cancer Early Detection Programs (NBCCEDP) (Output)[2]	FY 2013: 5,982 (Target Exceeded)	4,952	4,952	Maintain

[1] Targets and results are set and reported biennially.

[2] Targets reflect combined budget authority and ACA/PPHF funding.

[3] 2012 rates cannot be compared to rates before 2011 due to a change in BRFSS sampling methodology, which now includes cell phone users.

Performance Trends: Although recommended by the U.S. Preventive Services Task Force, screening rates for breast, cervical, and colorectal cancers remain low. Women over the age of 50 are at highest risk for breast cancer and benefit the most from screening. The incidence of late-stage diagnosis among women ages 50–74 has been trending downward since the 2008 rate of 106.7 per 100,000 women. In FY 2011, the rate increased slightly from the 2010 rate to 101.5 per 100,000 women, however CDC still exceeded its 2011 target (Measure 4.9.1). When compared to those not screened among this age group, mammography screening reduces breast cancer deaths by 17%. Through the National Breast and Cervical Cancer Early Detection Program (NBCCEDP), CDC provides access to breast and cervical cancer screening and diagnostic services to low-income, uninsured, or underinsured women.

Between 2009 and 2013, CDC provided 1,690,434 breast cancer screenings and detected 28,503 cases of breast cancer.

In FY 2013, the NBCCEDP provided 353,486 screenings for breast cancer and detected 5,982 cases, exceeding FY 2012 levels and continuing a steady trend of increased screenings and detections since FY 2010 (Measures 4.K and 4.L). The NBCCEDP serves approximately 10.6% of women eligible for breast cancer screening and approximately 6.5% of women eligible for cervical screening. Targets are based on total funding requested (FY 2016) for budget authority and PPHF. Implementation of the Affordable Care Act will afford greater access to coverage for cancer screening services, and is expected to reduce the size of the NBCCEDP-eligible population in 2015 and 2016. As a result, CDC anticipates serving a larger proportion of the eligible population than currently served through the NBCCEDP. Therefore, CDC will continue to provide direct screening to eligible women and link women to needed care.

Colorectal cancer (CRC) is the second most commonly diagnosed cancer and the second leading cause of cancer deaths among both men and women in the United States. CRC screening can detect cancer early when treatment is more effective and colonoscopy can actually prevent cancer by removing precancerous polyps before they turn into cancer. Unfortunately, in FY 2012, only 65.1% of adults aged 50-75 had been screened (Measure 4.9.2).

In Alaskan regions that partner with a CDC grantee, colorectal cancer screening rates increased by an average of 73% between 2009 and 2012.

Cancer reporting from providers to State Cancer Registries is included in CMS Stage 2 Meaningful Use criteria. Electronic reporting from physician Electronic Health Records to cancer registries is one of six options to achieve Meaningful Use criteria and receive CMS payment incentives. Enhanced use of Electronic Health Records by state registries will improve the timeliness, completeness and quality of cancer data reported, particularly from non-hospital facilities. Enhanced data will improve cancer surveillance, encourage development of comprehensive cancer control programs, and plan health care interventions designed to reduce cancer incidence or improve early detection. Implementation of Meaningful Use will significantly increase the number of reports received for each case by the central registry. In FY 2014, 13 registries (28% of all registries) electronically received physician cancer reports from Electronic Health Record (EHR)/Electronic Medical Record (EMR), exceeding the target by 75%. Because this is new initiative in its early stages, CDC considers its targets to be ambitious. Physician incentives for meeting Meaningful Use criteria will facilitate the National Program of Cancer Registries meeting these targets (Measure 4.9.4).

Oral Health

Performance Measures for Long Term Objective: Prevent oral health diseases and promote effective interventions that support optimal oral health.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
4.7.1: Increase the proportion of the people served by community water systems who receive optimally fluoridated water.[1] (Intermediate Outcome)	FY 2012: 74.6% (Target Not Met but Improved)	N/A[1]	77.0%	N/A[1]

[1] Targets and results are set and reported biennially.

Performance Trends: For 70 years, community water fluoridation has been a safe and healthy way to effectively prevent tooth decay, and has been recognized by CDC as one of 10 great public health achievements of the 20th century. CDC works with national partners, states, communities, and water operators to support the U.S. population having access to optimally fluoridated water to prevent tooth decay. CDC is working toward the Healthy People 2020 objective of 79.6% of the population on public water systems who receive optimally fluoridated water. Fluoridation of public water systems increased from 62.1% in 1992 to 74.6% in 2012 (Measure 4.7.1). In FY 2011, the Department of Health and Human Services (HHS) proposed reducing the recommended national level of fluoride in drinking water to 0.7 mg/L to prevent tooth decay while reducing the chance for children's teeth to develop dental fluorosis. The previous U.S. Public Health Service recommendations for fluoride levels ranged from 0.7mg/L to 1.2 mg/L. The final recommendation to reduce the optimal fluoride level is expected to become publicly available in early 2015. The final notice incorporates public comments and responses from an inter-governmental Federal Panel. CDC, in collaboration with the National Institute of Dental and Craniofacial Research (NICDR), has enhanced surveillance of dental caries (tooth decay) and dental fluorosis in the National Health and Nutrition Examination Survey (NHANES) to monitor the impact of these changes to the fluoride level recommendation.

From 2010 to 2012, 6.3 million additional Americans gained access to fluoridated water.

http://www.cdc.gov/fluoridation/factsheets/cost.htm

Safe Motherhood and Infant Health

Performance Measures for Long Term Objective: To improve the health of women and infants through public health surveillance, research, capacity building and science based practices.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
4.8.4: Increase the number of reporting areas that provide optimal data for assessing safe sleep practices using the Pregnancy Risk Assessment Monitoring System (PRAMS). (Intermediate Outcome)	FY 2013: 17 (Target Met)	21	41	+20
4.8.5: Reduce birth rates among adolescent females aged 15 to 19 years (per 1,000 births).[1] (Contextual Indicator)	FY 2013: 26.5	25.2	22.7	-2.5
4.8.6: Increase the percentage of women at risk for unintended pregnancy who report using long-acting reversible contraception.[2] (Outcome)	FY 2013[3]: 10.1% (Historical Actual)	11.0%	N/A[2]	N/A[2]

[1] Funding for this initiative in targeted communities ended in FY 2014. Data reported are national-level data.

[2] Targets and results are set and reported biennially.

[3] CDC analysis of 2011-2013 NSFG

Performance Trends: As a leader in population-based reproductive, maternal and child health, CDC strengthens the evidence base for effective interventions that improve both maternal and infant health. The birth rate for teenagers aged 15-19 has decreased over 50% in the past decade. This rate dropped to 26.5 per 1,000 in 2013, the lowest rate ever reported for the U.S. (Measure 4.8.5). In 2010, CDC identified and funded 10 communities with significantly higher than average teen birth rates. The teen birth rate in these communities decreased from 71.8 per 1,000 in FY 2009 to 45.1 per 1,000 in FY 2012.

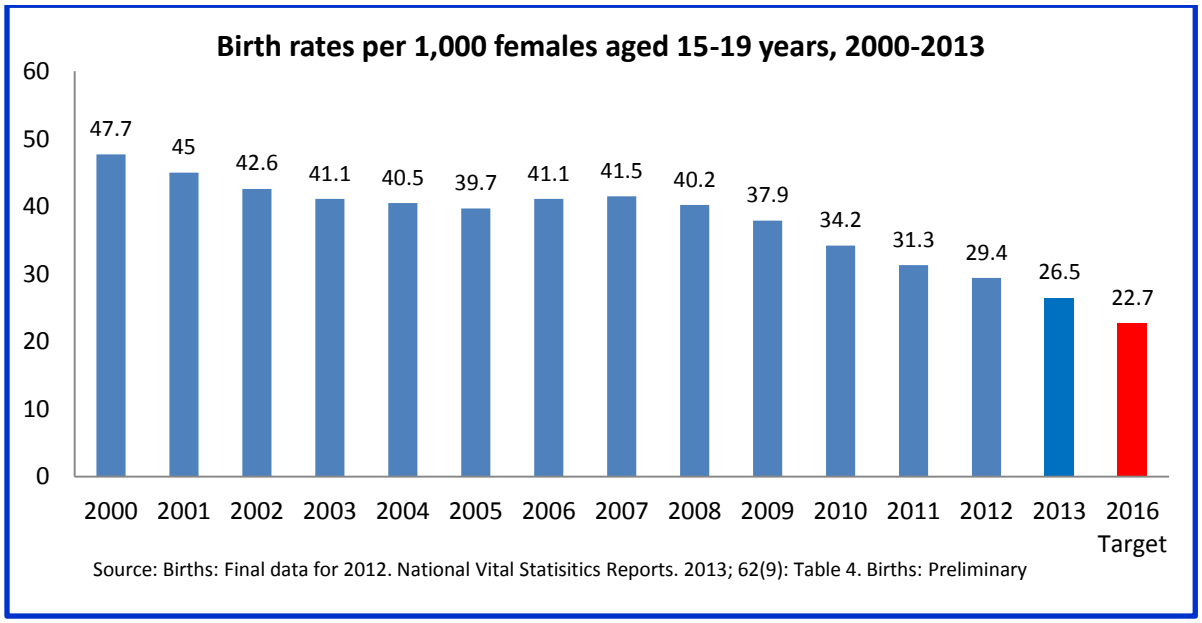


Figure 2: The birth rate for teenagers aged 15-19 has decreased over 50% since 2000. The rate dropped to 26.5 per 1,000 in 2013, the lowest rate ever reported for the US.

The availability of data through the Pregnancy Risk Assessment Monitoring System (PRAMS) allows CDC and states to monitor changes in maternal and child health status and indicators (e.g., unintended pregnancy, prenatal care, breastfeeding, smoking, drinking, and infant health), identify groups of women and infants at high risk for health problems, and measure progress toward goals in improving the health of mothers and infants. In FY 2013, 41 sites (40 states and New York City) collected data using PRAMS, which represents 78% of live births in the United States. In FY 2016, CDC will realign the core set of questions to allow all sites to measure safe sleep practices in order to evaluate community-based infant death prevention recommendations for reducing sudden unexpected infant deaths. Currently only 17 sites collect additional data for assessing safe sleep practices (Measure 4.8.4).

For individuals who are sexually active and do not want to become pregnant or cause a pregnancy, correct and consistent contraceptive use is needed to prevent unintended pregnancy. The most effective methods to prevent unintended pregnancy among sexually active individuals are long-acting reversible contraceptives (LARC) such as intrauterine devices (IUDs) and contraceptive implants.

CDC tracks the National Survey of Family Growth (NSFG) data on family formation, sexual behaviors and contraceptive use for females and males age 15 to 44. The proportion of sexually active women ages 15-19 years at risk of unintended pregnancy who report using LARC at last sexual encounter increased from 0.7% in 2002 to 3.6% in 2010. For women ages 20-44 years at risk of unintended pregnancy, reported LARC use at last sexual encounter increased from 2.2% in 2002 to 5.7% in 2010. The proportion of all women ages 15-44 years at risk of unintended pregnancy who report using LARC increased from 2.1% in 2002 to 5.5% in 2010. From 2010 to 2013, the percentage increased to 10.1%. CDC expects this percentage to increase to 11.0% by FY 2015 (Measure 4.8.6).

Arthritis

Performance Measures for Long Term Objective: Reduce pain and disability and improve quality of life among people affected by arthritis.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
4.11.1: Reduce the age-adjusted percentage of adults (age 18+) diagnosed with arthritis that are physically inactive in states funded by the CDC Arthritis Program.[1,2] (Outcome)	FY 2013: 29.7% (Historical Actual)	27.8%	N/A[1]	N/A[1]

[1] Targets and results are set and reported biennially.

[2] This measure has been revised from the FY 2013 President's Budget to account for the re-competition of the funding announcement, resulting in a new five-year cooperative agreement with 12 states (seven continuing from the prior project period).

Performance Trends: Moderate physical activity is a proven and safe self-management strategy for people with arthritis. Benefits include significant improvements in reducing pain level and enhancing function, mobility, and quality-of-life. Adults with arthritis have significantly higher rates of physical inactivity than adults without arthritis.

Through a CDC-YMCA of the USA partnership, more than 100 YMCA sites in 22 states are now providing Enhance®Fitness classes, a senior fitness and arthritis management program with demonstrated results

FY 2013 data for physical activity levels show almost 30% of adults diagnosed with arthritis in states funded by CDC were physically inactive (Measure 4.11.1), a slight increase from FY 2011 baseline results (28.9%). FY 2013 data only cover the first year of a five year project period, and six of the 12 states are newly funded so they had not yet established sufficient partnerships to embed physical activity programs within systems of care. Data from FY 2015 will likely show less physical inactivity among adults diagnosed with arthritis due to increased reach of physical activity interventions. To increase the level of physical activity among people with arthritis, the CDC and its 12 funded state arthritis programs, along with national partners (e.g., Arthritis Foundation, National Association of Chronic Disease Directors, Y-USA, National Recreation and Parks Association), will improve knowledge of appropriate physical activity through health communication messages and increased access, availability, and participation in proven physical activity programs for people with arthritis. Evidence-based interventions and programs include Walk with Ease[467], the Arthritis Foundation Exercise Program, Enhance®Fitness and Physical Activity. The Arthritis Pain Reliever[468], a health communications campaign for use by state health departments, partners, and other community organizations. These programs demonstrate reduced symptoms and improved function and physical activity behaviors among adults with arthritis.

[467] http://www.arthritis.org/resources/community-programs/walk-with-ease/

[468] http://www.cdc.gov/arthritis/interventions/physical/overview.htm

Behavioral Risk Factor Surveillance System (BRFSS)

Performance Measures for Long Term Objective: Improve validity, coverage, and dissemination of BRFSS.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
4.P: Increase the average percentage of completed cell phone interviews to maintain population coverage in the Behavioral Risk Factor Surveillance System (BRFSS)[1] (Output)	FY 2013: 27% (Target Exceeded)	25%	25%	Maintain

[1]Results reflect contributions of ACA/PPHF funding awarded at the end of FY 2012 but achieved in FY 2013. Targets do not reflect PPHF/ACA funding.

Performance Trends: CDC established the Behavioral Risk Factor Surveillance System (BRFSS) as a landline telephone-based health survey system conducted by states and territories to monitor population risk factors for chronic disease and other leading causes of death and disability. However, to maintain survey coverage and validity, the BRFSS like other telephone-based surveys had to adjust to the rapid rise in cellular telephone use by adding cellular telephone households to what were traditionally only landline telephone household samples. CDC worked with states to begin piloting a BRFSS cell phone survey in 2008 and officially moved to a dual landline and cellular telephone sampling frame beginning with the 2011 data collection cycle. Including cell phone data affected some 2011 prevalence estimates—such as smoking and heavy drinking—which are more common among younger respondents who were under-represented in the landline-only survey. Preliminary results from the July–December 2013 National Health Interview Survey (NHIS) indicate that about two in five American homes (41%) had only wireless telephones during that period of time. Data show that cell phone-only adults tend to have different demographics and risk behaviors than those with a landline telephone. CDC has demonstrated measurable improvements in reaching this segment of the population by increasing the average percentage of BRFSS cell phone interviews from 4.5% in FY 2009 to 27.0% in FY 2013 (Measure 4.P). FY 2012 Prevention and Public Health Funds, awarded at the end of FY 2012, assisted states in exceeding the FY 2013 target of 20.0%. Although CDC's FY 2016 funding request is level with FY 2015, the FY 2016 target reflects what CDC expects states to achieve with a funding level that is lower than what it had when it exceeded the FY 2013 target. Additionally, costs continue to rise for cell phone data collection compared to costs for landline-based data collection. CDC will adjust targets should funding levels change.

CDC increased the average percentage of cell phone interviews conducted across states from 4.5% in FY 2009 to 27% in FY 2013.

BIRTH DEFECTS AND DEVELOPMENTAL DISABILITIES

Child Health and Development

CDC Contextual Indicators for Long Term Objective: Prevent birth defects and developmental disabilities

Contextual Indicators	Most Recent Result	FY 2020 Target
5.1.5a: Increase the proportion of all children with autism spectrum disorders (ASDs) having a first evaluation by 36 months of age (Outcome)[1]	FY 2008: 43.8% (Target Not Met)	47.0%
5.1.5b: Increase the proportion of children with low SES with autism spectrum disorders (ASDs) who receive a first evaluation by 36 months of age (Outcome)	FY 2010: 39.7% (Target Exceeded)	41.0%
5.1.5c: Increase the proportion of children of minority race/ethnicity (non-white) with autism spectrum disorders (ASDs) having a first evaluation by 36 months of age (Outcome)[1]	FY 2008: 39.5% (Target Not Met)	43.1%
5.1.5d: Increase the proportion of children of low SES and minority race/ethnicity: with autism spectrum disorders (ASDs) who receive a first evaluation by 36 months of age (Outcome)	FY 2010 39.4% (Target Exceeded)	43.1%

[1]Targets are set and reported every four years. Baseline is based on analysis of study year 2008 data. Study year 2012 results will be available in FY 2016.

Performance Measures for Long-Term Objective: Prevent birth defects and developmental disabilities

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
5.1.8: Increase the percentage of primary care providers who (a) screen women of reproductive age for risky alcohol use and (b) provide appropriate, evidence-based interventions to reduce alcohol-exposed pregnancy for those at risk (Outcome)	a) FY 2014: 39.2% (Target Not Met but Improved) b) FY 2014: 35.1% (Target Not Met but Improved)	a) 43% b) 39%	a) 46% b) 42%	a) +3.0 b) +3.0
5.1.10 Increase the proportion of Hispanic women of reproductive age who have an optimal blood folate concentration for neural tube defect prevention[1]. (Outcome)	FY 2011: 75.5% (Baseline)	76%	N/A[1]	N/A
5.1.11: Reduce use of opioid-containing medications among: a. Pregnant women b. Women of reproductive age (Outcome)	a) FY 2011: 11.1% (Baseline) b) FY 2011: 26.4% (Baseline)	a) 9.0% b) 21.5%	a) 8.6% b) 20.4%	a) -0.4 b) -1.1

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
5.E: Increase the proportion of population-based birth defects surveillance programs that meet essential national data quality standards. (Output)	FY 2014: 50% (Baseline)	52%	54%	+2.0

[1]Targets and results are set and reported biennially.

Performance Trends: CDC's Autism and Developmental Disabilities Monitoring (ADDM) Network sites monitor the prevalence of Autism Spectrum Disorder (ASD) and other developmental disabilities in various geographic regions throughout the United States. ADDM has traditionally focused on 8-year-old children but has begun tracking 4-year-old children at some sites. Tracking 4-year-olds can help us understand more about children with autism who are identified at a younger age, including when they are being evaluated and diagnosed. Knowing this key information will inform efforts to get all children with autism connected to the services they need as soon as possible. The most recent ASD prevalence data (released in 2014) from ADDM estimated that 1 in 68 children living in ADDM Network communities during 2010 have autism, a 30% increase between 2008 and 2010. In part, this increase is due to improved identification, diagnosis, and treatment of children in local communities. Data for ASD among 4-year-olds will be published in 2015.

CDC data show 1 in 68 children living in ADDM Network communities during 2010 have autism, a 30% increase from 2008 to 2010.

CDC plays a critical role in the public health response to autism by monitoring prevalence and characteristics in the population, investigating risk factors, and educating families and providers about the importance of monitoring developmental milestones to address concerns as soon as possible. Early screening and diagnosis improve access to services during a child's most critical developmental period. CDC's data from the ADDM Network are used to track outcomes closely related to early screening and diagnosis. Results from the 2008 reporting period show a slight decrease in the proportion of all children with ASD having a first evaluation by 36 months of age (CI 5.1.5a); however, the results reported in 2008 indicated a slight increase in the proportion of all children of minority race/ethnicity with ASD having a first evaluation by 36 months of age (CI 5.1.5c). Results for the 2010 reporting period show a 2.4 percentage point increase in the proportion among all SES children (CI 5.1.5b) and a 3.1 percentage point increase among SES children of minority race/ethnicity (5.1.5d). Both contextual indicators exceeded their respective 2010 targets of 33.9 percent and 37.1 percent.

CDC also works to increase the percentage of primary care providers who (a) screen women of reproductive age for risky alcohol use and (b) provide appropriate, evidence-based interventions to reduce alcohol-exposed pregnancy for those at risk (Measure 5.1.8). Increasing primary care provider screening for alcohol misuse among women of reproductive age and the provision of evidence-based interventions are essential to improving maternal and child health and preventing Fetal Alcohol Spectrum Disorders (FASD). CDC did not meet FY 2014 targets, overall rates of provider-based alcohol screening (39.2%) and provider-based intervention (35.1%) continue to increase compared to the FY2012 baseline estimates of 36% (provider-based alcohol screening) and 32% (provider-based intervention). It is important to note that there are variations in rates across provider types. For example, in 2014, obstetricians/gynecologists and nurse practitioners reported the highest increases in alcohol screening and intervention rates when compared with other providers. Variations in these rates by provider type will be closely monitored in the coming years.

CDC strives to increase the proportion of Hispanic women of reproductive age who have an optimal blood folate concentration for neural tube defect prevention. CDC has modeled existing evidence to determine a blood folate concentration that will optimize the reduction in risk for neural tube defects. Blood folate concentrations offer a reliable measure to accurately assess a population's risk of neural tube defects. Because Hispanic women have

higher rates of neural tube defects than other race/ethnicities, CDC tracks red blood cell folate concentrations among Hispanic women of reproductive age. This information will help CDC develop appropriate prevention interventions directed to Hispanic women. FY 2011 baseline data for Measure 5.1.10 is from the most recent NHANES data available on red blood cell folate concentrations among Hispanic women of reproductive age (2009-2010). FY 2013 results will be available in December, 2015.

CDC aims to increase the proportion of population-based birth defects surveillance programs that meet essential national data quality standards. In the US, birth defects affect three percent of infants and are a leading cause of infant mortality, accounting for more than 20% of all infant deaths. Birth defects are also major contributors to disability, pediatric hospitalizations, and costs. While the overall prevalence of birth defects has remained stable over time, there is variation in the prevalence of specific birth defects. Increasing the number of birth defects surveillance systems that provide quality data will support efforts to identify causes of birth defects and guide the development and evaluation of primary and secondary prevention efforts. CDC will provide technical assistance to each program in their efforts to improve data quality (e.g. completeness, timeliness and accuracy) and will provide guidelines for expanding monitoring efforts to include additional data elements and outcomes. In FY 2013, 50% of CDC-funded birth defects surveillance programs met national data quality standards, and CDC expects this to rise to 54% for FY 2016 (Measure 5.E).

CDC aims to reduce use of opioid-containing medications among pregnant women and women of reproductive age to prevent birth defects. This aligns with CDC's efforts to identify maternal risk factors for birth defects that are amenable to clinical and public health intervention, as well as CDC's Treating for Two initiative, which focuses specifically on medication use in pregnancy as a potential risk factor for birth defects and other adverse birth outcomes. CDC has set a target of 8.6% for FY 2016 for pregnant women, a 2.5 percentage-point decrease over the baseline of 11.1%, and has set a target of 20.4% for women of reproductive age, a six percentage-point decrease over the baseline of 26.4% (Measure 5.1.11).

Health and Development for People with Disabilities

Performance Measures for Long-Term Objective: Improve the health and quality of life of Americans with disabilities

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 Target +/- FY 2015 Target
5.2.5: Increase the percentage of jurisdictions that collect, report, and use individually identifiable data in order to reduce the number of infants not passing hearing screening that are lost to follow-up (Outcome)	FY 2012: 54% (Target Exceeded)	66%	70%	+4.0
5.2.6: Decrease the incidence of skin breakdown in patients with spina bifida (SB) who attend SB clinics. (Outcome)	FY 2013: 16.2% (Historical Actual)	16%	12.8%	-3.2
5.2.7: Increase the percentage of preschool-aged US children with a diagnosis of ADHD who receive behavioral therapy (psychological services) per recommended clinical guidelines. (Outcome)	FY 2014: 34% (Baseline)	37%	40%	+3.0

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 Target +/- FY 2015 Target
5.F: Increase percentage of funded Disability and Health state programs that use state Medicaid administrative data to inform the development of public health programs for people living with intellectual/developmental disabilities (I/DD). (Output)	FY 2014: 0% (Baseline)	5.5%	11%	+5.5

Performance Trends: Early identification and intervention programs for newborns with hearing deficiencies are cost-effective and improve outcomes for these children. CDC's support and expertise of state and territorial-based Early Hearing Detection and Intervention Information Systems (EHDI-IS) has contributed to significant progress in the identification of newborns with hearing loss and there enrollment in intervention programs.. From 2000 to 2012, the percentage of newborns in the United States who were screened for hearing loss increased from 52% to 97% in 2012. Additionally, the number of infants identified with permanent hearing loss doubled from about 2,600 in 2005 to over 5,700 in 2012. Finally, the percentage of jurisdictions that collect, report and utilize EHDI data increased from 50% in 2011 to 54% in 2012 (Measure 5.2.5), representing an 11 percentage-point increase from 43% in 2010 .

CDC is working to improve the health of people with spina bifida (SB) by decreasing their incidence of skin breakdown. Skin breakdown is a major secondary condition for people with spina bifida, occuring primarily in those with myelomeningocele SB. Pressure ulcers are one type of skin breakdown that can have serious consequences. The annual incidence rate of pressure ulcers among patients with myelomengingocele can be as high as 33% and can lead to serious complications such as leg amputation or even death, and up to 8% of SB patients die of pressure ulcer complications. The annual cost of treating patients with SB for skin breakdown was estimated at $1.2 billion. The Agency for Healthcare Research and Quality (AHRQ) recommends a pressure ulcer bundle approach to preventing skin breakdown. Therefore, CDC will develop a Skin Breakdown Prevention Bundle and implementation plan, in collaboration with SB clinicians, to increase SB prevention practices. Gradually, CDC expects to see a reduction in reports of skin breakdown and costs for patients with spina bifida using data from the National Spina Bifida Patient Registry. CDC has set a target of 12.8% for FY 2016, a 3.2 percentage-point decrease over FY 2012 baseline (Measure 5.2.6).

CDC strives to increase the percentage of funded Disability and Health state programs that use state Medicaid administrative data to inform the development of public health programs for people living with intellectual/developmental disabilities (I/DD). Current surveillance systems are not detailed enough to understand the needs of this uniquely diverse population. To help enhance infrastructure and relationships needed to implement these systems, CDC will establish data use agreements to facilitate shared use of administrative data sets with and among grantees utilizing State Medicaid data. These improved data will inform programs in ways that will lead to targeted, evidence-based public health interventions that meet the actual needs of people with I/DD. CDC has set a target of 11% for FY 2016, an 11 percentage-point increase over the FY 2014 baseline (Measure 5.F)

CDC aims to increase the percentage of US children ages 2-5 years with a diagnosis of Attention-deficit/hyperactivity disorder (ADHD) who receive behavioral therapy (psychological services) for treatment. ADHD is the most common neurobehavioral disorder of childhood, diagnosed in 11% of children aged 4-17 years. Although the American Academy of Pediatrics recommends behavioral therapy as the first-line treatment for preschool-aged children (4-5 years of age), national data suggest that the majority of preschool-aged children are being treated with medication, and only a small percentage receive behavioral therapy. Further,

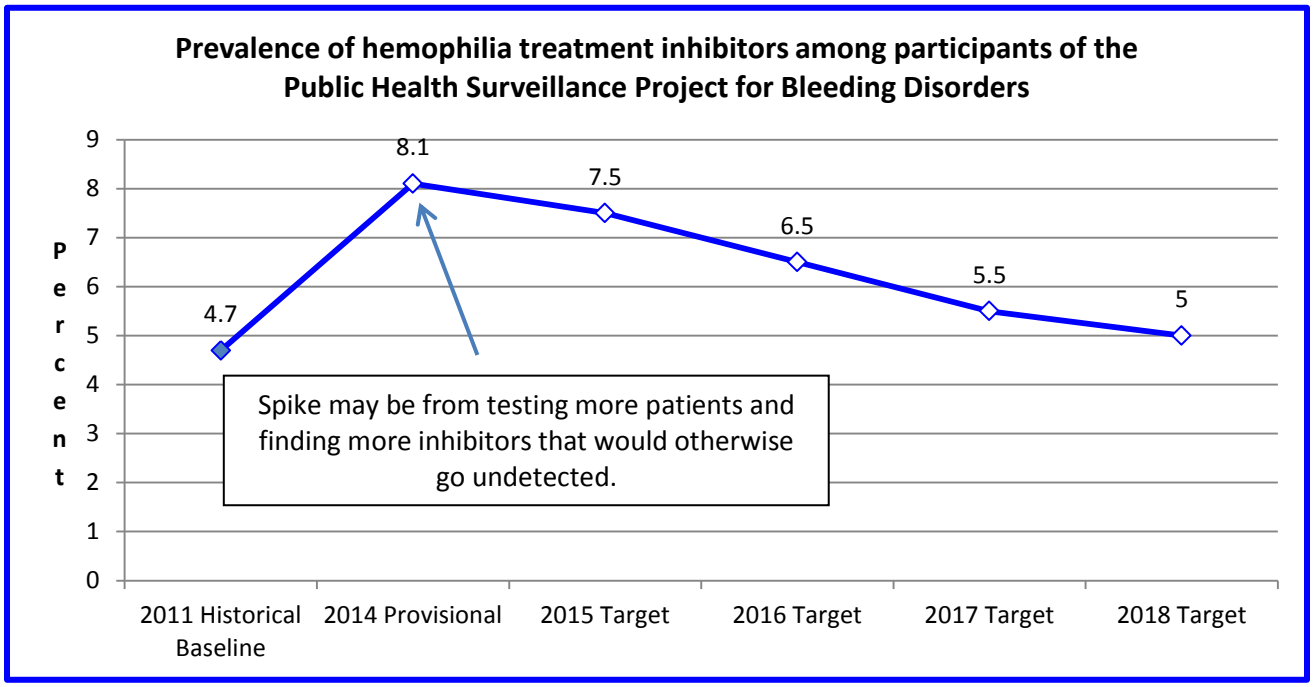
new data indicate that many children as young as two and three years of age are being diagnosed with ADHD, and many of these children are receiving medication for treatment.

By working with key pediatric, psychiatric, and psychological partner groups, CDC will: 1) assess the barriers to the provision of behavioral therapy to young children in the US; and 2) design programs to directly address the major barriers to these young children. CDC will also continue to redesign our national surveillance systems to gain insight into the current practice patterns for the treatment of ADHD in communities. CDC has set a target of 40% for FY 2016, a six percentage-point increase over the FY 2014 baseline of 34% (Measure 5.2.7).

Public Health Approach to Blood Disorders

Performance Measures for Long-Term Objective: Improve the health and quality of life for Americans with blood disorders

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 Target +/- 2015 Target
5.3.2: Decrease the prevalence of hemophilia treatment inhibitors among Public Health Surveillance Project for Bleeding Disorders patients (Outcome)	FY 2014: 8.1% (Provisional)	7.5%	6.5%	-1.0



Performance Trends: Approximately 15-20% of people with hemophilia develop an inhibitor (antibody) to the products used to prevent bleeding, making the treatments less effective. Medical providers typically treat these patients with higher and more frequent doses of the treatment products, which can make the inhibitor worse. Inhibitors can cause a patient's hemophilia treatment costs to exceed $1,000,000 a year, increase hospitalizations, and compromise physical functioning. Discovering an inhibitor as soon as possible helps improve outcomes and reduce costs. Although it's widely accepted by hemophilia care providers that development of an inhibitor is a serious complication of treatment, routine screening for inhibitors is not current practice.

In FY 2012, CDC replaced the Universal Data Collection (UDC) system with the Public Health Surveillance Project on Bleeding Disorders (PHSPBD). Data collection and sample testing began in FY 2014. The PHSPBD expands the scope of data previously collected by the UDC, incorporates screening for an inhibitor and facilitates the identification and use of best practices that help prevent or eradicate them. The PHSPBD also complements CDC's work on the identification of genetic and environmental risk factors for inhibitors and ongoing monitoring is expected to help identify the impact of new treatment products on inhibitor rates.

The FY 2011 baseline of 4.7% identified in 2009-2011 is most likely an underestimate of the true prevalence because screening for an inhibitor was not routinely performed during this time. FY 2014 provisional data show that 8.1% of people with hemophilia had developed an inhibitor and required a bypass drug for treatment of bleeds. CDC will establish a new baseline that accounts for routine inhibitor screening by March, 2015. CDC anticipates an initial increase in prevalence, with increased screening leading to identification of inhibitors that have not been previously identified. Longer-term targets show an approximate 7% - 8% decline in prevalence, reflecting the anticipated benefits of early screening and extensive patient and provider education which are to detect inhibitors early when they are more easily treated and eliminated thereby decreasing prevalence. In later years the additional knowledge about inhibitor risk factors gained from the surveillance and related research will lead to prevention strategies that we anticipate will further lower the prevalence of inhibitors.

ENVIRONMENTAL HEALTH

Environmental Laboratory

Performance Measures for Program: Environmental Health Laboratory

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
6.1.1: Number of environmental chemicals and nutritional indicators that are measured in surveys and studies of the U.S. population. (Output)	FY 2014: 345 (Target Exceeded)	345	345	Maintain
6.1.3: Number of laboratories participating in DLS Quality Assurance and Standardization Programs to improve the quality of their laboratory measurements[1] (Output)	FY 2014: 2,040 (Target Exceeded)	2,040	2,050	+10
6.1.4 Number of chronic disease biomarkers included in standardization programs that improve the quality of laboratory measurements. (Output)	FY 2014: 10 (Actual)	12	14	+2
6.A: Number of environmental chemicals for which methods were developed or improved (Output)	FY 2014: 132 (Target Exceeded)	25	25	Maintain
6.B: Number of laboratory studies conducted to measure levels of environmental chemicals in exposed populations (Output)	FY 2014: 100 (Target Exceeded)	75	75	Maintain
6.F: Number of states assisted with screening newborns for preventable diseases (Output)	FY 2014: 50 (Target Met)	50	50	Maintain

[1](i.e., newborn screening, chronic diseases [diabetes, cholesterol], environmental health [blood lead, cadmium and mercury], and nutritional indicators).

Performance Trends: CDC's biomonitoring measurements (in blood and urine) identify the level of chemicals and nutritional indicators in the U.S. population. The measurements provide national reference information for scientists, physicians, and health officials. In FY 2014, CDC measured 345 environmental chemicals and nutritional indicators, exceeding the target by reporting results for several new chemical classes recently added to the National Health and Nutrition Examination Survey (NHANES) (Measure 6.1.1). CDC does not anticipate the addition of new indicators and chemicals through FY 2016, so the targets for FY 2015 and 2016 are level with the FY 2014 result. In FY 2012 through 2014, CDC developed or improved several methods that measure multiple environmental chemicals in a single test, greatly exceeding the target for Measure 6.A. In FY 2015 and 2016, CDC will continue to develop or improve methods for priority environmental chemicals but does not anticipate developing or improving as many methods that measure multiple chemicals as the FY 2012-2014 time frame. CDC slightly increased FY 2015 and 2016 targets to reflect these current method development plans.

In FY 2014, released new biomonitoring results for 35 new chemicals and 16 previously reported chemicals, including new results for a special sample of adult cigarette smokers and non-smokers

In FY 2014, CDC also greatly exceeded its target of conducting 60 laboratory studies to identify populations with harmful exposures to chemicals (Measure 6.B). CDC's FY 2015 and 2016 targets account for higher than anticipated results since FY 2012. However, because results for this measure depend on exploiting collaborative

opportunities that align with the Environmental Health Laboratory's mission and budgetary goals, CDC does not anticipate conducting as many studies as it conducted in FY 2014.

CDC's Environmental Health Laboratory provides quality assurance and standardization programs to laboratories testing for chronic diseases, newborn screening disorders, nutritional status, and environmental exposures. CDC has met or exceeded its targets for participation in these programs since 2007 (Measure 6.1.3). In FY 2014, CDC greatly exceeded the target because of new CDC quality assurance programs for chronic disease biomarkers and new certification requirements from other federal agencies. CDC's FY 2015 and 2016 targets reflect this trend, while considering that participation in quality assurance and standardization programs is voluntary. CDC developed Measure 6.1.4 in FY 2014 to track efforts under new FY 2014 appropriated funding for ensuring the quality of laboratory tests for additional chronic disease biomarkers. This new measure complements CDC's ongoing work to improve laboratory quality through standardization programs (Measure 6.1.3.). In FY 2014, CDC provided standardization programs for 10 chronic disease biomarkers. Increasing the number of chronic disease biomarkers incorporated into standardization programs will improve the diagnosis and treatment of cardiovascular disease and breast cancer. CDC also provides quality assurance for newborn screening of preventable diseases (e.g. Severe Combined Immunodeficiency, Amino acid disorders, Endocrinopathies) and met its FY 2014 target to provide quality assurance materials and technical expertise to all 50 states (Measure 6.F).

Environmental Health Activities

Performance Measures for Program: Environmental Health Activities

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
6.1.2: Number of completed studies to determine the harmful health effects from environmental hazards. (Output)	FY 2014: 35 (Target Exceeded)	27	27	Maintain
6.1.5 Number of states using National Voluntary Environmental Assessment Information System (NVEAIS) to assist in preventing outbreaks of food-borne illness (Output)	FY 2014: 11 (Target Exceeded)	13	15	+2
6.H: Number of emergency radiation preparedness toolkits provided to clinicians/public health workers (Output)	FY 2014: 1,035 (Target Exceeded)	750	750	Maintain

Performance Trends: Since 2010, CDC has met or exceeded its target for completing studies to examine the human health effects of exposure to water and air pollutants, radiation, and hazards related to natural and other disasters (Measure 6.1.2). These studies help CDC develop, implement, and evaluate actions and strategies for preventing or reducing harmful exposures and their health consequences. In FY 2014, CDC worked with federal and state partners to investigate contaminated nutritional supplements that have caused adverse health effects, resulting in removal of the supplements from the market. Funding fluctuations in FYs 2013-2014 will impact study implementation and data analysis in the coming fiscal years. As a result, CDC has prioritized studies related to natural disasters and severe health hazards and maintained the FY 2014 target levels.

In April 2014, CDC launched the National Voluntary Environmental Assessment and Information System (NVEAIS), a standardized reporting tool local, state, territorial, and tribal food safety programs can use to identify underlying environmental factors (e.g., food handling practices, worker health policies, and food source attribution) that can be routinely monitored by food-safety programs to prevent or mitigate foodborne illness

outbreaks associated with food-service establishments. In its first year of full implementation, CDC exceeded its expectations in FY 2014 for Measure 6.1.5 with 11 states using the NVEAIS system. CDC anticipates that at least 13 states will use the system in FY 2015 and at least 15 states in FY 2016. In 2014, CDC also launched a free, interactive 8-10 hour e-Learning course for state and local food safety staff to improve environmental assessment and reporting related to foodborne illness outbreaks. CDC recorded over 1,100 e-Learning users from 48 states and 282 localities across the nation.

CDC distributed more than 1,035 radiation emergency tool kits to public health professionals and clinicians in FY 2014, which were shown to be valuable resources for planning (pre-event) and just-in-time (intra-event) use.

Providing expertise in radiation health and exposure, CDC exceeded its target in FY 2014 for Measure 6.H by distributing 1,035 radiation toolkits. Following the March 2011 radiation disaster in Fukushima, Japan, there was a spike in toolkit requests from the western United States and international partners in FYs 2011 and 2012. However, the number of requests leveled off in FY 2013 and FY 2014, and CDC anticipates this trend to continue through FY 2016. Since the creation of the toolkits in 2005, CDC has provided more than 29,000 kits to professionals across the nation and internationally to assist clinicians in developing plans and response capacity for radiation emergencies. An independent study conducted by Greene County (Ohio) Combined Health District in 2013 found that public health professionals who used the CDC tool kits showed "an increase of knowledge and abilities when used as the primary training reference in a full-day workshop" and that willingness to respond to a radiation emergency "was significantly increased."

Environmental Public Health Tracking

Performance Measures for Program: Environmental Public Health Tracking

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
6.C: Number of public health actions undertaken (using Environmental Health Tracking data) that prevent or control potential adverse health effects from environmental exposures (Output)	FY 2014: 36 (Target Exceeded)	30	21	-9

Performance Trends: Since FY 2005, state and local public health officials have used the Environmental Health Tracking Network to implement 237 data-driven public health actions (an average of approximately 24 per year) to prevent adverse health effects from environmental exposures, including 36 public health actions in FY 2014 (Measure 6.C). These actions include providing safety warnings ahead of major ice storms by activating public messaging systems, preventing children's exposure to lead from using eye cosmetics, and using Tracking data to inform policy makers on creating fish consumption advisories. The Tracking Network also serves as a source of information on environmental hazards, exposure, population data and health outcomes for health professionals, researchers, parents, and elected officials.

The FY 2015 target reflects recent results and current capacity of the states to take public health actions, while the FY 2016 target takes into account an anticipated drop in funding levels that will likely decrease awards to states by about 30%. This will impact states' and local governments' ability to maintain FY 2014 performance levels.

Asthma

Performance Measure for Program: Asthma

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
6.2.4: Increase the proportion of those with current asthma who report they have received self – management training for asthma in populations served by CDC funded state asthma control programs. (Output)	FY 2012: 45% (Target Not Met)	50%	50%	Maintain

Performance Trends: CDC measures the proportion of individuals with current asthma who report receiving asthma self-management training from a doctor or other health care provider (Measure 6.2.4). Implementing asthma action plans and effective asthma self-management (per the National Institutes of Health's *Guidelines for the Diagnosis and Management of Asthma*) are vital to helping people stay out of the hospital and manage their asthma. Studies show asthma self-management education can lead to a 54 percent reduction in hospital readmissions and a 34 percent reduction in emergency department visits— ultimately saving $35.00 for every one dollar spent in avoided health care costs and lost productivity. Asthma attack prevalence among persons with current asthma decreased from 55.8 percent in 2001 to 50.7 percent in 2012. This decrease represents progress in asthma management.

CDC did not meet the FY 2012 target for delivering self-management training through its funded grantees with 45 percent reporting receiving training (Measure 6.2.4). The data for this measure comes from the Asthma Call-back Survey (ACBS), which is methodically linked to the Behavioral Risk Factor Surveillance System (BRFSS). Due to changes to the BRFSS sample for calendar year 2011 data, which includes the addition of a cell phone sample and revised weighting methodology, results for this measure from 2010 and earlier should not be compared or combined with data from 2011 and later. Funded states are implementing comprehensive, evidence-based programs that target health care providers and asthma educators in multiple settings (doctor's offices, hospitals, schools, daycare centers, community organizations) to ensure they are aligning their efforts with the National Institute of Health's *Guidelines for the Diagnosis and Management of Asthma*. CDC released a new Funding Opportunity Announcement in FY 2014 and awarded funds to 23 states. CDC may adjust targets for this performance measure to reflect the new mix of funded states beginning in FY 2015.

Childhood Lead Poisoning Prevention

Contextual Indicator for Program: Childhood Lead Poisoning Prevention

Contextual Indicator	Most Recent Result	FY 2015-2018 Target
6.2.5: Reduce health disparities associated with blood lead levels in children aged 1-5 in the U.S. such that: a. The gap in blood lead levels between black children and children of other races is reduced (Contextual Indicator)[1]	FY 2010: 0.52 (Baseline)	0.45
6.2.5b: The gap in blood lead levels between children living above the federal poverty level and those living below the poverty level is reduced (Contextual Indicator)[1]	FY 2010: 0.54 (Baseline)	0.47

[1]Targets are set and reported every four years. Baseline is based on analysis of 2007-2010 data. 2011-2014 results will be available Dec 2015

Budget Output Measure for Program: Childhood Lead Poisoning Prevention

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
6.K: Number of states in which the Healthy Housing/Lead Poisoning Surveillance System (HHLPSS) has been deployed. (Output)	FY 2014: 21 (Target Exceeded)	23	24	+1

Performance Trends: These measures (6.2.5a and 6.2.5b) serve as valuable indicators of the success of lead interventions nationwide. Both focus on the stark health disparity gaps that exist between children, based on both race and household income. For example, African-American children are three times more likely than white children to have blood lead levels greater than five micrograms per cubic deciliter (the current blood lead level of concern). While overall U.S. child lead levels have fallen significantly in the last decade, reducing disparities is critical to decreasing the mean blood lead levels among all young children in the U.S. CDC resumed funding interventions in FY 2014 via the Prevention and Public Health Fund (PPHF) and is currently assessing performance implications for FY 2015 and FY 2016. Measures 6.2.5a-b remain contextual indicators of the overall success of lead poisoning interventions nationwide. Updated data is expected by December, 2015.

CDC provides national expertise on lead poisoning prevention and a national surveillance system for blood lead and other housing related health hazards. The Healthy Homes and Lead Poisoning Prevention Surveillance System (HHLPPS) helps state and local health departments target case management, home remediation, education, and prevention activities to protect children from lead and other unhealthy exposures in the home. In FY 2014, 21 states used HHLPPS to inform lead prevention activities, one more than in FY 2013 (Measure 6.K). CDC expects this number to increase to 24 in FY 2016.

INJURY PREVENTION AND CONTROL

Intentional Injury Prevention

Long Term Objective: Achieve reductions in the burden of injuries, disability, or death from intentional injuries for people at all life stages.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
7.1.3: Increase the difference in teen dating violence prevalence between the control group and Dating Matters group. (Intermediate Outcome)	FY 2013: 2.8% (Target Exceeded)	10%	15%	+5
7.2.5: Increase the percent of Core VIPP funded states that assess outcomes and impact of injury and violence prevention strategies using surveillance data. (Intermediate Outcome)[1]	FY 2014: 95.0%[2] (Target Met)	100.0%	N/A[3]	N/A

[1]The Core VIPP program is cross-cutting and is supported by both the Intentional and Unintentional Injury Prevention budget lines.

[2]Due to budget constraints, the number of Core VIPP states was reduced to 20 starting in FY 2012. The baseline and FY 2012 target were computed using 28 states while the FY 2013 target, FY 2014 target and FY 2012 result were computed using the 20 states currently funded.

[3]The current Core VIPP FOA ends in FY 2015. A new FOA is in development with baseline results anticipated in FY 2017.

Performance Trends: Violence-related injuries and deaths, including interpersonal and self-directed, cost approximately $107 billion a year in medical and other costs[469]. Teen dating violence is one area of growing concern in violence prevention. Teen victims of dating violence are more likely to be depressed and do poorly in school. They may engage in unhealthy behaviors, like using drugs and alcohol, and are more likely to have eating disorders. In extreme cases, some teens even think about or attempt suicide. Current science demonstrates it is most effective to begin working with teens at a younger age to stop dating violence before it starts.

Baseline Dating Matters Data from 2012-2013 School Year: Dating History (Youth Ages 11-14)

Dating Violence Victimization:

- **49.9% report psychological**
- **31.8% report moderate physical (e.g., shoving)**
- **22.0% report severe physical (e.g., using a weapon)**
- **24.1% report sexual violence**
- **16.9% report stalking**

Dating Violence Perpetration:

- **47.1% report psychological**
- **30.8% report moderate physical (e.g., shoving)**
- **22.1% report severe physical (e.g., using a weapon)**
- **13.7% report sexual violence**
- **6.1% report stalking**

CDC's Dating Matters® initiative is a combination of evidence-based and evidence-informed strategies that promote respectful, nonviolent dating relationships among youth ages 11–14 years in high-risk urban communities (Measure 7.1.3). CDC is examining the cost, feasibility, sustainability, and effectiveness of a comprehensive approach to teen dating violence in four high-risk urban communities during the first phase of a five-year demonstration project of Dating Matters® (FY 2011 - FY 2015). Elements of this prevention initiative are being delivered in over 40 middle schools across four cities (Baltimore, Maryland; Chicago, Illinois; Ft. Lauderdale, Florida and Oakland, California) and include a rigorous evaluation as well as cost analysis. The evaluation will continue to follow youth through high school to monitor the long-term program effectiveness. CDC estimates that up to 100,000 students and adults will have participated in Dating Matters® in the four demonstration sites when implementation is complete in FY 2015. In addition, CDC will continue

[469] http://www.cdc.gov/injury/wisqars/cost/cost-learn-more.html

planning for the dissemination of Dating Matters® strategies to other urban communities beginning in FY 2016 through seed funding and/or partnerships with other CDC programs and federal agency partners. CDC grantees will adapt and utilize the following evidence-based programs as part of the Dating Matters® initiative: 1) Safe Dates, which can decrease levels of dating violence among eighth graders; 2) Families for Safe Dates, which encourages families to talk about healthy dating relationships and dating abuse and can decrease levels of dating violence victimization among youth whose parents completed the program (for parents of eighth graders); and 3) Parents Matter, a community-level, family prevention program that enhances protective parenting practices for parents of 6th graders. In 2013, Dating Matters® communities increased the difference in teen dating violence prevalence over the control group by 2.8%, exceeding the target for 2013.

Additional CDC efforts for violence prevention include the Core Violence and Injury Prevention Program (Core VIPP), which is a cross cutting program that supports both intentional and unintentional injury prevention activities (Measure 7.2.5). The program is discussed in further detail in the Unintentional Injury Prevention section.

Unintentional Injury Prevention

Long Term Objective: Achieve reductions in the burden of injuries, disability, or death from unintentional injuries for people at all life stages.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
7.2.4: Reduce motor vehicle deaths per 100M miles traveled. (Outcome)	CY 2013: 1.10 (Target Not Met but Improved)	0.97	0.97	Maintain
7.2.5: Increase the percent of Core VIPP funded states that assess outcomes and impact of injury and violence prevention strategies using surveillance data. (Intermediate Outcome)[1]	FY 2014: 95.0%[2] (Target Met)	100%	N/A[3]	N/A

[1] The Core VIPP program is cross-cutting and is supported by both the Intentional and Unintentional Injury Prevention budget lines.

[2] Due to budget constraints, the number of Core VIPP states was reduced to 20 starting in FY 2012. The baseline and FY 2012 target were computed using 28 states while the FY 2013 target, FY 2014 target and FY 2012 result were computed using the 20 states currently funded.

3 The current Core VIPP FOA ends in FY 2015. A new FOA is in development with baseline results anticipated in FY 2017.

Performance Trends: Unintentional injuries are the leading cause of death for individuals ages 1–44 in the United States and cost more than $81 billion in medical costs per year. CDC works in multiple areas across unintentional injury, including transportation safety and older adult falls prevention. CDC also works to strengthen states' capabilities to address both intentional and unintentional injuries, especially through the Core Violence and Injury Prevention Program (Core VIPP).

Proven Motor Vehicle Safety Policy Solutions:

A $30 booster seat saves more than $9 for every $1 invested.

For only $70 per teen, graduated licensing programs generate $500 in cost savings.

Society saves $3 to $7 for every $1 spent on ignition interlock devices.

Source: http://www.cdc.gov/injury/pdfs/cost-MV-a.pdf.

Although CDC did not meet its 2013 target of 1.0 fatalities per 100 million vehicle miles traveled (VMT), the rate of traffic fatalities per 100 million VMT has declined since 2005 except for a slight increase in 2012 (Measure 7.2.4). These declines are likely attributable to prevention strategies that increase seat belt usage, graduated driver licensing systems, creation of safer motor vehicles, and improvement in safe driving behaviors. This trend is consistent with historical trends that show repeated instances of large declines followed by a multi-year leveling off period.

CDC will continue to implement effective prevention strategies, including:

- CDC's "Parents Are the Key" communications campaign toolkit, which provides resources to support graduated driver licensing systems and parental involvement in teen driving. Parents are the Key was re-launched with updated English and Spanish materials in October 2014. The campaign helps parents, pediatricians, and communities keep teen drivers safe on the road.

- CDC's Tribal Motor Vehicle Injury Prevention Program (TMVIPP), which significantly impacted communities through culturally appropriate, effective interventions that are implemented in eight tribal communities across the United States. For example, The Yurok Tribe in California implemented the California Rural Indian Health Board's Buckle Up Yurok Program, which was comprised of community education clinics, a media campaign, car seat checks and distribution events. The result was from 2011-2014 car seat use increased 34%.

CDC's Core VIPP program provides support to state health departments to increase state capacity to effectively disseminate, implement, and evaluate best practices and science-based strategies for injury and violence prevention programs. The Core VIPP grantees use surveillance data to inform injury and violence prevention activities. In 2014, grantees engaged in their third full year of program planning and implementation. As a result, 95% of grantees reported using data to assess outcomes and impact of injury and violence prevention strategies, an increase of 10 percentage points over the previous year and on target with the performance goal of 100% by 2015. As the current Core VIPP FOA ends in FY 2015, a new FOA is in development with baseline results anticipated in FY 2017 (Measure 7.2.5).

PUBLIC HEALTH SCIENTIFIC SERVICES

Health Statistics

Performance Measures for Long Term Objective: Monitor trends in the nation's health through high-quality data systems and deliver timely data to the nation's health decision-makers.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015 Target
8.A.E.1: Reduce the number of months from the end of data collection to data release on the internet (Outcome; Efficiency)	FY 2010: 7.6 (Target Exceeded)[1]	7.2	7.2	Maintain
8.A.1.1a: Sustain the percentage of NCHS website users that are satisfied with data quality and relevance (Outcome)	FY 2014: 77.3% (Target Not Met)	77.4%	77.4%	Maintain
8.A.1.1b: Sustain the percentage of Federal Power Users (key federal officials involved in health and health care policy or programs) that indicate that data quality is good or excellent (Outcome)	FY 2014: 100% Good or Excellent (Target Met)	100% Good or Excellent	100% Good or Excellent	Maintain
8.A.1.3: Increase the number of web visits as a proxy for use of NCHS data (Output)	FY 2014: 12.4 Million (Target Exceeded)	12.4 Million	13 Million	+0.9 Million
8.F: Number of communities visited by mobile examination centers from the National Health and Nutrition Examination Survey (Output)	FY 2014: 15 (Target Met)	15	15	Maintain
8.G: Number of households interviewed in the National Health Interview Survey[2,3] (Output)	FY 2013: 41,335 (Target Exceeded)	39,000	35,000	-4,000
8.H.1: Number of physicians surveyed in the National Ambulatory Medical Care Survey[3,4] (Output)	FY 2013: 11,141 (Target Exceeded)	8,000	3,300	-4,700
8.H.2: Number of patient visit records surveyed in the National Ambulatory Medical Care Survey[3,4] (Output)	FY 2013: 111,037 (Target Not Met)	80,000	30,500	-49,500

[1] Most recent result. Data from 2011 have not been released for all surveys and data collection systems at the time of submission.

[2] The increase in NHIS and NAMCS sample size will vary depending on when funds are received. Because PPHF funds were received late in the FY, sample increases are typically seen in the following calendar year.

[3] FY 2013 and FY 2014 targets and results reflect ACA/PPHF funding received in FY 2012 and FY 2013, respectively. Additional CDC funding in FY 2014 is reflected in FY 2015 targets. FY 2016 targets reflect no PPHF funds received in FY 2015.

Performance Trends: CDC uses several indicators to measure its ability to provide timely, useful, and high quality data. In FY 2010, the most recent year for which data from all surveys are available, data were released within 7.6 months from the end of data collection (Measure 8.A.E.1). After changes to modernize some survey programs, such as computerization of data collection, the continued focus on providing high quality data to the public has resulted in some initial delays in data releases. Other survey programs continue to release data in a timely manner, including the National Health Interview Survey which released 2013 data within six months of the end of data collection, achieving this timeliness goal for the 9th year in a row.

To drive program improvements, CDC assesses user satisfaction and perceptions of data utility. The percentage of National Center for Health Statistics' (NCHS') website users who are satisfied with data quality and relevance has increased by six percentage points since 2010 to 77.3% in 2014 (Measure 8.A.1.1a). Similarly, CDC interviews Federal Power Users (key federal officials involved in health and health care policy or programs) to assess their satisfaction with CDC's Health Statistics products and services including data quality, ease of data accessibility and use, professionalism of staff, relevance of data to major health issues, and relevance of data to user needs. CDC met the target of 100% Good or Excellent ratings for the seventh consecutive year in FY 2014 (Measure 8.A.1.1b).

CDC tracks the number of web visits as a proxy for the frequency with which NCHS data are used. Web visits to NCHS webpages within http://www.cdc.gov increased by about 3.2% to 12,400,000 in FY 2014 compared to FY 2013 (Measure 8.A.1.3). To further increase public interest in the reports and enable potential users to easily find data, CDC also increased the number of releases on the NCHS Facebook page by 28% between FY 2013 and FY 2014 and has pursued cross promotion of NCHS content with other CDC social media channels.

CDC monitors the implementation of its national surveys to ensure the collection and provision of accurate, high quality data. The National Health and Nutrition Examination Survey mobile examination centers visited the planned 15 communities in FY 2014 (Measure 8.F) to achieve the geographic diversity needed for nationally representative estimates. From 2011-2013, CDC increased the sample sizes for two of its surveys to better monitor changes in the provision of health care, largely through support from the Prevention and Public Health Fund (PPHF). The sample size of the National Health Interview Survey (NHIS) increased by about 20% from 34,329 households in 2010 to 41,335 households in 2013 (Measure 8.G). For the National Ambulatory Medical Care Survey (NAMCS), the number of physicians interviewed increased more than 200% between 2010 and 2013 to 11,141 (Measure 8.H.1). Though not meeting its 2013 target, the number of patient records surveyed also increased more than 200% from the 2010 baseline (Measure 8.H.2). The expanded samples provide more precise national estimates for access to care, prevention, management of chronic conditions, and health outcomes. Sample size increases also expand the utility of these surveys by allowing for more state-level estimates from the NHIS and for the first-ever state estimates for some measures from the NAMCS. For example, the NHIS sample size increase allowed CDC to produce reliable health insurance coverage estimates for persons of all ages for 32 states in 2011, 43 states in 2012, and 43 states in 2013, compared to 20 states at the baseline sample size.

CDC did not receive FY 2014 PPHF funds for 2015 NHIS and NAMCS sample increases. CDC identified funds to support some additional NHIS and NAMCS sample, so the targeted sample sizes will remain higher than baseline for 2015. However, CDC did not receive PPHF funds in FY 2015, and 2016 sample sizes will return to baseline.

Surveillance, Epidemiology, and Laboratory Services (OSELS)

Performance Measures for Long Term Objective: Lower barriers to data exchange across jurisdictions as part of an integrated strategy for public health surveillance and response

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015 Target
8.B.1.3a: Increase the percentage of public health agencies that can receive production Electronic Laboratory Reporting (ELR) Meaningful Use compliant messages from certified Electronic Health Record (EHR) technology used by eligible hospitals[1] (Output)	FY 2013: 46% (Target Exceeded)	54%	65%	+11
8.B.1.3b: Increase the percentage of public health agencies (or their designee) that can receive Immunization Information System (IIS) Meaningful Use compliant messages from certified Electronic Health Record (EHR) technology[2,3,4] (Output)	FY 2013: 81% (Target Not Met)	90%	90%	Maintain
8.B.1.3c: Increase the percentage of public health agencies that can receive production Syndromic Surveillance (SS) Meaningful Use compliant messages from certified Electronic Health Record (EHR) technology[5] (Output)	FY 2013: 63% (Target Exceeded)	84%	90%	+6
8.K: Sustain the number of jurisdictions developing or deploying National Electronic Disease Surveillance System (NEDSS)-compatible systems or using the NEDSS Base System, to improve case identification, investigation and response (Output)	FY 2014: 57 (Target Exceeded)	57	57	Maintain

[1] ELR: The work of state public health agencies reflected in this measure is funded by the National Center for Emerging and Zoonotic Diseases through the Epidemiology and Laboratory Capacity Cooperative Agreement.

[2] CDC does not currently track the percentage of agencies that can send EHR Meaningful Use compliant messages, but this may be possible, pending the inclusion of this requirement in the final Meaningful Use Stage 3 criteria issued by the Office of the National Coordinator for Health Information Technology.

[3] IIS: The work of state public health agencies reflected in this measure is funded by the National Center for Immunization and Respiratory Diseases through the Section 317 program.

[4] Stage 2 Meaningful Use began in FY 2014 and changed the format that providers are required to send for meaningful use compliant messages to HL7 2.5.1 only. FY 2014-FY 2016 targets represent this new standard and results are not comparable to previous years.

[5] Data prior to FY 2014 measures both HL7 2.3.1 and 2.5.1 standard formats. CDC will begin measuring receipt of production messages in FY 2014. FY 2014 results will not be comparable to previous years. SS: The work of state, local, tribal, and territorial (STLT) public health agencies reflected in this measure is funded through the Office of Public Health Preparedness and Response.

Performance Measures for Long Term Objective: Improve access to and reach of scientific public health information among key audiences to maximize health impact

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015 Target
8.B.2.1a: Increase the electronic media reach of MMWR through use of mechanisms such as the MMWR website and social media outlets, as measured by page views, app views, social media followers, and email subscribers (Output)	FY 2014: 22,423,492 (Historical Actual)	23,341,013	24,508,053	+1,167,040
8.B.2.2: Increase the electronic media reach of CDC Vital Signs through use of mechanisms such as the CDC website and social media outlets, as measured by page views, social media followers, and texting and email subscribers (Output)	FY 2014: 3,507,581 (Target Exceeded)	3,858,339	4,244,172	+385,833
8.B.2.5: Increase access to and awareness of the Guide to Community Preventive Services, and Task Force findings and recommendations, using page views as proxy for use (Outcome)	FY 2014: 1,339,561 (Target Not Met)	1,400,000	1,420,000	+20,000

Performance Measures for Long Term Objective: Improve the efficiency and accuracy of public health and clinical laboratory testing

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 Target +/- FY 2015 Target
8.B.3.2: Increase the percentage of public health and clinical laboratory professionals who improve laboratory policies and practices as a result of participating in CDC laboratory training (Outcome)	FY 2014: 73.8% (Target Exceeded)	75%	78%	+3

Public Health Informatics Performance Trends: CDC tracks the contribution of the informatics program and CDC program partners through the Electronic Health Records – Meaningful Use (EHR-MU) initiative[470]. CDC works to assess and ensure readiness of three key systems in each state: Electronic Laboratory Reporting, Immunization Information Systems, and Syndromic Surveillance. Public health agencies will assess their capability to receive data in a Meaningful Use-compliant format (i.e., Health Level 7 (HL7) 2.5.1 standard) from eligible hospitals and providers, meaning those with certified EHRs participating in the Centers for Medicare and Medicaid Services' Meaningful Use program. In FY 2014, Meaningful Use stage two required eligible providers to use only the latest

[470] http://www.cdc.gov/ehrmeaningfuluse/introduction.html

format (HL7 version 2.5.1). However, if the public health agency approves, providers currently using the older format (HL7 2.3.1) could be grandfathered in. CDC anticipates a drop in capability of Immunization Information Systems during the transition to the newer format. This change in the definition of meaningful use compliant data affected the results for FY 2013, and CDC did not meet the target. However, CDC expects public health agencies' capability to remain steady in future years (Measure 8.B.1.3b). In FY 2013, CDC demonstrated significant capability gains for Electronic Laboratory Reporting and Syndromic Surveillance as healthcare and public health agencies strove to meet Meaningful Use stage one and two requirements. Electronic Laboratory Reporting capability more than doubled from the 2012 baseline, exceeding the FY 2013 target by 39% (Measure 8.B.1.3a). Likewise, Syndromic Surveillance capability increased more than 30-fold from the 2012 baseline, exceeding its target by 66% (Measure 8.B.1.3c) in FY 2013. CDC will report FY 2014 results in spring 2015.

Public health agencies are not currently required to develop the ability to send messages to eligible providers and hospitals. The Centers for Medicare and Medicaid Services is considering a stage three objective that would include public health agencies' submissions to EHRs, however, this objective may apply to Immunization Information Systems only.

Surveillance Performance Trends: All 50 states, four municipalities and three territories have a National Electronic Disease Surveillance System (NEDSS)[471]-compatible system for notifiable diseases reporting (Measure 8.K). "NEDSS-compatible" means a state's information system meets an established set of requirements, enabling states to share information efficiently with CDC and other health agencies. Currently, 19 jurisdictions use the NEDSS Base System (NBS), a software product developed by CDC for state and local health department use in detection and reporting of notifiable diseases and conditions. NBS also provides electronic laboratory reporting capabilities, which allows timelier and more accurate disease reporting. CDC continues to improve on data timeliness, quality and access through the National Notifiable Diseases Surveillance System (NNDSS) Modernization initiative[472]. Essential to this effort is the development of the Message Validation, Processing and, Provisioning System (MVPS) which will enhance CDC programs' abilities to receive, process, store, access, share, and analyze health-related data, including EHR data, on a unified platform to further the agency's public health goals. Further, CDC began developing new Message Mapping Guides in 2014, transitioning data reporting to HL7 message standards. Jurisdictions adopting these new standards set the language, structure and data types required for seamless integration between systems. CDC will replace measure 8.K in the FY 2017 budget submission with a measure that tracks the percentage of data reported to NNDSS that is submitted by HL7 message standards.

Epidemiology Performance Trends: During FY 2014, CDC delivered critical epidemiological data and recommendations for solving public health problems to over 240,400 clinicians, epidemiologists, laboratorians, and other public health professionals through electronic and print communications published in the Morbidity and Mortality Weekly Report (MMWR)[473]. The number of MMWR subscribers has increased by approximately 51% since 2011. In addition, during this time period, MMWR's electronic media reach increased to over 22.4 million communication channels (page views, app views, and social media followers) due to TV, print, broadcast and internet media interest. MMWR's iPad and iPhone applications combined had 885,924 views, while MMWR's content is ranked among some of the most highly accessed CDC content. Similarly, CDC Vital Signs is a monthly communication program that targets the public, health care professionals, and policymakers through fact sheets, social media, a

MMWR by the Numbers, 2014:
22,400,000 communication channels (page views, app views, social media followers) due to TV, print, broadcast, and internet media
240,400 subscribers, a 51% increase since 2011
15,000 downloads of MMWR's most highly viewed report

[471] http://wwwn.cdc.gov/nndss/script/nedss.aspx
[472] http://wwwn.cdc.gov/nndss/script/NNDSS_Modernization_Initative.aspx
[473] http://www.cdc.gov/mmwr/

website (http://www.cdc.gov/vitalsigns), and a linked issue of the MMWR. Its electronic media reach grew from 250,000 potential viewings (page views, social media followers, and texting and email subscribers) in FY 2010 to over 3.5 million potential viewings in FY 2014 due to print, broadcast and cable media interest, and continued promotion to add subscribers to its social and email dissemination channels (Measure 8.B.2.2). CDC Vital Signs exceeded FY 2013 and FY 2014 targets, but may encounter slower growth in the future due to media saturation.

The Community Preventive Services Task Force (Task Force)[474] is an independent, nonpartisan, nonfederal, unpaid panel of public health and prevention experts. The Task Force's mandate is to identify population-based programs, services, and policies that are effective in saving American lives and dollars, increasing longevity, and improving quality of life. Task Force recommendations provide information about evidence-based options that decision makers and stakeholders can consider when determining what best meets the specific needs, preferences, available resources, and constraints of their jurisdictions and constituents. Task Force recommendations are compiled in The Guide to Community Preventive Services[475] (The Community Guide). The Community Guide website http://www.thecommunityguide.org) is the primary dissemination tool used to 1) provide information about Task Force-recommended options to individuals, organizations, agencies, and communities who are making their own decisions about what is best for their circumstances, and 2) assist those who request help in implementing Task Force recommendations that best meet their needs. In FY 2014, CDC received 1,339,561 page views on the Community Guide website, an increase of 44% over the 2011 baseline, nearly achieving the FY 2014 target. CDC maintained the majority of expected page views by utilizing processes, strategies, and web-based products developed and tested during 2011-2013. CDC expects modest growth in page views in FY 2015 through FY 2016 due to the release and promotion of enhancements to the Community Guide website (developed in 2012-2014) that provide customized decision and implementation support for a range of user audiences.

Laboratory Standards and Services Performance Trends: Historically, improvements in laboratory practices and policies have been measured in CDC hands-on training activities (Measure 8.B.3.2). CDC expanded the scope of Measure 8.B.3.2 for FY 2015 to include all formats of online and classroom-based training activities. Improvements in multimedia and communication technology have expanded the online training portfolio to address a broader range of training needs. This change allows for more significant reporting on training impact by evaluating an increasing population of training participants for improvements in practices and policies that correlate directly to improvements in laboratory testing efficiency and laboratory sustainability by capturing improvements such as testing accuracy, improved proficiency testing results, reduced test times, and laboratory cost savings. For example, CDC released a blended learning Basic Microbiology curriculum in 2014 that combined eLearning self-study courses with locally mentored hands-on training. The curriculum reached over 1,500 public health and clinical laboratory scientists, resulting in improved proficiency test results, an expanded workforce, and significantly reduced laboratory training costs.

CDC exceeded its FY 2014 target for Measure 8.B.3.2, increasing the percentage of public health and clinical laboratory professionals who improve laboratory policies and practices to 73.8%. This is a 27% improvement over the FY 2012 baseline. CDC will re-establish the baseline per the expanded scope of the measure and update targets in FY 2015, however future results will not be comparable to data prior to FY 2014. CDC will set targets for the expanded measure in FY 2017, once the baseline (2013-2015) has been established. Preliminary data for the expanded measure indicate 51.4% and 53.5% of public health and clinical laboratory participants improved laboratory policies and practices and implemented new or modified testing protocols in FYs 2013 and 2014, respectively. Noted improvements include enhanced laboratory biosafety and biosecurity, as well as more accurate and timely test results for improved community and patient health.

[474] http://www.thecommunityguide.org/about/aboutTF.html
[475] http://www.thecommunityguide.org/

PUBLIC HEALTH WORKFORCE AND CAREER DEVELOPMENT[1]

Performance Measures for Long Term Objective: Develop and implement training to provide for competent, sustainable, and empowered public health workforce able to meet emerging and future health challenges

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 Target +/- FY 2015 Target
8.B.4.2: Increase the number of CDC trainees in state, tribal, local, and territorial public health agencies[2] (Output)	FY 2014: 310[4] (Not Met)	430	487	+57
8.B.4.3: Increase the number of new CDC trainees who join public health fellowship programs in epidemiology, preventive medicine, public health leadership and management, informatics, or prevention effectiveness, and participate in training at federal, state, tribal, local, and territorial public health agencies[3] (Output)	FY 2014: 98[4] (Target Not Met)	266	359	+93

[1] Targets and results for 8.B.4.2 and 8.B.4.3 reflect some ACA/PPHF funding from FY 2013.

[2] 8.B.4.2 includes ALL (new and continuing) CDC-funded trainees in EIS, PHPS, PMR/F, Public Health Associate Program (PHAP), Emerging Infectious Diseases (EID) Laboratory Fellowship, CDC/CSTE Applied Epidemiology Fellowship, Health Systems Integration Program (HSIP), Applied Public Health Informatics Fellowship (APHIF) , and the Informatics Training-in-Place Program (I-TIPP).

[3] 8.B.4.3 includes NEW CDC-funded trainees in EIS, PMR/F, PHIFP, PHAP, Prevention Effectiveness Fellowship (PEF), and Presidential Management Fellows (PMF) program.

[4] The FY 2014 number of fellows is much lower than previous years because the start date for the new class of Public Health Associates transitioned from summer 2014 (FY 2014) to fall 2014 (FY 2015). FY 2014 was considered a "gap year" (no new associates) to accommodate this transition to a later start date; 145 new PHAP associates began in fall 2014 (FY 2015). CDC expects performance levels similar to previous years in FY 2015.

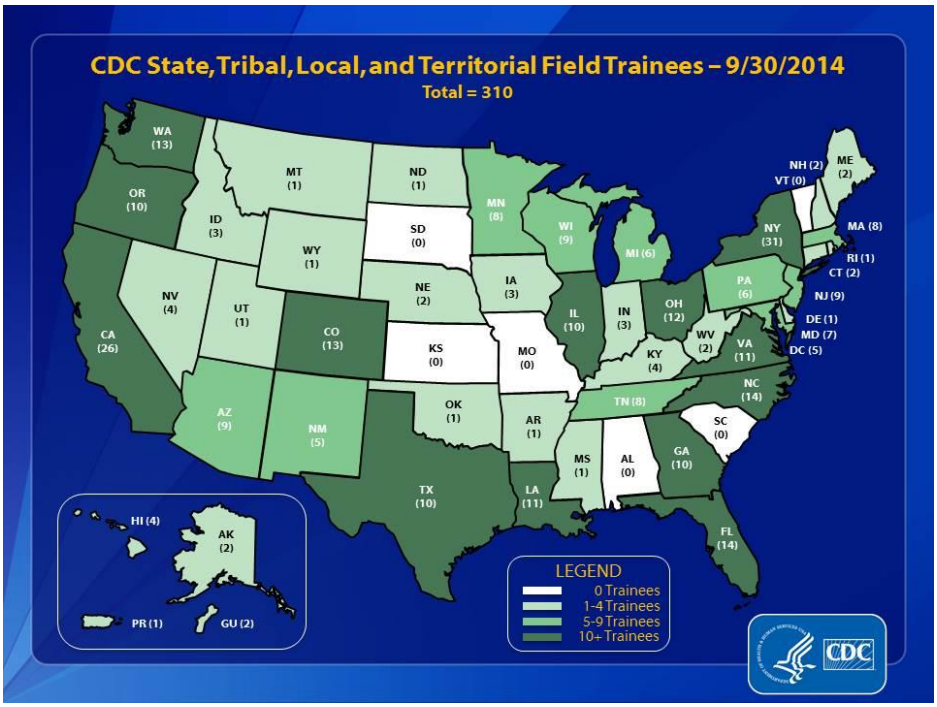
Performance Trends: CDC's experiential fellowship programs contribute to the public health workforce pipeline and help fill a critical need, as the public health workforce has decreased by at least 58,000 jobs since 2008. In 2014, 82% of CDC's fellowship program graduates pursued careers in public health practice or obtained additional public health education. During the previous three years, CDC exceeded the targets for its measures focused on training the next generation of the public health workforce (Measures 8.B.4.2 and 8.B.4.3). However, results for measures 8.B.4.2 and 8.B.4.3 decreased in FY 2014 due to the Public Health Associates Program's (PHAP's) transition to a new start-date for its incoming class. CDC's new class of 145 PHAP associates started in fall 2014 (FY 2015), as opposed to summer 2014 (FY 2014), and thus were not included in FY 2014 results. PHAP associates that began in the fall of 2014 will be included in FY 2015 results. CDC expects performance levels similar to previous years in FY 2015. CDC sets the targets based on the typical, annual class size for each of the fellowship programs included in these measures.

Results and targets for Measure 8.B.4.2 reflect CDC's efforts to strengthen informatics capacity at the state, tribal, local, and territorial (STLT) level. In FY 2013, CDC developed the Informatics Training-in-Place Program[476] (I-TIPP) which provides informatics training and guidance to current state and local health department staff who are working on Meaningful Use projects. By focusing on current state and local health department staff, CDC helps state and local partners advance current, high-priority informatics projects that may have languished

[476] http://www.cdc.gov/ophss/csels/dsepd/i-tipp.html

without additional assistance, training, and information-sharing among peers. This training program supplements the informatics training provided through the Public Health Informatics Fellowship[477] (which places doctoral-level fellows at CDC for two years of intense informatics training) and the Applied Public Health Informatics Fellowship (which places masters-level fellows at STLT agencies for one or two years of applied public health informatics training).

Since FY 2010, CDC has leveraged resources from other CDC programs and the Prevention and Public Health Fund (PPHF) to support an increased number of trainees. CDC did not receive PPHF funds for Public Health Workforce in FY 2014, which resulted in a significant funding cut for Public Health Workforce and Career Development activities. Future targets are tentative until PPHF funding is allocated.



CDC's fellowship programs promote service while learning—fellows fill critical workforce needs at CDC and in STLT public health agencies while training for careers in public health. By FY 2013, CDC increased the number of trainees in STLT public health agencies from 119 trainees in 2009 to 401 by targeting funding to fellowship programs that place fellows in STLT public health agencies rather than at CDC headquarters (Measure 8.B.4.2). This strengthened workforce capacity in several critical disciplines, including applied epidemiology, public health management, and informatics. The results dropped in FY 2014 due to a gap year for PHAP. CDC expects performance levels similar to previous years in FY 2015 and higher than previous years in FY 2016 per its FY 2016 request. As of September 30, 2014, CDC supported 471 fellows, 310 (66%) of whom were placed in state, tribal, local and territorial field assignments in 44 states, Washington D.C, Guam, Puerto Rico, and four tribal locations using a combination of FY 2013 and FY 2014 funds; the remainder were assigned to CDC.

477 http://www.cdc.gov/PHIFP/

OCCUPATIONAL SAFETY AND HEALTH

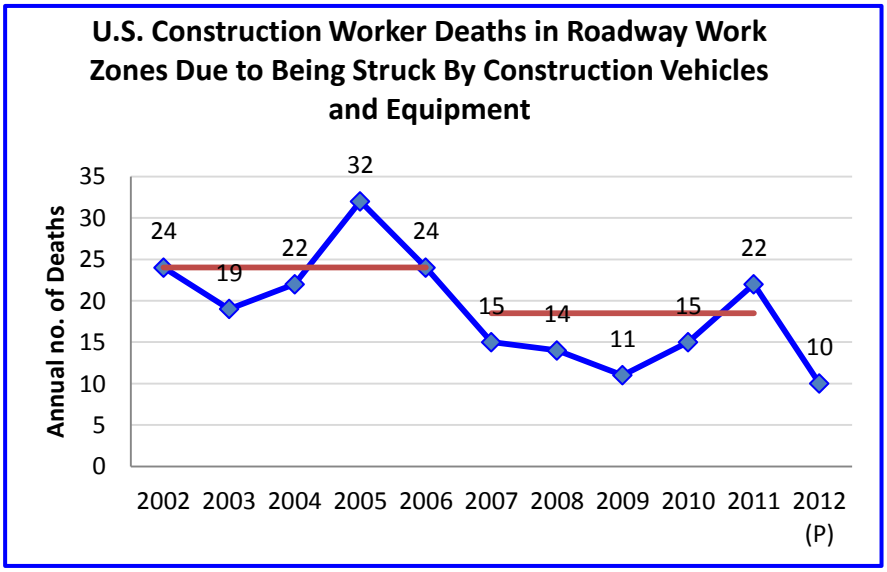
National Occupational Research Agenda (NORA)

Performance Measures for Long Term Objective: Conduct research to reduce work-related illnesses and injuries.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
9.1.1: Increase the effectiveness of the implementation of the recommendations from the National Academies reviews (Outcome)	FY 2014: 100% of the [7] evaluated CDC NIOSH programs received a score of 4 out of 5 or better based on an external review of their progress implementing recommendations from their National Academies reviews. (Target Met)	N/A[1]	100% of the [7] evaluated CDC NIOSH programs will receive a score of 4 out of 5 or better based on an external review of their progress implementing recommendations from their National Academies reviews.	N/A[1]

[1]Targets and results are set and reported biennially.

Performance Trends: Since 1996, the National Occupational Research Agenda (NORA) has served as a framework to guide occupational safety and health research not only for CDC but for the entire occupational safety and health (OSH) community. CDC has tracked the results of a unique research project initially funded through NORA that contributed to a reduction in roadway worker fatal injuries. Roadway workers risk fatal and serious non-fatal injuries in work zones when in close proximity to construction equipment. The graph on the right depicts trends in this area; the blue line depicts the number of deaths per year and the red lines mark yearly averages. CDC's productive partnerships with the Occupational Safety and Health Administration, labor unions, state agencies, and industry trade associations have contributed to raising awareness on work zone safety and keeping worker safety in the forefront of national discussions.



After peaking at 32 in 2005, U.S. annual construction worker deaths at roadway construction sites due to being struck by construction vehicles and equipment fell to a two decade low of 11 in 2009. The five-year average declined 23% from 24 deaths (2002-2006) to 18.5 (2007-2011).

CDC contracted with the National Academies in FY 2005 to review its occupational safety and health research program portfolio, assess the impact and relevance of each program, and identify emerging issues. The National Academies evaluation committees reported favorable scores for program relevance and impact for all eight of the CDC programs evaluated, including Hearing Loss; Mining; Respiratory Diseases; Traumatic Injuries; Construction; Agriculture, Forestry and Fishing; Personal Protective Technology; and Health Hazard Evaluations. As part of its commitment to implementing the National Academies recommendations, CDC asked the external members of the NIOSH Board of Scientific Counselors and the Mining Safety and Health Research Advisory Committee to review and score progress in FYs 2012 and 2014. All seven evaluated programs received a score of four out of five or better in both reviews, (Measure 9.1.1). CDC did not include Agriculture, Forestry and Fishing in the FY 2012 or 2014 reviews because it was proposed for elimination in FYs 2013-2015. In FY 2016, a new round of external reviews will score the seven programs on progress in implementing a mix of yet-to-be-addressed recommendations, continuing existing efforts on recommendations scored in FY 2014, and new priorities initiated and undertaken by programs in light of the National Academies reviews.

Other Occupational Safety and Health Research

Performance Measures for Long Term Objective: Improve the quality and usefulness of tracking information for safety and health professionals and researchers in targeting research and intervention priorities; measure the success of implemented intervention strategies

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
9.1.2a: Increase the number of research and intervention projects that were based on surveillance information (Output)	FY 2013: 170 (Target Exceeded)	170	170	Maintain
9.1.2b: Increase the number of projects that use surveillance information to demonstrate the success of NIOSH research (Output)	FY 2013: 71 (Target Exceeded)	71	71	Maintain

Performance Measures for Long Term Objective: Reduce workplace illness, injury, and mortality in targeted sectors

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
9.2.2a: Reduce rate of non-fatal workplace injuries among youth ages 15-17 (Outcome)	FY 2014: 3.5 (Target Exceeded)	3.7	3.7	Maintain
9.2.2c: Maintain ≥ 95% of active underground coal mines in the U.S. that possesses NIOSH-approved plans to perform x-ray surveillance for pneumoconiosis (Outcome)	FY 2014: 99% (Target Exceeded)	90%	90%	Maintain
9.2.3a: Percent reduction in respirable coal dust overexposure[1] (Outcome)	FY 2013: 65% (Historical Actual)	55%	N/A[2]	N/A[2]
9.2.3c: Ensure the quality of NIOSH certified respirators by increasing the number of audit activities completed (Outcome)	FY 2014: 311 (Target Exceeded)	175	200	+25
9.A: Number of safety and health patent filings (Output)	FY 2014: 2 (Target Not Met)	5	2	-3

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
9.B: Number of certification decisions issued for personal protective equipment (Output)	FY 2014: 560 (Target Exceeded)	300	350	+50
9.E: Number of research articles published in peer-review publications (Output)	FY 2014: 338 (Target Met)	350	338	-12
9.J: Number of Health Hazard Evaluations (Output)	FY 2014: 225 (Target Exceeded)	200	200	Maintain

[1]Annual trend data will be available by FY 2014.

[2]This measure has been suspended due to the introduction of a new rule by the Mine Safety Health Administration that changes both the definition of coal dust overexposure and its measurement.

Performance Trends: CDC continues to meet its performance targets by using surveillance information to develop and evaluate projects. The number of research and intervention projects based on surveillance information rose to 170 in FY 2013, continuing an upward trend from FY 2012 (Measure 9.1.2a). Additionally, 71 intervention programs used surveillance information to demonstrate the effectiveness of the program's strategies in FY 2013, an all-time high (Measure 9.1.2b). CDC expects to hold these performance levels steady through FY 2016.

CDC reduces workplace illness, injury, and mortality across occupational sectors. The rate of non-fatal workplace injuries among youth ages 15 to 17 fell to 3.5 per 100 FTE in FY 2014, reversing an upward trend seen in FYs 2012 and 2013 (Measure 9.2.2a). The current decreases in injury rates for youth are driven, in part, by the recent recession, which has resulted in lower employment rates for young workers. As the economy continues to improve, youth employment will likely recover, resulting in higher injury rates for these inexperienced workers. However, CDC will continue to focus on reducing young worker injuries through increased awareness and basic knowledge of workplace safety and health. For example, CDC will continue to promote the use of a high school curriculum, "Youth@Work: Talking Safety"[478], designed especially for young workers. The curriculum is available free of charge, and is customized for each state, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. CDC entered into a partnership with a large, urban school district in the state of Florida to teach the new Talking Safety curriculum in science courses to approximately 25,000, 8th grade students each year. Additionally, the American Federation of Teachers recently reviewed and approved the curriculum for use in conjunction with the Common Core State Standards.

Exposure to coal mine dust causes various pulmonary diseases, including coal workers' pneumoconiosis and Chronic Obstructive Pulmonary Disease (COPD). CDC works with underground coal mines in the United States to develop plans to perform x-ray surveillance for pneumoconiosis and COPD. Since 2008, at least 96% of active U.S. mines in the Coal Workers Health Surveillance Program have possessed a CDC-approved plan, well exceeding the 90% target (Measure 9.2.2c). A new regulation on respirable coal mine dust by the Mine Safety and Health Administration adds symptom assessment, documentation of occupational history, and spirometry to the surveillance program and extends eligibility to surface coal miners. The FY 2016 target remains level while CDC focuses on developing approval processes for these new evaluations and on assisting surface coal mines in developing their newly-required plans. CDC expected Mining Sector interventions to achieve a 55% reduction in respirable coal dust overexposure among miner operators by 2015, but reached this goal ahead of schedule. Recent data from 2013 indicate a 65% reduction in coal dust exposure, almost six times the initial 11% reduction achieved in 2004 (Measure 9.2.3a). FY 2014 results will be available by March 31, 2015. The same Mining and Safety Health Administration rule also lowers the permissible level of coal dust exposure and changes how dust

[478] www.cdc.gov/niosh/talkingsafety/

levels are measured, which will lead to more accurate (and potentially higher) estimates of overexposure starting in FY 2016. Such large methodological changes mean that a FY 2016 target cannot be set for the existing measure, and a new version of the measure will be introduced for FY 2017. CDC remains committed to reducing coal dust overexposure, and will continue to work with industry partners and develop new technologies like the Personal Dust Monitor.

An estimated 20 million workers use Personal Protective Equipment to protect themselves from death, disability, and illnesses. CDC's Personal Protective Technology program provides expertise from many scientific disciplines to advance federal research on respirators and other personal protective technologies for workers. Audit activities ensure that CDC certified respirators achieve their approved level of performance. CDC completed 311 respirator audit activities in 2014, exceeding expectations for the fourth year in a row (Measure 9.2.3c). CDC set the FY 2016 target at 200 to remain ambitious in light of projections that manufacturing sites will grow and the type of respirator audited will take longer to test, resulting in fewer audits completed each year. Additionally, FY 2014data demonstrate improvements in the inventory and quality of respiratory protection for workers in all industry sectors through 560 certified respirator decisions, exceeding the target and showing an increase over FYs 2012 and 2013 (Measure 9.B). Although demand for respirator decisions remains high, the FY 2016 target is set at 350 due to limited personnel resources available to respond to requests, the impact of consensus standards, and advances in technology.

With 28,902 downloads since its release in June 2013, the NIOSH Ladder Safety smartphone app is helping users set safe ladder angles more accurately and properly position their ladders.

CDC promotes the transfer of knowledge and technology for the development of products through patent filings and disseminates occupational safety and health information through publications. In FY 2014, CDC filed two safety and health patent applications, a decrease from FYs 2012 and 2013 (Measure 9.A). However, the United States Patent and Trademark Office granted CDC a new patent for the Universal Physiologic Sampling Pump Capable of Rapid Response to Breathing, which allows for size selective sampling of particulates via continuous air flow through a cyclone. This technology is available for licensing. The FY 2016 target is set lower than FY 2015 as CDC explores less expensive options for transferring its inventions such as licensing without patenting, private/government cost share options, etc. CDC also makes surveillance data available to researchers and the public, providing needed information for planning and decision-making.

CDC published 338 research articles in peer-reviewed publications in FY 2014, a small increase compared to FY 2013 (Measure 9.E). These publications represent a substantial contribution to the scientific literature regarding occupational health and safety. For example, in FY 2014, CDC published an article on a field study of potential exposure to volatile chemicals during flowback operations, a component of hydraulic fracturing. The findings suggested that workers' exposure to benzene (a known carcinogen) can exceed the NIOSH Recommended Exposure Limit (REL). CDC has issued general recommendations for employers and plans further research to develop engineering controls to reduce hazardous exposures.

CDC responds to employer, employee, and state and local requests for worker Health Hazard Evaluations (HHEs). CDC assesses the workplace and health of employees by reviewing records and/or conducting on-site testing. These evaluations present the opportunity to obtain information on occupational exposures where standards are lacking, or do not protect all workers. In FY 2014, CDC conducted 225, a decline from FYs 2012 and 2013 due to constrained resources and fewer requests (Measure 9.J). The FY 2016 target is set at 200 as CDC continues its efforts to increase the awareness of the program. A new video is being shared with stakeholders and outreach to local health departments is ongoing.

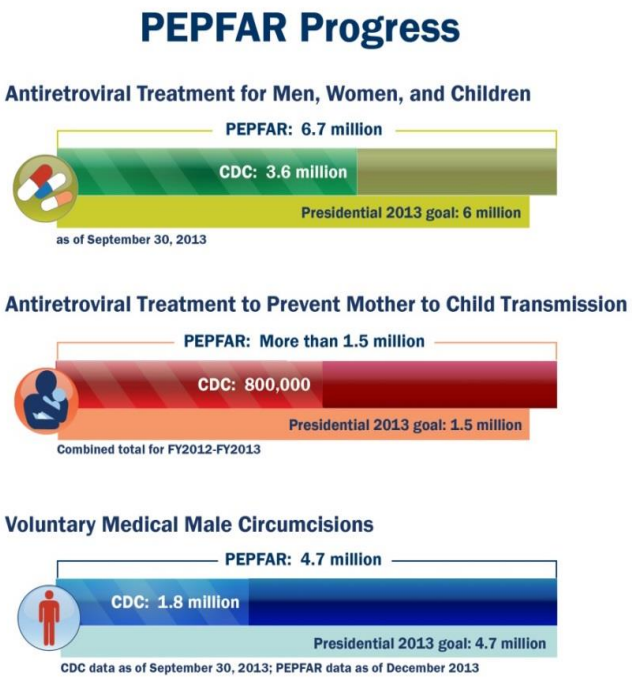
GLOBAL HEALTH

Global HIV/AIDS

Performance measures for Long Term Objective: Partner with ministries of health (MOHs), international and local partners and other United States Government (USG) agencies to achieve the PEPFAR goals of reducing the worldwide rate of new HIV infections and saving lives by focusing on three highly effective, evidence-based HIV interventions: (1) antiretroviral treatment for prevention and health benefits, 2) prevention of mother-to-child transmission; and 3) voluntary medical male circumcision.

Measure	Most Recent Result[1]	FY 2015 Target	FY 2016 Target	FY 2016 Target +/- FY 2015 Target
10.A.1.5: Increase the number of adults and children with HIV infection receiving antiretroviral therapy (ART) (Output)	FY 2014: 4,292,400 (Target Exceeded)	4,796,000	5,287,000	+491,000
10.A.1.6: Increase the number of HIV+ pregnant women receiving antiretroviral medications, to reduce mother-to-child HIV transmission (Output)	FY 2014: 437,900 (Target Not Met)	464,700	485,800	+21,100
10.A.1.7: Increase the number of males age 15 and over circumcised as part of the minimum package of male circumcision for HIV prevention services (Output)	FY 2014: 1,376,400 (Target Exceeded)	1,002,100	1,365,300	+363,200

[1] Targets and results reflect the revised PEPFAR definitions of support that were implemented in January 2014. The numbers include individuals who receive PEPFAR/CDC support at direct service delivery sites and technical assistance for service delivery improvement sites.



Performance Trends: Global HIV/AIDS funding supports CDC's essential role in implementing the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). Creating an AIDS-free generation is a policy priority for the United States. Preventing new HIV infections is achievable and critical to stem the global HIV/AIDS epidemic, even in the absence of an HIV vaccine. To accomplish this goal, CDC focuses on scaling up three pivotal evidence-based interventions: antiretroviral therapy (ART), prevention of mother-to-child transmission (PMTCT), and voluntary medical male circumcision (VMMC). ART reduces an HIV positive person's viral load, reducing the risk of sexual transmission to a partner by up to 96%. The initiation of lifelong antiretroviral medication for pregnant women leads to the virtual elimination of mother-to-child transmission and improves mothers' health. Conclusive scientific evidence shows that circumcision reduces men's risk of HIV acquisition from heterosexual exposure by at least 60%, with numerous additional benefits for themselves and their partners. When scaled-up and used in combination, these three interventions offer a historic opportunity to drive down the worldwide rate of new HIV infections and advance towards achieving an AIDS-free generation.

The PEPFAR Stewardship and Oversight Act of 2013 mandated more nuanced reporting on PEPFAR program outputs, outcomes, and impact, including how PEPFAR support is defined. In accordance with the statutory requirement, an interagency task team developed a revised definition of PEPFAR support that was implemented in January 2014. The new definition classifies individuals who receive PEPFAR support into two categories, those who receive direct service delivery support and those who receive services at sites benefiting from technical assistance only. Though the definition of support has been revised, neither the measures nor the strategy has changed. Rather, this represents a clarification of what is meant by PEPFAR support to each site and patient counted by PEPFAR.

The results for the FY 2014 performance measures include both individuals receiving direct support and those benefiting from essential technical support provided by CDC through PEPFAR to partner countries. However, beneficiaries who attend sites that do not benefit from a quarterly visit from PEPFAR are no longer included in the count. Since the revised definition of PEPFAR support has a higher threshold of support than the prior definition, it may reduce the number of sites and patients which are classified as receiving PEPFAR site support.

In FY 2014, CDC and CDC-supported partners in 23 PEPFAR countries and the Asia and Central Asia Regional Offices, in close collaboration with the Ministry of Health in each country, provided life-saving antiretroviral therapy (ART) for 4,292,400 HIV-infected adults and children (of which, 2,995,300 are receiving direct support and an additional 1,297,100 are benefiting from essential technical support provided by CDC), an 18% increase compared to FY 2013 and a 63% increase compared to FY 2012 (Measure 10.A.1.5). CDC provides funding, leadership, guidance, and supportive supervision to these countries to foster the rapid scale-up of ART. In FY 2014, the greatest increases in new patients started on ART supported by CDC occurred in Malawi (141,638 new patients on ART), Zambia (89,847), Uganda (89,183), Mozambique (88,324), and Kenya (78,883).

The increase in the number of persons on ART is due to two major reasons: (1) the 2013 WHO ART Guidelines that significantly increased the number of HIV-infected persons eligible for ART by offering treatment to those who are infected but not yet symptomatic; and (2) the increased focus of PEPFAR on providing treatment for all those who are eligible.

The increase in ART coverage occurred despite transitioning responsibility for providing this support to the Governments of South Africa for 96,615 patients and the Government of Namibia for 61,296 patients, who were supported by CDC in FY 2013. Transitioning responsibility to country governments is the ultimate goal of CDC support for national ART programs, so that these programs can be self-sustaining over the long term. In FY 2015 and FY 2016, CDC plans to increase the patients on ART to 4,796,000 and 5,287,000, respectively, in an effort to change the course of the epidemic in the CDC-supported PEPFAR countries.

Since it was made commercially available in 2011, over 30 countries have adopted use of a CDC-developed HIV Incidence assay. It is used for estimating recent infections and identifying HIV transmission hot spots for targeted prevention.

In FY 2014, CDC-supported partners in 21 PEPFAR countries provided 437,900 HIV positive pregnant women (of which, 291,600 received direct support and an additional 146,300 benefited from essential technical assistance provided by CDC) with antiretroviral drugs (ARVs), achieved 96% of the FY 2014 PMTCT ARV target and met 101% of the FY 2013 results (Measure 10.A.1.6). Overall, PMTCT ARV coverage of all known HIV positive pregnant women attending sites supported by CDC partners was stable at 88%. Overall coverage includes both women receiving either treatment or prophylaxis for PMTCT. One reason for stable overall coverage in FY 2014 was the focus on rapid transition of PMTCT programs to the 2013 WHO guidelines which recommend treatment for all pregnant and breastfeeding women (Option B/B+). The success of this transition is demonstrated by a 50% increase in the number of women on lifelong ART attending sites supported by CDC partners from 240,300 in FY 2013 to 360,300 in FY 2014. Therefore while the overall coverage of any type of PMTCT provided was stable, the coverage of lifelong ART for PMTCT increased from 49% to 72%. To further increase access and coverage, CDC is providing critical support to

countries as they fully transition to Option B/B+ in all PEPFAR supported sites; collaborating with U.S. Government and external partners to ensure commodity availability, continuing to focus on integrated service delivery models to improve the retention of women in the PMTCT program and collaborate with treatment colleagues to support these women as they continue on lifelong ART.

In FY 2014, CDC-supported partners in 12 high priority PEPFAR countries performed 1,376,400 voluntary medical circumcisions of males aged 15 and older by a qualified clinician (of which, 1,226,900 received direct support and an additional 149,500 benefitted from essential technical support provided by CDC), a 33% increase compared to FY 2013 and a 372% increase compared to baseline reporting in FY 2011 (Measure 10.A.1.7). CDC collaborates with country programs to scale-up voluntary medical male circumcision (VMMC) by expanding task shifting, increasing the number of dedicated VMMC teams, and supporting mobile services. Four large countries were able to reach or exceed their targets in FY 2014 largely by increasing outreach to hard-to-reach populations to provide access to eligible males: South Africa, Tanzania, Uganda, and Kenya. The targets for FY 2015 (1,002,100) and FY 2016 (1,365,300) are ambitious in light of limited resources. To assure continued success in the coming years, in addition to maintaining adequate resources, CDC is developing innovative communication approaches to encourage men at higher risk of HIV to undergo VMMC as part of a comprehensive HIV prevention strategy and expanding outreach services to more rural and hard-to-reach populations.

Global Immunization

Contextual Indicator for Long Term Objective: Help domestic and international partners achieve World Health Organization's goal of global polio eradication.

Contextual Indicator	Most Recent Result	FY 2020 Target
10.B.1.3: Reduce the number of countries in the world with endemic wild polio virus (Outcome)	FY 2012: 3 (Target Not Met)	0

Performance measure for Long Term Objective: Help domestic and international partners achieve World Health Organization's goal of global polio eradication.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015 Target
10.B.1.2: Increase the number of children vaccinated with Oral Polio Vaccine (OPV) as a result of non-vaccine operational support funding to implement OPV mass immunization campaigns in Asia, Africa, and Europe (Output)	FY 2013: 7,241,657 (Target Not Met)	55,000,000	N/A[1]	N/A

[1] Per objective 2 of the Global Polio Eradication initiative, OPV is scheduled to be withdrawn globally by the end of 2016. IPV will be introduced into the routine immunization schedule of GAVI-eligible countries starting 2015. CDC will propose a new measure once OPV is withdrawn and IPV is introduced

Contextual Indicator for Long Term Objective: Work with global partners to reduce the cumulative global measles-related mortality by 95% compared with CY 2000 estimates (baseline 777,000 deaths) and to maintain elimination of endemic measles transmission in all 47 countries of the Americas.

Contextual Indicator	Most Recent Result	FY 2020 Target
10.B.2.1: Reduce the number of global measles-related deaths[1] (Outcome)	FY 2013: 145,700 (Target Not Met)	30,000

[1] The Measles and Rubella Initiative formulated an improved method for calculating global measles mortality in late 2010 following measles outbreaks in Africa in 2009 and 2010. The actual results from 2009 onward reflect the improved measurement.

Performance measures for Long Term Objective: Work with global partners to reduce the cumulative global measles-related mortality by 95% compared with CY 2000 estimates (baseline 777,000 deaths) and to maintain elimination of endemic measles transmission in all 47 countries of the Americas.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015 Target
10.B.2.2: Maintain number of non-import measles cases in all 47 countries of the Americas as a measure of maintaining elimination of endemic measles transmission (Outcome)	FY 2013: 0 (Target Met)	0	0	Maintain
10.B.2.3: Increase the number of countries that achieve at least 90% immunization coverage in children under 1 year of age for DTP3 (three shot series of vaccines covering diphtheria, tetanus, and pertussis). (Outcome)	FY 2013: 129 (Target Not Met)	143	143	Maintain

Efficiency measure for Global Immunization

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015 Target
10.B.E.1: Increase the percentage of the annual budget that directly supports the program purpose in the field. (Efficiency)	FY 2013: 81% (Target Not Met)	≥90%	≥90%	Maintain

Performance Trends: Global immunization funding advances polio eradication and measles mortality reduction and elimination efforts.

CDC is the lead technical monitoring agency for the Independent Monitoring Board of the Global Polio Eradication Initiative (GPEI). The number of countries reporting endemic wild poliovirus (WPV) remained stable at four from FY 2008-2010 and then declined to three countries—Pakistan, Afghanistan and Nigeria—from FY 2010 to present (Measure 10.B.1.3). In March 2014, India was certified polio free, in part due to CDC's strategic support to India's Ministry of Health and Family Welfare and GPEI partners. The difficulty of reaching the remaining polio reservoirs in northern Nigeria stems from security challenges and the recurrent circulation of WPV from Nigeria into previously polio-free areas in Central Africa. However, there has not been a case of wild poliovirus reported in Nigeria since July 2014. Continued circulation of the virus along the Afghanistan-Pakistan border hindered achievement of the FY 2013 WPV target and compounded the challenge of interrupting residual WPV transmission.

Eradicating WPV cases in the three remaining countries is vital to preventing re-infection among polio-free countries and requires intensive operational efforts and more dedicated resources per child to reach children in isolated areas. Starting in 2012, CDC implemented emergency measures in the remaining endemic countries to recapture previous gains. In response to an increased availability of donor funds, CDC intensified its efforts by enhancing operations and increasing social mobilization. The enhancements resulted in an emphasis on targeted field consultations, scaling up successful innovations for polio eradication activities, and capacity building through training in accordance with the Global Polio Emergency Action Plan. Together, these activities

resulted in a nearly two-thirds decrease in the number of global polio cases between 2011 (650 cases) and 2012 (223 cases). In 2013, outbreaks in the Horn of Africa and Syria pushed the global total to 416 cases. Continued improvement in the Nigeria program along with intensified responses to the outbreaks has resulted in the possibility of a polio-free Africa in 2015. As of December 2014, Pakistan accounted for 85% of the global total of wild polio cases. The three endemic countries, however, represented only 160 cases (38% of the 2013 total). However, sequestration limited the number of OPV doses CDC purchased in 2013, resulting in the vaccination of approximately 7 million children—a 50% decline from 2011 (Measure 10.B.1.2).

Due to CDC and partner polio eradication efforts, Southeast Asia, including India, was certified polio-free in March 2014: 80% of the world is now polio-free. Transmission slowed dramatically during 2014 in every country except Pakistan where the Taliban has banned vaccinations.

Most polio re-infected countries encounter substantial and recurrent outbreaks due to low routine immunization coverage levels (less than 80%), suboptimal outbreak response, and weak health systems—constituting a "WPV importation belt" that stretches from West Africa to Central Africa to the Horn of Africa. As a result, the Global Polio Eradication Initiative[479], in consultation with national health authorities, developed the Polio Eradication Endgame Strategic Plan (2013-2018). The plan addresses the eradication of all polio disease, whether caused by wild poliovirus or vaccine derived virus. Per objective 2 of the plan, Oral Polio Vaccine (OPV) (Measure 10.B.1.2) is scheduled to be withdrawn globally by the end of 2016. Inactivated Polio Vaccine (IPV) will be introduced into the routine immunization schedule of GAVI-eligible countries starting 2015. OPV is being withdrawn to eliminate the rare occurrence of vaccine-derived poliovirus resulting in paralysis. OPV is still the best tool available for countries with active poliovirus circulation, but as wild poliovirus circulation is interrupted globally, removing the possibility of vaccine-derived poliovirus is essential to full eradication. Rather than increasing the number of children reached with OPV, CDC expects to see a decline in children reached. Declines in OPV are expected between the 2015 and 2016 as OPV is withdrawn worldwide and replaced with IPV. CDC will develop an appropriate measure for the shift from use of the OPV to the inactivated polio vaccine for the FY 2017 President's Budget.

In light of concerns that the polio eradication goal would not be achieved, the Executive Board of the World Health Organization (WHO) declared polio eradication a "programmatic emergency for global public health." As a result, CDC activated its Emergency Operations Center (EOC) for polio eradication in December of 2011 to scale-up its activities and rapidly expand technical expertise. This includes outbreak prevention and control, disease surveillance reviews; and immunization campaign planning, implementation and monitoring. CDC consults weekly with WHO and the United Nations Children's Fund (UNICEF) to identify needs and determine optimal resource allocation. CDC collaborations have resulted in the absence of Type 3 poliovirus worldwide since November 2012. Once six months have passed without a single polio case in the world, CDC will stand down its EOC activities but continue polio eradication activities until global certification is achieved.

Reducing cumulative global measles-related mortality by 95% compared with CY 2000 estimates presents unique challenges. Global measles mortality data released in late CY 2014 revealed the failure in recent years to increase measles vaccination coverage in Africa and Asia, especially in the Philippines and Federated States of Micronesia, has led to large scale outbreaks all around the world, reversing some of the consistent gains in measles mortality reduction. Though CDC and its partners did not meet the target for reducing measles related deaths, mortality has decreased 78% since CY 2002 (Measure 10.B.2.1). In CY 2013, the US recorded 189 people with measles, all of them traceable to importations from other countries. This represents the second largest number of cases in the US since measles was eliminated in 2000. Since CY 2008, CDC's collaboration with the Pan American Health Organization has helped ensure cases are contained and do not spur a resurgence of measles (Measure 10.B.2.2).

[479] http://www.polioeradication.org/

To maintain the gains made by polio eradication and measles mortality reduction, CDC partners with ministries of health (MOHs), WHO, and UNICEF to strengthen national immunization systems. The number of countries that achieve at least 90% immunization coverage in children under one year of age for DTP3 (third dose diphtheria, tetanus, pertussis vaccine) is the globally accepted performance indicator for national immunization programs. An increase in the number of countries achieving this target reflects progress in the global effort to strengthen immunization systems, resulting in an expected decline in the number of vaccine preventable diseases. The number of countries achieving 90% immunization coverage for DTP3 steadily increased from 125 in FY 2008 to 133 in FY 2011 before slipping to 129 in FY 2012 and FY 2013 (Measure 10.B.2.3). The decrease comes from countries that are unable to maintain gains that pushed them beyond the 90% coverage level. The number of countries meeting the coverage criteria stayed at 129 in FY 2013 with 31 countries achieving coverage levels of 80%-85%. Fluctuation is expected, but the goal is to solidify and build on gains from year to year. The absence of a decrease in the number of countries meeting 90% immunization coverage for DTP3 indicates countries are solidifying previous gains. DTP3 immunization activities are closely linked to polio immunization activities, so reductions in polio funding will hamper progress in this area.

Increased staffing costs associated with ongoing activation of CDC's Emergency Operations Center for polio eradication and rising administrative and travel costs, reduced the percentage of the annual budget directly supporting program operations (Measure 10.B.E.1). This remained true even with activation of CDC's Ebola response in 2014. CDC continues to review cost reduction options on a monthly basis to minimize administrative overhead while maximizing direct spending for field related activities. Continued plans to achieve the 90% threshold in FY 2016 include temporarily assigning a higher percentage of staff to the field and increasing the number of days spent in the field. Once active circulation of poliovirus ceases, CDC will return to normal EOC activation staffing levels and begin normal polio eradication activities until global certification is achieved.

Parasitic Diseases and Malaria

CDC Contextual Indicators for Long Term Objective: Decrease the rate of deaths from all causes in children under five in the President's Malaria Initiative[480] (PMI) target countries.

Contextual Indictors	Most Recent Result	FY 2015 Target	FY 2020 Target
10.C.1: Increase the percentage of children under five years old who slept under an insecticide-treated bed net the previous night in PMI target countries (Outcome)	FY 2013: 41.0% (Target Not Met)	85%	85%[3]
10.C.3: Increase the percentage of women who have received two or more doses of intermittent preventive treatment during pregnancy (IPTp) among women that have completed a pregnancy in the last two years (Outcome)	FY 2013: 25% (Target Not Met)	85%	85%[3]

[3] PMI was implemented in each of the 19 focus countries by 2012. Therefore starting in FY 2014, data from all 19 countries were included to calculate the median, using the most recent estimate available from each country.

[480] http://www.pmi.gov/

Budget Output Measure for Long Term Objective: Decrease the rate of deaths from all causes in children under five in the President's Malaria Initiative (PMI) target countries.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015 Target
10.C.A: The number of CDC authored publications that inform the global evidence for malaria control and prevention programs (Output)	FY 2013: 68 (Target Exceeded)	57	57	Maintain

CDC Performance Measure for Long Term Objective: To deliver timely and accurate reference diagnostic laboratory services for the detection of parasites in specimens submitted by domestic and international public health partners to CDC.

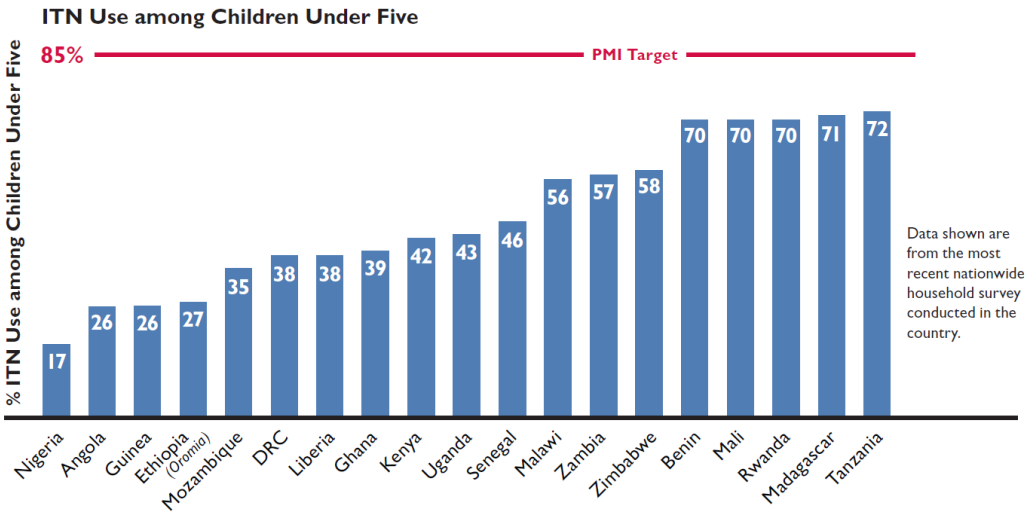
Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015 Target
10.C.4: The percentage of laboratory test results reported within the expected turn-around time (two weeks) upon receipt by CDC labs (Outcome)	FY 2013: 91% (Target Exceeded)	90%	90%	Maintain

Performance Trends: Malaria prevention and treatment tools are among the most cost-effective interventions available to improve global maternal and child health and survival. CDC's research informs the development of new tools to manage and mitigate threats from drug and insecticide resistance, guides future program and policy decisions, and builds the capacity of host country governments through strategic partnerships, such as the Ifakara Health Institute in Tanzania. Findings from collaborative research conducted with colleagues from Ifakara were shared with district health officials and the national malaria control team, helping them to improve training, supervision, and supply chains for health workers.

Based on evidence from CDC research over the last two decades, global malaria prevention and control programs continue to promote cost-effective interventions and scale-up efforts. These interventions include (1) intermittent preventive treatment in pregnancy (IPTp), (2) insecticide-treated bed nets (ITNs) and indoor residual spraying (IRS) to protect individuals and communities from infected mosquitoes, and (3) artemisinin combination therapy (ACT) to treat individuals diagnosed with malaria.

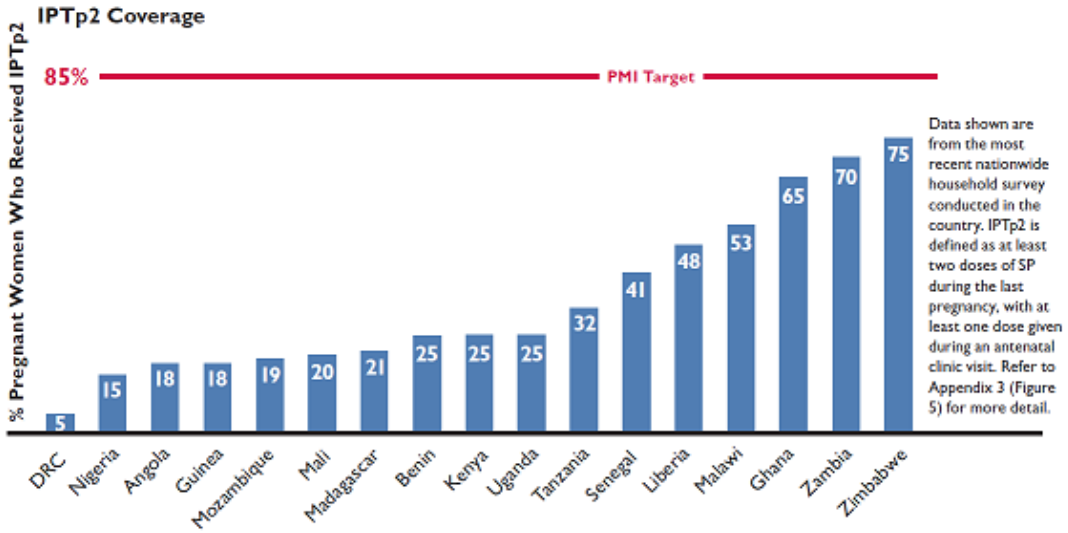
While CDC and its partners did not meet the FY 2013 President's Malaria Initiative (PMI) performance targets for Measures 10.C.1 and 10.C.3, results improved compared to baseline, narrowing the gap to the target. PMI countries scaled up the use of malaria prevention and treatment tools overall, expanding PMI to an additional four countries in 2007 and another eight countries in 2008 and fully expanding to the current 19 countries and the Greater Mekong Subregion by 2012. Compared to the FY 2008 baseline, the percentage of children under five years old who slept under an insecticide-treated bed net the night before increased from 13% to 41% (Measure 10.C.1). While no countries have achieved the 85% goal, several countries are closing the gap.[481]

[481] The chart for ITN use among children under five and ITPp2 coverage is from the President's Malaria Initiative eighth annual report to congress (April 2014) found at http://www.pmi.gov/docs/default-source/default-document-library/pmi-reports/pmireport_final.pdf?sfvrsn=16



Additionally, the percentage of women who received at least two doses of IPTp increased from 15% to 25% (Measure 10.C.3). The shortfalls in meeting targets largely reflect inefficiencies in procurement and distribution systems in host countries and the expansion of PMI to the additional eight countries in 2008. This expansion included Nigeria and the Democratic Republic of Congo, two countries with large challenges to scale-up of interventions. For countries that joined PMI through 2012, CDC will not be able to compare results from year to year until after FY 2015. Through PMI, CDC and its partners are working to mitigate procurement delays to ensure timely programmatic scale-up.

CDC is also monitoring the effectiveness of IPTp among pregnant women to inform future policy decisions for utilization. To date, scale-up of these interventions through PMI and other program efforts have contributed to the reduction of deaths from all causes in children under five years of age by 16%-50% in surveyed PMI countries. Country results vary widely as unique contextual factors heavily influence outcomes. These efforts have also contributed to saving more than 3.3 million lives since 2000 (World Malaria Report, 2013).



CDC tracks the number of authored publications that contribute to the global evidence base for malaria control and prevention programs. For example, in April 2014, CDC published results from a study assessing the prevalence of malaria and purchase of subsidized artemisinin-based combination therapy (ACT), the recommended malaria treatment, among drug shop clients in Tanzania. Results showed that more than 70% of ACTs went to clients who did not have malaria, and less than a third of clients who had the disease bought the medication. This study prompted the Global Fund and the Tanzanian government to implement policy changes to increase access to rapid diagnostic tests and subsidized treatment for people with malaria.

The time between research initiation and publication of results typically exceeds a 12-month period, and as a result, the number of publications varies from year to year. The number of peer-reviewed papers published in FY 2013 increased to 68 (Measure 10.C.A), and CDC continued to develop global policy documents and guidelines during that time. In addition to the Eighth Annual PMI Report to Congress, CDC co-authored several technical reports including the WHO World Malaria Report (2013), the Malaria Rapid Diagnostic Test Performance (Round 4), and the Roll Back Malaria Progress and Impact Series reports for Malawi and Madagascar. Each of these reports summarizes critical surveillance and monitoring and evaluation data that will inform global policy and programming. Current research includes strengthening the role and use of rapid diagnostic tests, exploring the potential use of insecticide-treated wall linings, and conducting a Phase III vaccine trial of the RTS,S malaria vaccine in Kenya. RTS,S is the most clinically advanced malaria vaccine candidate in the world. Preliminary results from the ongoing clinical trial showed that the vaccine cut by nearly half the number of malaria cases in children and cut by one-third the number of malaria cases in young infants. The vaccine averted 941 cases per 1,000 vaccinated children and 444 cases in vaccinated young infants. CDC, in collaboration with the Kenya Medical Research Institute, oversees one of 11 study sites in this multisite trial. The FY 2016 target for the number of authored publications that contribute to the global evidence base for malaria control and prevention programs remains fixed at the FY 2014 level.

While malaria and other parasitic diseases have a tremendous impact on global morbidity and mortality, they are a significant health concern in the U.S. due to increased international travel, importations, and domestically acquired infections. CDC's parasitic disease labs are global and national resources for ensuring efficient and high-quality analyses essential to timely and accurate diagnosis and treatment. In FY 2013, CDC analyzed and reported results for 91% of submitted specimens in a timely manner (approximately two weeks from the time of receipt by CDC labs), exceeding the 90% target (Measure 10.C.4). The FY 2016 target holds performance steady at 90%.

Program: Global Health Protection

With the launch of the Global Health Security Agenda in FY 2014, CDC continues to work closely with USG and international partners to improve disease prevention, detection, and response over time. The increase for FY 2016 will be used to support epidemiology and surveillance workforce capacity building, and other areas to advance the Global Health Security Agenda. Upon selection of target countries and concurrent distribution of funds, baseline capacity for each country will be determined to inform adjustments to performance targets

Performance measure for Long Term Objective: Build outbreak detection and response public health capacity in support of the International Health Regulations (2005).

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015 Target
10.E.1: Increase the percentage of outbreak and possible Public Health Emergencies of International Concern assistance requests that are handled in a timely manner (within 24 hours) (Outcome)	FY 2013: 73% (Target Not Met but Improved)	83%	83%	Maintain

Performance Trends: The Global Disease Detection (GDD) monitoring and evaluation program captures quarterly data to monitor progress and assess the impact of GDD Centers. CDC increased the proportion of outbreak and possible Public Health Emergencies of International Concern assistance requests handled in a timely manner (within 24 hours) from a baseline of 70% in FY 2009 to 79% in FY 2011. However, timely handling of requests dropped to 72% in FY 2012 and then rose slightly to 73% in FY 2013 (Measure 10.E.1). Performance for this measure is affected by the volume of requests received, type of assistance requested, location of the

outbreak, and maturity of the GDD Center providing the response. As a result of these dynamics, the trend reflects peaks and valleys instead of steady continuous improvement. Of the existing 10 GDD Centers, those that have been in existence the longest have the highest rates of responding within 24 hours (including China and Thailand), while the newer Centers have a slower average response time. The four newest GDD Centers (India, South Africa, Bangladesh, and Georgia) began reporting monitoring and evaluation data into the system in FY 2012 and FY 2013, and as these centers become more established, their capacity to respond to outbreaks has increased, improving their average response time.

In 2013, CDC responded to 73% of requests for outbreak assistance within 24 hours. In 2014, responses included Middle East Respiratory Syndrome, Chikungunya, and mobilization for CDC's response to the Ebola crisis in West Africa.

For 2014, results for Measure 10.E.1 will be affected by the large number of staff from GDD centers that have been deployed to West Africa to support Ebola response operations, contact tracing, and laboratory diagnostics, limiting their ability to report on outbreak assistance. In addition to the Ebola response, recent outbreak responses included: human H5N1 influenza in Cambodia and H7N9 influenza in China; MERS coronavirus in Saudi Arabia, Jordan and Qatar; Crimean-Congo hemorrhagic fever in Uganda; orthopox in Georgia; dengue in Angola, Kenya and Tanzania; meningitis in Ghana and Ethiopia; and chronic kidney disease in El Salvador and Guatemala.

Performance measures for Long Term Objective: To increase the number of public health staff skilled in epidemiology and surveillance in low and middle-income countries.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015 Target
10.F.1a: Increase epidemiology and laboratory capacity within global health ministries through the Field Epidemiology Training Program (FETP). New Residents (Outcome)	FY 2013: 300 (Target Exceeded)	430	430	Maintain
10.F.1b: Increase epidemiology and laboratory capacity within global health ministries through the Field Epidemiology and Laboratory Training Program (FELTP). Total Graduates (Outcome)	FY 2013: 3,130 (Target Exceeded)	3,500	3,700	+200

Performance Trends: Since 1980, CDC has developed international Field Epidemiology Training Programs (FETPs) serving 94 countries that have graduated over 3,100 epidemiologists. In FY 2013, CDC met its target for new residents and exceeded its target for total, cumulative graduates (Measures 10.F.1a and 10.F.1b). On average, 80% of FETP graduates work within their Ministry of Health after graduation and many assume key leadership positions—some examples include the National Director of Tuberculosis program and National Director of Chronic Disease program in the Dominican Republic, the Secretary General of the National Health Security Office, and Director General of the Department of Disease Control in Thailand, and the Deputy Director of the National Malaria Control Program in Ghana. FETP graduates strengthen sustainable public health capacity in their countries, which is critical in transitioning U.S.-led global health investments to long-term host country ownership. In FY2013, FETP graduates and residents led 345 outbreak investigations, over 200 planned investigations, and approximately 250 surveillance activities. CDC is

In 2014, FETP residents directly supported Ebola preparedness in more than 25 countries. Early response efforts in Nigeria limited the outbreak to 20 laboratory confirmed and probable cases in one of the largest, most densely populated, urban environments in the world.

planning for a level number of new residents in FY 2016 based on current participation and funding considerations. FETP activities are supported by funding from CDC appropriations and inter-agency agreements with the Department of Defense, Department of State, and USAID. Policy changes within those agencies may affect the number of FETPs supported. In light of this and the increased FY 2016 funding request, CDC will assess the implications for its performance targets for FY 2016 and adjust as applicable. CDC is working closely with Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) to implement the accreditation process for the FETPs, which will help maintain the quality of FETPs globally.

In 2014, FETP staff directly supported operations and capacity development in West Africa as part of CDC's response to the Ebola crisis. FETP residents have supported training and preparedness in countries not yet affected, including Cameroon and Ethiopia, while also supporting contact tracing and investigations in Guinea, Sierra Leone, and Liberia. In Nigeria, FETP residents participated in the rapid response for the first case in that country, and participated in investigations of all suspected cases as well as contact registration and monitoring of 900 contacts.

CDC-WIDE ACTIVITIES AND PROGRAM SUPPORT

Buildings and Facilities

Performance Measures for Long Term Objective: Improve efficiency and sustainability of CDC Facilities[1]

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
12.E.2: Increase the percent of CDC facilities (5,000 square feet and above) that meet the Guiding Principles for High Performance and Sustainable Federal Buildings (Efficiency)	FY 2014: 24.11% Square Footage (Target Exceeded) FY2014: 8.2% No. of Buildings (Target Not Met)	15.0% Square Footage 15.0% No. of Buildings	17.0% 17.0%	+2.0 +2.0
12.E.1: Reduce energy (E) and water (W) consumption per square foot (Efficiency)	FY 2014: 25.4%(E) (Target Not Met); 10.6% (W) (Target Not Met)	Re-baseline[2] (E); Re-baseline[2] (W)	N/A[2] (E); N/A[2] (W)	N/A[2] (E); N/A[2] (W)

[1] Targets are set by HHS and align to Executive Order 13514 and the Energy Independence and Security Act of 2007.

[2] Re-baselining per FEMP task force recommendations. FY 2016 targets to be established upon confirmation of new FY 2015 baseline

Performance Measures for Long Term Objective: Improve CDC's Buildings and Facilities Office's processes and performance[1]

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
12.1.1: Maintain Earned Value Management (EVM) index values of one for capital and repair/improvement projects based on scope, schedule, and cost (Output)	FY 2014: 1.0 (Target Exceeded)	1.00±0.08	1.00±0.08	Maintain
12.2.1a: Improve work order closure rates (Output)	FY 2014: 93% (Target Exceeded)	91%	91%	Maintain
12.2.1c: Improve Condition Index (CI), as measured by the ratio of the functional replacement value (FRV) of an asset with its backlog of maintenance and repair (BMAR) needs (Output)	FY 2014: 87.89 CI (Target Not Met)	90.0 CI	90.0 CI	Maintain
12.2.1d: Reduce non-mission dependency, as measured by the percentage of real property assets that are not deemed directly necessary to support the Agency's mission (Output)	FY 2014: 3.61% (Target Not Met)	2%	2%	Maintain

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
12.2.1e: Improve building utilization[2] (Output)	FY 2014: 7.58% (U) (Target Not Met but Improved)	5.00% (U)	5.00% (U)	Maintain
12.2.1f: Improve buildings and facilities operating costs (Output)	FY 2014: $13.13/sq. ft. (Target Not Met)	$10.29 /sq. ft.	10.29 /sq. ft.	Maintain

[1]Targets are set by HHS and align to Executive Order 13327; the Federal Real Property Council defines the metrics

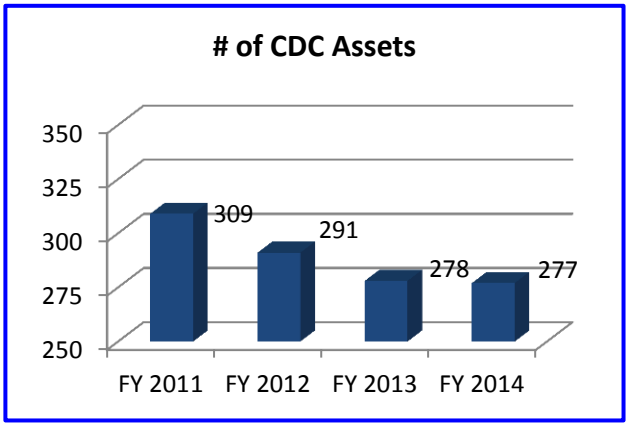
[2]Under-utilized (U); The Federal Real Property Council removed the metric Over-utilization (O) for FY 2013 and forward.

Performance Trends: CDC's Buildings and Facilities Office equips CDC to carry out its mission in safe, sustainable, and efficient operating facilities. Since 2010, CDC has:

- CDC did not meet its FY 2014 water consumption target. (Measure 12.E.1). CDC will continue through FY 2015, a two-year water usage study for the Roybal campus to address water usage and give guidance for future projects. Year one results (FY 2014) indicate a substantial improvement in water use, accomplished primarily by a change in operating procedures in Building 23. Preliminary results project a reduction of 76 million gallons of water use per year; totaling 39% of water used on the Roybal campus and estimated savings of over $1,000,000 annually. In addition to the study referenced above, projects to improve water metering and electronic reporting of water use are also underway. CDC did not meet its FY 2014 Energy Consumption goals (Measure 12.E.1). This is due mainly to harsh winter weather in 2014 with seasonal temperatures well below historic averages. This is underscored by more mild than typical conditions in 2013.

- Increased the percentage of sustainable facilities far beyond HHS targets (Measure 12.E.2). CDC received LEED Gold Certification for Building 107 (B107) in FY 2014. Guiding Principle Status for B107 will be determined in FY 2015. With the addition of the Guiding Principle compliant repair project at Building B on the Lawrenceville campus begun in FY 2014, both square footage and building count metrics have improved as indicated. For a detailed overview of “Guiding Principles”, please visit the GSA website on sustainable design: http://www.gsa.gov/portal/category/21083

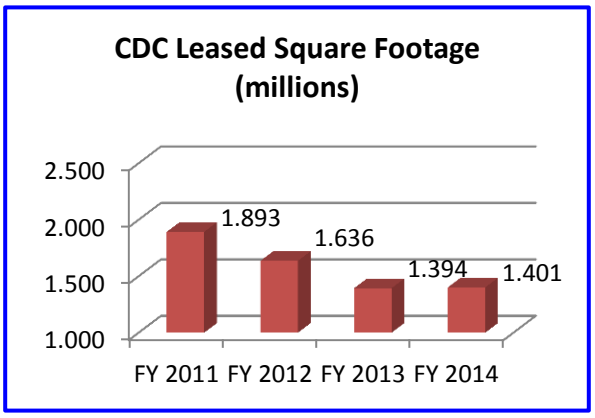
- CDC did not meet the CI target for FY 2014, dropping from a CI of 91.53 in FY 2013 to 87.89. However, CDC continues to maintain the largest, mission-critical, and mission dependent assets at a high level, with a weighted average of 97.75 for FY 2014. The un-weighted drop in CI from FY 2013 to FY 2014 can be explained by several small assets at the NIOSH Pittsburgh campus, some as small as 70 gross square feet (GSF). They are now identified for future demolition. These assets increased their deferred maintenance during FY 2014 from a little over $1,000,000 to about $3,500,000. At the same time, their replacement value totals only $5,600,000, resulting in actual negative values of CI in some cases. Further, the eleven assets total only 14,358 GSF out of a CDC-owned building portfolio of almost 5.5 million GSF. However, because the CI performance metric averages individual asset CI’s, their contribution to the overall CDC CI is disproportionate. For



instance, the CI for a 70 GSF magazine locker at Pittsburgh contributes just as much to CDC's overall CI as the 730,000 GSF Roybal Campus Building 23 laboratories. CDC's overall CI will improve upon demolition of these eleven assets.

- Continued to compress office space to meet the utilization rate standard of 170 usable square feet per occupant (Measure 12.2.1.e), but did not meet the target for under-utilization (U). However, CDC improved results by almost 50%, significantly improving upon FY 2013's result of 13.73% to only 7.58% in FY 2014.

- Exceeded HHS targets for customer service by reducing work order closure rates (Measure 12.2.1a), and strengthened project management through Earned Value Management (EVM) (Measure 12.1.1).



CDC did not meet its Mission Dependency target (Measure 12.2.1d) for FY 2014. CDC continually re-evaluates its assets for mission-dependency, and for FY 2013, CDC identified several small assets (less than 100 square feet each) at the Pittsburgh Research Center as potential targets for demolition. After designating these assets as "inactive" in our asset data, their classification changed to non-mission dependent and not utilized. Since the Federal Real Property Council mission dependency metric is not weighted based on square footage, these small assets result in as much impact on our mission dependency performance result as our large laboratory buildings. Because of unusually high demolition costs for the Pittsburgh Research Center assets, CDC did not follow through on the demolition in either FY 2013 or FY 2014. The contractor proposal even exceeded the value of one of the assets. CDC has developed an alternative plan for completing the demolition of these assets in FY 2015.

Regardless, CDC continues to demolish and terminate non-mission dependent assets or assets with low Condition Indices. Forty assets have been demolished or terminated since FY 2010.

CDC's operating costs fluctuated between FY 2010 and FY 2012, as major capital construction and demolition continued, but have since stabilized to approximately $13.15/sq. ft. each year (Measure 12.2.1f). The FY 2014 result of $13.13/sq.ft. is well over the metric of $10.29/sq.ft. established in 2010. (The metric has only changed by $0.53 since FY 2005.) Because CDC's laboratories comprise approximately 44% of its total asset square footage, the inherently high laboratory operating costs disproportionately increase CDC's overall operating cost.

CDC continues to compress its office space (i.e., better floor layouts and smaller cubicles) to meet the new UR standards. Overall, CDC has reduced leased square footage of buildings and structures by approximately 500,000 gross square feet from FY 2011 through FY 2013. Leased square footage for FY 2014 increased slightly to 1.401 million square feet due to several leases CDC established throughout the country for Federal Marshals in support of the National Stockpile program.

In FY 2015, efforts continue to re-configure a re-claimed data center for office space in Building 16 and vacated fitness center and cafeteria areas in Buildings 101 and 102. Similar efforts are underway in other buildings to compress existing space.

Public Health Leadership and Support

State, Tribal, Local and Territorial Support

Performance Measures for Long Term Objective: Improve the capacity of State, Tribal, local and territorial public health agencies to more efficiently and effectively manage and deliver high quality programs and services to protect the public's health

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
11.B.4.1a (State): Increase the percentage of nationally PHAB[1] accredited state public health agencies (Intermediate Outcome)	FY 2014: 12% (Baseline)	21%	31%	10
11.B.4.1b (Local): Increase the percentage of nationally PHAB[1] accredited local public health agencies (Intermediate Outcome)	FY 2013: 2% (Baseline)	6.4%	8.6%	2.2

[1]Public Health Accreditation Board

Performance Trends: The CDC Office for State, Tribal, Local and Territorial Support (OSTLTS) provides technical assistance, tools, training, information, and funding to state, tribal, local and territorial public health departments and organizations to improve effectiveness and efficiency in delivery of public health services. One major strategy for achieving these goals is to assist health departments in meeting national public health standards and achieving national public health accreditation through the independent Public Health Accreditation Board (PHAB). CDC investments have included grants to health departments under the National Public Health Improvement Initiative from 2010 to 2013, a grant and other support to PHAB to advance and continuously improve the national accreditation program, and funded collaborations with national public health partners to advance these goals. Since the national accreditation process was launched in September 2011 to the end of FY 2014, 54 health departments (48 local and six state) have achieved public health accreditation; 23% of the US population was being served at that point by an accredited health department, and more than 300 health departments are pursuing accreditation. CDC expects continued increase in accredited health departments, although the rate of growth in the predicted FY 2015 target may be larger given the impact that NPHII funding was able to provide in advancing health department accreditation readiness. Data from health departments suggest that accreditation has enhanced collaboration, accountability, transparency, and knowledge of local data and health issues. Local partnerships from accreditation readiness efforts have led to policy changes with strong potential health impact, such as a smoke-free ordinance in one county and a healthy food policy with recreation concession services in another.

In 2016, CDC will provide support to state and local health departments through a new cooperative agreement program to strengthen public health practice within the changing environment. This funding will support health departments' efforts to address gaps in foundational capabilities that align with national accreditation standards and are essential to health departments' ability to protect and improve health. The program will be based on two related frameworks that define national expectations for health department capacity and services: the Public Health Accreditation Board's Standards and Measures and the draft framework for Foundational Capabilities and Foundational Areas. Grantees will strengthen the essential skills and capacities that support all programs and activities, including enhancing health departments' business capacity. These efforts will be coordinated with and complement other CDC efforts, including coordinating an agency-wide look at billing capacity and other fiscal capabilities essential to health department function and success.

Communications

Performance Measure for Long Term Objective: Improve access to and reach of CDC's scientific health information among key audiences to maximize health impact

Measure	Most Recent Result	FY 2015 Target	2016 Target	FY 2016 +/- FY 2015 Target
11.B.1.1c: Increase health behavior impact of CDC.gov (Outcome)	FY 2014: 88%[1] (Target Exceeded)	90%	90%	Maintain

[1] Does not include individuals who responded "N/A"

Performance Trends: The Pew Research Center's Internet & American Life Project estimates that 85% of adults used the internet in 2013, and that 59% of those adults used the internet to find health information. However, not all health information meets the needs of consumers or changes behavior. CDC.gov consistently ranks among the top major federal websites by demonstrating high user satisfaction scores measured by American Customer Satisfaction Index (ACSI). CDC uses the satisfaction scores to improve its web site and ensure that its audiences are satisfied with the usability of the site, credibility of the information, and functionality of the web tools (such as content syndication). In addition to tracking its overall performance, CDC surveys web users to understand how likely they are to change behavior based on information found on CDC.gov. From FY 2010 to FY 2014, visitors indicating positive health impact and behavior change after visiting CDC.gov increased from 68% to 88% (Measure 11.b.1.1c). In particular, this measure helps CDC's web and health communication specialists understand the impact of materials placed on CDC.gov and assess how audiences use the content provided. This data allows CDC to continuously improve its web content.

CDC.gov's satisfaction score of 83 earned CDC a "top performer" rating among 100 participating federal websites in 2014

CDC has exceeded its targets since FY 2011. However, a significant increase occurred from FY 2011 to FY 2012 because CDC refined the ACSI survey questions for FY 2012, which eliminated users for whom the behavior change does not apply. That change resulted in greater accuracy of data produced from this measure, indicating higher satisfaction among users seeking information (for their own health needs or those of their families) than previously documented. CDC will slightly improve performance in FY 2016 relative to its FY 2014 results.

PUBLIC HEALTH PREPAREDNESS AND RESPONSE

State and Local Preparedness and Response Capability

Performance Measures for Long Term Objective: Enhance and sustain preparedness and response capability across state, local, and territorial health departments.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015 Target
13.5.2: Increase the percentage of state public health laboratories that directly receive CDC Public Health Emergency Preparedness funding that can correctly subtype *E. coli* O157:H7 and submit the results into a national reporting system within four working days for 90% of the samples received (Output)	FY 2013: 87% (Target Exceeded)[1]	80%[2]	80%[2]	Maintain
13.5.3: Increase the percentage of public health agencies that directly receive CDC Public Health Emergency Preparedness funding that can convene, within 60 minutes of notification, a team of trained staff that can make decisions about appropriate response and interaction with partners (Outcome)	FY 2013: 98% (Target Exceeded)	95%	95%	Maintain

[1] CDC results based on jurisdictions (N=30) that allocated PHEP funding for pulsed-field gel electrophoresis (PFGE) E.coli activities.

[2] Targets cannot be compared to results prior to FY 2012 as a new data collection method was implemented in FY 2012.

Performance Trends: CDC utilizes Public Health Emergency Preparedness (PHEP) awardee-reported data to aid jurisdictions in identifying preparedness gaps and in developing targeted strategies to improve performance across operations. CDC transitioned to a new system in partnership with PulseNet in FY 2012. In FY 2013, 87% of PHEP-funded public health laboratories correctly subtyped *E. coli* and submitted results within four working days (Measure 13.5.2). This result continues a trend of exceeding annual targets for accurate *E. coli* subtyping and reporting since FY 2010. CDC will maintain conservative targets as states complete the transition to the new system. Measure 13.5.2 reflects the ability of states and select localities to detect and determine the extent and scope of potential outbreaks in order to minimize their impact. Rapid diagnostic testing and timely lab reporting allows for the swift removal of harmful products, decreasing cases of illness and duration of exposure for consumers. *E. coli* remains a serious public health concern in the United States and testing performance is used as an indicator for other threats and a measure of awardee capability. Using laboratory preparedness techniques honed in previous *E. coli* responses, the Indiana Department of Health Laboratories received and processed samples within 24 hours of notification from an international traveler to the United States in May 2014 and subsequently determined they were positive for Middle East Respiratory Syndrome virus (MERS CoV). Upon confirmation by CDC labs in Atlanta the next day, the Indiana state lab supplemented their staffing and tested 124 samples from all of the confirmed patient's direct contacts over the next 48 hours to determine if the

Rapid lab testing and coordinated action by CDC and the Indiana State Health Department enabled confirmation and containment of the first MERS CoV case in the U.S. within 48 hours of notification (May 2014).

West Virginia's PHEP-funded laboratory tested 581 samples in 30 days, mobilized its public health incident management system, and provided PHEP-funded epidemiology support to enhance public health security in response to a chemical spill in the Elk River in January 2014.

virus spread to other individuals. This rapid laboratory testing and coordinated action on the part of state and federal agencies made the quick response to the case possible.

The ability to assemble key staff for timely decision-making and the establishment of effective incident management structures are essential components of a public health emergency response. Awardees must demonstrate the ability to rapidly assemble key incident management leadership empowered to make response decisions. In FY 2013, 98% of PHEP-funded public health agencies convened trained staff within 60 minutes of notification to make decisions regarding partner engagement and incident response (Measure 13.5.3). This exceeds the FY 2013 target and accounts for a nine percent increase from FY 2012. CDC will continue to work with grantees to improve results and achieve future targets.

Performance Measures for Long Term Objective: Integrate and enhance existing surveillance systems at the local, state, national, and international levels to detect, monitor, report, and evaluate public health threats.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015 Target
13.1.3: Increase the number of Laboratory Response Network (LRN) member laboratories able to use their current Laboratory Information Management System (LIMS) for LRN-specific electronic data exchange (Output)	FY 2014: 34 (Target Exceeded)	40	45	+5
13.1.1a: Increase the proportion of jurisdictions contributing data into BioSense to improve the national picture of population health. (Output)	FY 2014: 68% (Target Not Met but Improved)[1]	84%	90%	+6

[1]Measure 13.1.1a will be retired at the end of FY 2016 and a new measure proposed in FY 2017 for BioSense emergency department visits vs. total emergency department visits.

Performance Trends: Since FY 2009, CDC has steadily increased Laboratory Response Network[482] (LRN)-specific electronic data exchange capacity of member labs, growing from 28 labs in FY 2013 to 34 labs in FY 2014, which exceeds the FY 2014 target by 13% (Measure 13.1.3). While 100% of LRN labs are capable of exchanging data through the LRN Results Messenger, CDC encourages labs to transition to the enhanced Laboratory Information Management System Integration (LIMSi)[483]. LIMSi allows labs to quickly respond to public health threats by providing an integrated solution that builds on existing systems and workflow. CDC incorporated feedback from participating laboratories to further enhance the LIMSi implementation process. Additionally, CDC worked with LIMSi vendors to repackage the LRN configurations at a lower cost and provide more timely implementations. CDC estimates total LRN LIMSi implementations will expand to include at least 45 out of 130 (35%) labs by the end of FY 2016.

As the primary system supporting CDC's National Syndromic Surveillance Program, BioSense provides a platform that supports the use of syndromic surveillance to detect and characterize disease outbreaks or other hazardous events or conditions of public health concern. Through a National Syndromic Surveillance Community of Practice[484] (NSSCoP) and a network of shared analytic tools and services, public health programs will be able to collectively investigate disease threats that cross jurisdictions. CDC recruits jurisdictions to participate in the program by establishing Data Use Agreements (DUA), which allow hospital emergency departments to share patient symptom data from their geographic area. As of December 2014, 68% (43 of 63) of Epidemiology and

[482] http://www.bt.cdc.gov/lrn/
[483] http://www.cdc.gov/phin/tools/lrn/
[484] http://www.phconnect.org

Laboratory Capacity (ELC) jurisdictions have signed DUAs, and five additional ELC jurisdictions are pending (Measure 13.1.1a). This is a significant improvement from FY 2011, when only 13% of these jurisdictions had signed DUAs.

Performance Measures for Long Term Objective: Enhance and sustain nationwide and international laboratory capacity to gather, ship, and screen and test samples for public health threats and to conduct research and development that lead to interventions for such threats.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015 Target
13.3.1: Sustain the percentage of Laboratory Response Network (LRN) laboratories that have demonstrated ability to rapidly detect select biological threat agents	FY 2014:98% (Target Exceeded)	92%	92%	Maintain

Performance Trends: Laboratory Response Network (LRN) proficiency testing ensures laboratories within the network have the ability to rapidly identify biological threat agents. This includes performing LRN assays using agent-specific testing algorithms and available electronic resources to submit results. Due to an unmet proficiency testing target in FY 2013, the LRN Program Office completed state-level training of epidemiologists and laboratorians in FY 2014 to improve interpretation of the Smallpox Rash Illness algorithm. The Rash Illness algorithm is used by epidemiologists to direct laboratory testing when infections with orthopoxviruses (including smallpox) are suspected. In FY 2014, CDC exceeded the expected target passing rate for LRN laboratories participating in proficiency testing (Measure 13.3.1). Future targets remain fixed at 92% due to the increased complexity of proficiency testing protocols and the release of new assays, both of which are expected to challenge future pass rates.

Strategic National Stockpile

Performance Measures for Long-Term Objective: Assure an integrated, sustainable, nationwide response and recover capacity to limit morbidity and mortality from public health threats.

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015 Target
13.4.2: Sustain the percentage of state public health agencies that are prepared to use materiel contained in the SNS as demonstrated by evaluation of standard functions as determined by CDC (Outcome)	FY 2014: 100% (Target Met)[1]	100%	100%	Maintain
13.4.5: Number of trained and ready preparedness and response teams available for response to multiple events (Output)	FY 2014:19 (Target Exceeded)	15	15	Maintain
13.4.6: Percentage of inventory accuracies attained by using quality inventory management systems (Outcome)[2]	FY 2014: 99.71% (Target Exceeded)	97%	97%	Maintain

[1] Results cannot be compared to targets for FY 2015 and beyond due to data collection changes in FY 2014.

[2] This measure was revised in FY 2012 to better reflect CDCs progress and performance in this area. Instead of measuring inventory inaccuracies, the percentage of accuracies is reported.

Performance Trends: CDC manages and distributes Strategic National Stockpile (SNS) materiel utilizing promising practices and innovative solutions. These improvements are driven by various initiatives across the

spectrum of SNS-funded activities and result in reduced management costs for stockpiled medical countermeasures and increased operational efficiency.

Mitigating morbidity and mortality in a public health emergency requires skilled and prepared state and local partners to effectively utilize stockpiled Medical Counter Measures (MCM). CDC trains and supports partners to receive, distribute, and dispense MCMs through a broad range of technical assistance activities funded through SNS appropriations. These activities include:

- developing and delivering program guidance, informational documents, and operational/planning tools and IT systems;
- training for MCM response activities through a catalog of on-site, invitational travel, online, or mixed medium opportunities for efficient and effective development of federal, state, and local responders;
- planning and reviewing programs by SNS subject matter experts (SMEs);
- consulting for federal, state and local emergency response exercises including consulting on advance planning, simulations with SNS containers and products, full scale implementation, and evaluation
- establishing and strengthening public-private partnerships to integrate private resources into public health response plans for effective dispensing of SNS MCMs;
- fostering dialog and developing guidance and tools[485] for the integration of healthcare partners into public health response planning; and
- providing timely, accurate and relevant information to clinicians to respond to emerging threats and public health emergencies.

To evaluate the effectiveness of these activities, CDC conducts targeted technical assistance reviews which assess preparedness planning criteria for each PHEP awardee. Technical assistance reviews include the assessment of 13 core medical countermeasure planning domains. In July 2014, CDC transitioned from primarily assessing medical countermeasure planning to also measuring operational readiness. The new assessment, the medical countermeasure operational readiness review (ORR), will better measure a jurisdiction's ability to successfully execute any large-scale response requiring distribution and dispensing of medical countermeasures. The ORR builds upon the medical countermeasure planning progress PHEP awardees have made over the years and will help identify medical countermeasure response operational capabilities as well as gaps that may require more targeted technical assistance. CDC has consistently met or exceeded its target to sustain local-level medical countermeasure dispensing capability since FY 2009 (Measure 13.4.2). FY 2015 and FY 2016 targets are based on expected implementation of the new ORR measurement tool. Although the targets remain at 100%, results for years prior to FY 2014 are not comparable to FY 2015 and beyond.

CDC improved operational efficiency in FY 2013 by developing a new structure allowing for increased flexibility to rapidly organize and deploy SMEs to respond to multiple and concurrent public health threats. This "responder pool approach" promotes the cross training of deployable staff to support various response types while reducing individual staff commitments and the number of teams required to adequately respond to a public health emergency. In FY 2014, CDC decreased the target to 15 responder teams to align with the new approach, and will maintain this target through FY 2016 (Measure 13.4.5). CDC is evaluating alternative methods to measure the readiness of SNS staff to respond to emerging threats which may result in a change to this measure.

Inventory accuracy is critical to CDC's ability to account for the $6.3 billion worth of medical countermeasures stockpiled in the SNS. CDC has exceeded its target since FY 2010 at or above the 97 percentile (Measure 13.4.6). Planned improvements to the SNS automated inventory management system, which will better equip CDC to sustain and increase inventory accuracy, will be implemented in FY 2016. Improvement goals include increased

[485] http://www.cdc.gov/phpr/healthcare/about.htm

automation and reporting capabilities, reduced manual entries, and increased efficiency and productivity for system users.

WORKING CAPITAL FUND

Performance Measures for Working Capital Fund

Measure	Most Recent Result	FY 2015 Target	FY 2016 Target	FY 2016 +/- FY 2015
15.2.2: Maintain the percent of invoices paid on time (Efficiency)	FY 2014: 99.6% (Target Exceeded)	98%	98%	Maintain
15.5.1: Reduce the variance between annual revenues and annual costs (Efficiency)	FY 2014: 1% (Baseline)	1%	1%	Maintain
15.5.2: Reduce the variance between estimated and actual cost (Efficiency)	FY 2014: .5% (Baseline)	2%	2%	Maintain
15.5.3 Decrease the percent of bills that require correction (Efficiency)	FY 2014: 25% (Baseline)	20%	15%	-5

Performance Trends: CDC's Office of the Chief Financial Officer (OCFO) actively supports CDC's goals and customers through fiscal stewardship and financial strategy by providing financial services, budgetary and legislative guidance, and quality assurance. CDC has secured an unqualified audit opinion on the agency's financial statements each year since FY 1999.

Moreover, CDC has maintained a 98 percent prompt payment level since FY 2008 (Measure 15.2.2), which is pursuant to the U.S. Treasury Department's Prompt Payment rule requiring federal agencies to pay vendors in a timely manner. The Prompt Payment rule assesses late interest penalties against agencies that pay vendors after a payment due date. By paying 99 percent of invoices on time, CDC successfully limited interest payments to $8.13 per $1,000,000 in total payments in FY 2014, a 35 percent reduction over FY 2013, and a 49 percent reduction from FY 2012.

In FY 2014, CDC began implementation of the Working Capital Fund (WCF), which aims to achieve greater efficiency and transparency in the provision of Agency-wide business support services. CDC has three associated measures of focus; 1) Reduce the variance between annual revenues and annual costs (Measure 15.5.1), 2) Reduce the variance between estimated and actual cost (Measure 15.5.2) and 3) Decrease the percent of monthly bills that require correction (Measure 15.5.3). FY 2014 data indicates that the WCF remained solvent by collecting more revenue than costs incurred. The original cost estimate varied 0.5% from the actual costs charged. While this suggests the WCF has the ability to accurately forecast costs, targets remain slightly above baseline until CDC can establish trends to better estimate targets. Due to evolving systems during the first year, the WCF corrected 25% of the monthly bills. Improved performance is expected in future years as the data owners become more proficient in submitting data consistently. CDC expects its data systems will continue to be refined as implementation moves forward and as a result, it is likely that the measures will similarly evolve.

CDC CONTRIBUTIONS TO HHS PERFORMANCE

The FY 2016 HHS Performance Plan includes a total of 22 CDC-associated measures. CDC contributes measures to three FY 2014–2015 federal Agency Priority Goals, leveraging its expertise in surveillance and promotion of evidence-based practices. CDC leads key activities for 19 measures in the FY 2014-FY 2018 HHS Strategic Plan.

CDC contributions to Agency Priority Goals, FY 2014- 2015[1]

CDC Component	Program	Measure	HHS SP
National Center for Emerging and Zoonotic Infectious Diseases	Food Safety	By December 31, 2015, decrease the rate of Salmonella Enteritidis (SE) illness in the population from 2.6 cases per 100,000 (2007-2009 baseline) to 1.9 cases per 100,000.	3.E
National Center for Chronic Disease Prevention and Health Promotion	Tobacco	By December 31, 2015, reduce the annual adult combustible tobacco consumption in the United States from 1,342 cigarette equivalents per capita to 1,174 cigarette equivalents per capita, which will represent an approximate 12% decrease from the 2012 baseline.	3.D
National Center for Emerging and Zoonotic Infectious Diseases	Healthcare Associated Infections/National Healthcare Safety Network	To reduce the national rate of healthcare-associated infections (HAIs) by September 30, 2015 by demonstrating a 10% reduction in national hospital-acquired catheter-associated urinary tract infections (CAUTI) from the current SIR of 1.02 to a target SIR of 0.92	1.B

[1] CDC contributes to these shared goals but does not lead them

CDC contributions to the FY 2016 HHS Performance Plan

CDC Component	Program	Measure	HHS SP
National Center for Emerging and Zoonotic Infectious Diseases	National Health Care Safety Network and Healthcare-Associated Infections	Reduce the central line-associated bloodstream infection (CLABSI) standardized infection ratio (3.3.3)	1.B
National Center for Emerging and Zoonotic Infectious Diseases	National Health Care Safety Network and Healthcare-Associated Infections	Increase the number of hospitals and other selected health care settings that report into the National Healthcare Safety Network (3.3.4)	1.B
National Center for Chronic Disease Prevention and Health Promotion	Nutrition, Physical Activity, and Obesity	Increase the proportion of adults who engage in leisure time physical activity (4.11.9)	1.C
Office of Surveillance, Epidemiology, and Laboratory Services	Laboratory	Increase the percentage of public health agencies that can receive production Electronic Laboratory Reporting (ELR) Meaningful Use-compliant messages from certified Electronic Health Record (EHR) technology used by eligible hospitals (8.B.1.3a)	1.F
Office of Surveillance, Epidemiology, and Laboratory Services	Epidemiology	Increase monitoring of awareness and use of the Guide to Community Preventive Services, and Task Force findings and recommendations (8.B.2.5)	2.D
National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention	Domestic HIV/AIDS prevention and research	Increase the number of states that report all CD4 and HIV viral load values for surveillance purposes (2.2.4)	2.E
Office of Surveillance,	Public Health Workforce	Increase the number of CDC trainees in state, tribal,	2.E

CDC Component	Program	Measure	HHS SP
Epidemiology, and Laboratory Services	and Career Development	local, and territorial public health agencies (8.B.4.2)	
Center for Global Health	Field Epidemiology and Laboratory Training and sustainable Management Development	Increase epidemiology and laboratory capacity within global health ministries through the Field Epidemiology (and Laboratory) Training Program (FELTP) (10.F.1a-b)	2.E
National Center for Chronic Disease Prevention and Health Promotion	Tobacco	Reduce the proportion of adolescents (grades 9-12) who are current cigarette smokers (4.6.5)	3.D
National Center for Chronic Disease Prevention and Health Promotion	Tobacco	Reduce the proportion of adults (aged 18 and over) who are current cigarette smokers (4.6.3)	3.D
National Center for Immunization and Respiratory Diseases	Immunization (Section 317)	Sustain immunization coverage of at least 90% in children 19 to 35 months of age for one dose of MMR vaccine (1.2.1c)	3.E
National Center for Immunization and Respiratory Diseases	Immunization (Section 317)	Increase the percentage of adults aged 18 years and older who are vaccinated annually against seasonal influenza (1.3.3a)	3.E
National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention	Domestic HIV/AIDS prevention and research	Reduce the proportion of persons with an HIV diagnosis at later stages of disease within three months of diagnosis (2.1.8)	3.E
National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention	Tuberculosis	Decrease the rate of cases of TB among U.S.-born persons (per 100,000 population) (2.8.1)	3.E
National Center for Emerging and Zoonotic Infectious Diseases	National Health Care Safety Network and Healthcare-Associated Infections	Reduce the incidence (per 100,000 population) of healthcare associated invasive Methicillin-resistant Staphylococcus aureus (MRSA) infections. (3.3.2a)	3.E
Center for Global Health	Global HIV/AIDS	Increase the number of adults and children with advanced HIV infection receiving antiretroviral therapy (10.A.1.5)	3.E
Office of Public Health Preparedness and Response	Division of State and Local Readiness	Increase the percentage of public health agencies that directly receive CDC Public Health Emergency Preparedness funding that can convene within 60 minutes of notification a team of trained staff that can make decisions about appropriate response and interaction with partners (13.5.3)	3.F
Office of Surveillance, Epidemiology, and Laboratory Services	Epidemiology	Increase the electronic media reach of CDC Vital Signs through use of mechanisms such as the CDC website and social media outlets, as measured by page views, social media followers, and texting and email subscribers (8.B.2.2)	4.B

FY 2016 DISCONTINUED MEASURES TABLE

Measure 4.8.3: Increase the number of evidence-based findings disseminated annually that inform practice to improve maternal, infant, and reproductive health outcomes. (Output)

FY	Target	Result
2015	Discontinued	Dec 31, 2015
2014	120	125 (Target Exceeded)
2013	110	112 (Target Exceeded)
2012	105	120 (Target Exceeded)
2011	100	119 (Target Exceeded)
2010	Set Baseline	114 (Baseline)
2009	N/A	80 (Historical Actual)
2008	N/A	106 (Historical Actual)

Measure 4.8.3 is based upon the number of publications per year and does not adequately reflect CDC's programs and priorities. Therefore, CDC proposes to replace this measure with Measure 4.8.6, which better reflects CDC's maternal and reproductive health priorities

Measure 5.1.7: Increase the proportion of CDC-funded, state-based birth defects surveillance programs that disseminate surveillance data on the 12 core conditions within 2 years of data collection (Outcome)

FY	Target	Result
2015	Discontinued	Dec 31, 2015
2014	71%	Dec 31, 2014
2013	52.5%	64% (Target Exceeded)
2012	Baseline	50% (Baseline)

Since the development of this measure, CDC has established birth defects surveillance data quality standards and is working with its programs to meet these standards for their surveillance reporting. In lieu of Measure 5.1.7, CDC will track the proportion of birth defects surveillance programs meeting these standards via a budget output measure. FY 2013 results are the final data available for this measure.

Measure 5.1.9: Increase the Teratogen Information System Quantity/Quality of Evidence ratings for the most frequently used medications during pregnancy that have a baseline quantity/quality rating of fair or lower (Output)

FY	Target	Result
2016	Discontinued	Dec 31, 2016
2014	21	Dec 31, 2014
2012	Baseline	20 (Baseline)

Since 2012, CDC has worked to improve the quality and quantity of safety information for medications frequently used in pregnancy, primarily through supporting multi-site research on birth defects and associations with medication use in pregnancy. CDC's measure for reducing opioid use among pregnant women (Measure

5.1.11), as well as those of reproductive age, is a better indicator of success due to the growing burden of opioid use/exposure among this population. FY 2012 baseline data are the final data available for this measure.

Measure 5.3.1 - Increase the percentage of hemophilia patients treated at hemophilia treatment centers who are routinely screened for inhibitors (Outcome)

FY	Target	Result
2015	Discontinued	Dec 31, 2015
2014	10% above baseline	Dec 31, 2014
2013	Implement centralized universal inhibitor screening as a component of the PHSPBD. Implement ongoing provider & patient education programs.	Target Unable to Report
2012	Establish baseline of number of patients with hemophila enrolled in the UDC that receive routine inhibitor screening. Assess the inhibitor screening practices of a nationally representative sample of hemophilia care providers. Develop national guidelines for inhibitor screening.	Target Unable to Report

In FY 2013, CDC replaced the Universal Data Collection system with the Public Health Surveillance Project on Bleeding Disorders (PHSPBD). The PHSPBD increases the scope of data previously collected by the UDC system, providing information that better informs research for identifying risk factors and evidence-based prevention practices for effective treatments. CDC expects that routine screening for inhibitors will quickly and almost universally approach 100% for those participating in the surveillance project as screening is a key component of the system. CDC replaced measure 5.3.1 (an output measure) with measure 5.3.2, an outcome measure. Reporting of results has not been possible since before FY 2012.

Measure 8.B.2.1: Increase the reach of the Morbidity and Mortality Weekly Report (MMWR), as measured by the number of electronic and print subscribers (Output)

FY	Target	Result
2015	Discontinued	N/A
2014	206,174	240,485 (Target Exceeded)
2013	152,085	206,174 (Target Exceeded)
2012	145,648	164,324 (Target Exceeded)
2011	132,822	139,210 (Target Exceeded)

Measure 8.B.2.1 does not reflect the full scope of CDC's reach of the MMWR, therefore CDC proposes replacing this measure with a more expansive measure that allows tracking of efforts to expand and engage with MMWR's target audience. With the new measure (8.B.2.1a), CDC will be able to track individual components to see what areas are sensitive to CDC's efforts to improve communication uptake.

Measure 9.2.3b: Reduce the number of construction workers killed in roadway construction work zones due to being struck by construction vehicles or equipment. (Outcome)

FY	Target	Result
2015	Discontinued	N/A
2014	9	Dec 31, 2016
2013	N/A	Dec 31, 2015
2012	N/A	10

FY	Target	Result
		(Historical Actual)
2011	N/A	22 (Historical Actual)
2010	N/A	15 (Historical Actual)
2009	N/A	11 (Historical Actual)
2008	N/A	14 (Historical Actual)

This is a long-term outcome measure based on a unique research project slated to end in FY 2015 per shifting CDC priorities. Although the annual number of fatalities can be expected to rise and fall relative to roadway construction activity, over the two decades, the number of annual fatalities has dropped by 50%, from a high of 35 in 2005 to the current low of 10 in 2012.

Measure 14.2.2 - Fill knowledge/data gaps for human health effects/risks relating to hazardous exposures. (Output)

FY	Target	Result
2015	Discontinued	Dec 31, 2015
2014	10	2 (Target Not Met)
2013	10	10 (Target Met)
2012	10	10 (Target Met)
2011	10	10 (Target Met)
2010	10	10 (Target Met)
2009	34	37 (Target Exceeded)

The definition for “data gap filled” has changed over the years, and the ToxProfile development process no longer possesses the utility to fill data gaps based on voluntary participation through industrial collaboration (the primary source in past years). Therefore, the targets are no longer useful for looking at trends. ATSDR counted data gaps by tracking filled, epidemiological data gaps—that is, through identification of study completions and resultant publications in appropriate instances. The mere reporting of these, however, does not accurately reflect the efforts of ATSDR epidemiological studies.

Measure 14.3.1: Increase the percentage of sites where human health risks or disease have been mitigated, based on comparative morbidity/mortality rates, biomarker tests, levels of environmental exposures, and/or behavior change of community members and/or health professionals. (Outcome)

FY	Target	Result
2015	Discontinued	Dec 31, 2015
2014	75%	Data unavailable
2013	75%	75% (Target Met)
2012	76%	75% (Target Not Met)
2011	75%	78%

FY	Target	Result
		(Target Exceeded)
2010	74%	78% (Target Exceeded)
2009	74%	79% (Target Exceeded)

This measure reflects sites identified as public health hazards using an outdated database. Because it sometimes took several years to complete the mitigation, ATSDR calculated the measure by looking at all the sites in the database, no matter the year the action was taken or the hazard was identified. Therefore, trend data is neither useful nor meaningful. ATSDR has formed a working group with staff from EPA's Office of Solid Waste and Emergency Response to potentially create shared measures describing our collaborative efforts. FY 2014 data was not available as the data system was retired because of the time, cost, and effort required to maintain it. ATSDR replaced old system with the site impact system that will collect similar information on a population level.

Measure 15.4.2 – Reduce the percentage of high-risk contract types awarded (non competitive, competitive one-bid, cost reimbursement, T&M/LH) (Efficiency)

FY	Target	Result
2015	Discontinued	Dec 31, 2015
2014	-10 %	Dec 31, 2014
2013	-10 %	Feb 28, 2014
2012	-10 %	-1.81 % (Target Not Met but Improved)
2011	-10 %	31 % (Target Not Met)
2010	N/A	-13 % (Historical Actual)

CDC's percentage of high-risk contracts is already low. Over 86 percent of our contract dollars are awarded competitively, less than five percent of our contract dollars represent a competitive contract that received only one offer, and 87 percent of our contracts are fixed-price contracts (rather than cost reimbursement, time and materials, or labor hour contracts). While CDC makes every effort to limit high-risk contract types, this measure has limited usefulness because CDC determines the most appropriate contract type for each award based on a case-by-case analysis of the programmatic requirements and the risks and benefits of the contract types. The existence of this measure does not influence the determination of the most appropriate contract type for each action

SUPPLEMENTARY TABLES

OBJECT CLASS TABLE – DIRECT

Object Class	FY 2015 Enacted	FY 2016 Budget	FY 2016 +/- FY 2015
Personnel Compensation:			
Full-Time Permanent(11.1)	$701,575	$718,795	$17,220
Other than Full-Time Permanent (11.3)	$92,888	$94,025	$1,138
Other Personnel Comp. (11.5)	$29,106	$29,463	$357
Military Personnel (11.7)	$65,157	$65,955	$798
Special Personal Service Comp. (11.8)	$903	$905	$2
Total Personnel Compensation	**$889,628**	**$909,143**	**$19,515**
Civilian personnel Benefits (12.1)	$240,687	$246,536	$5,848
Military Personnel Benefits (12.2)	$43,715	$44,250	$536
Benefits to Former Personnel (13.0)	$262	$265	$3
SubTotal Pay Costs	**$1,174,292**	**$1,200,195**	**$25,902**
Travel (21.0)	$49,215	$56,248	$7,034
Transportation of Things (22.0)	$17,115	$17,475	$359
Rental Payments to GSA (23.1)	$7,964	$8,092	$127
Rental Payments to Others (23.2)	$1,270	$1,296	$27
Communications, Utilities, and Misc. Charges (23.3)	$34,118	$39,475	$40,304
NTWK Use Data TRANSM SVC (23.8)	$505	$516	$11
Printing and Reproduction (24.0)	$3,600	$3,676	$76
Other Contractual Services (25)	$1,724,856	$2,019,859	$295,003
Advisory and Assistance Services (25.1)	$781,176	$616,840	*$737,755*
Other Services (25.2)	$304,761	*$352,644*	$47,883
Purchases from Government Accounts (25.3)	$303,800	$479,415	*$554,739*
Operation and Maintenance of Facilities (25.4)	$62,119	$105,500	*$122,076*
Research and Development Contracts (25.5)	$52,828	$98,282	*$113,724*
Medical Services (25.6)	$41,869	*$48,448*	$6,578
Operation and Maintenance of Equipment (25.7)	$41,044	$44,191	*$51,134*
Subsistence and Support of Persons (25.8)	$655	$997	*$1,153*
Consultants, other and misc (25.9)	$33,001	*$38,186*	$5,185
Supplies and Materials (26.0)	$499,910	$490,913	-$8,997
Equipment (31.0)	$63,022	$59,934	-$3,088
Land and Structures (32.0)	$13,903	$13,903	$0
Investments and Loans (33.0)	$0	$0	$0
Grants, Subsidies, and Contributions (41.0)	$2,372,829	$2,233,231	-$139,598
Insurance Claims and Indemnities (42.0)	$82	$82	$0
Interest and Dividends (43.0)	$80	$80	$0
Refunds (44.0)	$0	$0	$0
Subtotal Non-Pay Costs	**$4,793,826**	**$4,945,608**	**$151,782**
Total Budget Authority	**$5,968,118**	**$6,145,803**	**$177,684**
Average Cost per FTE			
Civilian FTEs	**9,929**	**9,972**	**43**
Civilian Average Salary and Benefits	$107	$109	-$2
Percent change	N/A	4%	2%
Military FTEs	***926***	***926***	**0**
Military Average Salary and Benefits	$118	$119	$1
Percent change	N/A	5%	1%
Total FTEs	**10,855**	**10,898**	**43**
Average Salary and Benefits	**$108**	**$110**	$2
Percent change	**N/A**	**4%**	**2%**

OBJECT CLASS TABLE – REIMBURSABLE

Object Class	FY 2014 Final	FY 2015 Enacted	FY 2016 Request
Personnel Compensation:			
Full-Time Permanent(11.1)	$89,127	$89,127	$89,127
Other than Full-Time Permanent (11.3)	$18,777	$18,777	$18,777
Other Personnel Comp. (11.5)	$4,637	$4,637	$4,637
Military Personnel (11.7)	$8,055	$8,055	$8,055
Special Personal Service Comp. (11.8)	$215	$215	$215
Total Personnel Compensation	**$120,811**	**$120,811**	**$120,811**
Civilian Personnel Benefits (12.1)	$30,278	$30,278	$30,278
Military Personnel Benefits (12.2)	$5,418	$5,418	$5,418
Benefits to Former Personnel (13.0)	$0	$0	$0
SubTotal Pay Costs	**$156,506**	**$156,506**	**$156,506**
Travel (21.0)	$11,102	$11,102	$11,102
Transportation of Things (22.0)	$555	$555	$555
Rental Payments to GSA (23.1)	$755	$755	$755
Rental Payments to Others (23.2)	$245	$245	$245
Communications, Utilities, and Misc. Charges (23.3)	$1,315	$1,315	$1,315
Printing and Reproduction (24.0)	$935	$935	$935
Other Contractual Services:			
Advisory and Assistance Services (25.1)	$76,563	$76,563	$76,563
Other Services (25.2)	$74,798	$74,798	$74,798
Purchases from Government Accounts (25.3)	$58,354	$58,354	$58,354
Operation and Maintenance of Facilities (25.4)	$2,609	$2,609	$2,609
Research and Development Contracts (25.5)	$26,501	$26,501	$26,501
Medical Services (25.6)	$24,991	$24,991	$24,991
Operation and Maintenance of Equipment (25.7)	$2,235	$2,235	$2,235
Subsistence and Support of Persons (25.8)	$3	$3	$3
Consultants, other and misc (25.9)	$1,996	$1,996	$1,996
Subtotal Other Contractual Services	**$268,049**	**$268,049**	**$268,049**
Supplies and Materials (26.0)	$37,673	$37,673	$37,673
Equipment (31.0)	$10,286	$10,286	$10,286
Land and Structures (32.0)	$0	$0	$0
Investments and Loans (33.0)	$0	$0	$0
Grants, Subsidies, and Contributions (41.0)	$147,633	$147,633	$147,633
Insurance Claims and Indemnities (42.0)	$66	$66	$66
Interest and Dividends (43.0)	$0	$0	$0
Refunds (44.0)	$0	$0	$0
Subtotal Non-Pay Costs	**$478,614**	**$478,614**	**$478,614**
Total Budget Authority	**$635,120**	**$635,120**	**$635,120**
Average Cost per FTE			
Reimbursable FTEs	**2,181**	**2,181**	**2,181**
Average Salary and Benefits	$65,483	$65,483	$65,483
Percent change	-46.9%	-46.9%	0.0%
Military FTEs	**120**	**120**	**120**
Military Average Salary and Benefits	$112,273	$112,273	$112,273
Percent change	N/A	0.0%	0.0%
Total FTEs	**2,301**	**2,301**	**2,301**
Total Average Salary and Benefits	**$68,017**	**$68,017**	**$68,017**
Percent change	**N/A**	**0.00%**	**0.00%**

OBJECT CLASS TABLE - AFFORDABLE CARE ACT

Object Class	FY 2015 Enacted	FY 2016 Budget	FY 2016 +/- FY 2015
Personnel Compensation:			
Full-Time Permanent(11.1)	$18,487	$19,071	$584
Other than Full-Time Permanent (11.3)	$7,114	$7,338	$225
Other Personnel Comp. (11.5)	$398	$411	$13
Military Personnel (11.7)	$2,062	$2,127	$65
Special Personal Service Comp. (11.8)	$20	$21	$1
Total Personnel Compensation	**$28,081**	**$28,968**	**$887**
Civilian personnel Benefits (12.1)	$8,110	$8,367	$256
Military Personnel Benefits (12.2)	$1,786	$1,842	$56
Benefits to Former Personnel (13.0)	$0	$0	$0
SubTotal Pay Costs	**$37,977**	**$39,177**	**$1,200**
Travel (21.0)	$1,543	$1,591	$49
Transportation of Things (22.0)	$558	$576	$18
Rental Payments to GSA (23.1)	$28,946	$29,831	$885
Rental Payments to Others (23.2)	$2	$2	$0
Communications, Utilities, and Misc.Charges (23.3)	$3	$3	$0
NTWK Use Data TRANSM SVC (23.8)	$0	$0	$0
Printing and Reproduction (24.0)	$4	$4	$0
Other Contractual Services:			
Advisory and Assistance Services (25.1)	$187,377	$193,326	$5,949
Other Services (25.2)	$182	$188	$6
Purchases from Government Accounts (25.3)	$59,230	$61,101	$1,871
Operation and Maintenance of Facilities (25.4)	$0	$0	$0
Research and Development Contracts (25.5)	$0	$0	$0
Medical Services (25.6)	$2,383	$2,458	$75
Operation and Maintenance of Equipment (25.7)	$631	$651	$20
Subsistence and Support of Persons (25.8)	$0	$0	$0
Consultants, other and misc (25.9)	$6	$6	$0
Subtotal Other Contractual Services	**$249,808**	**$257,729**	**$7,921**
Supplies and Materials (26.0)	$90,201	$93,050	$2,850
Equipment (31.0)	$2,538	$2,618	$80
Land and Structures (32.0)	$0	$0	$0
Investments and Loans (33.0)	$0	$0	$0
Grants, Subsidies, and Contributions (41.0)	$474,720	$489,718	$14,997
Insurance Claims and Indemnities (42.0)	$0	$0	$0
Interest and Dividends (43.0)	$0	$0	$0
Refunds (44.0)	$0	$0	$0
Subtotal Non-Pay Costs	**$848,323**	**$875,123**	**$26,800**
Total Budget Authority	**$886,300**	**$914,300**	**$28,000**
Average Cost per FTE[1]			
Civilian FTEs	230	230	0
Civilian Average Salary and Benefits	$148.387	$153.075	$5
Percent change	NA	NA	NA
Military FTEs	20	20	0
Military Average Salary and Benefits	$192	$198	$6
Percent change	NA	NA	NA
Total FTEs	**250**	**250**	**0**
Total Average Salary[2]	**$152**	**$157**	**$5**
Percent change	**NA**	**NA**	**NA**

[1] PPHF FTEs based on direct hire estimates

[2] PPHF Civilian Avg. Salary only includes partial compensation

SALARIES AND EXPENSES

	FY 2015 Enacted	FY 2016 Budget	FY 2016 +/- FY 2015
Personnel Compensation:			
Full-Time Permanent(11.1)	$701,575	$718,795	$17,220
Other than Full-Time Permanent (11.3)	$92,888	$94,025	$1,138
Other Personnel Comp. (11.5)	$29,106	$29,463	$357
Military Personnel (11.7)	$65,157	$65,955	$798
Special Personal Service Comp. (11.8)	$903	$905	$2
Total Personnel Compensation	**$875,400**	**$892,775**	**$17,375**
Civilian personnel Benefits (12.1)	$240,687	$246,536	$5,848
Military Personnel Benefits (12.2)	$43,715	$44,250	$536
Benefits to Former Personnel (13.0)	$262	$265	$3
SubTotal Pay Costs	**$1,174,292**	**$1,200,195**	**$25,902**
Travel (21.0)	$49,215	$56,248	$7,034
Transportation of Things (22.0)	$17,115	$17,475	$359
Communications, Utilities, and Misc. Charges (23.3)	$39,475	$40,304	$829
Printing and Reproduction (24.0)	$3,600	$3,676	$76
Other Contractual Services:	$1,724,856	$2,019,859	$295,003
Advisory and Assistance Services (25.1)	$616,840	$737,755	$120,916
Other Services (25.2)	$304,761	$352,644	$47,883
Purchases from Government Accounts (25.3)	$479,415	$554,739	$75,324
Operation and Maintenance of Facilities (25.4)	$105,500	$122,076	$16,576
Research and Development Contracts (25.5)	$98,282	$113,724	$15,442
Medical Services (25.6)	$41,869	$48,448	$6,578
Operation and Maintenance of Equipment (25.7)	$44,191	$51,134	$6,943
Subsistence and Support of Persons (25.8)	$997	$1,153	$157
Supplies and Materials (26.0)	$499,910	$490,913	-$8,997
Subtotal Non-Pay Costs	**$1,798,831**	**$2,054,291**	**$255,461**
Rental Payments to Others (23.2)	$1,270	$1,296	$27
Total, Salaries & Expenses and Rent	**$3,509,733**	**$3,829,965**	**$320,206**
Direct FTE	**10,855**	**10,898**	**43**

DETAIL OF FULL-TIME EQUIVALENT EMPLOYMENT (FTE)

	FY 2014		FY 2015		FY 2016	
Direct FTE	**Civilian**	**Comm Corp**	**Civilian**	**Comm Corp**	**Civilian**	**Comm Corp**
Immunization and Respiratory Diseases	564	60	564	60	564	60
HIV/AIDS, Viral Hepatitis, STD and TB Prevention	1,094	104	1,094	104	1,103	104
Emerging and Zoonotic Infectious Diseases	899	120	899	120	919	120
Chronic Disease Prevention and Health Promotion	835	80	835	80	835	80
Birth Defects, Developmental Disabilities, Disability and Health	215	8	215	8	215	8
Environmental Health	355	33	355	33	355	33
Injury Prevention and Control	215	13	224	13	233	13
Public Health Scientific Services	596	122	596	122	596	122
Occupational Safety and Health	783	54	783	54	783	54
Global Health	862	124	862	124	867	124
CDC-wide Cross-cutting Activities	785	20	785	20	785	20
Public Health Leadership and Support	731	*19*	731	*19*	731	*19*
Business Services Support	*54*	*1*	*54*	*1*	*54*	*1*
Public Health Preparedness and Response	544	70	544	70	544	70
Agency for Toxic Substances and Disease Registry	235	35	235	35	235	35
Subtotal, Direct FTE	**7,981**	**843**	**7,990**	**843**	**8,033**	**843**
Reimbursable FTE						
Immunization and Respiratory Diseases	1	0	1	0	1	0
HIV/AIDS, Viral Hepatitis, STD and TB Prevention	0	0	0	0	0	0
Emerging and Zoonotic Infectious Diseases	31	3	31	3	31	3
Chronic Disease Prevention and Health Promotion	9	2	9	2	9	2
Birth Defects, Developmental Disabilities, Disability and Health	1	0	1	0	1	0
Environmental Health	46	11	46	11	46	11
Injury Prevention and Control	0	0	0	0	0	0
Public Health Scientific Services	280	11	280	11	280	11
Occupational Safety and Health	263	37	263	37	263	37
Global Health	81	22	81	22	81	22
CDC-wide Cross-cutting Activities	1,458	31	1,458	31	1,458	31
Public Health Leadership and Support	*0*	*0*	*0*	*0*	*0*	*0*
Business Services Support	*1,458*	*31*	*1,458*	*31*	*1,458*	*31*
Public Health Preparedness and Response	4	1	4	1	4	1
Agency for Toxic Substances and Disease Registry	7	2	7	2	7	2
Subtotal, Reimbursable FTE	**2,181**	**120**	**2,181**	**120**	**2,181**	**120**
TOTAL, CDC FTE	**10,162**	**963**	**10,171**	**963**	**10,214**	**963**

DETAIL OF POSITIONS[1,2,3]

(dollars in millions)	FY 2014 Actual	FY 2015 Base	FY 2016 Budget
Executive Level[4]			
Executive level I			
Executive level II			
Executive level III			
Executive level IV			
Executive level V			
Subtotal			
Total-Executive Level Salary			
ES-6			
ES-5			
ES-4			
ES-3			
ES-2			
ES-1			
Total - SES	32	30	29
Total - SES Salary	$5,132,562	$5,225,166	$5,554,166
GS-15	678	658	630
GS-14	1,903	1,864	1,820
GS-13	2,739	2,653	2,618
GS-12	1,591	1,514	1,503
GS-11	824	778	771
GS-10	60	54	55
GS-9	420	387	386
GS-8	75	71	66
GS-7	394	374	362
GS-6	64	64	62
GS-5	70	184	181
GS-4	44	24	16
GS-3	17	15	10
GS-2	4	2	1
GS-1	0	0	0
Subtotal	8,883	8,642	8,481
Total - GS Salary	$806,939,779	$883,313,513	$846,744,494
Average ES level			
Average ES salary			
Average GS grade	12.0	12.0	12.0
Average GS salary	$90,841	$102,212	$99,840
Average Special Pay Categories			
Average Comm. Corps Salary	$86,509	$91,641	$97,286
Average Wage Grade Salary	$58,524	$58,314	$60,763

[1] Includes special pays and allowances

[2] Totals do not include reimbursable FTEs

[3] This table reflects "positions" not full-time equivalent(s) (FTEs)

[4] Executive level data not available

PROGRAMS PROPOSED FOR ELIMINATION

The following table shows the programs proposed for elimination in the President's FY 2016 Budget request. The Budget prioritizes health programs that have a demonstrated record of success or that hold significant promise for increasing accountability and improving health outcomes. Following the table is a brief summary of each program and the rationale for its elimination.

Program	FY 2015 Enacted Level (in millions)
Preventive Health and Health Services Block Grant (PPHF)	$160.000
Racial and Ethnic Approach to Community Health (REACH) (BA, PPHF)	$50.950
Occupational Safety and Health – Education and Research Centers (BA)	$27.445
Occupational Safety and Health – Agriculture, Forestry, and Fishing (BA)	$24.000
Prostate Cancer (BA)	$13.205
Workplace Wellness (PPHF)	$10.000
Academic Centers for Public Health Preparedness (BA)	$8.000
All Other State and Local Capacity (BA)	$9.415
High Obesity Rate Counties (BA, PPHF)	$7.493
Total Reduction Amount	**$310.508**

Preventive Health and Health Services Block Grant (-$160.0 million)

The FY 2016 Budget request eliminates the Preventive Health and Health Services Block Grant (PHHSBG). These activities may be more effectively and efficiently implemented through the State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health program which provides resources to states to coordinate activities across categorical funding streams. When the PHHSBG was first authorized in 1981, there were minimal resources within CDC's budget allocated for categorical programs such as heart disease, diabetes, immunizations, and obesity, and many states did not receive funding from CDC to support prevention of chronic disease. However, since 1981, categorical programs at CDC have grown and can better address these public health threats. Elimination of this program provides an opportunity to find savings, while expanding core public health activities for other CDC priorities.

Racial and Ethnic Approach to Community Health (-$50.9 million)

The FY 2016 Budget request eliminates funding for the Racial and Ethnic Approaches to Community Health (REACH) program. CDC is committed to ensuring lessons learned from the REACH Program will continue to be integrated into current and future community health models, such as the Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health, in order to reach populations that experience the greatest health disparities.

Occupational Safety and Health – Education and Research Centers (-$27.4 million)

The FY 2016 Budget request eliminates funding for Education and Research Centers (ERCs). Originally created almost 40 years ago, the ERC program has addressed the limited number of academic programs focusing on

industrial hygiene, occupational health nursing, occupational medicine, and occupational safety. The ERCs' reach and impact have grown substantially across the nation since the program's inception, increasing awareness of the importance of coursework specializing in these areas. Although the budget does not include funding for the federal portion of these grants, CDC will continue to provide scientific and programmatic expertise to the ERCs as requested.

Occupational Safety and Health – Agriculture, Forestry, and Fishing (-$24.0 million)

The FY 2016 Budget request eliminates funding for the National Occupational Research Agenda (NORA) Agriculture, Forestry, and Fishing (AgFF) sector. Although this program has made positive contributions, given the relation to CDC's mission and the ability to have a national impact on improved outcomes, the AgFF has been proposed for elimination in a limited-resource environment.

Prostate Cancer (-$13.2 million)

The FY 2016 budget request eliminates funding for prostate cancer activities. While the evidence on prostate cancer screening remains unclear, CDC has conducted extensive research on and developed materials to help doctors better communicate with their patients about informed decision making related to prostate cancer screening and treatment. The proposed elimination will not impact CDC's ability to collect data on national prostate cancer incidence through the National Program of Cancer Registries, nor hinder the ability to share resources and lessons learned.

Workplace Wellness (-$10.0 million)

The FY 2016 Budget request eliminates Workplace Wellness activities. CDC will not require resources in FY 2016 to complete remaining activities and meet program goals. CDC will integrate lessons learned from these projects into on-going chronic disease prevention programs.

Academic Centers for Public Health Preparedness (-8.0 million)

The FY 2016 budget request reflects the elimination of the Academic Centers for Public Health Preparedness. CDC will continue to support research and training for public health preparedness through the public health preparedness and response research agenda. Eliminating funding for these centers allows CDC to prioritize funding for state and local health departments through the Public Health Emergency Preparedness (PHEP) cooperative agreement.

All Other State and Local Capacity (-$9.4 million)

The FY 2016 budget request reflects the elimination of All Other State and Local Capacity under State and Local Preparedness and Response Capability. Since 2002, PHEP cooperative agreements provided more than $9 billion to public health departments across the nation to upgrade their ability to effectively respond to a wide range of public health threats. This reduction would decrease CDC direct assistance to the grantees, including the Career Epidemiology Field Officer Program. CDC received significant funds through the Ebola Emergency funding in FY 2015 to expand domestic preparedness capabilities.

High Obesity Rate Counties (-$7.5 million)

The FY 2016 Budget request eliminates the High Obesity Rate Counties. This program was of limited duration, will complete their work in FY 2015, and is duplicative of other CDC efforts. CDC will integrate lessons learned from these projects into ongoing chronic disease prevention programs.

CDC FULL TIME EQUIVALENTS FUNDED BY THE AFFORDABLE CARE ACT

PPHF Program[1, 2] (dollars in millions)	ACA Sec.	2012 Total	2012 FTEs	2013 Total	2013 FTEs	2014 Total	2014 FTEs	2015 Total	2015 FTEs	2016 Total	2016 FTEs
Cancer Prevention & Control	4002	$0.0	0.0	$0.0	0.0	$104.0	11.2	$104.0	11.2	$179.2	11.2
Community Guide / Community Preventive Services Task Force	4002	$10.0	16.0	$7.4	16.0	$0.0	0.0	$0.0	0.0	$8.0	0.0
Community Transformation Grants (CTG)	4002	$226.0	55.6	$146.3	39.3	$0.0	0.0	$0.0	0.0	$0.0	0.0
Diabetes Prevention	4002	$10.0	0.0	$0.0	0.0	$73.0	19.1	$73.0	19.1	$73.0	19.1
Environmental Public Health Tracking	4002	$35.0	15.0	$20.7	12.4	$0.0	0.0	$0.0	0.0	$24.0	0.0
Healthcare-associated Infections (HAI)	4002	$11.8	5.0	$11.8	0.0	$12.0	6.4	$12.0	6.4	$14.58	6.4
Heart Disease & Stroke Prevention Program	4002	$0.0	0.0	$0.0	0.0	$73.0	12.2	$73.0	12.2	$73.0	12.2
Lead Poisoning Prevention	4002	$0.0	0.0	$0.0	0.0	$13.0	4.3	$13.0	4.3	$13.0	4.3
Million Hearts	4002	$0.0	2.2	$4.6	0.3	$4.0	2.1	$4.0	2.1	$4.0	2.1
National Early Care Collaboratives	4002	$0.0	0.0	$0.0	0.0	$4.0	1.0	$4.0	1.0	$4.0	1.0
National Prevention Strategy	4002	$1.0	1.4	$0.9	1.4	$0.0	0.0	$0.0	0.0	$0.0	0.0
Public Health Workforce	4002	$25.0	105.3	$15.6	91.0	$0.0	0.0	$0.0	0.0	$36.0	236.0
Racial & Ethic Approaches to Community Health (REACH)	4002	$40.0	0.0	$0.0	0.0	$30.0	6.96	$30.0	6.9	$0.0	0.0
Workplace Wellness	4303	$10.0	0.0	$0.0	0.0	$10.0	3.7	$10.0	3.7	$0.0	0.0
Preventive Health and Health Services Block Grants	4201	$0.0	0.0	$0.0	0.0	$160	22.4	$160.0	22.4	$0.0	0.0
Total		**$368.8**	**271.5**	**$207.3**	**225.0**	**$323.0**	**59.6**	**$483.0**	**89.3**	**$428.8**	**292.3**

[1]Excludes employees or contractors who: Are supported through appropriations enacted in laws other than PPACA and work on programs that existed prior to the passage of PPACA; Spend less than 50% of their time on activities funded by or newly authorized in ACA; or who work on contracts for which FTE reporting is not a requirement of their contract, such as fixed price contracts.

[2]CDC tracks total contract costs for ACA activities in the Affordable Care Act Object Class Table but does not track individual contract staff.

ACA Program[1, 2] (dollars in millions)	ACA Sec.	2012 Total	2012 FTEs	2013 Total	2013 FTEs	2014 Total	2014 FTEs	2015 Total	2015 FTEs	2016 Total	2016 FTEs
Childhood Obesity	4306	$0.0	2.0	$0.0	1.1	$0.0	1.1	$0.0	0.0	$0.0	0.0
Medical Monitoring in Libby, MT	10323	$4.0	2.45	$4.0	1.1	$4.0	0.9	$4.0	0.9	$4.0	0.9
Total		**$4.0**	**4.45**	**$4.0**	**2.1**	**$4.0**	**2.0**	**$4.0**	**0.9**	**$4.0**	**0.9**

PHYSICIANS' COMPARABILITY ALLOWANCE (PCA) WORKSHEET

[Department: Component]

Table 1

		PY 2014 (Actual)	FY 2015 (Estimates)	FY 2016* (Estimates)
1) Number of Physicians Receiving PCAs		2	2	2
2) Number of Physicians with One-Year PCA Agreements		0	0	0
3) Number of Physicians with Multi-Year PCA Agreements		2	2	2
4) Average Annual PCA Physician Pay (without PCA payment)		180600	180600	180600
5) Average Annual PCA Payment		28000	28000	28000
6) Number of Physicians Receiving PCAs by Category (non-add)	Category I Clinical Position			
	Category II Research Position	2	2	2
	Category III Occupational Health			
	Category IV-A Disability Evaluation			
	Category IV-B Health and Medical Admin.			

*FY 2015 data will be approved during the FY 2014 Budget cycle.

7) If applicable, list and explain the necessity of any additional physician categories designated by your agency (for categories other than I through IV-B). Provide the number of PCA agreements per additional category for the PY, CY and BY.

Not applicable.

8) Provide the maximum annual PCA amount paid to each category of physician in your agency and explain the reasoning for these amounts by category.

$30,000. All of CDC's physicians who are eligible for PCA funds are in Category II, Research. CDC currently has two SES physicians for whom PCA is appropriate and necessary.

9) Explain the recruitment and retention problem(s) for each category of physician in your agency (this should demonstrate that a current need continues to persist).

(*Please include any staffing data to support your explanation, such as number and duration of unfilled positions and number of accessions and separations per fiscal year.)*

CDC has found that SES salaries do not meet the threshold to attract top level senior officials for critical science-focused positions who are appointed under SES. PCA is needed to continue to attract and retain those top level physicians.

10) Explain the degree to which recruitment and retention problems were alleviated in your agency through the use of PCAs in the prior fiscal year.

(*Please include any staffing data to support your explanation, such as number and duration of unfilled positions and number of accessions and separations per fiscal year.)*

The use of PCA has enabled successful recruitment of physicians to key positions at CDC. It is anticipated that failure to offer PCA funds to CDC physicians could result in an increase in turnover.

11) Provide any additional information that may be useful in planning PCA staffing levels and amounts in your agency.

It is expected that PCA will continue through 2016 for the two SES members currently receiving PCA. The need will remain to pay PCA to any new physicians appointed under SES. Market pay will be utilized for all new accessions for physicians appointed under Title 5.

FY 2014 INTRAMURAL AND EXTRAMURAL OBLIGATIONS[1]

(dollars in thousands)

Major CDC Program	Extramural[1]	Intramural	Grand Total
Agency for Toxic Substances and Disease Registry (ATSDR)	$36,597	$37,812	$74,408
Birth Defects, Developmental Disabilities, Disability and Health	$100,344	$31,378	$131,722
CDC-Wide Activities and Program Support	$221,752	$69,486	$291,238
Chronic Disease Prevention and Health Promotion	$1,052,719	$130,713	$1,183,432
Emerging and Zoonotic Infectious Diseases	$249,353	$141,922	$391,275
Energy Employees Occupational Illness Compensation Program Act	$47,194	$5,537	$52,731
Environmental Health	$125,033	$54,018	$179,050
Global Health	$236,019	$166,498	$402,517
HIV/AIDS, Viral Hepatitis, STI and TB Prevention	$953,405	$162,373	$1,115,777
Immunization and Respiratory Diseases	$688,950	$92,939	$781,889
Injury Prevention and Control	$119,568	$30,574	$150,142
National Institute for Occupational Safety and Health	$185,210	$147,200	$332,410
Public Health Preparedness and Response	$903,734	$497,911	$1,401,645
Public Health Scientific Services (PHSS)	$279,025	$200,475	$479,500
Vaccines for Children	$3,540,494	$16,222	$3,556,716
World Trade Center Health Programs (WTC)[3]	$124,582	$137,348	$261,930
Grand Total[4]	**$8,863,977**	**$1,922,405**	**$10,786,382**

[1] Obligations may vary from appropriated amounts due to multi-year funding.

[2] All contracts are classified extramural in the analysis supporting this table. This varies slightly from prior reports.

[3] WTC amount reflects total program obligations and does not include NYC reimbursement.

[4] Working Capital Fund (WCF) amounts are included in Major CDC Program Grand Total

USER FEES

Activity	FY 2014 Actual	FY 2015 Estimate[1]
Cooperative Research and Development Agreement (CRADA)	$2,168,000	$2,168,000
Emerging & Zoonotic Infectious User Fees	$87,421	$87,421
Global Health DPD User Fees	$5,000	$5,000
Health Statistics User Fees	$1,601,985	$1,601,985
NIOSH Respirator Certification Program	$ 446,744	$ 446,744
Vessel Sanitation Program	$2,741,622	$2,741,622
Grand Total	**$7,050,771**	**$7,050,771**

[1] FY 2015 Estimate amount based on FY 2014 Actual Obligations.

CDC FY 2016 WORKING CAPITAL FUND EXHIBITS

The Joint Explanatory Statement accompanying the Consolidated Appropriations Act, 2014 (P.L. 113-76) included requirements for CDC to provide breakouts of select Working Capital Fund details.

Projected FY 2015 Working Capital Fund: Summary by Object Class

OC	Description	Total
11/12	Personnel Compensation/Benefits	$205,229,404
21	Travel	$1,698,593
22	Transportation of Things	$858,474
23	Rent, Communication & Utilities	$75,632,186
24	Printing and Reproduction	$69,918
25	Other Contractual Services	$235,444,638
26	Supplies & Materials	$1,832,312
31	Equipment	$7,026,209
32	Land and structures	$1,001,607
Grand Total		**$528,793,341**

SIGNIFICANT ITEMS

SIGNIFICANT ITEMS IN FY 2015 OMNIBUS APPROPRIATIONS REPORTS

Significant items for inclusion in the FY 2016 Centers for Disease Control and Prevention Congressional Justification from the Appropriations Committee, LHHS Subcommittee (P.L. 113-59).

Tuberculosis (TB)

The agreement notes the high costs associated with treating TB, especially multi-drug resistant TB. CDC and the Federal Tuberculosis Task Force are urged to work with the FDA and other partners to identify long-term strategies to ensure an adequate and affordable supply of tuberculosis drugs (p.16).

Action taken or to be taken

CDC, FDA, USAID, the Global Drug Facility, advocates, and drug companies have had multiple discussions about the availability of drugs for treating TB and Drug-resistant TB. Most recently, FDA, CDC, and the National TB Controllers Association presented updates on this topic at the December 2, 2014, Advisory Council for the Elimination of TB meeting. Long term solutions to the chronic problem of interrupted access to antibiotics are not likely to be resolved by a single agency. Furthermore, proposed solutions (stockpiling, purchasing drugs from overseas manufacturers after they obtain FDA approval or establishing incentives to assure that drug companies continue to manufacture older antibiotics) would require new resources.

Youth-based Programs

Youth under the age of 24 have one of the highest rates of HIV diagnosis. CDC is encouraged to improve outreach and education to this population via youth-based programs (p.16).

Action taken or to be taken

CDC supports multiple efforts to improve outreach and education of persons most at risk for HIV, including youth who in 2010 accounted for 26% of all new HIV infections. An example of a program that prioritizes young people is CDC's investment in efforts designed to provide outreach, education, testing and linkage services to young men of color who have sex with men (YMSM) and young transgender persons of color (YTG) ages 13-29. Specifically, CDC is funding eligible organizations that serve these populations to:

- Develop and implement effective community-based HIV prevention programs;
- Increase the number of these individuals and their partners who are aware of their HIV status and subsequently linked to care, treatment, and prevention services, as appropriate;
- Build organizational capacity for delivery of structural and behavioral interventions, outreach, and enhanced HIV testing; and
- Ensure provision of HIV prevention and care services.

In addition, CDC supports campaigns to encourage testing and risk reduction. The Testing Makes Us Stronger (TMUS) campaign is focused on young African American men who have sex with men—a population at very high risk for HIV. CDC also supports demonstration projects with health departments to address social, economic, clinical and structural barriers that discourage people from seeking needed prevention, testing and treatment services. These demonstration projects are designed to identify practical, workable solutions to minimize the impact of these broader problems on HIV testing and care. Finally, CDC-funded health departments provide HIV outreach and education to populations, including youth, that are most affected by HIV. The FY 2016 budget request includes an increase of over $6 million to improve HIV prevention activities targeted to youth.

Lyme Disease

The agreement encourages CDC to consider expanding activities related to developing sensitive and more accurate diagnostic tools and tests for Lyme disease, including evaluating emerging diagnostic methods and improving the utilization of adequate diagnostic testing; expanding its epidemiological research to determine the

frequency and nature of the long-term complications of Lyme disease; improving surveillance and reporting of Lyme disease produce more accurate data on its incidence; evaluate developing a national reporting system; and expanding prevention activity such as community-based public education and healthcare provider programs based on the latest scientific research on the disease(p.17).

Action taken or to be taken

CDC has been working in all of the general areas highlighted in the agreement and will continue to work diligently to expand these activities. To address the conferees' encouragement of CDC to expand its activities related to developing sensitive and more accurate diagnostic tools and tests for Lyme disease, CDC maintains and distributes, upon request, a comprehensive serum panel for the purpose of developing and evaluating new diagnostics tests for Lyme disease. CDC will continue efforts to identify unique diagnostic biomarkers and will work with the National Institutes of Health and the Food and Drug Administration to facilitate development and approval of improved Lyme diagnostic tests. Additionally, CDC recently launched a tick-borne disease acute febrile illness study to detect and identify novel tick-borne pathogens that may be responsible for Lyme disease-like illness in the U.S. and that are not diagnosed by current Lyme disease tests.

To address the request that CDC expand epidemiological research activities on tick-borne diseases, CDC completed support of a 5-year research study aimed at identifying and characterizing long-term and potentially chronic complications associated with Lyme disease infection. The results should be published in the near future by the grantee. CDC has also recently expanded the diagnostic biomarker work mentioned above to investigate the metabolic pathways that are potentially implicated in patients with long-term complications following Lyme disease treatment. The goal of the work is to enhance our understanding of post-treatment Lyme disease syndrome and identify the safest and most effective treatment options.

Lyme disease has been a nationally notifiable disease since 1991, and cases are reported to CDC each year through the National Notifiable Diseases Surveillance System or NNDSS. Thus, the principal challenge for surveillance is not the lack of a reporting system but rather assuring that cases are captured and entered into the system. To this end, CDC is funding health departments in over a dozen high incidence states to improve surveillance and reporting for Lyme and other tick-borne illnesses. This funding supports improved reporting by both physicians and laboratories. In addition, through our Emerging Infections Program, CDC is funding research studies in three states to better determine why and to what degree Lyme disease cases are under-reported. This work is designed to evaluate the degree of underreporting for Lyme disease and investigate alternatives to traditional surveillance that may relieve reporting burden. CDC continues to fund and conduct research to validate the most effective prevention methods and approaches for use by individuals and communities, to distribute newly-developed prevention resources and toolkits for prevention education, and to develop a healthcare provider education program based on validated, scientifically-proven research.

CDC Lab Capacity

The agreement includes an increase of $7,250,000 to increase CDC's internal lab capacity. CDC shall use the additional funding provided to establish cutting-edge lab diagnostics to improve rapid identification and detection of emerging pathogens; establish an innovative e-pathology system to speed communication and establish virtual specimen sharing in real time; and increase research capacity and safety in high-containment labs (p. 17).

Action taken or to be taken

CDC will work to maintain its ability to respond to outbreaks, identify unexplained illnesses, and support state and local diagnostics. CDC will establish cutting-edge laboratory diagnostic methods to improve identification and detection of emerging and re-emerging zoonotic pathogens and deploy them in outbreak-prone regions of

the world, and will launch innovative e-pathology systems, such as virtual pathology services and web-based tools, to enable laboratories to convey critical diagnostic information in real time, including at sites either without a pathologist or with a pathologist requiring professional backup.

As a result of incidents that occurred in CDC and other U.S. government laboratories in FY 2014, CDC conducted extensive internal and external reviews of its laboratory safety procedures and practices. CDC will continue to work to change processes, reduce the chances of an occurrence like these in its other laboratories, and apply the lessons learned to inform biosafety and biosecurity procedures at other laboratories across the United States. These activities are ongoing, and current priorities include:

- Initial expansion of biosafety training for laboratory scientists.
- External accreditation for laboratories.
- Exploring technologies to verify safety critical control points.
- Engaging the CDC's external Laboratory Safety Working Group for additional guidance and input.

Alzheimer's and Healthy Aging

The agreement notes the importance of developing and maintaining a population-based surveillance system with longitudinal follow-up. The agreement also urges that significant effort be made to ensure comprehensive implementation of the action steps listed in the updated Road Map... The agreement supports this important initiative to further develop and expand the surveillance system on cognitive decline and caregiving, including widespread dissemination of the data gathered, and to implement the updated Road Map (p. 20-21).

Action taken or to be taken

CDC appreciates the ongoing support of our surveillance efforts and efforts to disseminate the data gathered. In 2011-2013, a total of 47 states/territories used the BRFSS Cognitive Impairment module. Data are being shared with states and disseminated through multiple channels such as reports, briefs, state plans, and national and state level webinars, and at conferences. In 2014, CDC updated the BRFSS Cognitive Impairment and Caregiving module and in FY 2015; 34 states are using the Cognitive Decline module and 23 states are using the Caregiving module. This is the highest number of states using the modules in any year. CDC is also working with Community Preventive Services Task Force to conduct a systematic review of public health strategies and caregiving. CDC also awarded Cooperative Agreements to multiple organizations to help ensure comprehensive implementation of actions of The Healthy Brain Initiative: The Public Health Road Map for State and National Partnerships, 2013–2018 (i.e., Alzheimer's Association, National Association of Chronic Disease Directors, and Association of State and Territorial Health Officials). Additionally, CDC funded five Special Interest Projects through CDC's Prevention Research Centers program to create a Healthy Brain Research Network and conduct projects focused on communications, economic analysis, and dementia and co-occurring chronic conditions. CDC is also actively engaged with federal partners disseminating information, undertaking joint projects, and serving on workgroups with the National Institute on Aging/National Institute of Health, Health Resources and Services Administration, and the Administration for Community Living/Administration.

Burden of Disease

The agreement directs the CDC Director to implement a population-adjusted burden of disease criteria as a significant factor for new competitive awards within the Chronic Disease portfolio for Heart Disease, Stroke, and Diabetes (p. 21).

Action taken or to be taken

The burden of chronic diseases and associated risk factors is significant, accounting for over 86% of our health care expenditures. In 2012, almost half of adults, 117 million people, had one or more chronic conditions. One in four adults has two or more chronic conditions. Seven of the top 10 causes of death in 2012 were chronic diseases. Two of these chronic disease, heart disease and cancer, accounted for nearly 48% of all deaths. Diabetes is the leading cause of kidney failure, lower limb amputations other than those caused by injury, and new cases of blindness among adults. CDC currently funds all fifty states and the District of Columbia to implement strategies to prevent and manage heart disease, diabetes and stroke and reduce risk factors associated with these diseases. In new competitive funding opportunities addressing heart disease, stroke and diabetes, CDC will consider population-adjusted burden of disease, including mortality rates, disease and risk factor prevalence, along with the size of population affected, either directly or through correlated indicators like poverty, as significant factors.

Division of Oral Health (DOH)

The agreement provides the DOH support for enhancements to the State oral health infrastructure grants, national surveillance activities and community prevention programs. The agreement urges DOH to support clinical and public health interventions that target pregnant women and young children at highest risk for dental caries. CDC is encouraged to work across HHS to improve the coordination of oral health surveillance in a manner that reliably measures and reports health outcomes (p.21).

Action taken or to be taken

CDC's Division of Oral Health (DOH) supports national surveillance and effective population-based strategies that promote oral health and prevent disease. CDC supports interventions that are evidence-based, specifically community water fluoridation and dental sealants. Community water fluoridation benefits people of all ages and socioeconomic groups, including those difficult to reach through other public health programs and private dental care. Systematic reviews of studies have found that fluoridation prevents at least 25% of tooth decay in adults and youth. The application of dental sealants on permanent molars soon after they appear (generally around 6 years of age) reduce decay in these teeth by 81% approximately 2 years after placement. DOH supports school based sealant programs that target schools with high populations of low-income children who are higher risk of dental decay. We also support states who provide oral health education and fluoride varnish application to younger children, however, there are currently no population based strategies (other than fluoridation) for children under five and pregnant women that have an evidence base of effectiveness. DOH will continue to review the science and evaluate the effectiveness of our state oral health infrastructure grants to identify refinements that maximize effective use of these funds to improve the oral health of all Americans.

DOH continues to engage with partners across the Agency and the Department to improve coordination and increase efficiency, especially around oral health surveillance. For example, DOH works with CDC's Division of Reproductive Health on the collection and analysis of Pregnancy Risk Assessment Monitoring System (PRAMS) data to identify risk and opportunity that may disproportionately affect the oral health of pregnant women; data will be available for analysis in 2015. CDC has a Memorandum of Understanding with Centers for Medicare and Medicaid Services (CMS) and Health Resources and Services Administration (HRSA) to work collaboratively on oral health programs, and the group has finalized a document that identifies the complementary roles of each organization and potential synergies that can be realized through increased collaboration. Current areas of discussion include the development of consistent school-sealant program measures, elimination of barriers to care for underserved populations, and communication among agencies about funding opportunities and policy initiatives.

Epilepsy

The agreement applauds the CDC epilepsy program for the progress it has made in advancing a public health agenda to improve the lives of people living with epilepsy. CDC is encouraged to support internal and external collaborations that advance the recommendations of the 2012 Institute of Medicine Report "Epilepsy Across the Spectrum: Promoting Health and Understanding" (p. 22).

Action taken or to be taken

CDC appreciates the Committee's support for a public health agenda for epilepsy. CDC recognizes that strong collaborations are critical for implementing surveillance and prevention efforts to reduce epilepsy burden in the U.S. population.

CDC supports population studies and epidemiological studies to define incidence, prevalence and mortality associated with epilepsy in various populations (IOM Recommendation [R] 2). A November 2014 CDC publication described the higher rate of death in children with epilepsy compared to children without the disorder, and the leading causes of these deaths (IOM R2). Other 2014 studies have described quality-of-life outcomes (IOM R1, 2), burden of traumatic brain injury (IOM R3), and higher rates of physical and psychiatric comorbidity in adults and children with epilepsy (IOM R4). In 2014 and in collaboration with NIH, CDC has launched the first U.S. state-based registry to examine early mortality in children and young adults with epilepsy in ten states/jurisdictions (IOM R 3).

CDC will continue to fund national partners to develop and implement programs to enhance epilepsy public awareness, education, and communication about epilepsy at local and national levels (IOM R10, 11). CDC will continue to work with partners to improve the delivery and coordination of community services for people with epilepsy and their families (e.g., first-responder training, 24/7 helplines in English and Spanish) (IOM R8). CDC plans to continue support for the Managing Epilepsy Well (MEW) Network, composed of eight Prevention Research Centers across the U.S. The CDC MEW Network has led ground-breaking research on the science of epilepsy self-management, including making evidence-based programs that overcome transportation and stigma barriers available to people with epilepsy and providers (IOM R 9). For example, the first evidence-based on-line epilepsy self-management program (WebEASE) is now available at no cost on the Epilepsy Foundation web site. Two other evidence-based programs designed to treat depression in people with epilepsy are available for providers to implement in their communities. Together with its partners, CDC supports professional training opportunities for partners interested in implementing these programs locally (IOM R7, 8).

CDC supports the development of standardized laboratory tests on blood samples to identify people with cysticercosis and taeniasis that can be easily and economically employed throughout the world (IOM R3). Detecting these infections (caused by a tapeworm) is important to prevent a common cause of epilepsy in some U.S. immigrant population and in many developing countries.

CDC will continue to work with HHS partners, state/local agencies, and non-governmental organizations to assess epilepsy burden, support primary prevention research, develop and disseminate interventions that improve quality of life for people with epilepsy, and change systems and environments to better support people with epilepsy and their families.

Mississippi Delta Collaborative (MDHC)

The Mississippi Delta Region experiences some of the Nation's highest rates of chronic diseases, such as diabetes, hypertension, obesity, heart disease, and stroke. The agreement recognizes CDC's expertise in supporting evidence-based programs to prevent the leading causes of death and disability and commends their partnership with the MDHC. The CDC is urged to continue to support MDHC's work to strengthen linkages between the

community and clinical services in the region and to continue CDC's support for implementation of strategies that increase prevention efforts and improve access to physical activity and healthy nutrition (p. 22-23).

Action taken or to be taken:

CDC's Division for Heart Disease and Stroke Prevention recognizes the severity of disease burden within the Mississippi Delta Region. MDHC is currently in its fifth and last year of the cooperative agreement with CDC to support implementation of population-wide and priority population approaches to prevent and control high blood pressure, and reduce health disparities associated with high blood pressure. CDC is currently preparing a Funding Opportunity Announcement to be released in 2015 to continue this important work in the region.

Moderate Drinking

The agreement notes that numerous epidemiological and basic science studies have demonstrated that moderate drinking can be beneficial to health by reducing risk for coronary artery disease, type 2 diabetes, and rheumatoid arthritis, among others. However, these studies used different protocols or questionnaires, and may be difficult to compare. The agreement urges the Center to work with National Institute on Alcohol Abuse and Alcoholism on this issue (p.23).

Action taken or to be taken

CDC acknowledges that a number of observational studies have found that moderate alcohol consumption is associated with a reduced risk of cardiovascular disease (CVD). However, there are no randomized trials documenting these potential health benefits, and there are a number of reasons to question the relationship between these health benefits and moderate drinking, including the lack of a dose-response relationship, differences in the lifestyles of moderate drinkers and abstainers, and problems in the classification of drinking groups. In addition, a recent research study published in the British Medical Journal found that persons who drink less have better CVD outcomes than those who drink moderately, thereby challenging the belief that drinking alcohol is beneficial for reducing the risk of heart disease. CDC will work with the National Institute on Alcohol Abuse and Alcoholism (NIAAA) to plan an approach for evaluating the potential health benefits of moderate drinking, particularly its effect on the risk of CVD.

Special Interest Projects

The agreement directs CDC to ensure that any funds used to support Special Interest Projects will be competitively awarded through an open process that is available to all qualified entities, including nonprofit organizations, small businesses, and for-profit organizations (p.24).

Action taken or to be taken

The Prevention Research Center (PRC) program administers the Special Interest Projects. The SIP mechanism, created in 1993, allows the PRCs to compete for research projects sponsored by CDC as well as other HHS agencies. SIPs seek to address specific gaps in prevention research knowledge. All entities funded through the PRC program are eligible to apply for SIPs. These are academic research centers at accredited schools of public health or schools of medicine with preventive health residency programs. While only currently funded PRCs are eligible to compete for SIPs, PRCs are encouraged to involve other organizations in their research efforts and may competitively award subcontracts through an open process available to all qualified entities, including nonprofit organizations, small businesses, and for-profit organizations.

Birth Defects Prevention

The Center for Birth Defects Research and Prevention is commended for its work toward greater understanding the causes of birth defects and for expanding the National Birth Defects Prevention Network to include the work of the BD-STEPS program. CDC is encouraged to allocate additional resources to expand the BD-STEPS program, with the goal of incorporating States that do not currently have a birth defects surveillance system. Priority should be given to programs in these States that have previously submitted meritorious applications but did not receive grant funding due to budget constraints (p.26).

Action taken or to be taken

CDC appreciates the support for the Centers for Birth Defects Research and Prevention to conduct population-based research to examine the causes of birth defects. Eight centers collected data for births from 1997-2011 as part of the National Birth Defects Prevention Study (NBDPS), and continue to analyze this rich source of information to better understand causes of birth defects. The next phase of this research, Birth Defects Study to Evaluate Pregnancy exposureS (BD-STEPS)**,** builds upon the success of the NBDPS and began data collection for births starting in 2014. With available funds, CDC was able to support six study centers to participate in the BD-STEPS. CDC continues to participate as a study center in Georgia.

Alzheimer's Disease & Dementia

CDC is directed to recommend ways to obtain more accurate and complete measurements of the death rate due to Alzheimer's disease and dementia and to develop a consensus on the mortality burden of the disease (p.27)

Action taken or to be taken

CDC continues to promote the importance of accurate and complete reporting of all deaths, including those from Alzheimer's disease and dementia. Because statistical data derived from death certificates can be no more accurate than the information on the certificate, it is very important that all persons concerned with the registration of deaths strive not only for complete registration, but also for accuracy and promptness in reporting these events. For statistical and research purposes, it is important that all causes of death be reported as specifically and as precisely as possible. Careful reporting results in accurate statistics for both underlying and contributing causes of death (i.e., all conditions mentioned on a death certificate). In partnership with the National Association of Public Health Information Systems, CDC developed and promotes various tools and trainings for instructing physicians on accurate completion of the death certificate. For example, Instructions for Completing the Cause-of-Death Section of the Death Certificate[1] provides information on the importance of accurate cause-of-death information and examples of how to properly input the chain of events—diseases, injuries, or complications—that directly caused the death. CDC is considering methods to better educate physicians on death reporting, including reports from Alzheimer's disease and dementia, by including the provision of continuing education credits for an online training and the development of an application-based tool for quick, easy access to instructions for completing the death certificate.

[1] http://www.cdc.gov/nchs/data/dvs/blue_form.pdf

Amyotrophic Lateral Sclerosis (ALS) Registry

The agreement supports CDC's national ALS registry, which may help to identify the incidence and prevalence of the disease in the United States and advance research into the causes and treatments of ALS. CDC is encouraged to promote enrollment in the registry and facilitate the use of registry information for ALS research. CDC is also encouraged to continue to consult with other Federal agencies, including the NIH and the Department of Veterans Affairs to coordinate efforts and to avoid duplication (p.28).

Action taken or to be taken

CDC/ATSDR is promoting enrollment into the National ALS Registry through partnerships with the largest ALS patient advocacy groups in the U.S., such as the ALS Association, Muscular Dystrophy Association, and the Les Turner ALS Foundation. These groups represent approximately 80-90% of all U.S. ALS patients, inform and disseminate information about the Registry to persons with ALS (PALS), and assist in enrollment, when necessary. Registry staff also attends scientific meetings, conferences, and symposia informing health care providers and researchers about the purpose and role of the Registry. The Registry also connects enrolled PALS with new clinical trials and studies. Since December 16, 2014, 11 institutions have participated in the research notification mechanism and over 27,000 emails have been sent to PALS.

The National ALS Registry has been working closely with the NIH, CMS, and VA since the Registry's inception. Because this is the only congressionally-mandated, population-based ALS registry in the U.S., CDC/ATSDR coordinates with CMS and the VA to use their administrative data to help populate cases in the National ALS Registry; therefore, no duplication of efforts is occurring. In addition, the Registry is working with NIH to determine the feasibility of implementing a global unique identifier (GUID) system for PALS for the purpose of expanding research and clinical trials and reducing duplication. The Registry also works closely with the NIH to provide supplemental funding, when possible, for research grants for ALS. These research studies are unique to the NIH and do not overlap with research previously or currently funded by the Registry.

Harmonization of Laboratory Test Results

Laboratory professionals use a variety of test methods to obtain accurate and informative results to diagnose and treat patients, which may result in the reporting of different numeric values for the same test. CDC is urged to partner with the private sector in "harmonizing" clinical laboratory test results (p.29).

Action taken or to be taken

CDC's quality assurance and standardization programs regularly partner with private sector companies and manufacturers of laboratory tests to improve the accuracy and precision of test results for environmental chemicals, nutritional indicators, chronic disease biomarkers, and newborn screening. CDC collaborates with more than 25 private companies and professional organizations to harmonize testing through education, new product development, scientific consultation, and guidelines. CDC also works with nearly 500 commercial laboratories and test manufacturers to improve patient-care testing and clinical trials for chronic diseases including heart disease and stroke. In addition, CDC's Newborn Screening Quality Assurance Program works with 34 manufacturers of diagnostic products to improve newborn screening test results.

Primary Immunodeficiency

The agreement recognizes CDC's support for physician education and public awareness for primary immunodeficiency diseases and strongly encourages the agency to maintain its efforts to elevate the understanding of this important set of disorders (p.29).

Action taken or to be taken

CDC recognizes the severity of illness among people affected by primary immunodeficiency and supports work to disseminate evidenced-based educational information on a national level to public and private healthcare providers, educators, third-party payers, impacted families, and others who may help expedite clinical recognition and improve health outcomes for Americans with this condition. In FY 2014, CDC provided $921,500 in funding to the Jeffrey Modell Foundation to support physician education and public awareness for primary immune deficiencies.

With this funding CDC expanded state newborn screening for Severe Combined Immunodeficiency. State and territorial newborn screening laboratories received CDC funding to implement testing for severe combined immunodeficiency (SCID), a deadly disease that is curable if treated soon after birth. CDC began a two-year cooperative agreement cycle with Virginia, Georgia, and Oklahoma in FY 2013. Eligible state or territorial newborn screening programs were those that had not previously conducted state-wide SCID newborn screenings and that demonstrated sufficient laboratory expertise, facilities, and legal authority to conduct screenings. In FY 2015, CDC plans to start a new, two-year cooperative agreement cycle for up to three states.

Public Health Emergency Preparedness (PHEP) Cooperative Agreement Program

The agreement is aware that State and local health departments rely on the PHEP cooperative agreement program to support their work with Federal government officials, law enforcement, emergency management, health care, business, education, and religious groups to plan, train, and prepare for emergencies so that when disaster strikes communities are prepared. The agreement requests that the fiscal year 2016 budget request describe how PHEP funding is distributed at the local level and how CDC coordinates with States to ensure the funds are being directed toward the highest priorities. The agreement continues the traditional breakout of separate funding lines. The agreement does not expect the cooperative agreements to fund any CDC programmatic operating costs (p. 34).

Action taken or to be taken

CDC directs state and local PHEP awardees to use their PHEP cooperative agreement funding to build and sustain their public health preparedness capabilities according to the standards described in CDC's Public Health Preparedness Capabilities: National Standards for State and Local Planning document. These standards meet or exceed Public Health Accreditation Board standards and measures for preparedness.

Data from the PHEP Budget Period 3/FY2014 funding applications indicate that:

- PHEP awardees distributed a total of $207,878,846 PHEP funds to local health agencies and tribal entities
- The majority of those funds, $204,253,506, were allocated to local health departments, with the remaining funds, $3,525,340, distributed to tribal entities
- 41 awardees distributed PHEP funds to their local health agencies
- 20 awardees distributed PHEP funds to tribal entities

Current PHEP guidance requires awardees to review their preparedness status annually. This annual review identifies gaps and strategic priorities requiring additional funding or CDC technical assistance (i.e., providing strategy, best practices, identifying resources, and training exercises). These reviews compile information from a variety of sources including:

- Jurisdictional risk assessments
- Incident after-action reports and improvement plans
- Site visit observations conducted by CDC
- Other jurisdictional priorities and strategies

Collectively, this information allows state and local awardees to prioritize their preparedness investments, ensuring federal preparedness funds are invested effectively to strengthen preparedness and response systems nationwide.

The Pandemic and All Hazards Preparedness Reauthorization Act signed in March 13, 2013 specifies the funding formula for CDC's Public Health Emergency Preparedness Cooperative Agreement. In a year when the appropriated amount is less than $667,000,000 (as is in FY 2015) the less populous states are not given an

amount per capita that is equal to the amount per capita awarded to the larger states. CDC's intramural costs for PHEP, including support to PHEP grantees and Working Capital Fund expenses, were less than 5% of the total appropriation in FY 2014.

Strategic National Stockpile (SNS)

The agreement is concerned that CDC's response plans do not include guidance to State, county, and local public health officials regarding new acquisitions to the SNS and how those new acquisitions should be used in a response effort. Therefore, the agreement directs CDC to update all current response plans within 120 days of enactment to include countermeasures procured with Project BioShield funds since its inception in an effort to ensure that first responders and health care providers have the most up-to date guidance to respond to potential threats, including anthrax, smallpox, and acute radiation syndrome. Further, the agreement requests CDC to develop a process to ensure that all plans are reviewed annually and that new countermeasures acquired are in the plan within 60 days of receipt into the SNS program (p.34)

Action taken or to be taken

CDC supports the State, county, and local public health officials who are responsible for establishing and improving response plans specific to their jurisdiction. CDC's response plans for the deployment of SNS countermeasures guide CDC actions during a response and do not provide specific instructions for state and local public health officials, or specific information about individual countermeasures. CDC recognizes State and local plans and capabilities for the receipt, distribution, and dispensing of medical countermeasures from the Strategic National Stockpile as a critical component of public health preparedness. To support these efforts at the state and local level, CDC provides a guidance document to public health officials titled, Receiving, Distributing and Dispensing Strategic National Stockpile Assets: A Guide to Preparedness. This guidance provides information that helps personnel at the state, local, tribal and territorial levels develop and update plans to request and use SNS medical countermeasures (MCMs).

Many products held in the SNS will be used in accordance with the Food and Drug Administration (FDA) approved labeling that comes in the product package. For those products, additional guidance may not be required. Certain products do require additional guidance, either because the product does not have FDA approved labeling, or the product is not approved for the intended use. The majority of the products added to the SNS through Project BioShield funding do not have FDA approved labeling for the intended use and require additional guidance. This guidance on specific MCMs is provided through information and fact sheets for patients and providers under an Emergency Use Authorization (EUA) or through an Investigational New Drug (IND) protocol. For some MCMs that are used for their intended indication but require additional guidance, information and fact sheets for patients and providers may be provided through Emergency Use Instructions (EUI). CDC works with FDA and subject matter experts using all available information to develop product specific guidance that is communicated in a EUA, IND, or EUI. FDA approved labeling information is found in package inserts and EUA/IND/EUI guidance is provided to state and local public health officials to inform their response plans and prepare for effective dispensing of the specific countermeasures. For certain priority threats, additional guidance may be provided to State and local partners on a threat specific basis that covers multiple medical countermeasures for that threat.

To ensure that State and local partners are informed of new products added to the SNS or new guidance available for SNS held products, CDC is developing a new policy that requires CDC to notify state and local

partners of the addition of a new BioShield procured product to the SNS or publication of new guidance within 60 days. CDC's Division of Strategic National Stockpile, in coordination with the Division of State and Local Readiness, will notify State, Local, Tribal and Territorial (SLTT) partners via email and incorporate the changes into ongoing trainings or briefings for SLTT partners as necessary. This policy will be implemented no later than March 1, 2015. Additionally, CDC is developing a dedicated page containing all current EUA/EUI guidance on SNS held MCMs on a secure website maintained by CDC and accessible to all state and local planners to facilitate immediate access to MCM guidance. The page will be updated prior to the email notification to state, local, territorial and tribal partners. Incorporating these processes into CDC response planning protocols will ensure that state and local partners are promptly notified of new BioShield procured MCMs and provided with all available guidance to include in their response planning.

Preventive Health and Health Services Block Grant (PHHSBG)

The agreement rejects the Administration's proposed elimination of the PHHSBG. The agreement restores the PHHSBG to a level of $160,000,000. CDC is expected to provide these flexible funds to State public health agencies. CDC is urged to enhance reporting and accountability for the PHHSBG, such as providing technical assistance to States regarding using funds for core public health capacities that may not be supported through other CDC categorical funding streams, such as information exchange systems, health information technology, billing capacity, public health accreditation preparation, and implementation of evidence-based practices (p.36).

Action taken or to be taken

Oversight of the Preventive Health and Health Services Block Grant (block grant) recently transitioned to CDC's Office for State Tribal Local and Territorial Support (OSTLTS). As directed, CDC will continue to provide these flexible block grant funds to recipients in states, tribes, territories, and the District of Columbia. Building on the strong legacy of the block grant, OSTLTS is actively strengthening the transparency, accountability, and measurement of the program while recognizing and preserving the block grant's ability to address unique challenges faced by grantees. Specifically, in response to stakeholder input (state health officials, the Association of State and Territorial Health Officials, and the Advisory Committee to the CDC Director/State, Tribal, Local, and Territorial finance subcommittee), CDC is working in FY 2015 to improve the efficiency of internal business practices for better administration of the program and the measurement and evaluation of the program in order to better demonstrate the collective impact of the grant.

Congressional Scientific Research Coordination with NIH

The agreement directs CDC programs to coordinate with the Institutes and Centers of the National Institutes of Health (NIH) and share scientific gaps to accelerate knowledge research related to disease and prevention activity supported through NIH's research portfolios. The Director shall include an update in the fiscal year 2016 budget request on this effort (p.37).

Action taken or to be taken

As the nation's prevention agency and a leader in improving health around the world, CDC is committed to reducing the leading causes of death, disability and injury. CDC staff work 24/7 around the world to save lives, protect people, and save money through prevention. To achieve maximum public health impact, CDC conducts research; implements strategic, evidence-based programs; and monitors results through ongoing data collection. CDC leverages its scientific and public health expertise to assist federal partners, such as National Institutes of Health (NIH), in their efforts to address research related to health promotion and disease

prevention supported through their own research portfolios. CDC continually works with NIH to describe the current state of the science and identify gaps in knowledge in order to better inform and coordinate the public health research agenda at the Institutes and Centers of the NIH.

Scientific research coordination with NIH is also facilitated by shared systems and programs. CDC uses the NIH eRA Commons system for administering research grants. Consequently, the two agencies are able to monitor each other's research activity to ensure that scientific gaps are addressed with minimal duplication of effort. CDC also participates in the Small Business Innovation Research Program (SBIR) Omnibus grant and contract funding announcements coordinated by NIH. These funding announcements describe the priority research areas for the U.S. Department of Health and Human Service (HHS) SBIR program at each of the 24 participating NIH Institutes and Centers (ICs), Centers for Disease Control and Prevention (CDC), Food and Drug Administration (FDA) and the Administration for Children and Families (ACF). CDC works closely with NIH to ensure that the SBIR program addresses areas of scientific need that also have strong potential for technology commercialization.

Most recently, CDC entered into an Interagency Agreement with NIH to receive assistance with its patenting and licensing functions from the NIH Office of Technology Transfer. Technology transfer is the process by which existing knowledge, facilities, or capabilities developed under federal research and development funding are utilized to fulfill public and private needs. This partnership and coordination with NIH will enable CDC to leverage NIH's existing technology portfolio, networks, and marketing channels to accelerate the commercialization of CDC discoveries. In summary, CDC is committed to working with the NIH and its Institutes and Centers to share scientific gaps and coordinate the public health research agenda to achieve maximum impact.

The agreement continues to support preparedness activities, and requests an update in the FY 2016 budget request to describe the latest efforts ongoing and planned for the FY 2016 request (p. 38, 38a, 38b):

Advocacy Restrictions – Describe mechanisms, processes, and on-going efforts to educate its staff and recipients to prevent violations (p. 38)

Action taken or to be taken

Language included in Section 503 of Division F, Title V, of the FY 2012 Consolidated Appropriations Act (P.L. 112-74) reinforces and (in selected respects) expands long-standing provisions governing the use of appropriated funds by CDC and our grantees for advocacy, lobbying, and related activities.

CDC provides information of the restrictions to all awardees in the notice of the award titled Anti-Lobbying Restrictions for CDC Grantees. Additionally, CDC provides trainings for awardees to clarify and explain the restrictions in place for their award. Further, CDC has educated staff, including program officers who work with awardees, on AR-12 restrictions.

Public Health Emergency Preparedness Index (p.38a)

Action taken or to be taken

The National Health Security Preparedness Index[486]™ (NHSPI™; the Index™) provides a fresh way to measure and advance the nation's readiness to respond to large scale emergencies of all kinds. CDC supported the Association

[486] http://www.nhspi.org/

of State and Territorial Health Officials (ASTHO) in coordinating development of the National Health Security Preparedness Index (NHSPI), which involved more than 75 experts representing states, counties, cities, partner agencies, academia, private sector and other organizations. This tool was first released in December 2013 and was updated on December 9, 2014. The second annual 2014 Index includes an expanded and revised structure, additional measures, and updated data, adding richness to the preparedness picture that the NHSPI™ captures.

From the inception of the NHSPI™, it was planned for the Index™ to transition to another entity to manage and evolve the tool. The Robert Wood Johnson Foundation (RWJF) will take over leadership of the NHSPI™ in 2015 and beyond. The Foundation is planning multiple activities to continue to grow the Index including: engaging and incorporating other sectors that influence health security preparedness into the Index, incorporating model analysis and validation studies to inform Index improvement, and developing new web-based features and tools. The Foundation has engaged the University of Kentucky (UK) to help manage this important project. After the transition to RWJF, CDC will not provide further funding for the project, but will continue to support its development through participation on the NHSPI™ National Advisory Committee.

Psoriasis and Psoriatic Arthritis Data Collection (p.38a)

Action taken or to be taken

The CDC Arthritis Program recognizes the severity of disease among people affected by psoriasis as well as psoriatic arthritis, which is one of the more than 100 conditions that comprise arthritis and other rheumatic conditions. At present, CDC does not have a program to undertake steps to address either condition from a public health perspective.

Sepsis (p.38a)

Action taken or to be taken

CDC is collaborating with partners to organize and advance ongoing efforts in preventing adverse outcomes and death due to sepsis. Recognizing its unique role in leading prevention through collecting data for action based upon rigorous measurement, CDC is leading a working group on sepsis to establish goals and approaches for tracking this condition that will guide future prevention efforts. CDC is working with researchers (e.g. Prevention Epicenters) to develop innovative ways to assess the impact of prevention and treatment initiatives. While CDC has long partnered with patient advocacy and consumer groups (e.g. Consumers Union) to raise awareness and promote the prevention of healthcare-associated infections, which are a major cause of sepsis both inside and outside of hospitals. CDC is also working to increase the overall awareness of sepsis and the importance of early recognition and appropriate treatment to prevent sepsis-related death and disability.

Vaccine Safety – Specific actions with State and local officials and the provider community to reduce waste and ensure vaccine potency (p.38b)

Action taken or to be taken

In June 2012, the HHS Office of the Inspector General (OIG) published a report, entitled Vaccines for Children Program: Vulnerabilities in Vaccine, in which several deficiencies in vaccine storage and handling were identified. In the time since, CDC has made several efforts to address the findings and strengthen Vaccine for Children Program (VFC) vaccine storage and handling at the federal, awardee, and provider levels. CDC has implemented a number of requirements and tools related to vaccine storage and handling that are designed to reduce vaccine waste and ensure continuing potency of vaccines in provider offices. These include the following:

- CDC annually revises its VFC Operations Guide to strengthen programmatic and oversight guidance, including guidance for proper vaccine storage and handling. Current guidance for proper vaccine storage

and handling is evidence-based and results from several studies commissioned with the National Institutes for Standards and Technology. Specific guidance is provided on the types of temperature monitoring devices that VFC enrolled providers should use to ensure accurate readings, as well as on the frequency of monitoring.

- CDC developed a number of fact sheets, training manuals, web-based training modules, and other tools on proper vaccine storage and handling techniques for the provider community.
- Beginning in 2013, all VFC providers are required to complete annual training on vaccine storage and handling techniques, and CDC developed a vaccine storage and handling web-based training module to help the provider community meet this requirement.
- CDC annually reviews and provides technical support to the development of funding recipient (awardee) policies and procedures that adhere to CDC requirements, including policies around vaccine storage and handling in provider offices. CDC developed and issued a standardized site visit observation tool to record observations during each visit and guide technical feedback by the Project Officer, including feedback to the awardees to the provider on vaccine storage and handling techniques.
- CDC awardees are required to conduct a compliance visit of 50 percent of the VFC-enrolled providers in their jurisdiction each year and must use a standardized data collection tool developed by CDC to review vaccine storage and handling practices within the provider office. Each provider receives feedback from the awardee on the areas in which they did well and the areas in which improvement is needed, along with any necessary technical assistance.

In addition to the above noted tools and requirements, CDC convened a workgroup with a number of national organizations, including the American Academy of Pediatrics, the American Academy of Family Physicians, the Association of State and Territorial Health Officers, the National Association of City and County Health Officers, and representatives from state and local health jurisdictions. The Workgroup looked closely at vaccine inventory management issues in private provider settings in order to better understand the demands and challenges of vaccine management that may result in vaccine wastage. The workgroup is currently finalizing its data collection efforts and, once complete, will review the results of the data collection and provide specific guidance to address any issues identified.

In August 2014, HHS OIG determined that CDC had addressed all recommendations and closed the report.

West Virginia Tap Project (p.38b)

Action taken or to be taken

CDC/ATSDR has aided West Virginia in response to the chemical spill in the Elk River. In response to a request from the West Virginia Bureau of Public Health (WVBPH), CDC/ATSDR provided an emergency drinking water screening level for 4-methycyclohexanemethanol (MCHM) within hours of a chemical spill into the Elk River that contaminated a ten county area. CDC/ ATSDR also collaborated with other federal agencies and WVBPH in validating the emergency screening level when additional information became available. Further, the agency assisted the WVBPH in assessing the health effects experienced by persons who sought emergency department care following the spill. CDC/ATSDR also conducted a Community Assessment for Public Health Emergency Response (CASPER) EPI-AID, which surveyed a representative sampling of households in the nine county area around Charleston, WV to assess the effects of the spill on the community.

CDC/ATSDR continues to work with West Virginia in response to this spill. At the request of the West Virginia Bureau of Public Health, a team of experts from CDC/ATSDR visited the state on September 10-12, 2014 to discuss actions the state can take to further monitor population health and environmental hazards and to strengthen future response to environmental events. At that time, CDC committed to providing technical assistance to West Virginia as a non-funded partner in the Environmental Public Health Tracking Network.