DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
Epidemiology and Laboratory Capacity for Infectious Diseases
Funding Opportunity Announcements: CI04-040, CI07-701, and CI07-702
Continuation Application/Interim Progress Report Guidance
FY2010 (January 1 – December 31, 2010)

Application/Interim Progress Report Instructions

This solicitation addresses your application and progress reporting for the FY2010 non-Recovery Act ELC funding for the period of January 1 – December 31, 2010. As reflected in your most recent ELC Notice of Award and as described in correspondence and conference calls in recent weeks, the current ELC budget period (that began January 1, 2009) is being extended through December 2011 to accommodate potential awards via ELC of multi-year Recovery Act funding. This makes the current ELC budget period 36 months long (January 1, 2009 – December 31, 2011). Your non-Recovery Act ELC funding will continue to be awarded in 12-month increments during this extended budget period using essentially the same process as for typical non-competing continuation budget periods. The only significant difference in the process for this continuation within an extended budget period versus a typical continuation is that your FY2010 ELC non- Recovery Act "continuation" award will be made as a supplement to your current 36-month budget period rather than as a separate new 12-month budget period.

Application Submission:

The CDC is required by the Department of Health and Human Services (HHS) to receive applications through www.Grants.gov. CDC strongly encourages Grantees to submit progress reports through www.Grants.gov. If you encounter any difficulties submitting your progress report through www.Grants.gov, please contact CDC's Technical Information Management Section at (770) 488-2700 prior to the submission deadline. If you need further information regarding the application process, please contact Yolanda Ingram-Sledge at (770) 488-2787. For programmatic information, please contact Sandra Browning (404) 639-3635.

The continuation application/report must be submitted by September 18, 2009. Late or incomplete applications may result in an enforcement action such as a delay in the award/or a reduction in funds. CDC will only accept requests for a deadline extension on rare occasions after adequate justification has been provided.

General Application Packet Tips:

- Properly label each item of the application packet.
- Each section should use 1.5 spacing with one-inch margins.
- Number all pages.
- Do not exceed 125 pages (including appendices, budget and support).

- Use a 12 point font.
- Where the instructions on the forms conflict with these instructions, follow these instructions.
- It is strongly recommended that any additional documents that are submitted use Microsoft Office products (e.g., Microsoft Word, Microsoft Excel., etc.). If the applicant does not have access to Microsoft Office products, a PDF file may be submitted. Directions for creating PDF files can be found on www.Grants.gov. Use of file formats other than Microsoft Office or PDF may result in the file being unreadable by CDC staff.
- Attach additional documents to the application from the "Mandatory Documents" section of the "submit application" page.

Checklist of required contents of application packet:

1. Standard Form ("SF") 424S Form
2. SF-424A Budget Information-Non-Construction Programs
3. Budget Justification
4. Indirect Cost Rate Agreement
5. Project Narrative

Instructions for completing required contents of the application package:

1. **Standard Form ("SF") 424S Form**

   Download form from www.Grants.gov and complete all sections. *Special note: in addition to inserting the legal name of your organization in Block #5, insert the CDC Award Number provided in the CDC Notice of Award. Failure to provide your award number could cause delay in processing your application.*

2. **SF-424A Budget Information and Justification**
   A. Download the form from www.Grants.gov or http://www.whitehouse.gov/omb/grants/grants_forms.html.
   B. A budget and budget justification is required for each Program Area in which you are applying. Provide summary budget information on the 424A and detailed budgets and justification in the application (see E., below and Detailed Guidance later in this document). Should you need an additional 424A, please duplicate this form by downloading it from http://www.whitehouse.gov/omb/grants/grants_forms.html. Print, complete and scan this form as a pdf file and attach it under the "other attachment forms" in this packet. Complete each applicable section, provide a total for each Program Area, and title each form duplicated appropriately (Example 424A).
   C. Provide an estimate of the overall obligations for the current budget period
   D. Base the proposed budget on the federal funding level stated in the letter from CDC.
   E. In a separate narrative, provide a detailed, line-item budget justification of the funding amount requested to support the activities to be carried out with those

funds.

F. For your convenience, sample budget guidance is provided on CDC's internet at: http://www.cdc.gov/od/pgo/funding/grantmain.htm.

G. Include the following information as part of the budget narrative as applicable:
   - For any new proposed subcontracts provide the following: (1) name(s) of subcontractor; (2) method of selection (competitive or sole source—less than full competition must be justified); (3) period of performance; (4) description of activities; (5) itemized budget with narrative justification; and (6) method of accountability.
   - Attach the budget information and justification to the application through the "Mandatory Documents" section of the "submit application" page.

Financial Status Reports

An interim Financial Status Report (FSR) for the current budget period (that began January 1, 2009) is REQUIRED to be submitted with this continuation application. The form is available on the CDC internet at http://www.cdc.gov/od/pgo/forminfo.htm. The interim FSR must reflect all funds awarded in the current budget period (since January 1, 2009) and report estimated total expenditures for the full 12-month period that will end December 31, 2009. Therefore, the resulting unobligated balance (if any) will be an estimate of what will remain unobligated as of December 31, 2009.

Some of you may be receiving FY2009 Recovery Act funding via the ELC supplemental Funding Opportunity Announcements (FOAs) prior to the due date of this continuation application. As indicated in the Recovery Act FOAs, you will be required to separately track and report on Recovery Act funding versus your other ELC funding. Due to the timing of the Recovery Act awards, it is expected that Recovery Act ELC recipients will have made very few, if any, expenditures of Recovery Act funds by the time you submit this continuation application. Therefore, a Recovery Act ELC FSR is not required in this continuation application.

3. Indirect Cost Rate Agreement

A. If indirect costs are requested, include a copy of the current negotiated Federal Indirect Cost Rate Agreement or a Cost Allocation Plan approval letter for those Grantees under such a plan.
B. Clearly describe the method used to calculate indirect costs. Make sure the method is consistent with the Indirect Cost Rate Agreement.
C. To be entitled to use indirect cost rates, a rate agreement must be in effect at the start of the budget period.
D. If an Indirect Cost Rate Agreement or Cost Allocation Plan is not in effect, indirect costs may be charged as direct if (1) this practice is consist with approved accounting practices; and (2) if the costs are adequately supported and justified. Please see the Budget Guidelines (http://www.cdc.gov/od/pgo/funding/budgetguide.htm) for additional information.

E. Attach the Indirect Cost Rate Agreement or the Cost Allocation Plan approval letter to the application through the "Mandatory Documents" section of the "Submit Application" page. Select "Other Documents" and attach as a PDF file.

4. Project Narrative

Refer to the attached Program Guidance for further instructions

5. Program Guidance

Follows below.

Epidemiology and Laboratory Capacity for Infectious Diseases
Continuation Application/Interim Progress Report Guidance
FY2010 (January 1 – December 31, 2010)

Purpose

The purpose of the Epidemiology and Laboratory Capacity for Infectious Diseases (ELC) cooperative agreement is to enhance our nation's infrastructure for preventing and controlling infectious diseases by building and strengthening capacity in state and local public health agencies. This includes the capacity to identify and monitor the occurrence of known infectious diseases of public health importance; detect new and emerging infectious disease threats; identify and respond to disease outbreaks; implement and evaluate public health interventions to improve prevention and control of infectious diseases. Specifically, the program assists eligible public health agencies strengthen and expand capacities in the following three interrelated areas:

Epidemiology – To ensure staff are well-trained and well-equipped to provide rapid, effective, and flexible response to infectious disease threats and to ensure integration with public health laboratories.

Laboratory – To achieve modern and well-equipped public health laboratories, with well-trained staff employing high quality laboratory processes and systems that foster communication and appropriate integration between laboratory and epidemiology functions.

Health Information Systems - Working towards modern, standards-based and interoperable systems, that support electronic exchange of information within and between epidemiology and laboratory functions in public health agencies (e.g., systems that support public health surveillance and investigation, laboratory information management systems (LIMS)); among local, state, and federal public health agencies; and between public health agencies and clinical care systems (e.g., health care providers, clinical laboratories). Enhancing electronic exchange of information between public health agencies and clinical care entities will make a critical contribution to health reform in the U.S.

Background

In the United States and elsewhere, infectious diseases continue to threaten public health and contribute significantly to the escalating costs of health care. Changing organisms and ecosystems, a globalized economy, shifting demographics, and technological developments result in important and unrelenting changes to the infectious disease landscape. This includes increasing rates of antimicrobial resistance and healthcare associated infections and threats from new and emerging infectious diseases.

The ELC program was formed in 1995 as a key component of CDC's national strategy to address emerging infectious disease threats as outlined in its 1994 report "Addressing Emerging Infectious Disease Threats: A Prevention Strategy for the United States." (CDC, 1994) When it began, the ELC provided funding to 8 states and 2 local health departments to build general epidemiology and laboratory capacity to address infectious disease threats. Over time, the ELC grew in the number of sites and specific infectious diseases activities it supported. It is now a national program that provides support to all 50 state health departments, 6 large local health departments (Los Angeles County, Philadelphia, New York City, Chicago, Houston, and the District of Columbia), Puerto Rico and the Republic of Palau. The program continues to build the general epidemiology, laboratory and information systems capacities that support multiple

infectious diseases. It also supports more focused investments to address specific infectious disease areas, including zoonotic and vector-borne diseases, foodborne diseases, invasive bacterial infections, respiratory pathogens, antimicrobial resistance, prion disease, vaccine-preventable diseases, and healthcare-associated infections.

While the ELC has played a critical role in strengthening national public health infrastructure, much work remains. A 2003 report from the Institute of Medicine (IOM) "*Microbial Threats to Health: Emergence, Detection, and Response*" notes that the U.S. public health infrastructure continues to be inadequate. Upgrading public health capacities for infectious diseases will require increased investments that are sustained over time. With its long history of providing support directly to state and local public health programs at the frontline, the ELC is poised to address these continuing needs.

Increasingly, federally supported programs require greater accountability through improved measures of performance and impact. In addition, a 2008 external review of the ELC program emphasized the importance of working to better define the needed epidemiology, laboratory and information systems capacities; target ELC funding accordingly; and measure the program's impact. Accordingly, consistent with the ELC scope as reflected in the Funding Opportunity Announcements CI04-040, CI07-701, and CI07-702 and in subsequent annual continuation guidances, this FY2010 guidance emphasizes describing and defining the epidemiology, laboratory and information systems capacities needed in state and local public health departments to provide a strong foundation for infectious disease work.

Activities

Activities supported under the ELC cooperative agreement include building, maintaining, and strengthening general epidemiologic, laboratory, and information systems capacities, as well as focused disease-specific activities. This ELC guidance is divided into two sections: Section 1 - General Epidemiology, Laboratory, and Information Systems Capacities for Infectious Diseases, and Section 2 - Disease Area-specific Activities.

All ELC recipients must respond to Section 1. For Section 2, recipients need only to respond to those program components for which they are requesting FY2010 support and/or for which they received support in FY2009 and thus are required to submit a progress report.

Section 1 - General Epidemiology, Laboratory, and Information Systems Capacities for Infectious Diseases

Capacities and Gaps – Identify existing capacities supported by the ELC and gaps in epidemiology, laboratory and information systems.

Epidemiology and Laboratory – Build and strengthen general epidemiology and laboratory capacities for infectious diseases leading to a stronger public health infrastructure.

Health Information Systems – Build and strengthen information systems infrastructure through the implementation of the National Electronic Disease Surveillance System (NEDSS), Biosurveillance, the National Healthcare Safety Network (NHSN), other local and national information systems for infectious diseases and support for the Nationwide Health Information Network (NHIN).

Section 2 - Disease Area-specific Activities

Foodborne Diseases

A. Enhance capacity for investigation, control, and reporting of foodborne disease outbreaks and improve laboratory-based surveillance for emerging foodborne pathogens.

Antimicrobial Resistance

B. Develop and improve health department capacity for surveillance, prevention, and control of antimicrobial-resistant pathogens.

Vectorborne Diseases

C. Lyme Disease - Assist state and local health departments to develop and implement effective surveillance for laboratory diagnosis, prevention, and control of human infections of Lyme Disease caused by *Borrelia burgdorferi* bacterium.

D. West Nile Virus - Develop and implement effective surveillance, prevention, and control of West Nile virus and other arboviruses that occur in the United States.

Respiratory Diseases, including Vaccine Preventable Diseases

E. Influenza - Implement enhanced capacity for influenza surveillance and response.

F. Vaccine Effectiveness - Conduct meningococcal vaccine effectiveness surveillance in adolescents. Maintain specific activities for MCV, PCV, Rotavirus, and Varicella funded in the 2009 Recovery Act ELC supplement.

Prion Disease

G. Maintain and enhance surveillance for Creutzfeldt Jakob Disease (CJD) and the possible emergence of new variant forms of CJD.

Healthcare-associated Infections

H. Control of antimicrobial-resistant pathogens through the formation of collaboratives to reduce unnecessary antimicrobial use in healthcare facilities. Maintain and complement HAI activities supported in the 2009 Recovery Act ELC supplement.

DETAILED GUIDANCE

SECTION 1 - General Epidemiology, Laboratory, and Information Systems Capacities for Infectious Diseases

All ELC recipients are required to respond to this Section.

Program Information

A. Purpose and Objectives

The overall purpose of this section is to build and strengthen general epidemiology, laboratory, and information systems capacity in state and local health agencies resulting in a more efficient, robust, and flexible public health foundation for addressing infectious diseases.

Capacity and Gaps

The ELC cooperative agreement program is intended to support the strengthening at the state and local levels of capacity for surveillance and response – in epidemiology, laboratory and information systems. This year the ELC begins a new emphasis on more clearly and quantitatively measuring these capacities and their impact. Accordingly, applicants are to assess their current capacities supported by ELC and gaps that could be addressed should additional funding become available.

Epidemiology and Laboratory

This incorporates what was included in the "General Epidemiology and Laboratory Capacity" component in previous ELC guidances. Response can involve activities that have previously been supported under the General Epidemiology and Laboratory Capacity component but applicants are encouraged to evaluate their priorities and gaps and consider their response in the context of this 2010 guidance. In addition, applicants may address other special projects or activities that do not fall clearly under the disease-area specific activities in Section 2.

Health Information Systems

This incorporates the NEDSS component of previous ELC guidances. Response is expected to include the specific activities that have previously been requested and funded under the NEDSS component and may also include other health information systems activities consistent with the overall ELC intent and scope including biosurveillance (e.g., Biosense-related activities), NHSN, other local and national systems for infectious disease, and support for the Nationwide Health Information Network (NHIN). Applicants are encouraged to take a comprehensive approach to information systems that support epidemiology and laboratory practice.

The overall aim is to continue working towards modern, standards-based, and interoperable systems that support electronic exchange of information within and between epidemiology and laboratory functions in public health agencies (e.g., systems that support public health surveillance and investigation, laboratory information management systems (LIMS)); among local, state, and federal public health agencies; and between public health agencies and clinical care systems (e.g., health care providers, clinical laboratories). Enhancing electronic exchange of information between public

health agencies and clinical care entities will make a critical contribution to health reform in the U.S.

ELC and the Recovery Act
Under the Recovery Act, additional funds are being made available (under separate funding opportunity announcements) to ELC cooperative agreement recipients to support activities related to healthcare associated infections and Section 317 immunizations. While the Recovery Act requires separate tracking of these activities, ELC recipients should manage these activities in a coordinated way in keeping with the organization of their overall ELC program. In addition, ELC Recovery Act funded activities should be coordinated with other Recovery Act funded activities in the State. For example, ELC Section 317 immunization activities should closely collaborate with the Section 317 grantee in their State.

B. Program Contacts

For Administrative/Procedural:
Sandra Browning (404) 639-3635

For Epidemiology/Laboratory Technical:
Alvin Shultz (404) 639-7028

For Health Information Systems Technical:
Program Contact: Mark Winarsky, PHIN Program Manager, 404-498-6648
NEDSS Contact: Wayne Brathwaite, Public Health Advisory, 404-498-6279
Biosense Contact: Taha Kass-Hout, Biosense Program Manager, 404-498-2014

C. Availability of Funds
Amounts requested may vary depending on the activities proposed and funds available. The expected total available funds in FY2010 for the activities outlined in Section 1 is as follows:

Epidemiology and Laboratory: Approximately $4,600,000 (which is comparable to the amount approved under the ELC Core Component in FY2009).

Health Information Systems: Approximately $12,000,000.

At the time of this guidance, it is uncertain whether additional funds will be available in FY2010 above/beyond the amounts stated above. Nonetheless, recipients are encouraged to propose activities to address gaps that are identified relative to this section (see Application Content-A.2., below).

D. Recipient Activities
Build and strengthen general epidemiology, laboratory, and information systems capacities for a stronger public health infrastructure. Funds can be used for hiring staff, contracts, training, travel, equipment, supplies, or state assigned office costs.

Application Content

A. General Epidemiology, Laboratory, and Information Systems – Background, Capacity, Gaps

1. Background: Describe the population size, demographic characteristics, disease burden, geographic distribution, racial/ethnic makeup, health care delivery systems, and relevant IT infrastructure for your jurisdiction.

2. Epidemiology, Laboratory and Information Systems Capacities and Gaps: The ELC cooperative agreement program is intended to support the strengthening at the state and local levels of capacity for surveillance and response – in epidemiology, laboratory and information systems. This year the ELC begins a new emphasis on more clearly and quantitatively measuring these capacities and their impact. Accordingly, describe/summarize the following using the matrix format in Attachment A:
   a. Capacity supported through entire ELC cooperative agreement over the past year (including disease specific program attachments in Section 2). If this information appears within your progress report please summarize it here and indicate any additional capacity building/strengthening.
   b. The proportion of the total capacity in your state for epidemiology, laboratory, and information systems for infectious disease surveillance and response – that is supported through all ELC programs (once again, including Section 2 programs).
   c. Remaining gaps in capacity that might be supported through ELC if funds were available.

B. Progress Reports

1. Progress Report for Epidemiology and Laboratory:
   If you received funding under the General Epidemiology and Laboratory component in the FY2009 ELC funding period (e.g., awards beginning January 1, 2009), provide a detailed report on progress toward specific objectives that were supported and highlight significant successes or problems. Provide evidence of how ELC cooperative agreement funds are being used to strengthen collaboration between epidemiology and laboratory practice and contribute to effective disease surveillance and response by building epidemiologic and laboratory capacity (e.g. hiring staff, conducting outbreak investigations, expanding surveillance improving laboratory technology, etc.). Specifically addresses progress against the measures of effectiveness included in your FY2009 ELC proposal.

2. Progress Report for Health Information Systems
   If you received funding under the NEDSS Component in the FY2009 ELC funding period (e.g., awards beginning January 1, 2009), provide a detailed report on progress toward specific objectives that were supported and highlight significant successes or problems. Provide evidence of how ELC cooperative agreement funds are being used to strengthen information systems that contribute to effective disease surveillance and laboratory practice. Specifically addresses progress against the measures of effectiveness included in your FY2009 ELC proposal.

C. Operational Plans

1. Operational Plan for Epidemiology and Laboratory:
   Describe clear objectives and an operational plan for building and strengthening general epidemiology and laboratory capacity. Organized around specific objectives (e.g., maintaining capacities already supported under ELC - including activities supported previously under the General Epidemiology and Laboratory Capacity component, addressing gaps identified in A.2., above, special projects/activities that are not clearly within disease area-specific activities in Section 2), describe specific activities in the following areas:
   a. Workforce - hiring and maintaining staff (direct hires and contract staff)
   b. Training/Expertise
   c. Non-staff resources - equipment, supplies, services
   d. Coordination between and integration of epidemiology and laboratory.

   The Operational Plan must include a clear timeline for these activities over the 12-month funding period and identify specific persons/positions with responsibility for each objective and major activity.

2. Operational Plan for Health Information Systems
   Describe clear objectives and an operational plan for implementing and maintaining systems for electronic data exchange. Organized around specific objectives (e.g., maintaining capacities already supported under ELC and addressing gaps identified in A.2., above), propose specific activities in the following areas:
   a. Develop and maintain systems for electronic disease surveillance that adhere to established standards, such as PHIN and NEDSS specifications and requirements. This includes maintaining the personnel infrastructure previously funded under the NEDSS component of this cooperative agreement.
   b. Continue and enhance standards-based electronic exchange of nationally notifiable disease reports between state health departments and the CDC.
   c. Participate in the annual NEDSS Coordinator meetings, PHIN Coordinator meetings held annually at the PHIN conference (1-2 representatives), monthly conference calls, and relevant PHIN communities of practice (e.g., laboratory messaging, surveillance).

   In addition, applicants may propose specific activities in one or more of the following areas:
   d. Incorporate or enhance standards-based electronic exchange of laboratory results between public laboratories and national, regional, and local clinical laboratories and public health surveillance systems. This includes the implementation of Laboratory Information Systems (LIMS) that may be funded under separate Recovery Act announcements.
   e. Implement and/or enhance standards-based electronic exchange of surveillance data between local health departments and state health departments or between different surveillance systems.

f. Implement and/or standards-based electronic exchange of case report data between hospitals, healthcare systems, providers, Health Information Exchanges (HIEs), and public health agencies.
g. Pilot test Geocoded Interoperable Population Summary Exchange (GIPSE) format to extract aggregate biosurveillance data (case counts or rates stratified by geography (zip3), age and gender when possible) from disease surveillance systems. Ensure, through the development of data sharing agreements (if necessary), that this data could be shared across jurisdictional boundaries to improve situational awareness.

The Operational plan must include a clear timeline for these activities over the 12-month funding period and identify specific persons/positions with responsibility for each objective and major activity.

D. Monitoring and Evaluation:
Propose a plan for monitoring progress with building and strengthening epidemiology, lab, and information systems capacities. Include in this plan specific measures of effectiveness for both epidemiology/laboratory and health information systems so that effective "outcome" evaluation can be conducted.

E. Budget Narrative
Provide a detailed line-item budget and justification for the 12-month funding period of January 1 – December 31, 2010. Submit separate budgets for epidemiology/laboratory and health information systems. All budgets must be clearly broken out into the line-item categories specified in Form 424 (Salary, Fringe, Travel, Supplies, Equipment, Contractual, Other, and Indirect Costs).

SECTION 1 - ATTACHMENT A

MATRIX FOR RESPONSE TO APPLICATION CONTENT PART A.2.

	Area	Epidemiology	Laboratory	Information Systems
a. Current Capacity supported via ELC	Workforce			
	Training/Expertise			
	Equipment/Supplies/Services			
b. Proportion of total capacity that is supported by ELC	Workforce			
	Training/Expertise			
	Equipment/Supplies/Services			
c. Remaining gaps	Workforce			
	Training/Expertise			
	Equipment/Supplies/Services			

SECTION 2
DISEASE AREA-SPECIFIC ACTIVITIES

SECTION 2 - APPLICATION INSTRUCTIONS

Nine separate disease area-specific components are included in Section 2. Each includes background information, guidance, and instructions specific to that component. In the response to Section 2, recipients only need to address those components for which they are requesting FY2010 support (for the January 1 – December 31, 2010 funding period), except that recipients must include a progress report (see 1.A-C, below) for any program component under which they received funding in FY2009 (awards issued effective January 1, 2009 or later) even if not requesting further support in FY2010.

In this Section 2 response, **submit separate narratives (progress report and new funding period proposals) and budgets for each disease area-specific component**.

For each disease area-specific component include the following:

1. **Progress report on current budget period activities, objectives, and accomplishments:**

   A. Describe ELC-funded activities and accomplishments during the current budget period (i.e., from the date of your last Interim Progress Report to-date). Provide a detailed description of progress toward specific objectives for the component and highlight significant successes or problems.

   B. Measures of Effectiveness. In each component, list the Measures of Effectiveness you included in your previous (FY2009) application/IPR and provide a brief description of your progress to-date toward each Measure.

   C. Special Reporting Instructions. Note that there are additional special progress reporting instructions included in the Foodborne Diseases component (a Special Instructions paragraph is included in some of the food component projects).

2. **New funding period proposed program activities and objectives:**

   Provide a detailed and time-phased operational plan for continued performance of ELC activities for the 12-month budget period beginning January 1, 2010. See detailed guidance in each disease area-specific component below.

   Include updated specific Measures of Effectiveness for each program area that will be used to demonstrate progress in meeting the goals and objectives of the ELC during the coming new budget period.

   NOTE: Research (human/animal subjects or otherwise) is **not** supported through the ELC program. **Do not** propose any activities that constitute research. **Do not** include as part of your narrative or progress report, research activities funded through

mechanisms outside the ELC. For the definition of research, please see the HHS CDC Web site at the following Internet address: http://www.cdc.gov/od/science/regs/hrpp/researchDefinition.htm.
If research activities are included or suggested, it may delay your renewal award. Please contact your ELC Program Consultant if you have questions regarding proposed activities.

3. **A detailed line-item budget and justification:**
Provide a detailed line-item budget and justification for the proposed upcoming budget period activities. Provide the summary line-item information for each program area on Form 424A and then provide detailed budgets and justification in a narrative. All budgets must be clearly broken out into the line-item categories specified in Form 424A (Salary, Fringe, Travel, Supplies, Equipment, Contractual, Other, and Indirect Costs).

Section 2A

FOODBORNE DISEASES

Program Purpose

Foodborne disease ranks high among public health priorities; each year an estimated 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths in the United States are food-related, and the economic burden is estimated to be greater than $6 billion.

More than 1,000 foodborne disease outbreaks occur each year in the U.S., making groups of people ill and requiring public health and food industry resources to investigate and control. State and local staff investigate the large majority of these foodborne disease outbreaks. The Purpose of the Food Safety Office funds for the ELC is to: To enhance capacity at the state and local levels to conduct surveillance for foodborne diseases and to detect, investigate, control, and report outbreaks of foodborne diseases. Additionally these funds are used to improve laboratory based surveillance for emerging foodborne pathogens, including antimicrobial resistant foodborne pathogens.
Goals:

1. Improve Routine surveillance and epidemiology of foodborne illness.
2. Improve foodborne outbreak detection and response at the local and state levels
3. Improve laboratory methods for foodborne pathogens

The FSO funds are consistent with other ELC programs that build local and state pubic health capacity to track and respond to current and emerging public health threats.

Links: www.CDC.gov/foodsafety

Funding Guidance (Overall for Program)

The amount requested per applicant will vary depending on the range and scope of activities addressed. Additional guidance is listed below each activity.

Recipient Activities

A. OutbreakNet – reporting of outbreaks to CDC: OutbreakNet activities to enhance capacity for investigation, control, and reporting of foodborne disease outbreaks.

OutbreakNet is the network of epidemiologists and other public health officials, coordinated by CDC, who investigate multi-state outbreaks of foodborne, waterborne, and other enteric illnesses. Proposals will be evaluated on successful improvements in reporting of foodborne, waterborne, and other enteric bacterial pathogen outbreak investigations.

For outbreaks of foodborne illnesses the aim is to improve the timeliness of reporting by decreasing the time between first onset of illness and when an outbreak report is entered into the electronic Foodborne Outbreak Reporting System (eFORS)in 2008 and into the National Outbreak Reporting System (NORS) in 2009. The goal is for 75% of outbreaks to have a preliminary report in eFORS (or NORS) within two months (60 days) of the date the first case became ill (field #2 in the eFORS form 52.13, and located under "Dates" in the General Section in NORS). While it is expected that some proportion of outbreaks will not be recognized within this time frame, ELC proposals will be evaluated based partially on reporting improvements to reach this goal.

Program Activity Contact information

Ian Williams (404)639-2210

Instructions for use of funds

Funds are available to support supplies, computer equipment and data entry personnel necessary for sites to maintain and enhance outbreak reporting.

Measurable Goals

In addition, the completeness of certain eFORS (or NORS) variables will be reviewed. The goal is for 80% of reported outbreaks (final report) to have each of the following fields completed:

- Numbers of lab-confirmed cases (field #3 on eFORS form 52.13 and part A under Primary Cases in the General Section on NORS 52.13)
- Ages of cases (field #4 on form 52.13 and under Primary Cases in the General Section of NORS 52.13)
- Sex of cases (field #5 on form 52.13 and under Primary Cases in the General Section of NORS 52.13)
- Number of hospitalizations (field #11 on form 52.13 and under Primary Cases in the General Section of NORS 52.13)
- Number of deaths (field # 11 on form 52.13 and under Primary Cases in the General Section of NORS 52.13)

ELC proposals will be evaluated based partially on reporting improvements to reach this goal. The measurable goals should be presented as a progress report, in the following format:

Progress Report – Reporting of outbreaks to CDC: Special Instructions:

Please briefly describe the personnel and procedures for reporting foodborne outbreaks using eFORS (or NORS). Please also provide the statistics below:

eFORS (or NORS) Statistics for 12-Month period of July 1, 2008 through June 30, 2009

*Note: Statistics will be from eFORS for July 1, 2008 through December 31, 2008, and from NORS for January 1, 2009 through June 30, 2009

% eFORS preliminary reports submitted within 60 days of illness onset for first case	% eFORS reports with number of laboratory-confirmed cases indicated	% eFORS reports with age of cases indicated	% eFORS reports with sex of cases indicated	% eFORS reports with number of hospitalized cases indicated	% eFORS reports with number of deaths indicated

Availability of funds

Proposals should range from approximately $2,000 to $20,000.

B. OutbreakNet – personnel and training for outbreak detection and response -- OutbreakNet activities to enhance capacity for investigation, control, and reporting of foodborne disease outbreaks.

Outbreak investigations play a critical role in the control and prevention of foodborne disease. A primary goal of OutbreakNet is to facilitate communication and data exchange among partners to improve collaborative efforts and investigations. Timely and conclusive outbreak investigations are essential for removing contaminated food from commerce, including items that may have been intentionally contaminated, and invaluable for identifying fundamental flaws in food processing and production.

Although new surveillance tools have enhanced the recognition of foodborne disease outbreaks, the capacity of state and local health officials to successfully investigate outbreaks remains inadequate. Among an estimated 1,400 foodborne disease outbreaks reported to CDC annually, less than a third of them have an etiology or vehicle identified. There are increasing demands on state and local health departments to conduct timely, effective, and cross-jurisdictional outbreak investigations. These investigations require sufficient personnel, specialized training (e.g., the analysis of epidemiologic data related to clusters detected through PulseNet), and data collection tools that facilitate sharing of information with other jurisdictions.

Program Activity Contact information

Ian Williams (404)639-2210

Instructions for use of funds

Funds are expected to be available to support an MPH-level epidemiologist dedicated to the investigation and reporting of foodborne disease outbreaks and/or the development of new tools to enhance the timeliness and efficiency of outbreak investigations.

Funds are also expected to be available to support the training of local and state workers in foodborne disease outbreak investigation methodology, including equipment and educational material for training sessions, travel to and from training sessions and refresher courses. Travel to the CDC sponsored OutbreakNet annual meeting should be a high priority training opportunity.

Measurable Goals

Progress Report – Outbreak Inv. Special Instructions:

- List all foodborne epidemiologist staff supported by this cooperative agreement with percentage of time and hours spent on this activity. Highlight new staff added in the last year and include the date they started.

  Example: John Smith, 50% of time (20 hours a week)
  Chris Smith (new) start 8/4/04 100% of time.

- List the training funded by this cooperative agreement in the last year.

  Example: Chris Smith, Epi Ready course, Chicago, 8/20/04

Availability of funds

Proposals should range from approximately $5,000 to $75,000.

C. PulseNet

The PulseNet network has revolutionized foodborne disease surveillance by allowing near real-time DNA "fingerprinting" of foodborne pathogenic bacteria by state and local public health laboratories using rapid (one-day) and highly standardized PFGE protocols and by enabling the rapid comparison of these DNA "fingerprints" to a national database of "fingerprint" patterns for each foodborne bacterial pathogen. PulseNet makes rapid detection of clusters of foodborne illnesses possible and provides an early warning for public health investigation and intervention. For the system to function optimally, all laboratories in the network must perform PFGE typing of bacteria under routine surveillance in a standardized and timely manner, analyze results, and transmit all subtyping results and associated information to the national database without delay.

Program Activity Contact information

Peter Gerner-Smidt (404)639-3322

Kelley Hise (404)639-0704
Efrain Ribot (404)639-3521

Instructions for use of funds

Funds are expected to be available to support the following activities: (a) collection and transport of specimens, (b) PulseNet General activities and (c) PulseNet Area Laboratory activities.

(a) Funds are expected to be available to support the development of a mail-out/mail-in specimen collection kit to assist in obtaining specimens from patients; to explore the possibility of using a courier delivery system to transport clinical specimens from patients to the local health department and from the local health department to the state; and to educate staff regarding the appropriate collection of specimens, and to provide specimen collection material.

(b) Funds are available for participants to continue to participate in PulseNet and perform real-time PFGE typing of foodborne pathogenic bacteria using PulseNet standardized protocols (e.g., supplies, additional equipment required to perform additional testing, essential software upgrades and personnel needed to perform the laboratory tests in a timely manner). Where appropriate, proposals should include a request for personnel to analyze PFGE data and follow-up on any clusters that are identified.

If deemed appropriate by CDC, funds may be available for participants to obtain equipment, supplies and training associated with next generation subtyping methods (i.e. MLVA).

(c) Ongoing support is available for state public health laboratories that are designated as PulseNet Area Laboratories. State public health laboratories in Massachusetts, Minnesota, Michigan, Texas, Utah, Virginia, and Washington have been previously funded through the ELC program for their work as PulseNet Area Laboratories. Funds are available to support the following activities (in addition to general PulseNet activities above):

- Provide laboratory bench training, technical guidance and scientific expertise to PulseNet participating states within their designated area.
- Serve as a resource for surge capacity testing and reference capabilities in response to large foodborne outbreaks or potential threats of bioterrorism that may occur locally or nationally.
- Perform enhanced surveillance and subtyping of foodborne pathogens and/or rare pathogens (i.e. Vibrio spp., non-Typhimurium Salmonella serotypes, Campylobacter spp.).
- Provide a core unit of experienced scientists to participate in the evaluation and validation of procedures and testing initiatives in collaboration with CDC scientific staff (i.e. Evaluations of Universal Standard Strains, procedural changes and/or improvements, software programs).

- Actively participate in evaluation and validation projects for next generation subtyping methods for PulseNet.
- Provide recommendations and guidance with respect to laboratory testing or program issues (i.e. Non-culture based methods).
- Collaborate with CDC to develop a PulseNet "state perspective" and making recommendations in order to strengthen PulseNet for all participants.
- Serve as host sites for annual PulseNet update meetings, training conferences, and regional meetings.
- Serve as representative of laboratories within areas/region on planning committees, such as the PulseNet Update Meeting Agenda Committee and/or Regional meetings.

Measurable Goals

Progress Report – PulseNet Special Instructions:

(a) In your proposal, briefly describe the existing or proposed system used to enhance collection of foodborne outbreak-associated specimens for laboratory testing. Describe any changes to existing system over the past year.

(b) All PulseNet participating laboratories fill in the sections below:

1. List all laboratory staff, percentage of time and hours spent solely on PFGE. Highlight any new staff added in the last year and add the date they started.

PulseNet Personnel	New/ Continuing	If New, Start Date	% Time on PFGE/PFGE Analysis (est.)
Ex: John Smith	New	10/23/2009	50%

2. Complete the following table:

PulseNet General Statistics
For 12-Month period (from July 1, 2008 – June 30, 2009*)

	Total # of isolates received during past 12 months*	**Total # of isolates run by PFGE during past 12 months***	**How many isolates were run with primary enzyme?**	**How many isolates were run with secondary enzyme?**	**How many isolates were run using next generation typing methods?**
E. coli O157:H7					
Non-O157:H7 STEC					
Listeria					
Shigella					
Salmonella					
Campylobacter					
Vibrio cholerae					
Vibrio parahaemolyticus					

(c) All PulseNet Area laboratories fill in the sections below (for only those labs identified in above section as PulseNet Area Labs):

PulseNet Area Laboratory Statistics
For 12-Month period (from July 1, 2008 – June 30, 2009*)

Area Lab Responsibility	Area Lab Notes
Training of personnel in area labs: include number of people trained, dates, subject matter	
Travel to labs within area: travel for training, troubleshooting, etc.	
Surge Capacity: list number of isolates rec'd from each state for PFGE; include supplies sent to states	

Availability of funds

(a) Proposals should range from approximately $5,000 - $10,000.

(b) Proposals should include all PulseNet requests, regardless of amount. If you would like to prioritize each of your requests, please feel free to do so.

(c) Proposals (Laboratories) may range up to $60,000. These additional funds may be used for partial or full support of additional laboratory personnel, laboratory supplies and consumables needed to conduct Area Laboratory activities; additional equipment needed for PulseNet operations; and travel within their designated area to provide technical and troubleshooting assistance.

D. PulseNet –Surveillance for Shiga toxin-producing E. coli.

E. coli O157:H7 is widely recognized as an important cause of foodborne illness in the United States. E. coli O157:H7 can cause non-bloody and bloody diarrhea hemolytic uremic syndrome (HUS), and death. Other serotypes of Shiga toxin-producing E. coli (non-O157 STEC) can also cause these disease manifestations. Unlike E. coli O157:H7, the non-O157 STEC strains are not readily detected by simple culture methods. Consequently, less is known about their epidemiology or overall public health significance. The availability of commercial non-culture assays that can detect Shiga-toxins in clinical specimens makes efforts to monitor the prevalence of the non-O157

STEC organisms practical. However, many large clinical diagnostic laboratories are now performing only these non-culture tests for Shiga toxins and do not have an STEC isolate (O157:H7 or the other serotypes) to forward to the state or local public health laboratories. They are only able to forward a stool culture broth to public health laboratories. It is critical and essential for public health laboratories to isolate, identify and subtype the causative STEC in these broths to support public health surveillance and disease cluster recognition by PulseNet.

Program Activity Contact information

Peter Gerner-Smidt (404)639-3322
Kelley Hise (404)639-0704
Efrain Ribot (404)639-3521

Instructions for use of funds

Funds are available for states to enhance capacity (supplies) to isolate, identify and characterize E. coli O157 and non-O157 STEC and for the transport of isolates from clinical laboratories to public health laboratories.

In the proposal, briefly describe your laboratory capacity to identify and characterize E. coli O157:H7 and other Shiga toxin-producing E. coli. Indicate the approximate number of specimens/broths and the number of isolates referred to your public health laboratory (ies) for STEC identification and characterization (i.e., serotype). Describe any changes in the past year. Also include in your description any educational programs, services, or materials used to obtain specimens, enrichment cultures, or isolates from clinical laboratories for identification and characterization at the public health laboratory.

Measurable Goals

STEC General Statistics
for 12-Month period (from July 1, 2008 – June 30, 2009)

	Numbers received in the public health laboratory	Numbers sent to CDC for Isolation and/or Serotyping		STECs Identified	Person Hours
			O157		
Cultures			Non-O157		
Broths			Negative/ Repeat Tests		
Total			Total		

Availability of funds

Proposals should range up to $25,000.

E. Telediagnosis and molecular diagnosis of parasitic diseases through DPDx

The DPDx project supports approaches to improve the level of expertise for diagnosis of foodborne and other parasitic diseases in the US:

1. Internet-based diagnosis, which involves exchanging of images captured from diagnostic specimen (telediagnosis).

2. Molecular diagnostics; including diagnostic platforms such as real-time PCR and Luminex.

3. Training; including hands on workshops and internet-based training on diagnostic morphologic and molecular parasitology.

By using internet-based communication, laboratories can routinely use telediagnosis for diagnostic assistance. Telediagnosis assistance can provide definitive or screening diagnostic results on parasitic cases in minutes to a few hours. This allows laboratories to more efficiently address difficult diagnostic cases in normal or outbreak situations, and to disseminate information more rapidly. In addition, telediagnosis is a cost-effective method for diagnostic assistance, resulting in savings of up to 80% compared to traditional procedures of providing diagnostic assistance. DPDx also provides training to laboratorians on diagnostic parasitology, including telediagnosis. Molecular techniques have become essential tools in specific identification of infectious agents, including parasites. Selected PCR tests have been integrated into the routine CDC diagnostic parasitology and can be implemented in public health laboratories to provide molecular-based identification of parasites of public health concern when confirmatory diagnosis is needed. Conventional and real-time PCR and Luminex-based tests are available for implementation. Implementation of molecular techniques also provides the laboratories with the infra-structure to gather data on genetic diversity of parasites, which can be extremely useful in epidemiologic investigations.

Program Activity Contact information

Alex daSilva (770)488-4072

Instructions for use of funds

Funds are available to develop capacity for telediagnosis and/or molecular diagnosis through DPDx. Funds may be used for purchasing necessary or upgrading existing equipment (digital cameras, PCR thermocyclers, equipment for DNA extraction of clinical samples), software (image enhancement software, electronic database) reagents (PCR reagents, DNA extraction kits), and for attending DPDx training workshops at CDC and elsewhere. ELC sites are encouraged to apply for funds to equipment associated laboratories in their jurisdiction (e.g., local public health laboratories, laboratories in public hospitals).

Applications may include requests to support telediagnosis and molecular capacity for multiple eligible laboratories.

Measurable Goals

Progress Report DPDx and implementation of molecular diagnosis of parasitic diseases:

- List equipment purchased (telediagnosis and molecular diagnostic equipment).
- List software purchased.
- Specify if funds were used to implement telediagnosis in remote laboratories. If they were, describe in detail the activities developed in the sites equipped using the telediagnosis equipment, e.g., type of activities such as training and how many telediagnosis consultations were addressed.
- Describe any training activities developed with the use of telediagnostic approaches.
- List the DPDx training workshops attended by the staff.
- List the DPDx training activities in which the laboratory staff is engaged.
- Describe any diagnostic parasitology training needs addressed with the funds granted.
- List how many telediagnosis consultations were made (inquiries sent to CDC or other reference laboratories; inquiries received from regional labs). Describe how many cases were successfully addressed and how many needed a follow up or confirmatory diagnosis, e.g., PCR. Include and specify telediagnosis inquiries received by consulting labs as well.
- List how many PCR tests were performed on parasites using protocols transferred by CDC (including those performed for test validations).
- List the specific PCR-based tests that are being validated or are already in use for the diagnosis of parasitic diseases.
- List how many cases/samples required the use of PCR-based tests for confirmatory diagnosis.
- Additional comments.

Availability of funds

Proposals should range from $5,000 and $40,000.

F. CaliciNet –Capacity for molecular identification of noroviruses

Accurate, rapid and sensitive diagnosis of enteric viruses (e.g., noroviruses) associated with foodborne outbreaks requires molecular detection as well as genetic characterization of the viruses. Implementation of such techniques in public health laboratories will allow for rapid identification of viruses as well as implementation of appropriate control efforts in a timely manner for both food safety and food security events. Strain identification will be enhanced by participation in an integrated system for molecular fingerprinting (CaliciNet).

Program Activity Contact information

Jan Vinjé (404)639-3721

Instructions for use of funds

Funds are available for CDC training to develop capacity to perform RT-PCR (including real-time PCR) for noroviruses viruses and for participating in CaliciNet (National Norovirus Outbreak Network) which uses nucleotide sequence analysis for genotyping of norovirus strains.

Measurable Goals

Progress Report – Molecular Diagnosis Special Instructions:

- List equipment purchased.
- List software purchased.
- Specify if funds were used to implement molecular diagnostic techniques in remote laboratories.
- Describe any training needs addressed or training activities developed with funds received.
- Specify whether the laboratory has validated the diagnostic procedure under CDC guidance.
- Estimate how many specimens were tested or how many PCR reactions were performed for confirmatory diagnosis.
- Estimate a goal for next FY regarding the use of molecular techniques. Include estimate of how many specimens may be processed and tested if possible.
- Participate in CaliciNet.
- Additional comments.

Availability of funds

Proposals should range between $10,000 and $20,000.

G. NARMS

NARMS activities enhance the collection and transport of specimens from patients and improve laboratory-based surveillance for emerging foodborne pathogens including antimicrobial resistant foodborne pathogens.

The National Antimicrobial Resistance Monitoring System (NARMS) was established in 1996 within the framework of the ELC Program. The primary objective is to monitor antimicrobial resistance among human isolates of non-Typhi Salmonella, Salmonella serotype Typhi, Salmonella Paratyphi A and C, Escherichia coli O157, and Shigella. Because NARMS data have been collected systematically since 1996, the system is able to monitor emerging patterns of resistance. Beginning in 2003, NARMS was nationwide

and receiving isolates from 50 states and 3 local health departments. It is anticipated that all state public health laboratories will again participate in NARMS in 2010.

Program Activity Contact information

Ezra Barzilay (EDEB) (404)639-3330
Jean Whichard (EDLB) (404)639-2000
Regan Rickert (EDEB) (404)639-3479

Instructions for use of funds

Funds are available for laboratory supplies to ship every 20th non-Typhi Salmonella isolate, every 20th Shigella isolate, every 20th E. coli O157 isolate, every Samonella Typhi, every Listeria monocytogenes, every Salmonella Paratyphi A and C and every non-cholerae Vibrio isolate received at the state public health laboratory to CDC for antimicrobial susceptibility testing.

The NARMS sampling scheme is periodically reviewed and subject to change to address emerging or increasing resistance patterns. The NARMS scheme may also be modified to implement enhanced surveillance over a specified period of time. Changes in the scheme are discussed with the sites in NARMS quarterly conference calls prior to implementation.

Measurable Goals

Include the total number of non-Typhi Salmonella, Salmonella Paratyphi A and C, Salmonella Typhi, Shigella, E. coli 0157, Listeria monocytogenes, and Vibrio isolates submitted to NARMS in the previous calendar year. Include the total number of isolates received by your laboratory and of that total number include the percentage of isolates that were shipped to NARMS as well as submission frequency and number of conference calls attended. (See i.e. below)

Pathogen	Total # submitted to NARMS	Total # received by site laboratory	Percentage shipped to NARMS	Isolate submission frequency	Number of conference calls attended
Non-Typhi Salmonella	i.e. 25	500	5%	quarterly	4
Paratyphi A, C					
Salmonella Typhi					
Shigella					
E. coli 0157					
Listeria monocytogenes					
Vibrio					

Availability of funds

Proposals should range from approximately $1,000 to $7,500.

SECTION 2B

ANTIMICROBIAL RESISTANCE

Program Purpose

Priorities for antimicrobial resistance activities follow the action items found in A Public Health Action Plan to Combat Antimicrobial Resistance Part I: Domestic Issues (http://www.cdc.gov/drugresistance/actionplan/index.htm). In particular, prevention activities, enhanced local surveillance capacity, and improvement of laboratory detection are areas where state efforts would be most effective in detecting and preventing antimicrobial resistant infections. The specific activities expected in these three areas are described below.

Funding Guidance (Overall for Program)

The amount requested per applicant will vary depending on the range and scope of activities addressed. Additional guidance is listed below each activity.

Recipient activities

A. Surveillance for Drug Resistant Streptococcus pneumoniae

Pneumococcal disease is a common cause of morbidity and mortality in the U.S., and over the last two decades resistant pneumococcal strains have challenged our ability to treat these common infections. In 2000, a new vaccine that covered 7 pneumococcal serotypes (of 91 known) was licensed for children; this vaccine has been highly effective and disease caused by these 7 serotypes has declined by >99%. Since 2000, however, the U.S. has seen the emergence of a strain not covered by the vaccine--serotype 19A--that is highly resistant and has become the most common cause of pneumococcal infections in the U.S. The manufacturer of the 7 valent product, Wyeth Vaccines, now has a 13-valent formulation under review at FDA and hopes to have the new product licensed in third quarter 2009. The 13-valent formulation includes serotype 19A as well as the other more common strains not included in PCV7. Ongoing surveillance for DRSP will help monitor the effect of PCV13 on resistant infections and watch for the emergence of new resistant strains.

Sites can perform surveillance using a variety of methods including case-based approaches or aggregated antibiograms; sentinel sites or population-based approaches are appropriate.

Program activity contact information

Dr. Pekka Nuorti

Respiratory Diseases Branch, Division of Bacterial Diseases, National Center for Immunization and Respiratory Diseases
Phone 404-639-2906; email PNuorti@cdc.gov

Instructions for use of funds

Funds can be used for epidemiology or laboratory personnel, supplies, materials, or equipment as needed.

Measurable Goals

Goals would be an assessment of number of invasive pneumococcal cases identified and proportion of pneumococcal isolates resistant to key agents – penicillin, a macrolide (erythromycin, clarythromycin, azithromycin), and a third generation cephalosporin (ceftriaxone or cefotaxime)

Availability of funds

Level funding expected; small chance for an increase in funding.

B. Educational Efforts to Promote Appropriate Antibiotic Use - Get Smart: Know When Antibiotics Work in the Community

The purpose of this project is to assist state and local-level agencies in implementing health communication efforts and behavioral interventions to promote appropriate antibiotic use and prevent the spread of antimicrobial resistance. Funding proposals should address action items in the 2001 Public Health Action Plan to Combat Antimicrobial Resistance available on the internet at:

http://www.cdc.gov/drugresistance/actionplan/index.htm. An updated Public Health Action Plan to Combat Antimicrobial Resistance is currently under review. If it is published before ELC guidance is posted, ELC principal investigators will be updated with the relevant action items to address for this Activity.

Relevant action items from the 2001 Plan include:
(25) Conduct a public health education campaign to promote appropriate antimicrobial use.

(26) Develop and facilitate the implementation of educational and behavioral interventions that will assist clinicians in appropriate antimicrobial prescribing.

The Get Smart: Know When Antibiotics Work campaign targets healthcare providers, patients, and the general public to promote the appropriate use of antibiotics for upper respiratory infections (URIs) in outpatient community settings, according to action items 25 and 26 listed above. CDC and other public health and academic groups around the country have developed educational campaigns and behavior change strategies which promote the appropriate use of antibiotics for the treatment of many outpatient

conditions. Proposals for this education component should only be focused on the community and outpatient practice settings in reference to appropriate use of antibiotics for URIs. See www.cdc.gov/getsmart for more information (campaign objectives, goals, activities, etc.).

Program Activity Contact information

Darcia Johnson; tel:(404)639-3636, email: djohnson13@cdc.gov

Instructions for use of funds

Funds may be requested for:

- Partial or full salary for one staff project coordinator (health educator, behavioral scientist, etc.)
- Educational program implementation and evaluation
- General supply expenses (some printing and media efforts may also be funded; not to exceed 10% of the overall budget)
- Intra-state travel for local activities

Proposals for this section may only include educational efforts supporting Get Smart: Know When Antibiotics Work in the Community. **Do not** include requests for activities related to drug resistant Streptococcus Pneumoniae (DRSP) surveillance, healthcare–associated infections (specifically in hospitals or long-term care facilities), methicillin-resistant Staphylococcus Aureus (MRSA), or antibiotic use or resistant activities related to food animals/veterinary practice in this portion of the proposal. More details on the programs and recommendations are outlined in the following sections.

The following are suggested educational and evaluation approaches to prevent antimicrobial resistance and promote appropriate antibiotic use:

- Utilize several communication and proven effective behavioral change strategies to influence change at multiple levels – individuals, groups, and organizations or institutions.
- Encourage collaboration between a variety of partners (e.g. state and local health departments, health educators, epidemiologists, communication professionals, physicians and other healthcare providers, managed care organizations, professional medical associations, community interest groups, corporate partners, etc.).
- Include an evaluation component to monitor project implementation and demonstrate progress.

Funding should be requested to support a specific project promoting appropriate antibiotic use in the community. Applicants must demonstrate capacity to carry out the activity if it is funded. The project's timeline for completion and funding support should not exceed one year. Preferred activities will be replicated in that the work may apply to a large geographic area, may be duplicated elsewhere in the country, or will be available

online. Examples of possible projects include, but are not limited to: development of online or live continuing education, development of tools to help providers communicate with patients about appropriate antibiotic use, implementation of interventions aimed at the general public and providers to change knowledge, attitudes, and practices --- use indicators like changes in prescribing data and/or pre- and post-surveys to evaluate impact. If you have more than one project idea, you can submit multiple projects; however, each project needs a separate narrative and budget. If you submit multiple projects please rank them.

Criteria for funding:

- Proposed activities related to Get Smart: Know When Antibiotics Work in the Community should:
- Address the appropriate use of antibiotics in the community and outpatient practice settings using Get Smart materials, guidelines, and strategies
- All submissions must include the 12 requested pieces of information listed in the Application Format section and a separate budget.
- For assistance, refer to the Framework for Program Evaluation in Public Health (http://www.cdc.gov/eval/framework.htm) and Introduction to Program Evaluation for Public Health Programs Evaluating Appropriate Antibiotic Use Programs (http://www.cdc.gov/drugresistance/community/program-planner.htm#3). Evaluation should include tracking of activity outputs and outcomes, along with determining knowledge, attitude and behavior changes among the target audience(s). Project implementation and/or project impact must be assessed. You are required to demonstrate that you are building public health capacity by evaluating your efforts.

Measurable Goals

- Change in prescribing – healthcare provider target audience-Demonstrate that an existing proven effective intervention has an impact on increasing adherence to appropriate prescribing practices, including not prescribing for viral conditions and/or choosing narrow spectrum antibiotics when indicated. Collect prescribing data to demonstrate impact.

- Change in knowledge and attitudes – healthcare provider target audience-Demonstrate that an existing proven effective intervention can increase knowledge and improve attitudes of healthcare providers related to antibiotic resistance and appropriate antibiotic use. Collect survey and/or or other data to demonstrate impact.

- Change in knowledge, attitudes, and practices – general public target audience-Demonstrate that an existing proven effective intervention can increase knowledge and improve attitudes and practices of the general public related to antibiotic resistance and appropriate antibiotic use. Collect survey and/or or other data to demonstrate impact.

- Approaches to data collection could include, but are not limited to, implementing pre/post surveys, conducting in-depth interviews or focus groups, performing chart reviews, measuring media impressions, or accessing prescribing data.

Get Smart Application format:
The narrative portion of the application for the proposed project for the new fiscal year should include supporting information for the below listed headings. Project narrative (excluding budget narrative) should be 3-5 pages.
Numbers 1 through 5 include your project's background, significance, and summary, including objectives and target audiences

1. Project title (title of specific project for which you are seeking funding – not the name of your coalition, etc.)

2. Purpose of project (purpose of specific project for which you are seeking funding – not the purpose of your coalition, etc.)

3. Demonstrated need of project (scientific justification for why this project is of public health importance)

4. Objective(s): must be specific, measurable, achievable, realistic, and able to be accomplished in one year

5. Target audience(s): including, but not limited to healthcare practitioners, pharmacists, general public, underserved populations, health insurance organizations, pharmacy benefit management companies, retail health clinics, medical professional organizations, employers and/or employees, etc.

Numbers 6 through 12 include your project's methodology, desired impact, evaluation plan, and timeline for completion

6. List inputs/resources for the project: people, money, and information needed to conduct program activities effectively; specify role(s) and/or potential contributions of any listed partners

7. Describe the implementation plan for the project (i.e. what activities are needed to complete the project): actual actions and how they will be conducted by the program and its staff to achieve the desired outcomes in the target groups

8. List outputs for each component of the project: direct products of activities, usually some sort of tangible deliverable produced as a result of the activities (ex. number and types of healthcare providers who access a continuing education tool)

9. List short-term outcomes expected from each component of project (ex. increase in knowledge in healthcare providers upon completion of a continuing education activity)

10. List expected intermediate outcomes (ex. decrease in inappropriate prescribing (behavior change) among healthcare providers who completed a continuing education activity)

11. Describe how each component of the project will be monitored or evaluated (ex. the number of healthcare providers who complete a continuing education activity)

12. Project timeline: provide a table to describe the tasks and deliverables that will be accomplished each month (be specific); completion of project cannot exceed 12 months

Note: If you want to add information that is not included in the above list, add additional headings with supporting narratives.

Availability of funds

Amount requested by each applicant will vary depending on the range and scope of activities addressed. Funding will likely be in the range of $35,000 - $80,000.

C. Get Smart: Know When Antibiotics Work on the Farm

This campaign works to prevent the emergence and spread of antimicrobial resistance resulting from the use of antimicrobial agents in food-producing and companion animals. Applicants are encouraged to extend their Get Smart activities to include appropriate use of antimicrobial agents in animals. In particular, health departments may wish to collaborate with the state veterinary diagnostic laboratories, state departments of agriculture, industry leaders, and veterinary schools, if available, to implement educational materials and behavioral change strategies which promote appropriate use of antimicrobials. State public health veterinarians will likely be key partners in such activities. Funds also are available for participants to establish collaboration between state public health departments and schools of veterinary medicine to assist in expanding species-specific (cattle, poultry, swine, etc.) curricula for educating veterinary students on appropriate use of antimicrobials in veterinary medicine. Guidelines for appropriate use of antimicrobials in food-producing animals are listed in the World Health Organization's Global Principles for Containment of Antimicrobial Resistance in Animals for Food: http://whqlibdoc.who.int/hq/2000/WHO_CDS_CSR_APH_2000.4.pdf

Program Activity Contact information

Tegwin K. Taylor, DVM, MPH; tel: (404) 639-2894, email: tktaylor@cdc.gov

Instructions for use of funds

Funds may be requested for:

- Salary for one staff project coordinator (health educator, behavioral scientist, etc.).
- General supply expenses. Some printing and media efforts may also be funded.
- Intra-state travel for local activities and meetings.
- Travel and lodging for one person to attend the national appropriate antibiotic use conference in Atlanta, Georgia (not to exceed $1,500).

Proposed activities related to Get Smart: Know When Antibiotics Work on the Farm should:

A. Pilot Test Veterinary Curricula, where applicable

B. Address the appropriate use of antibiotics in agriculture and veterinary settings, and

C. Include collaborations with various agriculture and veterinary partners. Species-specific activities are encouraged.

All submissions should include a program evaluation component. Program implementation and/or program impact should be assessed.

For consideration of funding each proposal must include:

A. A detailed description of the proposed project or activities.

B. An itemized budget outlining how the requested funds will be used

Priority will be given to proposals that are innovative, multifaceted, and strategically or theoretically based.

Measurable Goals

Once curriculum has been established, guidance will be provided for sites regarding program goals.

Availability of funds

The amount actually funded will vary, but awards generally will range between $5,000 and $30,000.

SECTION 2C

LYME DISEASE

Program Purpose

CDC maintains a national program for research and education directed at the prevention and control of Lyme disease. The activities of this program include national surveillance for Lyme disease cases, targeted epidemiological investigations, diagnostic and reference laboratory services, evaluation of diagnostic tests, implementation of innovative tick control methods, and consultation and education for health professionals and the general public.

Over the last decade, reported Lyme disease cases have increased substantially in the United States (Bacon et al., 2008). Whether due to a true increase in disease incidence or simply better recognition, this increase has strained the resources of many state and local health departments. Hardest hit are the Healthy People 2010 reference states (Connecticut, Delaware, Maryland, Massachusetts, Minnesota, New Jersey, New York, Pennsylvania, Rhode Island, and Wisconsin) where Lyme disease is considered highly endemic. The growing burden of surveillance activities threatens to compromise the quality of the information obtained, including data needed to guide and evaluate prevention campaigns.

Through the ELC program, CDC aims to sustain and enhance surveillance for Lyme disease by state health departments. The principal components of this program are: 1) support for the routine collection and processing of surveillance data, and 2) support of innovations to improve the efficiency of Lyme disease surveillance activities. In addition, limited funding may be available to support educational or entomologic activities that enhance knowledge of disease risk (i.e. professional training) -- and thereby detection and reporting of cases -- in areas of possible disease expansion or emergence. Through quarterly meetings (by conference call or in-person), cooperative agreement partners will be asked to report on the successes and failures of their surveillance system, and will be asked to promote and share prevention campaign resources.

Bacon RM, Kugeler KJ, Mead PS. Surveillance for Lyme disease--United States, 1992-2006. MMWR Surveill Summ. 2008 Oct 3;57(10):1-9.

Additional information may be found in MMWR articles, Emerging Infectious Diseases Journal articles, and other publications available at the following website: http://www.cdc.gov/ncidod/dvbid/lyme/ld_resources.htm.

Funding Guidance (Overall for Program)

Anticipated funding of $480,000 to support up to 12 states (average award of $40,000 per state). States may request funding for any combination of Activities A, B, and C (described below). However, funding to Enhance Detection (Activity C) will be capped at

$96,000 (20% of total), with a maximum of $8,000 awarded per state. Eligible applicants are encouraged to contact the CDC Lyme disease program before applying. See below for funding availability specifics for each activity.

Minimum Eligibility Criteria

For FY 2010, eligible grantees will include only those states for which the annual incidence rate of Lyme disease in 2006 as reported to CDC (Bacon et al., 2008) is higher than the Healthy People 2010 objective (9.7 new cases per 100,000 population).

If additional funding is available, consideration for eligibility will also be given to states that border the high incidence states as defined above (please contact the Lyme disease program before applying).

Recipient Activities

A. Core Surveillance: Perform surveillance for Lyme disease. Conduct data analysis, interpret, and disseminate results.

Program Activity Contact information

Paul Mead, tel: (970) 221-6474 or Alison Hinckley, tel: (970) 266-3558
Chief, Epidemiology and Surveillance Activity, Bacterial Diseases Branch Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases

Instructions for use of funds

- personnel (or contractor) time to collect, record, verify and analyze routine surveillance data on all laboratory and physician diagnosed cases of Lyme disease
- personnel time to improve completeness of reporting for the following variables: race, clinical features, and county of exposure
- personnel time to report Lyme disease surveillance data to the CDC National Notifiable Disease Surveillance System (NNDSS) through the National Electronic Telecommunications System (NETSS) or the National Electronic Disease Surveillance System (NEDSS), as per state protocol
- purchasing software to be used with routine statistical or geospatial/temporal analysis of data
- personnel time to perform routine data quality/completeness reviews
- personnel time and/or printed materials to aid in dissemination of data (webpage, annual reports) on a regular basis

Measurable Goals

- hiring or retention of qualified personnel

- training of personnel
- reporting of confirmed and probable Lyme disease cases to CDC (via NEDSS) in a timely manner
- acquisition of software and training necessary for data analysis
- evaluation of key demographic or geographic parameters (used to target prevention)
- development of maps detailing endemic counties and/or high-risk areas (annually evaluated)
- frequency of and improvements due to routine data quality/completeness checks
- informal dissemination of information to public health partners (e.g. through participation on quarterly Lyme call)
- routine dissemination (webpage, annual reports) of aggregate results

Availability of funds

Up to 100% of funding ($480,000 total or $40,000 per applicant) will be allocated for the core surveillance activities described above.

B. Innovation: Develop, refine, or enhance existing surveillance capacity and activities to create a more sustainable and informative Lyme disease surveillance system.

Program Activity Contact information

Paul Mead, tel: (970) 221-6474 or Alison Hinckley, tel: (970) 266-3558
Chief, Epidemiology and Surveillance Activity, Bacterial Diseases Branch Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases

Instructions for use of funds

- supporting personnel time to conduct evaluations of surveillance system quality and potential improvements
- investing in information technology to develop or expand more efficient surveillance tools (e.g. electronic laboratory or physician reporting)

Measurable Goals

- hiring or retention of qualified personnel
- training of personnel
- development and dissemination (e.g. to public health partners) of informal reports regarding quality and coverage of surveillance data
- steps taken towards development or expansion of information technologies or electronic reporting

- overall improvement in completeness of reporting and healthcare provider compliance

Availability of funds

Up to 100% of funding ($480,000 total or $40,000 per applicant) will be allocated for the innovation activities described above.

C. Enhance detection: Perform additional educational and entomologic activities that complement Lyme disease surveillance.

Program Activity Contact information

Paul Mead, tel: (970) 221-6474 or Alison Hinckley, tel: (970) 266-3558
Chief, Epidemiology and Surveillance Activity, Bacterial Diseases Branch Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases

Instructions for use of funds

- personnel time to perform educational outreach to healthcare providers (to improve recognition, diagnosis, test interpretation, reporting, and completeness of reporting), especially in areas of Lyme disease expansion or emergence
- personnel time to perform educational outreach to community members to improve case recognition (and subsequent reporting) of Lyme disease, especially in areas of expansion or emergence
- personnel time and materials to perform entomologic activities (e.g. tick prevalence or infectivity investigations that help to define at-risk areas

Measurable Goals

- hiring or retention of qualified personnel
- training of personnel
- frequency of presentation/outreach activities and extent of coverage for targeted groups
- development and dissemination of maps highlighting distribution of vectors, infectivity rate, or otherwise defined at-risk areas

Availability of funds

Up to 20% of funding ($96,000 total or $8,000 per applicant) will be allocated for the other activities described above.

SECTION 2D

WEST NILE VIRUS

Program Purpose

CDC's West Nile virus (WNV) program provides funding through the WNV ELC program to support state and local health departments in the development and implementation of effective surveillance, laboratory diagnosis, prevention and control of human infections with WNV and other medically important arboviruses.

WNV has established itself in the U. S. for the foreseeable future. Approximately 11,753 U.S. cases with severe neurological disease have been reported to ArboNET since 1999, including 1,131 deaths. In addition, more than 2,000 presumptively viremic donors were identified through blood donor screening. It is estimated that there have been more than 1.6 million WNV infections nationwide since 1999. Since 1999, evidence of WNV human disease has been detected in all geographic regions of the continental U. S. and in the territory of Puerto Rico. The relative stability in the number of WNV reported cases over the past several years represents endemic WNV transmission in the continental U. S. The continued high number of reported human WNV diseases reflects the complicated ecology of WNV and the still somewhat limited understanding of all the factors that drive virus activity from year to year. Surveillance efforts, coupled with research, continue enhance our understanding of transmission dynamics. A number of factors affect the utility of disease response including lack of pre-emptive and aggressive mosquito control by the affected jurisdictions during the spring and summer months, limited or lack of implementation of integrated pest management activities, and lack of human protective behaviors such as use of effective repellants.

The natural transmission cycle of WNV and other domestic arboviruses involves mosquitoes becoming infected by feeding on virus-infected birds or other animals. Sixty three different species of mosquitoes have been shown to be infected with WNV. These species include avian-, mammalian-, amphibian-, and reptilian-biting mosquitoes. The expanding WNV epizootic, which is most likely associated with bird migration, underscores the continued risk for WNV disease and emphasizes the need for continued vigilance for the spread of the virus. In addition, blood transfusion and organ transplant transmission of WNV, as well as intrauterine transmission, were documented in 2002 for the first time. Additional information may be found in MMWR articles, Emerging Infectious Diseases Journal articles, and other publications available at the following website: http://www.cdc.gov/ncidod/dvbid/westnile/publications.htm

Funding Guidance (Overall for Program)

Applicants should request funding needed to support a fully operational WNV surveillance, prevention and control program.

Recipient Activities

Recipients should maintain or enhance existing bird, mosquito, human and equine surveillance for medically important arboviral diseases, particularly WNV, using methods appropriate to their jurisdiction. Surveillance activities should also include documenting human cases with novel routes of virus transmission, in addition to detection and reporting of pregnant women infected with WNV, instances of possible WNV transmission through breastfeeding, and WNV transmission through blood donation and organ transplantation. All recipient activities should be consistent with published CDC guidelines entitled Epidemic/Epizootic West Nile Virus in the United States: Revised Guidelines for Surveillance, Prevention and Control, April 2003 - available via the CDC Web site at: http://www.cdc.gov/ncidod/dvbid/westnile/resources/wnv-guidelines-aug-2003.pdf

Specific recipient activities in priority order include:

1. Maintenance of human surveillance activities for WNV and other medically important arboviruses. Basic requirements of a human surveillance program should involve:

   A. Participation in ArboNET, the computerized national surveillance system developed to track activity of WNV and other medically important arboviruses.

   B. Maintenance and/or enhancement of laboratory capacity to identify WNV infections in humans and other animal species. Testing protocols include but are not limited to human IgM and IgG enzyme-linked immunosorbent assay (ELISA), equine and other animal IgM ELISA, reverse-transcriptase polymerase chain reaction (RT-PCR), real-time RT-PCR, NASBA, antigen-detection ELISA, virus isolation techniques and virus identification using virus-specific monoclonal antibodies (requires BSL3 level containment).

   C. Data analysis and interpretation and dissemination of results.

2. Maintenance or expansion of environmental surveillance systems to include:

   A. Participation in ArboNET, the computerized national surveillance system developed to track activity of WNV and other arboviruses.

   B. Maintenance and/or enhancement of laboratory capacity to identify WNV and other medically important arboviruses for environmental surveillance purposes. Specific environmental surveillance activities include sustaining capabilities to capture, identify and test mosquito vectors, avians and vertebrates for exposure to WNV and other medically important arboviruses.

   C. Conduct data analysis and interpret and disseminate results.

3. Support prevention and educational activities for WNV and other medically important arboviruses.

Program Activity Contact information

Tracy Badsgard; tel (970) 221-6422; e-mail: tbadsgard@cdc.gov

Measurable Goals

1. Maintain or enhance diagnostic laboratory capacity and proficiency to conduct human surveillance.
2. Report all identified human and presumptive viremic donors to ArboNET.
3. Increase the number of human diagnostic confirmatory tests conducted in the public health laboratories.
4. Report all numerator and denominator data for dead birds and mosquitoes tested for medically important arborivuses.
5. Report, to the extent possible, on executed prevention measures and related disease prevention/control activities.

SECTION 2E

INFLUENZA

Program Purpose

Seasonal influenza surveillance currently consists of 9 system components which provide data on influenza viruses, outpatient influenza-like illness, influenza-associated hospitalizations, influenza-associated deaths, and the geographic distribution of the viruses and will form the foundation for pandemic influenza surveillance. The purpose of this funding is to assure a minimum level of epidemiologic and laboratory capacity among ELC grantees to carry out influenza surveillance and diagnostics. Awards will support a minimum of 0.5 FTE personnel to conduct influenza surveillance, and a minimum of 0.5 FTE personnel to conduct influenza diagnostic testing. The specific aims of this guidance are to improve and expand the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) including virologic specimen submission; enhance electronic influenza mortality surveillance; explore sources of electronic influenza morbidity data; expand laboratory capacity to perform influenza virus isolation, typing and sub-typing year round, and facilitate the improvement of influenza surveillance as recommended by the Council for State and Territorial Epidemiologists (CSTE).

Funding Guidance (Overall for Program)

Expected total funding is $5.2 million, which represents a decrease from the previous year.

Recipient Activities

A. Influenza Surveillance- The specific aims of this guidance are to improve and expand the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) including virologic specimen submission; enhance electronic influenza mortality surveillance; explore sources of electronic influenza morbidity data and facilitate the improvement of influenza surveillance as recommended by the Council for State and Territorial Epidemiologists (CSTE).

Recipients should identify an influenza surveillance coordinator whose responsibilities include:

- Recruit and retain sentinel providers for ILINet.
- Facilitate influenza specimen submission from ILINet sites to the state public health laboratory if needed.
- Encourage the collection of year-round influenza surveillance data in ILINet.
- Explore the availability and utility of existing sources of electronic influenza morbidity (including influenza hospitalization data) and mortality data.
- Facilitate weekly reporting of the State and Territorial Epidemiologists Report during influenza season.

- Facilitate reporting of influenza-related pediatric deaths through the National Notifiable Diseases Surveillance System.
- Investigate reports of novel influenza A virus infection in your state or jurisdiction.
- Develop a collaborative relationship between ELC staff and Emerging Infectious Program (EIP) staff in those states with an EIP influenza project.
- Work with CDC to develop mechanisms for reporting of influenza associated hospitalizations, electronic influenza laboratory reports and electronic influenza death reports.
- Act as a CDC point of contact for influenza surveillance.

Program Activity Contact information

Lynette Brammer, MPH (404) 639-1303
Lyn Finelli, DrPH (404) 639-2554

Instructions for use of funds

Awards will support a minimum of 0.5 FTE personnel to conduct influenza surveillance. Equipment costs will also be considered if they directly benefit the specific aims of this program.

Measurable Goals

- One regularly reporting ILINet site per 250,000 population or a minimum of 10 sites.
- State and territorial epidemiologist report submitted for >90% of possible weeks during influenza season (weeks 40-20)
- Timely notification (within 3 weeks of death) of influenza-associated pediatric deaths and completion of case report form (within 2 months of death).

B. Influenza Diagnostic Testing- expand laboratory capacity to perform influenza virus detection (by PCR and culture), typing and sub-typing year round.

- Expand and maintain laboratory capacity to perform virus isolation, typing and sub-typing of influenza viruses year-round.
- Establish and maintain year-around molecular testing capacity, such as real-time PCR for detection of avian and novel influenza viruses.
- Maintain weekly reporting of influenza test results from the U.S. WHO collaborating laboratories in your jurisdiction (all state public health laboratories particiapate in national virologic surveillance as a WHO collaborating laboratory).
- Maintain systematic submission of influenza virus isolates and clinical material for national virologic surveillance by public health World Health Organization (WHO) collaborating laboratories in your jurisdiction.
- Collaborate with other laboratories and rapid influenza testing sites in the state to acquire virologic testing results data and specimens for further virologic testing.

Program Activity Contact information

Lynette Brammer, MPH (404) 639-1303
Lyn Finelli, DrPH (404) 639-2554

Instructions for use of funds

Awards will support a minimum of 0.5 FTE personnel to conduct influenza diagnostic testing. Equipment costs will also be considered if they directly benefit the specific aims of this program (i.e., platforms for molecular diagnostics, specimen storage freezers, and IT equipment for personnel funded under this supplement).

Measurable Goals

- Reporting of influenza test results from the public health laboratory to CDC within three weeks of the date tested year-round.
- Submission by the public health laboratory of a minimum of 10 influenza virus isolates to CDC for further characterization.
- Maintain proficiency in PCR methods for influenza virus detection, typing, and subtyping by enrolling in a proficiency testing program and scoring 80% or better as per CLIA qualifications.
- Report the subtype of >75% of influenza A viruses tested by the public health laboratory.

SECTION 2F

VACCINE EFFECTIVENESS

Program Purpose

The purpose of this section is to maintain, enhance and complement specific activities associated with 317 Recovery Act immunization funding. Specifically, this attachment includes surveillance and vaccine evaluation activities related to Quadrivalent Meningococcal Conjugate vaccine, Haemophilus influenza type B, 13-valent Pneumococcal Conjugate vaccine, Varicella vaccine and the Rotavirus vaccine.

A limited amount of non-Recovery Act funding is available (see Availability of Funds under A, B, C, and D, below for specifics) to maintain, enhance and complement the intent of the 317 Recovery Act funding. All ELC recipients are eligible to request funding under this section whether or not they applied for or received an award under the 2009 ELC Recovery Act Section 317 Immunization Program Funding Opportunity Announcements.

Recipient activities

A. Enhanced meningococcal disease and invasive Haemophilus influenza type B surveillance

The purpose of this program is to build epidemiologic and laboratory capacity to improve diagnosis of vaccine-preventable bacterial causes of meningitis and invasive disease, specifically Neisseria meningitidis and Haemophilus influenzae.

Availability of funds

Recovery Act recipients under 2009 ELC FOA CI07-70403ARRA09 should continue MCV evaluation and other activities approved and funded under that FOA In addition, approximately $100,000 in non-Recovery Act funding is expected to be available for FY 2010 awards for the activties that follow. Individual awards may range from approximately $5,000 to $10,000.

A.1. Enhanced Meningococcal disease surveillance:

The specific aims of this activity are to improve detection of changes in the epidemiology of meningococcal disease that would require a change in policy or chemoprophylaxis recommendations.

- Determine the serogroup of all cases of meningococcal disease
- Determine vaccination status, date of vaccination, and type of vaccine, for all cases of meningococcal disease among 11-21 year-olds.

- Conduct antimicrobial resistance testing on all meningococcal disease isolates or ship isolates to CDC for antimicrobial resistance testing.
- Act as a CDC point of contact for meningococcal disease surveillance.
- Collaborate with CDC on evaluations of meningococcal disease surveillance.

A.2. Enhanced invasive Haemophilus influenzae type B surveillance:

The specific aims of this guidance are improve detection of type B Haemophilus influenzae disease in children <5 years of age.

- Determine the serotype of all cases of invasive Haemophilus influenzae in children < 5 years of age.
- Determine the vaccination status, date of vaccination, and type of vaccine for all cases of invasive Haemophilus influenzae in children <5 years of age.
- Act as a CDC point of contact for invasive Haemophilus influenzae surveillance.

Program activity contact information

Jessica MacNeil, MPH (404) 639-1194
Amanda Cohn, MD (404) 639-6039

Instructions for use of funds

Awards will support up to a .25 FTE personnel to conduct meningococcal disease and Haemophilus influenzae surveillance. Awards can also support supplies for diagnostic testing, including serogrouping,serotyping, and antimicrobial resistance testing. Awards can also support shipping isolates to CDC for further testing.

Measurable Goals

- Grantees should be able to confirm serogroup of 100% of identified meningococcal disease cases and 90% of Haemophilus influenzae cases in children <5 years.

- Grantees should be able to confirm vaccination status of 90% of meningococcal disease cases in persons 11-25 years-old and 90% of Haemophilus influenzae cases in children <5 years-old.

B. Assessing effectiveness of 13-valent pneumococcal conjugate vaccine.

The purpose of this project is to support the evaluation of the effectiveness of PCV13 as used in routine practice.

Availability of funds

Recovery Act recipients under 2009 ELC FOA CI07-70404RRA09 should continue PCV effectiveness activities approved and funded under that FOA. Availability of additional non-Recovery Act funding for FY2010 awards is uncertain.

C. Assessing Varicella Vaccine Effectiveness in School Settings through Varicella Outbreak Investigation

The purpose of this project is to strengthen investigations of varicella outbreaks among school-aged children for the purpose of conducting time-limited evaluations of two-dose varicella vaccine effectiveness in school settings.

Availability of funds

No additional funding beyond the 2009 ELC Recovery Act awards is expected to be available. Recovery Act recipients under 2009 ELC FOA CI07-70406ARRA09 should continue activities approved and funded under that FOA.

D. Rotavirus Vaccine Effectiveness

The purpose of this project is to support a network of sites within the ELC program to conduct active surveillance for cases of acute gastroenteritis among children under 5 years of age in emergency department (ED) and inpatient hospital settings within specific catchment areas.

Availability of funds

No additional funding beyond the 2009 ELC Recovery Act awards is expected to be available. Recovery Act recipients under 2009 ELC FOA CI07-70405ARRA09 should continue activities approved and funded under that FOA.

SECTION 2G

PRION DISEASE

Program Purpose

Prion diseases, or transmissible spongiform encephalopathies (TSEs), are a family of rare, progressive, invariably fatal neurodegenerative disorders that affect both humans and animals. They are distinguished by long incubation periods and a characteristic pathology of the brain that includes spongiform changes. Confirmation of a clinical diagnosis of prion disease generally requires the study of brain tissue obtained through biopsy or autopsy.

Creutzfeldt Jakob disease (CJD) and variant CJD (vCJD) are distinct human prion diseases. CJD refers to the classic forms of human prion disease that are endemic in the U.S. and throughout the world. vCJD refers to a clinically and pathologically distinct form of CJD for which there exists a strong etiologic link to bovine spongiform encephalopathy (BSE, commonly known as mad cow disease).

Working with its state and local health department partners, CDC is responsible for monitoring the national occurrence of human prion diseases in order to increase knowledge about these incurable diseases and to inform related public health control and prevention policies. To carry out this mission, the CDC and its many partners conduct prion disease surveillance through several different mechanisms. In addition to mortality data reviews, these mechanisms include activities designed to increase and maintain the number of brain autopsies on clinically diagnosed and suspected cases of prion disease. To facilitate this effort, since 1996-1997 CDC has supported the National Prion Disease Pathology Surveillance Laboratory at Case Western Reserve University that provides US clinicians and public health authorities with access to free, state-of-the-art prion diagnostic services (see www.CJDsurveillance.com).

There is continuing concern in the United States about both animal and human prion diseases. In addition to concerns about continuing occurrences of iatrogenic cases of CJD, the spread of BSE to humans has raised the issue of possible zoonotic spread of chronic wasting disease (CWD) in deer and elk. CWD has been documented in herds of farmed elk and is occurring in increasing numbers and spreading to more geographic areas of the country among free-ranging deer and elk. In addition, concerns exist due to the recently increased importations of Canadian cattle into the U.S. and the continuing occurrence of cases of BSE in cattle born in North America (totals: 16 in Canada, 2 in the U.S.), including three BSE cases identified in 2007 and four BSE cases identified in 2008.

Links for additional information

Additional information may be found in MMWR articles, Emerging Infectious Diseases Journal articles, and other publications available at the following website:

http://www.cdc.gov/ncidod/dvrd/prions/index.htm

Funding Guidance (Overall for Program)

Availability of funds

Approximately $400,000 is available in Fiscal year 2010 to support activities under this announcement. The anticipated funding range is between $16,000 and $110,000 per site depending primarily on population size, proposed expenditures, and anticipated numbers of human prion cases reported per year.

Minimum Eligibility Criteria

Eligible areas for these funds are the eight state or local health departments funded by cooperative agreement funds in any year 1996 through 2009 for enhanced prion surveillance (ID, MI, NJ, New York City, TX, WA, WI, and WY). Additionally, funds may be available for other state or local health departments who have developed a special interest in enhancing its prion surveillance activities. Considerations include an applicant's population size, previously documented occurrences of cluster(s) of human cases, proximity to Alberta Canada the (epi center in North America for BSE), the occurrence of BSE in the state, the presence of CWD and participation in studies of risk of human CWD. Representatives of such health departments are encouraged to contact prion program staff at CDC before submitting their application (404-639-3091).

Recipient Activities

a. Continue enhanced surveillance for CJD and the possible emergence of new variant forms of CJD.
b. Maintain regular contact with the National Prion Disease Pathology Surveillance Center at Case Western Reserve University.
c. Work collaboratively with pathologists, neurologists, funeral and mortuary directors, and other appropriate professionals within the state to maximize communications and reporting of suspected and diagnosed cases of CJD.
d. Work collaboratively with CDC and other sites funded for enhanced surveillance of CJD and other prion diseases.
e. Increase the number of autopsies performed on suspected and clinically diagnosed cases of prion disease.
f. Report immediately to CDC any newly suspected or confirmed case of CJD in a person less than 55 years of age as well as any case of suspected or confirmed CJD that may be the result of iatrogenic transmission.
g. Submit to CDC the following portions of the medical record for each person less than 55 years of age who is suspected of having or is diagnosed with CJD: admission summary, discharge summary, EEG reports, MRI reports, neurology consultation notes, psychiatry consultation notes, pathology reports from a biopsy, and pathology reports from autopsy.

h. At least quarterly, submit a line list of all persons with a suspected or confirmed diagnosis of CJD. Indicate which reports your project area accepts as a case (i.e., definitive, probable, possible, neurologist diagnosed) and for those cases include the following information in a line list: 1) Year of death, 2) State of residence, 3) Sex, 4) Age, 5) Date of birth, 6) CJD Status, 7) Was the case diagnosed by a neurologist?, 8) Is the case still under investigation and if yes, please explain, 9) Was CJD noted on the death certificate?, 10) Was an Autopsy performed?, 11) Was a Biopsy performed?, 12) Were specimens sent to NPDPSC?, 13) Were specimens sent to another laboratory?, 14) Were clinical data for cases < 55 years of age sent to CDC?, 15) Was the CJD Surveillance Report Form completed for cases < 55 years of age?.
i. Work collaboratively with the Department of Natural Resources to conduct chronic wasting disease related education and other activities aimed at persons who hunt within the state and those who consume venison provided by these hunters. (WI)
j. Work collaboratively with other states in the northwestern portion of the Untied States to coordinate a regional approach to enhance prion disease surveillance. (AK, ID, MT, WA)

Program Activity Contact information

Teresa Hammett, MPH, MS, tel: 404- 639-4389
Epidemiologist, Prion Diseases Activity, Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases

Lawrence B. Schonberger, MD, MPH, tel: 404-639-3091
Assistant Director for Public Health and Chief, Prion Diseases Activity, Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases

Ermias Belay, MD, tel: 404-639-3091
Associate Director for Epidemiological Science and Medical Epidemiologist, Prion Diseases Activity, Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases

Instructions for use of funds

Funds provided under this announcement must support activities directly related to prion surveillance.

Measurable Goals

a. Provide evidence of active surveillance activities conducted for CJD.
b. Report the number of suspected and clinically diagnosed cases of prion diseases for which biopsy or autopsy was conducted.

c. Report all suspected or confirmed case of CJD in a person less than 55 years of age as well as any case of suspected or confirmed CJD that may be the result of iatrogenic transmission to CDC within a reasonable time period.
d. Submit to CDC the pertinent portions of the medical record for each person less than 55 years of age who is suspected of having or is diagnosed with CJD. Pertinent sections of the medical record includes the admission summary, discharge summary, EEG reports, MRI reports, neurology consultation notes, psychiatry consultation notes, pathology reports from a biopsy, and pathology reports from autopsy.
e. Provide education to pathologists, neurologists, funeral and mortuary directors, and other appropriate professionals within the state to maximize knowledge and reporting of suspected and diagnosed cases of CJD.
f. Submit quarterly line lists of all persons with a suspected or confirmed diagnosis of CJD, indicating which reports your project area accepts as a case (i.e., definitive, probable, possible, neurologist diagnosed) and for those cases, include the following information in the line list: 1) Year of death, 2) State of residence, 3) Sex, 4) Age, 5) Date of birth, 6) CJD Status, 7) Was the case diagnosed by a neurologist?, 8) Is the case still under investigation and if yes, please explain, 9) Was CJD noted on the death certificate?, 10) Was an Autopsy performed?, 11) Was a Biopsy performed?, 12) Were specimens sent to NPDPSC?, 13) Were specimens sent to another laboratory?, 14) Were clinical data for cases < 55 years of age sent to CDC?, 15) Was the CJD Surveillance Report Form completed for cases < 55 years of age?.
g. Collaborate with the Department of Natural Resources to conduct CWD related education and other activities aimed at persons who hunt within the state and those who consume venison provided by these hunters. (WI)
h. Collaborate with other states in the northwestern portion of the Untied States to coordinate a regional approach to enhance prion disease surveillance. (AK, ID, MT, WA)

SECTION 2H

HEALTHCARE-ASSOCIATED INFECTIONS

Program Purpose

The purpose of this section is to maintain and enhance specific activities associated with 2009 ELC HAI Recovery Act funding. Recovery Act recipients under 2009 ELC FOA CI07-70402ARRA09 should continue activities approved and funded under that FOA .

Recipient Activities

A. The Campaign to Prevent Antimicrobial Resistance in Healthcare Settings

The purpose of this project is to facilitate the control of antimicrobial-resistant pathogens including MRSA, multidrug resistant gram-negative bacteria, and CDI, through the formation of collaboratives to reduce unnecessary antimicrobial use in healthcare facilities.

Three principle strategies form the foundation for reducing the threat posed by antimicrobial resistance in healthcare facilities. These consist of preventing the transmission of multidrug-resistant organisms (MDROs), preventing infections, and reducing unnecessary use of antimicrobials. Evidence indicates that significant portions of antimicrobial use in inpatient healthcare facilities is unnecessary and that such use may be reduced through multifaceted approaches involving prescription review and feedback, restrictions on use certain agents, automatic stop orders, and other stewardship practices implemented at the facility level. Because personnel at many facilities possess limited expertise in modifying physician prescribing behavior, collaboratives designed to foster peer-to-peer learning and sharing of best practices are more likely to reduce unnecessary use and may reduce infections caused by MDROs, especially Clostridium difficile. Although the measurement of facility-level antimicrobial use is not as widespread of a practice as the measurement of HAI as an outcome, there is an NHSN module designed to capture data on use and resistance. There are also NHSN modules for the measurement of MDRO infections, and especially Clostridium difficile (i.e., the CDAD module), rates of which are most closely linked to antimicrobial use.

Applicants addressing this topic area will initiate multi-facility collaboratives to reduce unnecessary antimicrobial use in acute care and/or long-term inpatient care facilities as a strategy to reduce infections caused by MDROs, especially CDI.
Priority will be given to applicants that propose collection of facility-level antimicrobial use data and tracking of an outcome, such as CDI, from facilities participating in the collaborative as a major component of their antimicrobial stewardship collaborative (see HAI Component of ELC Guidance for details on guidance for surveillance of HAI, which includes surveillance of antimicrobial use).

Program activity and contact information:

Arjun Srinivasan, M.D., Division of Healthcare Quality Promotion (DHQP), tel: (404)639-2303, email: beu8@cdc.gov

Instructions and Use of Funds

The amount requested by each applicant should include support to establish the collaborative and provide oversight and direction for the collaborative (e.g. an FTE or equivalent). The funds may also be used to assist with the implementation of stewardship interventions as well as with the development of surveillance systems to inform or evaluate the impact of programs to reduce unnecessary antimicrobial use (e.g. the NSHN antimicrobial use and resistance module). Additional funds can be used for recruitment and training of hospital-based staff for the development and implementation of stewardship interventions and the standard reporting of antimicrobial use data for inpatients.

Measurable goals

- Establishment of a multi-facility collaborative to develop and implement stewardship interventions
- Establishment of a surveillance mechanism to monitor antimicrobial use in the collaborative facilities
- Development and implementation of specific antimicrobial stewardship interventions in the collaborative facilities
- Reductions in targeted and/or total antimicrobial use in the collaborative facilities
- Reductions in CDI in the collaborative facilities

Availability of funds

Up to $150,000 total may be available for awards.

B. Building and Sustaining State Programs to Prevent Healthcare-associated Infections

The purpose of this project is to address the HHS Action Plan by using the existing ELC cooperative agreement to build and sustain state programs to prevent healthcare-associated infections.

Availability of Funds

Availability of non-Recovery Act funding for FY2010 awards is uncertain, yet funds may become available after issuance of this guidance. Therefore, interested ELC recipients are encouraged to propose activities in this FY2010 continuation. Recovery Act

recipients under 2009 ELC FOA CI07-70402ARRA09 should continue activities approved and funded under that FOA.