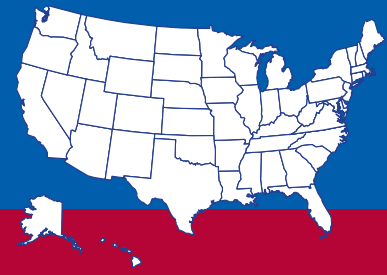# PUBLIC HEALTH EMERGENCY PREPAREDNESS COOPERATIVE AGREEMENT (PHEP) PROGRAM

EXPLANATION OF DATA

CDC's Center for Preparedness and Response funds state, local, and territorial public health preparedness activities through the **Public Health Emergency Preparedness (PHEP) cooperative agreement** and other funding methods. These resources help public health departments improve their ability to respond to a range of public health incidents and build better-prepared communities.

AT A GLANCE

Number of residents
Data source is the U.S Census Bureau (2017). **Annual Estimates of the Resident Population Change for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2017**.

Percent of residents who reside in Cities Readiness Initiative metropolitan statistical areas (CRI MSA)
Data source is the U.S Census Bureau (2017). **Annual Estimates of the Resident Population Change for the United States, Regions, States, and Puerto Rico: April 1, 2010, to July 1, 2017 (all counties by population)**. These data are only available for the states.

The percent of residents who reside in a CRI MSA includes the total number of CRI MSA residents divided by the state population. For MSAs that extend outside of state borders, residents of counties in other states have been excluded.

Number of local health departments
Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, as of December 31, 2018. These data are only available for the states and Los Angeles County.

Fact sheets include the total number of local health departments in each state. Note that some jurisdictions have a centralized public health structure with a single, state public health department. Those jurisdictions are designated with a footnote. In addition, the **definition of local health departments** may vary across jurisdictions. The number of local health departments may include the number of public health districts or community health boards for some jurisdictions.

Key Emergency Operations Center Activations
Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, as of December 31, 2018.

An emergency operations center is a location where highly trained experts monitor information, prepare for known (and unknown) public health events, and gather in the event of an emergency to exchange information and make decisions quickly. State, local and territorial fact sheets each describe two public health emergency operations center activations from 2016-2018.

Frequent public health emergencies
Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, as of December 31, 2018. Fact sheets include three example public health emergencies for each awardee.

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PREPAREDNESS AND RESPONSE FUNDING SNAPSHOT

Data sources are the Public Health Emergency Preparedness Cooperative Agreement funding announcements, FY 2016 July 1, 2016 – June 30, 2017 (Budget Period 5), FY 2017 July 1, 2017–June 30, 2018 (Budget Period 1), FY 2018 July 1, 2018 – June 30, 2019 (Budget Period 1 Supplement).

PHEP funds programs and activities that build and strengthen the nation's preparedness for public health emergencies, including natural, biological, chemical, radiological, and nuclear incidents. The PHEP amount includes these funding sources: Total Base plus Population Funding, Cities Readiness Initiative Funding, and Level 1 Chemical Laboratory Funding. Funding levels and types differ among PHEP recipients.

Note that FY 2016 Zika supplement funds are replenished FY 2016 PHEP funds that were reprogrammed during March 2016 for Zika response activities. While this funding originated from the CDC Zika Appropriation, funds returned to jurisdictions were not restricted to Zika activities.

PHEP IN ACTION

Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, as of December 31, 2018.

This section, through a short story, demonstrates how PHEP funds supported a jurisdiction's specific emergency response needs and the positive public health impact.

TOP PHEP CAPABILITY INVESTMENTS

Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, July 1, 2018 – June 30, 2019 (Budget Period 1 Supplement).

CDC has identified **15 public health preparedness capabilities** that guide state and local public health preparedness. Each of the public health capabilities identifies priority resources that contribute to routine public health activities, essential public health services, and preparedness and response functions. Note that these data refer only to PHEP funds. PHEP recipients allocate PHEP funding to specific capabilities in their annual budgets and work plans. Planned investments may not equate to actual expenditures. State and local government may also contribute funds not included in this data set.

MEDICAL COUNTERMEASURE READINESS

Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, as of December 31, 2018.

Medical countermeasure (MCM) Operational Readiness Reviews (ORRs) evaluate the ability to plan and successfully execute (operationalize) any large response requiring MCM distribution and dispensing. ORR data are used to facilitate more targeted technical assistance to help jurisdictions mature their preparedness programs. Key strengths and challenges were selected from MCM Operational Readiness Review reports and confirmed by each jurisdiction.

VULNERABLE POPULATIONS

Data source is the (2016) **CDC Behavioral Risk Factor Surveillance System (BRFSS) Annual Survey Data**. These data are only available for the states, localities, and Puerto Rico.

Successful planning for and responding to public health emergencies require addressing the needs of those who are most likely to be significantly affected. States and localities are required to consider the unique needs of their own populations.

PHEP-FUNDED STAFF

Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, data as of December 31, 2018.

PHEP provides preparedness support to states, localities, territories, and freely associated states through funded staff as well as various field placement programs.

CDC Field Staff: Field staff programs include Career Epidemiology Field Officers (CEFOs), Preparedness Field Assignees (PFAs), and public health advisors (PHAs).

CDC's CEFO program strengthens state, local, tribal, and territorial epidemiology capability by placing experienced, full-time epidemiologists in public health departments.

PHEP funds PHAs and PFAs who help PHEP cooperative agreement recipients develop their preparedness and response programs. The Division of State and Local Readiness employs a subset of PHAs as medical countermeasure specialists who focus on medical countermeasure planning requirements.

State, Local, and Territorial Staff: Categories include educators, epidemiologists, health professionals, laboratorians, and other staff. These staff are funded by the PHEP program in each jurisdiction.

EMERGENCY OPERATIONS COORDINATION

The **emergency operations coordination capability** is essential for the implementation of other public health preparedness capabilities during a public health emergency.

Number of minutes for public health staff with incident management lead roles to report for immediate duty
Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, 2015 data: July 1, 2014 – June 30, 2015 (Budget Period 3), 2016 data: July 1, 2015 – June 30, 2016 (Budget Period 4), 2017 data: July 1, 2016 – June 30, 2017 (Budget Period 5). These data are only available for the states, localities, and Puerto Rico.

This performance measure demonstrates a jurisdiction's ability to immediately assemble public health staff with incident management lead roles in response to an incident. The response time is the number of minutes between the time a designated official began notifying staff to report for immediate duty and the time the last staff person notified reported for immediate duty. Jurisdictions are required to measure response time in a real incident or an unannounced and immediate drill (versus a functional exercise where notice is provided). The performance target for this measure is 60 minutes.

If a jurisdiction did not submit data for this indicator, a dash is shown in the fact sheet. If a jurisdiction submitted data but did not have an incident meeting performance measure requirements, "N/A" is shown in the fact sheet. Previous years' fact sheets presented staff assembly

results for states, localities, territories, and freely associated states. Due to modified PHEP requirements, territories and freely associated states (except for Puerto Rico) did not report staff assembly results.

Conducted call-down drills to document the jurisdiction's ability to contact responders and activate the emergency operations coordination center
Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, 2015 data: July 1, 2014 – June 30, 2015 (Budget Period 3), 2016 data: July 1, 2015 – June 30, 2016 (Budget Period 4), 2017 data: July 1, 2016 – June 30, 2017 (Budget Period 5). These data are only available for the territories and freely associated states (except for Puerto Rico).

The role-based activation list must have current names and phone numbers of responders. It must also be maintained with current data and exercised during unannounced drills or real incidents at least semi-annually.

PUBLIC HEALTH LABORATORY TESTING

The public health laboratory testing capability is the ability to quickly detect, test, confirm, and report results to address actual or potential exposure to all hazards. Because the information provided by laboratories is essential for response to public health threats, these resources play an important role in emergency response planning and activities.

Result of communication drill between laboratory and epidemiological staff
Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, July 1, 2016 – June 30, 2017 (Budget Period 5). These data are only available for the states and localities.

Timely and effective communication between lab and epidemiological staff can reduce death and injuries in a public health emergency. The response time for this emergency contact drill is the number of minutes between the time that CDC contacted the on-call laboratorian or epidemiologist and the time the on-call-laboratorian or epidemiologist contacted CDC Emergency Operations Center to complete the drill cycle. The target time is 45 minutes.

PUBLIC HEALTH LABORATORY TESTING: LRN-B

CDC manages the Laboratory Response Network (LRN), a group of local, state, federal, and international laboratories. CDC funds a subset of jurisdictions through the PHEP cooperative agreement to establish and maintain LRN public health laboratories to respond to biological and chemical threats. The LRN is not limited to laboratories that receive PHEP funding. Other laboratories that participate include state and locally funded public health laboratories as well as federal, military, international, agricultural, veterinary, food, and environmental testing laboratories.

Number of LRN-B public health labs
Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, July 1, 2016 – June 30, 2017 (Budget Period 5). These data are only available for the states and localities.

The number of LRN Biological (LRN-B) public health labs includes the total number of local, county, and state public health laboratories. These labs test for one or more biological threat agents and are supported by the LRN program office at CDC. This number excludes the number of national, federal, military, agricultural, veterinary, food, environmental testing, and sentinel (for example, frontline, hospital-based) laboratories in each state.

Proportion of LRN-B proficiency tests passed

Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, 2015 data: July 1, 2014 – June 30, 2015 (Budget Period 3), 2016 data: July 1, 2015 – June 30, 2016 (Budget Period 4), 2017 data: July 1, 2016 – June 30, 2017 (Budget Period 5). These data are only available for the states and localities.

The LRN evaluates laboratory capabilities through proficiency testing. LRN-B laboratories must demonstrate the ability to receive, test, and report on one or more suspected biological agents from unknown samples. Proficiency test results are presented in the fact sheets as the proportion of proficiency tests passed to the total number of proficiency tests participated in by LRN-B public health laboratories each year.

If a laboratory is unable to successfully test for an agent within a specified time period and submit results, then the laboratory will not pass the proficiency test. If a laboratory fails a proficiency test, it is required to go through remediation proficiency testing to ensure that any problems are corrected. If a laboratory does not pass remediation testing, it can no longer perform testing in the LRN-B for that specific agent.

Previous years' fact sheets presented proficiency test results for all types of LRN-B laboratories (federal, military, agricultural, veterinary, food, and environmental). Currently, the proficiency test results only include those performed by the PHEP-funded laboratories.

If a laboratory did not participate in proficiency testing, the result is "Did not participate." Laboratories may not have capacity to test for the specific agents or they may have been closed for scheduled maintenance during the unannounced proficiency test. The results include first-round proficiency tests only; follow-up remediation tests are not included in the totals.

PUBLIC HEALTH LABORATORY TESTING: PULSENET

CDC coordinates **PulseNet,** which consists of local, state, and federal public health and food regulatory agency laboratories. PulseNet plays a vital role in monitoring and investigating foodborne illness outbreaks, strengthening national efforts to combat infectious disease outbreaks.

Laboratories in the PulseNet network use CDC's pulsed-field gel electrophoresis (PFGE) protocols to rapidly identify specific strains of Escherichia coli O157:H7 (E. coli) and Listeria monocytogenes (L. monocytogenes). L. monocytogenes is referred to as "Listeria" in the fact sheets. The percentages in the report are limited to human isolates. The target for this indicator is that states and localities will submit 90% of all tests performed to the PulseNet national databases within four working days. This timeframe allows the states and localities to demonstrate their ability to analyze samples and submit results in a timely manner to the PulseNet database. The laboratory located in Chicago is operated by the state of Illinois; therefore, no data for these indicators are presented in the Chicago fact sheet.

Percentage of E. coli-positive tests analyzed and uploaded into PulseNet national database within four working days

Data source is the CDC Office of Infectious Diseases (OID), National Center for Emerging and Zoonotic Infectious Diseases (NCEZID), 2015 data: January 1, 2014 – December 31, 2014 (Calendar Year 2014), 2016 data: January 1, 2015 – December 31, 2015 (Calendar Year 2015), 2017 data: January 1, 2016 – December 31, 2016 (Calendar Year 2016). These data are only available for the states and localities.

If a state or locality did not receive samples or did not perform testing, "N/A" is listed in the fact sheets for the percentage of tests analyzed and uploaded into PulseNet national database within four working days.

Percentage of Listeria-positive tests analyzed and uploaded into PulseNet national database within four working days
Data source is the CDC Office of Infectious Diseases (OID), National Center for Emerging and Zoonotic Infectious Diseases (NCEZID), 2015 data: January 1, 2014 – December 31, 2014 (Calendar Year 2014), 2016 data: January 1, 2015 – December 31, 2015 (Calendar Year 2015), 2017 data: January 1, 2016 – December 31, 2016 (Calendar Year 2016). These data are only available for the states and localities.

If a state or locality did not receive samples or did not perform testing, "N/A" is listed in the fact sheets for the percentage of tests analyzed and uploaded into PulseNet national database within four working days.

PUBLIC HEALTH LABORATORY TESTING: LRN-C

The LRN Chemical (LRN-C) is a national network of state and local public health laboratories that responds to public health emergencies related to chemical threat agents. Each laboratory has the capacity to monitor chemical exposures at their onset, assist local hospitals and first responders with sample collection, pack and ship to other network laboratories, or serve as a CDC sentinel site for large chemical emergencies.

Number and level of LRN-C labs
Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, 2017 data: July 1, 2016 – June 30, 2017 (Budget Period 5). These data are only available for the states, localities, and Puerto Rico.

There are three levels of LRN-C labs. The number of LRN-C labs listed is limited to those directly funded by the PHEP cooperative agreement (for example, state public health labs).

Proportion of core chemical threat agent detection methods successfully demonstrated by Level 1 and/or Level 2 labs
Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, 2015 data: July 1, 2014 – June 30, 2015 (Budget Period 3), 2016 data: July 1, 2015 – June 30, 2016 (Budget Period 4), 2017 data: July 1, 2016 – June 30, 2017 (Budget Period 5).

The proficiency testing results are the proportion of core methods successfully demonstrated by the Level 1 and Level 2 laboratories in each state or locality to the total number of core methods identified by CDC. CDC has identified nine core methods for detecting and measuring chemical threat agents and has conducted testing to determine LRN-C labs' proficiency in these methods.

Number of additional chemical threat agent detection methods demonstrated by Level 1 and/or Level 2 labs
Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, 2015 data: July 1, 2014 – June 30, 2015 (Budget Period 3), 2016 data: July 1, 2015 – June 30, 2016 (Budget Period 4), 2017 data: July 1, 2016 – June 30, 2017 (Budget Period 5).

CDC has identified four additional methods for Level 1 laboratories and Level 2 laboratories. A successful demonstration of these testing methods (four methods for Level 1 and up to two methods for Level 2) indicates ongoing proficiency. Testing for additional methods is optional for Level 2 laboratories.

Result of LRN-C exercise to collect, package, and ship samples

Data source is the CDC Center for Preparedness and Response, Division of State and Local Readiness, 2015 data: July 1, 2014 – June 30, 2015 (Budget Period 3), 2016 data: July 1, 2015 – June 30, 2016 (Budget Period 4), 2017 data: July 1, 2016 – June 30, 2017 (Budget Period 5).

Appropriate packaging and shipping of specimens is important to ensure the integrity of the specimen and the safety of all those involved. The Specimen Packaging and Shipping Exercise is designed to simulate CDC protocols for sample collection, packaging, and shipping in the event of a mass chemical emergency. This annual exercise evaluates the ability of a laboratory to collect relevant samples for clinical chemical analysis and ship those samples in compliance with International Air Transport Association regulations.

Each applicable jurisdiction is required to have at least one PHEP-funded laboratory participate in the exercise. For jurisdictions with multiple participating laboratories, all results are reported. If the jurisdiction passed the exercise, the result is "Passed." If the jurisdiction failed the exercise, the result is "Did not pass."

For more information on
CDC's Public Health Emergency Preparedness Program, visit
www.cdc.gov/cpr/map.htm