2019-2024 Public Health Emergency Preparedness (PHEP) Notice of Funding Opportunity - Supplemental Guidance and Resources

Domain 3: Considerations for Public Health Informatics

March 2019

Domain 3: Considerations for Public Health Informatics

Overview

Enhancing public health informatics capacity will advance public health surveillance and response capability by improving the timeliness, specificity, and accuracy of health information available for event detection and response. It will also improve the timeliness and accuracy of surveillance data that states voluntarily share with CDC to develop a national picture.[1]

Purpose

Improving national public health informatics capacity will advance surveillance and response capability by improving the data available for public health decision making. Enhancing state, local, and territorial health department capacity for electronic data exchange and use of participation in the following programs and systems can improve the timeliness, accuracy, and usability of surveillance data and accelerate the confirmation of findings.

- National Syndromic Surveillance Program (NSSP)
- National Notifiable Diseases Surveillance System (NNDSS)
- Electronic Laboratory Reporting (ELR)
- Electronic Case Reporting (eCR)
- Electronic Test Orders and Reporting (ETOR)

PHEP Programmatic Requirements

Per the 2019-2024 PHEP notice of funding opportunity, PHEP recipients are required to:

- Establish a common operating picture (COP) for effective response;
- Maintain current and future situational awareness efforts during incidents;
- Ensure information sharing systems are in place; and
- Maintain or increase reliable, resilient, interoperable, and redundant information and communication systems and platforms.

Sample Strategies and Activities

PHEP recipients can select one or more of the following strategies as part of their work plans; however, activities defined below are examples, not requisites. Recipients should select strategies and implement activities that expand and sustain current capacity based on the priorities and public health needs of their jurisdictions to make progress toward the outcomes defined in the PHEP logic model.

Following are examples of previously employed public health informatics population strategies and activities.

- *Implementation of a NNDSS:* Recipients have modernized and improved efforts to collect, analyze, and share disease surveillance data in a standards-based format between health care and public health systems and among jurisdiction-based surveillance systems and CDC. Public health uses this information to monitor, control, and prevent the occurrence and spread of state-reportable and nationally notifiable infectious and noninfectious diseases and conditions.
- *Use of ELR:* Recipients have expanded and updated the automated transmission of laboratory-related data from commercial, public health, hospital, and other laboratories to state and local public health departments through an electronic health records (EHR) system or a laboratory information management system (LIMS). ELR supports overall public health surveillance by helping improve the timeliness and accuracy of case

[1] Please note that this program area represents a broad array of initiatives and activities. As a result, the information included in these guidelines may not be all-inclusive.

detection and confirmation by state and local public health departments and subsequent information sharing with CDC.

- *Use of ETOR*: Recipients have increased the ability of a public health laboratory to receive electronic test orders from another laboratory or a clinical setting and to electronically return the test findings and other associated data to the ordering facility. This ability for public health laboratories to electronically exchange information makes the public health laboratories more efficient and increases the speed of identification of and response to diseases of public health importance.
- *Implementation of an NSSP:* Recipients have increased collaboration among public health agencies and local, state, and federal partners for timely exchange of syndromic data to improve the nation's situational awareness and responsiveness to hazardous events and disease outbreaks. Syndromic data include patient encounter data from emergency departments, urgent care, ambulatory care, and inpatient health care settings, as well as pharmacy and laboratory data. NSSP uses the BioSense platform, an integrated, cloud-based surveillance system for early detection and rapid assessment.
- *Use of eCR:* Recipients have improved automated transmission of information from the clinical setting, specifically from an EHR, to the public health agency in compliance with jurisdiction-specific disease reporting regulations. eCR supports overall public health surveillance by helping improve the timeliness and accuracy of case reporting and confirmation to state and local public health departments and subsequent information sharing with CDC.
- *Enhancing the public health information systems workforce:* Recipients have developed targeted, cross-cutting workforce training to support staff development and maintain or increase the functionality and capacity of public health information systems. This may be accomplished through designation of public health information systems specialists, developing and sustaining core personnel, or increasing overall public health informatics skills through current workforce training.
- *Advancing electronic information exchange:* Recipients enhanced jurisdictional public health informatics capacity to both receive and transmit data electronically using standards-based messaging and to improve and sustain capacity to receive, use, and transmit messages that adhere to meaningful use standards.
- *Sustaining and enhancing public health information systems:* Recipients have implemented and replaced public health information systems and shared platforms in various ways. Health departments are strongly encouraged to use the shared services offered by the BioSense platform, the Reportable Condition Knowledge Management System (RCKMS), and the Association of Public Health Laboratories (APHL) Informatics Messaging Services (AIMS), as applicable.
- *Improving the use and sharing of public health data:* Recipients have improved jurisdictional information sharing processes for day-to-day functionality and developing increased situational awareness through collaboration and system integration. This was accomplished through increasing information system interoperability, extending data availability within integrated dashboards, and participation in the NSSP through use of BioSense platform tools.

Recipients should seek to coordinate efforts with the jurisdictional epidemiology and laboratory capacity for infectious diseases (ELC), immunization, and other programs, as applicable, to increase the quality and percentage of NSSP, NNDSS, and ELR electronic reports sent to CDC. CDC also encourages increasing meaningful use practices or improving information exchange through standards-based messaging.

Public Health Informatics Resources

Title	Description	Location
Electronic Case Reporting (eCR)	Information from the clinical setting, specifically from an electronic health record (EHR) to the public health agency, in compliance with jurisdiction-specific disease reporting regulations.	• CMS Educational Resources: (https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/EducationalMaterials.html) • Meaningful Use (MU) Public Health (PH) Reporting Requirements Task Force: (http://www.cdc.gov/ehrmeaningfuluse/meaningful-use-mu-public-health-ph-reporting-requirements-task-force.html) http://www.cdc.gov/elr/about.html
Electronic Laboratory Reporting (ELR)	Laboratory-related data from commercial, public health, hospital, and other laboratories to state and local public health departments through an EHR system or a laboratory information management system (LIMS).	
Electronic Test Orders and Reporting (ETOR)	Improves the ability of a laboratory to receive electronic test orders from another laboratory or a clinical setting and to electronically return the test findings and other associate data to the ordering facility.	• HealthIT.gov – Test Results Reporting and Follow-Up: (https://www.healthit.gov/safer/guide/sg008) • Clinical Laboratory Improvement Amendments (CLIA): (https://www.cms.gov/Regulations-and-Guidance/Legislation/CLIA/index.html?redirect=/clia/) • Meaningful Use Fact Sheet – Public Health Information Network (PHIN): (http://www.cdc.gov/ehrmeaningfuluse/docs/factsheets/fs_mu_rlr.pdf)
Laboratory Informatics Self-Assessment Tool	Laboratory professionals can use the results of the self-assessment to gauge informatics capabilities and gaps, prioritize the use of existing resources, and to document and communicate informatics priorities to policy makers. Initially launched in 2009, the tool is now available as a web-based application.	https://www.aphl.org/programs/informatics/Pages/Informatics-Self-Assessment-Tool.aspx
National Notifiable Disease Surveillance System (NNDSS)	Exchange of disease surveillance data in a standards-based format between health care and public health systems and between jurisdictional surveillance systems and CDC.	https://wwwn.cdc.gov/nndss/
National Syndromic Surveillance Program (NSSP)	A collaboration among public health agencies and local, state, and federal partners for timely exchange of syndromic data to improve the nation's situational awareness, and responsiveness to hazardous events and disease outbreaks.	http://www.cdc.gov/nssp/index.html

Disclaimer

Web addresses of nonfederal organizations are provided solely as a service to readers. Provision of an address does not constitute an endorsement of this organization by CDC or the federal government, and none should be inferred. CDC is not responsible for the content of other organizations' web pages.