PHEP Capability 13: Public Health Surveillance and Epidemiological Investigation

Office of Epidemiology, VDH

Background

- [Public Health Emergency Preparedness and Response Capabilities – National Standards for SLTT Public Health](#)

- Capability standards strengthen the security and resiliency of the Commonwealth through systematic preparation for threats that pose a risk to the public's health

- Align with the agency's Emergency Support Function (ESF) #8 role

- Guide program improvement initiatives to address preparedness and response planning gaps

Definition of Terms

- Capabilities are divided into six domains and two tiers
  - Biosurveillance Domain
  - 13: Public Health Surveillance and Epidemiological Investigation (Tier 1)
  - Tier 1 standards form the foundation for public health emergency preparedness and response

- Each capability comprises functions, and each function contains specific tasks that are supported by multiple resource elements
  - Functions - Segments of the capability that must occur to achieve the capability definition
  - Tasks - Action steps that must be accomplished to complete a capability function

Capability 13:
Public Health Surveillance and Epidemiological Investigation

Capability Definition

- Create, maintain, support, and strengthen routine surveillance and detection systems and epidemiological investigation processes

- Includes ability to expand these systems/processes in response to events of public health significance

Function 1

- Conduct or support public health surveillance
  - Ongoing systematic collection, analysis, interpretation and management of public health-related data to effectively detect, verify, characterize, and manage an event of public health concern throughout and following the event

- Tasks
  1. Engage stakeholders to support public health surveillance and investigation
  2. Conduct or support routine and incident-specific surveillance
  3. Share surveillance findings
  4. Maintain and improve surveillance systems

Tasks – Function 1

- Engage stakeholders to support public health surveillance and investigation
  - Coordinate activities with laboratories, partners, and stakeholders who can provide public health-related surveillance data to support routine and emergency responses

- Conduct or support routine and incident-specific surveillance
  - Use data to conduct and support health-related surveillance

- Share surveillance findings
  - Share surveillance data and analyses to applicable leaders to assist with the identification of potentially affected populations at risk and enable rapid decision making during a response

- Maintain and improve surveillance systems
  - Maintain, assess, and strengthen surveillance systems, and continuously support bi-directional information exchange to respond promptly to public health threats, hazards, and incidents

Function 2

- Conduct public health and epidemiological investigations
  - Identify source of cases or outbreaks of disease, injury, or exposure and the associated determinants in a population to report results and findings to cross-disciplinary jurisdictional and federal partners and stakeholders

- Tasks
  1. Conduct public health and epidemiological investigations
  2. Provide support to local public health and epidemiological investigations
  3. Share public health and epidemiological investigation findings

Tasks – Function 2

- Conduct public health and epidemiological investigations
  - Investigate diseases, injuries, and exposures in response to natural or human-caused threats or incidents in collaboration with jurisdictional stakeholders

- Provide support to local public health and epidemiological investigations
  - Provide clinical and public health-related consultations to support public health agency investigations

- Share public health and epidemiological investigation findings
  - Report investigation results to impacted communities and jurisdictional and federal partners, as applicable

Function 3

- Recommend, monitor, and analyze mitigation actions
  - Recommend, implement, and support public health interventions that contribute to the mitigation of an event and monitor intervention effectiveness

- Tasks
  1. Identify public health guidance and recommendations
  2. Share appropriate public health guidance and recommendations
  3. Monitor and assess public health interventions

Tasks – Function 3

- Identify public health guidance and recommendations
  - Determine appropriate clinical, epidemiological, and environmental-related public health actions to mitigate threats, hazards, risks, or incidents based on current public health science-based standards

- Share appropriate public health guidance and recommendations
  - Communicate and coordinate guidance and recommendations with public health officials, partners, and stakeholders to support decision-making related to mitigation actions

- Monitor and assess public health interventions
  - Evaluate public health mitigation actions throughout the duration of the public health response and recommend additional mitigation measures as appropriate

Function 4

- Improve public health surveillance and epidemiological investigation systems
    - Assess internal agency surveillance and epidemiological investigation systems and implement quality improvement measures within agency/jurisdictional control

- Tasks
    1. Evaluate effectiveness of public health surveillance and epidemiological investigation processes and systems
    2. Identify and prioritize corrective actions
    3. Establish an after-action process, share after-action report(s) and improvement plan(s), and implement and monitor corrective actions

Tasks – Function 4

- Evaluate effectiveness of public health surveillance and epidemiological investigation processes and systems
  - Identify deficiencies encountered during responses to public health events and recommend opportunities for improvement

- Identify and prioritize corrective actions
  - Conduct post-incident or post-exercise evaluation meetings with response participants and relevant partners to identify procedures and organizational opportunities for improvement requiring corrective action

- Establish an after-action process, share after-action report(s) and improvement plan(s), and implement and monitor corrective actions
  - Obtain feedback from after-action conferences, hot washes, and incident debriefings. Develop and share AARs and IPs, and implement corrective actions