



Using the COPEWELL Model to conduct Public Health Emergency Preparedness (PHEP) Jurisdictional Risk Assessments

The latest version of the “[*Public Health Emergency Preparedness and Response Capabilities: National Standards for State, Local, Tribal, and Territorial Public Health \(CDC 2018\)*](#)” (National Standards for PHEPR Capabilities) describes the components necessary to advance jurisdictional public health preparedness and response capacity.

The document lays out the capabilities, functions, resource elements, and tasks that when developed will help build a jurisdiction’s public health emergency preparedness, response and recovery infrastructure.

Capability 1- Community Preparedness is the ability of communities to prepare for, withstand, and recover from public health incidents in both the short and long term. This capability consists of the ability to perform the functions listed below:

- Function 1: Determine risks to the health of the jurisdiction.
- Function 2: Strengthen community partnerships to support public health preparedness.
- Function 3: Coordinate with partners and share information through community social networks.
- Function 4: Coordinate training and provide guidance to support community involvement with preparedness efforts.

The following excerpts from the National Standards for PHEPR Capabilities outline the activities and outcomes of a jurisdictional risk assessment:

Function 1: Determine risks to the health of the jurisdiction

Function Definition: Identify potential jurisdictional public health, health care, mental/behavioral health, and environmental health hazards, vulnerabilities, and risks, and assess the human impact because of interruption of public health, health care, human services, mental/behavioral health, and environmental health services and supporting infrastructure.

Task 1: Conduct a public health jurisdictional risk assessment. Identify and prioritize jurisdictional risks, risk-reduction strategies, and risk-mitigation efforts in coordination with community partners and stakeholders.

Preparedness Resource Element

P2: (Priority) Jurisdictional risk assessments, which may include

- Identification of potential hazards, such as geographic and physical hazards, vulnerabilities, risks related to population characteristics, such as population density and demographics, and other risks in the community with the potential to adversely impact public health and related health care, human services, mental/behavioral health, and environmental health systems
- A definition of risk, including a risk formula
- The relation between identified risks to human impact and the interruption of public health, health care, human, mental/behavioral health, and environmental health services, noting that certain responses may affect basic functions of society, including physical damage to infrastructure or a reduction in the critical workforce
- Estimate of plausibility or probability of risks and hazards for the jurisdiction, such as the likelihood of natural disasters based on historical precedence
- Size and characteristics of the jurisdiction's population Identification or location of populations with access and functional needs
 - Identification of populations with limited language proficiency (language isolation) and limited access to communication channels to receive timely and effective public health information
 - Information on vulnerabilities based on socioeconomic status, education, culture, and other factors
 - Locations or mapping of populations using information sources, including geographic information systems (GIS), the Agency for Toxic Substances and Disease Registry (ATSDR) Social Vulnerability Index, HHS emPOWER data, and other sources
 - Data on the size and type of animal populations within the jurisdiction
- Jurisdictional risk assessments may be conducted using information, which may include:
 - Consultation with subject matter experts from jurisdictional partners and stakeholders
 - Data that help prioritize jurisdictional hazards and public health vulnerabilities, including historical data from emergency management risk assessment(s), public health programs, relevant scenarios or models, community engagements, GIS, and other supplementary sources
 - Identification of factors that influence community resilience
 - Estimated impact on public health, environmental health, and health care system functioning, for example, the potential loss or disruption of essential services, such as water, sanitation, vector control, electricity, or other utilities, or the interruption of public health, human services, environmental health, or health care

While COPEWELL will help facilitate all four of the Capability 1: Community Preparedness functions, this narrative will provide guidance on how to use the COPEWELL model to

conduct or to serve as a component of a jurisdictional risk assessment. The National Standards for PHEPR Capabilities outlines the tasks and resource elements that describe the activities and outcomes of the jurisdictional risk assessment.

Steps for Using COPEWELL for a Jurisdictional Risk Assessment

COPEWELL is a whole-of-community framework, model, and set of tools for risk assessment and management. It holistically frames the elements of a community based on baseline functioning and key domains known to impact disaster resilience, identifying elements of the community that are stronger versus more challenged. It also includes tools to engage partners in assessing, prioritizing and strengthening key areas. A key concept within the COPEWELL model is that Resilience equals Resistance (the community's ability to withstand an event's impact) plus Recovery (the time course and ability of a community to return to at least baseline functioning). Resilience is best built before an event. (www.copewellmodel.org)

All risk assessments or hazard vulnerability analyses (HVAs) start by identifying the types of threats or hazards a particular jurisdiction faces; COPEWELL refers to these as *events*. Top-level risk assessments and HVAs then rate each of these hazards as to likelihood of occurrence and impact if the hazard does occur. While the likelihood of occurrence is inherently independent of the level of preparedness and vulnerabilities of the jurisdiction, the impact is not. COPEWELL is a rigorous, comprehensive way to assess pre-event preparedness (mitigation and preparedness planning) and identify ways to address jurisdictional vulnerabilities in response and recovery

Step 1: Identify the main hazards faced by the jurisdiction, rank-ordered by likelihood of occurrence (not impact) on an annual basis.

Step 2: Using the COPEWELL framework's domains, Identify the domain capabilities and capacities that would be either impacted by or required to properly respond to the main hazards,

Step 3: Use COPEWELL to characterize jurisdictional functioning and resilience capabilities and capacity;

- using the COPEWELL provided jurisdiction's county-level data, or:
- through application, with partners, of the COPEWELL Domain self-assessment rubric tools.

Step 4: Identify the main points of intersection, in terms of domains of most concern, between Step 2 and 3. This analysis would identify the capabilities and capacities (COPEWELL Domains) most critical to jurisdictional functioning and to response and

recovery, as well as the vulnerabilities and capacity of the jurisdiction in each of those domains.

The final risk assessment consists of the ranked hazards from Step 1 and the domains of concern from Step 4.

Although beyond the scope of the assessment itself, plans forward can be derived from discussions with partners, review and application of domain specific resources found on the COPEWELL website, or other interventions developed and prioritized specific to the community.

NOTE: Other key potential uses for COPEWELL in advancing the “[Public Health Emergency Preparedness and Response Capabilities: National Standards for State, Local, Tribal, and Territorial Public Health \(CDC 2018\)](#)” include the following:

- Capability 2: Community Recovery,
 - Function 1: Identify and monitor community recovery needs – especially applicable to Task 1 (Identify jurisdictional community recovery priorities)
 - Function 2: Support recovery operations for public health and related systems for the community – especially applicable to Task 1 (Coordinate with jurisdictional partners and stakeholders to develop recovery solutions).
 - Function 3: Implement corrective actions to mitigate damage from future incidents – especially applicable to Task 6 (Assess and strengthen community resilience to future disasters).

- Capability 6: Information Sharing
 - Function 1: Identify stakeholders that should be incorporated into information flow and define information sharing needs
 - Function 2: Identify and develop guidance, standards, and systems for information exchange
 - Function 3: Exchange information to determine a common operating picture