

MAPPING COORDINATION NETWORKS TO STRENGTHEN PUBLIC HEALTH PREPAREDNESS AND RESPONSE IN REGION 3

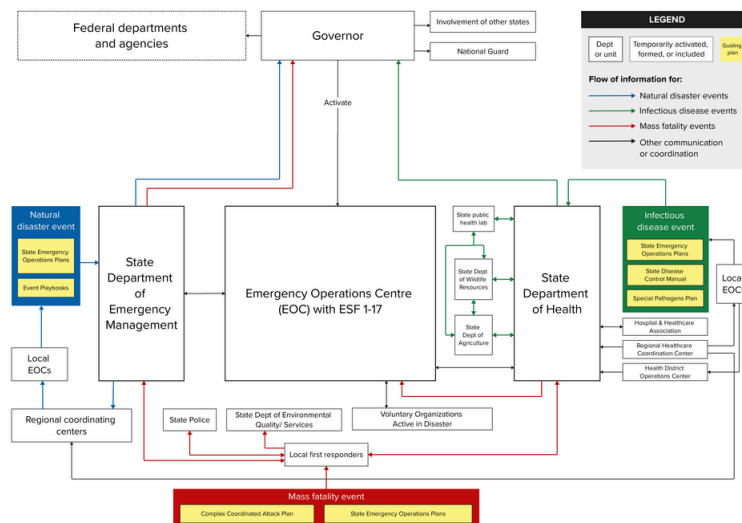
When a public health event becomes a state-level emergency, public health preparedness and response (PHPR) partners need to share information and coordinate their response. Having previously identified effective chains of communication and coordination can save time, resources, and lives. The goal of network mapping in this situation is to improve departmental information sharing and increase coordination through an enhanced understanding of state and regional partner roles and responsibilities during a public health emergency; established operational parameters; and improved networks and operational plans. This work is being conducted by the [Region 3 PHPR Center](#) and funded by the US Centers for Disease Control and Prevention.

What is network mapping?

Network mapping involves visualizing roles and responsibilities of key stakeholders and the chain of command through policies and procedures to identify silos, improve collaboration, and facilitate strategic decision-making by demonstrating how information and influence actually flow, compared to an organizational chart. Mapping helps administrators, staff, and other stakeholders understand network structures, detect vulnerabilities, and optimize performance. Public health emergencies increasingly require agencies, jurisdictions, and sectors to coordinate with each other.

Within Region 3, large-scale, multi-state public health events may be infrequent; however, coordination across two or more states or within complex environments such as the National Capital Region occurs more regularly. In these situations, delays or uncertainty around roles and responsibilities, chain of command, and which plans guide operations can hinder effective response - which could be subverted by creating and using up-to-date network maps.

EXAMPLE STATE EVENT-SPECIFIC NETWORK MAP:



Scope

The Region 3 PPHR Center collaborated with state PPHR partners to develop and use network analysis maps to improve intra- and inter-state communication and coordination during public health emergencies in Region 3. We set out to make preparedness coordination more visible, understandable, and actionable. These collectively-created network maps visually depicted preparedness roles, coordination and communication pathways, and partner relationships across multiple public health emergency scenarios. Our team has developed [an adaptable SOP for creating network and partner maps](#). The format, structure, and use cases of network maps are flexible and contextual based on state or regional priorities. For example, the Center developed the following two templates:



An [Extended Function Network Map](#), illustrating PPHR communication and coordination pathways across agencies during different types of emergencies



A [Partner Identification Map](#), depicting internal organizational structure alongside state, federal, emergency response, and external partners involved in preparedness and response activities.

Application

The network maps are intended to function as living tools that can be used across planning, training, exercises, and response operations. They provide a baseline representation of the preparedness coordination environment and can be updated over time as organizations, roles, and relationships evolve. PPHR partners can use network maps in the following ways to strengthen communication and coordination:



Serve as a shared, visual reference: Maps can be used across teams and partners as a visual tool to build a shared understanding of what coordination looks like during public health emergencies. Rather than relying solely on written plans or institutional knowledge, the maps provide a common reference point and help clearly identify chains of command for both all-hazards and scenario-specific PPHR activities. Thus, agencies can align expectations and strengthen their intra- and inter-agency plans and operations.



Improve processes and operations: Maps can be used to identify priorities for building and strengthening partnerships with entities featured in the networks. This allows PPHR partners to focus preparedness efforts where stronger coordination could most improve operational efficiency during an emergency.



Track changes over time: Maps are intended to function as a baseline, living document. They can be updated over time to track changes in the partner landscape, organizational structures, and coordination processes—helping ensure that preparedness efforts evolve alongside the system they're meant to support.

By making coordination structures visible and accessible, network mapping can help support a more intentional, resilient, and adaptive public health emergency preparedness and response system in Region 3. Visit the [Region 3 PPHR Center's website](#) to learn more and [download network analysis resources](#), including a standard operating protocol for mapping PPHR networks in your setting.



JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

Center for Health Security