



WHITE PAPER

Regionalization in Public Health Preparedness: A Framework for Achieving Community Resilience



Regionalization enhances community resilience by increasing the resources, capabilities, and capacity of one jurisdiction by that of its regional partners.

Introduction and Background

Using an integrated, regional approach to building and maintaining public health and medical preparedness helps enhance community resilience by increasing the resources and capabilities of one jurisdiction with the resources and capabilities of its regional partners. Presidential Policy Directive 8 defines resilience as the ability to adapt to changing conditions and withstand and rapidly recover from disruption due to emergencies.¹ Rand Corporation defines resilience as the sustained ability of a community to withstand and recover from adversity.² The process by which a community builds resilience is not universally described by any one entity for all disciplines. Developing individual jurisdictional preparedness by building and maintaining capabilities and partnering with neighboring jurisdictions provides the most effective means of all-hazards preparedness and community resilience.

Preparedness

The term “preparedness” refers to the actions taken to plan, organize, equip, train, exercise, evaluate, and improve to build and sustain the capabilities necessary to prevent, protect against, mitigate the effects of, respond to, and recover from those threats that pose the greatest risk to the security of a community.³ This definition describes two fundamental components of preparedness: the Preparedness Cycle and the Preparedness Mission Areas.

The Preparedness Mission Areas—Prevent, Protect, Mitigate, Respond, and Recover—describe the core capabilities necessary for a community to manage all-hazards emergencies and disasters. Capabilities outlined in the Preparedness Mission Areas are built and maintained by utilizing the Preparedness Cycle: Plan, Organize, Train, Equip, Exercise, Evaluate, and Improve.

Public Health Preparedness

Public Health Emergency Preparedness is the process by which a community becomes prepared to prevent, protect against, mitigate, respond to, and recover from the public health and medical consequences of disasters and emergencies. In communities across the country, state and local health departments, along with private sector and community healthcare partners,

bear the primary responsibility of executing public health emergency preparedness—yet they lack sufficient funds and resources to be completely resilient to all catastrophic disasters on their own. Disasters and emergencies with catastrophic public health and medical consequences have the potential to overwhelm local resources such as health departments, emergency medical services (EMS) entities, hospitals, clinics, and primary care providers. The management of the response to and recovery from large-scale emergencies requires a coordinated effort between the affected jurisdiction and neighboring and regional partners to meet resource and service demands in a timely manner. In addition, infectious disease outbreaks do not adhere to political jurisdictional boundaries. Integrated planning and response functions across geographically proximate jurisdictions enhance the ability of local health departments to rapidly identify and contain the spread of disease. Building community resilience through the implementation of an integrated, regional public health and medical preparedness process can significantly minimize the impact of such incidents and, more importantly, limit serious injury, permanent disability, and loss of life.

¹Presidential Policy Directive 8: National Preparedness. March 30, 2011: Definitions.

²Chandra, Anita, et al. “Building Community Resilience to Disasters. A Way Forward to Enhance National Health Security.” Rand Corporation, 2011.

³Presidential Policy Directive 8: National Preparedness. March 30, 2011: Definitions.



Capabilities-Based Planning

To assist jurisdictions in identifying and hardening the critical functions necessary for a public health emergency preparedness system and consistent with Presidential Policy Directive 8 requirements for a capabilities-based approach to planning, in March 2011, the Centers for Disease Control and Prevention (CDC) issued the first-ever national standards for Public Health Preparedness Capabilities.⁴ These capabilities address the 15 primary functions that state and local health departments must build and maintain to have a robust public health preparedness system capable of protecting, preventing, mitigating, responding, and recovering from disasters and emergencies. These capabilities can be achieved by following the Preparedness Cycle to address resource elements—first by individual jurisdictions and then regionally.

Individual Jurisdictional Preparedness

The origins of community resilience take root in local public health preparedness where multi-agency, multidisciplinary officials understand that collaborative preparedness efforts are necessary to enhance community resilience through well-developed and vetted plans, organization, equipping, training, and evaluation. These local jurisdictions have a strong understanding of their current capacities, capabilities, and gaps.

Assessing Preparedness

The true resilience of a community cannot be determined until after it has experienced a disaster; and determining levels of preparedness is difficult, since preparedness is not an end state but rather a continuous cycle, as described above. A jurisdiction can never be truly prepared; however, preparedness levels can be evaluated to determine return on investment and allocation of future funding and preparedness efforts. Local public health departments need to have a firm understanding of their current capability and undergo a thorough public health and medical capability and capacity assessment and gap analysis.

⁴Public Health Preparedness Capabilities: National Standards for State and Local Planning. Centers for Disease Control and Prevention. March 2011.

Public Health Preparedness Capabilities

- Public Health Laboratory Testing
- Public Health Surveillance and Epidemiological Investigation
- Community Preparedness
- Community Recovery
- Medical Countermeasure Dispensing
- Medical Materiel Management and Distribution
- Non-pharmaceutical Interventions
- Responder Safety and Health
- Emergency Operations Coordination
- Emergency Public Information and Warning
- Information Sharing
- Fatality Management
- Mass Care
- Medical Surge
- Volunteer Management

Implementing a Preparedness System

Individual jurisdictions should establish a public health and medical preparedness working group to address building and maintaining public health preparedness capabilities. The members of this working group should be consistent with the public health and medical emergency support function outlined in the jurisdictional emergency operations plan. This working group generally is led by the local public health authority and consists of emergency management, law enforcement, fire services, EMS, hospitals and healthcare providers, public works, local government representatives, local schools and universities, community and religious organizations, private businesses or industries, and any other entity comprising the healthcare support system in the jurisdiction. This working group will be responsible for assessing capability and capacity, identifying the strategy to address gaps, and building and maintaining capability and capacity.



Once capability and capacity of the jurisdiction is assessed and the gaps determined, the individual jurisdiction begins addressing gaps. From a resource and economic perspective, addressing the gaps by creating jurisdiction-by-jurisdiction capability and capacity may not be the most effective use of limited resources. Not every jurisdiction in the country needs a hazardous materials team or a Level I trauma center. These resources would be costly and underutilized. Individual jurisdictions can meet gaps by identifying nearby resources and partnering with those entities or jurisdictions to ensure availability during times of emergency—thus beginning the process of regionalization and enhancing whole community resilience.

Regional Preparedness

To enhance community resilience, local jurisdictions within a geographically proximate area can regionalize to build on the capacity and capabilities of each member jurisdiction. No consistent definition exists for what constitutes a region. However, for the purpose of this document, a region is defined as any partnership between two or more neighboring or geographically proximate jurisdictions and nongovernmental and private partners located within, for the purposes of public health and medical preparedness efforts.

Degree of Regionalization

In the 2007 National Association of County and City Health Officials (NACCHO) publication, "Planning Beyond Borders: Using Project Public Health Ready as Regional Guidance for Local Public Health," the writers asserted that regional planning consists of four collaboration typologies: networking, coordinating, standardizing, and centralizing. According to NACCHO, these typologies are inherently hierarchical in relationship along a continuum; however, they are not necessarily mutually exclusive and can be combined in a variety of ways. Regional activities may cross multiple capabilities and components of the Preparedness Cycle and can occur in different typologies at the same time; therefore, none of the four typologies exist in pure form.

Regionalization occurring across multiple capabilities, utilizing the Preparedness Cycle—in addition to the hierarchical relationship of the four regional planning typologies—lends itself to a maturity curve. Jurisdictions engaging in regionalization may move from simple networking to the more complex, centralized regional activities over time as a natural progression of an ongoing regionalization process with the objective of enhancing regional public health and medical preparedness. As the degree of regionalization increases, the

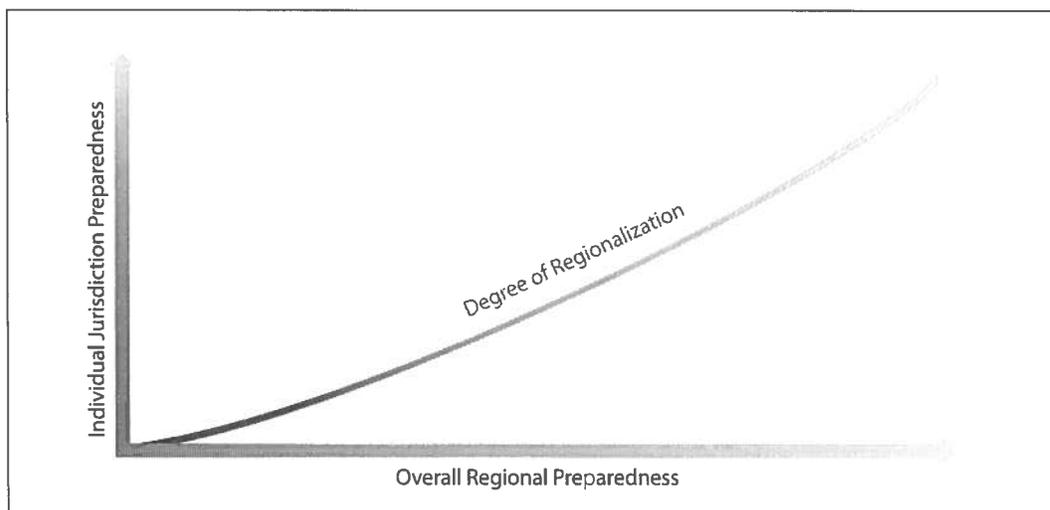


Figure 1. Public Health Regional Preparedness Maturity Curve



preparedness of the region and individual jurisdictions will improve, as demonstrated by the Public Health Preparedness Maturity Curve in Figure 1.

A region can also exist in a hybrid of typologies for different public health preparedness capabilities or for different components of the Preparedness Cycle. For this document, the typologies are used to describe the degree of regionalization that can exist for any one capability or one Preparedness Cycle component. Terms describing the process of regionalization and capturing the hybrid nature of regionalization are introduced later in the document.

Typologies

These typologies describe a “point in time” assessment of the degree of regionalization. A description of typology components by the preparedness cycle can be found in Appendix A.

Networking

Networking collaboration is the most informal of the typologies and is often seen as the foundation of all regional efforts. Networking can occur on either a regular or managed capacity or informally, where public health officials reach out to one another to share information. These peer-to-peer relationships are not regionally organized or consistent.

Coordinating

Coordinating occurs when local health departments and healthcare providers have sufficient preparedness capacity and capability at the regional level to actively manage in a coordinated fashion and to respond to a public health or medical surge emergency.

Standardizing

Standardized regional planning consists of sharing capacity and capability of local health departments, EMS, and regional healthcare delivery systems in such a way to achieve interoperability throughout all stakeholders and response partners. To accomplish standardized capacity and capability, agreement needs to exist across jurisdiction planners to standardize functions, training, policies,

agreements, and equipment across jurisdictional boundaries so capacity and capability can be combined without special effort or extra expense. The caveat is that the standardized resources remain in control of the owning jurisdiction.

Standardized resource typing and sharing agreements should be developed by decision makers from member jurisdictions in a manner that all partners and stakeholders can agree on and implement. Standardization, when effectively adopted, delivers a unified, cohesive, regional approach.

Centralizing

A centralized regional capacity and capability is created through pooling of resources, regionally agreed on alterations to normal operations, and mutual realization that no single jurisdiction, local health department, or health care system can effectively respond alone. A centralized model constitutes a pooling of the jurisdictions’ collective resources to maximize their individual strengths and fill gaps and limitations of response capabilities and capacity.

To develop a centralized capacity and capability, the region may form a separate “regional” entity with the sole purpose of addressing preparedness. This would allow the entity to function as a regional public health and healthcare agency with the ability to manage resources, procure assets, assist with training, and develop collaborative plans, policy, and operating guides for the region to respond as a unified force.

Regionalization Process

The regionalization process described below utilizes the concepts of typologies while capturing their hybrid nature.

Regionally Isolated and Shortcoming

Prior to regionalization, individual jurisdictions’ capabilities can vary widely. Some may have achieved a high level of preparedness on their own but act completely isolated and lack any regional collaboration. Others may be completely unprepared individually but participate in regional preparedness, leaving a shortcoming in the region. Regionalization will assist both of these jurisdictions.

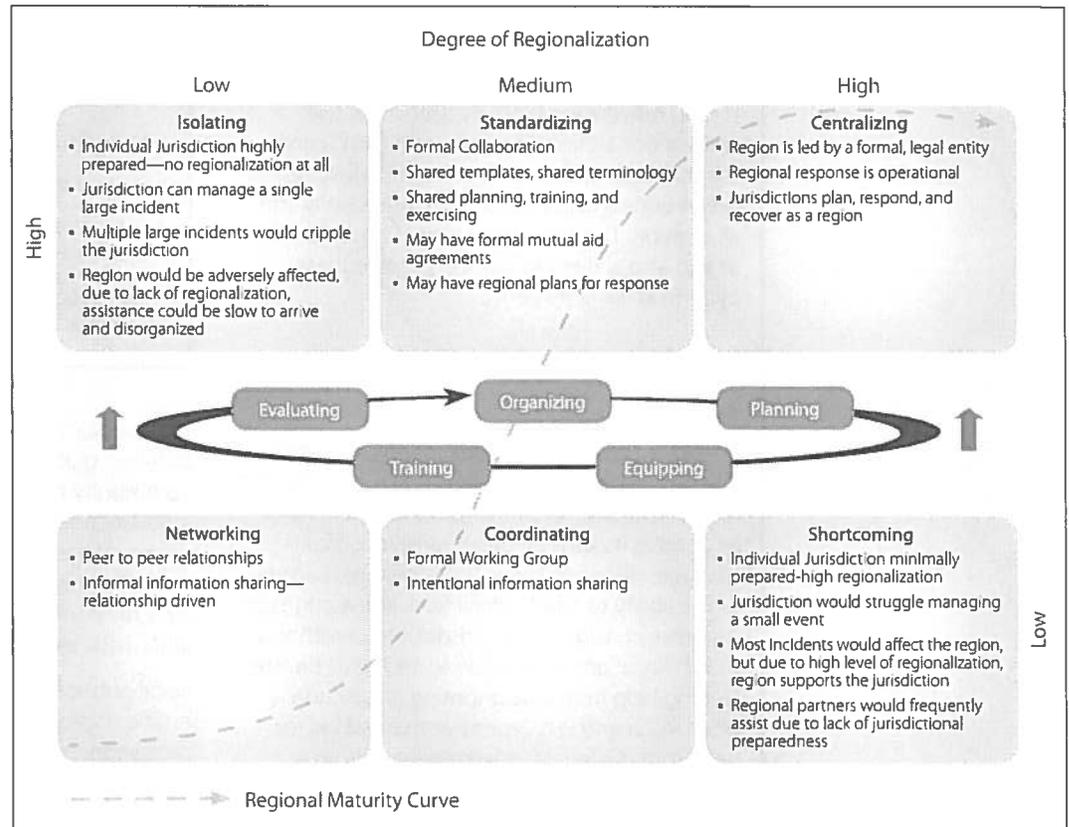


Figure 2. Public Health Regional Preparedness Maturity Model Process

Regionally Aware

As jurisdictions begin to regionalize, their first step is a process of regional awareness—identifying neighboring jurisdictions, meeting colleagues in the region, and beginning the process of networking. The boundaries and partners of the region must be defined, and relationships must be built. During this phase, jurisdictions will respond to emergencies on their own and will execute the preparedness cycle independently of each other. When the regional partners have been identified and all jurisdictions are committed to and willing to engage in regional preparedness, the region becomes reactionary.

Regionally Reactionary

As the region begins formal organization, it becomes a reactionary organization—taking intentional steps toward formal regionalization

and beginning to support each other as a cohesive unit. Formal coordination before, during, and after an event can occur. The region can collaborate on one or all of the public health preparedness capabilities in one or all of the preparedness cycle areas. Some regions choose to first plan together; then begin sharing equipment, resources, and training, and, finally, exercise together, before they respond either together or as mutual aid resources.

Regionally Hardened

Once the region has become a formal entity—conducting preparedness activities together—it becomes regionally hardened. The region is stronger and more prepared as a unit than as single jurisdictions, since resources are shared, and plans and response activities are standardized or centralized.



Regionally Resilient

The transition from a hardened region to a resilient region is difficult to prospectively quantify, since testing resilience is typically a retrospective assessment. Generally, a resilient region is one that has built and is maintaining all public health preparedness capabilities, both individually and as a region. The individual jurisdictions and the region also actively follow the preparedness cycle to achieve resilience.

Benefits and Barriers

Benefits

There are significant benefits to regionalization. The most significant benefit is that a community's response to and recovery from a disaster is only as good as its least prepared jurisdiction can manage. Having "back-up" from regional partners or the ability to rapidly draw from knowledge and expertise of neighboring jurisdictions can improve the ability of any jurisdiction to address a disaster. Getting help from a neighboring jurisdiction is often faster and less expensive than asking for help from the federal government or from a resource from across the country.

A coordinated response across a geographically proximate region will lessen public criticism of disaster preparedness, if all messages are consistent and response and recovery actions appear connected. This need for public information sharing and trust is especially important during public health emergencies, where a wide geographic area is affected by an emergency that knows no political boundaries.

Regionalization can also provide a cost savings while maximizing and potentially increasing an individual jurisdiction's capability and capacity to respond and recover from an event. Regionalization allows jurisdictions with limited resources the ability to benefit from the resources and knowledge of other jurisdictions by jointly funding projects or by sharing resources and knowledge.

Barriers

Despite the benefits to regionalization, jurisdictions can experience barriers and pitfalls in their attempts

Other Barriers to Regionalization

- Legal issues
- Lack of support from leadership
- Political pressures and constraints
- Fear of loss of autonomy, local identity in preparedness
- Competing priorities and inability to come to common agreement

to regionalize. One of the most significant barriers to fully regionalizing and developing a resilient community is that the majority of the healthcare infrastructure across the country is owned by the private sector. Jurisdictional leadership must actively engage healthcare partners to ensure their full participation and to ensure their gaps and needs are addressed through regionalization.

Local public health departments and other local entities lack sufficient staff to address day-to-day preparedness activities within their own jurisdictions and therefore lack the staff time to dedicate to regional planning. Some jurisdictions don't want plans and programs critiqued by regional partners and are therefore reluctant to collaborate.

Many jurisdictions' preparedness levels vary widely from highly prepared to very little preparedness, and regionalization between those two extremes may be difficult. The variability of needs and requirements may present as a barrier to regionalization, especially if the regional partners have differing views on the role of the public health and medical entities in preparedness.

Certain complexities that arise will significantly impact the development of regional activities. These complexities can include regions with counties that cross different states, those that include international borders, and those that have ports of entry. All of these complexities have been addressed somewhere in the country, so reaching out to jurisdictions that have experienced these challenges to gain insight and to share resources is a first step in addressing complex barriers.



Conclusion

The only way to begin to break down barriers and to take advantage of the benefits of regionalization is to become regionally aware and to start networking with representatives from geographically proximate jurisdictions. Jurisdictions engaging in regionalization may move from simple networking to the more complex centralized regional activities over time as a natural progression of an ongoing regionalization process with the objective of enhancing regional public health and medical preparedness. As the degree of regionalization increases, the preparedness of the region and individual jurisdictions will improve—resulting in a more resilient community.

Appendix A

Characteristics of Public Health Preparedness Regional Collaboration Types by Preparedness Cycle				
	Networking	Coordinating	Standardizing	Centralizing
ORGANIZE	Peer to peer relationships among leaders	Preparedness Leaders meeting regularly to discuss shared topics of interest	Formal collaboration group	Legal regional entity that oversees the activities of the region
	Informal group of preparedness leaders from the region, not formally defined	May or may not have agreements in place	Defined governance structure	Regionally employed staff
	Contact list		By-laws or legal framework in place	
PLAN	Peer to peer relationships among planners	Planners meeting regularly to discuss shared topics of interest	Capabilities-based working group	Regional response capability
	Informal group of planners	Regular plan sharing	Conducting regional HVAs	Shared or combined resources within a central plan or jurisdictional annex to a single regional plan
	Peer to peer plan sharing, ad hoc		Development of regional Concept of Operations Plans, not operational response plans	Development of regional operational plans that direct how the region will respond in a unified manner
	Contact List		Regional resource typing	
			Ensure interoperable jurisdictional plans	
			Standardized template and terminology for individual jurisdictional plans	



EQUIP	Peer to peer relationships among IT and Logistics staff	Formal information sharing on resources for information not with the intent of further interoperability	Region is fully interoperable across all systems within each jurisdiction	Region has one system for communication
	Minimally meets interoperability standards established by federal government	Regional inventory	Jurisdictional processes for managing people, badging and training are the same	Full situational awareness
		Regional resource typing		Jurisdictions access one system and use a centralized process for people, credentialing, and badging
				Sharing of jurisdictional staff across the region, ability to move people among/between jurisdictions
TRAIN	Peer to peer relationship among trainers	Trainers meet regularly to discuss shared interests and share curriculum and content	Training is consistent across the jurisdictions	Regional staff coordinate all trainings
	Informal meetings	Individual jurisdiction trainings are open to all regional partners, trainings are interchangeable across the region	Trainings include the same requirements, curriculum, and validation processes	All training programs offer the same curriculum and meet the same standards
				Regional training standard
EXERCISE, EVALUATE, IMPROVE	Peer to peer relationships	Exercise planners meeting regularly to discuss shared interests	Regional exercise plan that includes all jurisdictions	Regional staff serve as exercise planners and coordinate all exercises
	Informal group meetings	Jurisdictional exercises are open to other partners	Utilize same forms	One MSEL and one set of exercise requirements and documents.
		Jurisdictions can exercise together, but without an formal regional exercise plan	Exercises are not led by one exercise planning team, but by individual jurisdiction exercise planning team	Money and resources are pooled together to carry out exercises
		Separate AARs, CAPs/IPs	Jurisdictions exercise independently of each other, don't exercise at the same time	Regional exercise planning team
				Regional after action report and corrective action plan/ improvement plan



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