



Building Community Disaster Resilience: Perspectives From a Large Urban County Department of Public Health

Alonzo Plough, PhD, MPH, Jonathan E. Fielding, MD, MPH, Anita Chandra, DrPH, Malcolm Williams, PhD, David Eisenman, MD, Kenneth B. Wells, MD, MPH, Grace Y. Law, MA, Stella Fogleman, RN, CNS, MSN/MPH, and Aizita Magaña, MPH

An emerging approach to public health emergency preparedness and response, community resilience encompasses individual preparedness as well as establishing a supportive social context in communities to withstand and recover from disasters. We examine why building community resilience has become a key component of national policy across multiple federal agencies and discuss the core principles embodied in community resilience theory—specifically, the focus on incorporating equity and social justice considerations in preparedness planning and response. We also examine the challenges of integrating community resilience with traditional public health practices and the importance of developing metrics for evaluation and strategic planning purposes. Using the example of the Los Angeles County Community Disaster Resilience Project, we discuss our experience and perspective from a large urban county to better understand how to implement a community resilience framework in public health practice. (*Am J Public Health.* 2013; 103:1190–1197. doi:10.2105/AJPH.2013.301268)

BUILDING COMMUNITY

resilience to disasters—the ability to mitigate and rebound quickly—has received increased attention in the relatively new field of public health emergency preparedness and is now a central focus and a required activity for all public health departments that are recipients of Centers for Disease Control and Prevention (CDC) Public Health Emergency Preparedness (PHEP) grants.¹ Critical lessons from Hurricane Katrina in 2005, the H1N1 pandemic of 2009, and, most recently, Hurricane Sandy continue to demonstrate that underlying issues of lack of trust and the absence of sustainable engagement with community-based organizations, faith-based organizations, and other neighborhood-level organizations create significant disparities in population health outcomes following emergencies and disasters. This situation hampers public health interventions in both everyday public health work and emergency response.^{2,3} As a theory and approach, community resilience provides a framework that embraces principles of equity and social justice with a focus on developing the core capacities of populations both to mitigate disasters and to rebound from them.⁴ The challenge is to clearly and operationally define community resilience, develop principles

and practices that expand and enhance current community-based activities, and, through these changes, better align and integrate traditional public health and public health emergency preparedness.

Although the term community resilience is relatively new to emergency preparedness, the emerging operational frameworks embrace many of the core components of effective community-based public health practice and, in many ways, represent a reframing of long-standing approaches to improve community well-being that have not been incorporated in preparedness programmatic activities.⁵

We review the origins of the community resilience framework in the multidisciplinary research on individual resilience and assess how community resilience and related frameworks are shaping federal policies in all agencies involved in disaster and public health emergency response. We describe how the community resilience framework augments public health preparedness and reinforces longer-standing public health approaches to improving community health by examining a multi-year process developed by the Los Angeles County Department

of Public Health (LACDPH) to implement this approach. The strategy consists of operationalizing community resilience through the following steps:

- Improving the community engagement skills of health department staff and building sustainable community engagement processes;
- Developing a resilience tool kit that can be used by community organizations to build coalitions and coordinated neighborhood strategies to increase community preparedness and specific mitigation skills; and
- Identifying metrics so that systematic interventions that can improve the abilities of communities to promote resilience and mitigate disaster impacts can be measured and evaluated.

DEFINING COMMUNITY RESILIENCE

Most definitions of resilience refer to notions (derived from physics) of rebound, or bouncing back, from deformation or distress. The concept of individual resilience has evolved in psychology and the behavioral health sciences as a means to understand what adaptive capacities allow some individuals to continue



functioning effectively and display positive outcomes in the face of adversity.⁶ Individual resilience is seen as a set of protective factors and, most importantly, as a process of positive adaptation following exposure to adverse events.^{7,8} Viewing resilience as a process of positive adaptation has led to the search for factors that may encourage and promote a cascade of protective properties during and following exposure to adversity. A supportive social context in a community, prior to an adverse event, has emerged as a key component of resilience and provides a bridge between individual resilience theory and an exploration of a community-level theory.^{7,9,10} It is important to note, however, that community resilience is much more than the summation of individual resiliencies.¹¹

Community resilience has been defined as the sustained ability of a community to withstand and recover from adversity (e.g., economic stress, pandemic influenza, manmade or natural disasters). It represents a paradigm shift in public health emergency preparedness in emphasizing an assessment of community strengths not simply describing vulnerabilities.^{11,12}

Chandra et al., in their literature review, describe the 5 core components of community resilience as physical and psychological health, social and economic equity and well-being, effective risk communication, integration of organizations (governmental and nongovernmental), and social connectedness.^{12,13} Norris et al. describe community resilience as

a set of networked adaptive capacities, including economic development, information and communication, community competencies, and social capital.⁴ Consistent with the concept of resilience as a set of social characteristics and a process of adaptive behavior, Nuwayhid et al. describe components of resilience before as well as during and after an adverse event.¹¹ Their findings suggest that community resilience is a process rather than an outcome. Collective identity, prior experience with the adverse event, and social support networks contribute to building resilience over time. Additionally, community cohesiveness, social solidarity, and a connected political leadership help to sustain resilience after the event.^{11,12} Castleden et al., in their literature review, identify 10 components of resilience.⁶

Chandra et al. link their core components of community resilience with 8 levers for action¹²: wellness, access, education, engagement, self-sufficiency, partnership, quality, and efficiency. These levers provide a particularly good framework for a programmatic and practice focus on improving community resilience.¹⁴ They are immediately familiar to most public health practitioners and provide insight into how a community resilience perspective supports alignment between everyday public health practice and public health emergency preparedness and response. Such everyday public health interventions as reducing obesity and preventable injuries draw upon the identical levers found in the resilience framework, thus providing

a practical bridge between preparedness and traditional community-based public health practice. The community resilience literature strongly embraces the importance of a sustained commitment to improving connectedness (both social networks and information linkages) between individuals, organizations, and formal governmental agencies as a primary objective of building community resilience.^{12,15,16} The themes of improved connectedness through engagement, partnership, collaboration, and trust building provide the fundamental building blocks for improving social support structures, promoting social cohesiveness, and improving shared understanding of protective actions that improve community well-being whether in their regular routines or in an emergency situation.^{4,9,17}

The concept of community resilience embraces the core principles of increasing equity and social justice and recognizes that some communities bear the burden of inequitable distribution of critical resources. Communities with strong social and economic infrastructures have health insurance, stable housing, and other assets that make them better able to sustain healthy behaviors in the face of adversity than socially and economically marginalized communities.⁹ These strengths, which are broadly recognized in current public health practice as promoting well-being, constitute the central premise of the social determinates of health framework. However, it is only recently that activities of public health emergency preparedness have

incorporated a perspective that disasters occur within a social, cultural, and historical context of preexisting health disparities and, in some populations, of underlying mistrust of government.¹⁸

Vulnerability, in the emergency preparedness world, has traditionally focused on risk-related deficiencies in critical infrastructure (e.g., roads, buildings) or susceptibility to novel viruses (H1N1). However, it was only rarely recognized that vulnerability has a socially constructed component: in any given disaster scenario, those populations with mental health problems, chronic medical conditions, developmental disabilities, or extreme poverty are often most at risk for poor survival outcomes.^{10,19–21} Vulnerability, which is influenced by demographic, cultural, social, economic, and historical contexts, changes according to the interactions of the social determinants of health, an individual's functional limitations, and the nature of an adverse event.⁹

COMMUNITY RESILIENCE AS A NATIONAL PRIORITY

Emergency response interventions and resources will be inadequate and delayed following a major disaster, which requires communities to develop self-sufficiency for extended periods of time, ranging from days to weeks. Building community resilience is gaining national attention as a mechanism through which all communities—particularly those that experience disparities during nonemergency times—can strengthen their ability to rebound from adversity even in the