

Strengthening Social and Economic, Medical, and Public Health Systems Before Disasters Strike

Tanya Telfair LeBlanc, PhD, MS

ABOUT THE AUTHOR

Tanya Telfair LeBlanc is an AJPH Associate Editor, a senior public health scientist, and an educator who writes children's books under the name T. T. Telfair.

See also the COVID-19/Public Health Preparedness and Response section, pp. 842–875.

This special section of *AJPH* represents a collection of COVID-19 treatises that highlight some of the deep flaws in the American social and economic, health care, and disaster response systems—present before the onset of the current pandemic—that contribute to national mitigation challenges. Rao et al. (p. 849) provide an important comparison between Hurricane Katrina and COVID-19, two major public health disasters that devastated the United States. They demonstrate how both situations have revealed the concentrated impact on vulnerable populations who live in social, historical, and political environments in which health disparities and barriers to care exist under routine circumstances. The authors suggest using science to inform methods of addressing social determinants of health and public health policy, with the goals of increasing access to care and reducing health care costs. Self et al. (p. 854) examine shelter characteristics and infection prevention practices in relation to severe acute respiratory syndrome coronavirus 2

(SARS CoV-2) infection point prevalence during universal testing at homeless shelters. They conclude that sleeping arrangements and staffing policies, such as excluding symptomatic staff and having medical services on site, are modifiable factors that may be associated with transmission of SARS-CoV-2. They also emphasize the requirement of continuing services for people experiencing homelessness.

Goralnick et al. (p. 844) meet disaster structural frameworks and health disparities head on by critiquing the Hospital Incident Command System, which is activated during events to coordinate hospital-wide disaster responses. Based on lessons learned in the COVID-19 activation, they argue for embedding health equity specialists within the Hospital Incident Command System as an important next step to address hospital-based contributions to institutional racism, which led to disproportionate illness and loss of life in marginalized communities. Riley et al. (p. 860) expose another structural defect in the health care system: long-

standing challenges of the blood collection and distribution system to ensure an adequate blood supply for medical emergencies. The authors describe the US blood supply system, its gaps and vulnerabilities, and the impact of the pandemic upon it, all of which have contributed to public health emergency response challenges. McLaughlin et al. (p. 867) describe another structural component of the public health system in the COVID-19 response: the importance of laboratory diagnostics. The authors explain the complexities of an effective laboratory response system and highlight the difficulties and lessons learned when demand for laboratory testing capacity surges beyond routine expectations.

REEXAMINING RESPONSES TO DISASTERS THROUGH A CONTEXTUAL LENS

Disasters, both natural (famine, floods, pestilence) and man-made (wars, political unrest), have always been part of the human experience. In the past, the effect of disasters on human populations was, to some extent, more geographically restricted. However, life in the 21st century and all that goes with it—changes in rapid transportation availability and world travel, centralized methods for producing and distributing food, political and civil upheavals contributing to mass migrations, proliferation of organized terrorism, and effects of climate change—have expanded the potential for and possibility of large-scale, mass public health emergencies affecting thousands of persons per event.¹ The long-term, unforeseen consequences of 20th-century medical interventions have contributed to the natural evolution of microorganisms producing hardy pathogenic

strains that are resistant to available treatments.²

For the past five decades, global scientists and public health professionals have been concerned about calamitous worldwide disasters similar to the influenza pandemic of 1918, which infected more than one third of Earth's population and resulted in more than 50 million deaths.³ Government and public health agencies in the United States have devoted millions of dollars in resources to constructing response infrastructures and developing structural frameworks or models for mobilizing and coordinating multiple stakeholders across city and state bureaucracies and emergency and health care systems to mount responses.⁴ After the events of September 11, 2001, public health efforts to prepare for emergencies received renewed focus, energy, and resources⁵ and stimulated scientists from a plethora of disciplines to study disasters from various perspectives. Henry Fischer, a sociologist who studies the effect of disasters on social groups, offered a linear model for understanding the natural course of a catastrophe. He suggested that all or part of an existing social structure first experiences the mass emergency, then social structure is disrupted, the mass emergency is mitigated, and an adjusted social structure carries on after the event. Severity of disruption was measured on a 10-point scale based on extent, scope, and duration of the emergency.⁶

It is important to note here that in parallel with the build-up of efforts to address emerging threats that require large-scale mitigation and scientific inquiry to understand the potential impact on human populations, the way people communicate, receive, and understand information has changed in the past 50

years. The internet and its contentious offspring—social media—have become ubiquitous features of everyday life through home computers, workplace computers, and mobile devices, which may obfuscate receipt of accurate messaging.^{1,7,8}

In February 2020, when COVID-19 spread globally, I began to understand that disaster models and structural frameworks developed by public health and social scientists were based on several unwritten assumptions: (1) before a mass emergency, a social structure is assumed to be sound and cohesive, with individuals acting in ways to mutually support the whole; (2) a health care system is assumed to work reasonably well, with most people able to access care; and (3) a society's communication system is efficient for delivering unambiguous, life-saving messages to most of an affected population. Disaster responses in recent years, particularly the response to COVID-19, unmasked persistent structural flaws in organizational capacity, reaffirmed unresolved social and economic inequities, and identified systemic flaws in communication channels. The content in this issue of *AJPH* calls for a reexamination and strengthening of social and economic, medical, and public health systems before the onset of emergencies. *AJPH*

CORRESPONDENCE

Correspondence should be sent to Tanya Telfair LeBlanc, PhD, MS, 1415 Hwy 85 N, Suite 310 #302, Fayetteville, GA 30214 (e-mail: ttantelfair@gmail.com). Reprints can be ordered at <http://www.ajph.org> by clicking the "Reprints" link.

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CONFLICTS OF INTEREST

The author has no conflicts of interest to disclose.

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