



At-Risk populations and public health emergency preparedness in the United States: Nursing leadership in communities



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Environmental and Public Health Expert Panel

Executive Summary

Public health emergency preparedness is defined as:

...the capability of the public health and health care systems, communities, and individuals, to prevent, protect against, quickly respond to, and recover from health emergencies, particularly those whose scale, timing, or unpredictability threatens to overwhelm routine capabilities. Preparedness involves a coordinated and continuous process of planning and implementation that relies on measuring performance and taking corrective action (Nelson et al, 2007, p. S9).

Despite the billions of dollars spent on strengthening public health preparedness and the focus on all-hazards preparedness in the United States (U.S.) since 2001, many communities remain unprepared for major public health emergency events. Recent examples of natural disasters in 2020 that devastated communities and broke records include: the wildfires in the Western states, the hurricanes in the Atlantic, the rain and flooding in the Midwest, and the heat in the Southwest (Thompson, 2020). Anthropogenic climate change is expected to continue to adversely affect the environment and populations that live within them, including at-risk populations (Intergovernmental Panel on Climate Change, 2018).

The impact of these disasters and other public health emergencies fall disproportionately on at-risk groups, including those living in at-risk communities. The chronic underfunding of the public health infrastructure and programs designed to strengthen social determinants of health has resulted in the COVID-19 pandemic disproportionately impacting populations at-risk for increased disaster related morbidity and

mortality (e.g., different ethnic groups, long-term care residents, prisoners and others) (Fortuna et al, 2020; Kantamneni, 2020; Sequist, 2020; Haynes et al., 2020).

On February 11, 2020, the World Health Organization (WHO) officially named the disease causing the novel coronavirus outbreak, COVID-19. In response to the yearlong pandemic, the United Nations declared December 27 as the annual International Day of Epidemic Preparedness (United Nations, 2020, p.2) to recognize the importance of global collaboration and need to strengthen the health and public health infrastructure to prepare for future epidemics. As of January 2021, globally, there were over 101 million cases and about 2.2 million deaths (WHO, 2021). In the United States, there were over 25.5 million cases and over 431,000 deaths (Centers for Disease Control and Prevention, 2020a). COVID-19 has taken a greater toll on persons who are older, persons with co-morbid conditions (Centers for Disease Control and Prevention, 2020b) and persons of different ethnic and racial backgrounds (Artiga, Garfield, & Orgega, 2020).

Nurses and their professional nursing organizations share a responsibility to shape health care delivery and promulgate change for unjust systems and structures (American Nurses Association, 2015). Nurses, in their workplace and community, must be integral leaders in all-hazards mitigation, preparedness, response, and recovery. In particular, nurses' social contract to care for at-risk populations, as those more susceptible to illness, injury, or premature death due to hazards, requires nurses to assure that these at-risk populations are recognized, considered, and engaged in all-hazard preparedness and response at the community level.

Nurses should engage within the public health emergency preparedness process at every level of government and within organizations in their community. Nursing leadership can then help to assure protections for those most at-risk populations during times of disaster or public health emergencies.

Background

To best address the needs of communities that are at-risk, it is important to define the whole community and at-risk. The U.S. Department of Homeland Security's (DHS) National Response Framework (NRF) includes a broad definition of the whole community and recommends engagement of all community members and of community advocates to ensure preparedness for all. The NRF definition of the whole community:

The whole community includes individuals, families, households, communities, the private and nonprofit sectors, faith-based organizations, and local, state, tribal, territorial, and Federal governments. This all-inclusive approach focuses efforts and enables a full range of stakeholders to participate in national preparedness activities and to be full partners in incident response. Government resources alone cannot meet all the needs of those affected by major disasters. All elements of the community must be activated, engaged, and integrated to respond to a major or catastrophic incident. . . . This includes children; older adults; individuals with disabilities and others with access and functional needs; those from religious, racial, and ethnically diverse backgrounds; people with limited English proficiency; and owners of animals, including household pets and service and assistance animals (US Department of Homeland Security, 2019, p. 4).

Resources are available on the DHS/Federal Emergency Management Agency (FEMA) website, including the NRF, and planning documents to help communities and organizations be prepared. Other federal agencies have addressed this issue through recommendations, toolkits, development of models, apps, and planning resources.

The U.S. Department of Health and Human Services (HHS) defines at-risk individuals as, "people with access and functional needs that may interfere with their ability to access or receive medical care before, during, or after a disaster or emergency," (2021). Access and functional needs apply broadly; "Access-based needs require that resources are accessible to all individuals, such as social services, accommodations, information, transportation, medications to maintain health, and so on. Function-based needs refer to restrictions or limitations an individual may have that requires assistance before, during, and/or after a disaster or public health emergency." (US Department of Health and Human Services, 2021). While not meant to be inclusive, other populations who may be at-risk include: persons from different ethnic groups and cultures, persons with low health literacy, persons for whom English is a second language or limited proficiency of English, persons who are homeless, have

behavioral health issues or pharmacologic dependency, or persons with chronic and co-morbid health conditions.

Estimates of the total number of at-risk individuals in the U.S. are challenging to calculate. With respect to chronic conditions alone as a proxy of at-risk, in 2014, of the approximately 317 million population, 60 percent or 190 million Americans had at least one chronic condition and 42 percent or 133 million had multiple chronic conditions (Buttorff et al, 2017).

Considering other at-risk populations, (Centers for Disease Control and Prevention, 2018), substantial numbers of the U.S. population are potentially at-risk during a disaster or public health emergency. People who report their health as fair or poor and those with behavioral health issues are less likely to be prepared for a disaster (Eisenman et al., 2009). Specific populations at risk for inadequate disaster preparedness include frail older adults (Heagele, 2018), non-veterans (Der-Martirosian et al., 2014), younger individuals without children, females, those with lower educational achievement (DeBastiani, Strine, Vagi, Barnett, & Kahn, 2015), and non-English speaking and racial/ethnic minorities (Centers for Disease Control and Prevention, 2012). Further, older adults with chronic diseases do not adequately demonstrate increased disaster preparedness behavior, compared to the general population, proportionate to their disaster-related morbidity and mortality risk (Ko, et al, 2014). Older adults in general are more vulnerable to mortality during natural disasters (American Red Cross & American Academy of Nursing, 2020).

Responses and Policy Options

Professional nursing associations and agencies of the US federal government have identified the importance of addressing the needs of at-risk populations with respect to public health emergency preparedness. The American Association of Colleges of Nursing includes requirements for assessing population needs for public health emergency preparedness in the baccalaureate draft essentials (American Association of Colleges of Nursing, 2019) and the American Nurses Association Code of Ethics for Nurses with Interpretive Statements (American Nurses Association, 2015) includes provisions that can be applied to situations likely to arise during disasters. Additionally, three professional nursing organizations—the Association of Community Health Nurse Educators (ACHNE) (Kuntz et al, 2008), the Association of Public Health Nursing (APHN) (Association of Public Health Nurses, 2013) and the Emergency Nurses Association (ENA) (Emergency Nurses Association, 2019) have published papers or position statements regarding nurses' role in public health emergency preparedness; each of the documents specifically mention populations at-risk.

Policy

In June 2019, Congress passed and the President signed the [Pandemic and All-Hazards Preparedness and Advancing Innovation Act \(PAHPAIA\)](#), ([Public Law No. 116-22](#)). This law amends the Public Health Service Act to continue work by HHS to advance national health security. There are a number of amendments that include enhancing the authorities of the HHS Secretary, Assistant Secretary for Preparedness and Response, and the Director of the Centers for Disease Control and Prevention to prepare for and respond to public health emergencies. PAHPAIA also authorizes new public health and medical preparedness programs for regional health care preparedness and military and civilian partnerships and reauthorizes funding for other public health and medical preparedness programs ([US Department of Health and Human Services, 2019](#)). Overall public health preparedness funding has decreased with some programs experiencing significant changes, e.g. HHS Hospital Preparedness Program. However, in response to the COVID-19 pandemic, the U.S. Congress passed supplemental appropriations to support a wide range of programs including, medical product research and development, support for states, territorial and tribal programs, nutrition and food programs and services for older adults ([Trust for America's Health, 2020](#)).

Despite all the initiatives listed above, the consequences from a disaster or public health emergency disproportionately impact at-risk populations. Nurses have the knowledge, education, training, and skills and have a “. . . vital role to play in all phases of disaster (s),” ([International Council of Nurses, 2019](#)). Nurses can contribute at all levels and in all sectors due to their work in communities, their knowledge of the needs of at-risk populations and available resources, their ability to work strategically in health planning and their clinical expertise. Nurses are of “immense value during disaster risk prevention, response, and recovery ([International Council of Nurses, 2019](#)) and nurses, especially nurse leaders, must be involved with disaster/public health emergency policy planning, development and implementation.

The Academy's Position

This policy brief is consistent with the Academy's 2021-2022 Policy Priorities (American Academy of Nursing, n.d.) and 2021-2024 Strategic Goals and Objectives ([American Academy of Nursing, 2020](#)). The policy priority, to “Advance Health Equity & Champion Wellness” includes, “. . . a distinct focus on removing disparities and enhancing the care experience, especially for black and brown mothers, migrant populations, LGBTQ individuals, children, older adults, indigenous communities, and other vulnerable populations,” (American Academy of Nursing, n.d., p. 2)

This policy brief is also consistent with the Academy's support of the delivery of high-quality mental/behavioral health, increasing the capacity of public health nursing, reducing sources of climate change, the implementation of violence prevention programs, and expanding nursing's role in global pandemics ([Gonzalez-Guarda, et al, 2018](#); [Hanrahan, et al 2013](#); [Kub, et al, 2017](#); [Leffers & Butterfield, 2018](#)).

Implementation of the policy recommendations below will help strengthen the preparedness of at-risk populations, and support for nurses to advocate for the inclusion of at-risk populations in all-hazard preparedness efforts and for funding of public health infrastructure.

It is the shared responsibility of professional nursing organizations to shape health care delivery and promulgate change for unjust systems and structures ([Corless et al., 2018](#)). At-risk groups must be targeted in an ethical, effective, and culturally relevant manner to increase preparedness and mitigate the effects of disasters ([Bethel et al., 2013](#)).

Recommendations

To ensure that at-risk populations are recognized, considered, and engaged in all-hazard preparedness and response at the community levels, we provide the following recommendations:

- 1 Policymakers at all levels of government should invest in sustained funding for the protection of at-risk populations (health and mental health) and public health infrastructure before, during and after public health emergencies. These efforts should ensure that at-risk populations are identified, and involved in all-hazard preparedness planning, including plans for care during the response and recovery phases.
- 2 Policymakers should invest in the anticipated nursing workforce that will be needed to adequately respond to disasters. This includes, but is not limited to, personal protective equipment (PPE) as well as other equipment needs, childcare, transportation, and basic needs in the event of simultaneous personal property loss for this essential component of the workforce.
- 3 Emergency preparedness leadership in all levels of government should ensure nursing is included in activities and represented in leadership on disaster planning committees. Priority should also be given to engaging with nursing education faculty and administration.
- 4 Policymakers should consult with professional nursing organizations to assure the availability of member disaster registry or team listings (e.g., American Red Cross and Medical Reserve Corps) of trained nurses with appropriate expertise to deploy in a disaster.

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