


A Humanitarian Crisis: Lessons Learned From Hurricane Irma

 See also Lichtveld, p. 28; Rodríguez-Díaz, p. 30; Dzau et al., p. 32; and Woodward and Samet, p. 33.

On September 10, 2017, I decided to not heed mandatory evacuation orders and waited out Hurricane Irma in Florida. I was one of millions of people who waited patiently in their houses as the massive storm infiltrated the built environment along its path. This was a harrowing experience for me, as it was the first hurricane I had been through. I lived to tell the tale and learned a few things about hurricanes and humans.

First, the “calm before the storm” is the opposite of how people react before going through a hurricane because of the endless preparatory work that needs to be done. Second, the worst part of the hurricane is not the assailing rain pellets shooting against the window, it is the bass-like drone of the raging wind tearing at the roof of the house; every angry gust is a relentless effort to disassemble the structure offering the most protection and last line of defense against the storm. Third, the house starts to feel unsafe once the whistling wind and accumulating pools of water seeping under doors and windows reaffirm that this man-made shelter is imperfect. Fourth, there will probably not be water or power, but active cell phone service may remain—the final link to the outside world—resulting in a barrage of text messages from worried family members

or friends intermingled with tornado, hurricane, flash flood, and storm alarms. Finally, the feeling of stepping outside to assess the post-hurricane damage is a mixture of shock and euphoria: thinking about how bad it is but how much worse it could have been.

MANY NATURAL DISASTERS

Living through Hurricane Irma was one of many experiences faced by people who endured the natural disasters that devastated large populations in the United States during August and September 2017. Before Irma, Hurricane Harvey, a category 4 storm, made landfall in Texas and caused massive destruction throughout 43 counties in the state.¹ By comparison, Irma led to a state of emergency being declared in 67 counties in Florida alone, with the hurricane causing significant damage throughout many southern states.² In addition to the rare touchdown of a pair of category 4 hurricanes in the contiguous United States in less than a month, the eye of category 4 Hurricane Maria moved directly through Puerto Rico and caused country-wide power outages and mass devastation.

Other natural disasters affecting population health occurred during this time frame as well,

including forest fires. In September 2017, 129 active fires consumed 2 055 346 acres in the United States, the largest two occurring at Rice Ridge in Montana (132 732 acres) and Chetco Bar in Oregon (182 284 acres).³ These fires threatened residences, caused evacuations, and led to road, trail, and area closures throughout the Northwest.³

PATTERNS OF DAILY LIFE

These natural disasters halt patterns of daily life and involve a myriad of negative effects, including financial hardships experienced by individuals as well as local, state, and federal governments as they try to re-create the predisaster environment. Many businesses will lose money because of forced closures caused by power outages, water shut-offs, flooding, or unsafe terrain, whereas others (e.g., roofers, lawn and yard maintenance companies, waste collectors) will be unable to sustain the amount of work needed and may suffer undue stress owing to long working hours. Also, access to

health care services may be suspended and unavailable.

Employees of closed businesses may have to use limited sick days during this absentee period, which can have effects in terms of later periods of illness and rest time needed. Children will be unable to attend school until a functioning and safe environment can be adequately restored. In most instances, people will suffer from environmental exposures such as air pollution and contaminated water. In many cases people will die, along with animals and vegetation. Even evacuees will be affected, as they will often encounter long drives with unexpected delays as a result of traffic jams and gridlock, accidents, and closed exits. Life will indefinitely remain in this transition phase until normalcy is restored, a process that sometimes can take days, months, or even years.

HUMANITARIAN CRISES

Regardless of whether the public believes that climate change is the root cause of these natural disasters, we can all agree that the consequences of such events are severe and that there is the potential for millions of people to be affected. Typical guidelines for natural disasters are to evacuate or to store as much water and food as

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possible and then wait out the storm. It does not matter which option is chosen because those who leave suffer in that they always need to return home. However, when a house—or country—is damaged, flooded, or burned, what are people returning to?

The frequency of these disasters and the size of the populations affected have moved this public health issue from that of manageable emergencies into the realm of humanitarian crises. The response to disaster outcomes

needs to change as well as the preparatory work beforehand and the funding, support, and rebuilding that occur afterward. I do not know the solution to these problems, and in fact there is probably not a single correct solution. As someone who lived through a category 1 hurricane, I am merely making a call for change and a plea for action. I have seen what can happen in these types of scenarios, and I am also aware of how much worse the consequences can be. **AJPH**

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Disasters Through the Lens of Disparities: Elevate Community Resilience as an Essential Public Health Service

 See also Zolnikov, p. 27; Rodríguez-Díaz, p. 30; Dzau et al., p. 32; and Woodward and Samet, p. 33.

Weather experts, using wind speed, declared September 2017 the most active Atlantic hurricane season on record. However, wind speed is but one measure of impact. A comprehensive assessment of the immediate and long-term consequences of disasters requires a holistic, “whole community” approach, a term coined by the Federal Emergency Management Agency to encourage a multi-sectoral strategy to disaster management. However, intransigent disparities faced by many communities living in the path of disasters makes this an elusive concept.

CUMULATIVE COMMUNITY VULNERABILITY

Disasters, natural and technological, profoundly affect the

health and well-being of communities, especially those in disaster-prone regions. From Hurricane Katrina, the September 11th attacks, and the Deepwater Horizon oil spill to the salvos of Harvey, Irma, and Maria, disasters continue to be addressed as isolated, acute events. Vulnerable communities face cumulative, not isolated, threats, and disparities exacerbate the impact of each overlaying risk domain. For example, Hurricane Katrina, well recognized as both a natural and technological disaster, demonstrated the triple threat burden: historic health disparities, persistent environmental health risks, and living in a disaster-prone area. The Deepwater Horizon oil spill’s impact on communities of Vietnamese American fisherfolk exemplified the cumulative

insults of natural and technological disasters as well as this community’s socioeconomic and health disparities.¹ Against this backdrop, I examine the impact of Harvey, Irma, and Maria on communities.

Protecting the most vulnerable is the proven strategy to protect all. Recent disasters showed that this principle was again ignored in Texas, Florida, and Puerto Rico. Although self-preparedness is an important first step in disaster management, those who live from paycheck to paycheck do not have the luxury of buying three days’ worth of water and food. Even if this was possible, examples from all three disasters

showed that response resources were significantly delayed for the most vulnerable communities. Prominently in Puerto Rico, eight days postdisaster, communities still lacked safe drinking water, basic food supplies, transportation, and electricity. Indeed, the success of a disaster response is most accurately determined by the receivers, not the providers.

POLICY AND HEALTH DISCONNECT

To date, we have failed our most vulnerable communities in a three-pronged fashion: (1) failing to recognize that a community’s degree of disaster preparedness directly influences its capacity to recover, (2) failing to address disaster recovery as a long-term process requiring sustained investments of financial resources and human capital, and (3) ignoring disparities as chronic stressors that communities face.

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