

Hurricane Dorian and Disaster Response in the Face of Constant Threats

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ABSTRACT

Hurricane Dorian's impact on Eastern North Carolina and the Bahamas islands demonstrate the devastation and public health needs that can be left in the wake of a catastrophic event. The hurricane created a range of public health and healthcare challenges, strained further by the damage to infrastructure on which critical services, including the medical supply chain, depend. The recovery process is long, but offers an opportunity to build back better, more resilient communities that can withstand today's threats.

Key Words: disaster response, public health, emergency management, hurricanes, vulnerable populations

Emergency managers across the United States brace themselves for the intense months of August through November. While events can happen year-round, we in this field know these months tend to be highly active. The height of hurricane season often displays the ultimate convergence of natural disasters and public health needs. Since 2016, every hurricane season has brought major storms, leaving residents in their path vulnerable to the effects and the aftereffects of the storms. Though we have arrived at the midpoint of “peak hurricane season,” we have already seen the lasting devastation that a single event can cause, and are bracing ourselves for more to come.

Hurricane Dorian, which moved through the Bahamas and southeast US in early September, was the first event in this year's hurricane season to draw global attention and remind us of the destruction that one storm can leave behind. Just 150 miles from the US, the Bahamas—a country composed of hundreds of islands across the Northern Atlantic Ocean—bore the brunt of this storm which resulted in the decimation of their infrastructure. It is important to note that much of the infrastructure in the storm's path was unprotected and unreinforced, leaving those in its path all but helpless. The ruin caused by Dorian was greatest in the Grand Bahama and Abaco Islands, where at the time of this writing, search and rescue and basic restoration of services are still underway. Some mainstream reports have described portions of these islands as a “war zone”¹. As in a war zone, in the midst of the rubble left for survivors to navigate, continued health needs, both physical and mental, must also be addressed. In addition to rebuilding their infrastructure, those in the impacted islands are also left

grappling with no clean water or proper sanitation. These challenges are compounded by the fact that children do not have anywhere to attend school, and the tourism industry will have to “bounce back” from complete destruction, if at all.

After such a destructive event, the challenge is restoring basic operations that are sufficient enough to even manage the response. Testing and securing infrastructure to allow for safe sheltering of survivors is the first step. Determining the best and safest way to move survivors to shelter, and relocate them to less impacted islands, has to be done at the same time as search and rescue. Tracking and management of survivors, a need that we were able to identify partnerships to fill, is also vital. Similar to the response to and recovery from Hurricane Maria, these types of disasters do not afford us the luxury of determining hierarchy or delaying support.

To make matters worse, the geography of the impacted areas is spread out over skinny strips of low-lying land, making search and rescue a massive logistical undertaking. In order to help survivors, assist patients in need, and move towards recovery, we have to prioritize the immediate needs that are presented after a catastrophic event. The damage to all infrastructure leaves response, especially public health response, needing to restore or replace healthcare infrastructure almost right away in order to meet evolving needs.

Much of the focus has rightly been on the needs in the Bahamas as the country shifts towards recovery, but we must not forget other impacted areas. Eastern North Carolina was also hit by Dorian, with the storm moving across the Outer Banks with forceful wind and storm

surge. While this area may have missed the worst of it, the floodwaters were enough to damage healthcare infrastructure and strain the connections between those islands and the main coast of North Carolina. This disconnect complicated public health support and the delivery of medical products to the impacted region. As an example, the local pharmacies, which were accessible only by ferry to the main coast, were damaged by the storm and unable to restore operations immediately after Dorian.

For communities like this, the next closest option may not be accessible without additional transportation assistance. In this case, it was easier to leverage partnerships to bring the medical products to the island, instead of bringing the patients to the pharmacy. This feat was accomplished in partnership with chain pharmacies and emergency management in the midst of ongoing disaster. These are just a few examples from our vantage point, but it should also be considered that North Carolina has seen a serious and/or catastrophic event every year since 2016, including Hurricanes Matthew, Florence, Michael and now Dorian^{2,3}. At least two of those storms were labeled as “one in 100 year” events, which left communities in an almost continuous state of recovery.

When we experience severe events at this scale, we mustn't forget the importance of mental health support in response. This can be seen first-hand in the ongoing efforts in the Bahamas⁴. To support those impacted, many of our partners on the ground are amplifying the distress hotlines and psychological first aid as standard practice in response to address the trauma and dissociation caused by these events. However, we cannot fix all of these issues in one swoop. Sustained efforts to identify potential supports will be necessary well into recovery, as will recognizing that this continuous response/recovery cycle may call for tools beyond the standard ones.

We cannot overlook the similarities between North Carolina and the Bahamas, including the fact that vulnerable populations were not properly supported ahead of the hurricane. This reality has also caused both communities to now face the lingering and potentially deadly effects of a hurricane's aftermath.

The impact of the storm and the path to recovery will differ for the Bahamas and North Carolina, but both show the impact of hurricanes on health and well-being. These regions are still at risk of facing additional events in the very near future. Before the next disaster strikes, we must appropriately and swiftly act. Lives are depending on it.

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