

Super Storm Sandy: What We Learned

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Case Presentation

On October 22, 2012, a tropical depression formed off the northeast coast of Nicaragua in the Caribbean Sea. Two days later, it strengthened and became a Category 1 hurricane while traveling northeast, passing over Jamaica, the Dominican Republic, and Haiti, and continuing over Puerto Rico and Cuba by October 26. Over the next few days, the hurricane continued north but weakened to a tropical depression once reaching the Bahamas. However, it quickly progressed into a Category 1 hurricane once again due to warm waters and expanded to a radius of 100 miles.¹

The storm continued to progress up the U.S. east coast but stayed several hundred miles offshore when passing the Carolinas, pushing large waves and massive amounts of rain ashore. It moved past Delaware and New Jersey as a post-tropical cyclone, causing more damage as it struck a cold front heading east toward the Atlantic. Another high-pressure storm to the north trapped it along the shore, extending winds over 70 mph up to a thousand miles. It coincided with high tide north of New Jersey to Connecticut, resulting in record tide levels.²

Introduction

Described as a “raging freak of nature” by National Geographic,³ Super Storm Sandy, a hurricane of unprecedented size and strength, was forecasted to impact Delaware on October 29, 2012. It caused deadly flooding, mudslides, and destructive winds from the Caribbean to the U.S. East Coast due to an unusual combination of hurricane conditions and cold fronts. During the storm’s nine-day course, it killed 70 people in the Caribbean and almost 150 people in the U.S. The National Oceanic and Atmospheric Administration estimates Sandy caused at least \$70 billion in damages,⁴ making it among the costliest storms in U.S. history (see Figure 1). This natural disaster tested Delaware’s full capabilities in preparedness and response and the partnerships among the Delaware Department of Health and Social Services (DHSS), Division of Public Health (DPH), particularly the Office of Preparedness; the Delaware Emergency Management Agency (DEMA); and other state agencies.

Figure 1. Damage from Superstorm Sandy in New Jersey



Mass Care and Super Storm Sandy

Sandy powered a glancing blow to Delaware, causing unprecedented flooding in areas that never experienced flood of that magnitude, downed trees, and power outages. Several community shelters opened based on DEMA's response, accommodating more than 1,000 residents for three days. Delaware could have fared much worse, based on initial forecasts. Stakeholders involved in the preparedness and response identified a number of important lessons.

DPH's Emergency Medical Services and Preparedness Section (EMSPS) made several improvements. It developed new training that addresses gaps in preparedness and response; purchased new equipment to meet additional shelter client needs, and internally, made structural changes to the Incident Command System for a more effective functional structure during response and recovery. Quick action guides and checklists were developed to assist responders understanding of their roles in supporting DPH's State Health Operations Center (SHOC), an internal emergency response structure.

Several other changes revolved around supporting vulnerable populations during a disaster. EMSPS created a new SHOC response position, Vulnerable Populations Coordinator, to support the needs of people with disabilities, particularly in a disaster. It also established a new SHOC unit group known as the Functional Information and Support Center (FISC). FISC consists of staff from DPH and other DHSS divisions, and community organizations to offer resources and technology for those with Access and Functional Needs (AFNs).

In addition to improvements in the state's AFN response, EMSPS launched several preparedness planning initiatives for that population, including creating a planning group to focus on AFN mass care. The AFN Planning Group suggested designing a system to assist those with AFN during emergencies, and following the super storm, developed mitigation strategies to improve the preparedness and response capabilities for people with disabilities. One of the group's activities was developing the Preparedness Buddy emergency planning brochure, available on the DPH website in seven languages.⁵

DPH also launched a multi-year planning and exercise project that improved mass care capabilities within the state for persons with AFN and led to the development of several new Mass Care plans to address shelter roles and responsibilities. The new planning process also led to improvements in training, equipment, and staffing. For example, DPH purchased Shelter Communication Packages to improve communications of providers working at the shelters with those who have AFN. DHSS also partnered with DEMA and the American Red Cross (ARC) to train shelter managers on general shelter operations and maintenance, while DPH enhanced its shelter training for DHSS and Delaware Medical Reserve Corp nurses. Lastly, DPH created a new position, the Shelter Technician, who assists nursing staff at shelter medical stations, with safe patient handling, registration, logistics, and communications for persons with AFN.

In 2018, DHSS conducted a full-scale shelter exercise in Sussex County to test its ability to activate a shelter and its newly developed plans and capabilities of trained shelter managers. All DHSS divisions partnered with DEMA, the Delaware Department of Education, the Sussex County Emergency Operations Center, the Delaware National Guard, the Delaware State Police, the Indian River School District, and the ARCs.

Although Super Storm Sandy could be considered a “freak of nature,” this event forced DPH and state and local partners to review their plans and procedures and improve their preparedness and response capabilities.

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