

# Rx disaster preparedness: Meeting acute needs of patients and staff in times of crisis



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**50%**

increase in natural disasters

**6–12x**

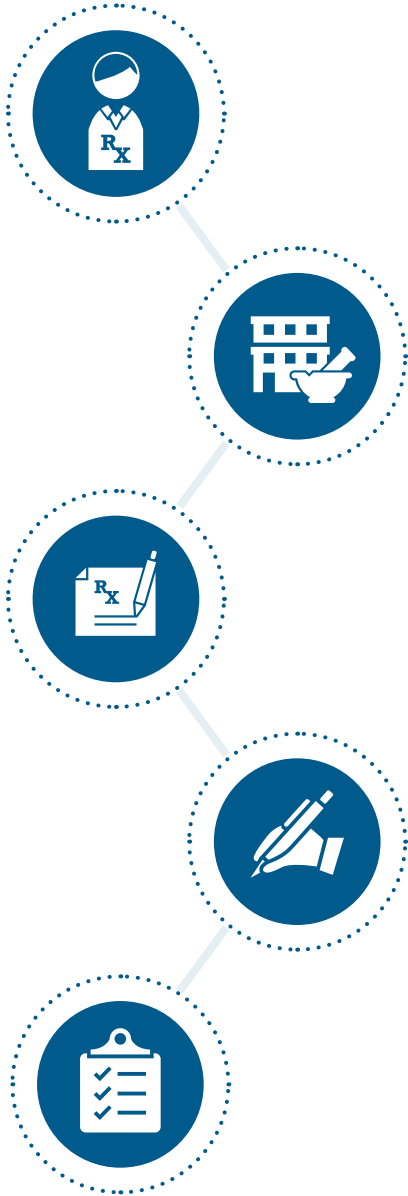
as many mass shootings per year

*Since the early 1980s, the United States has seen a 50% increase in natural disasters like hurricanes, tornadoes and floods.<sup>1</sup> During roughly the same time frame, sadly, mass shootings resulting in three or more fatalities have surged from one or two events per year to an average of one per month.<sup>2</sup> By designing a comprehensive disaster plan that addresses the needs of patients and staff alike, health systems can play a vital role in ensuring continuity of care and accessibility to drugs and supplies during even the most challenging conditions.*

From severe weather events to terror attacks, health systems must not only be prepared to respond decisively and constructively during a disaster to care for patients — they must also have a plan in place to ensure continuity of pharmaceutical deliveries, refrigerated drug storage, alternate documentation systems and emergency staffing for the duration of the recovery phase. Cultivating strong relationships and maintaining open lines of communication with drug wholesalers can equip health system pharmacies with vital insights to anticipate and adapt to each unique disaster.

## Planning for emergencies that can — or can't — be predicted

As devastating as natural disasters can be, they generally come with plenty of advance warning — from powerful, slow-moving hurricanes to relentless winter storms dropping record levels of ice and snow. These types of disasters are known, somewhat ironically, as “planned emergencies.” In contrast, mass casualty events such as shootings, bridge collapses, plane crashes and other unexpected disasters are known as “unplanned emergencies.” Each category has its own specific challenges, along with broader concerns that every disaster preparation plan should take into account. Here are just a few of the essential steps for success.



### 1 **Make sure pharmacists have a seat at the planning table**

Since pharmacists have a deep and broad understanding of the types and volumes of supplies that particular disasters require — as well as valuable insights into emergency storage and staffing issues — any disaster preparedness discussions should include pharmacy staff.

### 2 **Collaborate and communicate with drug wholesalers**

Before, during and after a crisis, healthy collaboration and communication with drug wholesalers can help health systems prepare for the worst and adapt their disaster plans to reflect real-world, real-time supply chain challenges.

### 3 **Map out emergency Rx orders ahead of time**

Pharmacy leaders should create templated disaster orders with all the essential medications and supplies to stock up in advance of a natural disaster or to restock after an unplanned emergency. It's important to let wholesalers know as soon as possible when a disaster order will be coming their way. Depending on the size of the order, deliveries may be made over multiple days.

### 4 **Include decision makers on your crisis and recovery teams**

Since no two disasters are exactly alike, having boots on the ground at every stage of the event is incredibly important — not just frontline staff, but pharmacy leadership, too. Health systems need people on the scene who are authorized to make decisions quickly and adapt as the situation evolves.

### 5 **Plan for drills, and drill the plans**

Familiarizing team members with the plan can be accomplished in many ways — from verbal walk-throughs during tabletop drills to full-scale disaster exercises involving the entire hospital or health system. These drills help to increase the staff's comfort level with the process. They also reveal gaps and issues to be addressed.

## Planning for natural disasters

As hurricanes gain momentum or floodwaters begin to rise, retail pharmacies tend to close up shop in keeping with voluntary or mandatory evacuation orders. This makes the role of the hospital pharmacy that much more critical, since essential medications are no longer accessible at the corner drugstore for residents or first responders who remain. Large hospitals typically “stand and defend” these facilities in all but the most catastrophic situations — and as a result, health system pharmacies have the complex challenge of acquiring drugs and supplies to serve current patients, potential disaster victims, hospital staff and the community at large.

Once the pharmacy team has worked up templated disaster orders for the kinds of meds and supplies that might be needed during different natural disasters, they’ll be prepared to save valuable time when disaster strikes. Yet there are many other factors to consider, including when and how to place wholesale orders. But what happens when the internet or phone lines go down? A good disaster plan outlines these and other “if this, then that” scenarios.

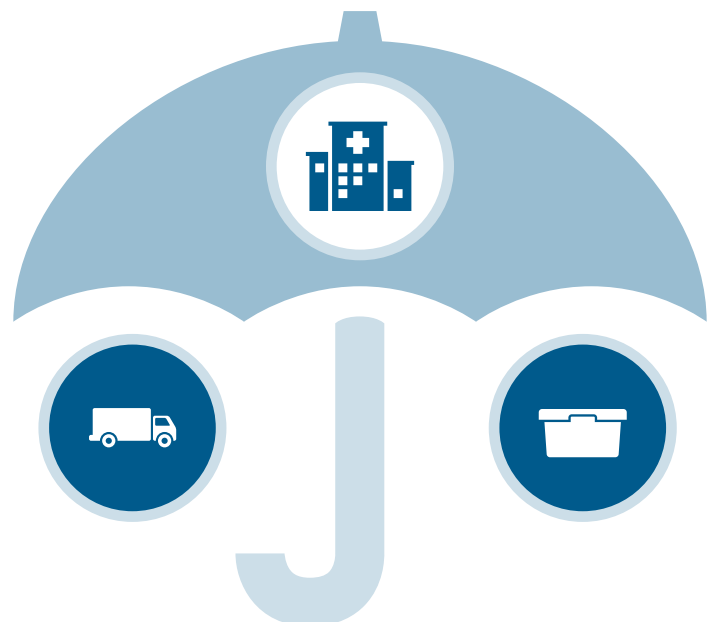
Depending on the timing and severity of the disaster, deliveries may follow their usual routes — or they may require inconvenient detours or unusual modes of transport. For example, a road blocked with storm debris can cause delays as delivery drivers find a safe and clear route. And during floods or widespread damage to roads, deliveries may come by high-water vehicle, boat or helicopter.

Next comes the challenge of where to store the additional drugs and supplies. With storage space already at a premium for many hospitals, high-volume disaster orders compound the issue. These items must be kept out of harm’s way, yet they must also remain easily accessible by pharmacists and caregivers. Drugs that require refrigeration present additional challenges. To begin with, hurricanes tend to strike during the fall, when hospital pharmacies are already stocked with flu vaccine. And because weather-related emergencies of all types tend to cause power outages, refrigerated storage should have access to backup power. If flooding is not expected to be an issue, refrigerated trucks may be an option. Pharmacy departments may also consider storing a number of lab-grade refrigerators off-site, then transporting and setting them up in protected areas within the facility as part of the disaster plan.



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## MUSC Health: Gearing up for severe weather

Pharmacy staff at the Medical University of South Carolina are no strangers to severe weather threats like hurricanes, floods and winter storms. These are some of the key steps that have become a part of their disaster preparedness plan.<sup>3</sup>

**Create an emergency supply list** with drug wholesaler before disaster strikes, including essentials such as:

- Opioids
- Antimicrobials
- Inhalers
- IV fluids
- Antivenin
- Disposables



1

2



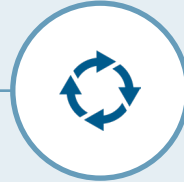
**Maintain multiple emergency contact numbers** with drug wholesalers

**Consider refrigeration space** — whether to buy and store units until needed, or rent as needed



3

4



**Weigh the possibilities of flooding** in low-lying areas that could affect business continuity or pharmaceutical deliveries

**Consider keeping medications in outlying areas** in case of catastrophic damage at main site



5

6



**Have a plan for printing patient medication administration records** and transporting controlled substances in an evacuation event

**Think through fuel supply options**, whether for gas-powered backup generators during the disaster or vehicles during the recovery phase



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## Responding to an active shooter scenario

While nothing can completely prepare pharmacy staff for every detail related to an active shooter at or near a medical facility, a comprehensive disaster plan can give staff a framework and resources to handle this type of mass casualty incident with decisiveness. Key points of a plan include the following:

- Developing and following a clear triage system
- Enacting a documentation system for patients not listed in automated dispensing cabinet patient list, including multiple “Doe” patients
- Deploying a disaster cart with trauma essentials
- Identifying surge needs and capacity while maintaining care for other patients
- Assigning clear roles for clinical specialists, pharmacy residents, staff pharmacists and technicians
- Early communication with drug wholesalers to alert them that a large order will be coming to replenish stock being used

## Preparing for mass casualty events

While cyberattacks and intentional interruptions to the electrical grid or phone networks warrant their own contingency plans, mass casualty events are clearly the most concerning types of unplanned disasters. As with natural disasters, the goals of a disaster plan focused on mass casualty incidents are to anticipate threats, prevent loss of life, preserve physical and psychological health, minimize economic loss, and reinforce confidence and resiliency.

Mass casualty incidents demand an effective triage system; fast access to trauma carts equipped with code trays, intubation kits, IV fluids, antibiotics, opioids and other essentials; and clearly defined roles that also give pharmacists the flexibility to adapt as the situation changes. They also require strong pharmacy leadership and a comprehensive plan that leaves no detail to chance, including:

- A comprehensive contact list
- Protocols for notifications
- Decision trees
- Drill activation procedures
- Written roles and responsibilities
- Emergency medication and supply inventory





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***Even if a pharmacy hasn't been through a specific type of disaster, there's a lot to be learned by tapping into order histories from other emergency events.***

## **Diminishing complexity: Tapping into historical data and lessons learned**

Choosing specific drugs and supplies to include on a disaster order, and in what quantities, is arguably more of an art than a science since no two hospital pharmacy situations or disasters are quite the same. Yet, there are plenty of good places to start looking at historical data and lessons learned.

Even if a pharmacy hasn't been through a specific type of disaster, there's a lot to be learned by tapping into order histories from other emergency events. This historical data can reveal what types of pharmaceuticals and supplies were in high demand during both the initial crisis and the recovery phase, giving pharmacy staff a good baseline to help customize templated disaster orders. Other health systems that have been through disasters can provide valuable guidance as well by sharing both their best practices and lessons learned.

Additionally, drug wholesalers may distribute lists of critical drugs and other items to have on hand in advance of hurricane or winter storm seasons, which can provide helpful insights into supplies that might not normally be considered. Tom Arnold, medical director of the Louisiana Poison Control Center in Shreveport, La., said the worst-case scenario didn't happen, but there were still dozens more snakebites than usual.<sup>4</sup>

It's difficult to determine an exact number, he said, because lines of communication were down after the storms and not all bites were reported.

"It's historically true that after any big storms come through, we always see more bites because of snakes being displaced, people going back in the cleanup phases and coming into contact with the snakes," Arnold said. Wholesalers routinely help their customers navigate nonroutine disasters of all kinds, making them a reliable resource for real-world insights.



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***Open communication among wholesalers, manufacturers and pharmacies is one of the most important ways to manage supply chain challenges.***

## **Enhancing infrastructure: Disaster-proofing the drug supply chain**

From a drug wholesaler's perspective, planned and unplanned emergencies involve many of the same protocols. These companies take steps to make distribution centers safe and secure; they maintain back-up generators with plenty of fuel; and they have communication procedures that keep staff, sales leaders and customers apprised of any special circumstances that could affect deliveries. They also frequently work together to overcome transportation challenges, share security resources or ship comingled freight to satisfy disaster orders. In times of need, these business rivals are also invaluable allies to each other and to the pharmacies they serve.

Since wholesalers generally know when storms are coming, they begin to build inventory in multiple distribution centers. If one distribution center takes a direct hit, or if the roadways between the facility and pharmacy customers become impassable, the wholesaler can shift orders to other distribution points to keep deliveries on track.

Open communication among wholesalers, manufacturers and pharmacies is one of the most important ways to manage supply chain challenges. When pharmacy team members know a shortage is on the horizon, they can take steps to conserve stock or make alternative clinical arrangements.

## Fueling performance: Keeping staff safe and motivated

As important as it is for organizations to think through potential supply chain challenges, it's just as vital to develop strategies for dealing with the "people chain" throughout the disaster and recovery phases. Disasters may require staff to remain on-site for days at a time, which calls for holistic planning that addresses both uptime and downtime issues. And while pharmacy staff are frequently eager to help during these critical events, frustration can easily arise when the disaster plan doesn't spell out:

- Changes in shift lengths
- Where staff will sleep and shower
- What, if any, overtime will be paid
- Guidelines for administrative leave, paid time off or leave without pay
- Dining arrangements
- Workout or recreational opportunities
- What items staff should bring with them, such as:
  - Personal prescriptions and over-the-counter drugs
  - Multiple changes of clothes
  - Comfortable shoes
  - Jackets
  - Sheets and pillows
  - Air mattress, cot or sleeping bag
  - Towels and washcloths
  - Dry shampoo and toiletries
  - Flashlight and batteries
  - Snacks
  - Something to do (iPad, games, books)



### Conclusion

From the moment a potential or active disaster emerges until long after the initial threat has passed, effective communication between pharmacy professionals, drug wholesalers, health system administrators, patients and the public is imperative to business continuity. By thinking through and preparing for those events most likely to strike, whether due to geography or other factors, health system pharmacies and their wholesaler partners can help to ensure that the continuum of care remains intact.



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- 2 Mark Follman, Gavin Aronsen and Deanna Pan. “US Mass Shootings, 1982-2019: Data From Mother Jones’ Investigation.” <https://www.motherjones.com/politics/2012/12/mass-shootings-mother-jones-full-data/> (Updated July 28, 2019). Accessed July 30, 2019.
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