



Bolstering Disaster Preparedness and Operational Resilience in the Healthcare Supply Chain



The healthcare supply chain is an extensive network of public and private stakeholders with unique expertise to manufacture, distribute and dispense medicines to patients safely. Healthcare distributors are a critical but often less visible part of the supply chain; the industry ensures that the providers and the communities they serve can access the medicines, vaccines and other healthcare products they need regardless of circumstance.

In recent years, a surge in disasters, from hurricanes and floods to tornadoes and disease outbreaks, has underscored the vulnerability of supply chain operations and the critical need for resilience in the face of such disruptions. Distributors and other healthcare supply chain stakeholders have responded to these events by leveraging their disaster expertise and implementing partnerships between the public and private sectors to maintain continuity of operations.

What characterizes a supply chain disruption?

Supply chain disruptions can threaten one or multiple parts of the supply chain. Disruptions can be characterized by their origin, scope and scale, and they can result from natural and human-made disasters, regulatory changes or social-political phenomena.

- Upstream disruptions affect sourcing and manufacturing, often driven by raw material shortages or import/export bans.
- Downstream disruptions impact demand (i.e., consumers, patients) and are typically induced by extrinsic or societal factors (e.g., medical surge, panic purchasing or hoarding).
- Acute disruptions are sudden and limited in duration.
- Chronic disruptions (e.g., ongoing fuel or workforce shortages) can develop into long-standing issues that are not easily resolved.
- Disruptions can be localized, such as those caused by power outages or conflicts, or global in scope, like pandemics or shifting trade relationships; each type poses unique challenges to the stability of the supply chain.

Resilience and the Healthcare Supply Chain

SUPPLY CHAIN RESILIENCE

is defined as the ability of the supply chain to manage disruptions without significant interruption to healthcare delivery and patient care.

OPERATIONAL RESILIENCE

is an organization's ability to resist, adapt to and recover from system disruptions that have the potential to hinder its capabilities.

The characteristics of a disruption influence how healthcare organizations prepare for and respond to events. To successfully prepare for and respond to a disruption, an organization must address the complexities of each type of event. Because supply chain disruptions and the lack of reasonable mitigation efforts or response plans can adversely affect continuity of care, healthcare supply chain organizations must have well-informed contingency plans in place to respond to specific crises promptly and efficiently. Examples include:

EXTREME WEATHER EVENTS



- Over the past 40 years, extreme weather events, ranging from short-term disasters like hurricanes and wildfires to longer-term shifts in regional weather patterns, have **increased in frequency**, become deadlier and have triggered hospital evacuations at an **unprecedented rate**.
- An extreme weather event, or its aftereffects, can cause widespread healthcare disruptions, underscoring the need for resilient medical supply chains. For example, Hurricane Helene shut down Baxter's North Cove facility in North Carolina, which supplied 60 percent of U.S. IV fluids and dialysis solutions, forcing hospitals to ration supplies and delay procedures.
- Healthcare organizations safeguard against disasters by coordinating with federal, state and regional preparedness authorities, and by developing enterprise resilience programs and emergency response plans.

DISEASE OUTBREAKS



- A major disease outbreak (i.e., an epidemic or pandemic) can strain supply chain capabilities, varying from acute to chronic.
- The COVID-19 pandemic showcased the necessity of maintaining both pandemic preparedness and response strategies and close coordination at every level. Public-private partnerships (PPPs) allowed the public sector to coordinate with private sector entities, each leveraging their expertise and vast networks to address threat(s).
- The mpox outbreak and COVID-19 pandemic responses included **PPPs** with distributors to quickly expand the distribution of vaccines and therapeutics to prevent further disease spread.

Distributors are at the forefront of operational resilience in healthcare.

HDA-member healthcare distributors play a pivotal role in supply chain resilience by distributing healthcare products where they are most needed. Further, distributors bring lessons learned from previous disasters — the preparations made, vulnerabilities exposed and overall responses — to further increase operational resilience. Maintaining operational and disaster preparedness resilience strategies is a crucial aspect of anticipating, preventing and resolving supply chain challenges — and something HDA members do each and every day. This continuous work has provided ample opportunities for supply chain organizations to innovate and adopt new solutions into their daily processes.

Recommendations for Advancing Operational Resilience Across the Supply Chain

HDA members are uniquely qualified to offer robust insight on [enhancing operational resilience, disaster preparedness and response](#) across the supply chain planning due to a combination of their extensive expertise and proven capabilities to operate during disasters. Below are a few of the industry's recommendations:



1. Develop working groups that include private-sector stakeholders and subject-matter experts to support data-informed decision-making for extreme weather contingency planning, leveraging technology to enhance forecasting and preparedness.



2. Sponsor PPPs to support the research, development and distribution of new medical countermeasures supporting the Public Health Emergency Medical Countermeasures Enterprise efforts.



3. Increase the number of community-level PPPs and grants to bolster communal trust, knowledge and preparedness for disasters.



4. Partner with private sector vendors to strengthen and expand the capacities of the Strategic National Stockpile using an expanded Vendor Managed Inventory model authorized in the PREVENT Pandemics Act. .



5. Invest in initiatives that strengthen the resilience of the healthcare supply chain workforce with a focus on safety and addressing staffing shortages.

Distributors stand ready to collaborate to strengthen healthcare supply chain resilience by sharing their expertise in the following areas: logistics, their networks and overall role in the healthcare sector, technological advancements; and growing data pools.

For more information, visit HDA.org/preparedness-and-response.

About the Healthcare Distribution Alliance

The Healthcare Distribution Alliance (HDA) represents primary pharmaceutical distributors — the vital link between the nation's pharmaceutical manufacturers and pharmacies, hospitals, long-term care facilities, clinics and others nationwide. Since 1876, HDA has helped members navigate regulations and innovations to get the right medicines to the right patients at the right time, safely and efficiently. The HDA Research Foundation, HDA's nonprofit charitable foundation, serves the healthcare industry by providing research and education focused on priority healthcare supply chain issues.