



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 ensure medical products are manufactured, distributed and dispensed to patients safely. Healthcare distributors are a critical, but often less visible, part of the supply chain. Primary pharmaceutical distributors, represented by the Healthcare Distribution Alliance (HDA), ensure that the providers and the communities they serve have access to the medicines, vaccines and other healthcare products they need regardless of circumstance.

In recent years, numerous events (such as hurricanes, disease outbreaks and the COVID-19 pandemic) have demonstrated how disruptions impact supply chain operations. Distributors and other healthcare supply chain stakeholders responded to these events by leveraging their disaster expertise and implementing partnerships between the public and private sectors to maintain continuity of operations. In each instance, distributors demonstrated the ability to adapt and operate under new conditions swiftly and efficiently. The agile response from distributors in these events prove a continuing need to maintain and improve operational resilience in the healthcare supply chain.

What characterizes a supply chain disruption?

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. Additionally:

- Disruptions can threaten one or multiple parts of the supply chain.
- Disruptions that impact the upstream components of the supply chain (i.e., sourcing and manufacturing processes) include events such as raw material shortages and import or export bans.
- Demand-side disruptions occur at the downstream end of the supply chain (i.e., consumers, patients) and are typically induced by extrinsic or societal factors (e.g., medical surge, panic purchasing or hoarding).
 - Those disruptions can be acute or chronic. Acute disruptions are sudden and limited in duration, whereas chronic disruptions (e.g., ongoing fuel or workforce shortages) can develop into long-standing issues that are not easily resolved.
- Disruptions can be confined to a small region (e.g., conflict zone, power outage) or transcend borders (e.g., global pandemic).

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 have **increased in frequency**, become deadlier and resulted in climate-caused hospital evacuations at an **unprecedented rate**.
- Weather events range from short-term (e.g., hurricanes, wildfires) to longer-term (e.g., geographical shifts due to climate change).
- An extreme weather event or its aftereffects can result in lasting disruptions. As an example, after Hurricane Maria hit Puerto Rico, there were lasting manufacturer-side disruptions globally.
- Healthcare organizations safeguard against climate disasters by coordinating with federal, state and regional preparedness authorities, and by developing enterprise resilience programs and climate action preparedness 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 representatives and climatologists to inform extreme weather contingency planning decision-making.



2. Sponsor PPPs for the research, development and distribution of new medical countermeasures modeled after the National Institute of Health's private-sector partnerships for the development of COVID-19 vaccines and treatments.



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 (SNS) using an expanded Vendor Managed Inventory (VMI) model authorized in the PREVENT Pandemics Act.



5. Invest in initiatives that bolster the resilience of the healthcare supply chain workforce, in particular targeted efforts around worker safety, and mitigating workforce 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.