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Supply Chain Management: Avoid Disruption by Enhancing Readiness

Disease outbreaks, natural disasters, labor strife, sudden spikes in product demand and other crises can disrupt vital supply chains, potentially threatening patient safety and compromising quality and efficacy of care. As outside suppliers become less reliable, problems related to internal supply chain operations – ranging from deficiencies in distribution networks, purchasing functions and storage capacity to outdated manual processes and data systems that cannot track real-time supply levels – become more visible and more potentially harmful. It is thus no surprise that, in the wake of the COVID-19 pandemic, <u>healthcare leaders rank supply chain risk exposures as one of their top operational priorities</u>, second only to staff safety concerns.

In the wake of the **COVID-19 pandemic**, healthcare leaders rank **supply chain risk exposures** as one of their **top operational priorities**, second only to staff safety concerns.

While it is impossible to predict exactly when a supply chain breakdown will occur, healthcare administrators can take measures to help prevent or at least mitigate shortages and resulting care delivery problems.

This *AlertBulletin®* offers a self-assessment questionnaire designed to help organizations evaluate their readiness to respond to supply chain emergencies. The checklist focuses on the following materials management practices and policies, among others:

• Strategic planning.

• Inventory controls.

• Crisis and business continuity management.

• Procurement processes.

• Protocols to address shipping delays, price gouging and counterfeit products.

• Warehousing and distribution procedures.

• Performance review and improvement.

By identifying deficits in supply-chain management, organizational leaders are better positioned to protect patients, prevent service interruptions and reduce potential liability. Healthcare administrators may wish to consider adapting the information and ideas presented in the questionnaire into their own risk management programs, tailoring the content to their unique exposures and circumstances.

Assessment Indicators	Yes/No	Comments
Strategic initiatives:		
1. **Has one person been placed in charge** of overall supply chain management?		
2. **Does this individual have executive-level authority**, high-level communication and negotiation skills, and demonstrated competency in the areas of supply chain technology, analytics and project management?		
3. **Has a supply chain risk team been established** with responsibility for detecting weaknesses, suggesting process improvements and assessing emergency preparedness?		
4. **Are there representatives on the supply chain risk team from relevant areas,** which may include, but are not limited to, the following:		
• Materials/supply chain management?		
• Strategic sourcing and contract management?		
• Shipping and receiving?		
• Informatics and IT?		
• Pharmaceutical services, including staff managing medication and vaccine storage?		
• Blood and tissue bank?		
• Incident command?		
• Risk management?		
• Performance improvement?		
• Frontline medical departments?		
5. **Are standing reports prepared by the risk team for the organization's Quality Improvement Committee (QIC) on the following pertinent issues,** among others:		
• **Supply chain operations,** including key products available only from a single supplier?		
• **Risk exposures within the individual facility,** as well as network-wide concerns?		
• **Chronic and acute supply shortages** and facility actions taken in response, including follow-up and monitoring?		
• **Potential effects of unforeseen events** – including natural disasters, infectious disease outbreaks, IT system or Internet outages, supplier business failures, widespread product hoarding, price spikes and recalls – on the supply chain?		
• **The probable impact of identified risks on supply chains** at the enterprise, regional, national and global level?		
• **Supplies most vulnerable to pilferage or diversion,** and therefore most in need of heightened security?		
6. **Are supply chain management issues addressed by the QIC's quality improvement process,** including such steps as follow-up, action planning and ongoing monitoring?		

Assessment Indicators	Yes/No	Comments
Strategic initiatives: (continued)		
7. **Are product acquisition-related processes and vulnerabilities reviewed by the supply chain risk team,** with attention given to the following questions and concerns, among others:		
• **Supplies that have the greatest potential impact on patient care,** either directly or indirectly?		
• **Usage rates of critical supplies and other at-risk products,** both currently and in the foreseeable future?		
• **Drugs, devices and equipment that may be compromised** during a natural disaster, supply chain interruption or other emergency event?		
• **First-, second- and third-tier suppliers,** assessing the importance of each to the organization?		
• **Lead times** and minimum stock orders?		
• **Locations of key factories,** as well as alternate supplier sites?		
• **Variability in shipping times** for primary and alternate suppliers?		
• **Receiving functions,** especially any past issues resulting in late or incorrect deliveries?		
• **Product history after receipt,** i.e., time and resources spent moving, storing and delivering inventory?		
8. **Are optimization reviews of supply network design and functioning conducted on a regular basis** and whenever the healthcare system undergoes a merger or acquisition?		
9. **Is there ongoing staff education designed to enhance compliance with supply chain protocols** and prevent individual providers from circumventing the system and independently purchasing medications, equipment and other supplies?		

By **identifying deficits in supply-chain** management, organizational **leaders** are better positioned to **protect patients, prevent service interruptions** and **reduce potential liability**.

Assessment Indicators	Yes/No	Comments
Inventory control:		
1. **Are supply chain processes automated,** permitting the organization to track inventory, detect shortages and shift to alternate suppliers swiftly and efficiently?		
2. **Has inventory tracking technology been installed that enables full visualization of the supply chain,** including product receipt, storage locations, stock levels and usage rates?		
3. **Are other key materials management functions automated,** including product sourcing and contract recordkeeping?		
4. **Does the organization utilize artificial intelligence and radio frequency identification device software** to help track movement of medications from manufacturers to patients, detect low levels of critical drugs and alert staff to the possible need for rationing?		
5. **Is inventory software carefully selected to enhance transparency, visibility and flexibility,** so that the organization may strategically allocate limited storage space and reduce waste?		
6. **Is there a backup inventory for essential and high-use products,** including, but not limited to, medications, IV fluids, personal protective equipment and critical medical devices?		
7. **Are adequate safeguards in place to prevent theft and diversion of supplies,** including high-cost medications, syringes and needles?		
8. **Does the organization belong to a network of healthcare facilities** that tracks the long- and short-term needs of members and shares high-demand supplies when necessary?		
9. **Have other inventory pooling initiatives been considered**, enabling the organization to optimize access to supplies and benefit from large-scale purchasing, both within its own healthcare network and among regional peers?		
Business continuity:		
1. **Are shortages, bottlenecks and other supply chain crises addressed** in the organization's written business continuity plan?		
2. **Is the continuity plan digitally accessible** in the event that work must be shifted to off-site warehouses or "pop-up" processing locations?		
3. **Have supply chain management "process maps" been created,** identifying the most critical roles and responsibilities?		
4. **Are critical supply-related databases identified** and continually backed up?		
5. **Are contingency plans in place relating to potential IT system breakdowns** and consequent knowledge loss?		
6. **Are materials management employees cross-trained** to ensure they can handle co-workers' job duties in the event of an epidemic or other emergency?		

Assessment Indicators	Yes/No	Comments
Product procurement:		
1. **To better predict and prevent potential shortages, are estimates made of short-term supply usage,** based on reports of current inventory, demand patterns, rates of consumption, supplier capacity and other relevant information?		
2. **Are longer-term forecasts of supply needs and trends made** based on analysis of relevant clinical data, including number of ambulatory visits, hospital admissions and diagnostic tests?		
3. **When possible, are critical products obtained from multiple suppliers in different geographic locations,** in order to reduce the likelihood of regional or global trade-related disruptions?		
4. **Have alternative or supplementary suppliers been identified** for products that come from a sole source or are frequently on back order?		
5. **Are essential and high-use items stockpiled** to soften the impact of a potential surge in demand or other supply chain disturbance?		
6. **Are stockpiled drugs and other perishable items checked periodically** to ensure they are not past their expiration dates?		
7. **Are discussions with key suppliers held on a routine basis** in order to convey expected future needs and inquire about available bulk discounts and other money-saving strategies?		
8. **Are global healthcare product bottlenecks and other potential disruptions tracked by the supply chain risk team** via updates issued by the U.S. Food and Drug Administration (FDA) and private subscription services, such as Supply Chain Brain and Supply Chain Management Review, among others?		
9. **Are details about supply chain breakdowns, recalls and other product availability issues conveyed to the QIC reporting structure** for dissemination throughout the organization?		
10. **Are roundtable discussions conducted with supply chain managers within the region,** in order to share successes and challenges, as well as strengthen collaborative arrangements?		
11. **Is the possibility of participating in a group purchasing organization considered,** in order to maximize efficiency and obtain better pricing on healthcare supplies?		

Assessment Indicators	Yes/No	Comments
Quality and reliability concerns:		
1. **Is there a formal protocol for assessing the reliability and financial stability of new suppliers,** especially during times of crisis?		
2. **Are the references of new suppliers checked** – as well as their financial statements, marketing materials, websites and other relevant sources of information – to confirm the legitimacy of these businesses?		
3. **Are special vendor-vetting services consulted** – such as Healthcare Ready and GHX Vendormate – as part of the supplier screening process?		
4. **Are samples requested and examined before purchases are made** to verify product quality, authenticity and clinical fitness, among other criteria?		
5. **Are contracts with suppliers reviewed prior to execution** to ensure that guarantees of authenticity are included and that responsibility for counterfeit or poor-quality products is assigned to the supplier?		
6. **Is there an established and documented process for checking inbound deliveries** for product quality, quantity and condition upon arrival?		
7. **Are cost variations tracked on all active purchasing projects** to detect potential price gouging, and are suspected cases reported to the National Center for Disaster Fraud and other legal and regulatory authorities?		
8. **During emergency periods, is the use of products that are either not approved by the FDA or approved for off-label use clearly monitored,** in order to ensure compliance with FDA Emergency Use Authorization guidance and time frames?		
9. **Are the satisfaction levels of physicians, nurses and other clinical providers measured** in regard to product quality and availability?		
Receipt, warehousing and distribution of goods:		
1. **Is a warehouse management system in place that permits hands-free tracking of product movement,** utilizing bar code or radio frequency identification technology?		
2. **Are advance shipping notifications received from suppliers,** and are these electronic notices acknowledged and filed?		
3. **Is inventory software designed to highlight shipping costs** and to capture costly overnight charges and other expenses associated with increased demand for certain products?		
4. **Are protective clauses included in contracts with high-volume shippers,** assigning responsibility to them in the event of delayed or damaged deliveries?		
5. **Are warehouse layouts reviewed on a regular basis** to enhance efficiency with respect to receiving, storing and dispatching supplies?		
6. **Has a continuous quality improvement program – such as Lean or Six Sigma – been implemented** to strengthen the reliability and efficiency of warehouse operations?		

Assessment Indicators	Yes/No	Comments
Crisis management:		
1. **Are potential supply chain disruptions included in the organization's emergency operations plan**, as well as its hazard vulnerability analysis process?		
2. **Is there a written supply chain crisis management plan** that contemplates the possibility of constraints on inventory capacity, bottlenecks in receipt and movement of supplies, and other supply-related emergencies?		
3. **Is the plan practical and realistic,** balancing the value of centralized crisis command and control functions with the need for flexibility and quick responsiveness?		
4. **Are emergency situations contemplated in supplier contracts,** including conditions that may result in long-term product scarcity?		
5. **Do contract terms address delivery delays or failures,** as well as reasons for termination of the agreement by the organization?		
6. **Have contingency plans been drafted** to switch to secondary or tertiary sources of supplies in the event of an emergency?		
7. **Do these contingency plans take into account the risks that lower-tier suppliers may present,** such as counterfeit products, price gouging, quality issues and quantity limitations?		
8. **Are supply chain professionals trained to respond effectively to crisis events,** in order to help ensure that hospital units remain functional, resources are equitably and rationally allocated, and staff and patients remain safe during emergencies?		
9. **Are departmental managers trained in supply chain management fundamentals,** including responding to disruptions?		
10. **Is there a written plan to proactively manage the flow of patients during emergency situations** by, among other measures, shifting patients from hospital beds to alternative settings, postponing elective procedures and/or curtailing inpatient stays, thereby alleviating demand for scarce supplies?		
11. **Is additional warehouse space available in the event of an emergency,** including sufficient cold storage capacity to support a mass vaccination program?		
12. **Are supply-related "disaster drills" conducted periodically,** in order to evaluate organizational readiness and response capabilities to various types of emergency scenarios?		
13. **Are actual supply chain emergencies reviewed in detail afterward,** enabling leadership to calculate losses incurred, understand the causes and extent of disruption, and analyze lessons learned?		

Assessment Indicators	Yes/No	Comments
Performance review and improvement:		
1. **Is there a written performance improvement (PI) program** for supply chain operations?		
2. **Are PI data reviewed in the context of strategic supply chain objectives,** such as those suggested by the Association for Health Care Resource & Materials Management of the American Hospital Association?		
3. **Are these strategic objectives reflected in job descriptions** and conveyed to materials management personnel on an ongoing basis?		
4. **Are supply-related data incorporated into the organization's overall PI program,** and are performance levels relayed to supply chain employees by their managers?		
5. **Are suppliers given feedback on a regular basis** regarding product quality, delivery and response times, and overall process efficiency, among other performance criteria?		
6. **Are transportation/distribution partners monitored for performance,** and do tracked metrics support supply chain goals and strategies?		
7. **Is feedback routinely requested from clinicians** regarding their supply-related needs, both current and emerging?		

Disclaimer: This resource serves as a reference for healthcare organizations seeking to evaluate risk exposures associated with supply chain management. The content is not intended to represent a comprehensive listing of all actions needed to address the subject matter, but rather is a means of initiating internal discussion and self-examination. Your organization and risks may be different from those addressed herein, and you may wish to modify the activities and questions noted herein to suit your individual organizational practice and patient needs. The information contained herein is not intended to establish any standard of care, or address the circumstances of any specific healthcare organization. It is not intended to serve as legal advice appropriate for any particular factual situations, or to provide an acknowledgement that any given factual situation is covered under any CNA insurance policy. The material presented is not intended to constitute a binding contract. These statements do not constitute a risk management directive from CNA. No organization or individual should act upon this information without appropriate professional advice, including advice of legal counsel, given after a thorough examination of the individual situation, encompassing a review of relevant facts, laws and regulations. CNA assumes no responsibility for the consequences of the use or nonuse of this information.

Quick Links

- Association for Health Care Resource & Materials Management of the American Hospital Association.

- Council of Supply Chain Management Professionals.

- Emergency Preparedness Rule, issued by the U.S. Centers for Medicare & Medicaid Services.

- Healthcare Supply Chain Association.

- Hospital Preparedness Program, a service of the U.S. Department of Health & Human Services.

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