



April 2020

TOP TEN STRATEGIES FOR STRENGTHENING YOUR SUPPLY CHAIN TO MINIMIZE RISK FROM FUTURE PANDEMICS

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1. PLAN FOR LIKELY SCENARIOS WITH KEY RESPONDENTS

Good crisis management depends on the ability of key responders to proactively plan for various scenarios in advance, in order to:

- Expedite decision making
- Clarify roles and responsibilities
- Quickly implement pre-established contingency plans

Pre-planning, (e.g., tabletop exercises) by internal and external stakeholders builds relationships through which participants can anticipate needs, identify necessary resources, and develop criteria for equitable allocation. Consider non-traditional sources for supplies, (e.g., local/regional businesses with stock-on-hand or that can manufacture product).

Internal stakeholders: Clinical, financial, and operational (supply chain, environmental services, infection control, engineering, human resources, etc.) leaders.

External stakeholders: Respective functional leaders at regional hospitals/healthcare systems, public health agencies, local and state governments, and critical supply sources (both traditional and non-traditional).

RESOURCE:

[Tabletop Exercise for Pandemic Influenza Preparedness in Local Public Health Agencies](#)

2. MATCH SUPPLY AND RESOURCE NEEDS TO VARIOUS SCENARIOS

The supplies and resources needed in a pandemic or other crisis will depend on the disease state, e.g., how it spreads, treatment required, etc. Leverage work done by the World Health Organization (WHO), the Centers for Disease Control (CDC) and others to create essential product category lists.

Understand what drives supply usage, e.g., staff levels not patient census drives the majority of personal protective equipment (PPE) use. Consider how changes in use of one supply, e.g., ventilators, increase the need for other supplies, e.g., consumables such as HEPA filters and O2.

Develop supply lists to expand capacity, such as conversion of ORs into ICUs. field hospital deployment, and movement of non-infectious patients to alternate locations.

RESOURCE:

[Manage Critical Supply Shortages: Reference List](#)

[Coronavirus disease \(COVID-19\) technical guidance: Essential resource planning](#)

3. CREATE EVIDENCE-BASED PROTOCOLS FOR SUPPLY UTILIZATION WITH CLINICIANS

A significant body of evidence on the safe and sustainable use of PPE and other critical resources is being generated as a result of the experience with COVID-19. This will include data on when various equipment is required, effective methods for reprocessing and decontamination, and engineering and administrative controls to minimize necessary usage.

This evidence can be used to establish protocols and controls to minimize waste in routine practice, as well as crisis contingency plans to conserve resources. Provide clinicians with evidence to inform guidelines for use of scarce resources and provide training in advance to minimize frontline healthcare worker distress when standard protocols are changed during a crisis.

RESOURCE:

[How Should U.S. Hospitals Prepare for Coronavirus Disease 2019 \(COVID-19\)?](#)

[GHX Lumere COVID Clinical Evidence Complimentary Access](#)

4. RECOGNIZE RISKS ASSOCIATED WITH CURRENT SUPPLY CHAIN PRACTICES

The severe supply shortages in light of COVID-19 have raised questions about hospital reliance on Just-in-Time (JIT) inventory practices. But JIT is pervasive across most supply chains as manufacturers and their suppliers seek to lower their own carrying costs. The practice, pioneered by Toyota in the 1970s, delivers products as they are needed vs. keeping large quantities on hand. As such, hospitals and their JIT distributor partners are at the mercy of upstream supply availability. In contrast to healthcare, JIT use in other industries is combined with better demand signals to support upstream production. See Strategy #7 below.

With significant cost pressures, manufacturers have also moved production offshore where labor is cheaper, and like many hospitals, adopted (near) single-source contracts, both of which increase supply chain risk.

COVID-19 is causing supply chain leaders across industries to rethink, but not necessarily fully abandon, such practices. Each has its merits but only when there is a full appreciation for the risk and tradeoffs.

RESOURCES:

[Coronavirus Business Closures Unmask Global Supply Chain Defects](#)

[Today's Supply Chains are Too Lean](#)

5. UNDERSTAND AND PRIORITIZE VENDORS THAT MINIMIZE UPSTREAM SUPPLY RISK

Following the 2011 Japanese earthquake and tsunami, many automakers and technology companies experienced severe supply disruptions as a result of their reliance on limited upstream suppliers whose sources were also disrupted by the natural disaster. Many companies assessed their own supply chain risks, creating redundant manufacturing and sourcing options in response.

Take steps to understand your own supply chain risk. Ask your vendors what steps they, and in turn their suppliers, have taken in-kind and if they will provide advance warning about potential shortages. Consider these factors when comparing vendors of comparable products.

RESOURCE:

[Coronavirus is proving we need more resilient supply chains](#)

6. ENHANCE CONTRACTS TO IMPROVE ALLOCATION, INCREASE FLEXIBILITY

Most supply chain leaders will continue to negotiate lower pricing in exchange for larger shares of their spend on specific supply categories. At the same time, they should explore contract terms that assure higher allocations in the event of shortages and/or no-penalty clauses if forced to seek supplies from alternate providers.

To facilitate product or vendor conversions, ensure you have visibility to alternate vendors for the same product and/or comparable products from different manufacturers/vendors (see Strategy #2 above.) Provide clinicians with performance evidence, clinically relevant attributes and instructions for use to determine clinical equivalencies and necessary practice changes (see Strategy #3 above). When evaluating unfamiliar vendors, utilize credentialing and compliance tools to minimize introducing risk into your supply chain.

RESOURCES:

[Evaluating Supply Chain Risks with Single vs. Multiple Vendor Sourcing Strategies](#)

[Vetted non-traditional suppliers offering PPE and other critical supplies](#)

7. IMPROVE INVENTORY AND UTILIZATION VISIBILITY, DEMAND SENSING DATA

With heavy reliance on JIT and historically limited interest in non-chargeable commodity items, such as PPE, many hospitals have limited visibility to real-time inventory and consumption rates. COVID-19 has rapidly changed opinions about the value of tracking such mission-critical items, as supply chains seek to acquire supplies in sufficient quantities, and finance executives struggle to manage cash flow and liabilities.

While pandemic planning alone may not fully justify the investment in real-time inventory management and point-of-use capture, there are other business benefits, including understanding actual costs to deliver care and providing critical data for demand planning to upstream supply chain partners. COVID-19 will force parties up and down the supply chain to evaluate their data needs, and demand sensing data may provide more valuable in contract negotiations than purchasing spend commitments.

RESOURCE:

[Bi-directional visibility across the Healthcare Value Chain](#)

8. CONSIDER SUPPLY CHAIN DEPENDENCIES WHEN RETURNING TO ELECTIVE SURGERIES/PROCEDURES

For most hospital finance executives, a return to elective and higher revenue producing procedures cannot come soon enough. Any return to “normal” operations must include evaluation of supply chain dependencies, including the availability of not only PPE but also other critical medical-surgical supplies, equipment, pharmaceuticals and infection control resources.

In addition to supplies on hand, hospitals should consult with their vendors to ensure they have adequate capacity and inventory to meet expanding demand, given the continuing restrictions that COVID-19 has had on both manufacturing and transportation capacity.

Take into account the ability to ramp up COVID-19 testing for both patients and staff.

Utilize outpatient and non-acute facilities to the extent possible and ensure the logistics capabilities required to stock such locations.

RESOURCES:

[Joint Statement: Roadmap for Resuming Elective Surgery after COVID-19 Pandemic](#)

[Non-Emergent, Elective Medical Services, and Treatment Recommendations](#)

9. DON'T DO CRISIS/PANDEMIC PLANNING AND RESPONSE ALONE

A bright spot amidst the trauma and strain brought by COVID-19 has been the formation of new partnerships among both competitors and organizations that otherwise have little or no interaction with one another. Even with the best planning, pandemics will create significant stress on the capacity of healthcare systems to meet dramatic surges in demand. Many of the investments necessary are beyond the resources of individual organizations. State and federal stockpiles are meant primarily to augment hospital resources.

Some of the most effective responses have been in communities where competing hospital leaders have proactively shared data on their respective resources and planned to share the burden as needed to support their communities. For example, could several hospitals invest in emergency supplies and warehouse space and proactively rotate stock into their respective organizations while replenishing emergency supplies to ensure quality products are available if needed? Some other mutual investment opportunities include:

- Analytics to predict patient demand and effective allocation of supplies to areas of greatest need
- Outreach to local businesses and educational institutions that can provide existing stock and/or provide manufacturing capabilities, including 3D printing
- Development of essential product category lists, maintenance of reference lists with alternative products and vetting of non-traditional supplies and vendors

RESOURCE:

[Strategies for Collaborating With Other Health Care Firms to Expand Production and Secure the Supply Chain](#)

10. BROADEN METRICS USED TO MEASURE SUPPLY CHAIN PERFORMANCE AND VALUE

Historically, supply chain has been viewed as a cost center with metrics primarily focused on the unit cost of the products, with an unrelenting pressure for savings from supply chain. With the advent of the Affordable Care Act and the AHRMM Cost, Quality, Outcomes (CQO) Movement, supply chain leaders began evaluating the role of supplies and the supply chain itself in improving total cost of care, quality of care to optimize health, and financial results driven by exceptional patient outcomes.

An over emphasis on supply cost can lead to practices that increase the risk of critical shortages. Past metrics have been about reduction in costs, SKUs, suppliers, inventory levels, and staff. AHRMM is leading an effort to broaden the key performance indicators (KPIs) for supply chain from highly tactical and operationally focused to a more holistic view of the health and risk status of the supply chain. Just as health care systems are working on developing High Reliability Organizations (HROs), the health care supply chain should have metrics related to reliability, resiliency, agility, flexibility, redundancy and security.

RESOURCE:

[Performance indicators for supply chain resilience: review and conceptual framework](#)