

A Substitute for Hard Work

Stormont Vail Health struggles with product availability and finding suitable substitute products. Supply chain uses whatever resources are available to do the heavy lifting so clinicians can provide seamless care.

Learning Objectives:

- *Describe timely response strategies to recalls, back orders and supply disruptions.
- *Outline methods to identify and order substitute products in anticipation of market volatility.

AUTHORS

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INTRODUCTION

The COVID-19 pandemic resulted in severe product shortages and unavailability of materials, increasing the impact of recalls and defects on our health system. High volumes of recalls and defects increase the possibility of patient or staff exposure to potentially harmful or ineffective products.

OBJECTIVE

Increase the resilience of Supply Chain by adding layers of defense to the causes of product shortage.

METHODOLOGY

- Develop master item lists that focus on Central Supply, High-use Laboratory, "Mission Critical" Surgery, and O.R.
- Work to identify substitute products for any stock items that are currently unavailable, backordered or that have been deemed critical
- Predict potential backorders based on recalls of currently utilized items
- Order extra stock of critical items that might be affected by a large recall/backlog

TOOLS

Utilizing cross reference tools, such as Vizient DMP (Data Management Platform) to help identify potential contracted substitutions.

Utilize the Emergency Care Research Institute (ECRI) to access healthcare product outcomes data to assist in product selection.

RESULTS/FINDINGS

- Enhanced ability to be proactive rather than reactive
- New tool developed through Vizient DMP that improves efficiency by allowing the simultaneous upload of multiple items when searching for contracted substitute options

CONCLUSION

Product shortages impact the ability to provide the right care to the right person at the right time.

When supplies required for crucial elements of care become difficult or impossible to obtain, we cannot provide efficient, effective, and timely care.

A proactive approach to the prevention of product delays or unavailability helps reduce Supply Chain vulnerability.

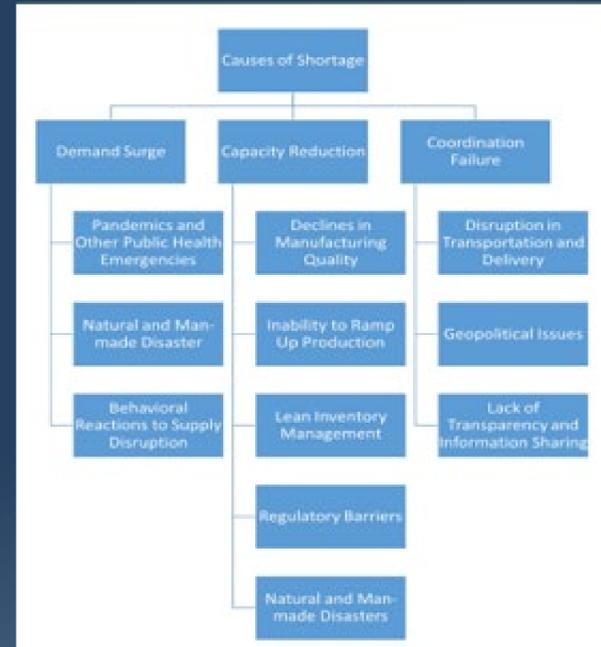
RELATED LITERATURE

Miller FA, Young SB, Dobrow M, et al. *BMJ Qual Saf* 2021; 30: 331 -335

National Academies of Sciences, Engineering, and Medicine. 2022. *Building Resilience into the Nation's Medical Product Supply Chains*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26420>



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The three causes of shortages in medical product supply chain— demand surges, capacity **reductions**, and coordination failures – and examples of each. Taken from the Building Resilience into the Nation’s Medical Product Supply Chains, National Academy of Sciences, pg. 100.

In medical product supply chains, a disruptive trigger event will only result in harm to people if multiple layers of defense fail. For example, if a drug manufacturer has a quality problem that interrupts production (failure of layer 1), there is insufficient inventory in the supply chain (failure of layer 2), there are no other production facilities with additional capacity (failure of layer 3), and health systems have no substitution strategy (failure of layer 4), patients could be harmed. Invoking the Swiss cheese model description of the Redundancy Principle, the resilience of this supply chain can be improved by adding more layers of defense (more slices of cheese) or by improving the effectiveness of individual layers (fewer holes).

