From Reactive to Predictive: How Health Systems Are Reframing Demand Planning

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Demand planning has evolved from a behind-the-scenes operational task into a strategic pillar for hospital and health system supply chains. Persistent supply disruptions, cost pressures, and increasingly complex clinical environments are forcing organizations to rethink how they forecast and manage demand across large, multi-site networks.

In interviews with *The Journal of Healthcare Contracting*, Jared C. Featherstone, Director of Supply and Demand Planning at Mayo Clinic Supply Chain Management, Paul Ophaug, AVP of Supply Chain Technology and Decision Support at HonorHealth, and John Geurin, SVP of Staples Business, Healthcare, described how demand management is becoming more predictive, collaborative, and technology enabled.

At Mayo Clinic, demand management has traditionally relied on historical supply usage to estimate future needs, Featherstone said. "While this approach has been adequate, it becomes less effective as the organization grows."

Changes in physicians, new procedures, and shifts in patient populations

can quickly distort forecasts, often before inventory managers see warning signs. To address these gaps, Mayo is transitioning to a predictive, data-driven model that incorporates patient population data and advanced analytics. "By analyzing patient populations and applying advanced algorithms, we can better understand the factors that influence demand fluctuations," Featherstone said.

That shift has become more urgent as supply disruptions persist well beyond the pandemic. Featherstone noted that constraints remain common across healthcare supply chains, requiring conservation strategies or substitutions that complicate planning and increase risk.

"Traditional purchase history alone cannot reliably inform future demand," he said, adding that demand-shaping techniques "substantially improve forecasting accuracy."

At HonorHealth, demand planning has also taken on a more strategic role. Ophaug said controlling cost while ensuring product availability requires close coordination across clinical, operational, and supply chain teams.

HonorHealth's approach incorporates case mix variability, patient volumes, and seasonal trends to forecast supply needs, allowing the organization to anticipate fluctuations rather than react to shortages.

For HonorHealth, availability and lead time remain major concerns, influenced by factors such as country of origin, transportation challenges, and natural disasters.

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– John Geurin, SVP of Staples Business, Healthcare

"There are many external pressures to consider as we demand plan," Ophaug said. He emphasized the importance of working closely with distribution partners and proactively adjusting procurement and distribution strategies as conditions change.

At Mayo Clinic, Featherstone said the pandemic fundamentally altered expectations around supply chain performance. Health systems are now scrutinizing how effectively their supply chains mitigate risk, with demand planning playing a central role in building resiliency.

"Providers expect stronger supply chain resiliency," Featherstone said, noting that improved demand planning has become "a core strategy for strengthening resiliency."

John Geurin emphasized the role of proactive planning in building that resiliency. "Organizations can't wait for shortages to happen," Geurin said. "By combining product standardization with analytics from our digital platforms, supply chain teams can anticipate demand, forecast inventory needs, and act proactively to prevent disruptions, helping healthcare providers operate more predictably and efficiently."

Cost pressures are also accelerating change. Inefficient stocking and replenishment practices create unnecessary manual work, higher transactional costs, and added expense when substitute products must be sourced. Featherstone said a well-structured demand management function helps streamline processes, eliminate waste, and support more reliable operations.

While the size of the operation is significant, Featherstone said the greater challenge lies in accommodating diverse specialty requirements.

"These exceptions — manageable individually — accumulate quickly," he said, turning otherwise simple standard operating procedures into complex workflows filled with variations.

HonorHealth faces similar challenges across its multi-site system. Ophaug pointed to fragmented systems and inconsistent reporting as barriers to real-time demand visibility. Variations in clinical practice can further obscure true demand signals, increasing the risk of excess inventory or shortages.

Geurin added that standardization and supply chain partnerships support predictable operations. "By helping organizations standardize products and leveraging our industry-leading supply chain and strong partnerships with top manufacturers, we ensure they have the products they need, when they need them, reducing risk, optimizing operations, and creating measurable value for providers," he said.

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When demand data is incomplete or delayed, the consequences can be significant. "Incomplete or delayed demand data can result in increased financial costs associated with patient care," Ophaug said, noting that it can also introduce clinical risks when substitutions are required.

Featherstone emphasized that blind spots in inventory visibility leave teams unprepared for unexpected changes, driving reactive decision-making and avoidable expense. At Mayo, he said the greatest concern remains the potential impact on patient care, which has driven investments in data, forecasting, and decision support.

The benefits of standardization

Standardization emerged as a critical enabler of effective demand planning — when applied thoughtfully. At Mayo Clinic, standardization is pursued where patient outcomes are unaffected.

"Standardization enhances resiliency, forecasting, and planning," Featherstone said, allowing aggregated usage, streamlined transactions, and fewer manual interventions.

HonorHealth has seen similar benefits. Ophaug said standardization reduces inventory carrying costs, supplier management time, and freight expense, while also supporting positive clinical outcomes through reduced variability and improved patient experience.

Looking ahead, both leaders see data integration and advanced technology as the next frontier. Ophaug believes machine learning and artificial intelligence will enable teams to act sooner by creating greater visibility across the supply chain.

Together, their perspectives underscore a broader shift across healthcare supply chains: demand planning is no longer about reacting to yesterday's usage, but about building scalable, data-driven systems that anticipate change, manage risk, and protect patient care. ■

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