

How a clinically integrated supply chain model can support improved patient outcomes and enables hospitals to prepare for future crises

The COVID-19 pandemic has emphasized the need for health system supply chain and clinical teams to collaborate. As hospitals around the globe face unprecedented capacity restraints, a clear link has emerged between supply chain capacity and healthcare workforce safety. More than 90,000 healthcare workers have been infected with COVID-19 around the world, and an adequate supply of personal protective gear is crucial to preventing infection and supporting increased demand for patient care.

To achieve a mature supply chain that not only reacts to crises such as COVID-19 but proactively prepares for them, Anne Snowdon, PhD, the Director of Clinical Research at HIMSS, detailed what health systems should prioritize, including transparency, traceability and adoption of a clinically integrated supply chain model.

Dr. Snowdon, along with Shawn McBride, the General Manager and Vice President of Cardinal Health™ WaveMark™ Supply Chain Management and Workflow Solutions, discussed how hospitals can employ best practices and solutions that support their journey to supply chain maturity during a July 30 webinar hosted by *Becker's Hospital Review* and sponsored by Cardinal Health.

Five key takeaways from their discussion:

- 1. A mature supply chain infrastructure enables digital tracking and traceability** for every product used in every procedure at the individual patient level and linked to patient care and individual outcomes, Dr. Snowdon said. The Clinically Integrated Supply Outcomes Model, or CISOM, has eight maturity levels (stages 0-7) of supply chain infrastructure. It integrates supply chain data with patient data from electronic health records. The model helps reduce waste, offers cost savings and leads to greater transparency of patient care outcomes.
In higher CISOM maturity levels, a hospital's supply strategy shifts from reactive to proactive through predictive analytics. By using predictive analytics, providers can anticipate patient risks and help procurement teams identify devices and priority solutions to support improved patient outcomes.
- 2. A mature supply chain enables transparency throughout the supply chain.** For example, a mature supply chain could help create product dashboards with real-time data on hospital inventories. In one example shown during the webinar, a hospital adopted CISOM and created a dashboard that showed categories of current PPE inventory levels. Nurses can see exactly how many gloves are available in the hospital, which allows them to strategize for patient care in times, such as the COVID-19 pandemic, when supplies are scarce. By adopting CISOM best practices, providers receive more accessible data on costs of treatment, length of treatment and typical patient response. When providers have access to data regarding their performance, it empowers them to make improvements, Dr. Snowdon said.
- 3. The CISOM model helps hospital leaders make data-driven decisions.** When leaders have a clear picture of their resources and patient outcomes, they can identify how to leverage areas in the

hospital that are more successful and strengthen others that need support. The CISOM model makes the supply chain infrastructure a strategic asset for C-suite leaders, who can mobilize teams to better advance supply chain strategy. It also supports the trust and working relationships between supply chain and clinical staff, as data allows the two teams to come to the table to review objective information and make collaborative decisions.

4. Supply chain plays a strategic role in developing a digital health ecosystem.

Although supply chain is sometimes overlooked in the digital health space, it is a critical strategic asset for health systems, Dr. Snowdon said. The heart of the digital ecosystem is analytics and traceability, which transforms data into knowledge, insights and outcomes. Applying analytics allows health systems to meaningfully engage with patients to help them stay healthy and well. Traceability of outcomes is key for mature supply chains. Also key is the democratization of data, and CISOM mobilizes ERP data and then maps it and integrates it with patient data. A mature digital health ecosystem can mobilize data in real time and analyze it to identify where

the organization is achieving outcomes and where it needs support, Dr. Snowdon said.

5. A mature supply chain results in savings and helps hospitals meet the quadruple aim.

Dr. Snowdon said that in a case study testing CISOM in Alberta, Canada, the province saw \$301 million in savings over seven years. To date, it has been the only part of Canada to avoid critical supply shortages during the COVID-19 pandemic, Dr. Snowdon said. In England, one hospital saw a 4:1 return on investment within 18 months of adopting CISOM. A hospital in the U.S. saw an almost 30 percent decline in labor costs and a 33 percent decline in supply costs by adopting CISOM. In the case studies, Dr. Snowdon said she found that regardless of how a health system operates, all hospitals that adopted CISOM posted comparable returns on investment within 18 months. They also saw a dramatic decline in errors, including the most serious form of patient errors. Adopting CISOM helps hospitals reach the quadruple aim of improved provider experience, improved patient outcomes, lower cost of care and improved patient experience.

To view the full webinar, [click here](#). ■

