West Coast health system looks to its supply chain to control costs.

About the healthcare system
One of the nation’s leading academic health systems, this prominent West Coast health system consists of four leading medical centers, including two community hospitals and an extensive network of hospital and community-based clinics. A workforce of approximately 30,000 people staffs the healthcare system.

Medline strategic partnership
The health system turned to its prime vendor, Medline, for Supply Chain Optimization (SCO) consulting.

As both a manufacturer and a distributor, Medline engineers implement lean methodologies across every aspect of their daily operations. With more customers asking for help implementing lean methodologies, in 2018 Medline launched SCO consulting for its prime vendor customers.

This West Coast health system engaged Medline’s SCO team to collaborate on operational improvements to reduce its total supply chain cost. In particular, the health system is actively pursuing ordering efficiency as part of its PAR optimization work.

“To us, patients come first. Our mission to improve the health of the public inspires our supply chain team to deliver the best possible service based on efficiency, quality and outcomes,” said the System Manager of Inventory Control. “Supply chain costs can represent up to half of a provider’s budget. As the industry’s focus shifts from volume-based to value-based care, balancing efficiency and quality presents a challenge.

“As healthcare costs continue to rise, we need to become more innovative and strategic in how we manage supplies if we are to fulfill our mission,” the System Manager of Inventory Control added. “To evolve, we must continue to strive for operational excellence and collaboration across all work streams.”
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Project rationale
The health system supply chain team has a culture of collaboration that encourages employees and strategic partners alike to identify areas of improvement while balancing efficiency and quality. Medline’s analysis served as a basis for helping the health system meet its larger goal of achieving long-term financial stability.

Phase 1: Map workflow
To map the health system’s current workflow, the Medline SCO team conducted a baseline review at its largest medical facility through:

» Documentation and data gathering. This included reviewing the order history to establish the number of units handled and lines ordered per PAR area.

» On-site observation, including reviewing space constraints.

» Informal interviews of material managers and clinicians.

» A 37-hour time and motion study to identify time spent on each task in the workflow. The health system is ordering supplies manufacturer-direct and through Medline (LUM less-than-case quantities). Medline delivers supplies in totes pre-sorted by PAR areas.

Phase 2: Analysis
The SCO team mapped the entire procure-to-pay process—from order placement to receipt, storage, point-of-use counting and replenishment, and payment. The team then calculated costs associated with each task.

One of the key insights from this analysis was that high-use items required significant handling time by both the health system material technicians and prime vendor warehouse staff. In the most extreme cases, hundreds of pieces were being handled individually by the supply chain staff.

Another key insight was that the total end-to-end workflow took far less time when supplies are ordered through Medline versus manufacturer-direct. From ordering to put-away and billing, the health system’s materials teams spent 10 minutes less on Medline LUM deliveries and 8.5 minutes less on Medline bulk deliveries than when manufacturer-direct items arrived by parcel couriers.

Phase 3: Recommendations
To address the first insight, the engineers proposed solutions to each high-cost task. Solutions fell into two categories—those that offer the largest cost reduction and those with the fewest barriers to implement.

One solution with few barriers to implement addressed the health system’s high handling time. The SCO team proposed switching order patterns of frequently used items from eaches to inner pack quantities.

For the supply chain team, ordering in inner pack quantities reduces labor time and order frequency, frees up time to engage end-users, and reduces transaction costs.

Likewise, the clinical team experiences higher levels of service, giving clinicians more time to focus on providing optimal patient care. This, in turn, increases patient satisfaction.

For Medline, the change marks a first step in streamlining the health system’s supply chain and reduces the need to replace items as often.

As for optimizing the end-to-end workflow, if the health system were to streamline orders through Medline, the time savings will reduce costs from $4.82 to $1.95 per line. The engineer’s analysis made clear that consolidating deliveries through Medline is a more efficient process than continuing to order manufacturer-direct from a number of different vendors.

Current ordering model

Proposed ordering model
Phase 4: Actions taken
The health system decided to convert Units of Measure (UOM) from eaches to inner packs or middle UOMs (MUM) for 40 items across 27 PAR locations. It also worked to avoid significant physical redesigns that would slow the process.

The health system trained its supply chain team members on process changes, while keeping in mind space constraints in PAR areas. A snapshot of order activity was taken three months prior to changes, and the results were compared to order activity after changes were implemented.

Switching from eaches to inner packs led to several efficiency gains across the total supply chain. As of September 2018, there was a 4% reduction in total requisitions.

Future improvements
The West Coast health system’s partnership with Medline will help it achieve its goal of operational excellence by pursuing strategic initiatives that can significantly benefit both teams.

The health system’s financial incentive far outweigh the amount of labor required to change its ordering patterns. The change was implemented with about eight hours of labor because it did not require redesign of PAR areas.

The health system is now on track to save about $2,000 a year solely by ordering its top 100 “pockets” by inner pack. (A pocket is a combination of item and ship-to location in the hospital.) This represents an 800% return on investment, according to its leadership, and marks only a start to more economic savings. If the health system opts to expand the enhancements to 1,100 additional pockets identified by the SCO team, the projected annual savings is $42,000.

The health system will continue to incorporate MUM into its continuous process improvement plan. Currently, its supply chain team is using advanced analysis and visualization tools to automatically highlight best UOM opportunities.

“Vertical integration of our supply chain with our prime vendor’s supply chain helps eliminate waste, drives efficiencies and sets the stage for a long-term strategic partnership. Our team plans to continue sharing repeatable best practices with other health systems, with the goal to collectively increase operational excellence industry-wide for the long term,” said the System Manager of Inventory Control.

87% reduction in total units handled
48% reduction in handling time for the health system
71% reduction in handling time for Medline

To boost operational efficiencies and reduce costs, the health system is shifting more orders to Medline.