

Performance Center from Omnicell

By Sandra Salverson, PharmD, BCPS

Headquartered in Peoria, Illinois, OSF HealthCare is an integrated health system comprising 13 acute care facilities with 1600 beds, 42 hospital-based outpatient facilities, approximately 108 physician office practices in 79 locations, six home health agencies, and five hospice programs. Automated dispensing cabinets (ADCs) serve as the core means of medication distribution. The health system averages approximately \$1.5 million of expired pharmaceuticals annually, and given that pharmaceuticals comprise 20% (\$100 million) of OSF HealthCare hospitals' expenses, the pharmacy inventory management system was recently evaluated with the goal of improving inventory management.

Drawbacks of Manual Processes

Previously, each OSF HealthCare pharmacy managed its own inventory through manual processes and ADC analytics. Inventory stored in numerous locations within each pharmacy was not visible to all staff members, thus purchases were often made based on personal experience. Stock levels were changed in response to patient-driven supply disruptions or drug shortages. While BCMA helped ensure the correct patients received the correct medications, it did not control costs or increase efficiency.

Our goal was to implement an automated inventory system driven by real-time data in order to minimize stockouts while ensuring timely access. The system would also provide peripheral inventory visibility to identify cost-containment opportunities in support of leadership's goal of achieving a 2.5% operating margin by avoiding stagnant, high-cost inventory. Ultimately, the automated inventory management system would serve as the foundation for the future implementation of a centralized distribution center.

System Selection and Implementation

Key stakeholders from supply chain, pharmacy, finance, and IT, in conjunction with senior industrial engineering students from the University of Illinois, collaborated to identify critical system requirements, including:

- Finance traceability
- Compatibility with current equipment and information systems (ie, vendor agnostic)
- Lot number and expiration tracking
- Customizable order templates and interaction with point-of-sale systems
- Inter-facility product transfer monitoring
- Inventory visibility across the health system
- Data analytics availability

Omnicell's Performance Center was selected, as it provides complete inventory visibility, reliable inventory count tracking, reduction of expired medication waste through optimizing par levels, inventory reduction, and drug shortage management. Inventory on static shelves can be scanned in and out, and the cloud-based platform locates medications anywhere within the health system, allowing for the identification by location of products approaching their expiration date. All captured transactions are fed to the Performance Center in real time, so the Omnicell analyst can identify optimization opportunities, which are then batched and sent to each hospital.

Database design began in April 2017, and inventory optimization analytics launched in June 2018. Within 6 months, we achieved 85% inventory visibility and transaction capture for 11 of our 13 hospitals. Once an alternate carousel vendor interface became available, we achieved 95% inventory visibility. Our annual physical inventory count was within 4% of the Performance Center's inventory valuation.

Results

Leveraging accurate counts and real-time inventory analytics to remove unused inventory resulted in a savings of \$2.2 million (through inventory reduction) in the first 12 months.

The Performance Center provides a scorecard to track progress on inventory goals, with data summarized monthly for both hospital-specific and overall health system progress on inventory turns, days on hand, inventory valuation, and changes in valuation due to price increase versus inventory change. Overall savings associated with changes in inventory turns are also tracked.

The Performance Center has added the capability to identify opportunities to utilize our own inventory for near-expired products in lieu of new purchases. For example, one of our critical access hospitals was able to decrease the number of tPA (alteplase) doses from six to four, based on reported usage data. The two vials that had a shorter expiration were transferred to a larger community hospital that cares for more stroke patients. This decreased inventory costs by \$16,500, reduced waste, and moved toward the inventory turns goal of 7.4.

Conclusion

With Omnicell's Performance Center, OSF HealthCare is making strides to contain costs by reducing waste and improving inventory allocation. More importantly, we are ensuring the right medications are available when and where patients need them, allowing us to provide high quality care. ■

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