

Improving Inventory Control and Charge Capture



Cooper Hospital / University Medical Center

Location: Camden, New Jersey

Beds: 525

This article examines how one hospital, Cooper Hospital/University Medical Center, has undergone an “automation transformation” by implementing Omnicell automation systems, realizing such benefits as reduced supply consumption, improved charge capture, and nurse satisfaction.

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Ralph Johnson, Director of Materials Management

Outdated materials management systems are increasingly recognized as an important source of lost revenue for healthcare institutions. Because of this, many facilities are turning to automated supply systems to help them better manage inventory, track and reduce costs, recapture lost charges, improve efficiency, and enhance patient care.

A “Sticky” Situation

One hospital that has undergone the “automation transformation” is Cooper Hospital/University Medical Center, a 525-bed, Level I trauma center located in Camden, New Jersey. Leading the charge towards automation was Ralph Johnson, director of materials management.

“When I came to the hospital in July 1996, it was still using the ‘yellow sticker’ method for supply tracking and accounting,” said Johnson. “Anyone who has used this system knows how inefficient and ineffective it is, primarily because the yellow stickers end up getting stuck to everything but the patient charge sheet.”

While Johnson knew that the yellow sticker charge system was a major culprit in lost patient charges, he was astonished by how much the hospital was actually losing with this system. “After completing my analysis, I found that the hospital failed to capture 43 percent of its supply charges with this system,” Johnson said.

During his analysis, Johnson noted similar problems with the way the hospital captured charges for drugs and related pharmaceutical supplies. “We were similarly failing to capture a significant amount of pharmaceutical charges,” added Johnson.

Seeking Solutions

After meeting with the hospital’s chief financial officer, the decision was made to aggressively address the problem. “The potential cost savings were significant and hard to ignore,” said Johnson.

Based on his experience with Omnicell™ at his previous employer, Johnson recommended installing the Omnicell

OmniSupplier® automated dispensing system. “I had come from a hospital that was already successfully using Omnicell’s automated system, so to me, the logical choice was Omnicell,” said Johnson. The CFO agreed with Johnson’s recommendation.

To validate projected improvements in inventory control, supply utilization, and charge capture, Johnson and the CFO decided to first undertake a three-month evaluation of the Omnicell system using four of the hospital’s most supply-intensive environments. The units chosen were the ICU, the trauma ICU, and two adult medical floors. In addition, the ICU would incorporate pharmacy modules into its OmniSupplier cabinets to validate the potential savings on drugs and other pharmaceutical supplies.

All Aboard!

Johnson knew that to successfully implement the new automation system, he would need the full support of the nursing staff, who would be its primary users.

“To encourage buy-in from the nursing staff, I made sure that they knew the system wasn’t being installed just to drive down costs; it would address their supply needs as well,” said Johnson. To this end, each of the nursing units would customize its OmniSupplier cabinets to its own unique needs, and any changes to stocked items would come directly from nursing.

It’s a Go

Initially, the OmniSupplier cabinets were installed in the four test areas, and the nursing staff was trained on their use.

“At first, the nursing staff was skeptical about using the OmniSupplier cabinets,” said Mary Jo Cimino, clinical manager for adult critical care at Cooper Hospital/University Medical Center. “They were primarily concerned about accessing the cabinets, especially in an emergency. But after having the opportunity to use the system, and realizing that it was very easy to use, this concern quickly disappeared.”

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Table 1—Cooper Hospital/University Medical Center Annual Savings Projection with Omnicell

Supply Consumption Reduction	\$ 661,612 / year
Supply Revenue Capture	\$ 750,885 / year
Pharmacy Revenue Capture ¹	\$ 875,113 / year
Total Projected Annual Savings	\$ 2,287,609 / year
Less: Omnicell Cost (Rental) (\$31,165 / month x 12 months)	\$ 373,980 / year
Projected Net Gain	\$ 1,913,629 / year

¹ Following the trial, Cooper Hospital/University Medical Center pharmacy administration chose to capture pharmacy costs with a newly implemented clinical information system. Cooper Hospital/University Medical Center continues to use OmniSupplier cabinets with pharmacy modules for inventory and control of floor medications and controlled substances.

Calculating Return on Investment

After completing the three-month evaluation, Johnson analyzed the hospital’s return on investment with the Omnicell automation system.

“The results were remarkable,” said Johnson. “Even after only three months, we experienced a tremendous reduction in supply charge losses, from 43 percent pre-Omicell to 2.75 percent post-Omicell.” Similar improvement was seen in pharmacy charge capture in the ICU.

There was also a significant reduction in supply consumption. “Since the Omnicell automation system provides complete accountability, users are more aware of how they use supplies,” noted Johnson, “so supply consumption actually goes down when access to supplies is controlled.”

Using the data from the four evaluation units, Johnson projected the savings the hospital might recognize if the automation program were expanded throughout the hospital [Table 1]. “The results were impressive,” noted Johnson. “Based on the evaluation numbers, we could potentially recognize \$1.9 million in annual savings and revenue capture with Omnicell.”

Benefits of Automation

Johnson and the CFO presented the trial results to the administration and to the finance committee of the hospital’s board of trustees, recommending that the automation program be expanded throughout the hospital. Realizing the benefits of the automated system, both agreed to proceed. Today, 134 OmniSupplier cabinets are located in 20 different patient care units throughout the hospital.

“We’re very pleased with the results we’ve achieved with Omnicell,” noted Johnson. Results are monitored weekly, and according Johnson, the over-

all hospital charge loss rate has never exceeded three percent. “We can now see how well we’re capturing supply charges because we can actually see a rise and fall in supply utilization with the patient census,” Johnson said.

The nursing staff has also seen a variety of benefits using the Omnicell automation system.

“Probably the most important benefit I’ve seen is that the nursing staff no longer has to spend so much time on supply and drug inventory management. The OmniSupplier cabinets do it for us,” said Cimino.

Emma Brandon, nurse manager of the neonatal ICU, agreed and added, “The Omnicell automation system provides many benefits. We now have a lot more supplies and medications at our disposal. And the lighted bins on the pharmacy drawers provide an additional level of safety by helping direct the nurse to the right drug. The OmniSupplier cabinets also allow us to track costs associated with a specific diagnosis. Overall, the Omnicell system has been a great help.”

Ensuring Ongoing Success

Overall, it can be said that automation at Cooper Hospital/University Medical Center has been a success. To ensure ongoing success, Johnson monitors patient census, lost charges, and null transactions weekly and sends summary reports to each unit manager. “If a unit’s charge loss rate or null transaction rate exceeds three percent per month, I make sure the unit manager is aware of it and corrects whatever the underlying cause is. Fortunately, such problems are uncommon,” Johnson said.

Cimino noted the importance of frequently updating the supplies stored in the cabinets so they reflect the actual use and needs of the unit. “I’m frequently adjusting the type and number of supplies stored in the ICU’s cabinets based on the data I obtain from the system. Doing so ensures that the supplies and drugs that are stored meet the changing needs of both the staff and patients.”



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