

# Pharmacist Shortage Spurs Automation Effort



## Jamestown Hospital

Location: Jamestown, North Dakota

Beds: 56

Community Population: 15,527

This article examines how one hospital, Jamestown Hospital of North Dakota, has met the challenges of a nationwide shortage of pharmacists by utilizing Omnicell's automation systems, leading to improved efficiency and quality of care.

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Karen Finck, Pharm.D., Director of Pharmacy

A common problem facing many hospitals today is the nationwide shortage of pharmacists. Perhaps nowhere is this problem felt more acutely than in small communities, where the pool of pharmacists is often limited, or even nonexistent.

Such was the problem facing Jamestown Hospital, a 56-bed hospital located in Jamestown, North Dakota. After losing one of its staff pharmacists in early 2000, finding a replacement was nearly impossible. “We advertised the pharmacist position for two months and didn’t get a single response,” recalled Karen Finck, Pharm.D., director of pharmacy. “Because of the nationwide pharmacist shortage, we knew we had to look at other options.”

To ease the burden on its pharmacy, Jamestown chose to install an automated medication dispensing system. “Automated medication dispensing has allowed us to utilize our pharmacy staff much more effectively, and it’s provided a variety of nursing, patient, and financial benefits as well,” said Finck.

## Automation as a Solution

Finck first became interested in automated dispensing technology 10 years ago, but had trouble convincing the hospital’s administration of its clinical and financial benefits. The hospital’s pharmacy situation, however, helped force the issue. “It was clear we had to do something—and fast,” recalled Finck.

After evaluating available systems, Jamestown chose to go with Omnicell. “Omnicell’s automated medication dispensing system had a variety of features other systems just didn’t have,” said Finck.

Finck liked Omnicell’s patient medication profiling feature, which allows pharmacists to review information on dosage, administration, contraindications, drug interactions, and patient drug allergies within their own pharmacy software prior to activating the Omnicell cabinets on the nursing units. The profiling feature also ensures that the patient’s complete drug profile is displayed on the cabinet’s screen at the point of care.

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In addition to the profiling feature, Finck also liked Omnicell’s guiding light technology that helps guide the nurse to the right medication. She also appreciated Omnicell’s reporting features and the system’s expandability, which would allow Jamestown to add bedside barcode scanning and automated supply dispensing in the future. Furthermore, Omnicell was compatible with the hospital’s existing computer systems, which would help simplify the system’s implementation.

### Ramping Up with Omnicell

Another reason Jamestown went with Omnicell was that the company could meet the hospital’s tight implementation deadline.

“We wanted the system fully operational in a month—and Omnicell delivered,” Finck said.

Installation required interfacing the Omnicell automated medication dispensing system to the pharmacy’s ADT, medication order profiling, and billing systems and installing OmniRx® cabinets in the emergency department\*, ICU, medical-surgical unit, and skilled nursing unit. The entire initial installation was complete by August 2000. In April 2001, an OmniTT (table top) unit was also installed in the hospital’s outpatient I.V. therapy area.



Karen Finck  
Pharm D., Director of Pharmacy  
Jamestown Hospital



Cathy Voeltz  
RN, Director of Patient Care Services  
Jamestown Hospital

\*Order profiling is not used with the OmniRx in the emergency department due to the unique medication access needs of the ED’s physicians and nurses.

## **Automation's Impact on Pharmacy**

For Jamestown Hospital's pharmacy, the Omnicell automated medication dispensing system had an immediate impact.

"It really helped decrease our pharmacists' workload, primarily because our pharmacists are no longer tied up with the time-consuming dispensing process, which is now done at the point of care," Finck said. "This has given them more time for more important clinical activities, such as fielding questions from the nurses and medical staff, reviewing patient charts, and providing patient education."

Finck added that the Omnicell automated medication dispensing system also saves the pharmacy time, especially when it comes to restocking medications.

"In the past, our pharmacy would have to make numerous trips to the nursing units each day for restocking. Since we installed the Omnicell automated medication dispensing system, we've become much better at managing par levels, so now we only have to make two scheduled restocking trips to the nursing units each day," said Finck.

## **Nursing Responds to Automation**

Cathy Voeltz, RN, director of patient care services, was also an early advocate of automation. "I was totally fascinated by automation technology the first time I saw it 10 years ago," recalled Voeltz.

Despite Voeltz's support for installing the Omnicell automated medication dispensing system, the rest of the nursing staff was less enthusiastic.

"Our nurses were scared to death of it," said Voeltz. "They were worried that they would always be standing in line waiting to access the cabinet and that it would interfere with their normal workflow. So, we asked them to at least give the new system a try, and we would address any problems as they arose. As it turned out, none of their concerns materialized. Our nurses now say they'd never go back to the old system."

Voeltz commented that the Omnicell automated medication dispensing system has had a variety of positive effects on both nursing and patient care.

"With our old system, our nurses were at the mercy of the pharmacy for delivery of a patient's medications. Now, with the Omnicell cabinets, medications are immediately available after a pharmacist reviews the order, so our nurses don't have to wait so long for medications—and, more importantly, neither do our patients."

"Another benefit is that our nurses no longer have to do end-of-shift narcotics counts, since the Omnicell System does it automatically," added Voeltz. "It's been a real time time-saver."

Voeltz noted that the Omnicell cabinets provide safety benefits as well. "The Omnicell cabinet drawers allow you lay out medications in any order you want. This allows us to keep look-alike drugs far away from each other. In addition, the cabinets' drawers and bins have guiding lights, which help guide the nurse to the correct medication."

**Table 1 – Jamestown Hospital Pharmacy Annual Savings from the Omnicell Automated Medication Dispensing System**

Annual Savings:	
Pharmacy technician	\$15,247
Pharmacist	\$70,420
Nurse (cycle count 3 shifts a day, 2 people)	\$47,136
Annual Increased Costs Related to Omnicell:	
Omnicell rental fees	(\$36,000)
Added tech position (for new pharmacy tasks, including Omnicell)	(\$16,600)
Overall Annual Savings	\$80,203

### Financial Benefits of Automation

To document the financial impact of the Omnicell automated medication dispensing system, Finck did a three-month post-implementation study and then annualized the data [Table 1].

“The greatest financial benefits of the system for us were not having to replace the pharmacist we lost and eliminating the costs associated with having to do narcotics counts at the end of every shift,” Finck said.

### Looking to the Future

In the near future, Jamestown Hospital hopes to expand its Omnicell automated medication dispensing system to include large volume parenteral medications, I.V. solutions, and patient supplies. “An important feature of the Omnicell System is its expandability,” said Finck. “It’s able to grow with you as your needs change.”

