



St. Luke's University Hospital automates cabinet-filling operations with XR2 Automated Central Pharmacy System

Customer Profile

St. Luke's University Health Network is a fully integrated, regional, non-profit network providing services at 10 hospitals and more than 300 outpatient sites. It's the region's preeminent teaching hospital system, serving 10 counties in central-eastern Pennsylvania and two counties in New Jersey.



St. Luke's University Health Network (Bethlehem, PA)

The Challenge

As longtime users of central pharmacy robotics at its Bethlehem campus, St. Luke's pharmacy leaders recognized the safety and operational benefits that automation systems can deliver.

However, after the campus transitioned to a cartless medication distribution model, pharmacy leaders believed traditional robotic medication storage and retrieval systems were incompatible with filling for its automated dispensing cabinets, where up to 75 percent of patient medications are stored.

100%

Accuracy

with barcode scanning to eliminate human error

400

Line Items

automatically stored and dispensed

The Solution

Faced with these challenges, St. Luke's became an Omnicell development partner and instituted the new XR2 Automated Central Pharmacy System to automate filling operations for the 94 medication dispensing cabinets at Bethlehem.

The XR2 system supports more than 90 percent of non-IV and non-narcotic formulary in a variety of form factors, including individual blisters, blister cards, vials, cups, packets, syringes, and others. The system provides:

- 100 percent barcode scanning, eliminating human error
- Use of manufacturer unit-dose barcode, significantly reducing packaging burden
- Support for cartless and cart fill distribution models
- Advanced algorithms to help reduce waste and maintain accurate inventory

Dynamic Filling, Restocking, and Inventory Management

For Bethlehem's daily cabinet fill, the XR2 receives the replenishment order and begins picking medications on a per-cabinet, batched-medication basis. Each batch is sealed in individual, clear bags and barcode labeled for the cabinet destination using XR2's Auto Packager system.

The XR2 also performs a daily mini-cart fill of about 300 items, with the patient-specific medications sealed in individual, barcoded packages. This takes about 90 minutes to complete for delivery to patient care areas. A pharmacist performs a random quality assurance check of 10 percent of the medications picked by the automation.

Explained Director of Pharmacy Donna Yeaw, "The automation freed up pharmacists' time for new clinical programs we didn't have before."

Bethlehem's XR2 System

- Stores approximately 400 line items and multiple days of inventory
- Proactively manages medication inventory levels and minimizes discrepancies, such as dispensing soonest-to-expire medications to reduce waste
- Works in conjunction with a medication carousel to store bulk items for restocking XR2 and other items

Enabling Technician Labor Flexibility

While the robot is picking meds for cabinet fill, a single pharmacy technician can oversee the system, which requires limited oversight during filling and restocking operations. The technician is free to perform other tasks.

An unintended benefit for St. Luke's is the impact on scheduling. Previously, technicians completed many drug deliveries overnight. When the hospital instituted a quiet initiative to help patients sleep better, pharmacy transferred cabinet filling for patient areas to other work shifts and experiencing greater efficiency.

"The automation freed up pharmacists' time for new clinical programs we didn't have before."

—Donna Yeaw, Director of Pharmacy Services

Learn more about the Omnicell XR2 Automated Central Pharmacy System at omnicell.com/XR2.