

Case Study



Somerset Supports Goals with Bar-Code-Driven Dispensing

At a Glance

Somerset Hospital
Somerset, PA

Solution Spotlight

– PROmanager™

Results

- Qualifies as a capital expenditure for bar-code readiness and may qualify for federal funding
- 68% of medications, an average of 610 doses, dispensed daily from PROmanager-Rx
- Patient-specific dispensing time reduced 50% compared to manual process
- Significant improvement in managing “soon to expire” medications
- 85% of PROmanager-Rx medications are purchased in manufacturer unit dose form, reducing packaging labor and costs
- Electronic checking utility reduces manual picks, improving efficiencies and pharmacist job satisfaction

Overview

Somerset Hospital is a 120-bed facility treating 4,500 inpatient and more than 147,000 outpatients annually in southern Pennsylvania. Somerset had a strategic technology plan in place that included bar-code readiness, CPOE and BCMA in order to close the medication loop, but news of available stimulus funds accelerated their timeline. The HITECH (Health Information Technology for Economic and Clinical Health) Act provided federal funding for some or all of a BCR initiative, so Somerset set the goal to reach the first stage of Meaningful Use by fall 2011.

An early adopter of McKesson’s Paragon® hospital information system, Somerset had already added Paragon modules to support pharmacy and clinical systems as they became available. “We had addressed the prescribing, transcribing, administration, and monitoring processes, but not the dispensing portion of the medication-use process,” said Chief Information Officer Jonathan Bauer. “We were looking for a solution that closed the loop by automating dispensing and improving accuracy and efficiency.”

Challenge

Medication dispensing at Somerset was a manual process with pharmacy’s 15 FTEs operating under a hybrid distribution model. Pharmacy performed a 24-hour cart fill, delivering approximately 1,000 scheduled medications to nurse servers located in patient rooms. “The manual cart fill was one of the most inefficient processes in our department,” said Michele Russic,

director of pharmacy. “It required a lot of pharmacist and technician labor. With so much re-work and repetition, there was the potential for people to lose focus, which increased the risk of dispensing errors.”

With the manual dispensing process, the med/surg, telemetry, and CCU medication batches had to be run 24 hours in advance of delivery. The batches were filled and checked by a pharmacist, but then had to be kept up-to-date until the next delivery. “Clearly, a solution that enabled technicians to fill the batches and pharmacists to check them just prior to delivery would be ideal,” stated Russic. In addition, the hospital was already a user of pre-packaged unit-dose medications and sought a solution that would not increase packaging labor or costs in pharmacy. “We wanted to automate, but without having to take on the labor of repackaging meds, so continuing to purchase manufacturer unit dose medications was our preferred method.”

For PRNs, some first doses, and narcotics, nurses accessed automated medication dispensing cabinets, but the hospital did not want to rely solely on cabinets. “There was limited space on the nursing units and limited medication storage space in the pharmacy,” said Russic. “Also, when you put everything into cabinets, you’re really taking the dispensing function away from the pharmacy and putting the burden on the nurse. BCMA is going to add to the nursing workload so we didn’t want to increase nursing time spent retrieving medications from cabinets.”

"We have reaped savings and improved quality through better medication management, increased nursing and medical staff satisfaction with pharmacy services, as well as overall job satisfaction by providing pharmacists with clinical opportunities."

Michele Russic
Director of Pharmacy
Somerset Hospital

Solution

Somerset's search for an automated, bar-code-driven dispensing solution for the central pharmacy led them to the PROmanager-Rx™ system. PROmanager-Rx is the only solution that enables hospitals to fully automate the dispensing, storage, and restocking of tablets, capsules, and other oral solid medications that come pre-packaged from drug manufacturers in unit-dose, bar-coded form. The system receives patient orders electronically through McKesson's Connect-Rx® software platform that integrates pharmacy and nursing automation solutions through an interface to the Pharmacy Information System.

The combination of manufacturer packaging, bar-code scanning of every dose, and sophisticated software makes PROmanager-Rx the safest automated pharmacy system available. Explained Russic, "PROmanager-Rx was the right choice for us because it can automate 70 to 80 percent of our daily cart fill, easily fits into our pharmacy layout, and was affordable."

Results

In December 2010, Somerset implemented a 12,000 dose PROmanager-Rx with conveyor to process cart fill and first dose orders and a singulator to prepare 2x5 medications for restocking.

Patients are identified via bar-code scan and every unique dose is scanned when stocked and when dispensed, increasing filling accuracy and reducing dispensing errors. The old manual system of filling and checking batches well in advance of delivery is a thing of the past, and the Connect-Rx software provides an electronic pharmacist checking utility that facilitates the process.

According to Russic, "We've reduced manual picks and time spent checking meds, repetitive processes that provided little job satisfaction for pharmacy. And because PROmanager-Rx fills are delivered directly to the nurse servers, we are able to keep the nurse in the room with the patient, which is important to us in order to maintain high service levels."

PROmanager-Rx utilizes the concept of max and par inventory values, and a restock report to assist in identifying medications to be restocked. Dynamic inventory optimization allows the max and par values to be set as a number of days' usage, adjusting quantities as needed. Somerset stores approximately 6,800 doses and 450 unique medication line items, including low-volume, infrequently used meds, which present potential for error when dispensed manually. "We have seen improvements in the restocking of returned meds. The previous manual processes left potential for returned meds to go into the wrong pick station bins, but with PROmanager-Rx, restocking and returns occur through bar-coded restock trays so those errors have been eliminated." Russic states.

Another safety feature with PROmanager-Rx is that it determines or assigns an expiration date to each dose, and will not dispense an expired medication or one with an unreadable bar code. "PROmanager-Rx has made a big difference in how we manage expiration dates," said Russic. "It identifies and removes soon-to-expire medications from stock and dispenses the drug with the earliest expiration first, which has also improved our inventory management." In addition to the highest levels of safety, the system has reduced the packaging burden inside the hospital, saving both pharmacy labor and costs. Per Russic, "We use PROmanager-Rx to dispense as many oral solids as possible. We currently dispense 68 percent of patient-specific medications, which averages out to 610 doses daily. We purchase 85 percent of medications in manufacturer unit dose and have found that the majority of drugs are system-ready upon delivery from the wholesaler and compatible with PROmanager-Rx."

Increased efficiencies have allowed Somerset to redirect resources to other areas, including the implementation of a unit-based pharmacist service and expansion of their employee prescription benefit program. Russic summarizes, "PROmanager-Rx has closed the loop by automating dispensing while improving accuracy and efficiency. It has also rendered medication distribution safer, and allowed us to expand the services we provide to patients and our employees."

MCKESSON

McKesson Automation Solutions

500 Cranberry Woods Drive
Cranberry Township, PA 16066
(724) 741-8000

www.mckesson.com