



Improving Patient Safety and Financial Stewardship Through Pharmacy Automation

The flagship facility of a not-for-profit health system, this Swisslog Healthcare client is an 808-bed teaching hospital in the Southeastern United States. As the region's only Level One Trauma Center, the medical center excels at comprehensive care for trauma, heart, neuroscience, vascular, stroke, orthopedic and oncology patients.

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The Challenge

The hospital's central pharmacy distributes 85% of patient medications through 138 automated dispensing cabinets. Non-cabinet stat and first-fill doses are dispensed through their Swisslog Healthcare **TransLogic®** Pneumatic Tube System. Until recently, the pharmacy stored all medications on static shelving, making the pick process tedious, labor-intensive and error-prone. Six technicians were required to manually pick and complete the two daily cabinet replenishments as well as two daily critical low-fills and one non-cabinet fill. To manage drug

inventory, a buyer walked the shelves, visually assessing quantities and relying upon personal experience to determine re-order needs. This created an excess of safety stock, which contributed to unnecessary inventory overhead and created opportunities for waste.

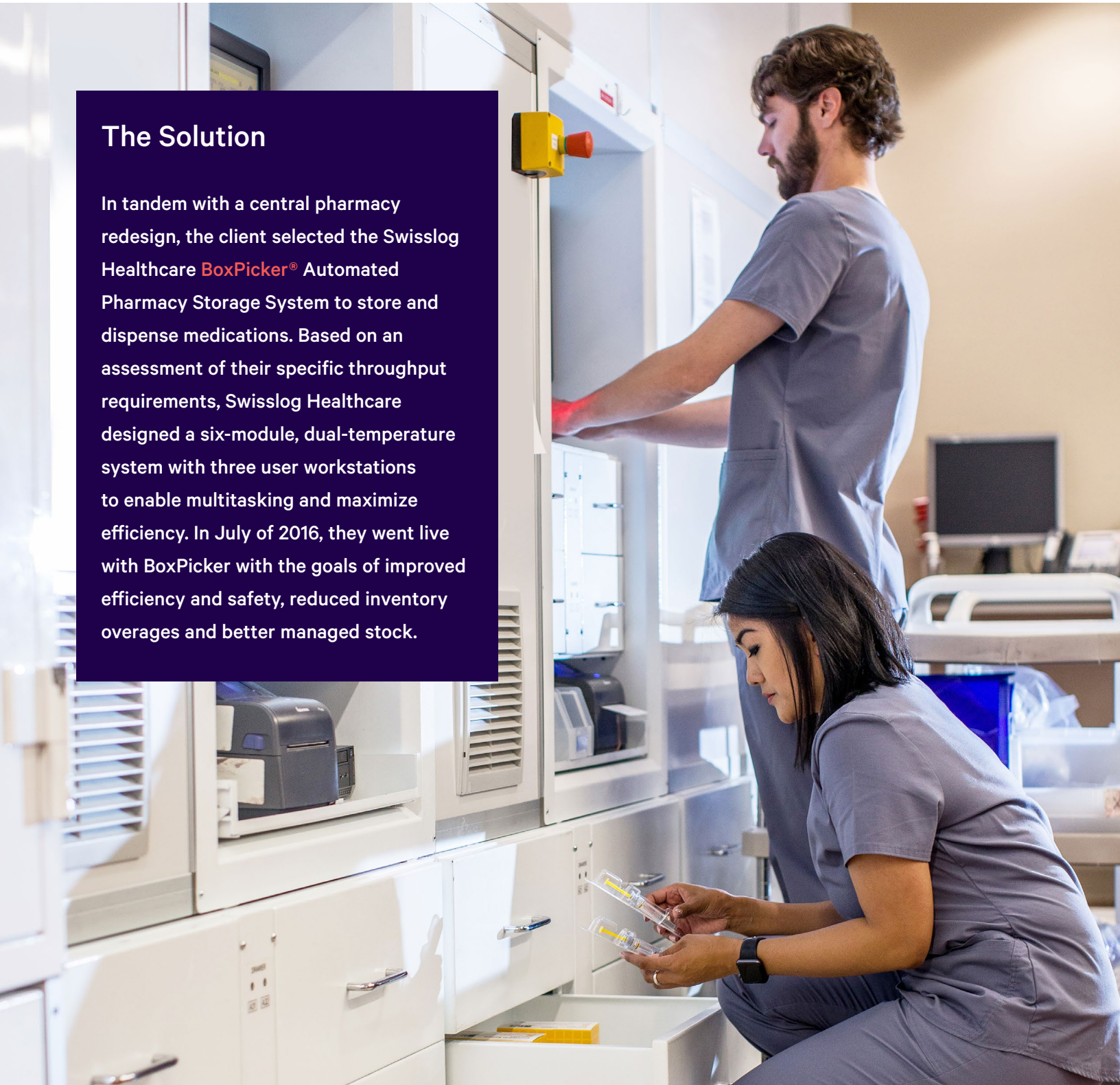
In 2012, pharmacy leaders saw an opportunity to improve patient safety and staff efficiency, while reducing inventory overhead and drug waste, through pharmacy automation.

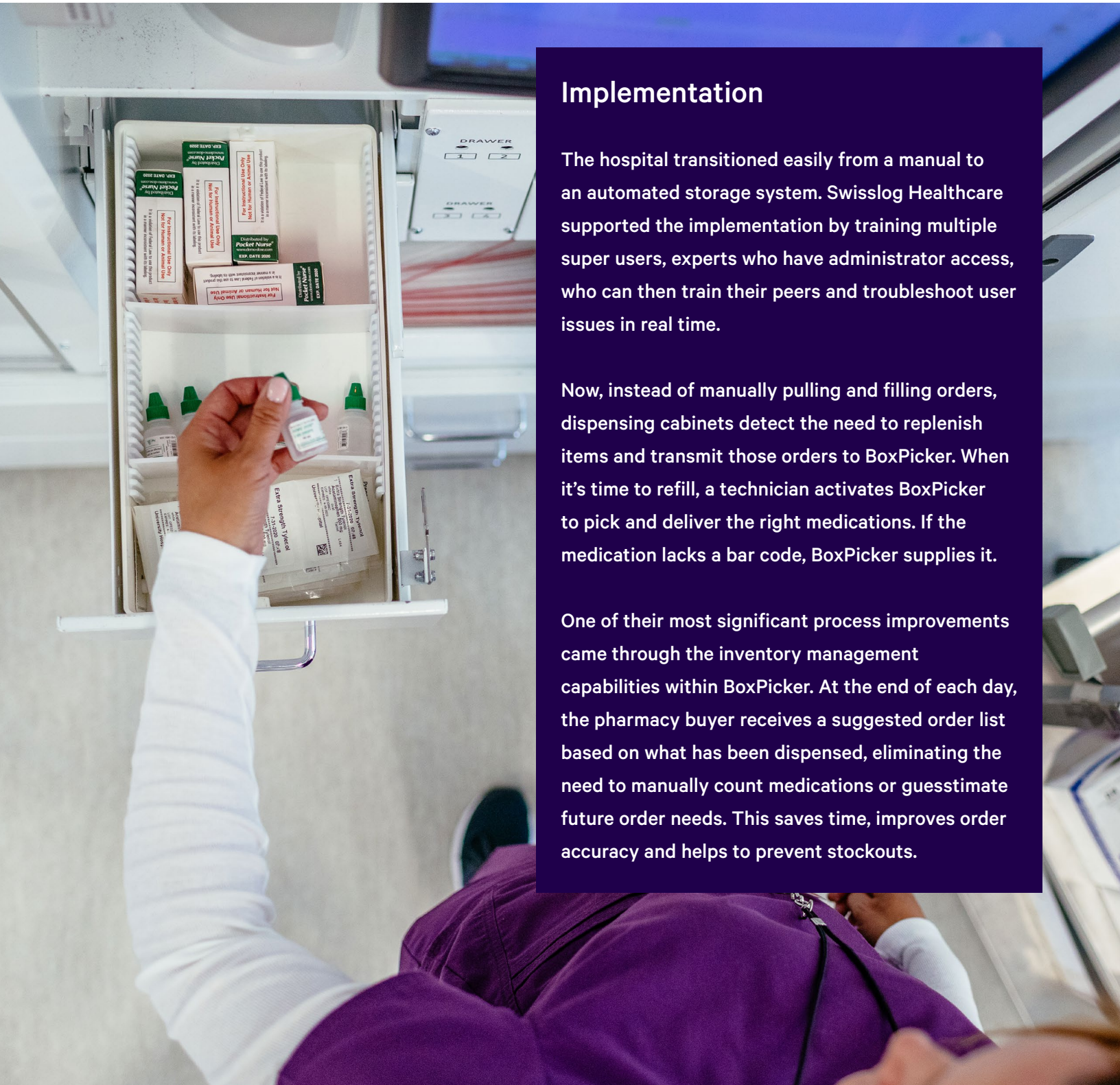
«There is a lot of talk in pharmacy about maximizing your degree. We wanted our technicians and pharmacists to do work that put their cognitive skills to use, such as optimizing cabinet inventory and improving our distribution systems,» said the hospital's Pharmacy Services Operations Coordinator. «Also, people make mistakes. Layering automated safety checks on top of human safety checks adds security.»



The Solution

In tandem with a central pharmacy redesign, the client selected the Swisslog Healthcare **BoxPicker®** Automated Pharmacy Storage System to store and dispense medications. Based on an assessment of their specific throughput requirements, Swisslog Healthcare designed a six-module, dual-temperature system with three user workstations to enable multitasking and maximize efficiency. In July of 2016, they went live with BoxPicker with the goals of improved efficiency and safety, reduced inventory overages and better managed stock.





Implementation

The hospital transitioned easily from a manual to an automated storage system. Swisslog Healthcare supported the implementation by training multiple super users, experts who have administrator access, who can then train their peers and troubleshoot user issues in real time.

Now, instead of manually pulling and filling orders, dispensing cabinets detect the need to replenish items and transmit those orders to BoxPicker. When it's time to refill, a technician activates BoxPicker to pick and deliver the right medications. If the medication lacks a bar code, BoxPicker supplies it.

One of their most significant process improvements came through the inventory management capabilities within BoxPicker. At the end of each day, the pharmacy buyer receives a suggested order list based on what has been dispensed, eliminating the need to manually count medications or guesstimate future order needs. This saves time, improves order accuracy and helps to prevent stockouts.



«Nursing has also noted the safety benefits of BoxPicker, with **no picking errors** reported in the nine months since implementation.»

Measures of Success

Just nine months after implementing the Swisslog Healthcare BoxPicker, the pharmacy **reduced the value of their overall on-hand inventory by over 20%** from \$3.2 million to \$2.5 million. The department has also **improved inventory turnover by over 40%** from 8.5 to 12.3.

Freed of the manual work of picking and filling, **pharmacists and techs are now able to focus on higher-level tasks**, including optimizing cabinets, which improves service to nurses and patients. In addition, overtime hours have fallen by more than 25%.



«Swisslog Healthcare operational consultants went above and beyond, months after the initial BoxPicker implementation, to help us find further workflow efficiencies. We anticipate moving from six techs to two for cabinet replenishment, allowing our team to engage in more cognitively demanding, interesting work to add value to pharmacy operations and patient care.»

—Pharmacy Services Operations Coordinator



«We sat down with the client, listened to their concerns and observed their processes for three shifts,» said Swisslog Healthcare Clinical Solutions Consultant, Cindy Doig. «That allowed us to help the pharmacy department take full advantage of the BoxPicker System's operating and safety features and to standardize processes across shifts.»

Ongoing Support

Eight months after go-live, Swisslog Healthcare Clinical Solutions Consultants returned to the hospital to optimize the technology's use. They found several opportunities for further productivity and safety improvements. With BoxPicker, for example, staff no longer needs to fill all cabinets at the same time; rather, they can make the best use of the machine by performing pulls throughout the day. Also, because cabinets automatically transmit orders to BoxPicker, a second technician is not needed to reconcile doses pulled from the unit against a print-out. These improvements allow the pharmacy to reduce the labor needed to fill cabinets by two-thirds, **enabling redeployment of technicians to higher-level tasks.**

Swisslog Healthcare

At Swisslog Healthcare, we strive to lead change for better care. At the core of this vision is a focus on improving workflows and reducing the time clinicians spend doing repetitive tasks—enabling more time to care for patients and residents. Our solutions and services extend across the continuum of care, including transport, medication and supply chain management for long-term care facilities, consolidated service centers, hospitals and health systems.



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