

## CASE STUDIES:

# Automating Your Outpatient Pharmacy

REASONS TO AUTOMATE YOUR OUTPATIENT PHARMACY OPERATIONS abound. For some facilities, workflow efficiency is of the utmost concern, whereas others are solely interested in increasing patient safety or improving the services provided to patients. However, for most outpatient pharmacies, all three of these goals need to be reached.

With many sophisticated vendor systems available in the market, how do you know which is right for you? Furthermore, how can you ensure that the implementation will be smooth and that products will perform at their optimal levels?

On the pages that follow, outpatient pharmacists share their experiences with implementing automated technology and optimizing the use of various vendor products. **R&P**



For more information on outpatient automation, circle #51 on the reader service card.

## CASE STUDIES:

### Increasing Staff Satisfaction through Automation

By Carolyn Robbins, PharmD, RPh, CDE

Lincoln Community Health Center serves a patient population of over 35,000 and fills 800 to 1,000 prescriptions a day. In addition to high volume, perhaps our most compelling reason to automate was the reduction of medication errors. In November 2001, we installed ScriptPro's SP 200 Robotic Prescription Dispensing System. Then, in January 2002, we installed ScriptPro's SP Central Workflow Management System along with SP Checkpoints with bar code scanners for prescription verification, tracking, and management, and three SP Stations with touch-screen monitors, bar code scanners, and labeling devices for manually filled prescriptions.

The positive impact of ScriptPro's robotic and workflow technology is measurable. We have tracked a significant and steady decrease in medication errors (now less than .01%) due to the technology's ability to prevent wrong-patient, wrong-dose, and wrong-drug errors. By scanning the bar code on a stock bottle and then on the SP 200 drug cell, the system will confirm that we are filling the robot accurately. We verify each filled prescription by scanning its bar code and performing a visual check with an on-screen picture of the drug. The SP Stations can also provide on-screen picture verifications of the drugs, providing another accuracy check for our staff members.

To ensure that the right patient receives the right drug, the SP Station, using SP Central Workflow, batches prescriptions by patient. Then, when we scan a prescription label, all prescriptions for the patient appear on-screen, and we can easily verify that we are giving the right patient the right prescriptions. The batching feature is especially helpful when servicing patients with the same or similar names, which may have been confused before the ScriptPro implementation.

Automating our pharmacy has also reduced our patients' wait time by about 16% percent, even as our prescription-fill rate increased by 8%. Because a prescription's bar code is scanned at each step in the fill process, our staff can use the SP Checkpoints to track prescriptions

throughout the pharmacy, whether they are stored in the refrigerator, the new-will-call area, the refill-will-call area, in oversized-bag shelves, or if they are still being filled. When a patient approaches the pick-up window, we are able to easily identify the location of each of his or her prescriptions and determine whether they are ready to be picked up, or if it will be a few more minutes.

In addition, the decrease in work-related stress for our staff is unbelievably satisfying. We polled the pharmacy staff before implementing ScriptPro's technology, and our staff was obviously dissatisfied with their stressful workload. In a post-implementation poll, 100% of our pharmacists and technicians stated their work environment had improved. They cited the following reasons: greater confidence in the accuracy of prescriptions; ability to locate prescriptions; reduced manual selection and counting of tablets and capsules; assurance that patients receive all of their medications; assurance that multiple patients' medications are not mixed in the same bag; and

online picture identification of all drugs, even drugs outside our formulary.

We chose ScriptPro's equipment for its compact footprint; 24-hour, seven-days-a-week support service; and the upfront and on-site training. The workflow analysis and design provided by ScriptPro's team were also extremely helpful. By following ScriptPro's recommended procedures for daily and weekly maintenance, we continue to operate without a hitch. Furthermore, ScriptPro continually upgrades our equipment as part of our standard service agreement.

*Carolyn Robbins, PharmD, RPh, CDE, is the director of pharmacy for Lincoln Community Health Center and the assistant director of pharmacy for Durham Regional Hospital/Duke University Health System, both in Durham, North Carolina. She has worked for the health system for 28 years.*



*The use of ScriptPro's SP 200 has led to increased staff satisfaction at Lincoln Community Health Center's pharmacy.*

## CASE STUDIES:

### Automated Safety Nets

University of North Carolina (UNC) Healthcare operates three outpatient pharmacies, each dispensing from 800 to 1100 prescriptions a day. When making the move towards automation, we knew our limited space could not accommodate a system with a big footprint. We also wanted a fairly simple, easy-to-maintain system that would allow us to capture patient signatures electronically, better manage our will-call bins, and display drug images to staff members during the filling and verification processes. With these requisites in mind, in 2003, we decided to implement Innovation Associates' PharmASSIST Enterprise System.

Using this technology, a pharmacist receives a prescription from a patient at the intake window, reviews it, and then enters it with our TechRx order-entry software, which interfaces with PharmASSIST and prints a bar-coded label. A technician scans the label, and if the order is for one of the 100 commonly dispensed medications stored in our PharmASSIST cabinets, the system will auto-fill the prescription. If a prescription requires manual filling, the technician scans its bar code and the bar code on the stock bottle to verify that the drug matches the prescription. Providing further safety checks, PharmASSIST displays an on-screen image of the drug, along with patient information, and the order is then verified by a pharmacist. Filled prescriptions are placed in our



*PharmASSIST cabinets in UNC Healthcare's outpatient pharmacies store and dispense 100 common medications.*

**By Colleen Gresham, RPh, and Randy Bowling, RPh**

PharmASSIST-managed will-call bins and added to our patient-delivery queue, which help us track prescriptions and service customers with greater ease. Upon delivery of the prescription, the software presents an electronic signature pad for the patient to sign.

Using PharmASSIST's reports, we track controlled-substance prescriptions and employee fill and verification activities to meet JCAHO medication-management standards. In addition, the electronic signature capture confirms for drug manufacturers that patients who qualify for drug-assistance programs have received their drugs and that replacement drugs are needed. PharmASSIST's reports also help us track inventory and expiration dates.

Post-purchase, we have been very satisfied with Innovation Associates' training and customer-service programs. In fact, their praiseworthy service is one reason we plan to use PharmASSIST in the next pharmacy we build.

*Randy Bowling, RPh, assumed his current post as senior operations specialist at UNC Healthcare in 2001.*

*The assistant director of pharmacy for ambulatory care service at UNC Healthcare, Colleen Gresham, RPh, has worked for UNC Healthcare since 1982.*

## CASE STUDIES:

### Improved Inventory Management

By Melissa Mook, RPh

Operated by WellSpan Health, York Hospital's outpatient pharmacy, located in York, Pennsylvania, fills up to 600 prescriptions a day, serving hospital employees and discharge patients, as well as the general public. We wanted compact equipment that would increase our efficiency by allowing us to fine-tune our current practices.

In May 2005, we implemented AutoMed's FastFill 200 and Efficiency WorkPath software. After an order is entered using our QS/1 operating system, an interface transmits the prescription information to the FastFill 200, where the drug is dispensed into a vial, which is then labeled by the machine. A technician scans the prescription's receipt and the vial's bar code, and the FastFill 200 identifies the vial that matches it. The technician then removes and caps the vial, completing the fill process.

WorkPath tracks all of our prescriptions, both auto- and manually filled, which is particularly helpful when serving patients with

multiple prescriptions. This feature ensures that we don't lose track of orders or separate them, resulting in better patient care and service.

We now process prescriptions more efficiently, and our staff's morale has improved because of the increase in resources available to them. I think we will continue to reap considerable benefits from AutoMed's technology, particularly in managing our inventory. The automated equipment has simplified our reordering; using FastFill 200's inventory reports, a technician is able to quickly discern which of the 199 drugs stored in the machine need to be reordered, thereby streamlining our ordering processes. Our adjustments to our new system have been minor, and I have enjoyed working with AutoMed.



AutoMed's FastFill 200 in York Hospital's outpatient pharmacy.

*An employee of WellSpan Health for 11 years, Melissa Mook, RPh, has served in her current position, director of outpatient pharmacies, for six years.*

## CASE STUDIES:

### Productivity and Safety

By Don Nelson, DPH



Parata RDS can fill a 30-count prescription in about 20 seconds.

Jackson-Madison County General Hospital's outpatient pharmacy serves our 7,000 employees and their families, and fills an average of 300 to 450 prescriptions daily. We had a goal to improve productivity while maintaining our customers' safety, and robotics offered us an opportunity to do that. In addition, with a plan to move to a new location on the horizon, we wanted something portable and with a small footprint.

Our pharmacy installed Parata RDS (Robotic Dispensing System) about a year ago. At just 12 square feet, it fits nicely on the end of our shelving. More than 75% of all our prescriptions come through Parata RDS, which counts doses and selects, labels, caps, and sorts vials by a patient's last name. The robot can fill a 30-count script in about 20 seconds.

Before installing Parata RDS, we had limited counter space for counting and filling, leading to opportunities for filling mistakes during extremely busy times. Over the past year, not one patient

has come back with a prescription error. I feel confident that our prescriptions are correct, and we have more time to pay close attention to our patients.

Our administration is pleased with the technology because it will pay for itself in just two or three years. If we can get the job done more accurately with our current staff, the hospital can assign pharmacy staff to other areas of the hospital, to a satellite pharmacy, or to clinical rounds.

For our customers, the biggest change is wait time. Before implementing Parata RDS, we had lines that were 15 to 20 people deep during our busiest times. Now I have customers out the door in less than a minute. There is essentially no wait time. We also have more time to answer patient questions, making our workdays much more satisfying.

*Don Nelson, DPH, is the head pharmacist at Jackson-Madison County General Hospital's employee pharmacy.*

#### Where to find it:

VENDOR	WEBSITE	READER SERVICE #
AutoMed	www.automed.com	79
Innovation Associates	www.innovat.com	84
McKesson Automation	www.mckessonautomation.com	82
Parata Systems	www.parata.com	78
PickPoint Corporation	www.pickpoint.com	80
ScriptPro	www.scriptpro.com	83