

# DRUG TOPICS

## Automation options abound for retail pharmacy

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Automated medicine machines are a growing trend in retail pharmacies, according to Todd Brown, MHP, R.Ph., associate clinical specialist and vice chair, department of pharmacy practice, school of pharmacy, Northeastern University, Boston. "The number of prescriptions being filled annually is increasing as the population ages, and pharmacies have experienced significant growth in prescription volume," he said.

In addition, Brown explained, community pharmacy is transitioning from primarily dispensing to taking on more responsibility for drug therapy management, and pharmacists are being pulled in that direction. "The costs of health care and of medications are constantly applying pressure to make the pharmacy process more efficient, and automation is one way to solve these problems," he said.

Brown went on to point out that while automation has been around for a while, the cost of these automated machines has been decreasing to the point where they are beginning to be more realistic for pharmacies to use. "Now that it economically makes sense, we are seeing a lot of pharmacies using these machines, which help make them more efficient. Automation assists with the technical dispensing-type process, and it allows the pharmacist to oversee the process and spend more time with patient-focused activities," Brown explained.

### Trend toward automation

Automated dispensing machines are used more in chain, than independent, pharmacies on the retail side, according to Chris Thomsen, president of The Thomsen Group, an independent consulting firm that specializes in retail pharmacy technology and automation.

"There is a growing need for these systems in the retail segment," said Thomsen. "Right now there are five available robots and various counting systems," he said, noting that in the past three years his group has looked at both the market and vendors to see what is being offered.

Thomsen explained that in the past 12-18 months, the regional chains have been focusing on automated workflow first. "They are standardizing the overall process and then deciding whether to bring in, depending on the volume, a counting system or robotics at the very high-volume pharmacy," he said. "Years ago we thought every pharmacy would eventually have a robot or at least would be a candidate for one, but generally only those above 300 or 350 prescriptions a day [retail] will start considering a robot," he commented.

Below that volume, Thomsen believes counting machines are best. "It doesn't make sense to spend \$200,000 for a robot when you can spend \$40,000 or \$50,000 on a counting machine. You have to weigh the return on the investment," he noted. For example, if a regional chain decides to use counting technology in all its pharmacies, the cost has to be multiplied by the number of sites. "They are being careful and there are a lot of options out there now and a lot of choices," he said.

In all pharmacies—retail and outpatient—only about 7% employ robotics, according to Thomsen research. "It is amazing to have five robots in such a small market that actually utilizes robotics," Thomsen remarked, adding that he sees the growth more in automated counting machines and systems that improve work flow. Two of the leaders for automated machines used in pharmacies today are McKesson APS and Parata Systems LLC.

## Counting systems

McKesson APS has the AccuMed counting and dispensing cabinet and its Pharmacy WorkFlow software in 200 retail pharmacies across the country, according to Debbie Bedosky, marketing communications manager, McKesson APS, in Pittsburgh. "Together these two products are usually all a pharmacy needs to help reduce patient errors and ease the shortage of pharmacists," she said.

The AccuMed cabinet has a counting speed of up to 10 capsules or pills per second. It supports multiple and simultaneous users. "It has a 60-shoot dram [a small unit of measure relating to the number of pills the machine holds] size and a 360 dram hopper capacity, which helps reduce the replenishment. This also helps save time," Bedosky explained.

The system operates with two different software systems, Pharmacy 2000 workflow or AutoLink. "This system [Pharmacy 2000] improves patient safety and care by increasing accuracy and greatly reducing the risk of medication errors through bar-code technology. The individual dispensing shoots reduce cross-contamination of pills and they free staff to help counsel patients on prescriptions," said Bedosky.

The base system is an 18-cell cabinet design, Bedosky explained. The scalable design of the system allows for additional cabinets to be added and reconfigured, as volume grows, for the best workflow layout in the pharmacy. Flexible layouts can be combined in a variety of configurations such as pharmacy bay, end-cap, or linear layout she said.

Customizable levels of security are also available. "Multiple security settings allow pharmacies to adjust to their preferred level of security. The user-verification feature utilizes user identification bar codes that validate and track the pharmacy staff through the entire filling and replenishment process. In addition, the system increases security with electronically locked gates and drawers and cartridge monitoring that ensures secure prescription retrieval," Bedosky noted.

McKesson APS also has a Navy contract in which the AccuMed cabinets are in Navy pharmacies.

## Robotics

Robotic systems don't simply count. Typically, a system can automatically count the pills from a cell or container directly into a vial, handle the vial, and apply the label. Parata RDS (robotic dispensing system), from Parata Systems LLC, Durham, N.C., caps the vial and places it by patient name in an alphabetical holding bin.

The Parata RDS interfaces with most leading pharmacy systems and is designed to process Rx's quickly and efficiently. Parata RDS delivers high-speed prescription productivity in a compact machine that fills a prescription in about 20 seconds, a cycle time that includes: selecting and labeling a vial, filling, capping, and sorting by patient last name. The system also fits into small spaces. "Three components make up this machine, different from others in the marketplace. The first would be size. At 12 sq. ft., we have 252 types of medications that can be put in the machine, which is about 25% more than anyone else in the marketplace," said Tom Rhoads, VP, marketing, at Parata.

Second, "there is tremendous speed with the robot," Rhoads said. It can count 25 to 30 pills a second and can do 150 to 180 prescriptions an hour. And third, Rhoads added, the machine is compact and fast with high capacity and is extremely accurate (100% in terms of right pill in right vial and 99.9% on right number of pills).

The Parata RDS dramatically changed Bob Tucker's Pharmacy in Fernley, Nev., a full-service independent pharmacy and medical supply store. "It has positioned us for added capacity because our community is growing rapidly," said Tucker, who is concerned about ballooning volume when Medicare beneficiaries gain drug coverage next year. "Now most prescriptions are filled within five minutes, and we have not had one miscount since we purchased the machine in January 2005." Tucker studied various systems for about a year before settling on Parata.

"Since we acquired the system, I have lost a pharmacist and a tech [by attrition] and we have not replaced either. That was never my goal to reduce staff, but we found we can do more prescriptions more quickly and accurately with the Parata RDS," he told *Drug Topics*.

Bob Tucker's Pharmacy has a daily average of 255 single prescriptions with one pharmacist and two techs and one and a half clerks, but the volume can go as high as 300 or 400 Rx's on a busy Monday after the pharmacy

has been closed on Saturday and Sunday.

In summary, automation options for retail pharmacies are varied and plentiful. Overall, they can help community pharmacies increase efficiency, productivity, and accuracy, all the while freeing up precious time for pharmacists to consult with patients.

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