

Beyond Fast Dispensing, Patient Safety Is Critical

Whether they are chain or independent operators, pharmacy retailers are eager to employ technologies and operational systems that will enable them to handle an ever-escalating number of prescriptions at a time when there just aren't enough pharmacists.

Integrated voice response systems, which get pharmacists and technicians off the phone, have almost become the norm, while automated dispensing--from counting machines to in-store pharmacy robots--is becoming essential for more and more stores.

Pharmacies are being physically redesigned and work flow systems are being integrated into core pharmacy dispensing systems to maximize the efficiency of every person in the pharmacy, while centralized filling facilities gear up to take more dispensing duties away from the stores. Retail pharmacies must also begin to integrate electronically transmitted prescriptions from physicians, as long-awaited e-prescribing gradually becomes a reality.

"There's a hodgepodge of offerings out there, and pharmacists say their heads are spinning," Chris Thomsen, president of The Thomsen Group, a consultancy based in Kansas City, Mo., told *Retail Pharmacy Management*.

"Pill counting and robotic systems are great, but pharmacists tell us they need automated work flow systems to help them cope with 300 to 500 scripts a day and more," he said.

After spending an immense amount of time and money developing systems, both technological and manual, to comply with HIPAA (the Health Insurance Portability and Accountability Act), retail pharmacy operators are now anxious to choose the right systems to handle the entire process of prescription dispensing--and they are somewhat overwhelmed by the choices available and issues involved, Mr. Thomsen added. "They have vital questions: "What do I choose? How do I make sure prescriptions are properly passed along and that databases with on-screen images of medications are up to date? How can I keep consistent the printed warning statements to patients about potential interactions of their medications?"

Don't Skirt Intent of Technology

Retailers and even most patients recognize that automated systems are more reliable than humans in counting pills or catching drug interactions. In fact, the best performance in prescription dispensing accuracy belongs to the massive, fully automated, mail-order filling facilities.

Nevertheless, according to Matt Grissinger, RPh, medication safety analyst at Huntingdon, Pa.-based Institute for Safe Medication Practices, the technology can only be accurate when it is used correctly. The biggest impediment to maximizing the usefulness of technology is the human being that tries to outsmart the technology--or use the system in a way in which it was not intended to be used.

"People can work around technology," he said, offering an example from the hospital side: "Rather than scan patient bar codes one at a time when administering medications, some time-pressed nurses could remove armbands from 10 patients for scanning," he explained. Using the technology this way, the

opportunity for error reverts, almost, to pretechnology days. At the retail level, he said, "we still have to figure out how things can go wrong, such as putting the wrong fill in the wrong bin. As important as having the right technology is having the pharmacists and technicians buy in and want to do the right thing."

Needed in the retail setting, Mr. Thomsen explained, are overarching systems that ensure patient safety "by assigning full responsibility to pharmacists and technicians for specific steps, directing them as to the steps they need to take, and linking their names, initials and security codes to their work. If a patient brings in, say, three prescriptions, a good work flow system would track who enters, fills, verifies and checks each prescription, and ensures that all three will be prepared and ready for the right patient. Then, electronic signature capture of the person who picks up the prescriptions would close the loop and complete the audit trail."

Considering Cost Carefully

As vital as patient safety technology is becoming, pharmacy operators are realistic about their fiscal strength and their ability to invest in technology in the current economy. "If technology were affordable, patient safety would be our No. 1 factor," Laddie Burdette, executive vice president, Fruth Pharmacy, Point Pleasant, W.Va., told *Retail Pharmacy Management*. "If we could put in bar coding and visual screening that checks the tablets on every prescription, we'd do it immediately," but, he added, "we have to do what's economically feasible. We have to look at where we want to go and get there the best way we can. We have to examine the total cost of technology and pharmacists, but, at the same time, if we can add to our checking and make pharmacy safer, it would be a great plus."

At Medic Drug, in Cleveland, the pharmacy staff "would be very eager to employ anything that raises customer confidence in them and frees them more time to consult," according to pharmacy director Alan Lipsyc, RPh. At the same time, he conceded, "we need to be prudent about the technology we buy."

In New York, where it became mandatory on July 10 for pharmacists to counsel on every new script, not just *offer* to counsel, Marc Speert, RPh, pharmacy director at New City, N.Y.-based Drug World, is already relying on new technologies to help free pharmacists' time. "Our No. 1 responsibility is the correct dispensing of medicines to patients. Operators have no choice but to make appropriate changes to their practices to provide that," he said. "It's a matter of what a human life is worth. Otherwise, we're just merchants giving out products--except that we deal in medications that can potentially save lives and, if we're lax, can potentially take a life. Compare that to greengrocers ... if they make a mistake, you may get the wrong apples."

However fast the pharmacy community may move to adopt patient safety technologies, it will not be "soon enough," added Mr. Grissinger. "The biggest impediment is cost." Noting that prices will fall very slowly as the sales volume of such systems rises, he asks: "Why aren't insurance companies or the government subsidizing these investments? They are a matter of public health. Instead of making pharmacists haggle over insurance codes or formulary issues over the phone, I envision a greater role for third parties in supporting this broader use of technology. The money has to come from somewhere."

As technology is used to protect patient safety, the next big benefit to patients and payers will be using technology to improve patient adherence to their prescribed regimens.

Mr. Thomsen tells of scanners being built into personal digital assistants that patients themselves can use. The devices are loaded with software to ring and remind people to take their medications and log when they do so. He offers some examples that would affect patient health as well as the strained healthcare

system: "This type of technology is so important for HIV patients who take multiple medication cocktails or people with diabetes who check their blood levels throughout the day."

--Al Heller

To Err Is Human ... but, Prevention Works

The best plans to reduce prescription errors will likely incorporate some high-technology approaches as well as some relatively simple technologic and environmental improvements.

According to Michael Cohen, president of the Institute for Safe Medication Practices, the four most frequent reasons for prescription dispensing errors are problems with workload, distractions, work environment and work area.

So often the easiest error-reducing method isn't a technology at all. For example, Chris Thomsen, a consultant and president of The ThomsenGroup in Kansas City, Mo., told *Retail Pharmacy Management* that brighter lighting can yield significant improvement. Over a decade ago, a study by Buchanan et al (*AJHP* 1991:54-64) showed that dispensing errors fell from a 3.7% rate to a 2.6% rate when illumination was increased from 102 foot-candles to 146 foot-candles. "It's not just about reading prescriptions or labels, it's also being able to see the colors of the actual medications for accuracy," Mr. Thomsen noted. He also urged the use of facility design and work flow areas to help establish clear and efficient responsibilities behind the bench.

The application of relatively low-technology approaches, such as interactive voice response (IVR) systems, can lower pharmacists' workload and help improve safety, Mr. Thomsen said. He cited a 1999 survey indicating that IVR systems reduce phone ringing and distractions by 33% while enabling pharmacists to process 60% of refills without touching the phone. "Retailers used to think their elderly customers wouldn't want to use IVR," noted Mr. Thomsen. "However, they do use IVR, and the system clearly eliminates distractions from the pharmacy."

Mr. Thomsen offers a few additional tips from a recent presentation for improving the pharmacy environment and, in turn, pharmacy safety:

- Look for ways to automate your inspection system: 77% of content errors are made with manual systems.
- Don't neglect your printer: 68% of label errors occur with laser printers.
- Keep the lights bright: 73% of the content errors occurred in pharmacies with a lighting level below 94 foot-candles in the inspection area.
- Don't cram your shelves: 66% of content errors are associated with tight spacing.

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