

## Today's and Tomorrow's Challenges

**Volume** - U.S. pharmacies filled an estimated 3.14 billion prescriptions in 2002. The volume of dispensed prescriptions is expected to balloon 46 percent over the next five years.

The projected increase in the number of available pharmacists over that same period of time will only be a modest 5.4 percent, a rate that's 10 times slower than Rx volume. (Source: NACDS)

**Dispensing errors** - classified as everything from the wrong label to the wrong drug - occur at a rate of 4 errors per day in a pharmacy filling 250 per day. That's an estimated 51.5 million errors annually. (Source: Auburn University 2003 study of 50 community and outpatient pharmacies)

## Automation and Technology: A Practical Solution for Your Pharmacy

(Part 2 of a 2-part series by Christopher Thomsen, president of The ThomsenGroup, Inc.)

### Standardizing the Dispensing Process

Pharmacy owners and operators are increasingly anxious to choose the right pharmacy automation systems that will handle more than just the order entry, the adjudication and billing, as well as the counting, labeling and capping of their prescriptions. While some pharmacists note that they are overwhelmed by the choices available, many are now asking what technology and automation can handle the entire prescription dispensing process.

Questions being asked are: "What do I choose? With all of the other administrative duties that must be addressed, how do I make sure that prescriptions in my pharmacy are being filled correctly, being verified against databases with on-screen images of medications and are being delivered to the right patient?" In other words, how do we standardize the entire prescription dispensing process and eliminate the possibility of skipping critical quality control steps to verify that the right prescription has been dispensed?

The term "automated workflow system" is generally defined as software modules or products that can improve productivity and efficiency by automating and dividing tasks of the prescription dispensing processing into separate steps so that they can be consistently performed by one or more people. An automated workflow system provides a standardized process or protocol that is observed and utilized by everyone using the system. In the case of pharmacy, every person filling, labeling, verifying, collating and storing a prescription with an automated workflow system follows the same rules. There are no exceptions.

Currently, automated workflow systems are provided by either the pharmacy management or the automation system vendors. There is also a wide range of functionality and pricing, and not a single automated workflow system looks or operates like the next.

Several pharmacy management system vendors tout the fact that their automated workflow system is already part of their existing operating system and can be activated in the pharmacy with the flip of a switch. While these systems do provide for the orderly processing, verification and delivery of a prescription, they do not provide any automated prescription filling functionality. They are, however, the least expensive automated workflow systems on the market and start at around \$5,000.



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Nearly all of the pharmacy automation vendors provide automated workflow systems, and the functionality of these systems is quite different. First of all, these systems require tight integration with the pharmacy management system to operate and provide complete functionality. Next, the goal of these systems is to track and manage - from order entry to filling to verification to collation to will call to patient pick-up and verification - 100 percent of a pharmacy's prescriptions.

Automated workflow systems provided by the pharmacy automation vendors also vary in price, from \$40,000 to well over \$300,000, but the benefits are real and justifiable. Just consider the fact that lost or misplaced prescriptions costing an average pharmacy \$60 to \$100 per day in labor, could be dramatically reduced or eliminated.

Because of the nature of automated workflow systems, it is also inferred that they can reduce the chaos in a busy pharmacy and increase efficiency, productivity and dispensing safety.

#### **Automation, Technology and Patient Safety**

All pharmacy automation and technology should, at one point or another, focus on helping pharmacists perform inspections more frequently and accurately. One study indicated that just keeping the original prescription (hard or electronic copy) with the product throughout the filling process helps to detect and eliminate dispensing errors. Another study found that raising the lighting levels to at least 146 foot-candles helped to reduce medication errors by one full percent and that the elimination or minimization of interruptions and distractions helps to improve a pharmacist's inspection accuracy.

According to Matt Grissinger, RPh, medication safety analyst at the Institute for Safe Medication Practices, 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.

At the community pharmacy level we must continue to be aware of the fact that even with the best technology, things can go wrong. As important as it is to have and use the right technology, it is even more important to have pharmacists and technicians who buy in and want to do the right thing with that technology.