The Efficient Pharmacy
Trends in Dispensary Innovation & Automation
Vol. 2, No. 3

Healthy Computing Guide

Lighting
- To avoid glare from your screen:
  - Use an adjustable desklight for your keyboard or paperwork
  - Natural light from windows should be controlled with blinds or drapes
- You should not face a window or have one behind you (window should be 90° from your screen

Monitor (unless built-in)
- Your monitor should be positioned directly in front of you
- The centre of the screen should be 24"-28" from your eyes and slightly below eye level
- Your monitor should be adjustable

Keyboard
- Your keyboard should be an adjustable work surface
- Padded wrist rests should be used to support wrists in a straight or "neutral" position

Seating
- Your chair height should be adjustable, with padded arm rests and good lower back support
- Elbow, hip, and knee joints should be as close to 90° as possible

Breaks
- Take regular breaks from your computer, such as 2-3 minutes each half hour and 10-15 minutes every 2 hours
- Look out a window or at an object at least 20 feet away to relax your eyes
- Do simple stretching exercises to relax the whole body

Reprinted from Harvard Community Health Plan Foundation and The Computer Museum

Inside

Many Ways to Stay Competitive

by George Hess RPh

It was 1977 when we installed our first computer system — one of those on-line systems that connected to some distant computer in another city. We were happy to be part of the first stages of pharmacy computerization. Those systems were a good way to get a feel for how effective computers could be in the prescription department. Convinced that computers were important to our business strategy; we purchased a stand-alone system in 1981. We were one of the first stores in our market area to change over to a stand-alone system. A few systems later, we now have a RISC-based system with unbelievable speed and functionality.

One of the benefits we realized, even with an on-line system, was having information we never had before. We use the prescription reports to keep an eye on inventory at the item-detail level. We still routinely check to see which prescription drugs are slowing down so we can cut back on reorder quantities. But we now can take advantage of a perpetual inventory module in our system as this ties into our electronic purchase-order system. Our computer sends an order to our wholesaler with a press of a key at the end of the day and within a half hour we have a list of "outs" returned. We no longer have to key-in orders during the day on a hand-held device, and we have taken the guesswork out of the quantity to order. Helping, of course, is that we watch the activity on drugs when a new generation of products hits the market. We don't want to be caught with an excessive inventory of drugs that are nearing the end of their life-cycle. We can see this when prescriptions

courtesy of Lackman Pharmacy

begin to tail off. We try to get these products out of the store as quickly as possible.

Defensive Measures

Pharmacies have to look for ways to reduce cost and improve efficiency since third-party programs pretty much have taken control over what we can charge for prescriptions. And the chains have become increasingly aggressive in their efforts to improve market share at the independent's expense. In our market area we have our fair share of chain competition — seven chains within a 14-mile radius of my store, three within three miles. So we are always looking for ways to sharpen our efficiency and improve our customer service. I made it a point to listen to what other pharmacy owners have done — what they have found works and what doesn't. I came up an idea to improve service by installing an electric door. A lot of our customers are senior citizens, and I did this with them in mind. I am pleased to say they love it, and the addition to my electric and heating bill is hardly noticeable. I certainly would not be without this store feature.

Continued on page 4

Technology Watch

Bar coding – save time and reduce errors

Why are bar codes so popular? In addition to the time-saving aspects (scanning a bar code versus reading and re-entering alphanumeric data), consider this statistic from the U.S. Department of Defense: the error rate in recording data through bar coding is 1 in 3,000,000 compared to 1 in 300 for normal data entries. Add to this the data from published reports showing that 1 in 250 prescriptions filled at drugstores and other retail outlets contains an error (an estimated 4,500 errors/day in Canada and 46,000 errors/day in the U.S.) and you begin to see that adding bar code scanning to the dispensary can address some very serious issues that arise at each stage of the process.

Doctor's office

One of the most error-prone components of filling a prescription is deciphering the doctor's handwritten prescription. In the U.S., many pharmacies are beginning to use computerized transmission prescription systems (CTPS). These are networks that link physicians and pharmacists for the electronic transmission of new and refill prescriptions.

Until CTPS are available in Canada, we need to explore alternatives to the traditional doctor's scribble. Much press has been given over the years to the use of smart cards, yet these are still in early development. Here's a short-term alternative: If the physician enters the prescription (including product, strength, and dosage information) into a computer, the resulting hard copy can contain this information in a printed bar code.

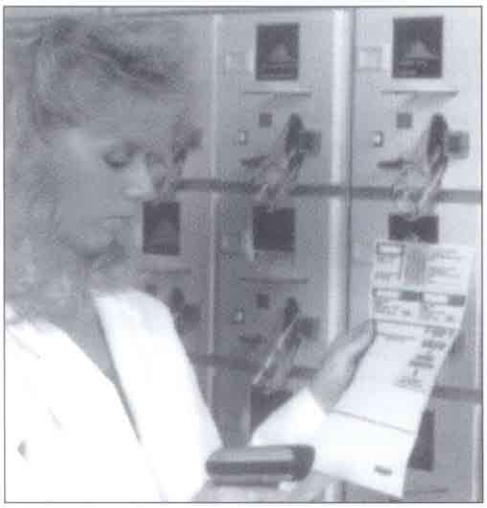
Data entry

When a patient hands the bar-coded prescription to the pharmacist, one of the most time-consuming tasks in the dispensary, data entry, can be replaced by a simple bar-code scan. In addition to the obvious time-saving benefits to both physician and pharmacist, electronic prescriptions eliminate the task of deciphering written prescriptions. This means fewer callbacks for verification and fewer chances of making an error.

After scanning the bar code, the pharmacy management system prints the appropriate label set, complete with bar codes. This is passed to the filling station(s) along with a hard copy of the prescription. Besides vial and bag labels, the label set might include auxiliary warning labels, receipts, and the pharmaceutical product's DIN number represented as a bar code.

Filling

To fill the prescription, the technician need only scan the bar code on the label set. Instead of the technician searching for the product, software (already available) directs



the technician to the location of the medication, whether pre-counted by automated dispensing systems or positioned on static shelves and arranged by usage. Product counted through automation will be accurately dispensed. But what about product picked off the static shelves? Software called Rx Check uses the same label-set and stock-bottle UPC bar codes that dispensary-mapping software does, which helps to eliminate wrong-product and right-product/wrong-strength errors. The bar code on your label set contains the DIN number of the product to dispense. The UPC is a number unique not only to the product and strength but also to "pack size" (whether the bottle holds 30, 100, 500 drugs). The technician scans both the label set and the stock bottle, and Rx Check looks for a match. If the correct product and strength information is scanned on both occasions, the system allows the technician to continue. If either the product or the strength is incorrect, the system does not allow the count to proceed.

Checking

If a dispensing error gets past the first two stages (data entry and filling), bar-code scanning and available technology can help to pick up the error when checking. As the pharmacist scans the prescription's bar code, a computer monitor displays an enlarged color photograph of the actual medication and the image of the doctor's written prescription (for all prescriptions, including refills).

Will-call

So the prescription has been filled accurately and verified, but the patient has already left the store and is returning later to pick up the prescription. In most pharmacies, the filled prescription would be put on shelves or in drawers at the cash counter, filed in alphabetic order. But how often do patients enter your store, announce their names, and watch as you search through piles of bags looking in vain for theirs?

New bar code-driven technology presented at The American Society of Health Care Professionals December 1998 conference can solve that problem. The Automated Will-Call system (AWC) manages put-away and retrieval of completed or partially-filled orders on either a static shelf unit or a vertical carousel with "put/pick-to-lights" ("Pick-to-lights" means that the equipment or shelving has small lights at each possible storage location. When the bar code is scanned, the correct light illuminates to show the employee where to retrieve [or restock] the item). In addition to managing the regular orders, Automated Will-Call can handle bulk, refrigerated, and controlled substances. The system identifies and controls the purging of aged prescriptions to assist in-store restocking and reverse-distribution credits. It also has the capability to notify patients when their orders are available

Continued on page 4

Profile

Bergeron & Vincent

Familiprix

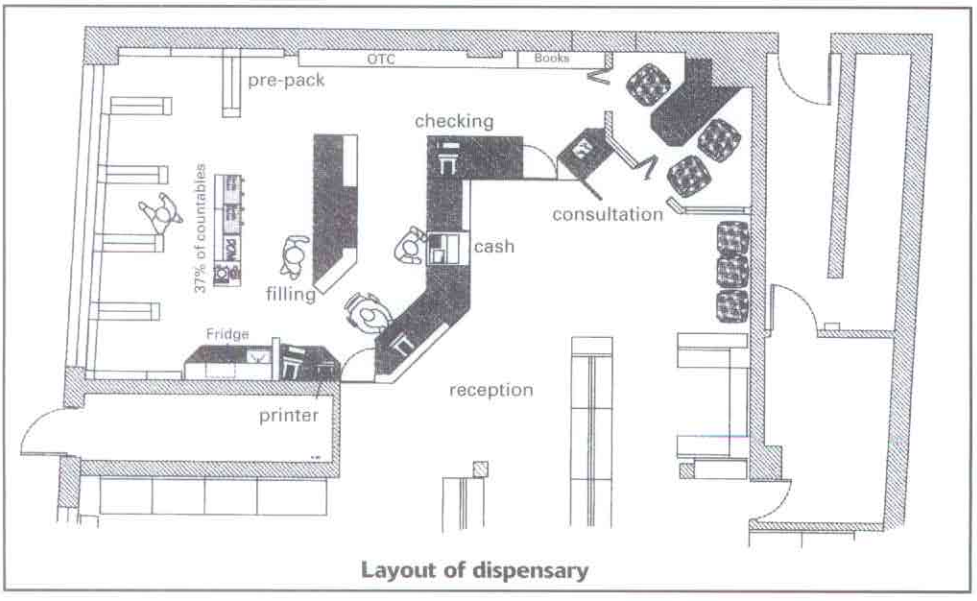
Shawinigan, Québec

According to André Vincent, pharmacist and co-owner of Familiprix Shawinigan, "Improving customer service, building store loyalty and reducing congestion in aisles were the main motivations in our recent store renovation."

"We had an outdated elevated dispensary which isolated us from our customers. We wanted to have more eye-to-eye contact. Before beginning the renovation process, we consulted our customers and they told us that they wanted to have more access to the pharmacy staff and less obstacles in the aisles." To eliminate the congestion in the aisles and improve the traffic flow, Vincent needed to expand his whole pharmacy. By acquiring the store next door, he added an additional 2,800 square feet to his pharmacy.

"We moved our dispensary from its old location along the long wall to the back of the store. In doing this we achieved two things; we minimized the walk-through to the dispensary, making it easier on our customers. Secondly, we were able to redesign our shelving placement. Now we have four large shelving units compared to the eight previous. And we even display more products with the new configuration."

One of the first changes Vincent made to the dispensary was to separate the customer area from the filling area. A recommendation that came from Vincent's design consultants, AutoPharm. In this way the pharmacist would not be distracted by the counting operation, freeing his or her time for customer service and staff supervision. Behind the reception area, Vincent placed his filling area. This placement gave the technicians easy access to the shelves for manual filling and to the Baker Cells and Universal 2000 for automated filling.



Layout of dispensary

"Prior to installing our automated dispensing system the BakerAPS support staff did a very careful analysis of our higher-volume and more-frequently dispensed drugs. From this analysis we determined which mix of drugs should be included in our Baker Cells. This combination of automation and redesign has significantly improved the efficiency of our technicians."

Customers now come to a separate reception area where a technician enters the script into the computer. The script is delivered to another technician, where it is filled either manually or with the automated dispensing system. The script is then given back to the pharmacist for verification. With a separate computer, the pharmacist reviews the patient files and checks for potential problems.

The pharmacist then has three different patient counselling options: open, semi-private, or private. For more routine prescriptions or refills, the pharmacist generally uses the open area next to the cash. For more involved discussions, the pharmacist moves to an adjacent semi-private area that has two half walls. For total privacy, Vincent has installed a completely enclosed patient counselling room. "Our customers have expressed total satisfaction with these three counselling options."

"Before starting this project, I read extensively about trends in pharmacy design. I also consulted with a professional design firm. Also, because our pharmacy is part of a co-operative, there are specific design criteria which we observed."

"I wanted to create a softer, more relaxed environment. Our old pharmacy was painted white, like a hospital. Now our walls are soft yellow and we added the touch of real wood to our furnishings in the dispensary area. Changing to full-spectrum fluorescent lights gave the store a softer, more natural, lighting effect."

"From the staff and the customer's perspective, the changes in our store have been very well received. After a brief period of adjustment, our staff feels that they do less walking, have more time to interact with the customers, and are less stressed at the end of the day. We consider our renovation project to be a real success."

Many ways to Stay Competitive — Continued from page 1

Then two years ago, I attended a computer vendor's conference. There I was able to take a close look at laser printers. The advantages in my mind were immediately evident. I was looking at a label that was easy-to-read with its crisp letters, and these printers could produce patient-education materials that were professionally presented and also easy-to-read. So I spent the money for the laser printer and I am glad I did. The drug-education information that I now provide has really cut down on phone inquiries after patients get home. Also, the cost of labels and printer supplies has dropped dramatically since laser printers were introduced. As a bonus, laser printers are quiet — a benefit my staff appreciates.

I also invested in automation to gain better control over the expensive drugs we dispense. We are using a 23-cell automated counting and dispensing system for the most expensive, best-selling drugs that are normally dispensed in large quantities. Not only is this a great time-saver when the pharmacist is working alone, but there is another benefit. It's hard to put a price on that expensive prescription where we may have manuallly dispensed one or two more tablets than we should. There is no real way to quantify the savings here, but we all know it's happening. Next will be an interactive voice-response (IVR) system to allow our patients to call in their refills without needing to get a pharmacist on the phone. Chains are adapting this technology and I know why. The time we spend on the phone taking routine refill requests can be substantial. I figure if we get half our customers to phone in their refills through the IVR system it will be another successful time-saver. It's scheduled for this year.

Another recently added service is FlavoRx, and it's beginning to catch on. FlavoRx works best when there is a large population of young families in the market area. We will be promoting the choice of medicine flavors through the use of coupons distributed through pediatricians.

Prepare for Service

We are very customer-focused in everything we do. The time savings gained from the way we employ technology gives us more customer time, which I feel is important to maintain store loyalty. I even carry this personal signature to our advertising. I use cable TV to get our message out and found it to be very cost-effective. I write my own ads, take them to an editing studio where they are produced on screen while I personally do the voice-over. The cost runs about $250. I found that using fixed spots is more productive than the less expensive random ones. I also decided to replace our old sign out front with one that has three lines of removable letters. This is a great way of reminding the public of what they can find inside the store. I will be using the sign for various promotions, such as sales on vitamins, and plan to use it for event marketing.

There are a number of avenues through which independents with a little creative thinking and the effective use of technology can ensure a successful pharmacy practice. We have been in business for 27 years and I have seen a number of changes that have caused pharmacies to close their doors or sell out to the chains. I see the challenges as opportunities.

George Hess, RPh is the owner of Hess Pharmacy in Bridgeton, NJ. The pharmacy system installed is from PDX Inc. The laser printer is from LexMark. The dispensing system and IVR are both from Baker APS.

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The Efficient Pharmacy

Trends in Dispensary Innovation & Automation

The Efficient Pharmacy is a quarterly newsletter that addresses the informational needs of community pharmacists as they adjust to a changing pharmaceutical environment. The publication will provide pharmacists with timely practical information on how to reprofessionalize their pharmacy by improving work flow, adopting new technology and developing the ergonomic design of the dispensary and its components. *The Efficient Pharmacy* is distributed free of charge to pharmacists in Canada and is funded by an educational grant from AutoPharm.

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Bar coding to save time... — Continued from page 2

as well as to remind them at pharmacy-specified times.

Summary

Let's review how bar codes can help in managing the prescription department of the average pharmacy:

Data entry

The prescription is scanned into the computer using a bar code generated at the physician's office.

Filling

The technician is directed to the precise location of the product upon scanning the bar code. A second bar-code scan confirms that the correct product was picked.

Checking

After scanning a bar code, the pharmacist verifies the product by referring to an on-screen photograph. The original hard copy of the prescription is also displayed on-screen, even for refills.

Will-call

The finished prescription is placed in a bar code-designated spot in will-call, and it is retrieved for the patient using the same scanning procedure.

In each of these steps the pharmacy saved time and had a substantially reduced possibility of error

In the next issue of The Efficient Pharmacy, *we will continue our exploration of the use of bar codes with an examination of the use of Point-of-Sale systems to catch OTC - Rx drug interactions.*

For more information on the concept of storing your products by usage, please see Carole Beaudet's article "Mapping products efficiently in a dispensary" in Vol. 1, No. 4.