

Pharmacy

The Efficient

Trends in Dispensary Innovation & Automation

Vol. 4, No. 1

Missing Back Issues of the Efficient Pharmacy?

This issue marks our third anniversary of *The Efficient Pharmacy*. Over the years we have received not only numerous requests for subscriptions, but for copies of back issues as well. Back issues are available to our readers either in print format or electronically (pdf via e-mail). There is a nominal fee - \$5 each or \$48 for all 12. Or electronically - \$3 each or \$29 for all 12. Payment by cheque or Visa to APS Canada, 1450 Hymus Blvd., Suite 2, Dorval, Quebec H9P 1J6. 800-361-6241

Just in case you have forgotten which issue or issues you would like, here is a summary of the past 12.

Vol. 1 No. 1 :

Better Use of Technicians

by K.K. Janke, Ph.D.

Describes how to make more efficient use of pharmacy technicians.

Pharmacy Software for the Future

by Dr. Jeff Poston, CPhA

New features in pharmacy software are seen as key to the future.

Profile:

Mark Scanlon, *The Clinic Pharmacy*, Peterborough, Ontario

Bar Codes and the Dispensary

by Eydie Brussel

Outlines the benefits of bar code technology for pharmacists.

The History of Canadian Pharmacy: Douglas Schoening

He modernized dispensary operations and improved front-end merchandizing.

Vol 1. No. 2

An Innovative Community Pharmacy Design

by Alex C. Lin, Ph.D. and Jose Arantes, Ph.D.

The evolving role of the pharmacist calls for innovation in dispensary design.

Maximizing Your Technician Resource

by K.K. Janke, Ph.D.

Defining responsibilities; technician training; and optimizing technician efficiency.

Continued on page 4

Improving Efficiencies and Reducing Medication Errors: Part 4

by Wayne M. Caverly

We all make mistakes. Indeed, it would be impossible to go through a day without making some errors. And errors that occur in your dispensary are no different from the errors that occur in all of our lives: for instance, we have all missed an exit while driving because we were on "auto-pilot," or read something incorrectly because we expected to see a certain word or phrase. The difference in your dispensary is not that errors occur, nor what causes them, but the potential severity of the results.

Dispensary error (sometimes called pharmacy error or pharmacist error) is simply human error applied to a particular business. One of the factors that influences human error is our psychological well-being. Stress and fatigue result in enormous losses of productive time and an elevated risk of error. The recognition and alleviation of stress and fatigue can help you to reduce error rates as well as help you to retain and attract new employees (and patients), thus improving your business.

One way to reduce patient pressure and pharmacist stress is to provide a comfortable waiting area for your pa-

The traditional approach to identifying the cause of a dispensing error has been to blame the pharmacist who made the error. Often, however, the pharmacist who made the error is a victim of the system in which he or she must practice.

Aboud, RR. Errors in Pharmacy Practice. U.S. Pharmacist NABP CE article

tients. When is the last time you spent 30 minutes in your waiting area? The answer is probably never, but until you do, how will you truly know whether it's comfortable and inviting? Many pharmacies are adding children's play areas to the waiting area. It doesn't have to be large or fancy; a simple Nintendo

Continued on page 3

Inside

Pharmacy and the Internet: Part 1 2

Pharmacy and the Internet: Part 1

By Dawn Polley

When pharmacists think of how technology has affected their practices, the first thing to come to mind is the computer used to fill prescriptions. While pharmacy has embraced technology more than any other healthcare profession, the business of pharmacy hasn't kept up with other industries when it comes to using technology and the Internet. We can go on the Internet and do our banking, rebalance our stock portfolios, and order groceries, but we can't access any of our medical or prescription records. The patients we serve are beginning to wonder why they can't have the same level of connectivity with their healthcare providers that they have with other providers. The only question is how long will consumers tolerate their technology-challenged healthcare systems?

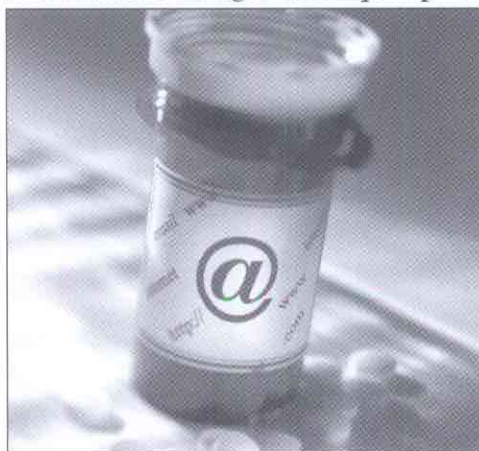
It's interesting to ponder how the Internet is going to further affect the practice of pharmacy and the way we conduct our affairs. To understand the impact of the Internet, we need to know who is using it, where we are, and where we are going.

Who uses the Internet: Home access is split between females and males, with the highest users in the 25-44 age bracket. When it comes to health and beauty shopping on the Web, women drive sales as they do in the brick-and-mortar world. The Internet health and beauty shopper is for the most part a Caucasian married woman between the ages of 35 and 54 with a household income between \$45K and \$100K. Stud-

ies predict that women will become the dominant cybershoppers by 2003.

How are people using the Internet? Currently, the number-one reason is education. Forty-three percent of users scan the Web for health information. Baby boomers are starting to reach the age where health and pharmaceutical use are increasing significantly. These consumers are demanding to be involved in their health care. They want to be educated on all health matters and are comfortable searching the Web for health information. They will demand change, much the same way they have throughout their lives.

The second reason people use the Internet is e-commerce. We are only 0.5% into the e-commerce evolution. In the next phase the Internet will broaden and deepen. Web-based consumer buying is estimated to shoot from US\$45-billion in 2000 to US\$600-billion in 2005. Only a handful of companies will survive. Companies will integrate the Net deep into industries in new ways that change those industries. Think of how all these changes will impact phar-



macy over the next five, ten, or even twenty years.

What is the current pharmacy presence on the Internet? Relentless change marked on-line pharmacy in 2000, with chain drugstores, pharmacy benefit managers, wholesalers, and independent operators each staking claims to a business that has largely failed to produce a profit. Many changes were brought about by the U.S. Internet Drug Sales Act 2000, to help clean up the industry. The Act requires pharmacists to be licensed in each state in which they operate or deliver prescription drugs. Internet sites can also display the VIPPS logo, which signifies that they are registered with the National Association of Boards of Pharmacy. Consumers are being advised to use only certified sites.

Most chains have developed a rich Web presence for purposes of loyalty and brand development. Almost all the on-line pharmacies offer fairly extensive health-condition and disease-state information or hot links, as well as Rx indications and interactions. The more interactive Web sites offer "ask the pharmacist" functions whereby a consumer can e-mail a question to a pharmacist and receive a response in 24-48 hours.

Many sites are scrambling to redefine their business models, given their persistence in losing money. One daunting roadblock, at least on the prescription side of the business, is the fact that there hasn't yet developed a critical mass of people wanting to fill their prescriptions via the Internet. So far, fewer than 5% of U.S. Internet shoppers have bought a prescription on-line. But that will grow: a leading research firm predicts that U.S. on-line pharmacy revenues will rise from \$33-million in 1999 to \$4.4-billion by 2004. However, that will only account for 2.5% of the ex-

pected \$175-billion market in the U.S. To win, the “click-and-mortar” operators will have to continuously maintain their customer relationships on the Web. When a patient logs onto a site, for instance, a picture of the local pharmacist could pop up. When people pick up prescriptions at the store, they could be offered a Web address for further information — the allergy database, for example. This will allow customers to get a unified experience.

In Canada, the presence of pharmacy on the Internet is almost non-existent. It is currently illegal for prescription drugs to be obtained in Canada through the Net, although this could change within the year. Most chains in Canada have a Web presence, and some offer the ability to order refill prescriptions on the Internet. Some also allow for e-commerce for OTC products and HABA merchandise.

Future trends: Within the next two years, the Internet will undergo a revolutionary change. The next major shift will be to wireless access. Besides mobile wireless commerce, future trends include voice-controlled wireless and television commerce. “Location-based commerce” already exists in Europe; for example, if you live in Finland, you can phone a number to a soft-drink machine using a cell number, and the cost is added to your bill while the soft drink is dispensed. Probably the single most significant change will be the development of voice portals that allow people using wireless connections to navigate the Web by voice commands and even to have e-mail messages read to them. By 2005, all new cars will be Web-enabled.

In the next issue of *The Efficient Pharmacy*, Ms. Polley will discuss e-prescriptions and the tremendous opportunities the technology presents to pharmacists in the future.

Improving Efficiencies and Reducing Medication Errors – Continued

system and some coloring books will occupy most children for the time required.

And while I wrote “a comfortable waiting area” above, what I’d like you to consider is comfortable waiting areas. As your clients age and become less mobile, they will thank you — with their continued patronage — if you provide small waiting areas throughout the pharmacy.

An accident is often the end result of a chain of events set in motion by a faulty system design that either induces errors or makes them difficult to detect.

Leape LL, Bates DW, et al. Systems analysis of adverse drug events. JAMA 1995; 274(1):35.

The design within your dispensary is also crucially important to relieving stress. Poor arrangement of workflow disrupts the pharmacy staff, resulting in distractions that can lead to errors. Some of the signs of poor workflow include employees bumping into each other or having to excuse themselves to pass; insufficient counter space; and overflowing shelves. These all result from design flaws that will cause decreased productivity, inefficient movements, and an increased risk of mistakes.

Many of the issues that affect productivity, efficiency, and accuracy come back to the design of the pharmacy. Pharmacy design should not concern itself only with the physical layout of walls, fixtures, and cabinets. Even inadequate lighting and high degrees of ambient noise can reduce productivity and contribute to errors. Other factors that lead to errors include ventilation, tem-

perature, and humidity, and studies have shown that the colours, sounds, and other esthetics of our surroundings also affect the way we feel and perform.

In order to address these issues you need a competent pharmacy designer, someone with the tools and knowledge to first measure and then recommend corrections to environmental issues that affect productivity, efficiency, and dispensary error rates.

All the items discussed in this four-part series, both in automation and design, seek to improve the system in which you and your staff must work. Proper facility design and a prudent use of technology can improve your staff’s efficiency and productivity. It can make your pharmacy a pleasant, stress-free place in which to work. And, most important of all, it can help you to ensure that your staff are never blamed for an error caused more by their environment than their own failures.

For additional information on the esthetics of an efficient pharmacy, see *Pharmacy Post* (pharmacyconnects.com) and my articles from January 2000 (*See Pharmacy Design in the Right Light*); June 2000 (*Room for Colour in Pharmacy*); September 2000 (*Create a Hospitable Indoor Climate*); January 2001 (*Relief for Tired, Stressed Staff*); and May 2001 (*Whistle While you Work*).



Missing Back Issues – Continued

Pharmacy Software

by Dana Welin, RPh.

Software for the more mechanical tasks of prescription filling.

Profile:

Dwight Johnson, People's Drugstore, Armstrong, B.C.

Innovations in Pharmaceutical Care: John Webster Sr.

Innovative medication delivery in long-term-care facilities.

Vol. 1. No. 3.

Modifying delivery systems when implementing pharmaceutical care

by Rosemin Kassam, Pharm.D et al

A research project evaluating pharmacy practice for ambulatory seniors.

Looking Back: Kerney Hurst

He devoted his life to his one great idea-automating pill counting.

Pharmacy Design: A Textbook Case

by Charles Cobden

A typical textbook layout of a dispensary is modified to improve efficiency.

The Efficient Pharmacist: A Student Perspective

by Anjali Acharya

How will students keep up with new and pioneering technologies?

Vol. 1 No. 4

Does your work get in your way - or is it time?

by Bev Allen BSP

In pharmacy practice, time management is crucial.

Mapping products efficiently in a dispensary

by Carole Beaudet, BA

A dispensary's products' are re-mapped by frequency of use.

Innovation in Pharmacy Practice: Jean Paul Desjardins

Where others see obstacles, pharmacist Desjardins sees opportunities.

Profile:

Barry Lackman, Lackman's Pharmacy, Montreal, Quebec

Vol.2 No.1

Pharmaceutical Care Software

by Dave Robertson, RPh

New dispensary software that will allow pharmacists to create new revenue opportunities.

Automation of Documentation

by Ray Arseneau RPh

Identify ways to streamline paper handling, documentation and patient follow-up.

Patient Counseling Areas: New Options Give Greater Flexibility

by Wayne M. Caverly

Designing patient counseling areas.

The Perception of Colour

by France Gendron

The impact colour can have on our workplace.

Profile

Calgary Co-op, Calgary, Alberta

Vol. 2 No.2

The cost of profit: Putting your money to work for you

by Doug Mallett.

When the time comes to acquire equipment should you lease or buy?

The Limits of Automation

by Wayne M. Caverly

Which tasks are appropriate for machines, and which ones for humans?

Profile:

Pharmacie Potvin & Garneau, Sherbrooke, Quebec

Vol. 2 No.3

Many Ways to Stay Competitive

by George Hess RPh

The effective use of technology ensures a successful practice.

Bar Coding to Save Time and Reduce Errors, Part 1

The benefits of bar code technology.

Profile:

Familiprix, Bergeron & Vincent, Shawinigan, Quebec

Vol. 2 No. 4

Pharmacy Technicians: A Personal Experience

by Ron Elliott, BScPhm, FASCP

Reduce overload and meet professional responsibilities with technicians.

Point of Sale is Perfect for the Pharmacy

by Terry Cook

A twenty-five year review of Point-of-sale software .

Bar Coding to Save Time and Reduce Errors: Part 2

Help to lower inventory costs and to refine the ordering process.

Profile

Hy and Zels Pharmacy, Thornhill, Ontario

Vol.3 No. 1

Cognitive Processes in Medication Errors

by Anthony F.Grasha, PhD; Michael O'Neill, RPh

What causes the mental mistakes that lead to dispensing errors?

Liquid Dispensers

Automated water dispensers save time and reduce errors.

Profile:

College of Pharmacy and Nutrition, University of Saskatchewan

Vol 3. No. 2

Improving Efficiencies and Reducing Medication Errors, Part 1

by Wayne M. Caverly

Improve output without increasing dispensing errors

Use lighting to set the mood for productivity and profits

Design elements have an impact on your staff and patients.

Profile:

CarePharma, Kemptville, Ontario

Vol. 3. No. 3

Improving Efficiencies and Reducing Medication Errors Part 2:

by Wayne M. Caverly

Proper product placement can reduce errors.

Robots for Retail

Robotic systems take the prescription from data entry to verification.

Profile:

Pharmasave #546, Middleton, Nova Scotia

Vol. 3 No. 4.

(Almost) Free Speech For Pharmacy

by Mark A. Underwood

Computer speech technology for pharmacy.

Improving Efficiencies and Reducing Medication Errors: Part 3

by Wayne M. Caverly

Prescription-checking software and automation for reconstitutions help reduce errors.

Profile:

Causey Pharmacy, Natchitoches, Louisiana

The Efficient Pharmacy

THE JOURNAL OF PHARMACY PRACTICE & RESEARCH

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.

The opinions expressed in *The Efficient Pharmacy* are those of the contributors and do not necessarily reflect the views of AutoPharm.

The editorial staff and AutoPharm welcome opinions as well as subscription requests from our readers. Please direct your correspondence to:

Saxe Communications
Tel. (802) 872-7559 Fax. (802) 872-7558
Internet: info@saxecomcommunications.com

Editorial Board

Bev Allen BSP
University of Saskatchewan

Wayne Caverly
The Efficient Pharmacy Institute
Dwight Johnson BSP

© 2001 All rights reserved