



Automation timesavers

Our population is aging. Statistics Canada's most recent studies show that 22% of Canadians are 55 years or older — the projection is for this to increase to 33% within the next 20 years.¹ Aging of the very people who account for approximately 40% of Canada's prescriptions has led to two conflicting problems: 1) prescription volumes are growing everywhere, and 2) the shortage of pharmacists, currently pegged at 10%,² is worsening (causing some pharmacies to close their doors).

The inevitable result: pharmacists are being forced to fill more prescriptions in less time. How can we improve our pharmacies' (and pharmacists') output, their productivity and efficiency, without the increased workload leading to an increase in dispensing errors and diminished patient safety? One of the answers can be found in the growing popularity of pharmacy automation.

Automation performs repetitive processes, frees people from routine tasks and has advanced tremendously since the late 1960's when a few counter-top systems were introduced. At first only affordable in the highest volume stores, we now see automation of all levels of complex-

ity at a price any pharmacy can afford.

While pharmacy automation systems differ in complexity, they all decrease dispensing errors and reduce the time it takes to fill prescriptions. This can result in many corollary benefits, including lower dispensing costs, more free time for pharmacy staff, decreased waiting times and more time for patient counseling (which increases patient adherence, satisfaction and loyalty), and increased revenue due to higher efficiency.

Because one of the basic benefits of automation is error reduction, the first levels recommended to pharmacists are systems that impact the maximum number of prescriptions. The three basic systems are:

1. A bar code driven universal (or counter-top) counting machine combined with an electronic balance. This unit can be used to count all oral-solid medications quickly, accurately and without cross-contamination as well as for fast, accurate compounding
2. A bar code-driven electronic water dispensing system for antibiotic products
3. A telephone refill management system to answer all incoming phone calls (processing routine requests, including refills) while automating and managing much of the patient-pharmacist-physician communication.

With these three systems in place every prescription — new and refill — is affected by automation and the benefits of bar coding.³ These sys-

tems are affordable to pharmacies filling fairly low volumes (less than 100 prescriptions a day) given an ROI (return on investment) of less than 24 months. Additional automation systems may be added to higher-volume dispensaries, or as prescription volumes grow. These include:

- Semi-automated counting systems sometimes referred to as cassette or canister systems. These systems increase the amount of time saved per prescription handled, but they only affect a limited number of (high-volume) products — the number placed in cassettes.
- Full automation or cell systems: these further improve timesaving but are also limited to the pharmacy's highest-volume products.
- Robotics, which saves the most time, but is reserved for very high-volume dispensaries.
- Workflow software, which manages the flow of prescriptions through the filling and verification process and efficiently operates the counting technologies mentioned above.

If and when these products are cost-justified depends on many factors unique to your practice. A competent pharmacy consulting firm will have the tools available to assist you in evaluating your needs to determine the best fit.

To ascertain which, if any, system suits your practice: 1) obtain a print-out of your most-dispensed (100-200) products sorted by number of prescriptions and showing total

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volume dispensed; 2) determine the minimum, maximum and peak hourly prescription volumes; minimum and maximum staffing levels plus wages and benefits; pharmacist involvement in dispensing (percentage of active counting, oral antibiotic preparation and phone calls handled); 3) consult with one or more experienced companies who can help you analyze how automa-

tion will affect your practice and impact patient safety. Review all proposals and ROI projections carefully, looking for hidden assumptions that may not apply to your practice.

REFERENCES

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2006, 2011, 2016, 2021 and 2026 available at <http://www.statcan.ca/english/Pgdb/People/Population/demo23c.htm> (Accessed 26 Jul 2002)

2. CACDS media release 11/28/01, "Canada Short Over 2,000 Pharmacists," available at <http://www.cacds.com/en/PDF/Pharmacist Shortage-Ipsosrelease.PDF> (Accessed 1Aug 2002)
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accuracy.

- How complete is the information? Look for a balanced presentation that is suitable for the audience and purpose. Be alert for obvious omissions or one-sided views. However, bias and conflict of interest can be difficult to discern. You may have to check other sources to confirm completeness.
- What is the purpose of the information? Be on the lookout for promotional material that is intended to sell a product under the guise of education.

So, the next time you are handed a print-out from the Internet, welcome your patient's interest in learning more about his or her health, and their decision to discuss it with you. Use the opportunity to discuss the pros and cons of information from the Internet and encourage sys-

tematic, critical assessment of Internet information. As you gain experience with the Internet, you will discover that it is indeed an indispensable source of health information — for your patients and you.

Need More Information?

- There is a useful checklist for consumers on using health information on the Internet at the Canadian Health Network site: www.canadian-health-network.ca/html/help/checklist1.html (Last accessed July 8, 2002)
- An excellent policy paper entitled Criteria for Assessing the Quality of Health Information on the Internet has been developed: hitiweb.mitretek.org/hswg/docs/policy.html (Last accessed July 8, 2002)

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doctors, just someone to explain their disease condition and medications. To pay out of their own pockets, they obviously have a high level of trust and respect for the pharmacist's knowledge.

One memorable anecdote sums up my experience: A patient paid \$90 for a consult but was not reimbursed by the Ontario Drug Benefit program.

During a six-week follow up period, I discovered that her doctor had accepted my recommendations, her hot flashes had reduced in frequency and intensity, and her depression had improved, despite a death in the family. I asked her if the cost was worth it and she said, "Yes!" Consequently, I have been able to provide PC in a self sustaining manner that provides a new

revenue stream rather than a drain on pharmacy resources. More importantly, it has brought me extreme professional satisfaction to enhance my patient's quality of life. I encourage other pharmacists to do the same for their patients.

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