



The impact of electronic prescribing and the eDrug project on pharmacy practice in British Columbia

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THE PHARMA_{NET} MEDICATION MANAGEMENT INFORMATION SYSTEM IS recognized worldwide as a secure electronic network that connects community pharmacies in British Columbia to a central database, recording all prescriptions dispensed in the province. PharmaNet is now in the midst of a significant transformation that will affect the fundamental infrastructure of the health care system in BC. The eDrug Project is set to improve patient safety and medication management in BC by upgrading the current PharmaNet system. The project is part of the larger eHealth Project, a 10-year initiative that began in 2009, that will eventually connect pharmacists, physicians and other health care professionals by providing a secure, shared electronic health record (EHR) for each patient.¹ This article will outline the basic components of the eDrug Project, with special emphasis on electronic prescribing (ePrescribing), and describe the impact that these new technologies will have on the profession of pharmacy.

The new PharmaNet system, called PharmaNet-eRx, will add the following 3 main features: 1) more comprehensive patient medication history information with broader authorized access by health professionals; 2) ePrescribing; and 3) automation of the PharmaCare Special Authority process.¹ The most exciting aspect of the eDrug Project, in my opinion, is the movement towards ePrescribing and the use of electronic medical records (EMRs). Currently, only 23% of Canadian doctors use EMRs, compared to 98% in the Netherlands and 89% in the United Kingdom.² The first step in the ePrescribing process involves the physician entering prescriptions into the patient's EMR, followed by transmission of this information to PharmaNet-eRx.³ Within seconds, PharmaNet-eRx will check the prescription against the patient's medical record and return information on drug-drug interactions, drug-allergy interactions and other drug-related problems, such as contraindications.³ After the prescriber has reviewed the information, he or she will confirm the prescription, and the pharmacist can retrieve the prescription electronically from PharmaNet-eRx.³

Implementation of ePrescribing and the eDrug project will have many important influences on health care and the prac-

tice of pharmacy in BC. One of the most significant benefits of this technology is improved patient safety. With ePrescribing, illegible prescriptions will no longer be an issue, significantly reducing the number of dispensing errors and the need to contact prescribers to clarify prescriptions. Electronic prescriptions are much easier to interpret, as they use a standard form, and since the process is entirely online, faster delivery of care to the patient is possible. Patient safety will also be improved by the warning system built into PharmaNet-eRx, which checks possible interactions and drug-related problems specific to each patient. According to a study by the Canadian Institute for Health Information, 23,000 Canadians die each year in hospitals from adverse events, and many of these deaths result from missed drug interactions, inappropriate medications and deficits in the coordination of care.⁴ Currently, many physicians do not have complete lists of all the medications a patient is taking, and must contact the pharmacy if they wish to obtain this information. The PharmaNet-eRx system provides this information to the physician during the prescribing process, and thus potential problems can be identified right from the start, greatly reducing the risk that a patient will experience an adverse reaction.

I believe the eDrug initiative will also save time and enhance pharmacy practice efficiency. Many traditional pharmacy tasks, such as refill requests and authorizations, can be automated and streamlined using the online system. Physicians will be able to submit special authority requests electronically and obtain a response while the patient is still present. Shortening of special authority approval times means that patients can begin therapy sooner. Prescribers will also have access to the PharmaCare benefit status of drugs,¹ so they can select the drug with the least cost to the patient, minimizing affordability issues at the pharmacy and increasing patient adherence. With ePrescribing, prescriptions no longer need to be typed into the computer system by the pharmacist, saving time by eliminating routine tasks and allowing pharmacists to focus their efforts on providing pharmaceutical care to patients. Finally, with eHealth technology, the pharmacist can avoid asking the patient unnecessary questions,

as a comprehensive EHR is available for consultation.

eHealth information technology will have a profound effect on the way in which health care professionals communicate. I think the system has the potential to both improve and hinder collaborative medication management between physicians and pharmacists. On one hand, PharmaNet-eRx provides an additional tool for communication using a shared patient file. Both pharmacists and physicians have access to a lot of the same information and are well connected, and thus can collaborate and work towards providing “seamless care” for patients. On the other hand, the physician now has access to detailed medication history that was once reserved only for the pharmacist. Consequently, the physician may feel that he or she no longer needs to consult the pharmacist for medication history or drug advice, because the information can be obtained online. While this is possible, I think the vast majority of health care professionals understand the importance of collaborative work in maximizing therapeutic outcomes and providing efficient and effective health care to patients. Having access to all the information and tools that pharmacists use may actually improve the physician’s understanding of the pharmacist’s role and how collaboration can be useful.

Pharmacy is truly a profession of lifelong learning, not only in terms of new drugs and treatment options available, but also for the tools used in practice. I believe the implementation of

ePrescribing and the eDrug/eHealth projects in BC will help facilitate the shift toward a more patient-centred profession that is focused on maximizing therapeutic outcomes for patients. This technology will improve the significance and relevance of pharmacists’ interactions with prescribers and patients, helping to solidify their role as medication specialists. While the eDrug/eHealth project is a massive undertaking that requires time, money and acceptance, I believe that once it is established, it will have a positive impact on safety, efficiency, communication and collaboration in health care and the profession of pharmacy. ■

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