EPRESCRIBING: AN IMPORTANT PART OF MEDICATION SAFETY

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Abstract

ePrescribing is the next service tool that will enable pharmacists and providers the ability to manage a patient's current and historical medications. Allowing the provider to easily send an electronic prescription directly to the pharmacist will help eliminate errors in prescribing, reduce fraud and narcotic abuse, decrease the waiting time at the clinic and pharmacy, and focus on patient safety and continuity of care. Going to the doctor can sometimes be tough when your community does not have a permanent provider in the community. Time is taken to get an appointment, explain your medical history to a travelling locum, and then get a prescription. The patient then needs to go to the local or closest pharmacy and wait again for the prescription to be filled. A patient can wait for up to two hours for the whole process to be completed. There has to be a more efficient way to get the proper information, access and care the patient needs. Between 2009 and 2014, there were approximately 655 deaths reported from fentanyl overdoses in Canada. With ePrescribing, the patient will never touch the prescription, hence minimising the risk of multiple prescriptions being filled. Instant messaging between the provider and pharmacist will save on fax and phone communication, and allow the right information to be communicated promptly to the right person. The instant communication between a provider and pharmacist can ensure that the drug being prescribed is not going to interact with other medications and ensure that the patient has not already filled the prescription. The pharmacist can also give details on the current course of medication, and inform the provider if the patient is covered by their current insurance. While a patient's healthcare record is changing from paper to an electronic format, we need to ensure we are providing the tools necessary to help healthcare providers attain the best healthcare for patients. Hence optimal use of ePrescribing will ultimately reduce medication error rates and other safety risks.

Keywords: medication, ePrescribing

Introduction

Medications play an important role in managing patient care. From treating sinus infections to managing chronic diseases, drugs are a significant part of the patient's health record. Having a complete medication profile available for the provider to assess before treating the patient can improve patient outcomes, and help prevent unnecessary medical costs. Two out of every three visits to the doctor end with a prescription being written.[1] Prescribed medications are given to the patient on a piece of paper that needs to be taken to the local pharmacy. There the patient will need to wait for the completed medications, on top of their wait at the doctor's office. Wait times can increase if the prescription is illegible, they are on another medication that will cause an interaction, or they do not have drug coverage for that prescription. In any of these situations, the pharmacist will need to make a call to the doctor, wait for a response by either follow-up phone call or a new faxed prescription. Scenarios like these are why there is so much time lost waiting. As well as, prolonged exposure to the public while waiting for completed prescriptions can put others at risk of illness. Between hospitals and physicians, drugs have been amongst the top three categories of health spending in Canada,[2] which relies on a note passing system between doctor-patient-pharmacist to manage the action.

ePrescribing is the next service tool that will help eliminate the paper process, as the world around us is advancing in electronics. It is defined by Health Canada "as a means of streamlining the prescription process by enabling prescriptions to be created, signed and transmitted electronically."[3] The Canadian Institute

for Health Information (CIHI) noted that "approximately 700 deaths in Canada were caused by preventable drug
errors each year."[4] Having more providers prescribing online would potentially help prevent those deaths associated with medication interactions. Extending technology to the provider-pharmacist relationship supports the continuum of care from the initial physician visit to managing all interactions with health providers. Providers and pharmacists need to be able to communicate and share the information to achieve continuity of care for the patient. By eliminating paper and proceeding with ePrescribing, providers will have the tools they need to reduce medication errors; in addition, pharmacists will not receive illegible prescriptions. The technology exists; providers and pharmacists just need to start using the available programmes.

ePrescribing will allow the pharmacist and provider a safer and more efficient means of communication. It will support the clarification needed to help fill a prescription. Not only is ePrescribing aiming to reduce fax and phone activities, it supports a safer and more efficient dispensing and monitoring programme. The National Council for Prescription Drug Programs (NCPDP) defines ePrescribing as, "the ability of a physician to submit a 'clean' prescription directly to a pharmacy from the point of care."[5] Allowing the provider to write a prescription at the point of care will help eliminate errors made from re-transcriptions. By providing alerts about patient's drug coverage, interactions of other medications, and relevant dosing and drug information, the provider can more effectively prescribe a medication. Kaushal et al. found that error rates decreased from 42.5 per 100 prescriptions to 6.6 per 100 prescriptions, nearly a seventh of the previous level, in just one year after the adoption of ePrescribing in 12 community based practices.[6] This suggests that ePrescribing provides the right information and accessibility to improve medication safety.

In order to adopt such a wide spread initiative, all jurisdictions and collaborating stakeholders need to meet the same standard principles. Stakeholders are not just the providers and pharmacists using the system, but the patient themselves. By having standards available, the developers of such systems know what needs to be adopted and supported. Such principles are maintaining patient confidentiality,

verifying the authenticity of the prescription, and the authorising a prescription to one pharmacy.[7] These few principles really show the integrity, quality, and security ePrescribing requires. Along with having standard principles, legislation needs to reflect the acceptance of electronic prescriptions. In the Northwest Territories, Canada, Pharmacy Act (2006), states that, "a prescription must be in a written, verbal or faxed form…"[8] This legislation does not offer any direction for electronic prescriptions. Legislation in the Territories and across Canada needs to reflect the changes needed for nationwide adoption of a tool that will help optimise patient safety. In order to implement a programme, standards, legislation and stakeholders need a common standard and plan for adoption of electronic prescription.

By engaging and ensuring that patient information is still going to be safe, secure and that it gets to the right person at the right time is an essential characteristic. The providers and patients can be reassured that only what needs to be sent is sent, while the pharmacists are safeguarded to see only what they need to see. When the pharmacists get a prescription, they always look for a provider's signature to guarantee the authenticity. Maintaining this process is essential. When sending something electronically, there needs to be a way to identify the validity of where it came from, and certify that the provider has electronically signed off the prescription. Adding an electronic signature and routing the prescription to only one designated pharmacy will help reduce fraudulent prescriptions.

Recently Canada has had a serious growing opioid crisis. The abuse has seen increases in addictions, overdoses and deaths. Canada Health Infoway is committed to "reducing the harm and costs of opioid-related fraud and misuse with the launch of PrescribeIT(tm)."[9] If Canada can start implementing an integrated system with current and improving standards for Electronic Medical Records (EMR) and pharmacy management systems, ePrescribing will be the tool of the future. Having the two systems integrated will allow quick communication between provider and pharmacist, certify that prescriptions cannot be altered or forged, and promote building a medication management tool. By adopting such a development, Canada will start to see an improvement in continuity of care, reduction in waiting times and fraud, prevention of opioid overdose drug uses and

deaths, and improve patient safety.

A "National Physician survey in 2014 put the adoption of Electronic Medical Records at 79%",[10] which shows that a vast majority of Canada already has the building blocks to implement ePrescribing. Interoperability between Electronic Medical Records and a Pharmacy Management system will help create sustainable healthcare in Canada. ePrescribing is a tool that will allow providers and pharmacists the right information at the right time to achieve optimal health outcomes. By providing access to drug coverage, drug to drug interactions, and dosage information, the provider would have access to the most up to date medication information, which can be used in a clinical decision support system to help the provider prescribe and treat accordingly. Similarly, minimising the risk of multiple prescriptions being filled by not allowing the patient to handle the prescription will improve patient safety. Direct and instant communication between the provider and pharmacist will eliminate phone and fax activities. By eliminating paper, Canada can have a stronger medication management tool, see reduction in wait times, medication errors, abuse with narcotics, and ultimately have legible prescriptions all while improving patient safety and continuity of care.

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