Digital Health Drug Repository: Improving access to information for Geriatric Emergency Management Nurses

Evaluating benefits is an important component of the connecting South West Ontario (cSWO) Program that helps to support and demonstrate the realization of health system benefits through the adoption of an electronic health record (EHR). By pursuing the measurement of organizational value (improvements in the efficiency of care delivery such as time-savings and redirected resources) and clinical value (patients undergo fewer unnecessary tests, patients have improved access to care), patients ultimately benefit from higher quality, better informed clinical decision-making.

In the Fall of 2016, the Ministry of Health and Long-Term Care (MOHLTC) began an initiative to integrate the Digital Health Drug Repository (DHDR) into the cSWO Regional Clinical Viewer, ClinicalConnect™, to enhance the data and information available in the EHR. Three early adopter health service provider sites in Guelph were provided with access to drug information in this initial stage with a focus on testing the ability to share information currently available via a standalone drug profile viewer (DPV) with a more widely dispersed interface (the EHR). The data that is shared through the DHDR includes similar data elements to those that already exist in DPV, as well as expanded access to dispensed drug events, including Narcotics Monitoring System (NMS) data.

By pursuing the measurement of organizational value (easier access to patient drug information) and clinical value (better informed prescribing decisions and reduction in potential adverse drug events), patients ultimately benefit from higher quality, better informed clinical decision-making.

Value statement

Accessing the drug information now available through the DHDR enables Geriatric Emergency Management (GEM) nurses in the emergency department (ED) to reduce potential adverse drug events (ADEs).

GEM nurses improve care in the emergency department for seniors

It has been estimated that as many as 20 per cent of ED patients are people over the age of 65.[1] A combination of factors – including polypharmacy, cognitive changes, atypical presentations of acute illness, presenting with complex comorbid conditions, and social vulnerability – translates into seniors having longer wait times in the ED, increased likelihood of being admitted to hospital, and higher rates of recidivism.[1] Medication errors (including medications inadvertently stopped, started, and/or changed, as well as medication interactions) are also a potential source of harm to patients, particularly seniors who are more likely to be taking a variety of medications. One study found that 10.6 per cent of all ED visits among elderly patients was due to ADEs.[2] This study also found that 31 per cent of ED patients who were 65 years of age or older had at least one potentially harmful drug combination in their medication list.[2]

The role of the GEM nurse was developed in Ontario in 2004 in response to a need for expert clinical resources in EDs who could perform targeted geriatric assessments to at-risk seniors. Given the increased likelihood of ADEs amongst seniors, one of the most important tasks that the GEM nurses complete is a Best Possible Medication History (BPMH), as part of the medication reconciliation process.

Improving patient safety through Best Possible Medication History

Medication Reconciliation (MedRec) has been identified by Accreditation Canada as a means of reducing potential adverse drug events, and is a required organizational practice (ROP).[3] A BPMH involves a systematic review of all the medications a patient is taking and is an important component of the MedRec process. In order to improve the accuracy of the BPMH, Accreditation Canada and the Institute for Safe Medication Practices (ISMP) Canada recommend a second source of information, in addition to the patient/family interview.[4] This second source of information is often difficult to access for several reasons: patients often forget to bring medications with them, patients may present with cognitive difficulties,

language barriers, and information can be difficult to access from pharmacies, especially outside their working hours. Electronic drug databases, such as DHDR, can facilitate the medication reconciliation process by acting as the second, and reliable source of information for completion of a BPMH.

DHDR enabling a faster, more reliable BPMH process at ED discharge

GEM nurses at the Guelph General Hospital (GGH) have recently been provided with access to prescribed drug information – including narcotics – for all geriatric patients through the DHDR, which they have found to be a reliable source of information as they complete the BPMH process with older patients at time of discharge from the ED. In anticipation of an upcoming accreditation review at GGH, the DHDR has been incorporated into the workflows of GEM nurses to facilitate the BPMH process. Previously, GEM nurses would have accessed medication information through the drug profile viewer (DPV), which was outside of the EHR and therefore more time consuming to access. Through Contextual Launch, the DHDR is available in just a couple of clicks, saving the nurses time and effort. As well, the DHDR is perceived to have a more comprehensive listing of medications than the DPV, as nurses described instances in which medication information was missing from the DPV but present in the DHDR. In the process of conducting a BPMH, the GEM nurse asks the patient about all the medications they are currently taking. The medication information accessed through the DHDR is important for safe treatment planning and prescribing practices.

The GEM nurses described scenarios in which the DHDR was particularly helpful, by giving them a better understanding of patient medication use. For example, a recent patient forgot to tell the nurse that she was taking a narcotic for pain. The nurse was able to see the narcotic in the DHDR listing. In another scenario, a patient was prescribed Dilaudid (hydromorphone) by her family physician at a specified dose and told to increase the medication if pain was not being relieved. This patient increased the dose too fast, became confused and presented in the ED. Access to the DHDR enabled the GEM nurse to figure out what had happened and appropriate adjustments were made.

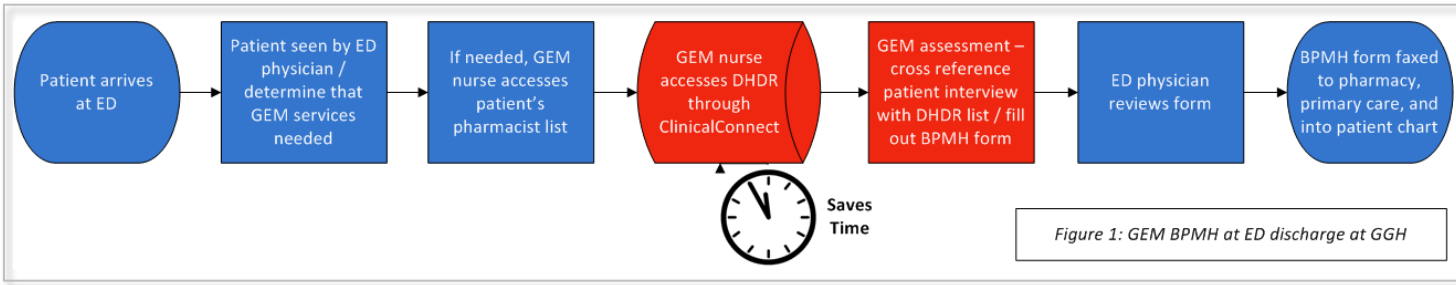

Figure 1: GEM BPMH at ED discharge at GGH

Testimonial

"Using DHDR provides a reliable source of medication information for our elderly patients. While doing our medication reconciliations, we are required to use at least two sources of data. The DHDR provides a clear and accurate list of the medications our patients are on. It is readily available through ClinicalConnect, which we use often to gather data on our patients. One of the great features of the DHDR is the ability to see if narcotics have been dispensed. Narcotics can be a high risk medication for this population of patients. The ability to collect an accurate medication history on our patients allows us to provide better care for them."

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Questions

For questions, comments, or to participate in cSWO's Benefits Realization program, please contact: Julia Bickford, BR Specialist, Change Management and Adoption Delivery Partner, eHealth Centre of Excellence: Julia.Bickford@eHealthCE.ca

Sources

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