CONNECTING SOUTH WEST ONTARIO

Benefits Realization: the Digital Health Drug Repository improves transitions of care

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

Access to the DHDR can enhance a clinician's ability to provide his or her patients with safe, high quality care.

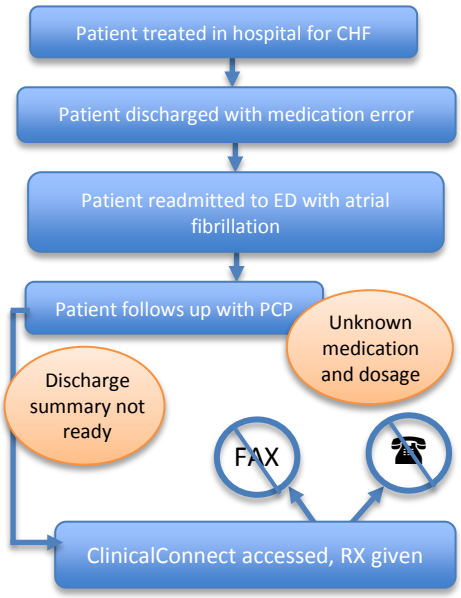
Dr. Dan Finnigan, a family physician at the Guelph Family Health Team (FHT), accesses pharmacy information using the cSWO Regional Clinical Viewer, ClinicalConnect. To help him mitigate adverse drug events (ADE) upon patient follow up after discharge from hospital, Dr. Finnegan can see drugs that were provided in hospital, and now using DHDR can see information about drugs dispensed in the community. The DHDR is also used to inform prescription management, which is valuable when treating new primary care patients as clinicians can gain deeper knowledge of the medication history.

Access to DHDR improves medication management during transitions of care

Poor communication during transitions of care between hospitals and primary care can negatively impact patient safety and quality of care. Failure to identify ADEs and medication discrepancies contribute to increased readmission rates.[1] Armor et al (2016) reported serious ADEs resulted in 2.2 million hospitalizations, and approximately 106,000 lost lives annually in the United States, with a cost of 85 billion dollars to the healthcare system.[1] In the context of Ontario, the total measured costs for ADE-related ED visits and subsequent hospitalizations in seniors was an estimated $13.6 million in 2007.[2] Patients who increase the number of medications they take are at a greater risk for ADEs; therefore, ADEs are more frequent among older patients. Approximately 10 per cent of hospital patients will experience ADEs after discharge, and one-third to one-half of these ADEs will be caused by human error or flawed procedures.[3] For example, one study found that information about medications was missing from hospital discharge summaries 40 per cent of the time.[4]

In a recent incident at the Guelph FHT, Dr. Finnigan was following up with one of his elderly female patients who was seen in the ED for a congestive heart failure (CHF) exacerbation and a new diagnosis of atrial fibrillation. The patient had been admitted for a short period of time and was started on a drug called diltiazem, which is used to control the heart rate of patients with atrial fibrillation. However, after discharge she was not given a continuation of her new medication due to a clerical error. She re-presented to the ED within 48 hours and was back in atrial fibrillation. She was given a dose of diltiazem and told to follow up with her family physician in the morning. When Dr. Finnigan saw her, she had

brought a family caregiver to the appointment and neither the patient nor the caregiver had any idea what medication or dosage she had been given in hospital. Knowing that he wouldn't receive the discharge summary for several days, Dr. Finnigan accessed ClinicalConnect and could instantly see her diltiazem dosing and up-titration to the effective dose. He safely wrote her a prescription for it and followed up in a few days, at which time she was still rate-controlled and no longer at risk of an ADE. The figure (right) outlines this event. In this and other reported cases, clinicians are reinvesting time into using ClinicalConnect because community dispensed drug information via DHDR and hospital information in the Pharmacy module offer a more robust source of information to inform decisions.



The DHDR informs primary care narcotic prescribing decisions for new patients

While some physicians have instituted a "no narcotics" policy, the College of Physicians and Surgeons of Ontario suggests that providing narcotics is part of good clinical care and refusing to prescribe these drugs may result in inadequate management of clinical problems, patients seeking treatment from other physicians, and leaving patients without appropriate treatment.[5] However, physicians may feel uncomfortable prescribing narcotics in the absence of an established physician-patient relationship. Access to a reliable, electronic source of narcotics information may help physicians prescribe responsibly and with more confidence that the prescription would not be misused. In British Columbia, it was recently mandated that all physicians refer to their existing digital narcotics database prior to prescribing.[6]

Dr. Finnigan recently described how he was able to access the DHDR to review narcotic medications for a new patient who was joining his practice. In this particular case, the patient had experienced difficulty finding a family doctor who was comfortable re-filling his existing narcotics prescriptions, leaving him feeling discredited and ostracized from the medical care community. During the meet-and-greet appointment with Dr. Finnigan, the patient discussed the narcotics that he used, the doses, who prescribed them, and when the last prescription was filled. Dr. Finnigan was able to independently confirm that this patient was being honest by cross-referencing their discussion with the narcotics data available in DHDR. Due to the fact that Dr. Finnigan was able to validate the patient's story through the DHDR, he felt assured that it was safe to continue the prescription.

Testimonial

"Currently, all dispensed narcotics are in DHDR, so I can feel comfortable that if the narcotic prescription does not appear, the patient likely is not actually on it. The DHDR helps me be a more responsible prescriber."
- Dr. Finnigan, Family Physician, Guelph FHT

Questions

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

Sources

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