CONNECTING SOUTH WEST ONTARIO

Analysis and Research: Reducing unnecessary patient transfers and improving continuity 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 electronic health records (EHRs). 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.

The cSWO Analysis and Research program uses a research-based approach to identify areas of clinical best practice that are affected by the use of EHRs, and works collaboratively with clinicians to understand the value of EHRs. This formative evaluation process informs change management and adoption, and enables clinicians to use EHRs more effectively. This research does not include the use of any personal health information.

This document is one in a series of case studies which describe the clinical value of EHRs in different clinical settings and contexts, particularly with respect to clinical best practices. The work of the cSWO Analysis and Research program is ongoing; depending on the circumstance, these cases occasionally raise questions for further investigation, and clinicians are invited to participate in analysis and research to continue to develop these answers.

Value statement

Access to the cSWO Regional Clinical Viewer, ClinicalConnect™, enables physicians to assess patients remotely, ultimately reducing unnecessary patient transfers and improving continuity of care.

Impact of patient hospital transfers

Every year, almost 400,000 patient transfers take place in Ontario.[1] Although the majority of patient transfers are for routine, non-life threatening circumstances, they continue to rely on fully equipped ambulances, diverting resources from more emergent requests.[1] Immediate access to a trauma center is not always available and patients often undergo an initial assessment at a non-trauma facility before transferring to a trauma center. Inter-facility transfers are done by emergency medical services (EMS) or helicopter emergency medical services (HEMS) depending on factors, including injury severity, geographic variation, and resource availability.[2] In 2010/11 there were over 16,000 HEMS patient transfers in Ontario.[3] The cost of HEMS is $8,000- $10,000 per hour, billed to the province if the patient meets requirements.[4] The cost of an ambulance ride to the patient is $45 with OHIP coverage, and $240 if the transfer is deemed medically unnecessary.[5] Patient transfers are costly in other ways as well; inter-hospital patient transfers increase the number of patient handovers, contributing to communication errors, the leading source of adverse events in both the health care and transport setting.[6] Removing the patient from their local support networks also adds to the emotional stress endured by families the patient, as well as the patient themself.[7]

One service facilitating patient transfers during emergency situations is CritiCall Ontario, a central switchboard coordinating discussions between physicians regarding the care plan of a patient. When a patient arrives at a smaller hospital that does not have the adequate resources needed to treat that patient, the attending physician may call CritiCall Ontario. A call agent will take the physician's information, as well as the condition of the patient, and will contact the appropriate specialists who possess the knowledge and resources needed to treat the patient. Once the referring physician and the available specialist are connected via CritiCall, they consult on the best care plan for the patient, and determine whether the patient needs to be transported.[8] CritiCall helps facilitate continuity of care for the patient, which is defined as "delivering seamless service through integration, coordination and sharing of information between providers."[9]

ClinicalConnect enabling decreased patient transfers and increased efficiency of care

Dr. Mark Crowther, hematologist and Chair of the Department of Medicine at McMaster University, credits ClinicalConnect with changing the way he practices medicine. Utilizing the desktop and mobile applications of ClinicalConnect helps him facilitate care for patients, particularly those who are outside of Hamilton, Ontario. ClinicalConnect has been an invaluable tool in terms of viewing patient results and consulting with fellow physicians within the patient's circle of care during the development of a patient care plan.

Dr. Crowther states that, "having reliable access to patient records is instrumental during clinics, and provides a level of redundancy that allows [us] to treat [our] patients". Figure 1 describes four true examples outlined by Dr. Crowther describing how patient care has improved as a result of utilizing ClinicalConnect. The ability to access patient history and test results through the clinical viewer has reduced unnecessary patient transfers for testing and treatment, as described in the first example. The ability to check lab results as they are uploaded live to the Ontario Laboratories Information System (OLIS) by community labs has increased the efficiency for providing care to patients, as described in the second example. Examples three and four describe how ClinicalConnect enables physicians to provide continuous care to patients, regardless of the patients' location.

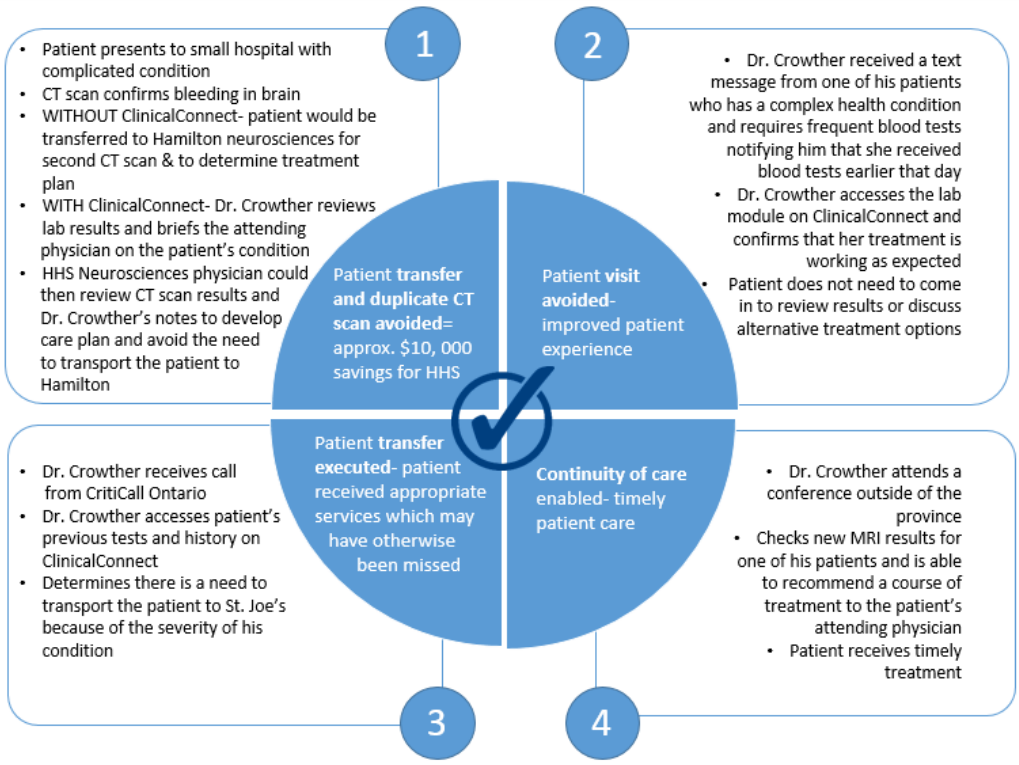

Figure 1: Examples of ClinicalConnect use in and out of the hospital

Testimonial

"Being able to review results in "real time" and from "remote" sources greatly facilitates patient care and reduces resource utilization. It would be difficult to go back to the "pre-ClinicalConnect" era."

Dr. Mark Crowther, Chair, Department of Medicine, McMaster University

Questions

Authored by Wanda Hemsworth, Benefits Realization Lead, and Beth Murray, Benefits Realization Analyst, cSWO Change Management and Adoption Delivery Partner, HITS eHealth Office at Hamilton Health Sciences. For questions, comments, or to participate in cSWO's Analysis and Research program, please contact: cSWOresearch@lhsc.on.ca.

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