Benefits Realization: Improving patient flow and care in emergency departments

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.

The cSWO Benefits Realization program uses a research-based approach to identify areas of clinical best practice that are affected by the use of the electronic health record (EHR), and works collaboratively with clinicians to understand the value of the EHR. This formative evaluation process informs change management and adoption, and enables clinicians to use the EHR 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 the EHR in different clinical settings and contexts, particularly with respect to clinical best practices. The work of the cSWO Benefits Realization program is ongoing; depending on the circumstance, these cases occasionally raise questions for further investigation, and clinicians are invited to participate in benefits evaluation to continue to develop these answers.

Value statement

Using the information found in the Regional Clinical Viewer, ClinicalConnect™, physicians in the Emergency Department (ED) can readily access patients’ comprehensive medical history at any time, leading to better disposition decisions, fewer duplicate assessments and hospital admissions, as well as more efficient patient flow through the ED.

Emergency Department care

Emergency Departments care for millions of Ontarians each year. Since 2009, yearly visits to Ontario’s EDs have increased by 13.4 per cent (Health Quality Ontario (HQO), 2016). Patients who go to Ontario’s EDs are also becoming sicker: Visits by patients with potentially life-threatening issues has increased by 44.1 per cent over the last seven years (HQO, 2016).

Not surprisingly, these growing demands have challenged EDs’ capacity for providing timely and efficient patient care. Although ED wait times have generally decreased in recent years, an average ED visit still takes up to 7.8 hours for 90 per cent of patients (HQO, 2016). ED wait times are affected by a number of factors, such as the severity of patients’ illness as well as the delay in accessing specialists and diagnostic services (particularly during evenings, weekends, and holidays; Auditor General of Ontario, 2010).

Long ED wait times are associated with numerous adverse outcomes, including increased risks of morbidity and mortality, prolonged length of stay in cases of hospital admittance, and poor patient care (Di Somma et al., 2015; Guttman et al., 2011). Thus, moving patients through EDs as quickly and efficiently as possible is a key priority for many hospitals. Indeed, a recent report by the Auditor General of Ontario suggests that “hospitals should identify causes of delays in patient flow and examine ways of reducing wait times in ED accordingly” (2010, p. 141).

Electronic Health Record systems in Emergency Departments

The challenges placed on EDs have led hospitals to search for – and adopt – innovative solutions to the delays associated with ED patient flow. ClinicalConnect is one such solution. This regional clinical viewer provides real-time access to information from all of the acute care hospitals across south west Ontario (SWO), all four SWO Community Care Access Centres, all regional cancer care programs, as well as laboratory and diagnostic repositories (i.e., OLIS, SWODIN). To illustrate the benefits of ClinicalConnect in the context of ED patient care, Dr. Lindsey Sutherland, an ED physician at the Chatham-Kent Health Alliance (CKHA) tracked her use of ClinicalConnect during 10 shifts in August/September 2016 (approximately 200 patients).
ClinicalConnect in Emergency Department care

Dr. Sutherland accessed ClinicalConnect in seven cases (four per cent of patients seen) where patients’ comprehensive medical history was unlikely to be available in the CKHA’s EMR; that is, for complex care patients (e.g., those with post-op complications after out-of-town surgeries, patients with cancer) and patients from out-of-town. Figure 1 (adapted from Auditor General of Ontario, 2010) illustrates the benefits associated with ClinicalConnect as patients progress through the ED.

ClinicalConnect provided significant clinical value in the care of six of the seven patients. Specifically, ClinicalConnect facilitated a better, more comprehensive understanding of patients’ health history in six instances. As a result of access to complete patient histories, additional tests and specialist consultations were avoided in the case of two patients, resulting in enhanced ED patient flow, better patient care (e.g., through the avoidance of additional radiation exposure from another CT scan), and cost savings for the assessments that were precluded. Further, information gathered in ClinicalConnect reduced disposition uncertainty by allowing for the comparison of past and present assessments, thereby enabling more precise, individualized care and better disposition decisions (two patients). Finally, by providing access to comprehensive patient histories, information gathered through ClinicalConnect reduced clinical ambiguity to the extent that three patients avoided being admitted or being transferred to another hospital.

In summary, ClinicalConnect adds significant clinical and organizational value benefiting patient flow and care in the ED by providing access to critical information that is timely and may not be available through any other means.

Testimonial

“ClinicalConnect is an important tool in the ED when dealing with our most complex and vulnerable patients. It allows us to fill gaps within a patient’s medical history by accessing consult and investigation reports from neighbouring communities. Within minutes, we can individualize the care-plan for patients, improving patient safety and resource utilization. In addition, I find patients and families comment on an improved ED experience because of their personalized care.”

Dr. Lindsey Sutherland, ED Physician, Chatham-Kent Health Alliance

For questions, comments, or to participate in cSWO’s Benefits Realization program, please contact: Christin Moeller, Benefits Realization Lead, Change Management and Adoption Delivery Partner, TransForm SSO: christin.moeller@transformsso.ca

Sources

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