

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 electronic health records (EHR) through the cSWO Regional Clinical Viewer, ClinicalConnect™, enables the community paramedicine team in Niagara region to obtain an accurate and complete patient history in order to better support their enrolled patients, which results in fewer Emergency Department (ED) visits and a reduction in hospital lengths of stay (LOS).

Community Paramedicine Programs contribute significant savings in health care spending

Traditionally, paramedics respond to emergency 911 calls, treat patients who are ill and injured, and transport the patients to emergency departments for additional acute care treatment. However, not all patients require transport to an emergency department. Many simply need basic assessment and referral to an appropriate community service. This is particularly evident with seniors, residents in rural and remote areas, and vulnerable members of the community.¹

By expanding the role of paramedics, and working collaboratively with other community agencies, paramedics can manage and subsequently refer the patient to the most appropriate health care service provider (such as the patient's family doctor, home and community care, family health team, and/or mental health and addiction services). At times, the Paramedic may simply have to assist the patient by contacting a family member or friend to attend their home to provide basic support or monitoring.¹

According to a study completed by the Emergency Medical Services Chiefs of Canada (EMSCC), Community Paramedicine programs within Canada have been found to contribute to significant savings in health care by reducing the volume of 911 calls, emergency department visits, hospitalizations, and the demand on long-term care beds, ultimately improving mortality and morbidity rate, and filling health care gaps.¹

Access to the EHR enables reduction in ED visits and hospital lengths of stay

Niagara Community Paramedics conduct home visits, work directly with primary care physicians to deliver advanced care in the patient's home, and provide referrals to community health care programs, including Home and Community Care, Urgent Service Access Team (USAT), and Niagara Region Seniors Outreach. The program targets high risk patients living with complex medical issues, such as Chronic Obstructive Pulmonary Disease (COPD), Chronic Heart Failure (CHF) and Diabetes, who have visited the emergency department at least five times in the previous year. The paramedic services provided include health teaching, managing of medication, pre-treatment bloodwork and treatment of exacerbations.²

The program coordinator is notified automatically by Niagara Health’s hospital information system when one of the registered patients attends ED, is admitted to hospital or is discharged from hospital, which allows them to follow up promptly to understand root cause of the visit and identify preventive strategies.

Between the launch of this program in April 2016 and the end of March 2018, 116 patients have been enrolled, with 1,156 home visits and 77 referrals to community services having been made. According to a recent patient satisfaction survey, 100 per cent of the patients surveyed were either very satisfied or satisfied with the program and all felt that the paramedic helped their overall health and well-being.

Based on tracking done by the program coordinator of patients for six months prior to enrollment until their exit from the program, there has been, overall, a 65 per cent reduction in ED visits and a 74 per cent reduction in hospital admission days. As can be seen in Figure 1, the number of ED visits and the total LOS days have decreased as the number of enrolled patients have increased.

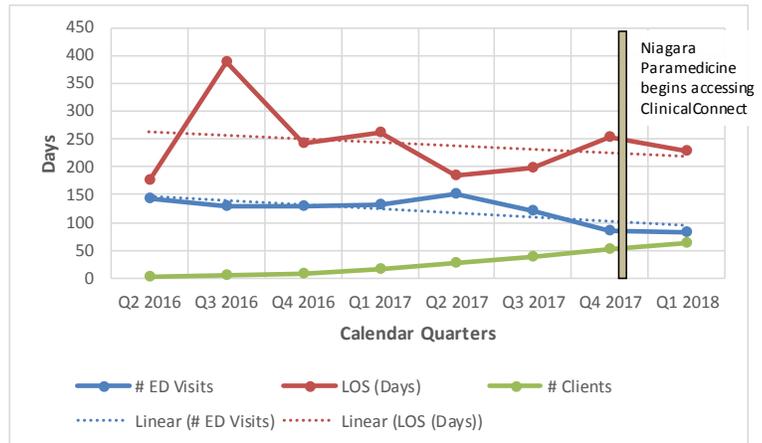


Figure 1: Reduction in ED Visits and Hospital Lengths of Stay for Patients Enrolled in the Paramedicine Program

Although the paramedicine team has only been using ClinicalConnect since early 2018, they have found access to visits, transcriptions, medical notes, lab results and medications to be invaluable and are expecting this access to enable them to continue achieving/exceeding their performance measures as they move forward. Some examples of where they have found access to the EHR to provide value include:

- Understanding the patient’s condition and history when enrolling a new patient
- Understanding what took place during a hospital visit (ED or admission) in order to prevent future visits and exacerbations
- Developing a comprehensive care plan for the patient
- Communicating effectively with the patient’s family physician on treatment needed
- Arranging for appropriate healthcare services in the community

Testimonial

“ClinicalConnect allows us to expeditiously assess and respond to patients who have the greatest health care needs in our society, thus allowing for more coordinated, comprehensive and safe health care provision.”

Anik Lambert-Belanger, Coordinator, Niagara Community Paramedicine Program

Questions

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Sources

¹ Emergency Medical Services Chiefs of Canada. (2011). Community Paramedicine in Canada Whitepaper. Retrieved from <https://www.nasemso.org/Projects/RuralEMS/documents/CommunityParamedicineCanada.pdf>

² Niagara Community Paramedicine Program. Retrieved from https://www.niagararegion.ca/living/health_wellness/ems/wainfleet-paramedic.aspx