

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 electronic health records (EHRs) through the cSWO Regional Clinical Viewer, ClinicalConnect™, supports a Vascular Nurse Practitioner (NP) in providing standardized and quality care to patients seen in clinic.

Vascular Disease, a leading cause of preventable death in Canada

Vascular disease, which is a result of disorders in the blood vessels, including arteries, veins and the lymphatic systems, is the leading cause of preventable death and disability in Canada.^{1,2,3} Twenty four million Canadians have at least one risk factor for vascular disease while ten million have three or more.² Vascular surgery is a surgical specialty dedicated to the treatment of conditions associated with vascular disease, such as aortic aneurysms, stroke and mini strokes from carotid artery narrowing, poor leg circulation and varicose veins.³

In August 2012, the Ontario Vascular Health Blueprint was released. It was rooted in a vision of “an integrated, patient-centered, accessible continuum of high quality vascular health services and resources that facilitates and fosters improved vascular health, reduced incidence of vascular disease and reduced consequences of vascular-related diseases for all Ontarians”. The Canadian Heart Health Strategy has suggested that an integrated approach to cardiovascular disease could reduce associated healthcare costs by as much as 20 per cent.⁴ Hamilton Niagara Haldimand Brant (HNHB) Local Health Integration Network (LHIN) has established a Regional Vascular Services Program to ensure equal access to a coordinated system of evidence-based vascular services across the continuum of care.⁵

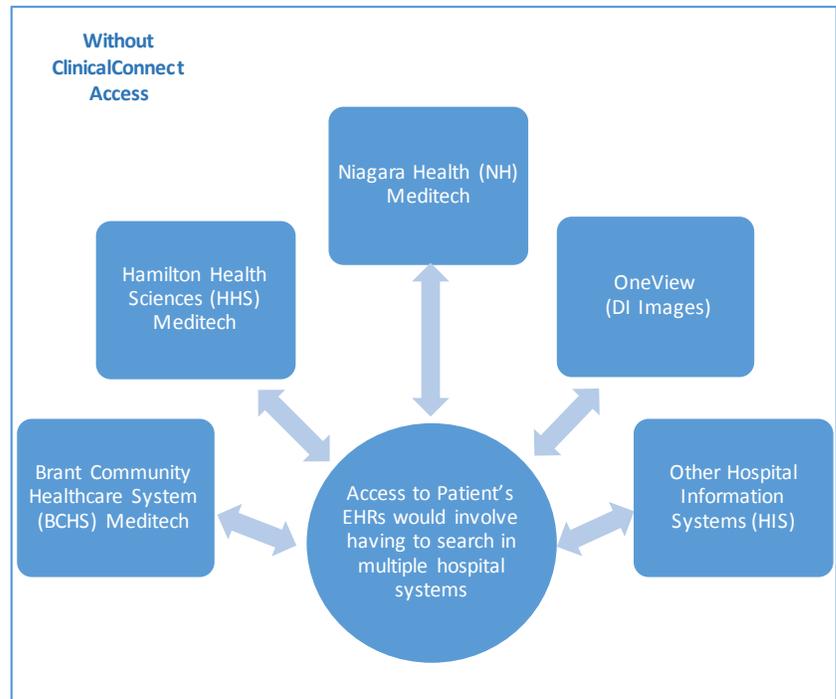
Janine Duquette, BScN, MN-ACNP, DNP, is a Nurse Practitioner with the regional vascular program who runs a clinic for Brant Community Healthcare System (BCHS), participates as a team member at vascular surgery clinics at Hamilton Health Sciences (HHS), and is responsible for developing evidence-based clinical pathways for inpatient care of vascular surgery patients. As a Nurse Practitioner, Janine provides a full range of health care services, including diagnosing illness, ordering and interpreting diagnostic tests, referring patients to other healthcare professionals and specialists, providing counselling and education, providing treatment, prescribing all medications and managing chronic disease.⁶

EHR access streamlines preparation for clinic visits

Janine sees on average 8-16 vascular surgery patients per day, for pre-operative assessment, post-operative follow-up, ongoing surveillance, and risk reduction visits. She has had access to ClinicalConnect for over five years and would find clinic preparation time and effort to be unmanageable without that access. Having information about each patient in one place rather than having to log onto and search for the patient information in multiple hospital systems as well as One-View and paper charts to gain a complete understanding of the patient's history is a definite benefit. As each system functions and organizes patient information differently, finding the required documents would be very labour-intensive and time-consuming, especially without administrative support.

Many of the patients seen in the clinic have visited multiple hospitals in the past, which makes having the details in one place crucial to ensuring that risks to the patient's health and safety are well understood and managed. The patient data of most value is found in the Visits, Transcriptions, Health Records, Radiology and Lab modules. Before ordering CT scans, for example, previous test results can be checked for renal insufficiency. Access to the patient's EHR over time also allows for monitoring of the impact of treatment and risk reduction efforts.

The booking clerk at BCHS, who is responsible for booking new referrals and follow-up appointments at the clinic, forwards a list of upcoming appointments from her scheduling system to enable Janine to prepare for clinic in advance. Ideally, she would like to be able to more easily obtain this list using ClinicalConnect's Census feature should it become available for patients assigned to nurse practitioners.



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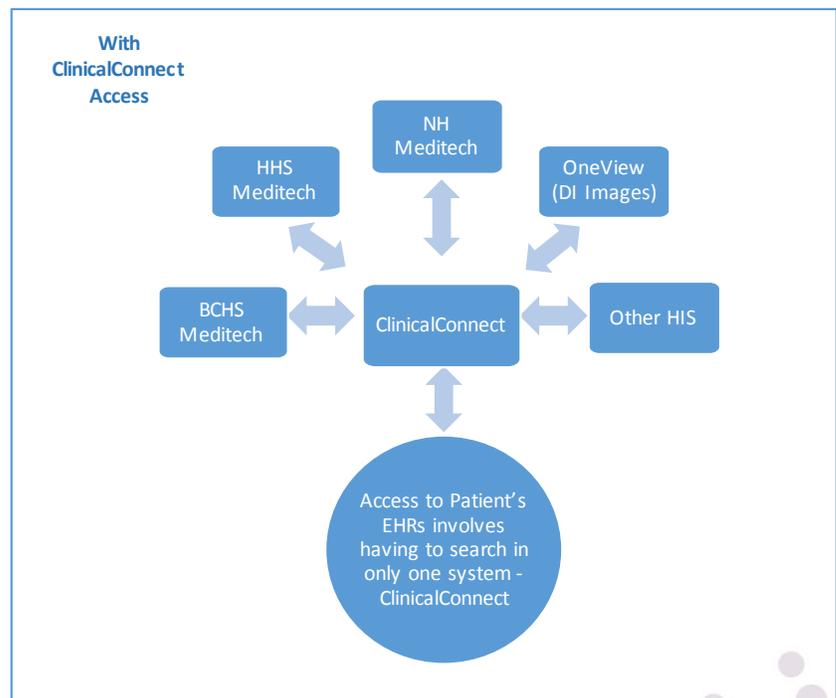


Figure 1: Streamlined Access to Patient's Electronic Health Records

Testimonial

“ClinicalConnect has been a significant part of my day-to-day clinical practice as an outpatient nurse practitioner. It ensures timely access to patient information from various sources and organizations. The accessibility of notes from various organizations assists with continuity of care and allows me to attend satellite clinics without carrying a number of patient charts - this also aids in maintaining confidentiality while working offsite and travelling to and from clinics. The ability to streamline and access various diagnostic tests while working off site is imperative to providing high quality, effective and efficient care, and ClinicalConnect certainly offers this service. I can quickly access dictated notes from previous hospital visits or consulting services, and laboratory values to assist in my decisions towards the plan of care. Communication between various care providers and health services is imperative to ensure the best possible care for patients. ClinicalConnect also provides the ability to access patient’s home medications, which allows me to provide medication reconciliation and ensure safe dosing and prescribing of necessary treatments. Without ClinicalConnect, my clinics would not run efficiently and would not be manageable to provide high quality care to vascular patients. Thank you ClinicalConnect for all that you provide!”

Dr. Janine Duquette, Nurse Practitioner, Vascular Services, Hamilton Health Sciences

Questions

Authored by Wanda Hemsworth, Benefits Realization Lead, 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.

Sources

¹ Vascular 2013. *Making the connection: A Call to Action on Vascular Health*. Retrieved from:

https://vascularnetwork.ca/wp-content/uploads/2013/10/VascularDeclaration_ENG.pdf

² Ontario Integrated Vascular Health Strategy. Communiqué No 2 (2014). Retrieved from:

<http://www.hnhblhin.on.ca/~media/sites/hnhb/Goals%20and%20Achievements/Clinical%20Program%20Integration/Vascular%20Health%20Strategy%20Communique%20-%20November%202014.pdf?la=en>

³ What is Vascular Surgery? Retrieved from: <https://www.vascular.ca/patients>

⁴ *Shaping the Future of Vascular Health: An Integrated Vascular Health Blueprint for Ontario* (August 2012). Retrieved from: http://ontariostrokenetwork.ca/wp-content/uploads/2013/11/Vascular_Health_Blueprint.pdf

⁵ HNHB LHIN Vascular Surgery. Retrieved from:

<http://www.hnhblhin.on.ca/goalsandachievements/ClinicalProgramIntegration/Vascular.aspx>

⁶ NPAO by the Numbers: Making Health Change Happen. Retrieved from: <https://npao.org>