



Background

In Ontario, heart failure is one of the top 5 reasons for inpatient hospitalization with an average length of stay of 8 days.¹ With an aging population, the number of people with heart failure is expected to rise, making it even more important to focus on enhancing outpatient management to reduce rate of admission to the hospital.² Feedback from clinicians around the country indicate that the Canadian Cardiovascular Society (CCS) Heart Failure Guidelines provide great value, but there is still a need to address issues regarding the implementation of guidelines in daily practice.³

The eHealth Centre of Excellence Chronic Heart Failure (CHF) decision support tool, created by the Quality Based Improvements in Care (QBIC) program, can be integrated directly into the PCP's electronic medical record (EMR) for quick and easy access. The tool translates CCS guidelines into decision support in order to assist the PCP in the provision of timely, evidence-based care and ensure optimal patient outcomes.

In 2016, the New Vision Family Health Team, also identified as a Heart Function Clinic, adopted the CHF EMR decision support tool to better support efficient management of patients with CHF. The clinic caters to more complex patients referred by other primary care providers across the region. The figure below illustrates CHF patient management process from the care team perspective, before and after CHF tool adoption.

Before CHF Tool Adoption

- An EMR flow sheet form used at every patient visit
- A summary note is filled in as a free text summarizing the chart

- Manual scrolling through the chart to review free text progress note, as form not searchable
- **Duplicate work** to summarize information from the flow sheet in different spots of the chart.

- Steps in the **management process not standardized** according to best practice
- **Time wasted** searching for information
- Difficult to work as a team
- Quality of information collected varied due to lack of standardization

After CHF Tool Adoption

The CHF decision support tool is used to apply the Canadian Cardiovascular Society Heart Failure Guidelines

- **Form is searchable** with the capability to retrieve and share information with care team members
- Everything done by any member of the team is populated in one form with a **logical flow during an appointment** fitting the flow of patient interviews and assessments

- **Standardized process of care** with decision support to guide clinicians through the process, ensuring that no steps are missed.
- **Reduced office inefficiencies**
- Support a team-based approach for managing patients with CHF

"The CHF tool developed by eCE has been an invaluable contribution to the Heart Function Clinic's care pathway here at New Vision FHT. Inter-professional management of this complex patient population according to best practice recommendations has been improved, communication across sectors at transitions of care has been streamlined, and the quality of our outcomes data is more robust. We're eager to continue working with eCE to further enhance primary care decision support advancements for chronic disease."

- Bridget Braceland, New Vision FHT

What were the benefits?

Since the adoption of the CHF decision support tool, the **tool has been used for 100% of CHF patients** at the New Vision Clinic. There has since been an **increase in the efficiency** of CHF patient management due to the tool's ability to be used for collecting **standardized information** by different members of the team, while ensuring quality of information and supporting a team-based approach to care. Clinicians no longer need to scan through patient documents to find information or summarize information from one flow sheet to another part of patient's chart, **reducing time spent on administrative tasks**. The tool's ability to prompt clinicians through the **application of best practice guideline** – thereby **standardizing the care process** and ensuring that no steps are missed in the management of their patient's condition – is perceived to be beneficial by clinicians.

The CHF tool **graphs the patient's weight over time**. The visual representation **assists in detecting edema (fluid-overload) or dehydration (volume depletion)** so that adjustments in diuretics can be made appropriately, which may help prevent exacerbations of CHF requiring hospitalization.

What does EMR data tell us about the CHF tool use and impact on patient care?

An analysis of EMR data from two different clinics that have adopted the tool in Waterloo Wellington Local Health Integration Network (WWLHIN) illustrated the following impact on patient management outcomes:



Within less than a year of adoption the CHF tool has already been used in the care of 50% of patients with CHF.



87% increase in appropriate therapy for CHF



11% ↑ in claimed billing incentives for management of patients with CHF by PCPs



18% ↑ in Pneumococcal immunization
19% ↑ in Influenza immunization

Program description



QBIC is a program hosted by the eHealth Centre of Excellence in the Idea Quarter of Waterloo, Ontario. The objective of QBIC is to improve the health and wellness of Waterloo Wellington

residents by supporting primary care clinicians to realize greater value out of existing ehealth technologies.

The program's highly qualified team of Change Management Specialists offer free ehealth coaching sessions and workshops to clinicians across the region, either one on one, or in a group. They also work with system partners — such as the Ontario Renal Network, Cardiac Care Network, and Centre for Effective Practice — to develop EMR decision support tools integrating best practices.

For more information on QBIC's range of services, please contact QBIC Program Manager Danika Walden, at Danika.Walden@ehealthCE.ca. A full catalogue can be found at: www.ehealthce.ca/QBIC.

Works cited:

1. The Canadian Institute for Health Information (2017). Inpatient Hospitalizations, Surgeries and Newborn Indicators, 2015-2016.
2. Tran, D. T., Ohinmaa, A., Thanh, N. X., Howlett, J. G., Ezekowitz, J. A., McAlister, F. A., & Kaul, P. (2016). The current and future financial burden of hospital admissions for heart failure in Canada: a cost analysis. *CMAJ Open*, 4(3), E365-E370.
3. Howlett, J. G., Chan, M., Ezekowitz, J. A., Harkness, K., Heckman, G. A., Kouz, S., . . . Canadian Cardiovascular Society Heart Failure Guidelines Panels. (2016). The Canadian Cardiovascular Society Heart Failure Companion: Bridging Guidelines to Your Practice. *Canadian Journal of Cardiology*, 32(3), 296-310.

If you have any questions or would like further information on this Benefits Realization (BR) case, please contact Lirije Hyseni, BR Specialist at the eCE, at: Lirije.Hyseni@ehealthCE.ca

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