ENSURING TIMELY OPTIMIZATION IN HEART FAILURE CARE: A SYSTEMS APPROACH

Robert S McKelvie MD PhD FRCPC
Western University and St. Joseph’s Health Care
London Canada
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Conflicts of Interest

• No disclosures
Heart Failure- a National Problem

Top 5 reasons for hospitalization in Canada, 2017–2018

<table>
<thead>
<tr>
<th>Reason for hospitalization</th>
<th>Number of hospitalizations</th>
<th>Percentage of hospitalizations</th>
<th>Average acute length of stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Giving birth</td>
<td>362,700</td>
<td>11.8</td>
<td>2.2</td>
</tr>
<tr>
<td>2. COPD and bronchitis</td>
<td>93,353</td>
<td>3.0</td>
<td>7.2</td>
</tr>
<tr>
<td>3. Acute myocardial infarction</td>
<td>71,192</td>
<td>2.3</td>
<td>4.9</td>
</tr>
<tr>
<td>4. Pneumonia</td>
<td>70,149</td>
<td>2.3</td>
<td>6.7</td>
</tr>
<tr>
<td>5. Heart failure</td>
<td>68,972</td>
<td>2.2</td>
<td>8.9</td>
</tr>
</tbody>
</table>

Accessed May 1, 2019
Burden of heart failure in Ontario

Population Ontario age 40+ years 7,206,368

Approximately 280,000 people living with HF.

Incidence: 5 per 1000 in age 40+ years (about 38,000 new cases a year)

Prevalence: 39 per 1000 in age 40+ years

1 month mortality from diagnosis: 8%; 1 year mortality from diagnosis: 22.7%

30-day readmission following hospitalization: 9% (heart failure); 21% (all cause)

In 2015/16: 65,334 admissions that involved people with HF, 766,681 days in hospital

Data source: Discharge Abstract Database (DAD), Heart Failure Cohort (Schultz et al. 2013); National Ambulatory Care Reporting System (NACRS), Ontario Drug Benefit Claims (ODB), Ontario Health Insurance Plan (OHIP) Claims Database, Registered Persons Database (RPDB)
Acute Care Utilization in Ontario (FY 2015/16)

- Approximately
  - 83% of people with HF are 65+ years of age
  - 38,000 ER Visits/Year
  - 66,000 hospitalizations/year with a HF diagnosis
    Average LOS: 12 days
  - 25,000 hospitalizations/year with a Main Dx of HF
    Average LOS: 9 days
  - 770,000 days in hospital/year

Data source: CIHI DAD/NACRS (FY 2015/16)

Note - data represents Ontario residents with valid HCN, age 20+ years using acute care services

Case: Any diagnostic code is: "I255*" "I500*" "I501*" "I509*"
Therapeutic Approach to Patients with HFrEF

- **Patient with LVEF ≤ 40% and Symptoms**
  - Triple Therapy ACEi (or ARB if ACEI intolerant), BPL, MRA
  - Titrate to target doses or maximum tolerated evidence-based dose

  **REASSESS SYMPTOMS**
  - NYHA I
    - Continue triple therapy
  - NYHA II-IV: SR, HR ≥ 70 bpm
    - ADD Ivabradine and SWITCH ACEI or ARB to ARNI for eligible patients
  - NYHA II-IV: SR with HR < 70 bpm or AF or pacemaker
    - SWITCH ACEI or ARB to ARNI for eligible patients

  **REASSESS SYMPTOMS AND LVEF**
  - NYHA I or LVEF > 35%
    - Continue present management
  - NYHA I-III and LVEF ≤ 35%
    - Refer to ICD/CRT algorithm
  - NYHA IV
    - Consider:
      - Hydralazine/nitrates
      - Referral for advanced HF therapy
      - Mechanical circulatory support/transplant
      - Palliative Care referral

  Reassess every 1-3 years or with clinical status change
  Consider LVEF reassessment every 1-5 years
  Reassess as needed according to clinical status

* ARNI: angiotensin II receptor blocker neprilsyn inhibitor (sacubitril/valsartan)
† Refer to Table 5
Ontario Landscape - Medications

Percentage of patients age 65+ years dispensed evidence-based medication at 180 days post heart failure diagnosis in Ontario FY 2015/16 to 2017/18

Data source: Discharge Abstract Database (DAD), Heart Failure Cohort (Schultz et al. 2013); National Ambulatory Care Reporting System (NACRS), Ontario Drug Benefit Claims (ODB), Ontario Health Insurance Plan (OHIP) Claims Database, Registered Persons Database (RPDB)
Ontario Landscape - Newer therapy

Percent of patients age 65+ years dispensed Angiotensin Receptor Blocker/Nephrilysn Inhibitor following heart failure diagnosis in Ontario FY 2016/17 - 2017/18

Data source: Discharge Abstract Database (DAD), Heart Failure Cohort (Schultz et al. 2013); National Ambulatory Care Reporting System (NACRS), Ontario Drug Benefit Claims (ODB), Ontario Health Insurance Plan (OHIP) Claims Database, Registered Persons Database (RPDB)
Ontario Landscape- follow up care

Percent of patients seen by physician within 7 days following hospital discharge for heart failure in Ontario FY 2016/17-2017/18

Data source: Discharge Abstract Database (DAD), Heart Failure Cohort (Schultz et al. 2013); National Ambulatory Care Reporting System (NACRS), Ontario Drug Benefit Claims (ODB), Ontario Health Insurance Plan (OHIP) Claims Database, Registered Persons Database (RPDB)
• We recommend that all patients with recurrent HF hospitalizations, irrespective of age, multimorbidity, or frailty, should be referred to a HF disease management program. (Strong Recommendation, High Quality Evidence)

• We recommend that care for patients with HF be organized within an integrated system of health care delivery where patient information and care plans are accessible to collaborating practitioners across the continuum of care. (Strong Recommendation, Moderate Quality Evidence)

Ezekowitz et al., 2017
Purpose- honorable mention

Purpose- Highlight the systems approach to support better management of patients with HF in Ontario

Note- honourable mention that other provinces are exploring system approaches to managing heart failure
Building a model for supporting system integration for heart failure care in Ontario
The intensity and level of care may vary over time with the patient’s complexity and risk changes, but the goal is to ensure that high quality care is available as close to home as possible and that care is coordinated across all levels of care.
Understand how providers and teams could improve HF care, with regards to:

- Improving compliance with clinical best practices
- Reducing variation in practice and outcomes
- Improving patient and caregiver experience
- Providing evidence-based care close to home
- Integrating care across the continuum
Integrating Heart Failure Care Initiative (IHFCI)-
Project Objectives

In three early adopter sub-regions (London, Ottawa, Guelph)

1. Implement CorHealth Ontario’s *Spoke-Hub-Node Model* of organizing heart failure care

2. Implement Health Quality Ontario’s *Heart Failure Care in the Community Quality Standard*

3. Develop a *Provincial Roadmap* for integrating heart failure care in Ontario based on the lessons learned through the three ‘early adopter’ teams (June 2018-March 2019)
Early Adopter Teams

1. London and area
2. Guelph/Kitchener area
3. Ottawa region
Early Adopter Teams

- Each early adopter team:
  - Clinical and administrative leadership * need representation from spoke, hub and node locations
  - Regional administrative leadership
  - Front line providers
  - Patient/caregivers
  - CorHealth Ontario- project management support, coaching, provider education, administrative data interpretation, linking stakeholders (“match making”)

Dedicated project manager at each site:
Field notes, lessons learned, biweekly meetings and reports submitted to CorHealth
(deep dive into notes- Evaluative report available electronically)
Sources of information to inform Roadmap

- Early Adopter Team Meetings and Activities
- Project Manager Field Notes and Reports
- Provincial Task Group

A Roadmap for Improving Integrated Heart Failure Care in Ontario
Recommendations
May 2019
Learnings from the 3 Early Adopter Teams distilled into 10 recommendations around *how to implement integrated, evidence-based HF Care*.

Recommendations focus on 4 Critical Considerations Spanning all Phases:

- Patient and Caregiver Voice
- Collaborative Leadership
- Education
- Data and Reporting

**Phase 1:** Getting Started

**Phase 2:** Taking Action

**Phase 3:** Sustaining, Scaling Up and Spreading
**Recommendation 4:** Provide targeted HF educational opportunities for providers (at the spoke, hub and node levels), as an effective way to increase HF expertise, generate interest and to find undiscovered HF champions, willing participants, and supporters.

**Practical Tip!**
- Refer to the [Evaluative Report](#) to learn about the Early Adopter Teams’ experiences with providing HF educational opportunities.

**From the Toolkit...**
- Refer to the ‘[Heart Failure Education](#)’ folder of the Toolkit for various HF education links and resources for providers and patients/caregivers.
**Recommendation 7:** Focus quantitative and qualitative measurement and key data elements on project implementation objectives. Use data gathered to drive quality improvement.

**Practical Tips!**
- HQO collects HF indicators using administrative data sets – these can provide some guidance around key data elements to consider. Refer to the [HQO Heart Failure Quality Standard](https://example.com) website for a Data Table and Measurement Guide.
- Consider using data collection forms that are standardized and shareable across sites.
- Refer to the Canadian Cardiovascular Society ‘[Quality Indicators for Heart Failure](https://example.com)’. 
IHFCI Implementation Support Toolkit

Overview

Integrating heart failure (HF) care requires an array of approaches and strategies. This toolkit was created to support interested clinicians, administrators, and health care teams to work towards integrating and connecting HF care in their local areas; that is, to provide ‘wrap around care’ for patients.

The contents of this toolkit are meant to be adapted by interested individuals and teams, as they see fit. It is not comprehensive, and is not meant to be prescriptive or limiting. Rather, these tools and resources are meant to serve as a guide to help teams get started.
Summary

• Timely optimizing of care for heart failure patients demands a systems approach to organizing care

• Integrating care at a systems level requires a paradigm shift in how we currently organize care

• Ontario is proposing a spoke-hub-node model of care – early days helped shape the Provincial Roadmap for Integrating HF Care

• Documents, tools, resources are available electronically- material will continue to evolve as the initiative continues to grow

Website for tools and resources: www.corhealthontario.ca