



ENSURING TIMELY OPTIMIZATION IN HEART FAILURE CARE: A SYSTEMS APPROACH

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London Canada

May 10, 2019

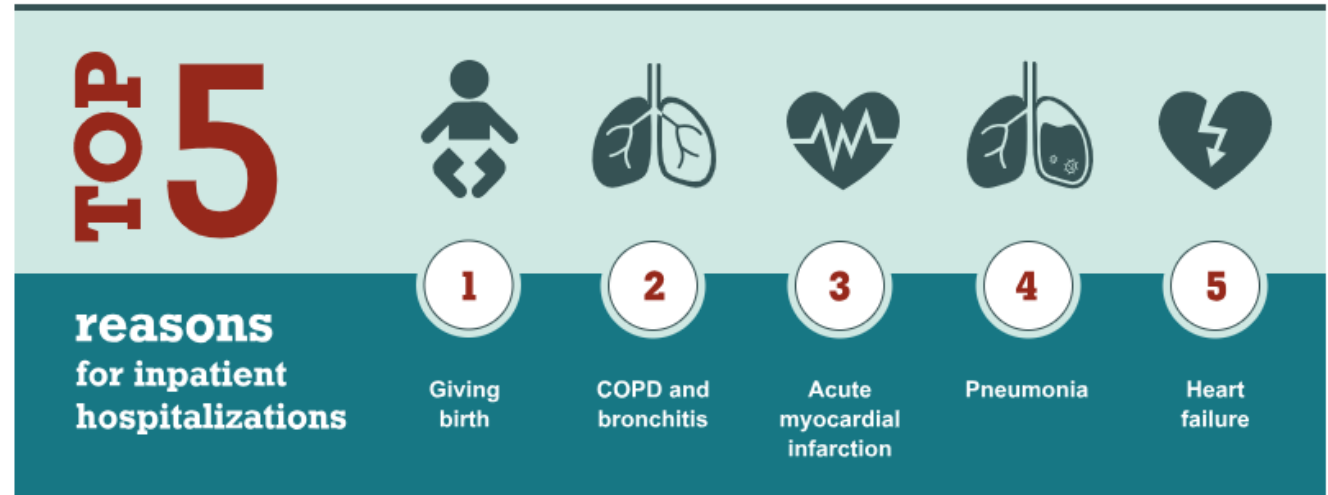
Conflicts of Interest

- No disclosures

Heart Failure- a National Problem



Canadian Institute for Health Information
Better data. Better decisions. Healthier Canadians.



Top 5 reasons for hospitalization in Canada, 2017–2018

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

<https://www.cihi.ca/en/hospital-stays-in-canada>

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

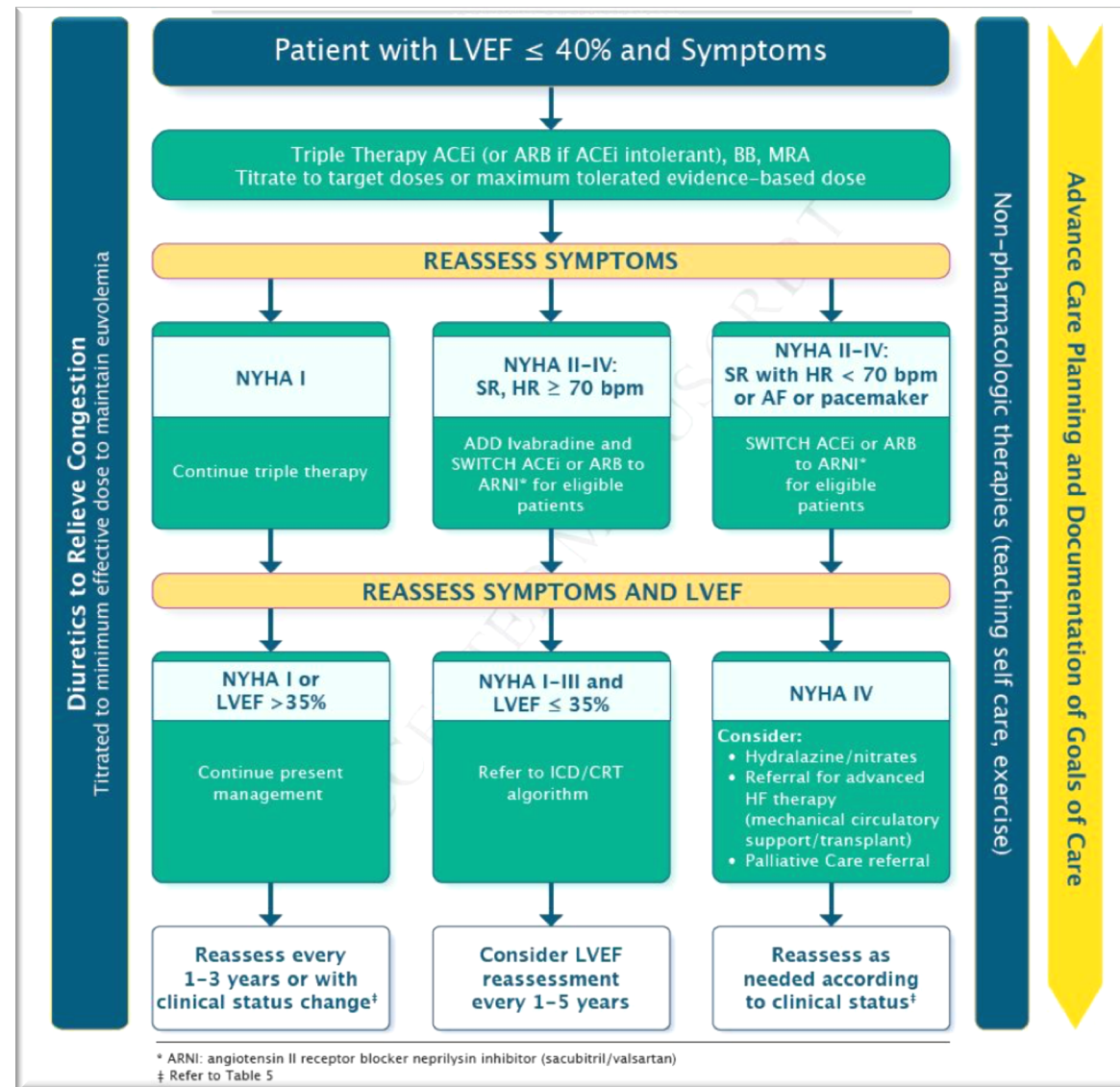
- 83% of people with HF are 65+ years of age
- 38,000 ER Visits/Year
- 66,000 hospitalizations/year with a HF diagnosis
Average LOS: 12 days
- 25,000 hospitalizations/year with a Main Dx of HF
Average LOS: 9 days
- 770,000 days in hospital/year

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

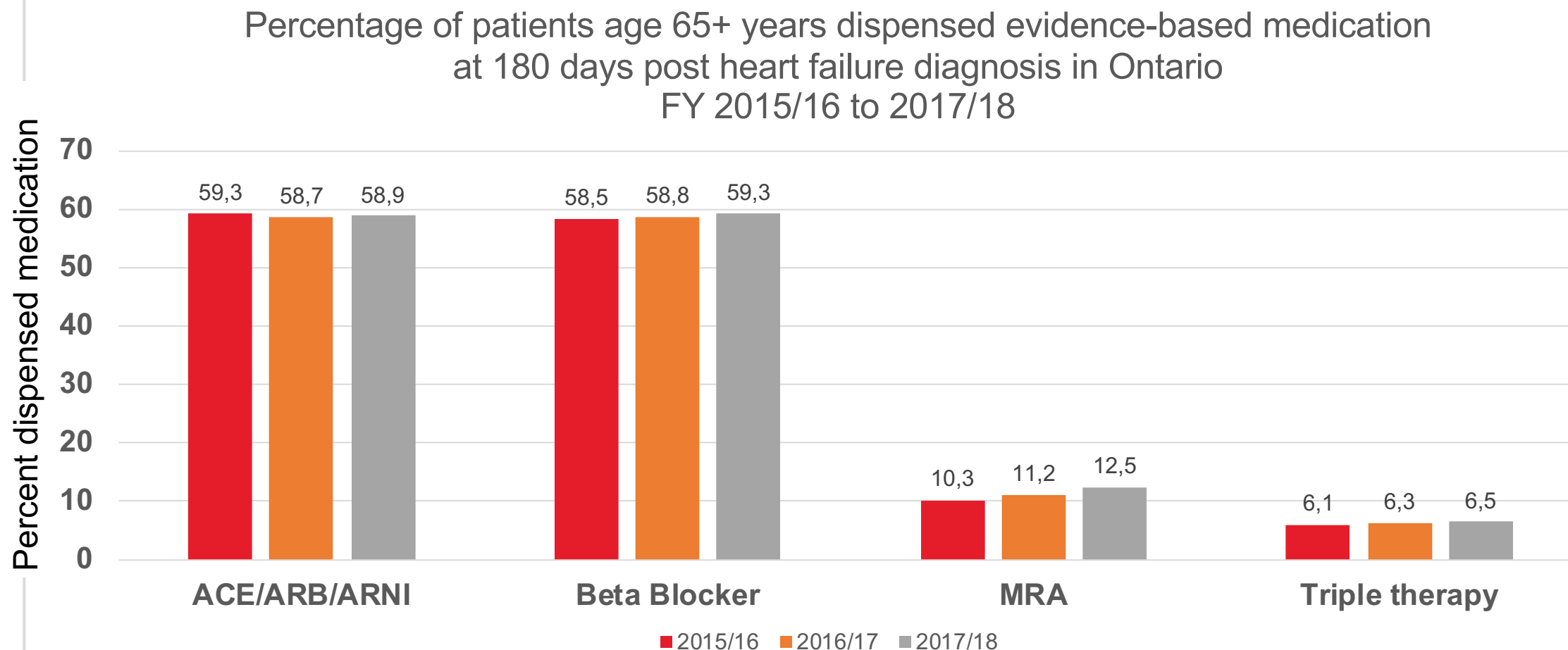
Note- data represents Ontario residents with valid HCN, age 20+ years using acute care services

Case: Any diagnostic code is : "I255*" "I500*" "I501*" "I509*"

Therapeutic Approach to Patients with HFrEF

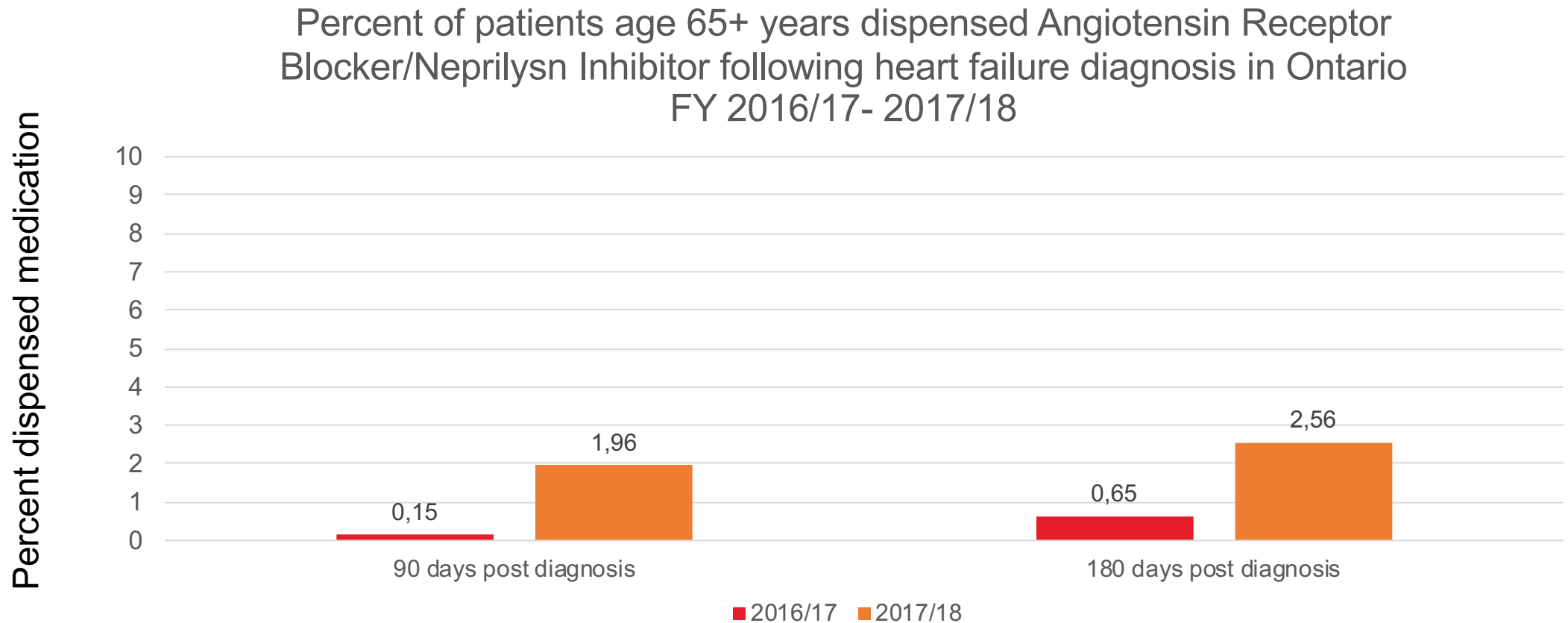


Ontario Landscape- Medications



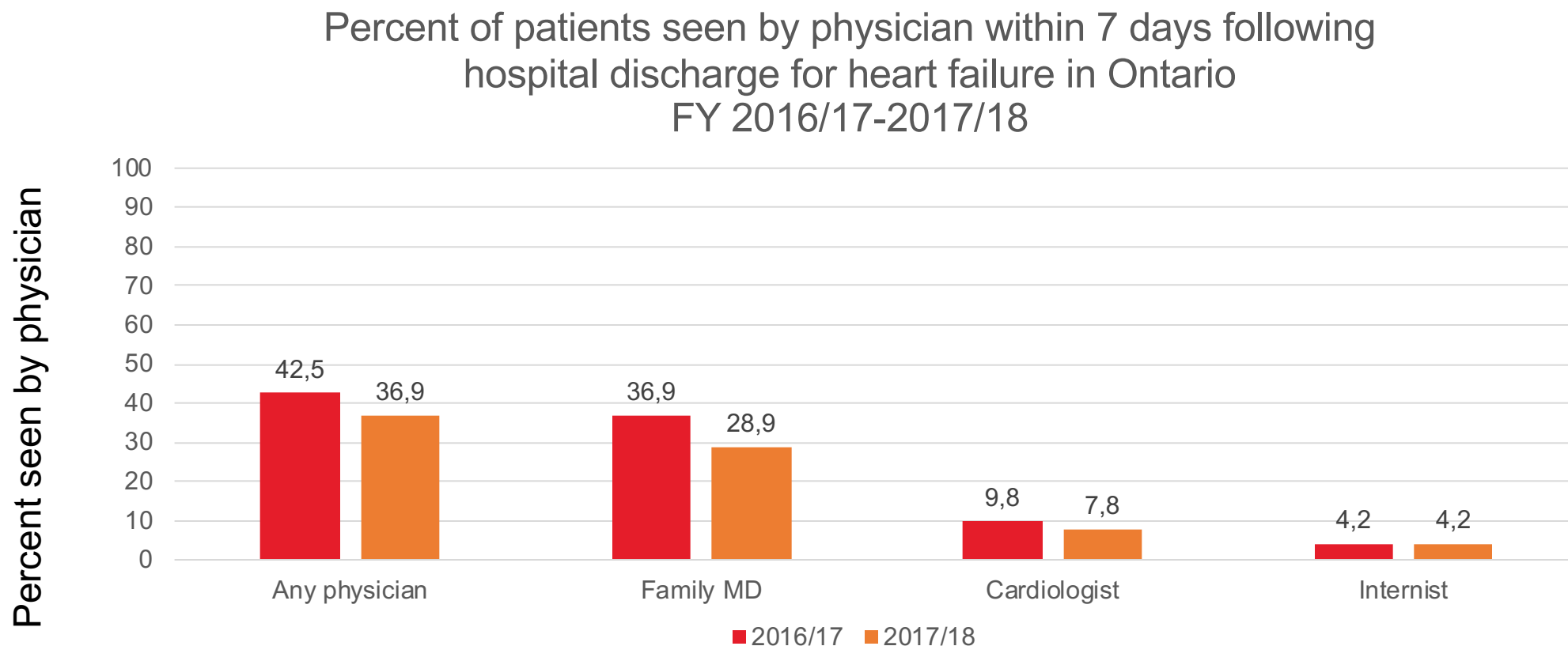
Data source: Discharge Abstract Database (DAD), Heart Failure Cohort (Schultz et al. 2013); National Ambulatory Care Reporting System (NACRS), Ontario Drug Benefit Claims (ODB), Ontario Health Insurance Plan (OHIP) Claims Database, Registered Persons Database (RPDB)

Ontario Landscape- Newer therapy



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



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)

CCS Heart Failure Guideline Recommendations

- 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



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Review

The Spoke-Hub-and-Node Model of Integrated Heart Failure Care

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ABSTRACT

Heart failure (HF) is a significant public health concern. Specialized HF clinics provide the optimal environment to address the complex needs of these patients and improve outcomes. The current and growing population of patients with HF outstrips the ability of these clinics to deliver care. Integrated care is defined as health services that are managed and delivered so that people receive a seamless continuum of health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation, and palliative care services. This approach requires coordination across different levels and sites of care within and beyond the health sector, according to changing patient needs throughout their lives. The spoke-hub-and-node (SHN) model represents an organization of care that works collaboratively with the primary care sector and is highly integrated with community-based multidisciplinary teams of health care professionals and specialty care. The purpose of this article is to analyze the requirements for successful implementation of SHN models. We consider the respective roles of HF clinics, HF nurse specialists, pharmacists, palliative care teams, telemonitoring, and solo practitioners. We also discuss levels of care delivery and the importance of patient stratification and patient flow. The SHN approach has the potential to build on and improve the chronic care model (CCM) to deliver centralized services to preserve high-quality patient-centred care at affordable costs.

RÉSUMÉ

L'insuffisance cardiaque (IC) est un problème de santé publique important. Les cliniques spécialisées dans la prise en charge de l'IC offrent un environnement optimal pour répondre aux besoins complexes de ces patients et pour améliorer leurs résultats. La population actuelle et toujours croissante de patients atteints d'IC dépasse la capacité de ces cliniques de prodiguer des soins. On entend par soins intégrés des services de santé qui sont gérés et fournis de manière à ce que les patients reçoivent un continuum sans heurt de services de promotion de la santé, de prévention des maladies, de diagnostic, de traitement, de prise en charge des maladies, de réadaptation et de soins palliatifs. Cette approche nécessite une coordination entre différents paliers et centres de soins tant à l'intérieur qu'à l'extérieur du secteur de la santé, en fonction de l'évolution des besoins du patient tout au long de sa vie. Le modèle en étoile représente une organisation des soins caractérisée par le travail en collaboration avec le secteur des soins primaires et une forte intégration avec les équipes pluridisciplinaires des professionnels de la santé et des soins spécialisés ancrés dans la communauté. Cet article vise à analyser les conditions de la réussite de la mise en œuvre des modèles en étoile. Nous analysons les rôles respectifs des cliniques de traitement de l'IC, du personnel infirmier spécialisé en IC, des équipes de soins palliatifs, de la télésurveillance et des praticiens indépendants. Nous abordons également les paliers de prestation de soins et l'importance de la stratification et du cheminement des patients. L'approche en étoile peut permettre de tirer parti du modèle des soins chroniques en améliorant pour fournir des services centralisés dans le but de continuer à dispenser des soins de haute qualité axés sur le patient, à des coûts abordables.

Heart failure (HF) is a significant public health concern, affecting more than 500,000 Canadians. HF cases have increased 13% from 2010 to 2016, with a continued expected rise, greatly due to the aging population.^{1,2} The prevalence of

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See page 868 for disclosure information.

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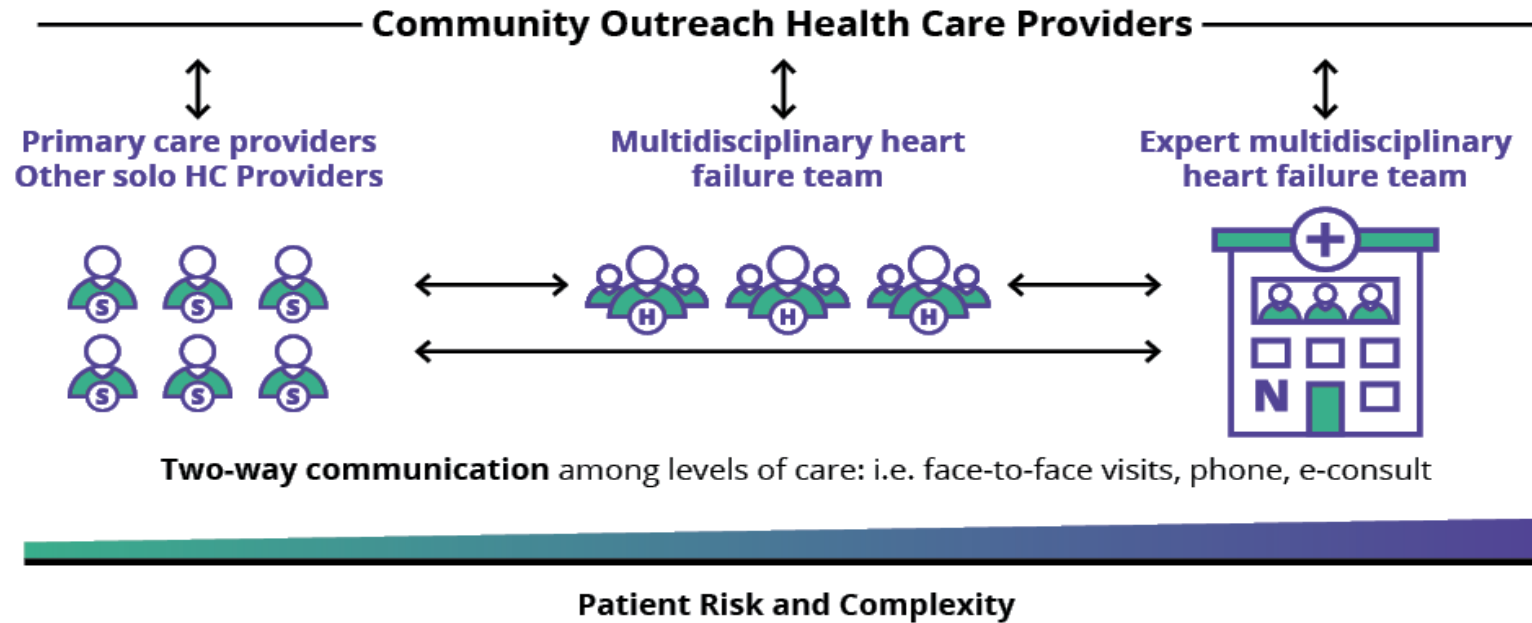
Minimal requirements and key clinical services for heart failure programs within a spoke-hub-node model of care

August 23, 2018

HF is approximately 3.5%, increasing with age to approximately 23% for those older than age 85.¹ Annual mortality is approximately 12% overall, approaching 25% among those older than age 85.¹ There are more than 75,000 new cases each year, and more than 60,000 patients die each year.¹ Despite current management 50% of patients die within 5 years of diagnosis.³⁻⁵

HF represents the second leading cause of hospital admissions for Canadians older than age 65 and the fifth leading cause of medical admissions overall.⁶ Compared with

Integrated Model of Heart Failure Care: Spoke-Hub-Node



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.

LEVELS OF PATIENT CARE AND SETTING



SPOKE

Stable, low risk, few co-morbidities
Community provider office or clinic



COMMUNITY HUB

Moderate risk multiple, stable co-morbidities
Local hospital or community setting



TERTIARY NODE

High risk, multiple co-morbidities, complex needs
Advanced cardiac hospital

Goals of Integrated Heart Failure Care Initiative (IHFCI)

Understand how providers and teams could improve HF care, with regards to:

Improving compliance with clinical best practices

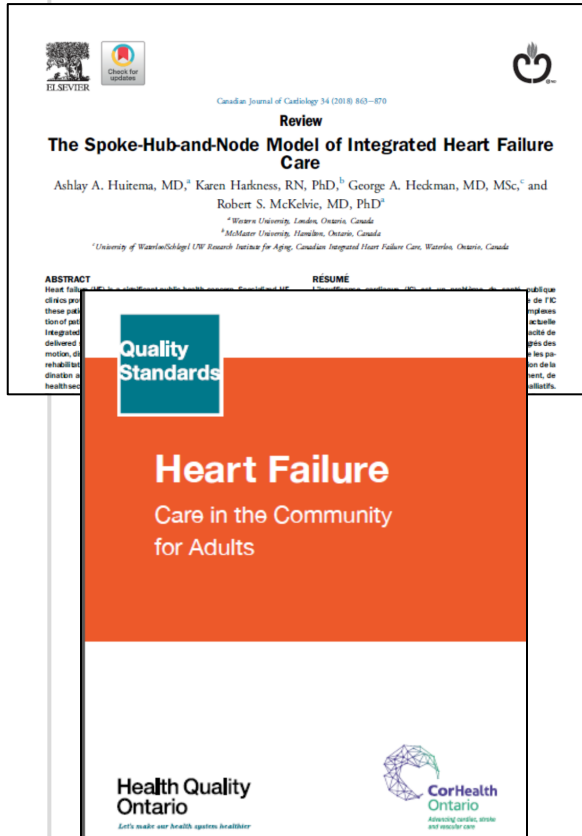
Reducing variation in practice and outcomes

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



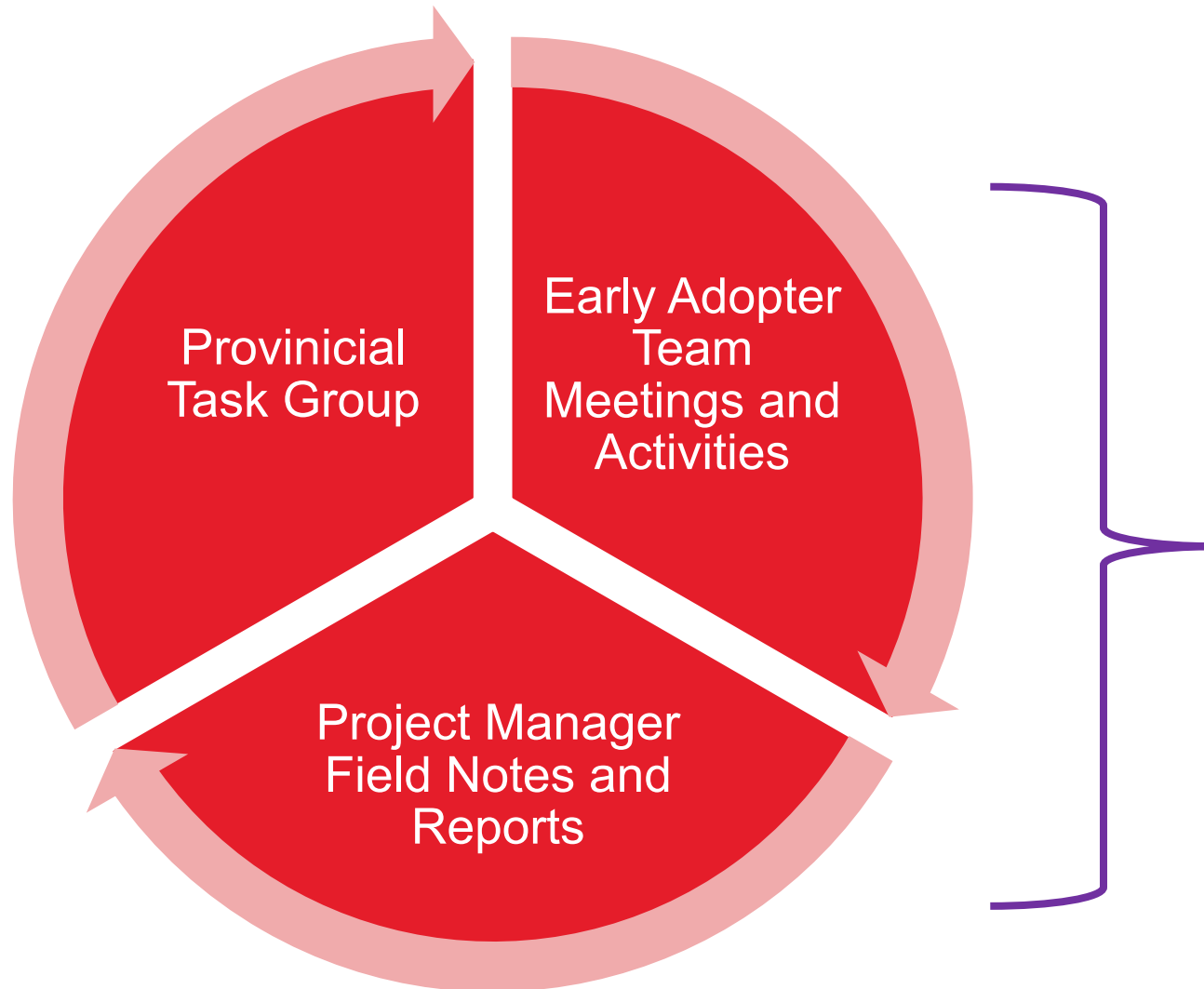
Early Adopter Teams

- 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



A Roadmap for Improving Integrated Heart Failure Care in Ontario

Recommendations

May 2019

The Roadmap for Improving Integrated HF Care

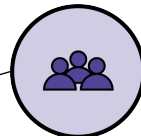
Learnings from the 3 Early Adopter Teams distilled into 10 recommendations around *how to* implement **integrated, evidence-based HF Care**.

Recommendations focus on 4 Critical Considerations Spanning all Phases

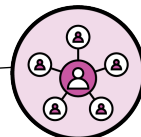
Phase 1: Getting Started

Phase 2: Taking Action

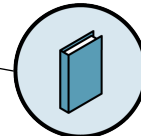
**Phase 3: Sustaining,
Scaling Up and Spreading**



Patient and Caregiver Voice



Collaborative Leadership



Education



Data and Reporting

Example from Roadmap



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.

Example from Roadmap



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](#) 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](#)'.

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.

Integrating Heart Failure Care
(IHFC)

▼ IHFC Implementation
Support Toolkit

Overview

A Business Case for IHFC

Environmental Scanning

The Spoke-Hub-Node
Model of Heart Failure Care

Heart Failure Quality
Standard

Heart Failure Education

Project Management
Support

Patient and Caregiver
Engagement

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