

**Session 8 - Making Evidence Relevant:**  
Collaborating & Engaging with Health System Leaders to  
Drive Evidence-Based Care

**Speakers:** Pat Campbell, Dr. Robert McKelvie, Alex Chambers,  
Dr. Harindra Wijeyesundera, Kori Kingsbury, Angela Jacobs

**Moderator:** Dr. Sahba Eftekhary

# Presenter Disclosure

- **Session Name:** Making Evidence Relevant: Collaborating & Engaging with Health System Leaders to Drive Evidence-Based Care
- **Presenters:** Dr. Sahba Eftekhary (moderator), Pat Campbell, Dr. Robert McKelvie, Alex Chambers, Dr. Harindra Wijeyesundera, Kori Kingsbury, Angela Jacobs
- **Relationships with commercial interests:**
  - Only Dr. Robert McKelvie has relationships with commercial interests to declare, and are as follows:
    - **Grants/Research Support:** Pfizer, Bayer
    - **Consulting Fees:** MedX Group Inc.
    - **Other:** Pfizer, Servier – Speaking and Advisory Board Member

# Disclosure of Commercial Support

- This session has received no commercial support

# Mitigating Potential Bias

- **Not applicable:** Dr. Sahba Eftekhary (moderator), Pat Campbell, Alex Chambers, Dr. Harindra Wijeyesundera, Kori Kingsbury, Angela Jacobs.
- **Dr. Robert McKelvie** – Dr. McKelvie's presentation is not related to any pharmaceutical research or promotion; therefore, there is no risk of potential bias.

# Session Objectives

## Focus:

- To contextualize evidence for Ontario's health system
- To emphasize the importance of collaboration with key stakeholders and health system partners to inform the process of evidence development and implementation

## HQO projects:

- Caesarean Section Rate Variation
- Congestive Heart Failure

# **Caesarean Section Rate Variation in Ontario**

**Presenter:** Pat Campbell

# Objective and Research Question

## Objective:

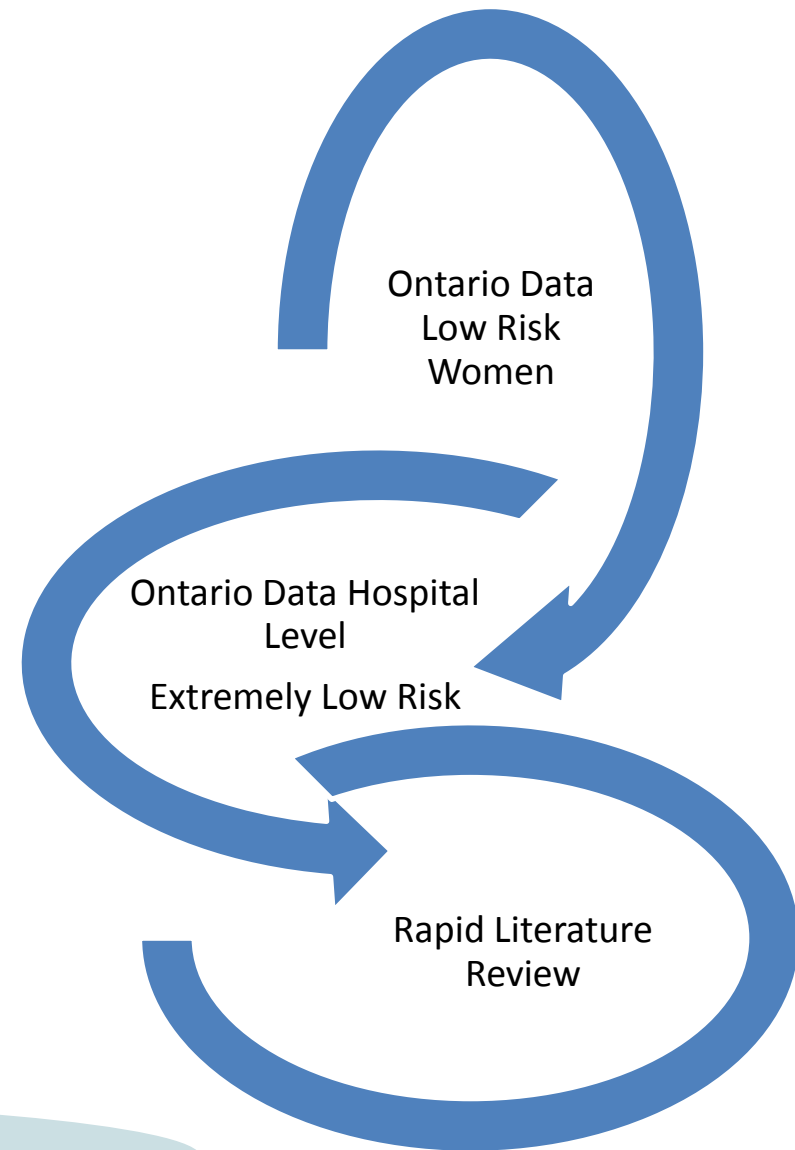
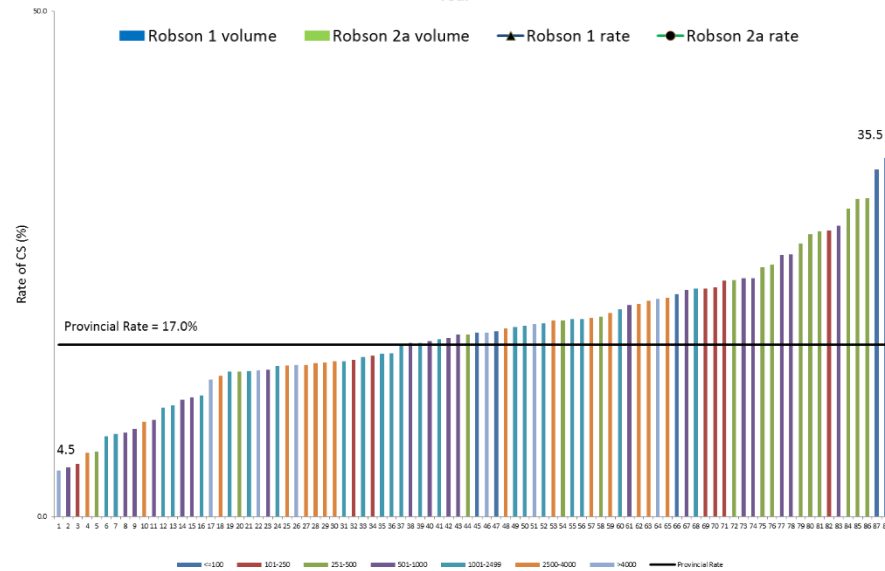
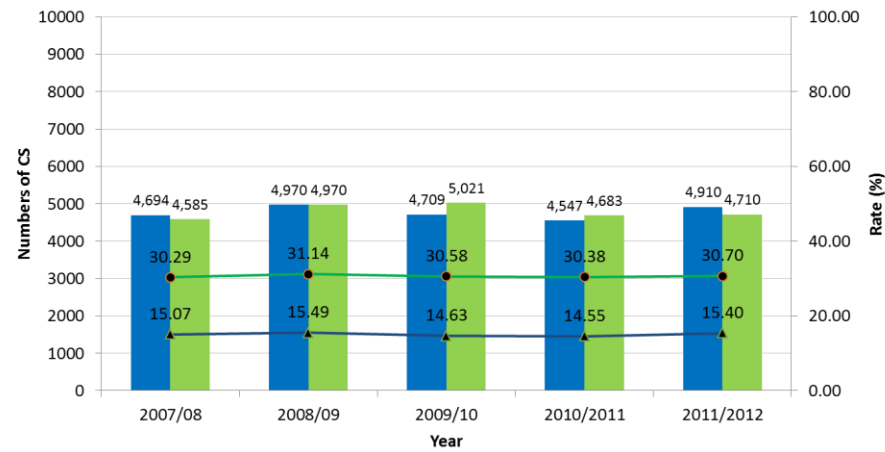
To examine the caesarean section (C-section) rates in Ontario to determine if there is rate variation across the province and to review the literature to assess the factors affecting the likelihood of having a C-section.

## Research question:

- Is there statistically and clinically significant variation in C-section rates across Ontario?
- What factors (clinical, provider, patient, and setting) contribute to the variation in rates?

# Key Project Elements

- **Ontario Data – is there a problem?**
  - Comparison of provincial C-section rates over time, across LHINs and by hospitals
- **Rapid review – what can be done about it?**
  - Identify factors associated with the likelihood of undergoing a C-section
- **Expert panel – Guidance and contextualization**
  - Facilitated by Evidence Development and Standards (EDS) unit at HQO
  - Chairs: Pat Campbell (OHA) and Lorraine Ferris (U of T)
  - Panel members included obstetricians, midwives, obstetrical anaesthesiologists, obstetrical nurses, prenatal educators, policy makers
  - Representation from Ministry, LHINs, hospitals, Society of Obstetricians and Gynecologists of Canada (SOGC), Provincial Child and Maternal Health (PCMCH), BORN Ontario, Ontario Hospital Association (OHA)



**highest quality evidence supports:**  
Elective induction policies at 41 weeks (subgroup)

# Expert Panel Recommendations

1. HQO along with key partners develop and standardize a provincial elective induction policy for low risk women.
2. The Province adopt a provincial standard in the caesarean section rate for low risk women equal to a 20% relative decrease in the current provincial rate for a low risk population of 17%.
3. Data from the BORN registry be available to hospitals for audit and quality improvement initiatives to achieve the planned provincial standard rate for caesarean section in a low risk population.
4. BORN along with PCMCH provide audit and feedback to hospitals regarding their low risk obstetrical population to support quality improvement in maternal-infant care.
5. LHINS establish perinatal networks to support the management of labour and delivery in a low risk population.
6. As part of their public reporting function that HQO report annually on key performance indicators which include caesarean section rates and early induction rate.

# OHTAC Recommendations

1. HQO in collaboration with key partners develop and standardize a provincial elective induction policy for low risk women and track these rates through key performance indicators.
2. BORN along with PCMCH provide audit and feedback to hospitals on an individual and confidential basis regarding their low risk obstetrical population to support quality improvement in maternal-infant care. This should be accompanied by the provincial caesarean section rate average for comparison purposes.

## Next Steps

- Recommendations submitted to MOHLTC
- OHTAC recommendations were posted for public comment
- Next steps for implementation are currently underway

# **Congestive Heart Failure From Evidence to Implementation**

## **Presenters:**

**Dr. Robert McKelvie & Kori Kingsbury**, Heart Failure and the Cardiac Care Network

**Alexandra Chambers**, Evidence for Heart Failure

**Dr. Harindra Wijeyesundera**, Field Evaluation for Heart Failure Clinics

**Angela Jacobs**, Heart Failure Clinics Implementation, The LHIN Perspective

# Heart Failure and the Cardiac Care Network

Dr. Robert McKelvie and Kori Kingsbury



**CARDIAC CARE NETWORK**

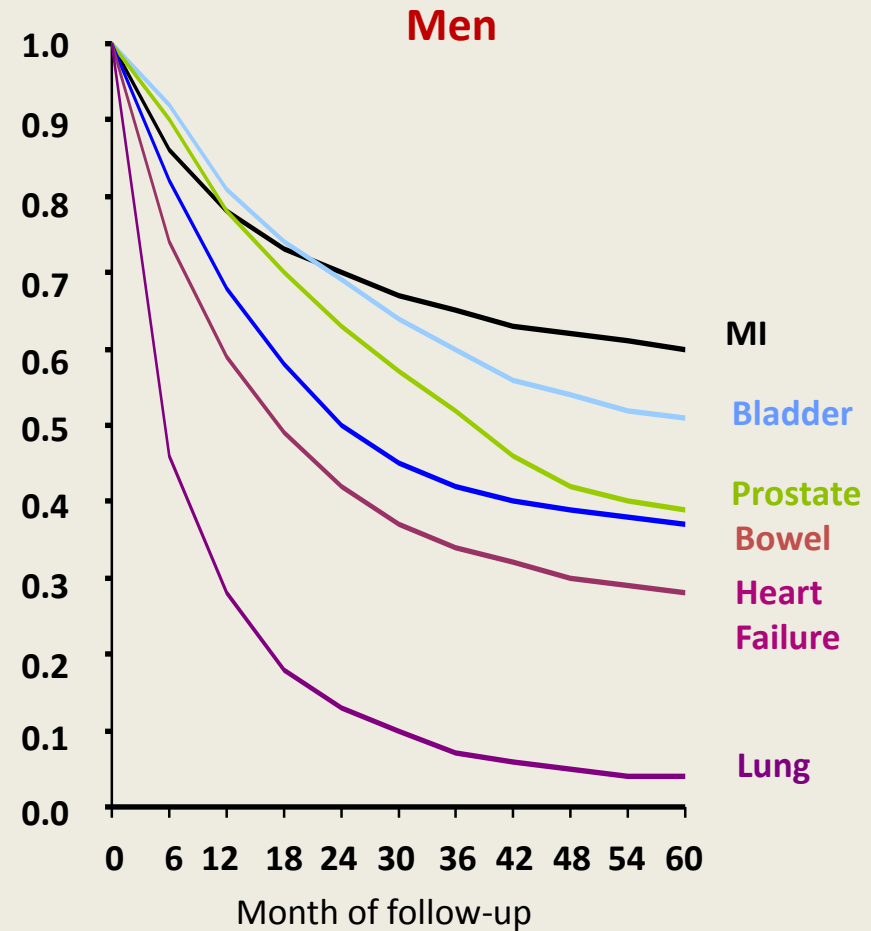
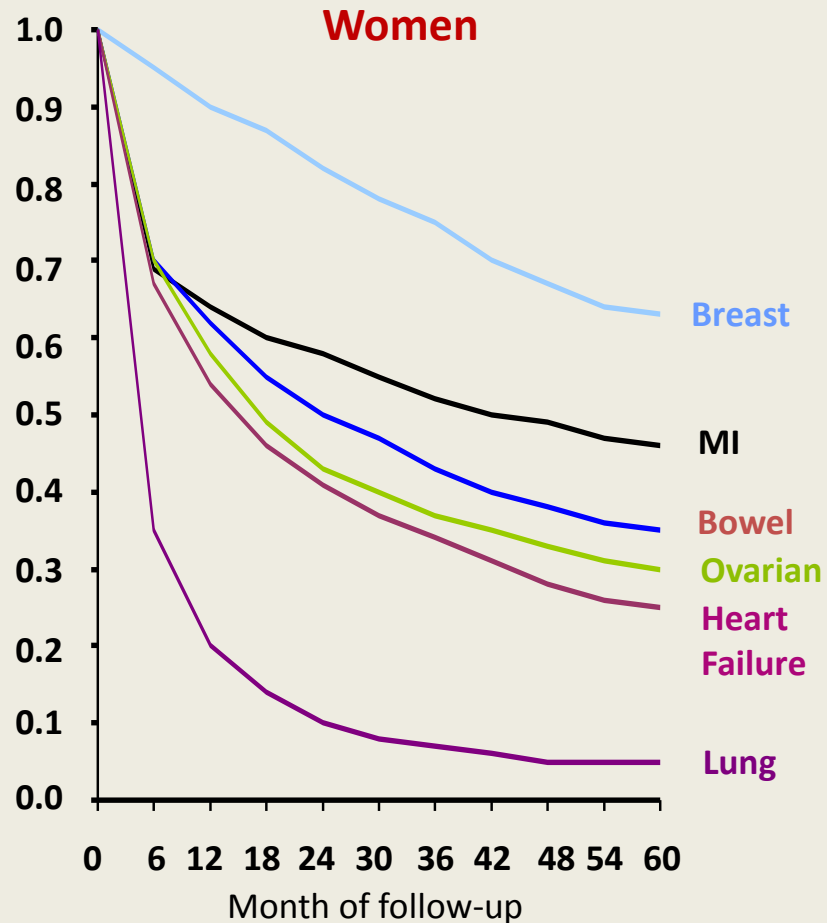


# Burden of Heart Failure – Health System

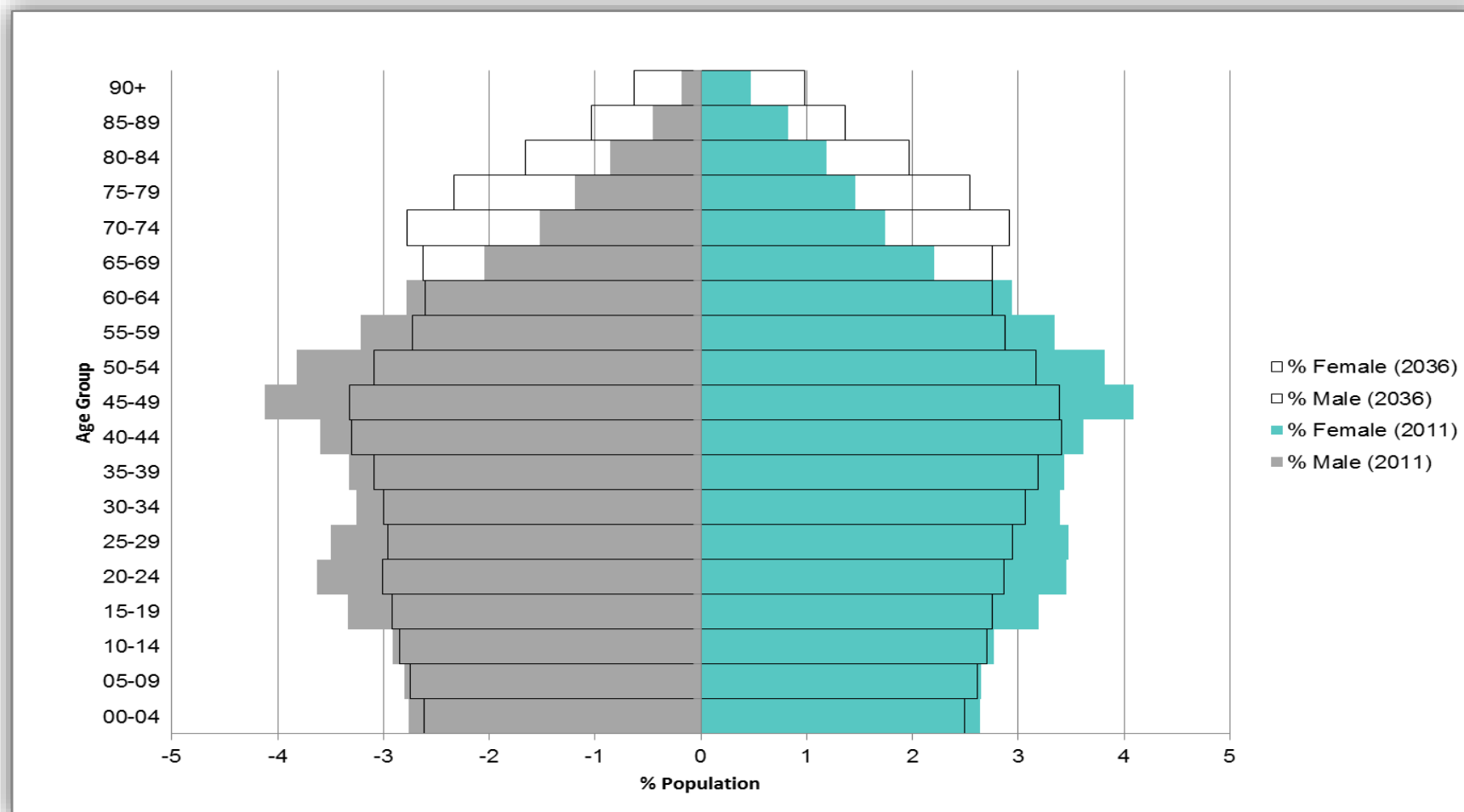
- HF was the cause of 1.9% of all hospitalizations in Canada and was listed as a comorbidity or primary diagnosis in 4.9% of hospitalizations.
- HF is the single most common cause of hospitalization in patients over 65 years of age.
- Patients over 75 years of age account for two-thirds of all hospital days for HF patients; readmission rates at three months ranges from 23% to 50%.
- LOS for HF patients was approximately 12 days, nearly double the LOS for all other causes (2005/06).
- The typical HF patient is elderly and may have multiple morbidities in addition to coronary artery disease (CAD) including hypertension, atrial fibrillation, diabetes mellitus or chronic obstructive pulmonary disease (COPD).

# More Malignant Than Cancer

survival



# Population Pyramid



# Impact of HF for Ontario

- HF is associated with significant mortality and morbidity
- HF prevalence is increasing
- The management of a HF patient requires a community

## Challenge

## Heart Failure

- Variations in access to services across the province

- LTC...

- Variations in access to services across the province
- Only 4% of HF patients receive palliative care

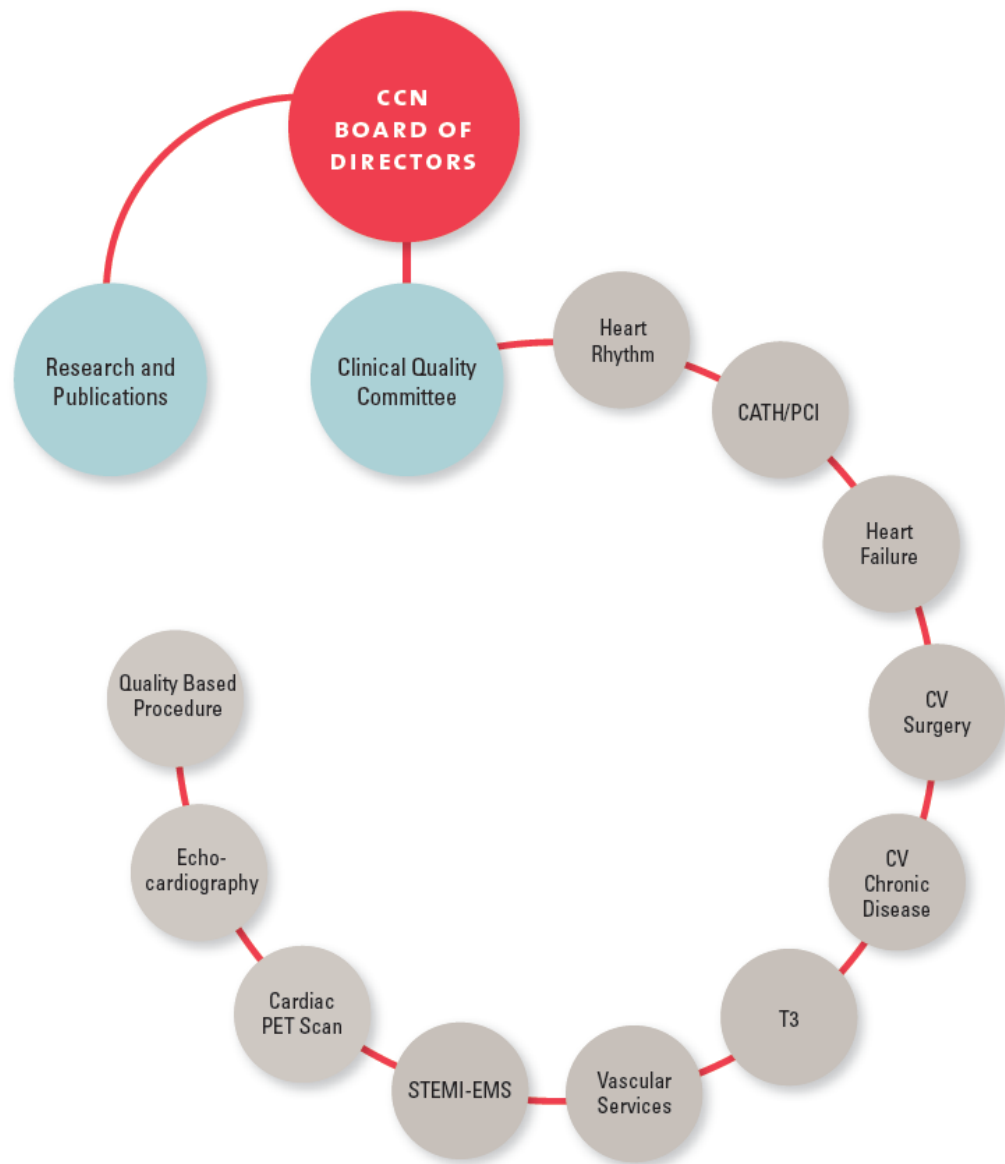
Variations in access to services across the province

- Variations in access to services across the province

High proportion of ED visits and readmissions within 30 days of discharge  
Three-month readmission rates

visits  
30

The system of care is fragmented, with insufficient emphasis on chronic disease management including self-care.



# Cardiac Care Network of Ontario Heart Failure Working Group

Working Group Composition
Cardiologists
Geriatricians
Family physician
Nurses
Hospital Administrators
CCACs

# Cardiac Care Network of Ontario

## Heart Failure Working Group

**Working group divided into sub-groups to investigate**

- Guideline based management of HF
- The present state of HF management in Ontario
- Outline what needs to be done to make management more effective
- Consider quality indicators that could be used to assess management

# Major Findings of the CCN Report

- Ideal structure of a provincial HF management system is predicated on understanding the nature and implications of HF as a common and chronic illness that primarily affects aging patients and their caregivers
- HF is associated with impaired QOL, high mortality and high degree of hospitalization and health service utilization
- Optimal HF management should be rooted in interprofessional primary care, with enhanced capacity to actively and effectively manage complex HF patients, seamless integration with and timely access to specialist services and community support services, providing care and services based on a comprehensive assessment of patient and caregiver needs

Key Priorities	CCN Recommendations
Patient/Care Giver Supports	<ol style="list-style-type: none"> <li>1. General information on HF must be available to improve public awareness and knowledge of HF.</li> <li>2. Standardized tools for self-care management should be developed and implemented.</li> <li>3. Self-help groups should be established to support HF patients and care givers.</li> </ol>
Organization of Care	<ol style="list-style-type: none"> <li>4. Inventory of HF resources by LHIN should be available, with defined “hubs” and “spokes” so that there is a clearly defined regional network of HF care, comprised of PCP, FHT and Specialists to facilitate direct, integrated, and coordinated consultation and co-management of HF patients.</li> <li>5. Multidisciplinary teams and supports (CCACs and palliative care) must be available by LHIN to support HF management strategies.</li> </ol>
Clinical Pathways, Tools & Resources	<ol style="list-style-type: none"> <li>6. Ontario HF risk stratification and referral tools must be adopted by providers in acute and community care settings to standardize care.</li> <li>7. HF patients should receive appropriate follow-up intensity based on their clinical stage of HF and identified needs.</li> <li>8. Unique patient groups (e.g. frail elderly, and end of life) will require additional standard assessments and resources (e.g. system navigation, palliation) to support care and transition stages.</li> <li>9. Specialized HF training, education, and resources to support standard clinical skills and competency should be provided through a provincial community of practice /mentorship programs.</li> <li>10. A province wide, coordinated HF triage and reporting system/registry should be established to patient referrals, system capacity and clinical outcomes.</li> </ol>

# Partnerships



# Evidence for Heart Failure Clinics

Alex Chambers

# Community-Based Specialized Multidisciplinary Care

- Evidence-based analysis on heart failure clinics
- Literature search—October 2008
- 7 randomized controlled trials
  - Meta-analysis→ improvement in all-cause mortality
  - Disaggregate studies to identify the components of the heart failure clinic programs

# Components of Heart Failure Programs

Study	Frequency of visits	Caregiver support	Availability outside scheduled visits?	Nurse change meds?	Involvement of GP	Group sessions
Bruggink (N=240)	9 visits within 1 year	No	Yes	No	None	No
Wierchowicki (N=160)	5 visits within 1 year	No	Yes	No	GPs could call clinic	No
Mejhert (N=313)*	“regular”	No	NR	Yes	None	No
Stromberg (N=106)*	As needed	Yes	Yes	Yes	None	No
Doughty (N=197)	Every 6 weeks	No	Yes	No	Every other visit with GP	Yes
Dunagan (N=151)	“regular”	No	No	No	None	No
GESICA (N=1,518)*	At least 4 calls within first 2 months	No	No	Yes, for diuretics	None	No

\* These studies found a significant improvement in survival in patients receiving the heart failure clinic care versus usual care

# OHTAC Recommendation & Standards of Care for Heart Failure Clinics

- OHTAC recommended specialized community-based care for patients with chronic diseases
- Standards of Care for Heart Failure Clinics
  - **Evidence-Based Components**
    - 1) Medication titration aligned to evidence-based target doses.
    - 2) Care should be consistent with evidence-based guidelines.
    - 3) Health care professionals should provide education, self-management training, and counselling to patients and their informal caregivers.
    - 4) Mechanisms that enable frequent follow-up should be built into the model of HF clinics.
  - **Expert Opinion-Based Components**
    - 5) Mechanisms that enable rapid access to specialized care should be built into the model of HF clinics.
    - 6) A structure of the roles and responsibilities, collaboration, and communication between HF specialists, primary care providers, and hospital inpatient physicians should be developed and implemented to facilitate efficient and effective seamless care.
    - 7) Once patients are stabilized, HF clinics need to refer patients back to primary care with a care management plan.
    - 8) HQO will work with experts, CCN, and HF clinics to develop and promulgate standards to be followed by HF clinics and their referral base throughout the LHINs.
- For more information, please visit <http://www.hqontario.ca/evidence/publications-and-ohtac-recommendations/ontario-health-technology-assessment-series/specialized-community-based-care>

# Field Evaluation for Heart Failure Clinics

Dr. Harindra Wijeyesundera



# Specialized HF Clinics

- Multidisciplinary, including at least a physician, & nurse practitioner
  - Often with access to pharmacists, dietician, physiotherapist

## All Cause Mortality

- 29% reduction in favor of HF clinics

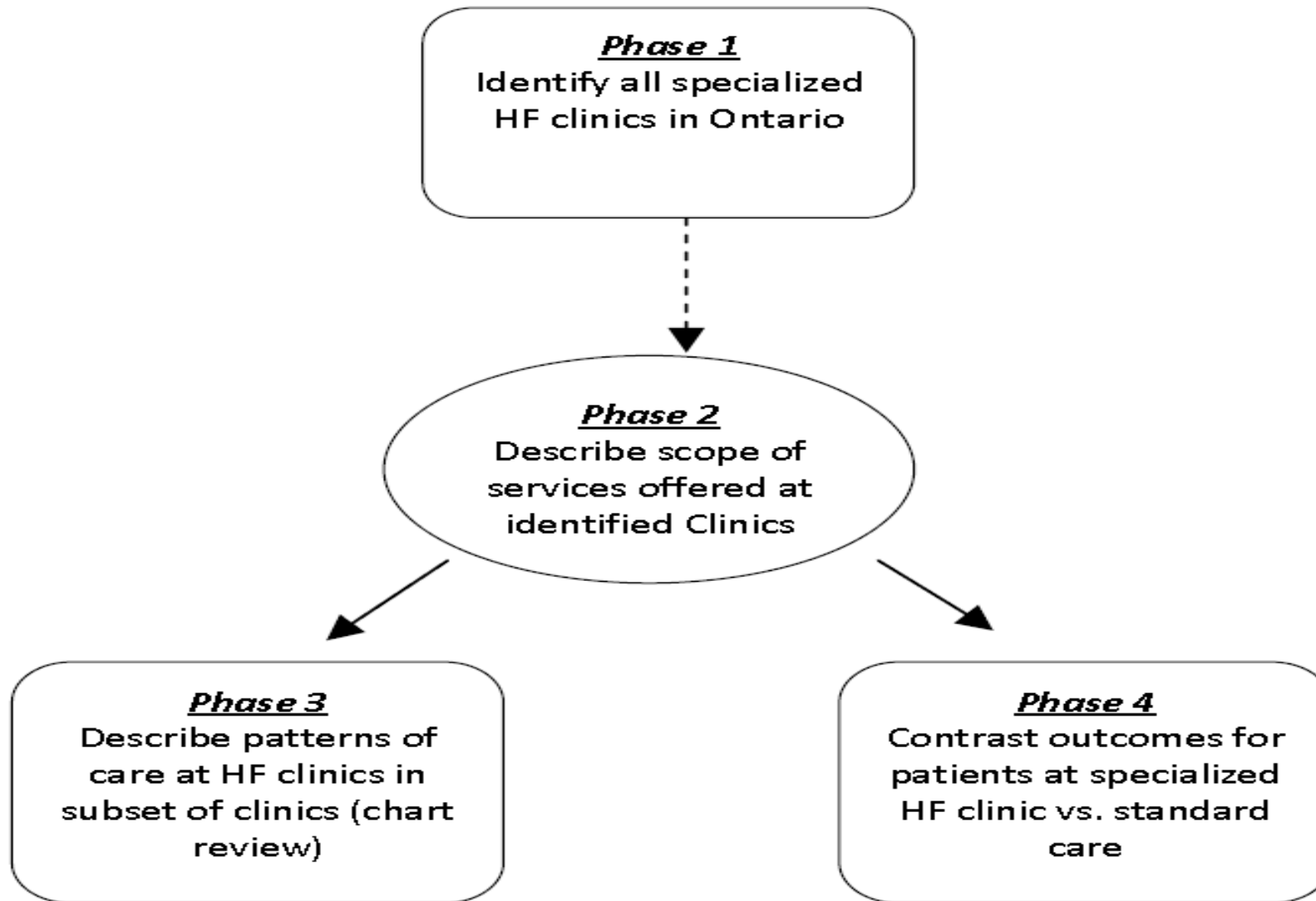
## Model Based Economic Analysis

- HF clinics to be cost-effective in Ontario
  - ICER of \$18,259 per life year gained

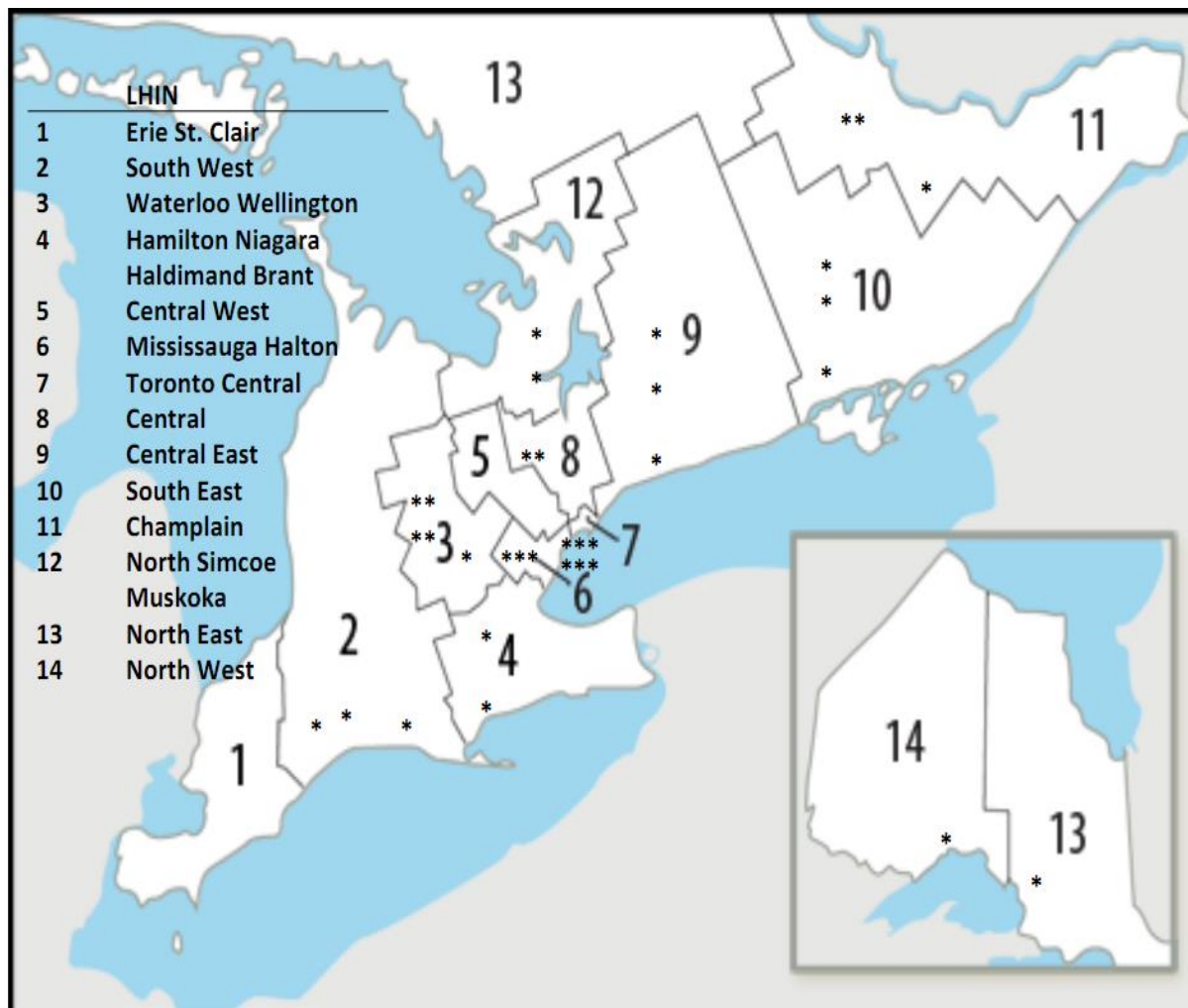
# Concerns About Literature

- Heterogeneous intervention
  - Different models studied
- Not a new technology
  - HF clinics are currently in operation
  - Are the HF clinics in Ontario reflective of the literature?

# Field Evaluation



# Phase 1-2: HF Clinics in Ontario



## Total of 34 HF clinics

- 143 total physicians
- Intensity and complexity of services were categorized and ranked in high, medium and low strata
  - (Phase 1 and 2)

# Conclusions Phase 1-3

- We found that despite the absence of funding, a large number of HF clinics are distributed across Ontario
- Substantial spectrum of:
  - Access
  - Clinic structure
  - Complexity and intensity services offered
  - Pattern of care within clinics

# Conclusions Phase 1-3

- Reflect local circumstances
  - Appropriate
- Reflect absence of adequate funding
  - Therefore represent what was possible given local funding available
- Is this variation in services offered important?

# Phase 4

- **Effectiveness and economic evaluation of multi-disciplinary heart failure clinics: a population-based study**

## **Objectives:**

- Compare clinical effectiveness and health care costs for Ontario HF patients treated at specialized HF clinics to HF patients treated with standard care
- Understand which components of HF clinics are associated with outcomes

# Results: Field Evaluation

Overall Cohort			
	HF Clinic	Standard	p-value
<i>n = 1288</i>			
Death	52.1%	54.7%	0.02
Hospitalization	87.4%	86.6%	0.009
HF Hospitalization	58.7%	47.3%	<0.001
Total Cost	\$54,311	\$39,994	<.0001
<b>ICER = \$158,344</b>			

## Clinical Level Features associated with Improved Outcomes

- Improved survival:
  - caregiver, peer support
  - defined education program
- Reduced hospitalization:
  - medication titration regiment
  - capability for rapid outpatient follow-up in response to increase surveillance

# Conclusions

- In order for HF clinics to be effective and efficient, standards are necessary for the service model
  - CCN expert panel involvement

# Heart Failure Clinics Implementation: The LHIN Perspective

Angela Jacobs

# Partnering To Accelerate

## PAN-LHIN Lead:

- Bill MacLeod, CEO, Mississauga Halton LHIN, Ontario Health Technology Advisory Council (OHTAC) Member

## Working partners:

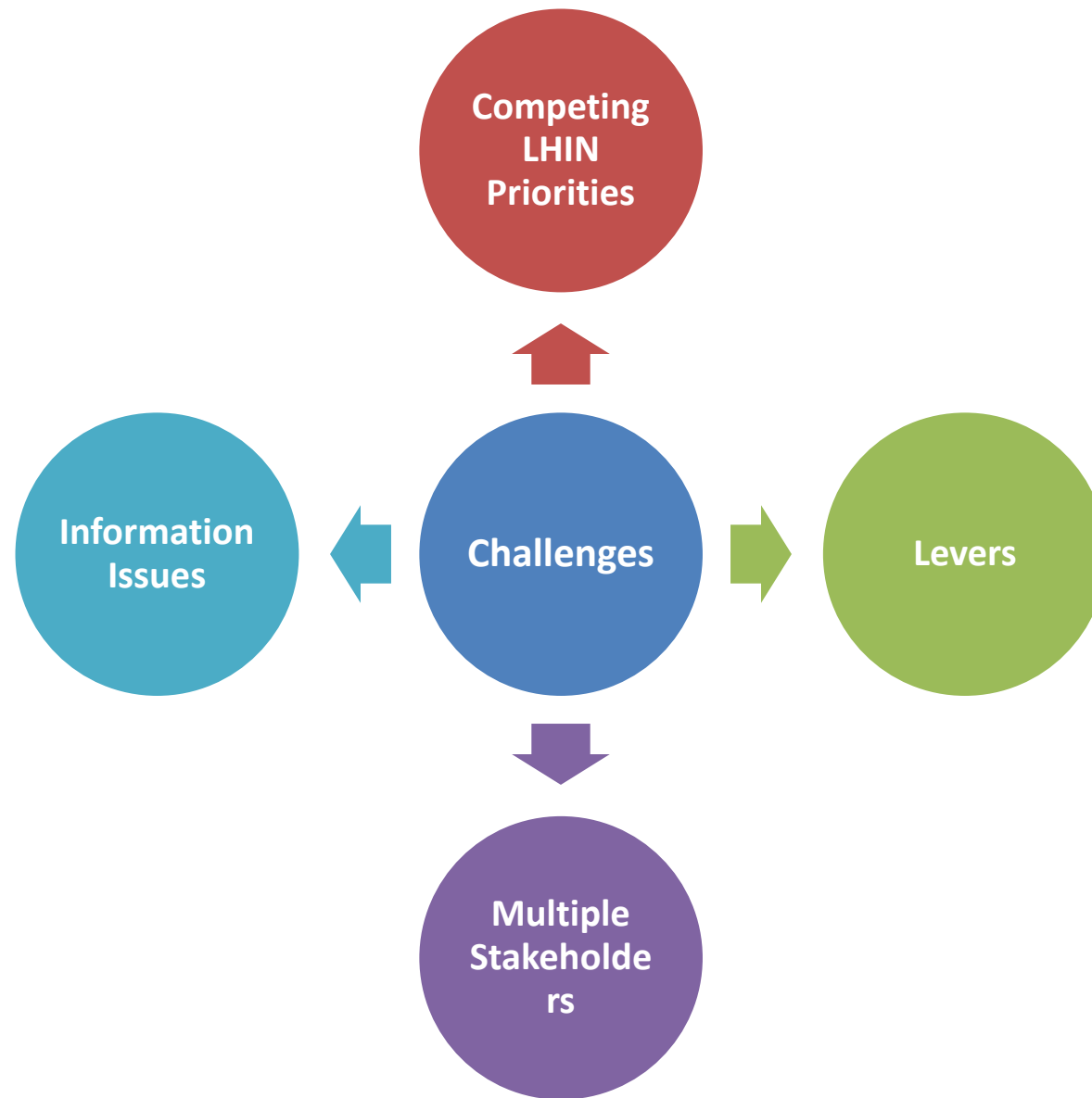
- HQO Evidence Development and Standards
- Cardiac Care Network

## Engagement with other LHINs:

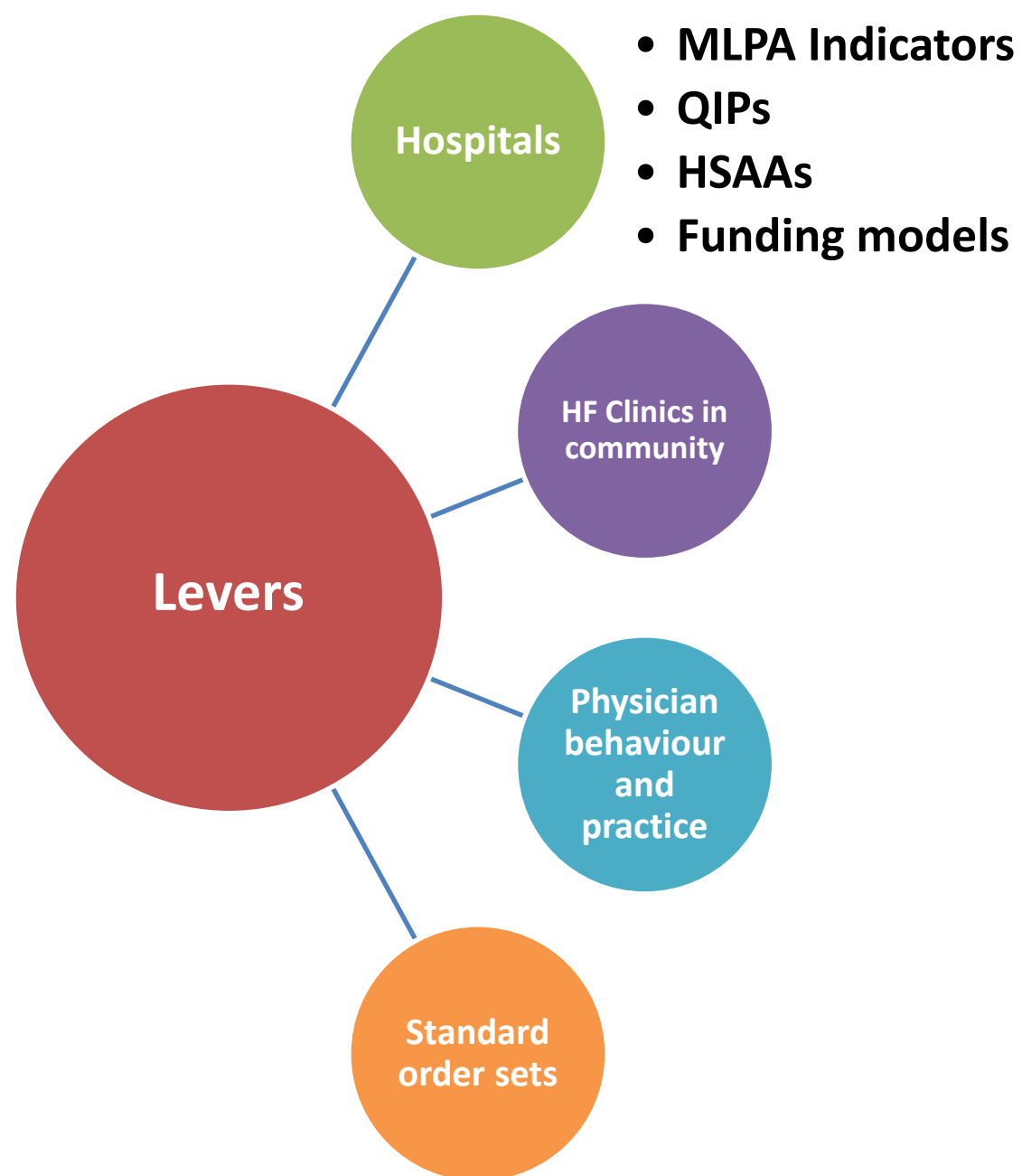
- LHIN CEOs
- LHIN Senior Directors

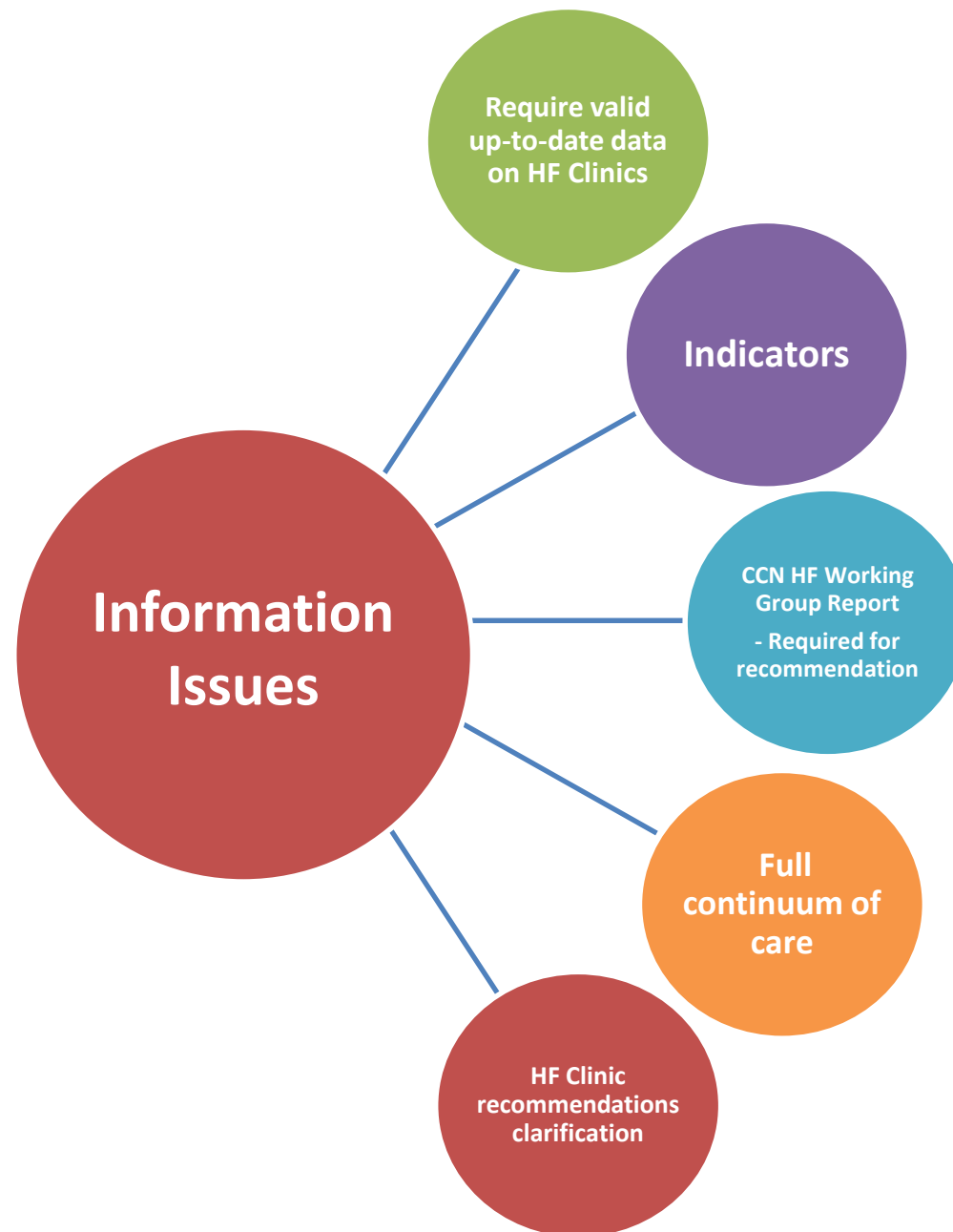
# Heart Failure Clinics Implementation

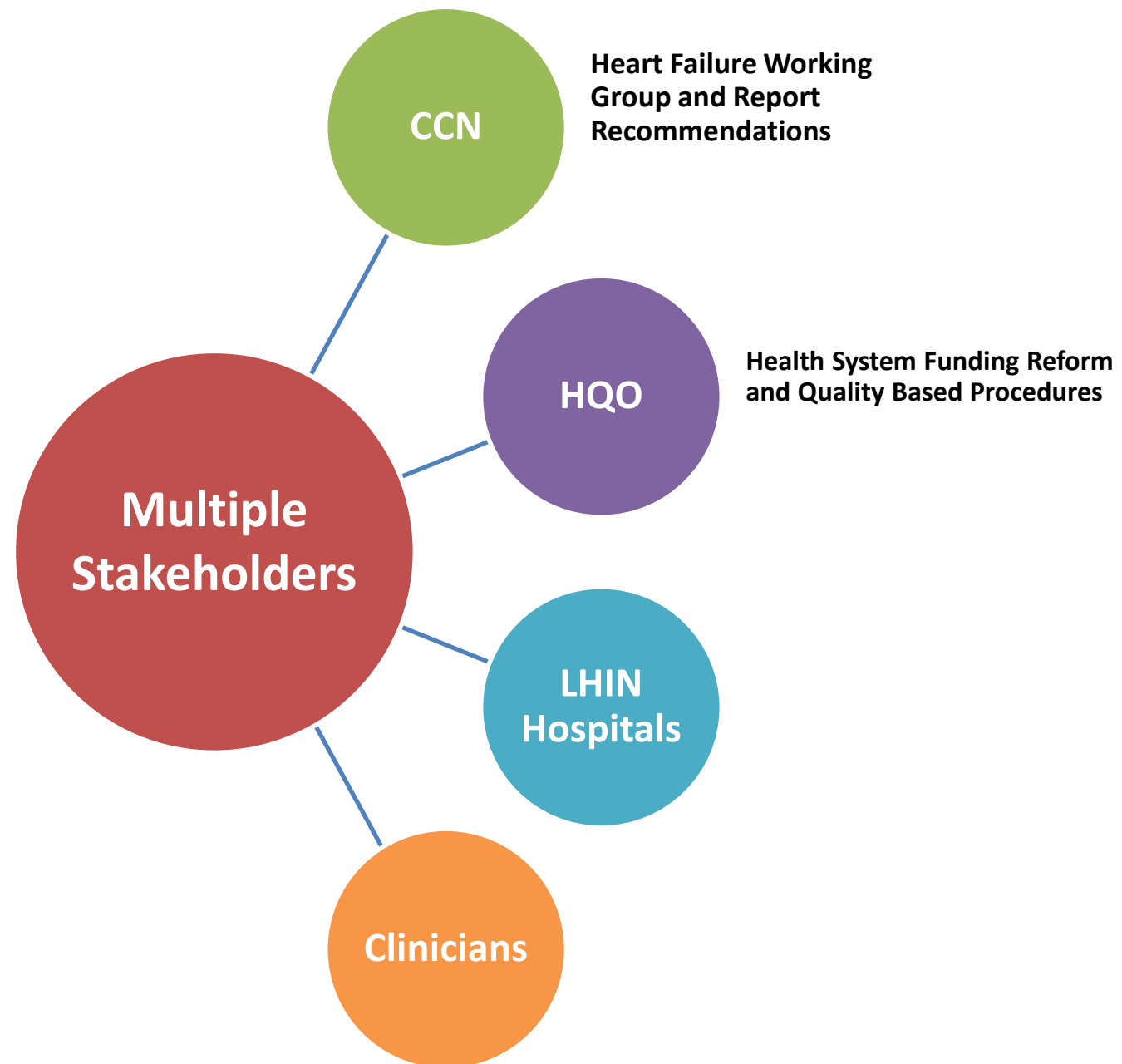
- A total of five LHINs volunteered to be early adopters (February 2013)
- CCN participation as a key enabler
- New knowledge of:
  - HSFR and QBP coming for CHF
  - CCN HF Working Group – Report - preliminary release date - April 2013
- Agreement to review CCN report and include in the implementation











# In Summary

- With several stakeholders focused on Heart Failure and with the upcoming release of the CCN Heart Failure Report, there is momentum and consensus on which to build improvement efforts for HF and HF clinics within the LHINs.
- Collaboration with these multiple stakeholders who are ready to implement these recommendations, increases our ability to influence physicians' behaviours and utilize more levers.

# Next Steps

The LHIN Working Group will meet to review the CCN Report and develop plans for collaboration with the stakeholders around the implementation of these recommendations.



# Thank You