



Prevalence of Subclinical Atrial Fibrillation in High Risk  
Heart Failure Patients and its Temporal Relationship with  
Hospital Readmission for Heart Failure  
PROTECT-HF

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***Central Coordinating Centre:***

*Population Health Research Institute*

# Rationale



- **Heart failure** (HF) is the leading cause of hospitalization, and is a significant burden on society
- >50000 Canadians are admitted to hospital every year with a primary diagnosis of HF and this is projected to continue to rise
- Despite significant advances in treatment of HF in past 20 years, rates of **re-hospitalization** remain high
- **Atrial fibrillation** (AF) is very common in HF patients and a common cause of HF exacerbation
- *Most patients with acutely decompensated HF present to hospital in **sinus rhythm***

# Rationale



- The cause for HF exacerbation cannot be identified in 40-50% cases
- **Silent (Subclinical) AF** refers to short lasting AF (minutes to hours) and can only be identified with continuous, long term ECG monitoring
- We have previously shown that **silent AF is 5-fold** more common than clinical AF
- **Could it be that Silent AF explains a majority of these unexplained cases of HF exacerbation?**

# Hypotheses



- **Silent AF is common** in HF patients with no known history of prior AF who are discharged after an acute exacerbation of HF

AND

- There is a temporal association between silent AF and **hospital readmission for HF**

# Purpose of the study



- To evaluate the prevalence of **subclinical AF  $\geq 30$  min** in duration in pts discharged from hospital following an admission for acute HF exacerbation and who have **no known history of clinical AF**
- To examine the **temporal association** between subclinical AF  $\geq 30$  minutes in duration and 30-day hospital readmission for HF



# Organization

## Coordinating Centre:

PHRI

Dr. Jorge Wong, overall PI

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Site

Site PI: Dr. Jorge Wong

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# Inclusion criteria



1. *Patient hospitalized with a most responsible diagnosis of acute decompensated HF*
2. *Clinical signs and symptoms of heart failure as per Boston criteria (i.e. score  $\geq 8$ )*
3. *Age >18 years*

# Exclusion criteria:



1. History of **atrial fibrillation**
2. History of hypertrophic **cardiomyopathy** or congenital heart disease
3. End stage **renal disease** or advanced renal dysfunction (e.g. estimated glomerular filtration rate,  $eGFR < 15 \text{ mL/min/1.73 m}^2$ )
4. Unable to provide informed **consent**
5. Presence of a pacemaker or an ICD with an **atrial lead** (which can already diagnose AF)
6. History of cardiac surgery in past 30 days





# Study Flowchart:

