

Optimizing Heart Failure Management in Community

Presentation to:

PSS: Personalized Support and Stabilization Team

QRT: Quick Response Teams

Home Health Community

December 10, 2020

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Regional Heart failure Strategy

We Are Recording!



This session is being recorded for the purpose of delivering education and workshops on behalf of Vancouver Coastal Health. It may be shared online with VCH staff.

We ask that you refrain from identifying patients, specific team members or offering any other personal information. To remain in the session is considered consent to the recording.

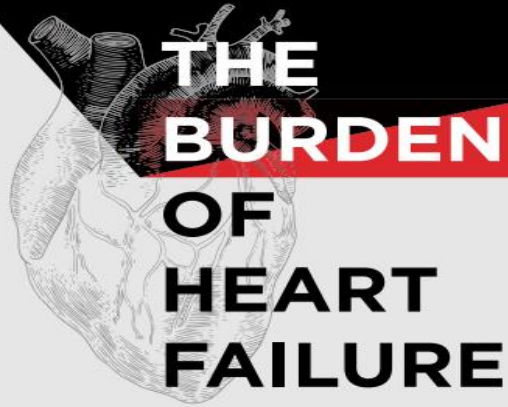
Objectives

By the end of the sessions you will have:

- A general awareness of the burden of HF
- A basic understanding of chronic heart failure
- An update on new HF pharmacological therapies
- Develop strategies to prevent hospital readmission
- An update on impact of COVID on heart failure
- Heart failure educational resources available in VCH



Burden of Heart failure



THE BURDEN OF HEART FAILURE

Heart failure means the heart muscle is damaged or weakened, unable to pump blood efficiently. It is a significant health issue for hundreds of thousands of Canadians and their families, and its reach is expanding. It is often the last stop for Canadians who experience a journey through cardiovascular disease.

Because more Canadians are surviving cardiovascular disease, more are developing heart failure. With improved diagnostics and better medical management, heart failure patients are living longer with their damaged hearts — but not without challenges.

HEART FAILURE IS A GROWING EPIDEMIC



HEART FAILURE is on the **RISE** in **CANADA.**



600,000 **CANADIANS** are living with **HEART FAILURE.**



50,000 **CANADIANS** are diagnosed each year with **HEART FAILURE.**



1 in 2 **CANADIANS** has been touched by **HEART FAILURE.**



HEART FAILURE costs more than **\$2.8 BILLION** per year.

Heart And Stroke Foundation Annual Report 2016

Today:

90,000 people over the age of 40 are diagnosed with HF each year

Over 600,000 living with heart failure in Canada

25% increase in HF hospitalization, especially adults from 30-39 years of age

Second most common cause of death in people over 65 years.

One in 4 do not know what HF is and almost half think it can be cured

The burden of HF in Canada

The burden of HF in Canada



MORTALITY^{1,2}

- One-year mortality rate: 25%
- Median life expectancy: 5.5 years



HOSPITALIZATIONS^{2,3}

- 30-day HF readmission rate: 3.5%, one-year HF readmission rate: 10.5%
- Third highest cause of hospitalization
- LOS approximately 8 days, \$10,000/hospitalization



SYSTEM IMPACT³

- Expected cost of \$2.8 billion per year by 2030 (direct and indirect costs)

Increasing frequency of acute events with disease progression leads to high rates of hospitalization and increased risk of mortality⁴⁻⁸

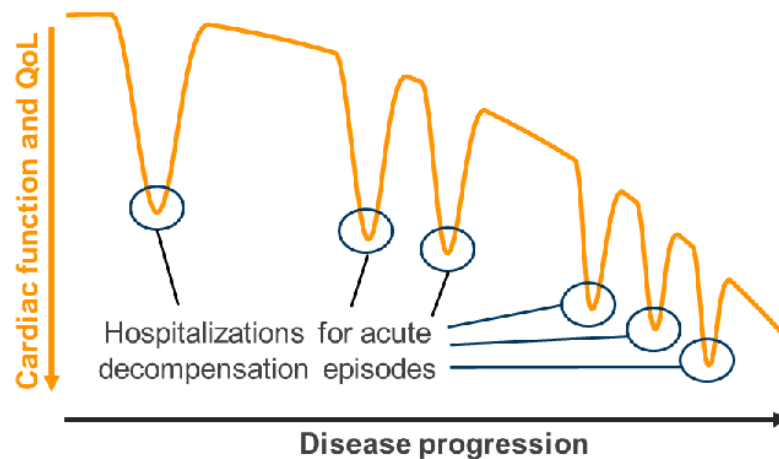


Image adapted from Gheorghiade M et al. 2005⁷

LOS, length of stay; QoL, quality of life

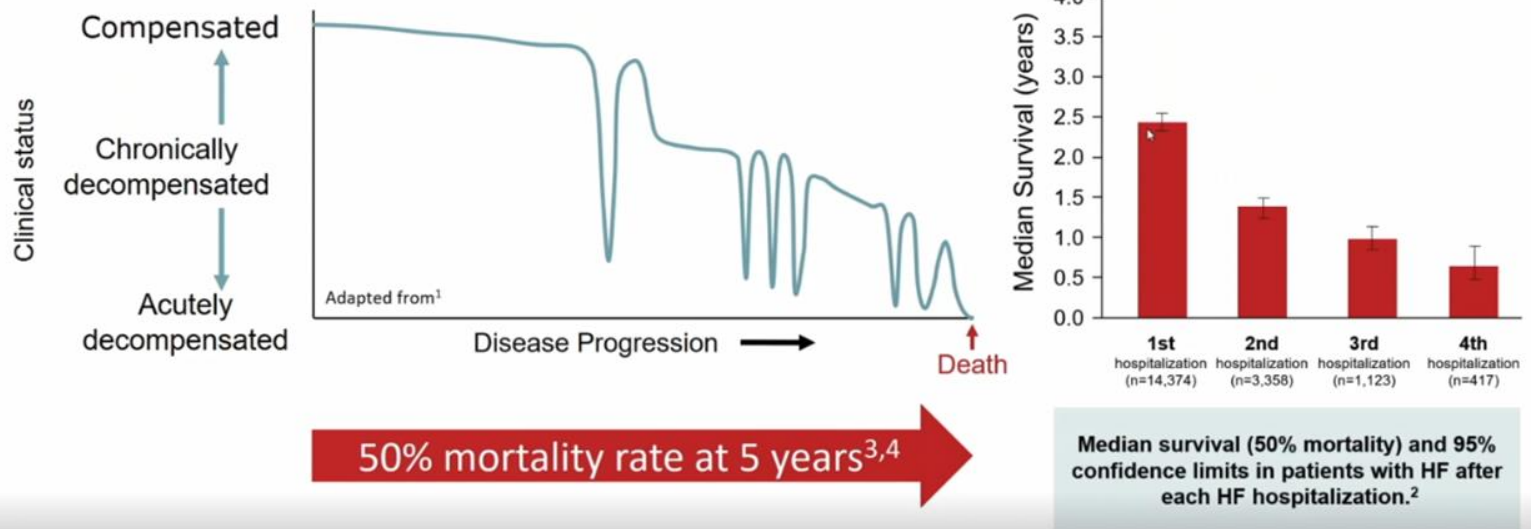
1. Atler DA et al. J Gen Intern Med 2012;27(9):1171-1179; 2. Yeung DF et al. CMAJ 2012;184(14):E765-E773. 3. Tran DT et al. CMAJ Open 2016;4(3):E365-E370;

4. Ahmed A et al. Am Heart J 2006;151(2):444-450; 5. Gheorghiade M et al. Am J Cardiol 2005;96(6A):11G-17G; 6. Gheorghiade M & Pang PS. J Am Coll Cardiol 2009;53(7):557-573;

7. Holland R et al. J Card Fail 2010;16(2):150-156; 8. Muntwyler J et al. Eur Heart J 2002;23(23):1861-1866

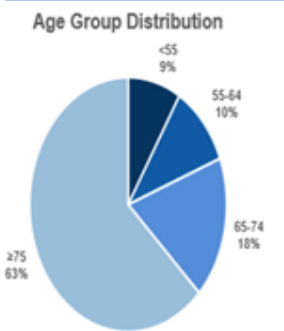
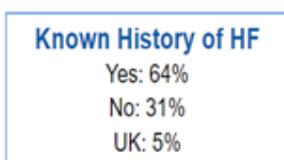
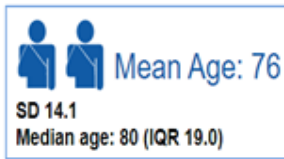
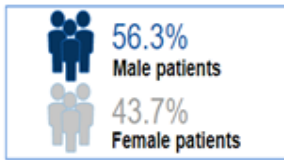
HF Trajectory

Risk increases after every ADHF episode



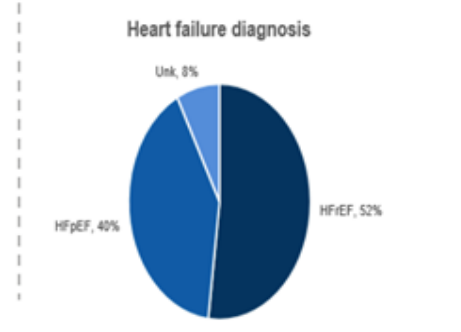
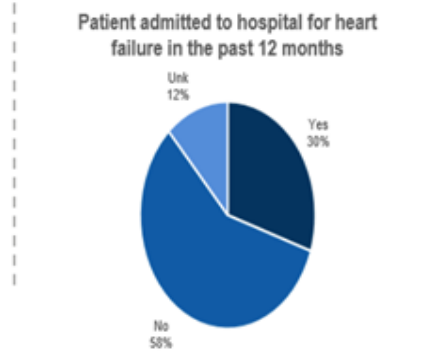
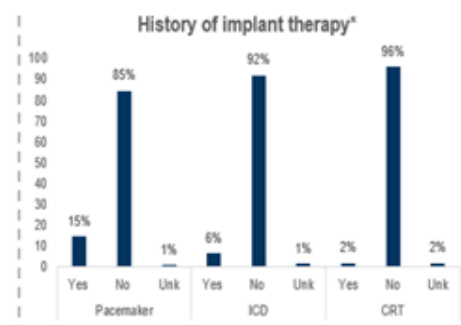
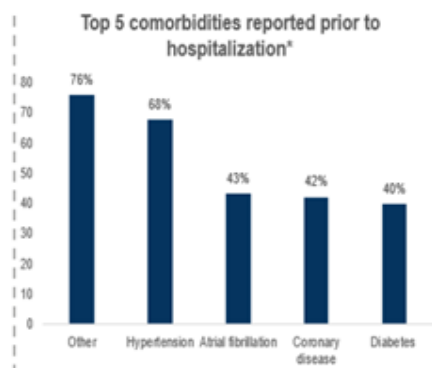
1. Gheorghiade et al. Am J Cardiol 2005;96:11G-17G; 2. Setoguchi et al Am Heart J 2007;154:26026; 3. Benjamin et al. Circulation 2017;135(10):e146-e603; 4. Roger et al. JAMA 2004;292:344-50

INPATIENTS: Selected baseline characteristics



*Multiple answers per patient possible

Total number of inpatients = 943



CAN-HF:
A Canadian multi-centre, retrospective, non-interventional study of inpatients and ambulatory patients with heart failure

Sean A. Virani MD, MSc, MPH, FRCPC, FCCS
on behalf of the CAN-HF Steering Committee

Heart Failure in BC

Canada*

Sex

Female – 43.7%

Male – 56.3%

Age group

Mean Age- 76 years (63% over 75)

Comorbidities

HTN – 68%

AFIB – 43%

CAD – 42%

DIABETES – 40%

HF Diagnosis

HFrEF - 52%

HPpEF - 40%

LOS – 8 days

**CAN-HF 2020, Canadian Multi-Center Retrospective Study of Inpatient and Ambulatory Care Patients with Heart Failure.*

British Columbia/VCH*

Sex

Female – 44 %

Male – 56 %

Age group

Mean Age- 75 years (majority over 75)

Comorbidities

HTN – 75%

AFIB – 54%

CAD - 45%

DIABETES - 41%

HF Diagnosis

HFrEF – 47%

HPpEF - 53%

LOS – 9 days

**VCH/PHC Heart Failure Audit 2019*

Need to Know

- Trajectory is long and gradual
- Patients do not return to baseline
- Punctuated with HHF
- Further decline after each hospitalization
- There is much we can do to slow the progress and improve quality of life
- Goal: Prevent re-hospitalization



What is Heart Failure

Current definition of HF

- HF is a complex clinical syndrome in which abnormal heart function results in, or increases the subsequent risk of, clinical symptoms and signs of reduced cardiac output and/or pulmonary or systemic congestions at rest or with stress¹
- Categorized based upon ejection fraction (EF): ~50% have EF $\leq 40\%$, for which there are approved therapies, and ~50% have EF $>40\%$



Echocardiography is the most accessible method to evaluate LVEF in Canada.²

EF, ejection fraction; HFmEF, heart failure with mid-range preserved ejection fraction; HFpEF, heart failure with preserved ejection fraction; HFrEF, heart failure with reduced ejection fraction;

HHF, hospitalization for HF; LVEF, left ventricular ejection fraction

1. Ezekowitz JA et al. Can J Cardiol 2017;33(11):1342-1433; 2. Steinberg BA et al. Circulation 2012;126(1):65-75.

What is Heart failure

- The inability of the heart to pump blood to meet the oxygenation and nutritional needs of the tissues
- A complex clinical syndrome
- Can result from any structural or functional cardiac disorder that impairs the ability of the ventricle(s) to fill with or eject blood

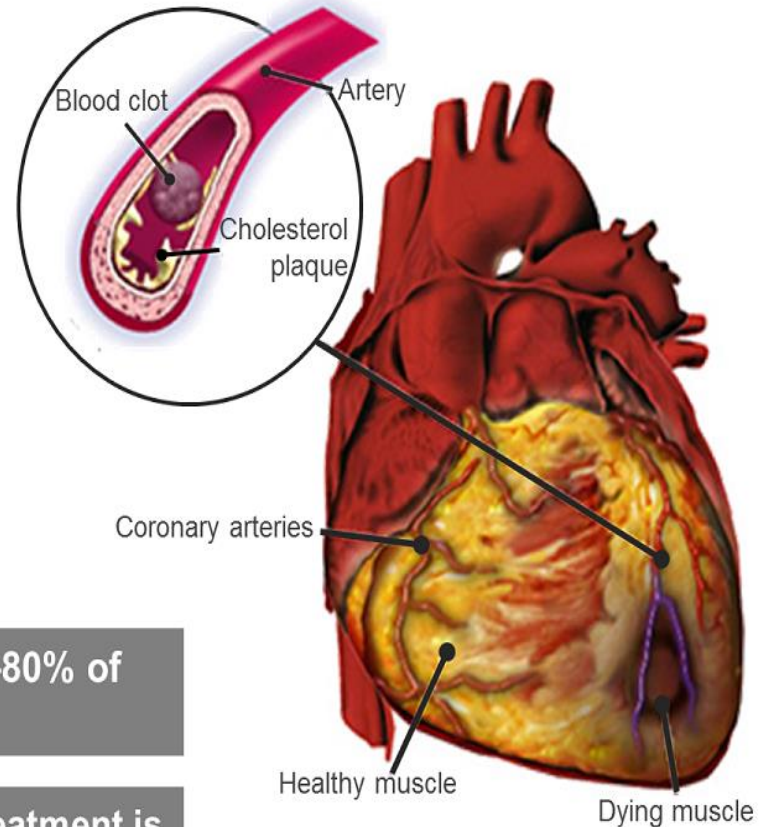
Causes of HF*

- 1- Ischemic heart disease (~60%)
- 2- Idiopathic (~20% genetic)
- 3- Valvular heart disease
- 4- Viral myocarditis
- 5- Toxins, i.e. alcohol, cocaine, specific chemotherapeutic agents, etc.
- 6- Infiltrative heart disease
- 7- Congenital heart disease

*Not an exhaustive list

Hypertension is a contributing cause in ~70–80% of persons with HF

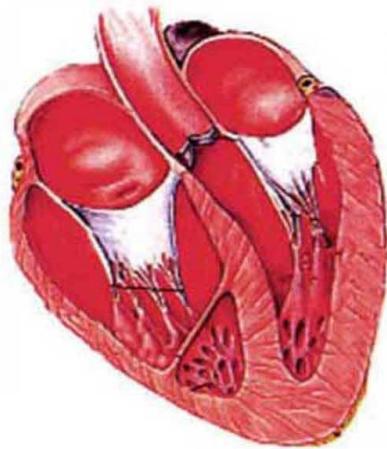
When EF is reduced, i.e. <40%, foundational treatment is similar irrespective of cause



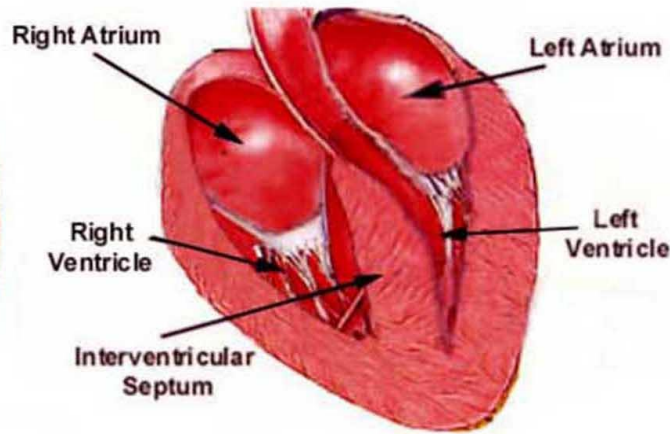
EF, ejection fraction

Ezekowitz JA et al. Can J Cardiol 2017;33(11):1342-1433; Yancy CW et al. Circulation. 2013;62(16):1495-

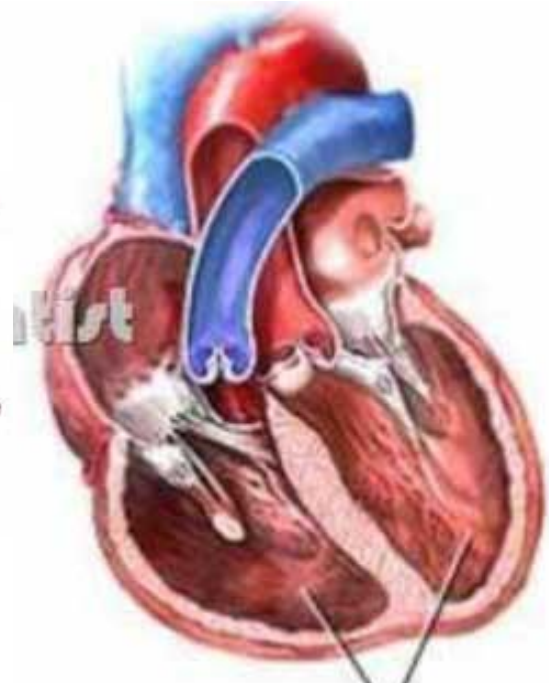
Diastolic and Systolic Heart Failure



Normal Heart



Diastolic Heart Failure



Systolic Heart Failure

Current Definition of HFpEF

HFrEF
(LVEF \leq 40%)^{1,2}

HFmEF
(41% \leq LVEF \leq 49%)^{1,2}

HFpEF
(LVEF \geq 50%)^{1,2}



- HFpEF is a clinical syndrome that evolves from a combination of risk factors and comorbidities including:³
 - Advanced age
 - Female sex
 - Obesity
 - Systemic arterial hypertension
 - Diabetes
 - Renal dysfunction
 - Anemia, iron deficiency
 - Sleep disorders
 - COPD

HFpEF “masqueraders” that should be excluded:

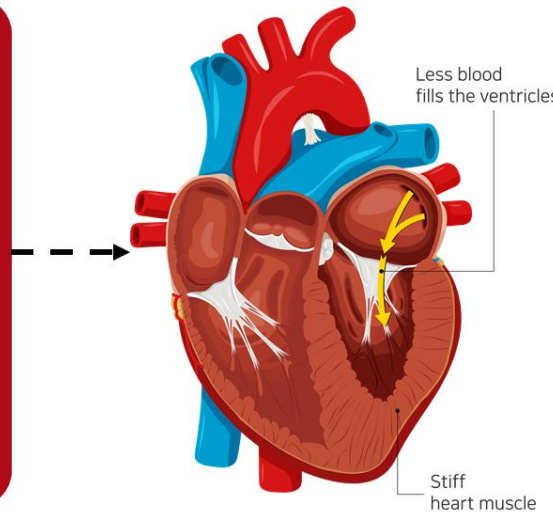
- CAD
- Valvular heart disease
- Arrhythmias
- Pericardial constriction

Echocardiography is the most accessible method to evaluate LVEF in Canada.²

Pathophysiology of HFpEF : A Practical Approach

Aggravates HF

- Hypertension/pressure overload
- Volume overload
- Increased HR
- AF
- Ischemia
- Uncontrolled DM
- Anemia
- CKD
- Progressive infiltrative or inflammatory disease



Potential Management

- Treat underlying causes:
 - Control hypertension
 - Address valvular disease
 - Manage fluids
 - Control tachycardia
 - Maintain sinus rhythm
 - Treat DM with CV-protective agents
 - Treat anemia/iron deficiency
 - Stabilize renal function
- Rule out treatable infiltrative conditions

Risk Factors for Heart Failure

- Hypertension
- Ischemic heart disease
- Valvular heart disease
- Diabetes mellitus
- Heavy alcohol use
- Chemotherapy
- Family history
- Obesity



Signs and Symptoms Left Sided Heart Failure

Left side = pulmonary congestion

Low output

- Fluid backs up into the lungs, crackles, cough
- Dyspnea, orthopnea, PND
- Dizziness, fatigue, ↓ exercise tolerance
- Displaced apex
- 3rd or 4th heart sound, murmurs
- Eventually Rt sided failure



Same/Better/Worse??

Signs and Symptoms

Right sided heart failure

Right sided failure =
venous congestion

- ↑ JVP
- Weight gain
- Anorexia, nausea & vomiting
- Ascites, liver congestion
- Pedal, leg, or sacral edema



Same/Better/Worse??

Triggers of Decompensation

- Not taking medications as prescribed
- Illness or infection (pneumonia, UTI, etc)
- Increased pressure on the heart to pump blood due to high BP
- Increased fluid intake
- Non-adherence to salt and/or fluid restrictions
- Alcohol and other non-prescription drugs

NYHA Classification of Symptoms



Class I

Class II

Class III

Class IV

No symptoms

Can perform ordinary activities without any limitations

Mild symptoms

Occasional swelling
Somewhat limited in ability to exercise or do other strenuous activities

Noticeable limitations in ability to exercise or participate in mildly strenuous activities

Comfortable only at rest

Unable to do any physical activity without discomfort

Symptoms at rest

No symptoms at rest



Canadian Cardiovascular Society HF Guidelines



Canadian Journal of Cardiology 33 (2017) 1342–1433

Society Guidelines

2017 Comprehensive Update of the Canadian Cardiovascular Society Guidelines for the Management of Heart Failure

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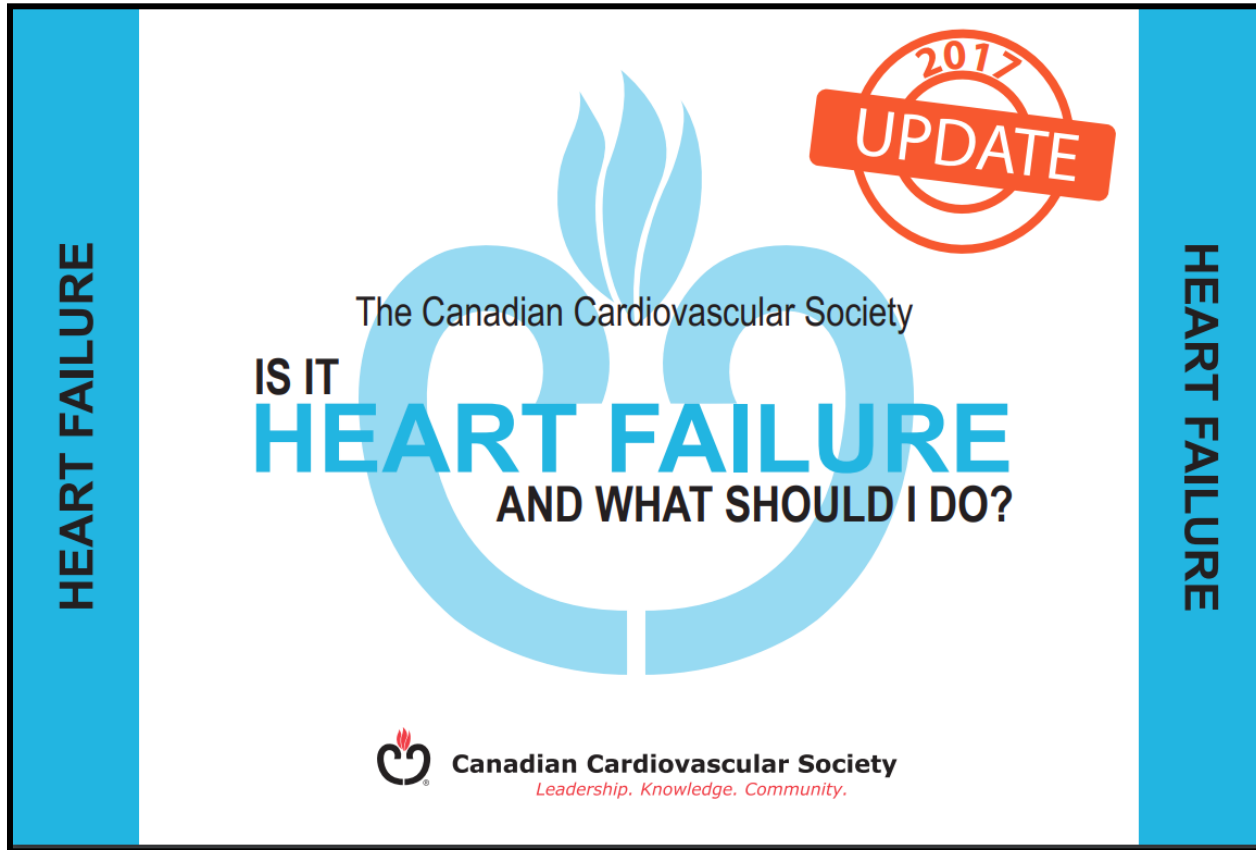
ABSTRACT

Since the inception of the Canadian Cardiovascular Society heart failure (HF) guidelines in 2006, much has changed in the care for patients with HF. Over the past decade, the HF Guidelines Committee has published regular updates. However, because of the major changes that have occurred, the Guidelines Committee believes that a comprehensive reassessment of the HF management recommendations

RÉSUMÉ

Depuis la parution des Lignes directrices sur l'insuffisance cardiaque (IC) de la Société canadienne de cardiologie en 2006, les soins aux patients atteints de ce trouble ont connu d'importants changements. Au cours de la dernière décennie, le Comité des lignes directrices sur l'IC a publié des mises à jour périodiques. Toutefois, en raison des changements importants qui sont survenus, le Comité des lignes

CCS Pocket Guideline 2017

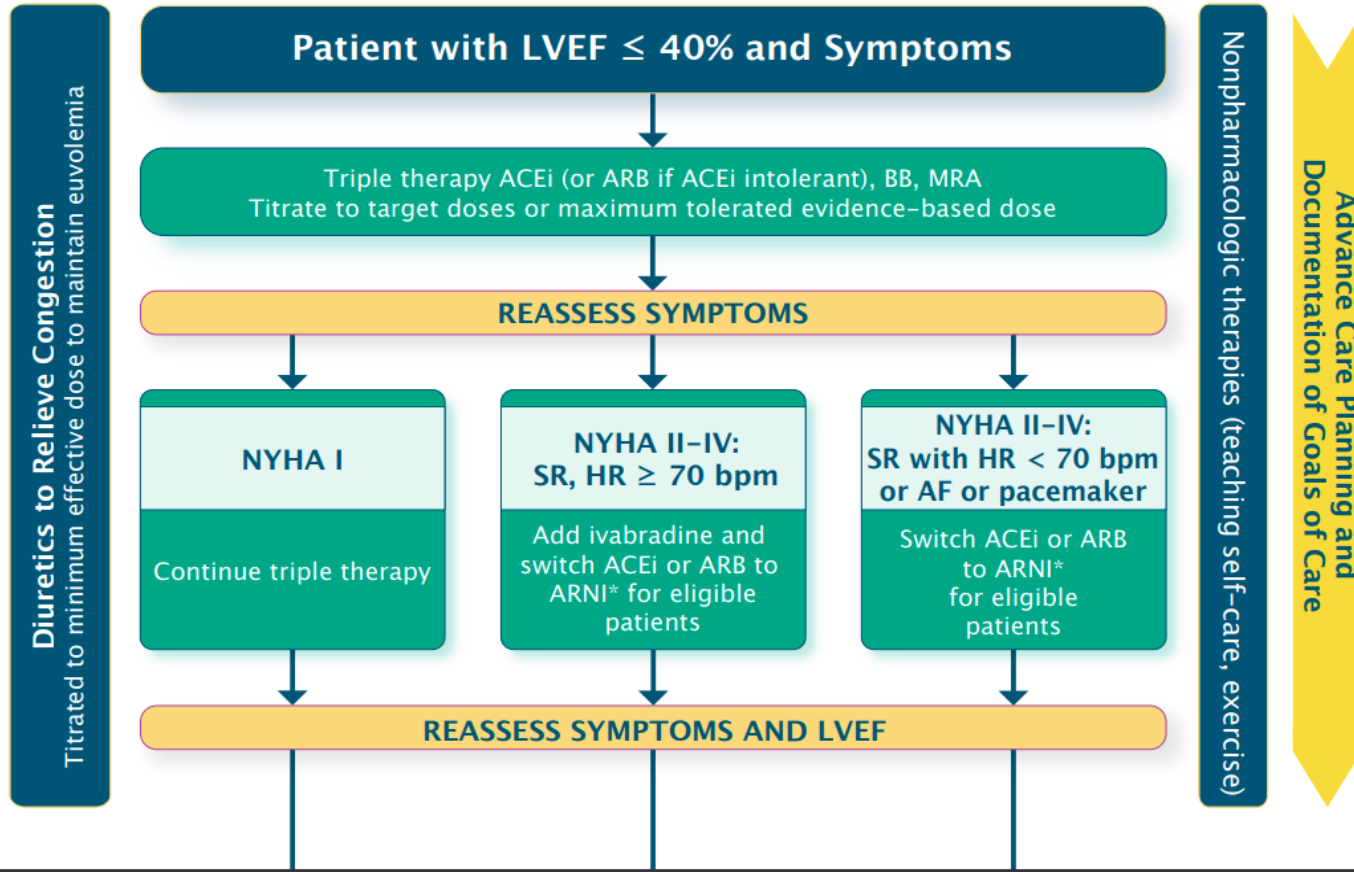


https://www.ccs.ca/images/Guidelines/PocketGuides_EN/HF%20Booklet%202017%20FINAL.pdf

Evidence-based Drugs and Oral Doses as Shown in Large Clinical Trials

Drug	Start Dose	Target Dose
<i>Ace-Inhibitors (ACEi)</i>		
Enalapril	1.25-2.5 mg BID	10 mg BID/ 20 BID in NYHA class IV
Lisinopril	2.5-5 mg daily	20-35 mg daily
Perindopril	2-4 mg daily	4-8 mg daily
Ramipril	1.25-2.5 mg BID	5 mg BID
Trandolapril	1-2 mg daily	4 mg daily
<i>Angiotensin Receptor Blocker (ARB)</i>		
Candesartan	4-8 mg daily	32 mg daily
Valsartan	40 mg BID	160 mg BID
<i>Beta-blockers</i>		
Carvedilol	3.125 mg BID	25 mg BID/ 50mg BID (> 85kg)
Bisoprolol	1.25 mg daily	10 mg daily
Metoprolol CR/XL*	12.5-25 mg daily	200 mg daily
<i>Mineralocorticoid Receptor Antagonists (MRA)</i>		
Spirolactone	12.5 mg daily	50 mg daily
Eplerenone	25 mg daily	50 mg daily
<i>Angiotensin receptor–neprilysin inhibitor (ARNI)</i>		
Sacubitril/Valsartan	24/26 mg BID	97/103 mg BID
<i>I_f Inhibitor</i>		
Ivabradine	2.5-5 mg BID	7.5 mg BID
<i>Vasodilators</i>		
Isosorbide dinitrate	20 mg TID	40 mg TID
Hydralazine	37.5 mg TID	75-100 mg TID-QID

Algorithm for treatment of HF



What is Best Practice ?

Canadian Cardiovascular Society HF Guidelines 2017

1. Triple therapy on discharge:

ACE/ARB, BB and MRA, Consider ARNI&Ivabradine

Note: 2020 Guidelines add SGLT2i

2. Daily weights

3. Fluid and salt restricted diet

4. HF self-management education

5. Multidisciplinary discharge planning

6. Follow up appointment within 2 weeks

7. Coordination of care *

NEW HEART FAILURE THERAPIES

CCS 2020 HF Therapies



ELSEVIER



Check for updates



Canadian Journal of Cardiology 36 (2020) 159–169

Society Guidelines

CCS/CHFS Heart Failure Guidelines: Clinical Trial Update on Functional Mitral Regurgitation, SGLT2 Inhibitors, ARNI in HFpEF, and Tafamidis in Amyloidosis

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New Drugs Therapies

1. ARNi, Angiotensin Receptor- Neprilysin Inhibitors also known as :

Sacubitril/valsarten or ENTRESTO

2. Ivabradine
3. SGLT2i
4. Vericiquat
5. Omecamtly – Mecarbil

Approved HF drugs in Canada and their targets

Mechanism of Action	HF Therapies	Demonstrated mortality benefit?	Demonstrated reduction in hospitalization?
Enhancement of natriuretic peptide system and renin-angiotensin-aldosterone system	ARNI	✓	✓
Inhibition of renin-angiotensin aldosterone-system	ACEI ARB	✓ } ✓ } Less effective than ARNI	✓ ✓
Inhibition of sympathetic nervous system	BB	✓	✓
Inhibition of aldosterone	MRA	✓	✓
Unknown	SGLT2i	✓	✓
Heart rate reduction	Ivabradine	✓ (in HR ≥77 bpm subgroup)	✓
Other	Hydralazine + nitrates Digoxin Loop diuretics	✓ } X } Less effective than ACEI/ARB/ARNI ?	✓ ✓ ?

ACE, angiotensin-converting enzyme; ACEI, angiotensin-converting enzyme inhibitor; ARB, angiotensin receptor blocker; ARNI, angiotensin-receptor-neprilysin inhibitor; BB, beta-blocker; BP, blood pressure; HR, heart rate; MRA, mineralocorticoid receptor antagonist; SGLT2i, sodium-glucose cotransporter 2 inhibitor

Adapted from Levin ER et al. N Engl J Med 1998;339(5):321-328;

Nathisuwan S & Talbert RL. Pharmacotherapy. 2002;22(1):27-42; Kemp CD & Conte JV. Cardiovasc Pathol 2012;21(5):365-371;

Schrier RW & Abraham WT. N Engl J Med 2009;341(8):577-585.

What is best care?

CCS 2020 Guidelines

Drug	Start dose	Target dose
ACEi		
Enalapril	1.25-2.5 mg BID	10 mg BID/20 BID (NYHA class IV)
Lisinopril	2.5-5 mg daily	20-35 mg daily
Perindopril	2-4 mg daily	4-8 mg daily
Ramipril	1.25-2.5 mg BID	5 mg BID
Trandolapril	1-2 mg daily	4 mg daily
ARB		
Candesartan	4-8 mg daily	32 mg daily
Valsartan	40 mg BID	160 mg BID
β-blockers		
Carvedilol	3.125 mg BID	25 mg BID/50 mg BID (>85 kg)
Bisoprolol	1.25 mg daily	10 mg daily
Metoprolol CR/XL*	12.5-25 mg daily	200 mg daily
MRA		
Spirolactone	12.5 mg daily	50 mg daily
Epleronone	25 mg daily	50 mg daily
ARNI: sacubitril/valsartan	50-100 mg BID	200 mg BID
If inhibitor: ivabradine	2.5-5 mg BID	7.5 mg BID
Vasodilators		
Isosorbide dinitrate	20 mg TID	40 mg TID
Hydralazine	37.5 mg TID	75-100 mg TID or QID
SGLT2i: dapagliflozin	10 mg QD	10 mg QD

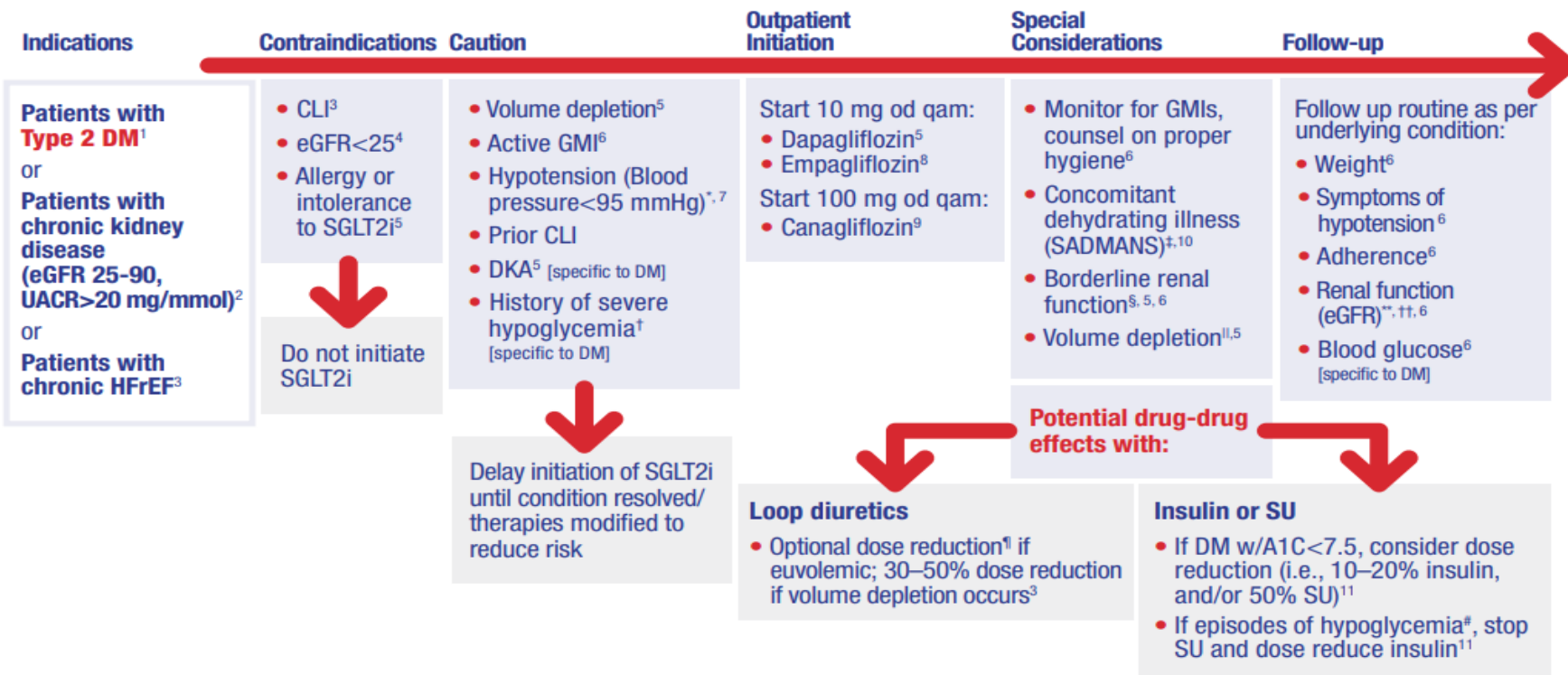
HF Guidelines Update 2020

NEW We recommend SGLT2 inhibitors, such as dapagliflozin be used in patients with mild to moderate heart failure due to reduced left ventricular ejection fraction (LVEF $\leq 40\%$) and *concomitant type 2 diabetes*, to improve symptoms and quality of life and to reduce the risk of hospitalization and cardiovascular mortality (**Strong Recommendation; High-Quality Evidence**).

NEW We recommend SGLT2 inhibitors, such as dapagliflozin be used in patients with mild to moderate heart failure due to reduced left ventricular ejection fraction (LVEF $\leq 40\%$) and *without concomitant diabetes*, to improve symptoms and quality of life and to reduce the risk of hospitalization and cardiovascular mortality (**Conditional Recommendation; High-Quality Evidence**).



Practical approach to SGLT2 inhibitors for treatment of cardiovascular disease



Abbreviations:

CLI: critical limb ischemia; **DKA:** diabetic ketoacidosis; **DM:** diabetes mellitus; **eGFR:** estimated glomerular filtration rate; **GMI:** genital mycotic infections; **HFrEF:** heart failure with reduced ejection fraction; **SGLT2i:** SGLT2 inhibitors; **SU:** sulfonylurea; **UACR:** urine albumin to creatinine ratio

This document has been exclusively developed and approved by the CHFS. CHFS has received unrestricted financial support from AstraZeneca and the Boehringer-Ingelheim - Lilly Alliance.



Canadian Heart Failure Society
Société canadienne d'insuffisance cardiaque

Sick day/dehydration illness Management

S sulfonylureas

A ACEIs/angiotensin or
angiotensin neprilysin inhibitors

D diuretics, direct renin inhibitors

M metformin

A angiotensin receptor blockers

N nonsteroidal anti-inflammatory

S SGLT2is



Heart Failure and COVID -19



GUIDANCE FROM THE CCS COVID-19 RAPID RESPONSE TEAM

Is it COVID-19 or Is it Heart Failure?

Management of Ambulatory Heart Failure Patients

Introduction

To preserve healthcare resources and prevent vulnerable patients from being unnecessarily exposed to healthcare facilities and the Emergency Department (ED), healthcare practitioners are screening patients via **virtual** assessment (phone, telehealth or regionally available platforms), in order to determine the appropriate diagnostic and treatment approach. The following is simple, practical guidance on patient evaluation and use of laboratory testing.

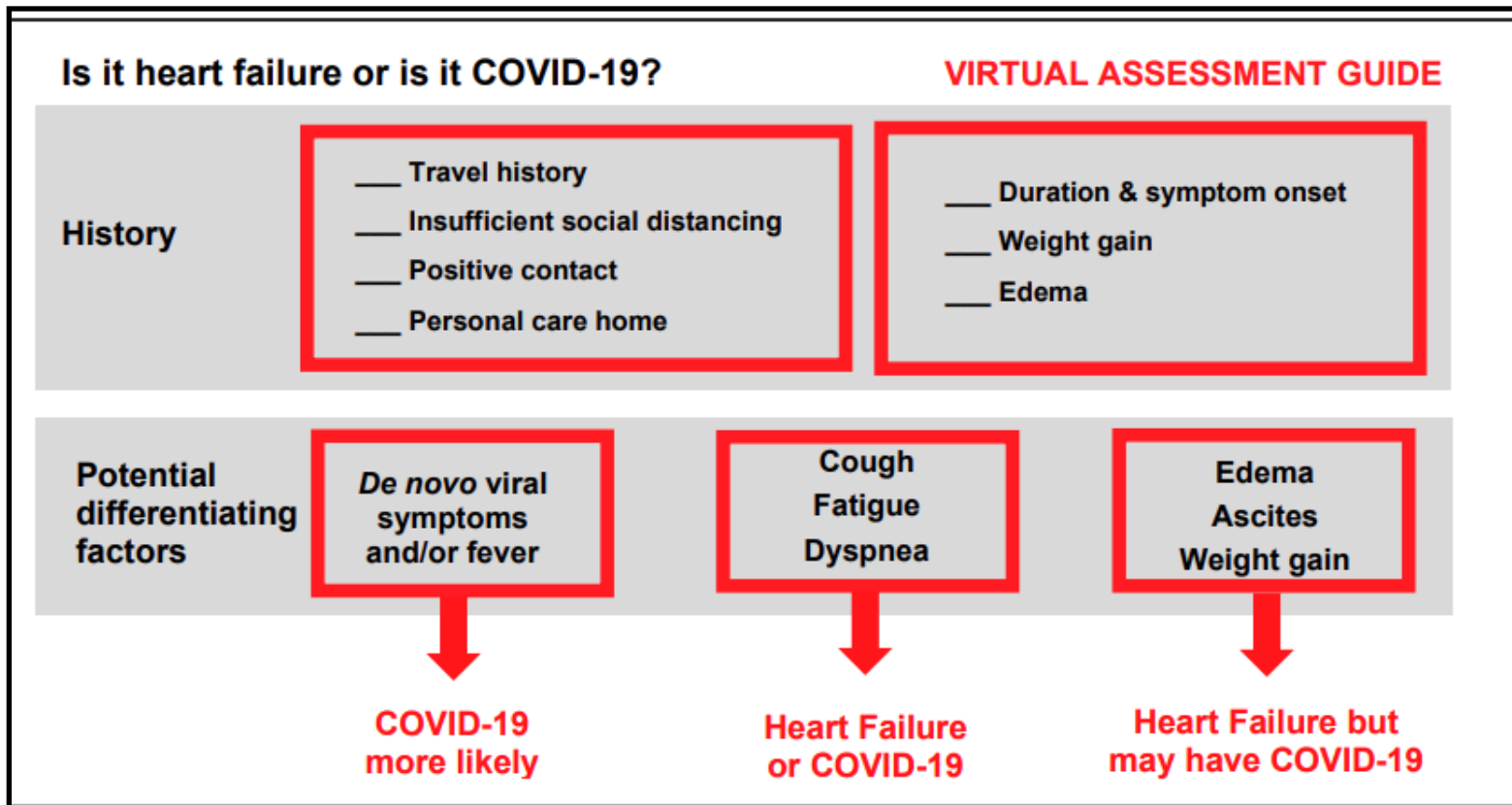
Symptom evaluation

The following tool is designed to guide your clinical reasoning to differentiate the likely etiology of symptoms for a patient with known heart failure (HF). It has not been validated, and the final determination must be made using clinical judgement. **In cases of uncertainty, patients should be advised to attend a COVID-19 testing station and/or be assessed in person following institutional protocols for PPE use**

[http://www.ccs.ca/images/Images_2020/COVID or HF RRT doc 01Apr.pdf](http://www.ccs.ca/images/Images_2020/COVID_or_HF_RRT_doc_01Apr.pdf)

Virtual Assessment Guide

COVID-19 VS HF



Need to Know

Table 2: Considerations for virtual HF management



Continue all current therapy, including RAAS blockers



Do not delay initiation or up-titration of life saving therapy. This may be critical for individual patient and system level outcomes



Fill prescriptions digitally. This may mean a change in practice, but is absolutely necessary to minimize touch points with the healthcare system



Defer imaging studies where feasible and '**Choose Wisely**'



Look closely at the **labs** you order – are they really needed or nice to have?



Address and/or update **goals of care status** for all patients



Conduct **visits virtually** utilizing existing resources and infrastructure. Specifically avoid the default of sending someone to the ER if possible

Virani and al. CJC May 2020



Canadian Heart Failure Society
Société canadienne d'insuffisance cardiaque

COVID-19 and Heart Failure: A message for patients from the Canadian Heart Failure Society

Le français suit

Please share the below with your patients. This information is also available on our [website](#).

What we know about the COVID-19 pandemic (also referred to as Coronavirus) is changing quickly. Every day we are learning more and more about the virus, how it's transmitted and how it affects those who have it. Because you are likely hearing about COVID-19 from many different sources, we want to ensure you receive accurate information about your health and well-being, and what to do during this crisis.

Why is it important that I learn about COVID-19?

If you:

- are 65 years old and older, and/or
- have a compromised immune system, and/or
- have underlying medical conditions, such as heart failure,

you have a higher risk of getting very sick if you contract COVID-19.

Even if you are at higher risk of getting very sick, there are ways that you can protect yourself and your family.

What websites have reliable information about COVID-19?

The **Public Health Agency of Canada** has very important information for ways that you can protect yourself and family from COVID-19. We encourage you to visit their [website](#) for reliable and up-to-date information.

The **World Health Organization** has information about COVID-19 in English, French, Spanish, Russian, Arabic and Chinese on their [website](#).

Should I keep taking all my heart medications?

You should continue to take all your medications as prescribed, unless instructed differently.

<https://heartfailure.ca/education/patient-resources>

During **COVID-19**, it is important that people with **HEART FAILURE** continue to manage their health.



Continue to take all your medications as prescribed unless your doctor tells you otherwise.

1.

Contact your provider and ask if your regular check ups and testing can be done by phone or via video or home services can be arranged.

2.

Contact your health care team if your symptoms become worse.

3.

Call 911 immediately if you experience signs of a heart attack or stroke.

4.

Stay socially connected using phone or video calls to reduce feelings of depression and anxiety.

For more information about online support groups, visit heartlife.ca and heartandstroke.ca/connect

5.

Feelings of depression and anxiety are real and common in heart failure. **Help is available.** Talk to your health care provider.

6.

Hospitals and health care locations are following all precautions for COVID-19. Avoiding necessary care for your heart failure in fear of COVID-19 can be more dangerous for your health.

7.

If you experience symptoms of COVID-19, contact your healthcare provider immediately.

8.

Continue to monitor salt and fluid intake. Stay active and eat a healthy diet.

9.



Heart Failure Self-Management in Community

Case Study

Presentation:

- 78 yr Female
- Chronic HF with cough
- NYHA Class 2-3
- EF 27% later 22%
- VS: BP 100/70, P 89, R 28
- Pitting Edema
- “Looking mildly unwell”
- 11 day history of SOB
- Swollen painful knee

History and Labs:

ICMO, AFIB, CAD, HTN
DM, Dyslipidemia, OA

LABS:

BNP 3002

CR 102

GFR 50

K 2.9

HGB 109

INR 6.3

COVID negative

Case Study

On Discharge:

Stabilized, no SOB, cough improved, chest was clear on auscultation, congestion improved and weight stabilized, swelling in the knee decreased, pain resolved and able to ambulate, remained hypotensive, kidney injury (d/t NSAID injections and IV Lasix) still recovering so Ramipril held, AFIB consult with interventional cardiologist for restart of NOAC or consider an Atrial Appendage, A1C 5.7 showed good glycemic control so Glycazide held.

Cardiac Function Clinic Telehealth:

Nov.3 - Start Spironolactone, consider Entresto or increase Ramipril

Nov.18 – Start Entresto and Empagliflozen, also approved for LAA in December or January

3M: Elements to Self-care

1. Maintenance

Behaviours to reduce risks and adhere

2. Monitoring

Daily routine checking

3. Management

Evaluate change in symptoms

Non-pharmacologic Strategies

- Sodium and fluid restriction
- Daily weight monitoring
- Regular exercise may improve QoL
- Achieving and maintaining healthy body weight
- Smoking cessation
- Annual influenza, periodic pneumococcal pneumonia immunizations and current/future vaccines relevant to this high-risk population (e.g., COVID-19)
- Close follow-up and disease management
- Patient and caregiver education

Tips for self-care

- ❖ Build confidence in self-management skill
- ❖ Tailor to cognitive and emotional status
- ❖ Enhance trusting relationship
- ❖ Navigate shared decision-making
- ❖ Strive for individualized care
- ❖ Incorporate caregiver and social supports
- ❖ Attend to EOL conversations


VCH HEART FAILURE RESOURCES

Differentiating HF and COPD

Differentiating between Heart Failure and COPD Exacerbation		
	Heart Failure	COPD Exacerbation
Symptoms	Breathless ness at rest or lying flat, increasing fatigue, may feel sub sternal cardiac pain D/T ischemia Key: Breathlessness on exertion, more than usual	Breathlessness at rest, fatigue Key: Prolonged (48 hours or more) increased SOB from usual,
Signs	Acute or gradual onset dyspnea and SOB, wheeze and /or crackles on auscultation D/T venous congestion and pressure, may have non-productive cough, with white or pink frothy sputum, PND, elevated JVP, heart murmurs (S3,S4), AFIB and other arrhythmias, peripheral edema, ascites, Key: weight gain, tight cloths,	Gradual and worsening dyspnea and SOB , use of accessory muscles, “barrel chest”, wheeze, decreased air entry and crackles auscultation, cyanosis, <u>chronic</u> cough with fever and yellow sputum if pneumonia active, PND, malnutrition, weight loss Key: Increased amount of mucus from the usual and change in mucus form the usual
Diagnostics	High BNP , CXR: cardiomegaly or vascular congestion, ECHO: confirms HFrEF or HFpEF, ECG: confirms LVH	Normal or slightly elevated BNP, CXR shows infiltrate, large volume capacity with flat diaphragm (air trapping),
Pulmonary Function Test	PFT may be normal or airflow obstructions may be due to acute venous congestion	Expiratory flow limitation, mild, moderate or severe FEV/FVC ratio spirometry D/T weakened airways
Triggers	Fluid overload D/T salt diet, increased fluid intake , CAD, arrhythmias, elevated BP, use of NSAIDs, illness , stress, alcohol, chemo, thyroid	Respiratory infection, pollutants , sudden change in climate and air quality
Treatment Response	Improvement when extra fluids are removed and HF medications optimized	Improvement with steroids and other COPD medications

Heart Failure Action Plan

Patient Information



How you want to be treated.

My Heart Failure Plan - How do I feel today?


Daily checks

- Take my medications exactly how my doctor or pharmacist has instructed.
- Drink 6 to 8 glasses of fluids each day (1 glass = 250 ml, 6-8 glasses = 1500 ml – 2000 ml).
- Eat foods or liquids that are low in salt or salt-free.
- Check for swelling in my feet, ankles, legs and stomach each day.
- Weigh myself every day in the morning before I eat breakfast and write it down. Keep track of changes in weight and watch for weight gain.

Which heart failure zone am I in today?


Safe zone: I have...

What should I do?



Safe Zone


- No shortness of breath.
- No chest discomfort, pressure or pain.
- No swelling in my feet, ankles, or legs.
- No weight gain of more than 4 pounds (2 kilograms) in 2 days or 5 pounds (2.5 kilograms) in 1 week.



- Take my regular medications.
- Continue with my daily checks.


Caution zone: I have one or more symptoms...

What should I do?



Caution Zone


- More short of breath than usual.
- Have not slept well because my breathing is more difficult.
- Find it harder to breath when lying down.
- Wake up at night short of breath.
- Have swelling in feet, ankles or legs.
- Gained more than 4 pounds (2 kgs) in 2 days or 5 pounds (2.5 kg) in 1 week.



- Arrange to see my doctor
Name: _____
Phone: _____
- Call 811, the BC Nurse Line, and speak with a nurse.
- Other:
Name: _____
Phone: _____


Danger zone: I have one or more symptoms...

What should I do?



Danger Zone

- Struggling to breathe.
- Have a fast heartbeat that does not slow down with rest.
- Have chest pain.
- Unable to think clearly.



Act fast!

- Dial 911 for an ambulance to take me to the hospital emergency department.

The information in this document is intended solely for the person to whom it was given by the health care team.

FD 250 H351 PHC (Apr-15)
Page 1 of 1



HEART FAILURE AND YOU

<https://vimeo.com/176344773/21f1347c67>



Link to HF Companion Video:
<https://vimeo.com/176344773/21f1347c67>

End-of-Life Issues

- Early discussions about HF prognosis
- Regular review of goals of care
- Look for and treat depression
- *Palliative Approach to care and the Role of the Nurse CNA Policy:* <https://cna-aiic.ca/en/policy-advocacy/palliative-and-end-of-life-care>
- VCH and Advance Care Planning:
<https://my.vch.ca/dept-project/Client-Relations-and-Risk-Management/advance-care-planning>

Heart Failure Network

EOL Resources

The screenshot shows the homepage of the BC's Heart Failure Network. At the top, there is a search bar and a navigation menu with links for 'About', 'For BC Healthcare Providers', 'For Patients and Families', 'News and Events', and 'Working Group Member Login'. The main content area features a large banner with the text 'KNOWLEDGE SHARED' and 'We are committed to education'. Below this, there is a red sidebar with a list of resources: 'PRACTICE RESOURCES', 'REFERRALS: HEART FUNCTION CLINIC ECHOCARDIOGRAM, NUCLEAR CARDIOLOGY', 'SERVICES BY HEALTH AUTHORITY', 'PRACTICE / CARE STANDARDS', 'PROFESSION-SPECIFIC RESOURCES', 'LANDMARK RESEARCH TRIALS', and 'END OF LIFE TOOLS'. The bottom of the page has sections for 'EVENTS' and 'NEWS'. The BC's Heart Failure Network logo and tagline 'Quality care for quality life.' are also visible.

The screenshot shows the 'End of Life Tools' page. At the top, there is a breadcrumb trail: 'BC's Heart Failure Network > For BC Healthcare Providers > End of Life Tools'. The main heading is 'End of Life Tools'. Below this, there is a section for 'ipall (Palliative Care Assessment tool)' with a download icon and the text 'Download iPall Heart Failure - Palliative Care Assessment Tool'. The next section is 'Patients Advanced Personal Action Plan', which includes a paragraph explaining the tool's purpose and a link for 'Advanced Personal Action Plan (381)'. The final section is 'Clinical Practice Guidelines for Heart Failure Symptom Management', which lists several symptoms with corresponding links: 'Anorexia/Cachexia' (Anorexia and Cachexia (385)), 'Dyspnea' (Dyspnea (496)), and 'Edema/Ascites' (Edema and Ascites (324)).

Links

1. CPD for HF Management in Community:

http://vchconnect/policies_manuals/reg_policy_clinical/clinical_care/search/Pages/s/results.aspx?k=heart%20failure%20&s=CPDs

2. CCRS Heart Failure Course (4 modules):

https://learn.vch.ca/m2/vch_custom/transition/index.html

3. BC Heart Failure Network resources(including EOL and ICD Deactivation):

<http://www.bcheartfailure.ca/for-bc-healthcare-providers/>

4. VCH/PHC PHEM site - heart failure resources:

<http://vch.eduhealth.ca/>

5. My Heart Failure Plan companion video:

<https://vimeo.com/176344773/21f1347c67>.

6. CCS Heart Failure Guidelines 2017:

http://www.ccs.ca/images/Guidelines/PocketGuides_EN/HF%20Booklet%202017%20FINAL.pdf



Extra Slides

CCS Guidelines: ARNI

RECOMMENDATION 33:

We recommend that an ARNI be used in place of an ACEi or ARB, in patients with HFrEF, who remain symptomatic despite treatment with appropriate doses of GDMT to decrease cardiovascular death, HF hospitalizations, and symptoms (Strong Recommendation; High-Quality Evidence).

Values and preferences. This recommendation places high value on medications proven in large trials to reduce mortality, HF re-hospitalization, and symptoms. It also considers the health economic implications of new medications.

Note: Wash out period 36 hours

CCS Guidelines: Ivabradine

RECOMMENDATION 34:

We recommend that Ivabradine be considered in patients with HFrEF, who remain symptomatic despite treatment with appropriate doses of GDMT, with a resting heart rate > 77 beats per minute (bpm), in sinus rhythm, and a previous HF hospitalization within 12 months, for the prevention of cardiovascular death and HF hospitalization (Strong Recommendation; Moderate-Quality Evidence).

Values and preferences. High value is placed on the improvement of cardiovascular death and HF hospitalizations as adjunctive therapy to standard HF medication.

Note: Phosphenes and QT abnormalities

Personalized Support & Stabilization (PSS) Program

Personalized Support & Stabilization Team: In a Nutshell
Provides intensive wrap around care for up to eight weeks;

- Gives access to a rapid response team available seven days a week with extended hours and an ability to monitor clients remotely;
- Connects community with acute partners (i.e. geriatricians, hospitalists, etc.) early in the transition process to facilitate earlier discharges and get people back home faster so their time in hospital is shorter;
- Collaborates with primary care professionals (i.e. GP/NPs) to ensure clients remain connected to the care they need once clients transition back to their primary care provider and community care team;
- Provides team based care to ensure coordination of care, effective intra-team communication and optimal patient centered care;
- Ensures all staff on the team are working to their full scope of practice and provides one 'Most Responsible Clinician' to simplify access and ensure clients know who to contact when they need help or more intensive care;
- Implements standardized processes and protocol driven care so there is consistency across VCH and PHC sites; and
- Encompasses a holistic approach to getting clients back out into the world around the

Eligible patients must meet the following criteria:

- Are medically complex frail adults
- Can be safely cared for at home
- Are identified as a high risk of readmission
- Don't require 24 hour professional care
- Have potential for functional improvement
- Wish to actively engage and participate
- Are able to manage their condition