Disclosures

Consulting/Advisory Board:
Abbott, Akcea, Astra Zeneca, Amgen, Alnylam, Boehringer Ingelheim, Cardiol Therapeutics, Merck, Novartis, Pfizer, Servier

Speaker:
Astra Zeneca, Boehringer Ingelheim, Eli- Lilly, Novartis, Servier

Clinical Trials:
Amgen, Astra Zeneca, Bayer, Boehringer Ingelheim, Merck, Novartis

Research Grants:
Novartis

Educational Grants:
Servier

Canadian Cardiovascular Society

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CHFS SCIC

Canadian Heart Failure Society
Société canadienne d'insuffisance cardiaque

CCS CHFS Clinical Practice Update HF Phenotype Pathway *Preview*

Shelley Zieroth, MD

President, Canadian Heart Failure Society

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- Derek Leong RPh
- Dr. Kim Anderson

Objectives

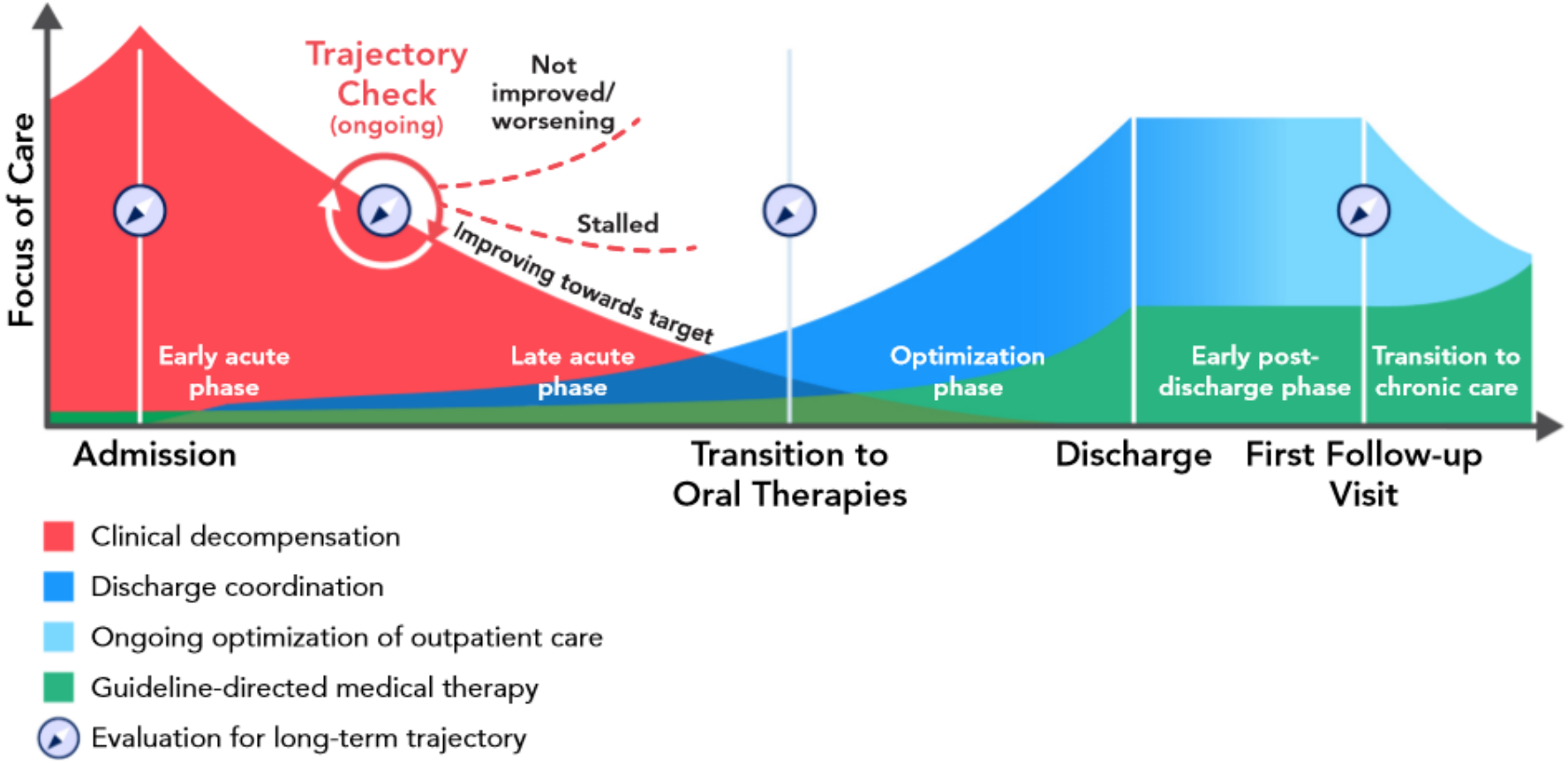
- Preview/*crowdsource* the CHFS phenotype pathway/algorithm for the practical application of HF therapies

- Reveal the CHFS inpatient HF order set, discharge tool and patient diary

NOTE:

Final CCS CHFS CPU HF Phenotype Pathway will be e-published in the Canadian Journal of Cardiology simultaneous with the CHFS Spotlight podium presentation at the Canadian Cardiovascular Congress, October 22-25, 2020

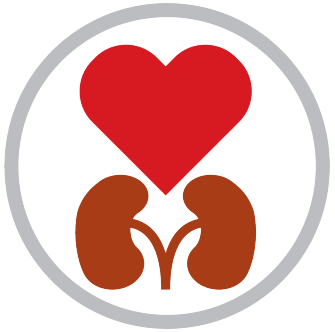
Clinical Course of Heart Failure



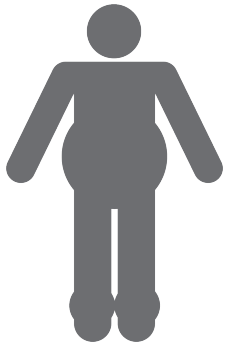
2019 ACC Expert Consensus Decision Pathway on Risk Assessment, Management, and Clinical Trajectory of Patients Hospitalized With Heart Failure Steven M. Hollenberg, Lynne Warner Stevenson, Tariq Ahmad, Vaibhav J. Amin, Biykem Bozkurt, Javed Butler, Leslie L. Davis, Mark H. Drazner, James N. Kirkpatrick, Pamela N. Peterson, Brent N. Reed, Christopher L. Roy, Alan B. Storrow, J Am Coll Cardiol. 2019 Oct, 74 (15) 1966-2011

Phenotypes

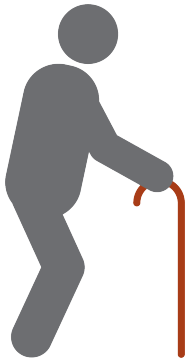
T2DM



CRS/Stalled



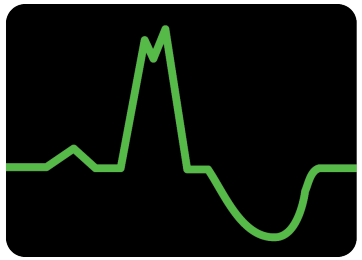
Wet
Hypertensive



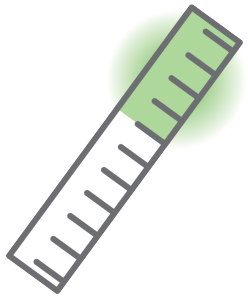
Elderly

Afib

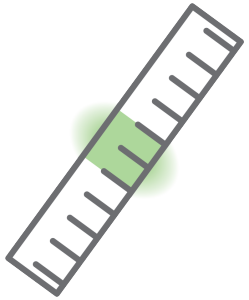
High
Heart Rate



LBBB



HFpEF



HFmrEF

De novo

Type 2 Diabetes

- In a patient with Type 2 DM and LVEF 35% and NYHA 2-3 symptoms how would you prioritize their GDMT (assuming Health Canada/ regulatory approval)

A) RASi BB MRA SGLT2i

B) RASi SGLT2i BB MRA

C) SGLT2i RASi BB MRA

RASi = (Ace or ARB or ARNi)

BB = (B Blocker)

MRA = (Mineralocorticoid receptor antagonist)

SGLT2i = (Sodium glucose co-transporter 2 inhibitors)

Type 2 Diabetes

- In a patient with Type 2 DM and LVEF 35% and NYHA 2-3 symptoms how would you prioritize their GDMT (assuming Health Canada/ regulatory approval)

What did the majority around the CPU table say?

A) RASi BB MRA SGLT2i

B) RASi SGLT2i BB MRA

C) SGLT2i RASi BB MRA

How About Without Type 2 Diabetes ?

- In a patient with LVEF 35% and NYHA 2-3 symptoms how would you prioritize their GDMT (assuming Health Canada/ regulatory approval)

A) RASi BB MRA SGLT2i
B) RASi SGLT2i BB MRA
C) SGLT2i RASi BB MRA

RASi = (Ace or ARB or ARNi)

BB = (B Blocker)

MRA = (Mineralocorticoid receptor antagonist)

SGLT2i = (Sodium glucose co-transporter 2 inhibitors)

How About Without Type 2 Diabetes ?

- In a patient with LVEF 35% and NYHA 2-3 symptoms how would you prioritize their GDMT (assuming Health Canada/ regulatory approval)
- What did the majority around the CPU table say?

A) RASi BB MRA SGLT2i

B) RASi SGLT2i BB MRA

C) SGLT2i RASi BB MRA

How About Without Type 2 Diabetes ?

- In a patient with LVEF 35% and NYHA 2-3 symptoms how would you prioritize their GDMT (assuming Health Canada/ regulatory approval)
- In the last case which 2 drugs would you start simultaneously?

A) RASi BB MRA SGLT2i

B) RASi SGLT2i BB MRA

C) SGLT2i RASi BB MRA

D) SGLT2i RASi BB MRA

High Heart Rate

- In a euvolemic patient with a BP of 90/60 on metoprolol 100 mg po BID and a Heart Rate of 98 bpm (sinus) LVEF 35% and NYHA 2-3 symptoms how would you address the residual risk of elevated heart rate?

A) Uptitrate Bblocker

B) Add ivabradine

High Heart Rate

- In a euvolemic patient with a BP of 90/60 on metoprolol 100 mg po BID and a Heart Rate of 98 bpm (sinus) LVEF 35% and NYHA 2-3 symptoms how would you address the residual risk of elevated heart rate?

- What did the majority around the CPU table say?

A) Uptitrate Bblocker

B) Add ivabradine

De novo HFrEF

- In a patient admitted with newly diagnosed ADHF with LVEF 35% how would you prioritize their in hospital GDMT (assuming **NO** regulatory restriction) ?

A) ACEi BB MRA then switch to ARNI as outpatient

B) ACEi BB MRA no switch to ARNI as outpatient until reassess LVEF

C) ARNI BB MRA

ACEi = Ace Inhibitor
BB = Beta blocker
MRA = Mineralcorticoid receptor antagonis
ARNI = Angiotensin receptor neprilysin inhibitor

De novo HFrEF

- In a patient admitted with newly diagnosed ADHF with LVEF 35% how would you prioritize their in hospital GDMT (assuming **NO** regulatory restriction) ?
- What did the majority around the CPU table say?

A) ACEi BB MRA then switch to ARNI as outpatient

B) ACEi BB MRA no switch to ARNI as outpatient until reassess LVEF

C) ARNI BB MRA

Shelley Zieroth @ShelleyZie... · 1d

💥Polltime pre HFUpdate.ca next wknd: Did #covid19 ⬆️ your use of ARNI first line over Acei to reduce hosp+ HCU in HFrEF pts? @IAmDrIbrahim @JJheart_doc @GiuseppeGalati_ @ValleAlfonso @hvanspall @gcfmd @BiykemB @AndrewJSauer @DrRajivsankar @mmamas1973 @DrMarthaGulati

YES Chronic HFrEF only	5%
YES Chronic+Denovo pts	19%
NO ARNI 1st always	26%
NO I'm Acei 1st always	**49%**

50% already use ARNI 1st line

CollabCare

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CHFS Heart Failure Order Set

ACTION

Diagnostics

Investigations on Admission (if not already done in ED)

☐ 12-Lead ECG[1,3] ☐ 15-Lead ECG

☐ CXR PA + Lateral[1,3] Reason: _____

Repeat echocardiogram **only** if no recent cardiac imaging performed in past 12 months and clinical status change warrants investigation

☐ 2D Echocardiogram[1–3] Reason: _____

☐ _____ Reason: _____

IV Therapy

☐ Saline lock; flush as per policy/procedure ☐ _____ at _____ mL/h

Heart Failure Medications

Diuretics

IV diuretics are recommended as first-line therapy for patients with pulmonary or peripheral congestion[1]

If symptomatic hypotension arises, consider holding diuretics and reassessing for volume overload

☐ furosemide _____ mg IV for 1 dose STAT **(max 200 mg/dose)**

☐ furosemide _____ mg IV q _____ h

☐ furosemide _____ mg/h IV continuous infusion (5 – 20 mg/h)

☐ furosemide _____ mg PO q _____ h

☐ bumetanide _____ mg PO q _____ h (0.5 mg; **max 10 mg in 24 hours)**

☐ metolazone _____ mg PO q24h, administer 30 minutes prior to loop diuretic (2.5 mg; **max 20 mg in 24 hours)**[2]

☐ _____

Angiotensin-Converting Enzyme-Inhibitors (ACEI)

☐ perindopril _____ mg PO q24h (initiation dose 2 – 4 mg; target regimen 4 – 8 mg q24h)[1]

☐ ramipril _____ mg PO q12h (initiation dose 1.25 – 2.5 mg; target regimen 5 mg q12h)[1]

☐ _____

Angiotensin Receptor Blockers (ARB) For Patient Intolerant to ACEI

☐ candesartan _____ mg PO q24h (initiation dose 4 – 8 mg; target regimen 32 mg q24h)[1–3]

☐ valsartan _____ mg PO q12h (initiation dose 40 mg; target regimen 160 mg q12h)[1–3]

☐ _____

Angiotensin Receptor Neprilysin Inhibitors (ARNI)

Patients who remain symptomatic despite triple therapy, consider change ACEI/ARB to an ARNI[1,3]

Concomitant use with an ACEI or ARB is contraindicated; if an ACEI was administered, wait 36 hours before administering ARNI[1,3]

☐ sacubitril 24 mg/valsartan 26 mg, 1 tab PO q12h (target regimen sacubitril 97 mg/valsartan 103 mg, 1 tab PO q12h)

☐ sacubitril 49 mg/valsartan 51 mg, 1 tab PO q12h (target regimen sacubitril 97 mg/valsartan 103 mg, 1 tab PO q12h)

☐ sacubitril 97 mg/valsartan 103 mg, 1 tab PO q12h

Submitted by: ID PRINTED NAME YYYY-MM-DD HH:MM ☐ Read Back

Practitioner: ID PRINTED NAME YYYY-MM-DD HH:MM SIGNATURE

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PATIENT INFORMATION

Document allergies on approved form and ensure medication reconciliation has been reviewed as per organizational process

CHFS Heart Failure Order Set

ACTION

Heart Failure Medications Continued...

Beta-Blockers

☐ bisoprolol _____ mg PO q24h (initiation dose 1.25 mg; target regimen 10 mg q24h)[1]

☐ carvedilol _____ mg PO q12h

(initiation dose 3.125 mg; target regimen 25 mg q12h [if weight greater than 50 kg, target regimen 50 mg q12h])[1]

☐ _____

Mineralocorticoid Receptor Agonist (MRA)

☐ eplerenone _____ mg PO q24h (initiation dose 25 mg; target regimen 50 mg q24h)[1–3]

☐ spironolactone _____ mg PO q24h (initiation dose 12.5 mg; target regimen 50 mg q24h)[1]

Vasodilators

The combination of isosorbide dinitrate and hydralazine are recommended in addition to standard treatment for black patients with HFrEF with advanced symptoms or patients unable to tolerate ACEI, ARB or ARNI therapy[1]

☐ hydralazine _____ mg PO q8h (initiation dose 25 mg; target regimen 75 mg q8h)

And ☐ isosorbide dinitrate _____ mg PO q8h (initiation dose 20 mg; target regimen 40 mg q8h)[1]

Sinoatrial Node Modulator

Ivabradine can be considered in patients with HFrEF who are in sinus rhythm with a resting heart rate of greater than or equal to 77 beats per minute and have had a previous HF hospitalization within the past year[10]

☐ ivabradine _____ mg PO q12h

(initiation dose 2.5 – 5 mg[1] [if greater than 75 years old, initial dose 2.5 mg]; target regimen 7.5 mg q12h[1])

Digoxin

Digoxin may be considered in patients in sinus rhythm who continue to be symptomatic with triple therapy[1,3]

☐ digoxin _____ mg PO q24h (0.125 – 0.25 mg)

Sodium-glucose Cotransporter 2 (SGLT2) Inhibitor

SGLT2 inhibitors should be started once medically stable or upon discharge given risks of euglycemic DKA

Dapagliflozin may be considered in patients with mild to moderate HFrEF (LVEF less than/equal to 40%) and with or without concomitant type 2 diabetes[11] (do not use in patients with type 1 diabetes)

Caution should be exercised when combining SGLT2 inhibitors, ARNI, and diuretics because of their concomitant effects to promote diuresis[11]

Note: If serum creatinine is increasing, dapagliflozin should not be initiated or be reassessed if initiated.

☐ dapagliflozin 10 mg PO q24h[12]

Electrolyte Management

☐ Non-Critical Care Potassium Oral Replacement Clinical Protocol

☐ _____

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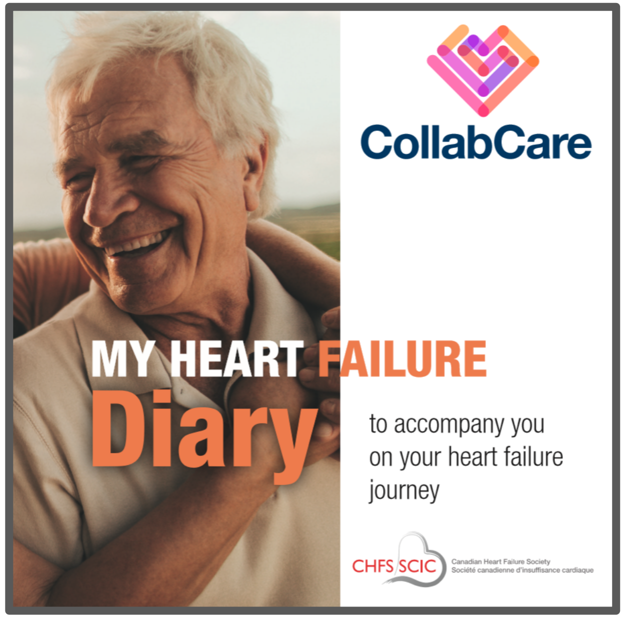

MY PERSONAL FOLLOW-UP

Date	Weight (kg)	Blood pressure (mm Hg)		Heart rate (bpm)	During the day have you experienced…		How much has your heart failure affected you during the day? For each topic below, place a cross on the symbol that most closely represents how you felt			
		systolic	diastolic		Tiredness (YES or NO)	Breathlessness (YES or NO)	… hobbies & recreational activities	… your efficacy at work	… doing household chores	…visiting family or friends
							☺ 😐 ☹	☺ 😐 ☹	☺ 😐 ☹	☺ 😐 ☹
							☺ 😐 ☹	☺ 😐 ☹	☺ 😐 ☹	☺ 😐 ☹
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My heart failure treatments

Name and dosage of medicines (mg)	Morning	Noon	Evening	Comments

My other treatments

Name and dosage of medicines (mg)	Morning	Noon	Evening	Comments

Morning Noon Evening

MY PROFILE

My weight

My usual/normal weight is between

__________ and __________ kg

It's important to check for swelling in your ankles, legs, and around the waist by simply pressing your thumb into the tissue for a few seconds. If it leaves an indentation, you have swelling. This may indicate fluid retention, which can appear before you notice a marked difference in your weight.

Weight gain and adjustment of diuretic dosage

Excess fluid can be eliminated by temporarily/exceptionally increasing the dosage of diuretics for a short period, if your doctor has recommended this:

Extra diuretic prescribed ____________________

+ 1 kg __________ mg

+ 1.5 kg __________ mg

+ 2 kg __________ mg

Contact your doctor if you gain more than 2 kg in weight

CHFS/SCIC Canadian Heart Failure Society *presents*

SAVE THE DATE

HEART FAILURE

AWARENESS WEEK MAY 4-10, 2020

in partnership with

Canadian Cardiovascular Society

HeartLife FOUNDATION

Canadian Council of Cardiovascular Nurses

Heart&Stroke Cœur+AVC

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CACPR Canadian Association of Cardiovascular Prevention and Rehabilitation

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