

# Safety in Failure: Enhancing Patient Experience, Care and Outcomes in Heart Failure

MacAulay L<sup>1</sup>, Wijayarathne PM<sup>1</sup>, Kelly B<sup>1</sup>, Ko S<sup>1</sup>, Zeitzen T<sup>1</sup>, Ritchie E<sup>1</sup>, Ananthakrishna R<sup>1,3</sup>, Livori A<sup>1,2</sup>.

1. Grampians Health Ballarat, VIC, Australia
2. Centre for Medicine Use and Safety, Monash University, VIC, Australia
3. Grampians Health Horsham, VIC, Australia.

## Background

Grampians Health is a large regional Health service in Victoria, with a disproportionately large burden of Heart Failure admissions, and no existing Heart Failure care pathway. A new patient-centred, evidence-based model of care was introduced in conjunction with the Safer Care Victoria Heart Failure Collaborative and Cardiovascular Nurse Ambassador programs.

## Methods

The new Model of Care was based upon the Heart Foundation's "Five steps to a Safe Heart Failure Discharge"<sup>1</sup>. The following interventions were implemented to establish and sustain the new model of care:



**HEART FAILURE PATIENT MANAGEMENT Checklist**

Aboriginal & Torres Strait Islander  Aboriginal  TSI  Neither

English as first language Yes/No  Born in Australia Yes/No

HF DIAGNOSIS:  HFrEF  HFpEF  Pul HTN RVSP \_\_\_\_\_

TTE Date: \_\_\_/\_\_\_/\_\_\_ LVEF % \_\_\_\_\_ RV function \_\_\_\_\_ RWMA  DCM

Heart VALVES: Mild/Mod/Severe  MVR/MS: \_\_\_\_\_ TVR/AS: \_\_\_\_\_ AVR/AS: \_\_\_\_\_

COMORBIDITIES: Implanted device  PPM/ICD/CRTD  HTN  AF NOAC Yes/No

IHD: STEMI/NSTEMI/CABGS  Diabetes  PVD  STROKE  CKD  AKI

Smoker  Current  Ex-smoker  Mood Disorder  GOUT  GORD  COPD  ASTHMA

OSA CPAP Yes/No  ETOH  Obesity (kg) \_\_\_\_\_ Dry weight (kg) \_\_\_\_\_ BNP \_\_\_\_\_

Daily weight Yes/No \_\_\_\_\_ Fluid Restriction Yes/No \_\_\_\_\_ 1000/1250/1500 mL

Fe levels checked (HFrEF) Yes/No \_\_\_\_\_ Ferritin \_\_\_\_\_ Fe infusion ordered \_\_\_\_\_ Hb \_\_\_\_\_ K+ \_\_\_\_\_ Urea \_\_\_\_\_  
Tsat \_\_\_\_\_ % Yes/No \_\_\_\_\_ Creat \_\_\_\_\_ eGfr \_\_\_\_\_ %

**MEDICATIONS PRESCRIBED (Guideline Directed Medication therapy HFrEF, or other):**

Medication	Yes/No	If no, please specify reason
ACE/ARB	Yes/No	<input type="checkbox"/> Renal <input type="checkbox"/> Hypotension <input type="checkbox"/> K+ <input type="checkbox"/> Other _____
ARNI	Yes/No	<input type="checkbox"/> Sacubitril/valsartan <input type="checkbox"/> Renal <input type="checkbox"/> Hypotension <input type="checkbox"/> K+ <input type="checkbox"/> Other _____
Beta blocker	Yes/No	<input type="checkbox"/> Bisoprolol <input type="checkbox"/> Hypotension <input type="checkbox"/> Nebivolol <input type="checkbox"/> Bradycardia <input type="checkbox"/> Metoprolol succinate <input type="checkbox"/> Carvedilol
MRA	Yes/No	<input type="checkbox"/> Spironolactone <input type="checkbox"/> Renal <input type="checkbox"/> Hypotension <input type="checkbox"/> Eplerenone <input type="checkbox"/> K+ <input type="checkbox"/> Other _____
SGLT2inh	Yes/No	<input type="checkbox"/> Empagliflozin <input type="checkbox"/> Renal <input type="checkbox"/> Other _____ <input type="checkbox"/> Dapagliflozin
Beta Blocker not tolerated	Yes/No	<input type="checkbox"/> Ivabradine SR, P<=77 <input type="checkbox"/> Dabigatran <input type="checkbox"/> Digoxin <input type="checkbox"/> Apixaban
ACE/ARB not tolerated	Yes/No	<input type="checkbox"/> Hydralazine <input type="checkbox"/> Anticoagulant: <input type="checkbox"/> Rivaroxaban <input type="checkbox"/> ISMN <input type="checkbox"/> Warfarin
Other HF meds	Yes/No	<input type="checkbox"/> Hydrochlorothiazide <input type="checkbox"/> Amiodarone <input type="checkbox"/> Furosemide <input type="checkbox"/> Other Cardiac Meds <input type="checkbox"/> Calcium Channel Blocker <input type="checkbox"/> Bumetanide <input type="checkbox"/> IR Beta Blocker

**6 Steps to a Safe HEART FAILURE DISCHARGE:**

NOT 'In scope' for Safer Care Victoria reporting

Please circle, initial, and add your designation, e.g. RMO, NP, RN, EN, Pha. If not completed, please enter reason in right column, e.g. delirium, cognitive deficit, off ward, tfr to another hospital etc.

Patient asked "What matters to you?"	Yes/No	Reason
1. Education on signs & symptoms of HF and fluid management provided to patient/carer	Yes/No	_____
a. Living well with heart failure book given	Yes/No	_____
b. Daily weight diary given	Yes/No	_____
c. Symptom tracker given	Yes/No	_____
d. Patient/carer has measuring jug or given	Yes/No	_____
e. Patient/carer has weighing scales	Yes/No	_____
2. Written action plan provided to patient/carer	Yes/No	_____
a. Patient/carer know who to call; fridge magnet given	Yes/No	_____
3. Medication education provided	Yes/No	_____
a. Verbal	Yes/No	_____
b. Written medication list from pharmacy	Yes/No	_____
4. Medical review scheduled within 7 days	Yes/No	_____
a. GP appointment booked?	Yes/No	_____
b. BH5@Home admission?	Yes/No	_____
c. Heart Failure Clinic appointment booked?	Yes/No	_____
5. Referral to Cardiac Rehabilitation Sent	Yes/No	_____
a. Cardiac Rehabilitation Referral Form (MR 020.21)	Yes/No	_____
b. Requested on HARP referral	Yes/No	_____
6. Referral to HARP Sent	Yes/No	_____
Grampians Watch/HARP referral (Bossnet MR0315.5)	Yes/No	_____
a) HF education & assessment of self-management skills	Yes/No	_____
b) Medication education	Yes/No	_____
c) Advanced Care Planning	Yes/No	_____
d) Referral to Cardiac Rehab, HIP or Physiotherapy (On HARP referral: Please state dry weight if known).	Yes/No	_____
<b>Additional referrals:</b>		
a) Referral to Heart Failure Clinic (MR 104.20)	Yes/No	Requested / Completed
b) Referral to Palliative care	Yes/No	Requested / Completed

Heart Failure Progress Note Checklist - V70 25/07/2023 1:13 PM Page | 2

Figure 1: Heart Failure Inpatient and Discharge Planning Checklist

## Results

- A new Heart Failure model of care has been implemented, including some regional sites: Over 10 months, 70% of the 185 inpatients seen have received all 5 steps.
- Significantly expanded HARP and two new Heart Failure Cardiac Rehabilitation services to support the large increase in referrals.
- A new Heart Failure Cardiac Rehabilitation Nurse Practitioner role. This extends the capacity of the Heart Failure Clinic, by providing weekly assessment & medication titration, and rapid access to the HF consult team.
- There has been positive consumer feedback regarding the increased education and support provided, with many clients utilising the Heart Failure HELP for assistance.

## Conclusions

- Collaboration during model of care design and implementation has strengthened partnerships with internal and external services, such as Hospital in the home, HARP and Ballarat Community Health, who perform a vital role in the extended Grampians Health Heart Failure team.
- Challenges included the paper-based medical records system, and worsening GP access, which remains a barrier to continuity of care.
- Next steps include readmissions and process data to evaluate the model of care impact on hospital readmissions, length of stay and quality of life measures.

## References

1. Five steps to a Safe Heart Failure Discharge, 2021. National Heart Foundation, retrieved from: [https://www.heartfoundation.org.au/getmedia/99483a42-bc06-40af-91b4-5617e91ecccd/210412\\_5stepstoasafedischarge\\_Final.pdf](https://www.heartfoundation.org.au/getmedia/99483a42-bc06-40af-91b4-5617e91ecccd/210412_5stepstoasafedischarge_Final.pdf)