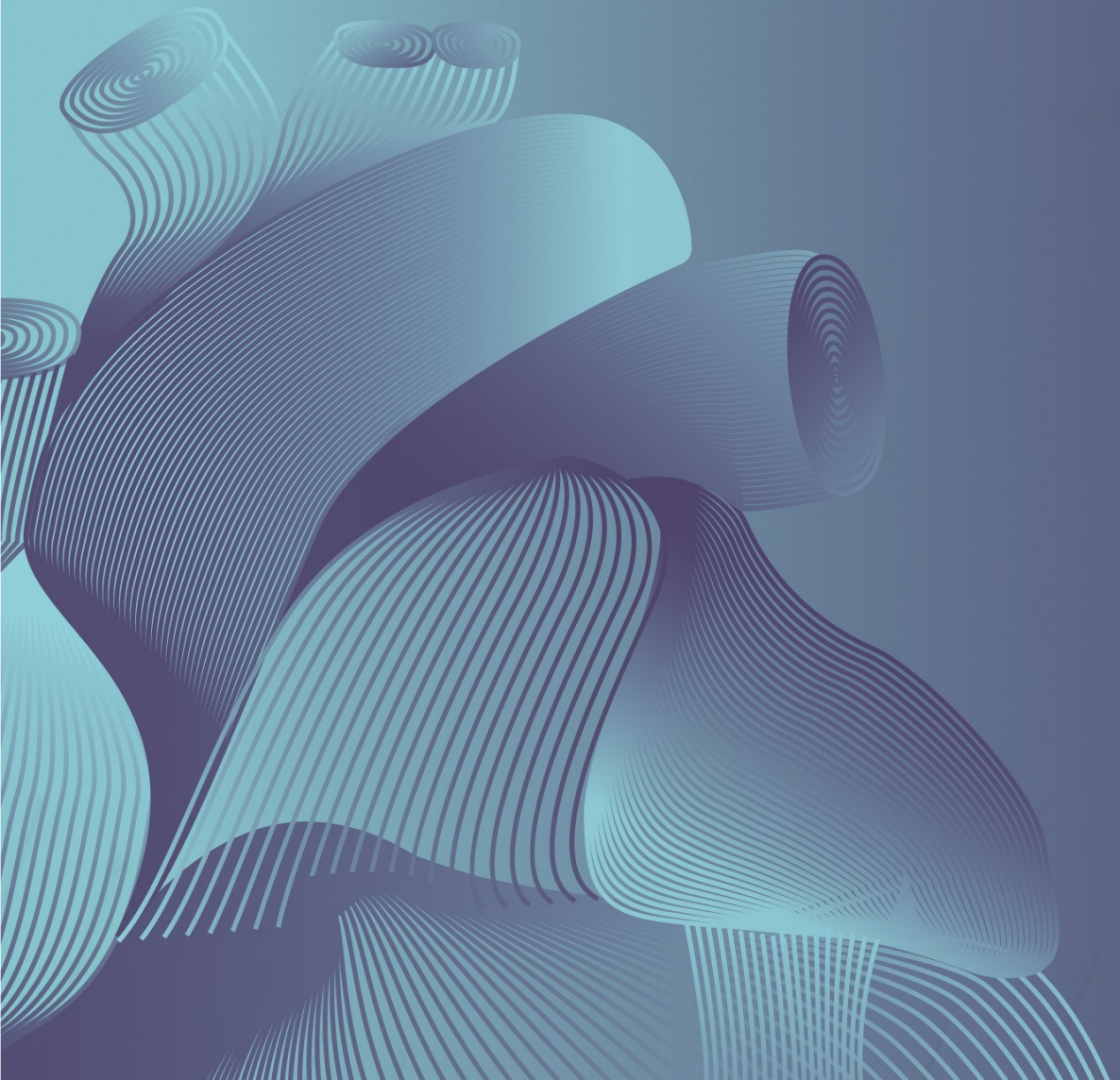


7th Advances in Heart Failure 2024

10 e 11 de Outubro

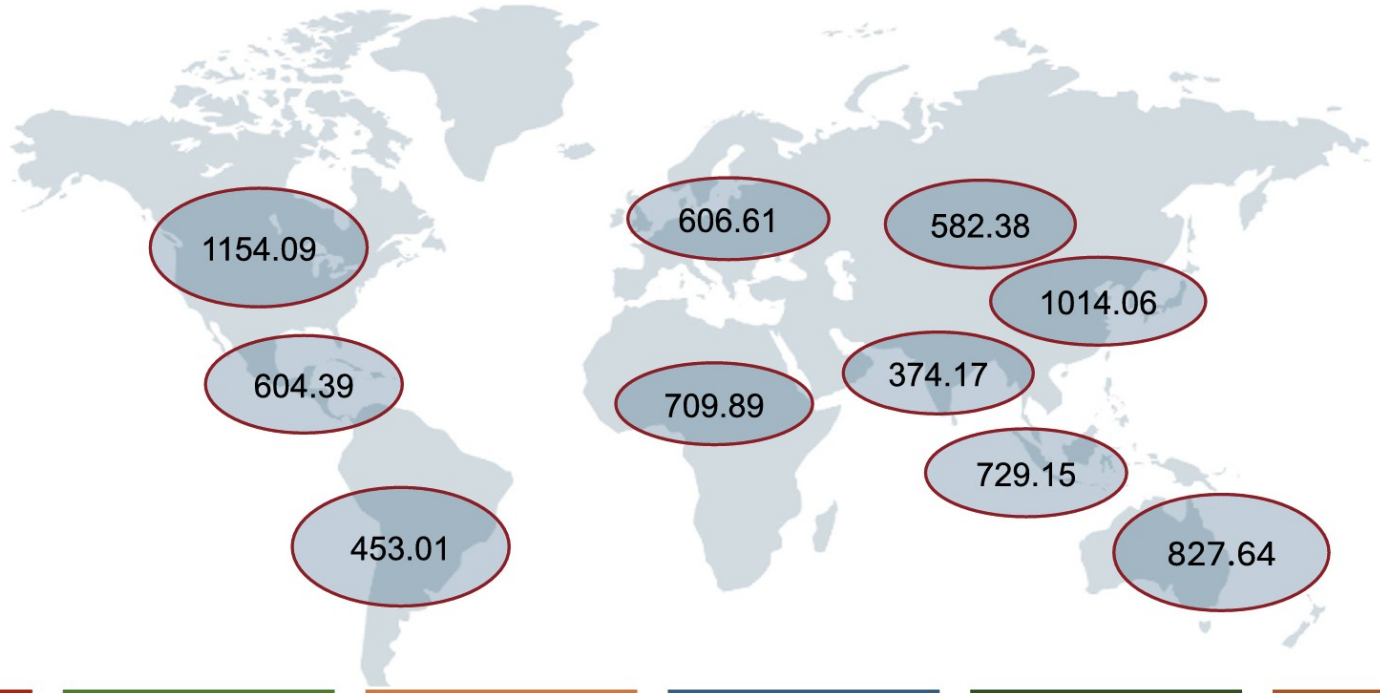
FACULDADE DE MEDICINA DA UNIVERSIDADE DO PORTO

Cuidados de Transição: A Prática Atual em Portugal

Centros Avançados

Elisabete Martins

FIGURE 1 Global Burden of Heart Failure



Hospitalisation for worsening HF is a critical point in the disease trajectory and provides an opportunity to review and optimise HF therapies

JACC Adv. 2024;3(9):101131

- **What is transitional care in heart failure and why it's crucial?**

A comprehensive, multidisciplinary, individual-tailored strategy **during a vulnerable period** to improve patient self-management, the care ability of caregivers and coordination between hospital resources and social support systems for continuous management

→ It is <u>particularly useful to prevent early exacerbations and rehospitalizations</u>.

Effectiveness of Transitional Care Interventions for Heart Failure Patients: A Systematic Review With Meta-Analysis

Transitional care may improve outcomes, reducing hospital readmissions, and enhancing the quality of life

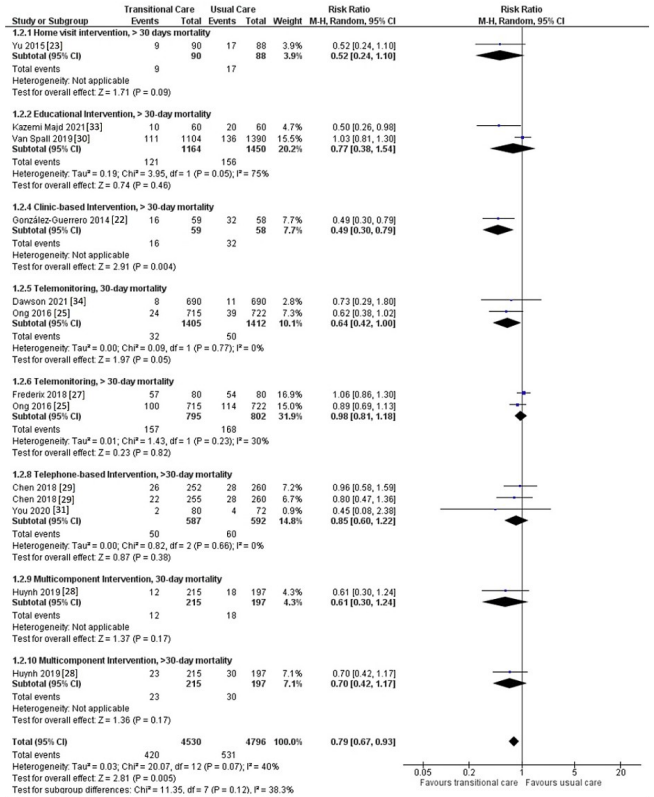


FIGURE 4: Forest plot showing the effect of TCIs on mortality

CI: confidence interval; M-H: Mantel-Haenszel; TCI: transitional care intervention.

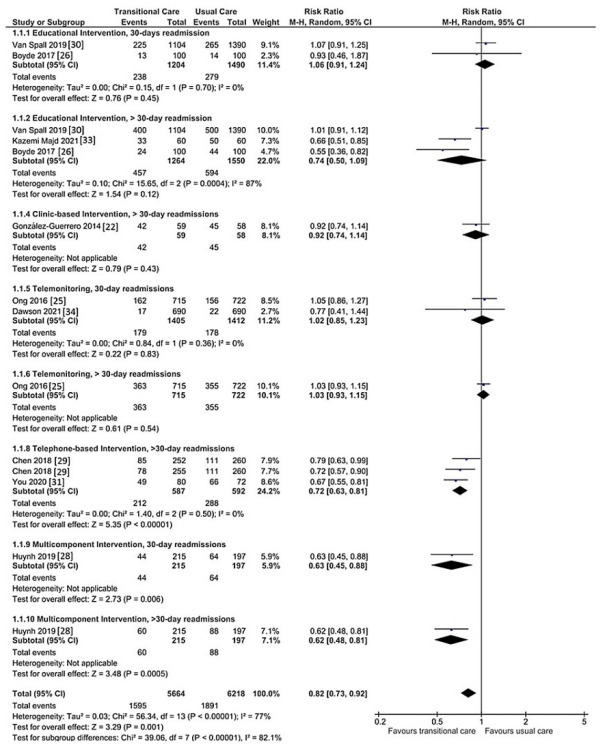


FIGURE 3: Forest plot showing the effect of TCIs on hospital readmissions

- **Transitional Care Models: aims**

An holistic, patient-centered approach

➡ **Risk stratification** is needed to develop an **individualized HF management program**

Early recognition of precipitating factors and recurrent congestion

Treating comorbidities

Evaluating and overcoming possible barriers (social, cultural, economic, cognitive status).

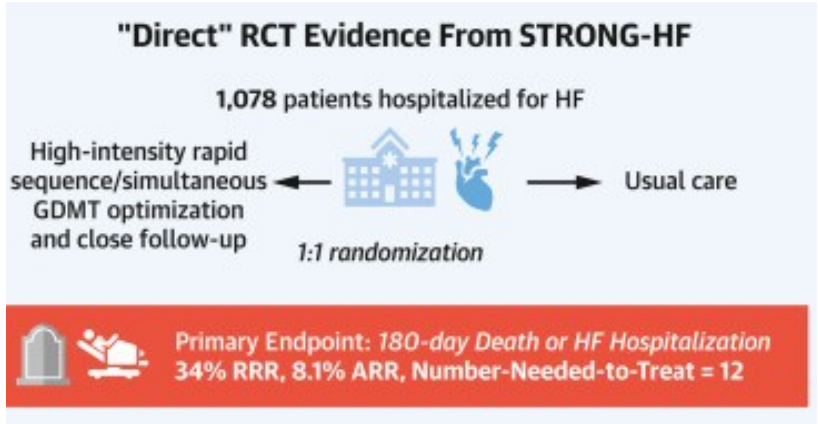
Optimizing evidence-based therapies

4.2. Management strategies

Two large trials have been published since the last guidelines: COACH and STRONG-HF.

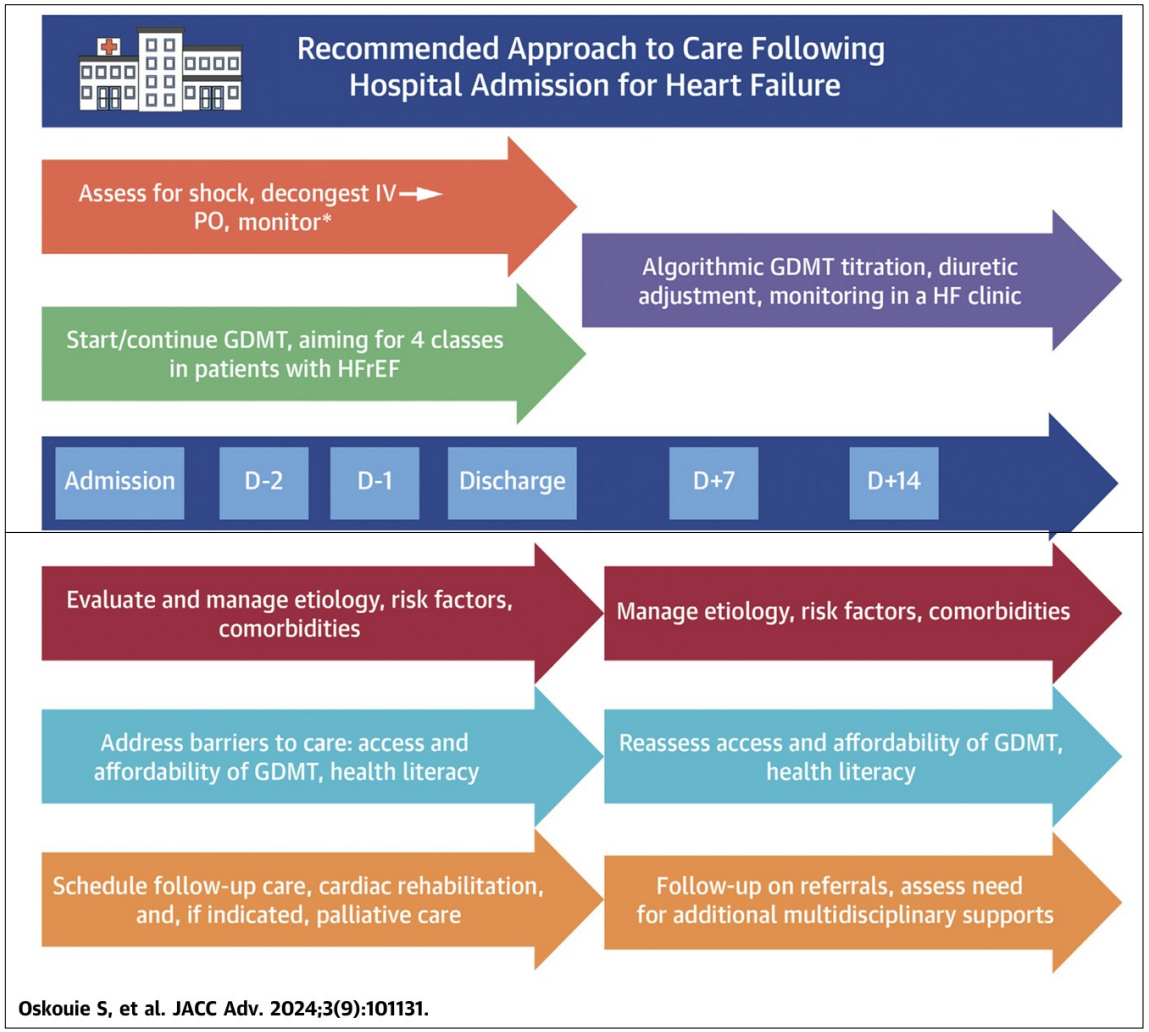
Recommendation Table 3 — Recommendation for pre-discharge and early post-discharge follow-up of patients hospitalized for acute heart failure

Recommendation	Class[a]	Level[b]
An intensive strategy of initiation and rapid up-titration of evidence-based treatment before discharge and during frequent and careful follow-up visits in the first 6 weeks following a HF hospitalization is recommended to reduce the risk of HF rehospitalization or death.[c,d,e] [16]	I	B



2023 Focused Update of the 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure

Optimize Care Following Admission for Heart Failure



Oskouie S, et al. JACC Adv. 2024;3(9):101131.

- **Transitional Care Models**

The choice should come from local health-care resources and from target HF population

- **Nurse-Led Transitional Care**
- **Home care programs; home hospitalization**
- **Case management programs (intense post-discharge monitoring)**
- **Telemonitoring and remote patient management**
- **Patient and caregiver education: self-management interventions**

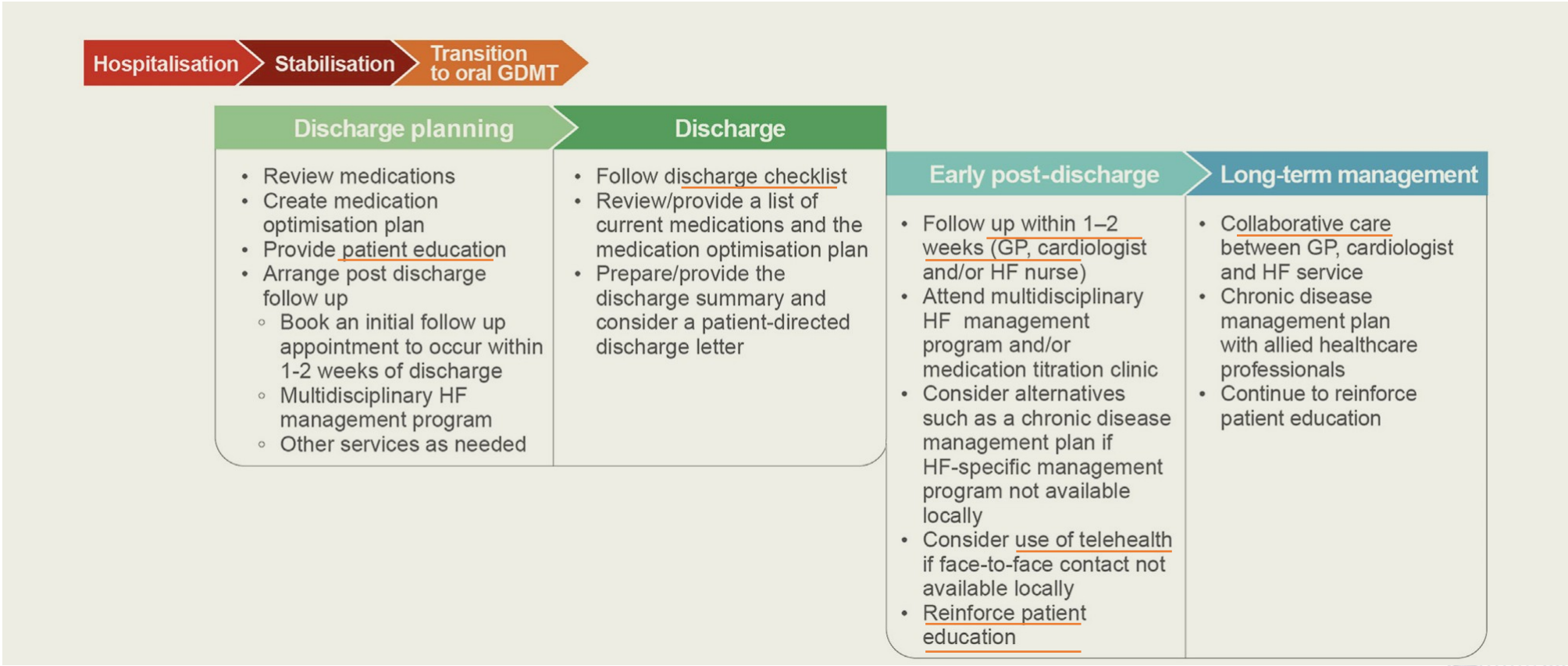
…

Combinations

Challenges in Transitional Care for Heart Failure

- Complexity of HF condition (heterogeneity, comorbidities)
- Elderly patients
- Care fragmentation during disease trajectory
- Communication between healthcare providers
- Adherence to treatment
- Health literacy, social and economic barriers: different care needs
- …

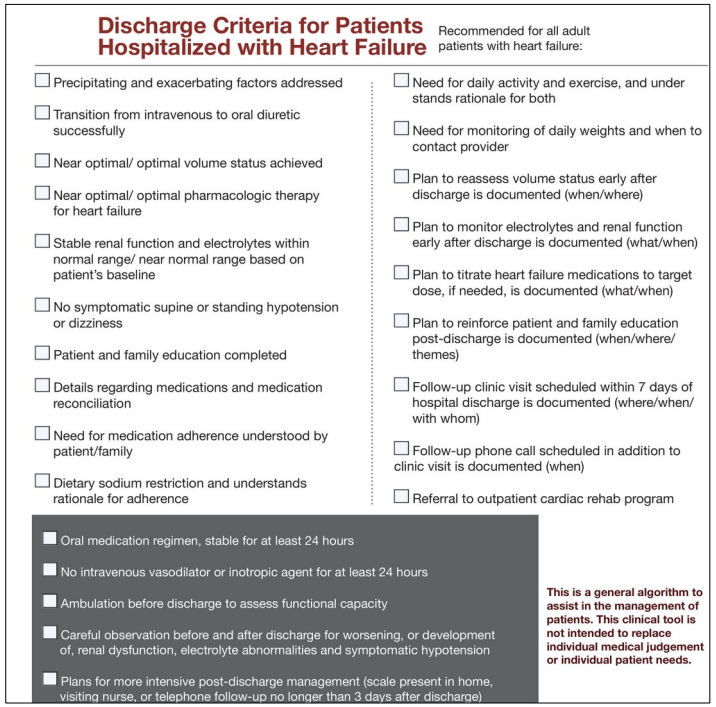
- **Key steps in transitional care following a heart failure hospitalisation**



Heart Lung Circ. 2024;33(7):932-942.

• Discharge Documentation and Tools

- Discharge summary
- Medication optimisation (titration) plan
- Discharge checklist



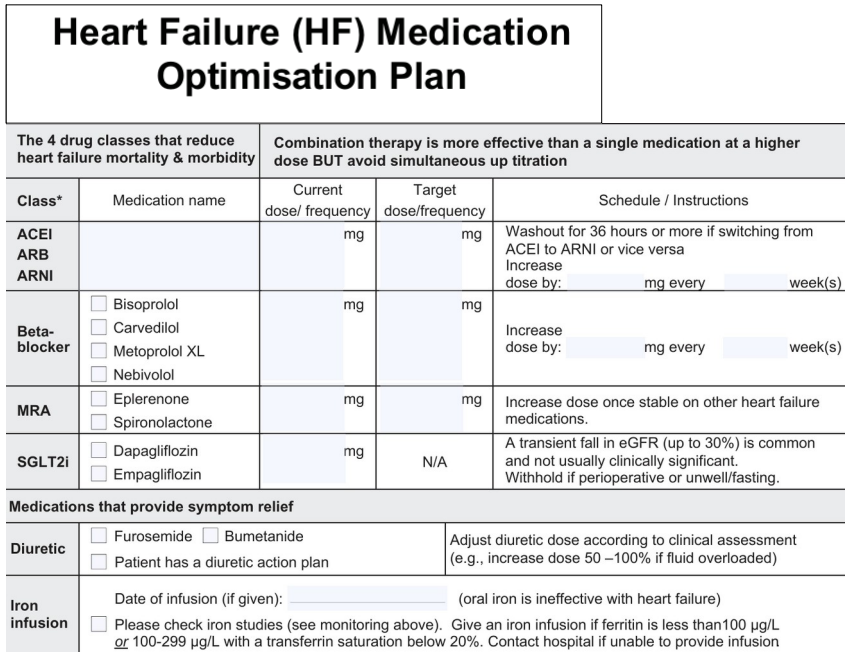
Discharge Criteria for Patients Hospitalized with Heart Failure

Recommended for all adult patients with heart failure:

- ☐ Precipitating and exacerbating factors addressed
- ☐ Transition from intravenous to oral diuretic successfully
- ☐ Near optimal/ optimal volume status achieved
- ☐ Near optimal/ optimal pharmacologic therapy for heart failure
- ☐ Stable renal function and electrolytes within normal range/ near normal range based on patient's baseline
- ☐ No symptomatic supine or standing hypotension or dizziness
- ☐ Patient and family education completed
- ☐ Details regarding medications and medication reconciliation
- ☐ Need for medication adherence understood by patient/family
- ☐ Dietary sodium restriction and understands rationale for adherence
- ☐ Need for daily activity and exercise, and under stands rationale for both
- ☐ Need for monitoring of daily weights and when to contact provider
- ☐ Plan to reassess volume status early after discharge is documented (when/where)
- ☐ Plan to monitor electrolytes and renal function early after discharge is documented (what/when)
- ☐ Plan to titrate heart failure medications to target dose, if needed, is documented (what/when)
- ☐ Plan to reinforce patient and family education post-discharge is documented (when/where/ themes)
- ☐ Follow-up clinic visit scheduled within 7 days of hospital discharge is documented (where/when/ with whom)
- ☐ Follow-up phone call scheduled in addition to clinic visit is documented (when)
- ☐ Referral to outpatient cardiac rehab program

- ☐ Oral medication regimen, stable for at least 24 hours
- ☐ No intravenous vasodilator or inotropic agent for at least 24 hours
- ☐ Ambulation before discharge to assess functional capacity
- ☐ Careful observation before and after discharge for worsening, or development of, renal dysfunction, electrolyte abnormalities and symptomatic hypotension
- ☐ Plans for more intensive post-discharge management (scale present in home, visiting nurse, or telephone follow-up no longer than 3 days after discharge)

This is a general algorithm to assist in the management of patients. This clinical tool is not intended to replace individual medical judgement or individual patient needs.

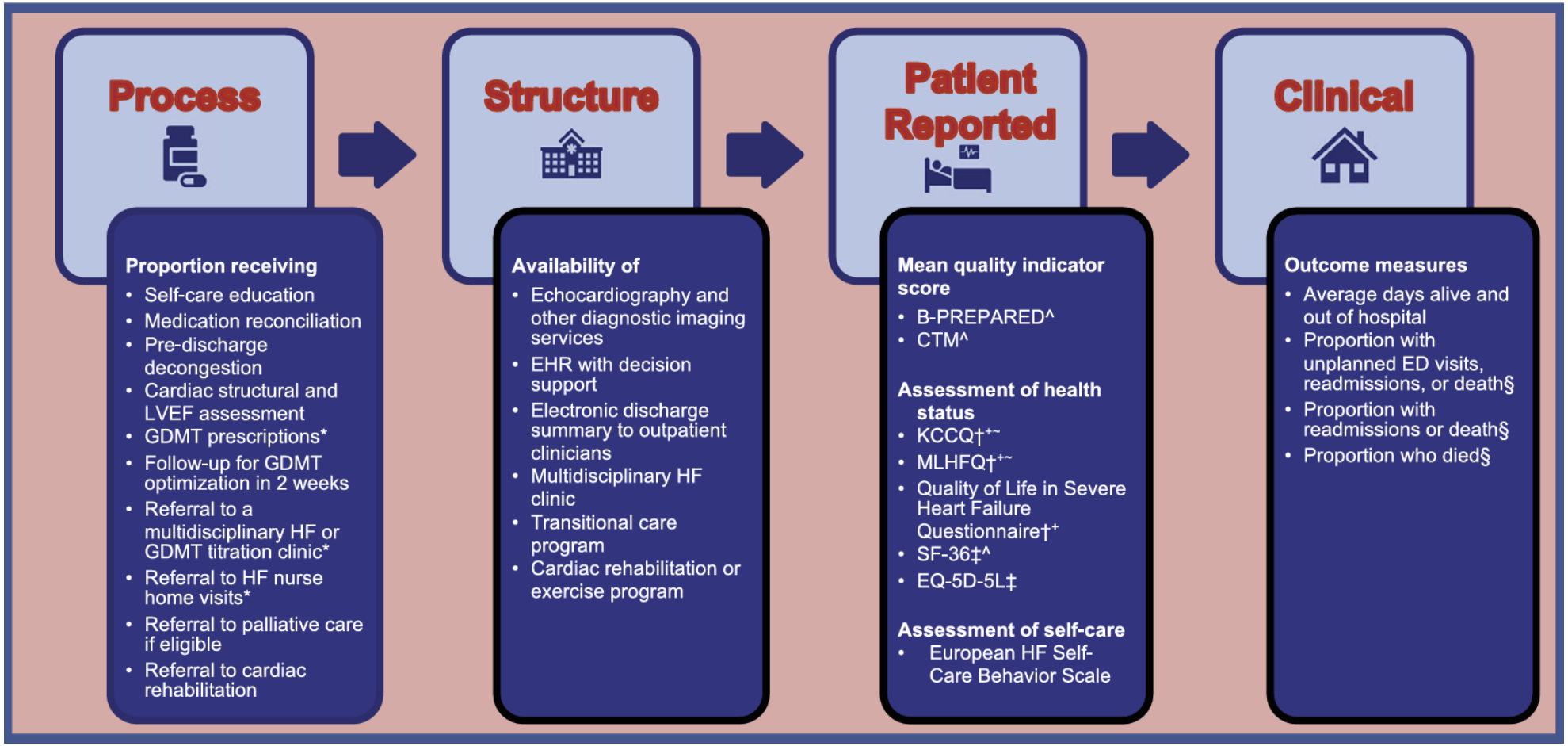


Heart Failure (HF) Medication Optimisation Plan

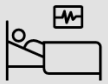
The 4 drug classes that reduce heart failure mortality & morbidity		Combination therapy is more effective than a single medication at a higher dose BUT avoid simultaneous up titration		
Class*	Medication name	Current dose/ frequency	Target dose/frequency	Schedule / Instructions
ACEI ARB ARNI		mg	mg	Washout for 36 hours or more if switching from ACEI to ARNI or vice versa Increase dose by: mg every week(s)
Beta-blocker	☐ Bisoprolol ☐ Carvedilol ☐ Metoprolol XL ☐ Nebivolol	mg	mg	Increase dose by: mg every week(s)
MRA	☐ Eplerenone ☐ Spironolactone	mg	mg	Increase dose once stable on other heart failure medications.
SGLT2i	☐ Dapagliflozin ☐ Empagliflozin	mg	N/A	A transient fall in eGFR (up to 30%) is common and not usually clinically significant. Withhold if perioperative or unwell/fasting.
Medications that provide symptom relief				
Diuretic	☐ Furosemide ☐ Bumetanide ☐ Patient has a diuretic action plan			Adjust diuretic dose according to clinical assessment (e.g., increase dose 50 –100% if fluid overloaded)
Iron infusion	Date of infusion (if given): (oral iron is ineffective with heart failure) ☐ Please check iron studies (see monitoring above). Give an iron infusion if ferritin is less than100 µg/L *or* 100-299 µg/L with a transferrin saturation below 20%. Contact hospital if unable to provide infusion			

Heart Lung Circ. 2024;33(7):932-942.

Quality indicators of transitional care quality



HFA Quality of Care Centres (QCC) categories : Essential Features

	COMMUNITY QCC 	SPECIALISED QCC 	ADVANCED QCC 
TARGET PATIENTS 	• Chronic outpatients / rehabilitation • Acute, not severe HF / mildly decompensated	• Moderate HF complexity, • New-onset HF / after recent hospitalisation	• Severe / Advanced HF patients • HTx and/or MCS candidates/ recipients
SETTINGS 	• Primary care • Cardiology / rehabilitation • Community hospital	• CCU / ICU / chest pain unit and specialised wards in district hospitals	• As in specialised QCC • + Heart Surgery
ACCESSIBILITY 	• Elective • Prompt (<48h) access if needed	• On-Duty cardiologist 24/7 • CCU/ICU dedicated beds	• As in specialised QCC • + Cardiac surgery in a heart team • + ICU dedicated beds
SERVICE / EQUIPMENT 	• Therapeutic optimisation • Patient & caregiver education • Rehabilitation • ECG, TTE, 24h ECG/BP Holter, laboratory tests • Referral to higher level centers	• Aetiology assessment, • Therapeutic optimisation, • Cardiac catheterisation, Arrhythmia ablation, • ICD/CRT implantation • TOE, CMR, CPET • Renal replacement therapy	• As in specialised QCC + • Circ. Support • Perform HTx and/or MCS and/or provide support • Cardiac surgery • Valve intervention. • EMB, genetic testing
HUMAN RESOURCES 	• Primary care • Internists / • Cardiologists • Nurses	• Cardiologist 24/7, • HF nurses, • Other specialties	• As in specialised QCC • + Cardiac surgeons 24/7 • + Heart team

CCU, coronary care units
CRT, cardiac resynchronisation therapy

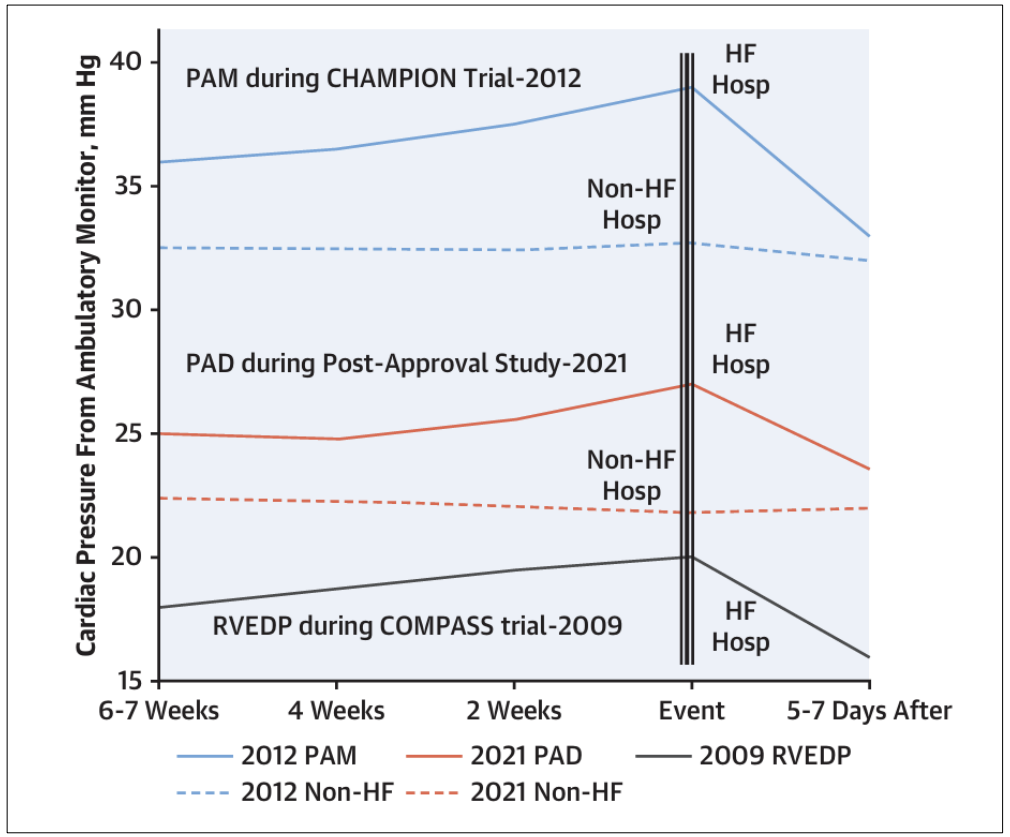
HF, heart failure
HTx, heart transplantation

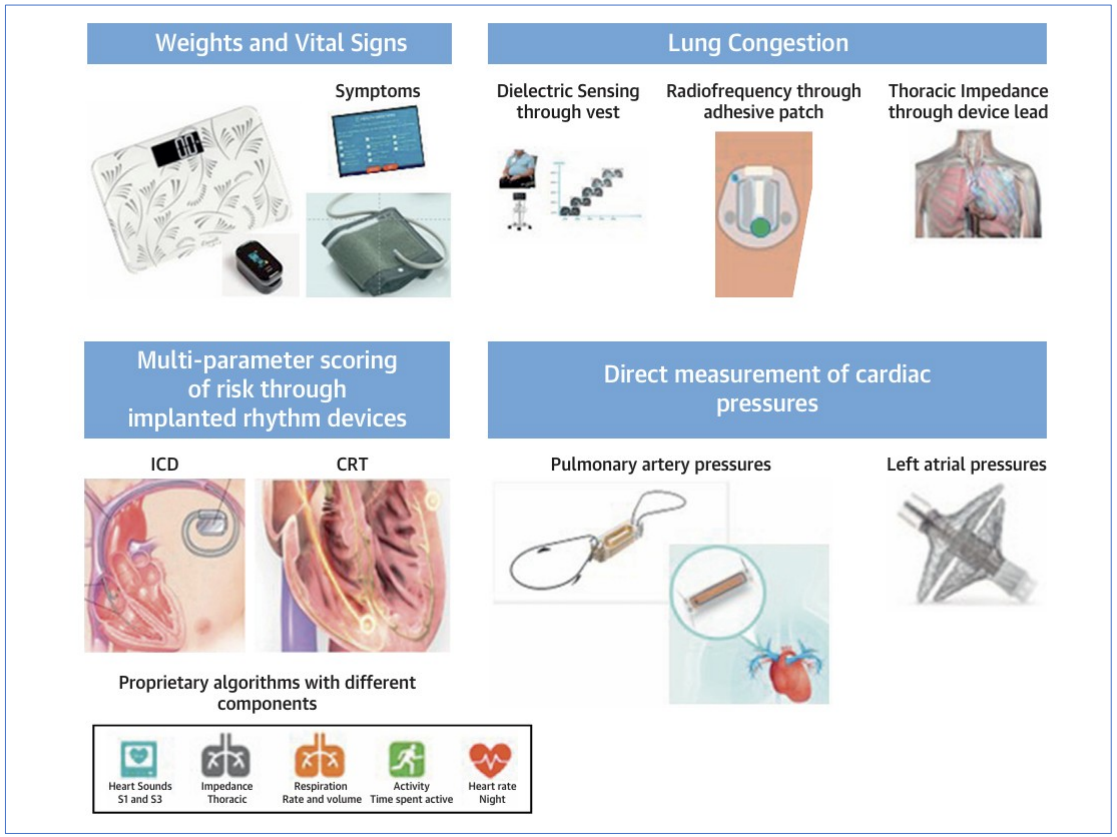
ICU, intensive care units
ICD, implantable cardioverter defibrillators
MCS, mechanical circulatory support

Particularities in TC in Advanced Centers

- **More advanced HF patients**
- **Multidisciplinary (advance therapies) centers**
- **Cardiovascular implantable devices monitoring**

Remote Monitoring





J Am Coll Cardiol. 2023 Jul 11;82(2):182

- **Technologies for remote monitoring of heart failure**

Home Telemonitoring System	
Non-invasive hTMS	
– TM	Telemonitoring (individual)
– STS	Structural telephone support
– Complex TM	Complex telemonitoring
Invasive hTMS	
– CIED	Cardiac implantable electronic devices
– IHM	Invasive haemodynamic monitoring

The use of telemedicine is limited:

- Internet access
- Equipment, standard procedures
- Reimbursement
- …

J Am Coll Cardiol. 2023 Jul 11;82(2):182

Advanced Therapy Centers

Management of Patients in HF stage D

and

other HF stages

	Direct Admission to Non-ATC n = 2,331,690	Direct Admission to ATC n = 525,037
HF Decompensations		
Cardiogenic Shock	1.3%	4.8%
Cardiac Arrest	1.0%	1.4%
Mechanical Ventilation	1.8%	3.1%
Noninvasive Ventilation	2.2%	2.1%
Ventricular Arrhythmia	4.6%	8.0%
Acute Kidney Injury	28.6%	35.0%
HF Hospitalizations		
Mortality	2.6%	2.9%
Multivariable-adjusted OR	1 (reference)	0.82 (0.78-0.87)
Severe HF Hospitalizations		
Mortality	37.2%	25.3%
Multivariable-adjusted OR	1 (reference)	0.81 (0.76-0.85)

Multidisciplinary Teams

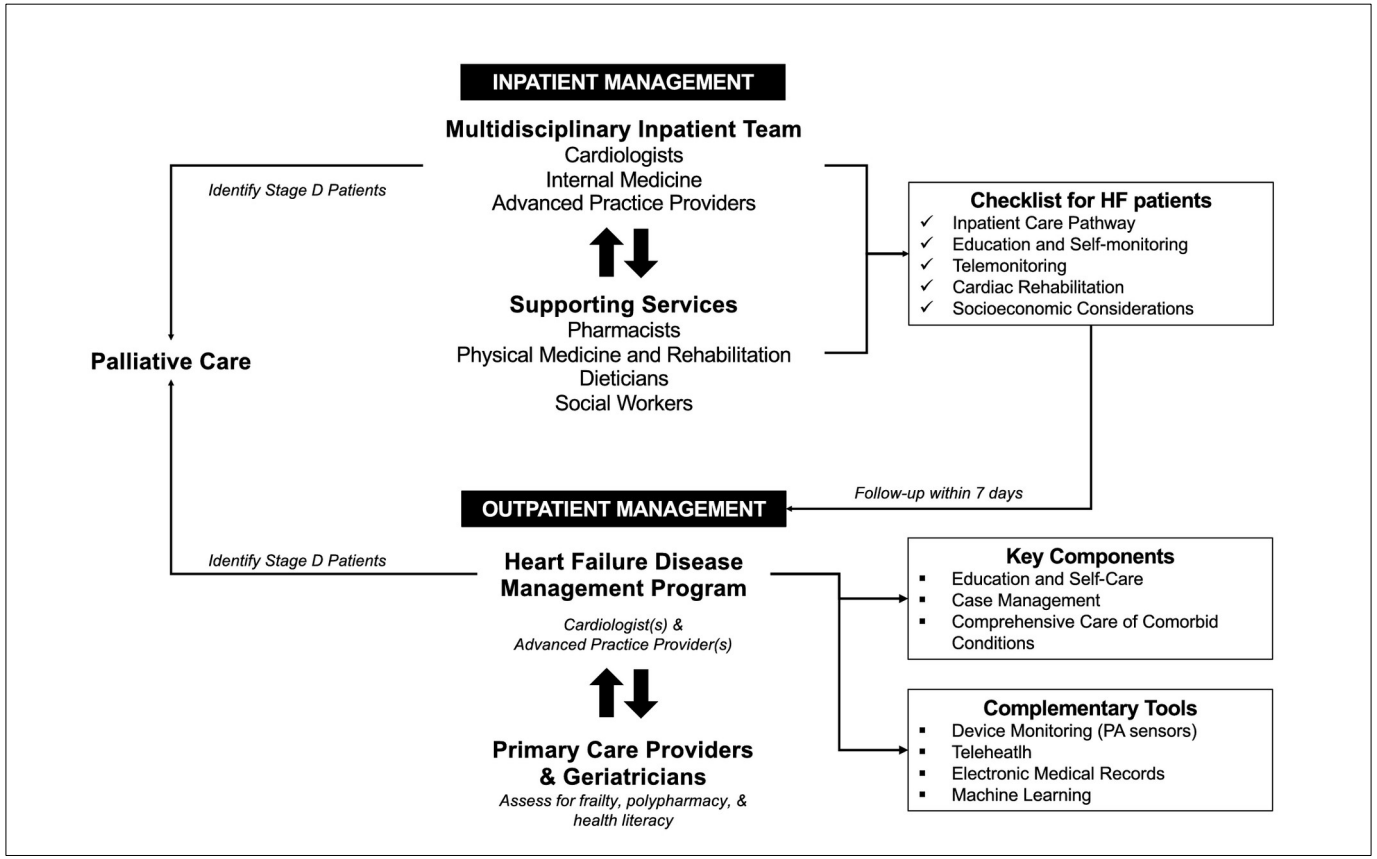


TABLE 7 Proposed Criteria for Referral of Patients With Advanced Heart Failure to Specialized Palliative Care

Disease-based

Complication of advanced/refractory heart failure

- Cardiorenal syndrome
- Persistent malignant arrhythmias
- Implantable cardioverter-defibrillator shocks
- Cardiac cachexia
- Inability to tolerate or resistant to guideline-directed therapies
- Multiorgan failure
- Presence of one or more life-threatening diseases in addition to heart failure

Advanced cardiac therapies

- Chronic inotropes
- Meets criteria but is not a candidate for mechanical circulatory support or cardiac transplant.

Hospital utilization

- ≥2 emergency room visits within the past 3 months
- ≥2 hospitalizations within the last 3 months

SÃO JOÃO | Centro de Referência Transplante do Coração

(Candidates to transplant or mechanical circulatory support)

HF Hospitalization

Multidisciplinarity

Thoracic surgery
Internal Medicine
Nephrology
Palliative Care

Nutrition
Rehabilitation
…

Cardiology outpatient clinic
Nurse coordinator 5days/week

Telephone and in-person consultations

Telemonitoring

(Noninvasive and Cardiac Devices)

TMO plan: Safety indicators

- NT-proBNP>10% from pre-discharge
- K+>5.0mmol/L
- HR<55bpm
- SBP<95mmHg
- eGFR<30 ml/min/1.73mq

Integrated and collaborative hospital community approach, in relation to stage and severity of the disease:
general practitioners; local cardiologists

Transitional care in advanced HF centers

- Transitional care in advanced centers is characterized by the **follow-up of a significative proportion of patients with advanced HF :** many with cardiac devices, easier access to different medical specialties.

- One of the main challenges in these centers is to **balance the provision of transitional care between patients with different severities of HF**, requiring collaboration with other cardiology centers and general practitioners.