Heart Failure Treatment Guidelines
University Hospital Plymouth

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Heart Failure (HF) affects approximately 2% of the population and accounts for 5% of all emergency admissions to hospital with an associated high mortality rate. Pharmacological therapies can improve symptoms, reduce Heart Failure hospital admission and improve survival. Deferral of treatment confers a great risk to the individual. These guidelines are aimed for the diagnosis, treatment and management of patients with Heart Failure. Some novel therapies are recommended for use by NICE by specialist initiation only and there are individual guidelines available for these. https://www.nice.org.uk/guidance/ng106

The UHP Heart Failure service comprises of Specialist Heart Failure Cardiologist, Heart Failure Nurse Specialists, Cardiology Consultants and Heart Failure administration support. The inpatient team works closely with the Community Cardiac Team at Livewell Southwest to provide collaborative working assisted by a weekly Heart Failure MDT to achieve gold standard care.

The National Heart Failure Audit highlights how specialist input improves patient outcomes.

UHP offer provision for direct access clinics form primary care as a single point of access based on BNP levels and a suspect diagnosis of Heart Failure.

UHP Heart Failure Team

Dr Edward Davies – Consultant Cardiologist
Dr Ben Sieniewicz – Consultant Cardiologist

Rebecca Horne – Lead Heart Failure Specialist Nurse
Rosemarie Gilbert – Heart Failure Specialist Nurse
Liz Cann – Heart Failure Specialist Nurse
Elaine Vanlint – Heart Failure Team Administration support

UHP Inpatient Referral **Inclusion** Criteria

- HFrEF <40%
- STEMI/NSTEMI with EF <35% (repeat echocardiogram in 6-8 weeks post MI to re-assess LV function)

To meet the below referral criteria – patients must have signs/symptoms of Heart Failure with current presentation of fluid overload

- HFmrEF EF 40-50%
- HFpEF/Diastolic Dysfunction EF >50%
- Right Sided Heart Failure (exclusion of PE)
- Severe Valve Disease

UHP Inpatient Referral **Exclusion** Criteria

- Atrial Fibrillation with HR >100bpm (unless known LVEF<40%) – repeat echocardiogram once adequate rate control
- RHF with current diagnosis of Pulmonary Embolism (PE) – repeat echocardiogram following treatment and re-refer if meets criteria
- EF >40% without signs/symptoms of Heart Failure
- STEMI/NSTEMI – EF>35%
- Exacerbation of COPD/Chest infection if EF >40%
- Valve disease **without** associated signs and symptoms of Heart Failure – consider referral to cardiology if severe
- Valve disease awaiting surgery

Contact Heart Failure Nurse Team via:

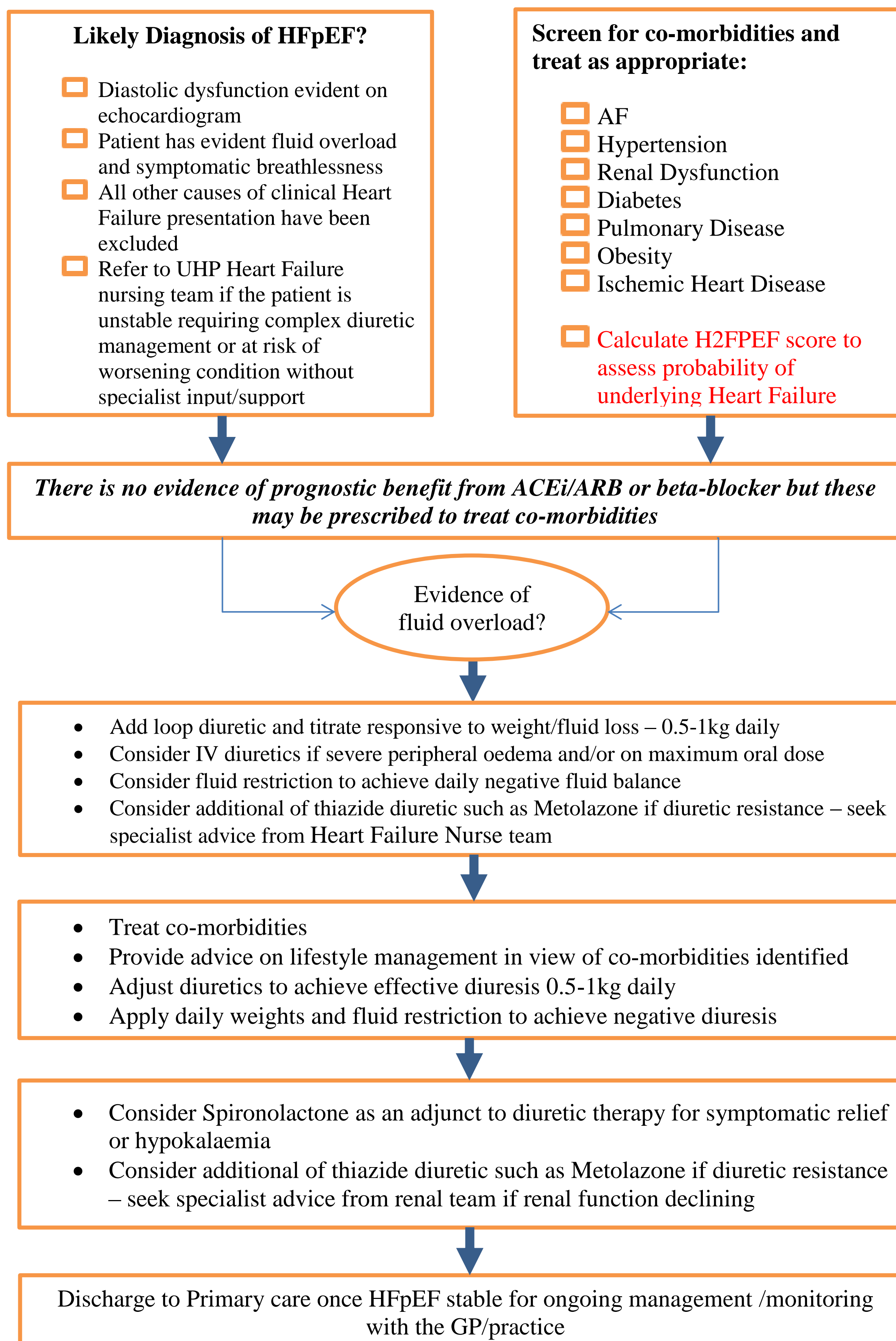
Salus – Specialist Heart Failure Nurse Review

Tel ext: 39263/31732

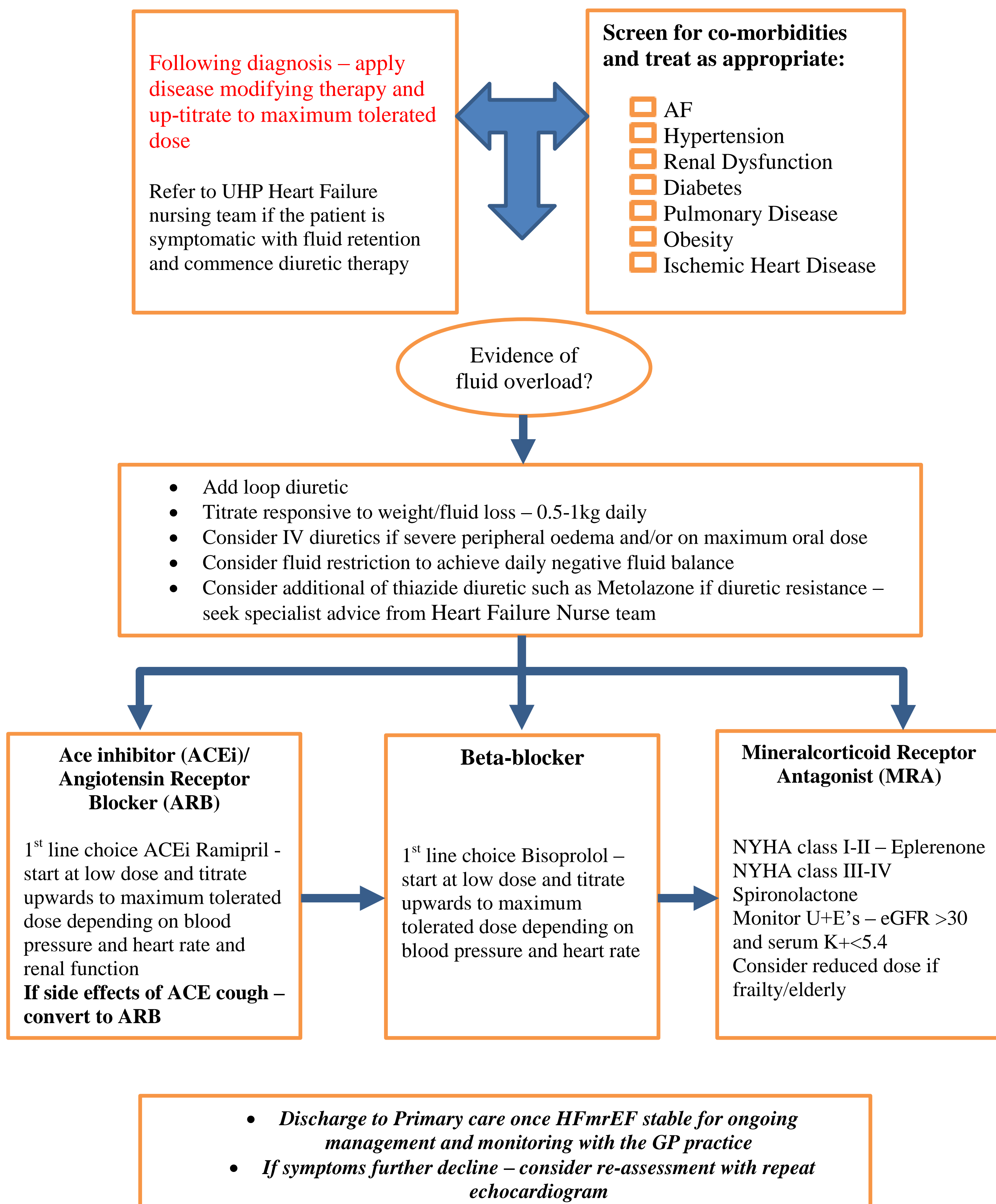
Bleep - 81494/81495

Email - plh-tr.hfnreferraluhp@nhs.net

UHP Treatment Pathway for Heart Failure with Preserved Ejection Fraction (HFpEF) EF > 50%



UHP Treatment Pathway for Confirmed Heart Failure with mid-range Ejection Fraction (HFmrEF) EF 40-50%



- ***Discharge to Primary care once HFmrEF stable for ongoing management and monitoring with the GP practice***
- ***If symptoms further decline – consider re-assessment with repeat echocardiogram***

UHP Treatment Pathway for Confirmed Heart Failure with reduced Ejection Fraction (HFrEF) EF <40%

Refer to Inpatient Heart Failure Specialist Nurse Team

Salus – Specialist Heart Failure Nurse Review
Tel ext: 39263
Bleep - 81494/81495
Email - plh-tr.hfnreferraluhp@nhs.net

STEP 1

DIURETICS

- Treat fluid overload with loop diuretic
- If diuretic naive start low dose and titrate upwards responsive to weight/fluid loss – aim to achieve 0.5-1kg weight/fluid loss daily
- Consider IV diuretics if severe peripheral oedema and/or maximum oral dose
- Consider fluid restriction to achieve daily negative fluid balance
- Consider additional of thiazide diuretic such as Metolazone if diuretic resistance

STEP 2

Start low dose and titrate up-wards

Sacubitril/Valsartan (ARNI) Ace inhibitor (ACEi)/ Angiotensin Receptor Blocker (ARB)

- Consider ARNI first line (NICE <EF 35%, ACC EF <40%)
- If established on ACEi/ARB and stable symptoms – convert to ARNI
- If hypotensive or recovering from AKI - consider low dose ACEi/ARB as bridge to ARNI

Beta-blocker

- Start first if tachycardic
- Delay if pulmonary oedema or severe peripheral oedema
- If unable to tolerate beta-blocker or further increased dose B.B – consider Ivabradine (ensure SR and HR>75bpm)

STEP 3

Mineralcorticoid Receptor Antagonist (MRA)

- NYHA class I-II – Consider Eplerenone **OR**
- NYHA class III-IV – Consider Spironolactone
- Monitor Potassium level – eGFR >30 and serum K+<5.4
- Consider reduced dose if frailty/elderly

SGLT2 inhibitor

- Consider for patients with or without type II diabetes
- Dapagliflozin currently licenced for heart failure treatment in HFrEF as additional therapy
- Monitor renal function, not for use in Type I diabetes or if eGFR <30
- https://www.nejm.org/doi/ful

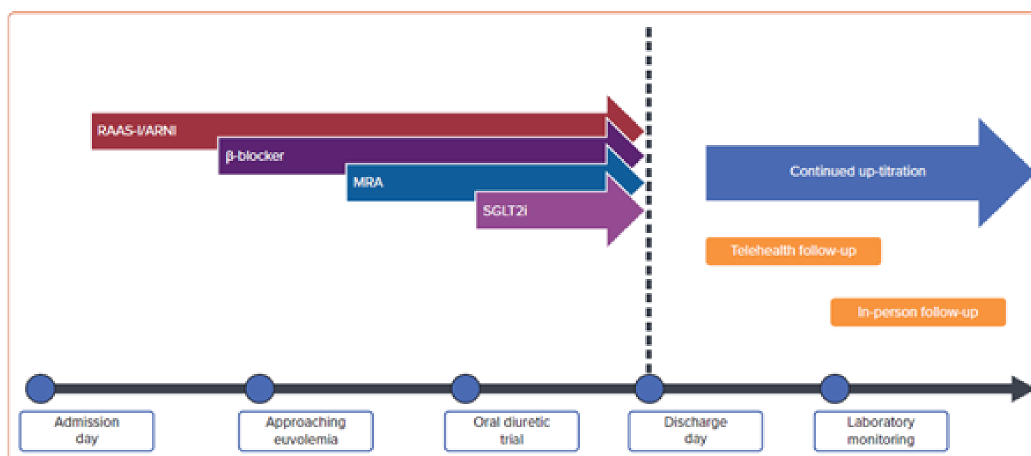
STEP 4

IV Iron

- Screen for Iron Deficiency
- Consider Ferrinject if:
- Hb <150 and Ferritin <100 **or**
- Hb <150. Ferritin <300 **and** Transferrin Saturations <20%

Improve Symptoms, Reduce Hospitalisation, Reduce Mortality

Shifting the Paradigm of Guideline-directed Medical Therapy Initiation



A suggested timeline of initiating guideline-directed medical therapy (GDMT) for patients admitted with heart failure with reduced ejection fraction during their hospitalization. ACEi = angiotensin converting enzyme inhibitor; ARB = angiotensin receptor blocker; ARNI = angiotensin receptor–neprilysin inhibitor; MRA = mineralocorticoid receptor antagonist; RAAS-I = renin-angiotensin-aldosterone system inhibitor; SGLT2i = sodium–glucose cotransporter-2 inhibitor.

Aim to start all 4 foundational Heart Failure therapies, once on all 4 then proceed to up-titrate;

1. **Plan parallel initiation and titration of the four most effective disease modifying drugs**
2. **Adapt drug initiation and titration to the individual patient based on fluid status, heart rate, blood pressure and renal function**
3. **Aim to up-titrate to maximum tolerated doses for optimised treatment**
4. **Reduce the number of steps to achieve optimal treatment where possible**

Repeat echo at 3 month interval following optimisation of medical therapy

If LV EF remains <35% refer to UHP Heart Failure Consultant Team for consideration of device therapy and advanced treatment options

If Heart Failure with recovered EF – continue medical therapy and educate patient for ongoing monitoring

Trust Guidelines	NHS University Hospitals Plymouth NHS Trust
Guidance Title: Heart Failure Treatment Guidelines	
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August 2021	**1.1**

Accountabilities	
Lead	Rebecca Horne (Lead Heart Failure Specialist Nurse) Dr Ben Sieniewicz (Consultant Cardiologist) Dr Edward Davies (Consultant Cardiologist)
Reviewed by (Group)	Cardiology Governance Group
Approved by (Lead)	Dr Sangaraju (Cardiology Governance Lead)
Links to other documents	

Version History		
V1.0	July 2021	Guideline created
V1.1	August 2021	Minor amendment made

Last Approval	**Due for Review**
August 2021	July 2023