Nottinghamshire Area Prescribing Committee

# Nottinghamshire Heart Failure Guidelines

## Primary Care Referral and Management Considerations

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**with input from the Heart Failure Transformation Group**

**Nottinghamshire Heart Failure Guideline Version 1.0**
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**Accessibility checked - contains flow charts and tables that may not be accessible to screen readers.**

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# Contacts for NUH

There are several routes into getting specialist heart failure advice in Nottingham. In addition to a patient's named cardiologist, there is a specialist heart failure team comprising of heart failure cardiologists and heart failure specialist nurses. Prompt advice can be given through the regular heart function MDT, email or through heart failure clinics.

**Nottingham heart failure specialist consultant team:**
Drs Bara Erhayiem, Amar Mistry, Jenny Chuen and Saima Khan

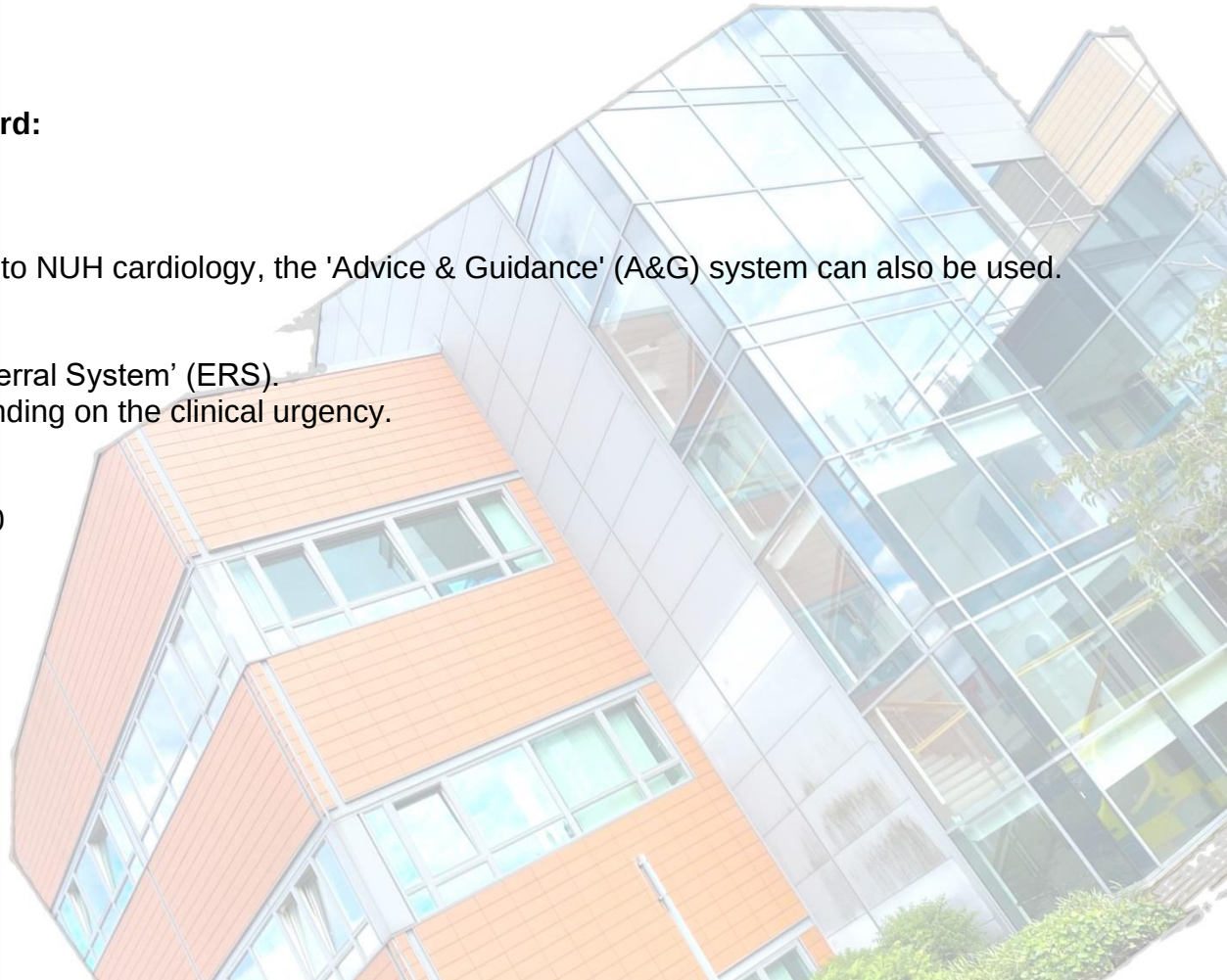
**Heart failure MDT referrals via:**
Community and NUH heart failure nurse specialist team

**HF team above, and on-call cardiology team, via switchboard:**
Queens Medical Centre (0115 9249924)
City Hospital Campus (0115 9691169)

For non-urgent, simple, enquiries regarding patients not known to NUH cardiology, the 'Advice & Guidance' (A&G) system can also be used.

**NUH heart failure and general cardiology clinics:**
Referrals into the NUH service can be made via ‘Electronic Referral System’ (ERS).
The patient will be vetted to one of many clinical services depending on the clinical urgency.

**Community Heart Failure Nurse Specialists:**
Nottingham North and West and North and East: 0300 0830000
Rushcliffe: 0115 8440504
City: 0300 300 7995



# Contacts for SFH

Referrals into the SFH service can be made via ‘Electronic Referral System’ (ERS).
The patient will be vetted to one of many clinical services depending on the clinical urgency:

- HF Consultant Advice & Guidance
- General Cardiology Clinic
- One Stop Heart Failure Clinic
- Community HF Nurse Service MDT care

**Heart Failure Lead Consultant Cardiologist:**
Dr Ifti Fazal

**Heart Failure Specialist Nurse Team**
Gail Moore, Lynsay Hayes

**HF team above, and on-call cardiology team,**
**via Sherwood Forest Hospitals switchboard:** 01623 622515

**Community Heart Failure Nurse Specialists:**
Newark & Sherwood: 01623 781891
Mansfield & Ashfield: 01623 781891

# Scope and Purpose

The purpose of these guidelines is to provide local clinical and service guidance for primary and secondary care on the diagnosis, management, and referral of patients with or suspected of having heart failure. The guidelines have been developed through the Nottingham Heart Failure Transformation Group and using the latest clinical research, evidence, and NICE/ESC guidance, considering our local structure, logistics and capacity.

These guidelines are not a comprehensive overview of epidemiology, budget, targets, pathophysiology, and very advanced care considerations. They are also not a detailed overview into the teaching and reference of heart failure signs, symptoms, and clinical features. The aim is for supporting healthcare professionals in recognising heart failure, urgency of referrals and expediently implementing the best-evidenced treatment in an equitable manner to help care for this very high-risk population.

The definition of 'specialist' in this guideline is any healthcare professional who has undertaken an appropriate formal qualification or period of recognised training in heart failure or cardiology and has working experience and knowledge in this area. It includes cardiologists, specialist nurses, pharmacists, HCOP physicians with interest in heart failure and GPs with interest in heart failure. By adhering to this guideline when prescribing for heart failure patients and indications, it is assumed that any Notts APC requirements for drug prescribing are met.

**Resource Links:**
British Society for Heart Failure: https://www.bsh.org.uk/
NICE guideline: https://www.nice.org.uk/guidance/ng106
ESC guidance: https://www.escardio.org/Guidelines/Clinical-Practice-Guidelines/Focused-Update-on-Heart-Failure-Guidelines
Cardiorenal Forum: https://www.cardiorenalforum.com/
Notts APC HF palliative guideline: https://www.nottsapc.nhs.uk/media/3gvbware/palliative-care-in-end-stage-heart-failure.pdf

# Diagnosis

Clinical signs & symptoms that are suspicious of heart failure

***Core workup to consider for breathlessness, fatigue, oedema and/or heart failure suspicion:***
*FBC, U&E, LFT, NTproBNP, TSATs, Ferritin, TFT, HbA1c, Bone profile, Vit D, CXR, Spirometry, ECG, Blood Pressure, BMI*

*In the absence of more probable, alternative, explanation of symptoms*

*NTproBNP risk stratification*

*Heart failure unlikely*
*NTproBNP <400ng/L*

*Continue considering primary diagnosis of heart failure*
*NTproBNP 400ng/L to 2000ng/L*

*Likely heart failure and higher risk*
*NTproBNP >2000ng/L*

# Referral & Service Structure NUH&SFH

Primary Care decision for echocardiography and/or NUH or SFH Cardiology input

Refer for GP open access echocardiogram, if required, at time of clinical diagnosis

Referral made to 'Heart Failure Service' through the Electronic Referral System (ERS)

Referrals vetted by NUH Echocardiography and HF Teams and at SFH by Cardiology, Diagnostics and HF Teams.

*The NUH/SFH teams will book the patient into **one or more** of the following cardiology services depending on the referral details.*

*Patients will be vetted urgent, or routine depending on the referral details and may move between the different services.*

- NUH Heart Function MDT Clinics
- NUH&SFH HF Consultant Advice & Guidance
- NUH&SFH Community HF MDT care
- NUH Ambulatory HF Day-Case Unit: *next working day*
- NUH&SFH Specialist HF echocardiography Clinic
- NUH&SFH General Cardiology Clinic

# Referral Criteria

Working diagnosis of clinical heart failure & **prior to echocardiography**

| Urgent clinical criteria for priority referral | Urgent management considerations at time of initial GP practice assessment |
|---|---|
| NTproBNP criteria in the absence of significant life-limiting extra-cardiac co-morbidity<br>• *NTproBNP > 600ng/L if age < 50*<br>• *NTproBNP > 2000ng/L if age < 75*<br>• *NTproBNP > 2000ng/L if age >75 and in sinus rhythm*<br>*Consider reducing the cut-off levels by 50% in BMI > 40 and in patients on ACEi/ARB.* | **Offer loop diuretics** if evidence of peripheral oedema, ascites, pleural effusions or raised JVP |
| Suspicion of severe valve disease on auscultation | **Offer ACE-inhibitor or angiotensin receptor blocker** if has hypertension, CKD with proteinuria and/or diabetes |
| Left Bundle Branch Block on ECG with QRS duration >150ms | In existing CKD or Type II diabetes patients only - **Consider SGLT2 inhibitor** if eGFR >30mL/min. |
| **Oedema past thighs** limiting mobility | **Do not add Beta blockers prior to seeing echo results** – it can be clinically dangerous to prescribe without a diagnosis |
| **Syncope on exertion** and/or with no prodrome | **Stop non-prognostic therapies** if blood pressure normal or low; oral nitrates, calcium-channel, and alpha blockers |
| **Pregnancy** or wanting to become pregnant soon | **Stop or switch therapies that are harmful** in heart failure, including regular NSAIDs, glitazones, rate-limiting calcium-channel blockers (diltiazem and verapamil), venlafaxine. |
| **Awaiting urgent surgery** (non-cardiac) | **Strongly advise** to reduce excess alcohol consumption, stop smoking, and limit excess dietary salt intake |
| Awaiting or undergoing **potentially curative Cancer treatment** | |
| **eGFR < 30mL/min** | |
| **Symptomatic hypotension or bradycardia** | |

# General Principles of Care

| | |
|---|---|
| **For all patients** | **Avoid sedentary behaviour.**<br>**Encourage physical exercise** appropriate to baseline fitness.<br>**Avoid excess salt intake**.<br>**Avoid excess fluid intake** but do not routinely advise long-term fluid restriction.<br>**Avoid excess alcohol** intake.<br>**Smoking cessation** advice.<br>**Optimisation of co-morbidities.**<br>Advise '**Think Kidney' campaign** and **sick-day rules for ACE-i/ARB/SGLT2i** temporary cessation.<br>**Diuretic education**. |
| **For patients on pre-existing cardiac medicines for previous non-heart failure indications** | It is appreciated that many new HFrEF patients may already be on medicines for angina, hypertension, chronic kidney disease.<br>1. continue pre-existing **ACE-i or ARB** or **up-titrate** if on low dose.<br>2. If not on a beta-blocker licensed for HFrEF, **switch to the equivalent dose of bisoprolol**.<br>3. **Focus on the addition of new HF therapies to complete 'quadruple' care, rather than titration alone of pre-existing medicines. See next page**<br>4. Convert CVD primary prevention **statin dosing to secondary prevention dosing if myocardial infarction suspected** on echocardiogram. |
| **For patients with type II diabetes on insulin and/or sulphonylurea when being initiated onto SGLT2i** | 1. Refer to T2DM guidance, taking into account most recent HbA1c and usual glucose levels.<br>2. If diabetes is already well controlled, c**onsider stopping sulphonylurea** and **consider reducing insulin by 10% as you start SGLT2i**<br>3. Seek advice from diabetes specialist nurse, community HF team or NUH HF team if unsure rather than not offer SGLT2i. |
| **Community speciality referrals** | 1. HFrEF: Community heart failure team referrals to support ongoing cardiac therapy titrations and MDT support.<br>2. HFpEF: If available, community matron team referral to support co-morbidity, frailty and/or diuretic management.<br>3. Community palliative care team for advancing heart failure and co-morbidity: see page 16.<br>4. Heart failure, pulmonary or cardiac rehabilitation referral for all patients, as available.<br>5. Community HCOP referral for patients with significant frailty and co-morbidities. |

# HF with reduced LVEF

Start 'quadruple' therapy in all patients with a left ventricular ejection fraction ≤ 40%, if no *absolute* contraindications and as soon as possible, *by GP practice in conjunction with community HF teams.*

| Patient Profile | Starting Medications and dosing | Therapy guidance |
|---|---|---|
| **Systolic blood pressure > 100mmHg**<br>**Heart rate > 60bpm**<br>**Normal Sodium and Potassium**<br>**eGFR > 30mL/min** | **Bisoprolol** 1.25mg OD<br>**Losartan** 25mg (ARB) or **ramipril** 1.25mg (ACE-i)<br>**Spironolactone** 25mg (MRA) OD<br>**Dapagliflozin** or **Empagliflozin** 10mg (SGLT2i) OD *(Seek specialist advice to approve initiation outside of T2DM and CKD. This may include specialists within your practice or PCN or via A&G from cardiology if no local HF specialist.)* | **All therapies can start simultaneously at lowest doses and**<br>-side effect profiles are usually easily identifiable<br>-this adds prognostic and symptomatic benefit.<br>**Reduce loop diuretics if the patient is not fluid overloaded**<br>Try to **delay beta-blocker until severe fluid overload improving.**<br>**Clinically review within 2 weeks** (inc. U&E and BP/HR)<br>*An initial eGFR reduction of up to 33% can occur. >33% consider renal artery stenosis (outside of dehydration or worsening HF)* |
| **Already on stable ACE-i/ARB**<br>**Systolic blood pressure > 100mmHg** | Consider **Sacubitril/Valsartan** instead of ACE-i/ARB up-titration<br>**Entresto** 24/26mg BD *(specialist initiation/advice)*<br><br>ACEi therapy must be discontinued **at least 36 hours before initiation** of sacubitril/valsartan due to risk of angioedema from concurrent therapy. | Cardiologists or community HF specialists may advise to start sacubitril/valsartan early or first-line in selected patients (this may include specialists from the practice/PCN).<br><br>**Clinically review within 2 weeks**<br>For U&E, oedema and BP/HR check |
| **If resting heart rate < 60bpm** | **Do not offer a beta-blocker** | Continue with initiating other therapies as indicated |
| **Symptomatic low blood pressure or postural hypotension** | **Avoid initial ACE-i/ARB and beta-blocker**<br>**Avoid sacubitril/valsartan**<br>**Give: -Spironolactone** 25mg OD<br>**-SGLT2s:** Dapagliflozin or Empagliflozin 10mg OD *(Seek specialist advice to approve initiation outside of T2DM and CKD. Includes specialists within your practice/PCN)* | **Clinically review within 2 weeks** (inc. U&E and BP/HR) for ACE-i/ARB or beta-blocker.<br><br>**At these doses, SGLT2i and MRA do not cause hypotension**. |
| **eGFR < 30mL/min** | **Avoid starting ACE-i/ARB, MRA and SGLT2i**<br>**Give Bisoprolol 1.25mg OD** | **Early Secondary Care opinion needed** via referral or Advice&Guidance. |
| **If Potassium > 5.5mmol/L** | **Avoid starting ACE-i/ARB and/or MRA**<br>**Give Bisoprolol** 1.25mg OD<br>**Give Dapagliflozin or Empagliflozin** 10mg OD *(Seek specialist advice to approve initiation outside of T2DM and CKD. Includes specialists within your practice/PCN)* | **Clinically review within 2 weeks** (inc. U&E and BP/HR)<br><br>**Advise low potassium diet**.<br><br>**Early HF team** opinion if persistently raised |

Aim to maintain patient on the lowest dose of loop diuretic required to maintain comfortable euvolaemia.
Assess for diuretic titration at every clinical interaction to avoid hypovolaemia/dehydration.

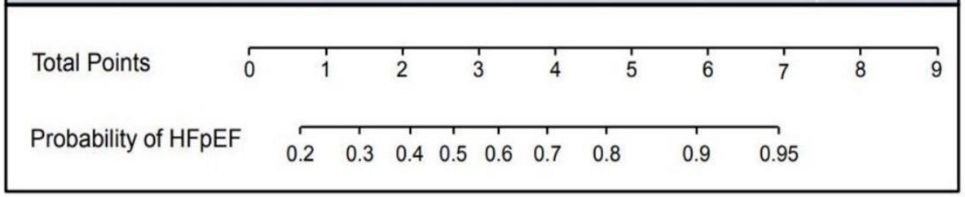
# HF with preserved LVEF

The evidence for blanket prognostic therapies in left ventricular ejection fraction >45% is lacking and rapid 'quadruple' therapy is not advised and may even be harmful.

**Diagnostic criteria for classic 'HFpEF'**
Clinical features of heart failure with **raised NTproBNP**, **dilated atria** and/or **left ventricular hypertrophy (LVH)** on echocardiography. Further refinement can be made utilising clinical scoring systems like H2FPEF (opposite).

**Treatment**
For patients with confirmed HFpEF, the **main goals of treatment** are to **reduce symptoms, increase functional status, and reduce the risk of hospitalisation.** At present, there is no clear evidence that any specific pharmacological therapy, diet, or other treatments reduce the risk of mortality.
**Early recognition and treatment of fluid overload improves symptoms and may prevent a requirement for hospitalisation**.
Conditions commonly associated with HFpEF include
-hypertension,
-coronary artery disease,
-COPD,
-anaemia,
-atrial fibrillation,
-diabetes,
-chronic kidney disease,
-sleep-disordered breathing.
Screening for and treatment of these co-morbidities is particularly relevant in HFpEF where the comorbidity burden is often high and drives additional healthcare needs and non-HF related hospitalisations.
On the following page, there are management considerations to consider in all patients with HFpEF that may influence specialist referral and specific treatments.

| | Clinical Variable | Values | Points |
|---|---|---|---|
| $H_2$ | **H**eavy | Body mass index > 30 kg/m$^2$ | 2 |
| | **H**ypertensive | 2 or more antihypertensive medicines | 1 |
| F | Atrial **F**ibrillation | Paroxysmal or Persistent | 3 |
| P | **P**ulmonary Hypertension | Doppler Echocardiographic estimated Pulmonary Artery Systolic Pressure > 35 mmHg | 1 |
| E | **E**lder | Age > 60 years | 1 |
| F | **F**illing Pressure | Doppler Echocardiographic E/e' > 9 | 1 |
| $H_2$FPEF score | | | Sum (0-9) |



| Patient Profile in suspected HFpEF | Diagnosis Consideration | Management Guidance |
|---|---|---|
| **Obesity**<br>**Metabolic syndrome**<br>**Type II diabetes**<br>**Atherosclerotic vascular disease**<br>**Smoking history**<br>**Chronic kidney and/or liver disease**<br>**Elderly**<br>**COPD** | **Classic and highly likely 'HFpEF'** | **Offer Dapagliflozin or Empagliflozin 10mg OD** to all *(seek specialist advice to approve initiation outside of CKD and T2DM; this may include specialists from the practice/PCN)*<br>- if eGFR > 20mL/min;<br>**Avoid beta-blockers** unless a strong non-HF indication.<br>**Diuretic titration to maintain euvolaemia** (including reducing if the patient is not fluid overloaded)<br>**Spironolactone 25mg OD**: especially if HTN or obesity.<br>**Reduction of polypharmacy**.<br>**Conservative blood pressure targets** for hypertension.<br>**Physical rehabilitation** and regular aerobic activity<br>Screen for COPD and Obstructive Sleep Apnoea if concerns |
| **Persistent/Permanent Atrial fibrillation** | Common finding, especially in the elderly | **Digoxin preferred**, if needed, in HFpEF.<br>**Consider weaning off beta-blockers** if heart rate < 70bpm.<br>No strict target heart rate: aim <110bpm at rest. |
| **No typical HFpEF comorbidities and age <40 to 65** | Possible HFpEF | **Early cardiology referral** |
| **Any patient age < 40**<br>**+/- positive family history**<br>**+/- features of shunt**<br>**+/- features of pulmonary hypertension**<br>**+/- normal ECG** | Classic HFpEF **very unlikely**<br>Needs specialist input and workup | **Early cardiology referral** |
| **History of carpal tunnel syndrome**<br>**Small QRS complexes on ECG despite LVH on echo**<br>**Autonomic and peripheral neuropathy**<br>**Heavy proteinuria / Nephrotic**<br>**Sensitive to BP lowering medications**<br>**Myeloma/MGUS history** | Cardiac Amyloidosis | **Early cardiology referral if no suspicion of myeloma and Cardiac amyloidosis suspected.**<br><br>**Urgent free-light chains and immunoglobulins recommended**<br>**Urgent referral to Haematology if myeloma suspected** |
| **Previous TB, pericarditis, or cardiac surgery**<br>**Previous chest radiotherapy**<br>**Severe fluid overload with NTproBNP <1000ng/L**<br>**Ascites, liver dysfunction with normal albumin**<br>**Raised venous pressures with 'normal' echo** | Constrictive Pericarditis | **Early cardiology referral for advanced imaging** |

# Diuretic management

**> 95% of patients are fluid overloaded at time of heart failure diagnosis**
Loop diuretics are the mainstay of treatment. Falling eGFR and low sodium are common findings in fluid overload care has to be taken to not misinterpret these findings as reason to not offer diuresis. As heart function therapies are initiated, the need for diuretics frequently reduces and diuretics should be wean down to lowest possible maintenance dose at every opportunity to avoid hypovolaemia, hypotension and pre-renal acute kidney injury.

**An increase in diuretic should be considered when:**
• Increase in weight of ≥2kg over 2-3 days.
• Increased dyspnoea, oedema, ascites, orthopnoea.

**A decrease in diuretic should be considered when:**
• Stable and mild dyspnoea with no oedema, ascites, orthopnoea.
• Specific symptoms of dehydration (eg thirst, very dry mucous membranes and decreased skin turgor, postural hypotension).

U&E should be repeated within 1-2 weeks of diuretic dose changes.

It is encouraged to **empower** patients and teach them to record their own weight and symptoms frequently and **self-titrate** loop diuretics.

The routine advice for **fluid restriction** is not encouraged by any guideline and can be harmful. Patients should be encouraged to control dietary salt and fluid ***excess***.

| Diuretic prescribing guidance |
|---|
| **Furosemide 20-40mg once to twice daily,** titrating as needed up to 120mg BD |
| If **still symptomatic** and on 120mg twice daily of furosemide, **consider switching to bumetanide**, which has greater and more consistent bioavailability.<br>40mg furosemide = 1mg bumetanide |
| If **sodium > 135mmol/L**, early supplementation with **bendroflumethiazide** or **metolazone** 2.5mg to 5mg 'PRN' from once weekly to once daily at midday. Metolazone is classified **Red** - only for specialists to prescribe. |
| Ensure on SGLT2i if no contraindication. |
| In patients on ACEi/ARB - **Increase Spironolactone** or **Eplerenone** to 50mg once daily.<br>Eplerenone is classified **Amber2** – specialist recommendation/initiation. |
| In patents **NOT ON** ACEi/ARB **Spironolactone** to 200mg daily without the presence of other prescription. |
| **Amiloride** 5-10mg twice-daily if intolerance to spironolactone or eplerenone. |
| Ensure no excess dietary salt intake and no excess fluid intake. |
| **Aim sodium >125mmol/L** if symptoms improved and oedema controlled |

| Referral for intravenous ambulatory furosemide |
|---|
| If an ambulant community HF patient has increasing symptoms and fluid overload despite >120mg furosemide or >3mg bumetanide twice-daily, then please urgently call the 'NUH heart failure team' via NUH switchboard to consider day-case unit attendance for ambulatory intravenous furosemide therapy (SFH does not provide day-case unit attendance for ambulatory IV furosemide). |

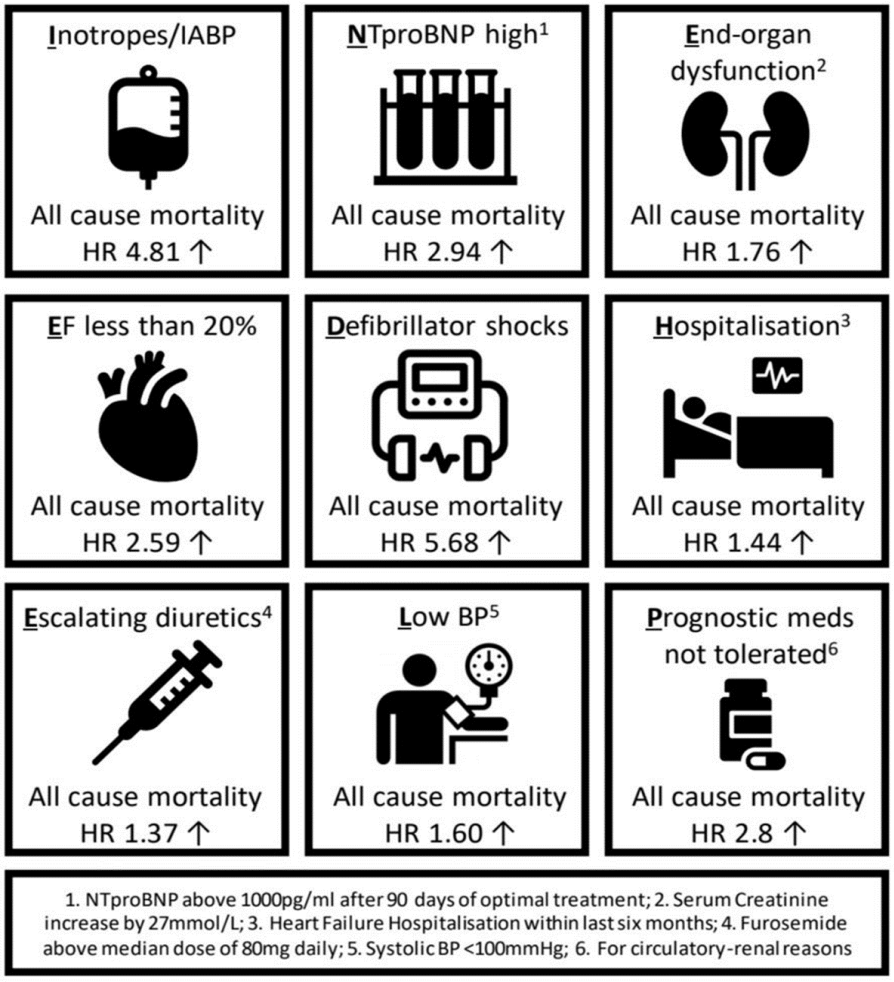
# Drug Dosing: core therapies

| Heart Failure Medication | Starting Dose | Target Dose | Titration steps | Ensure | | | |
|---|---|---|---|---|---|---|---|
| | | | | Heart Rate > 50bpm | Systolic BP > 110mmHg | Potassium <5.5mmol/L | eGFR reduction <33% |
| **Beta-blocker:** **Bisoprolol** | **1.25mg once daily** | **10mg once daily** Or 5mg BD if OD not tolerated | **1.25mg - increase every 2 wks** | √ | √ | | |
| **ACE-inhibitor:** **Ramipril** | **1.25mg once daily** | **10mg once daily** Or 5mg BD if OD not tolerated | **1.25mg - increase every 2 wks** | | √ | √ | √ |
| **Angiotensin Receptor Blocker (ARB):** **Losartan** | **25mg once daily** | **150mg once daily** | **50mg - increase every 2 wks** | | √ | √ | √ |
| **Aldosterone Antagonist (MRA):** **Spironolactone or Eplerenone (Amber2)** | **25mg once daily** | **50mg once daily** | **25mg - increase at 2-4 wks** | | Doesn't cause hypotension at these doses | √ | √ |
| **SGLT2 inhibitor:** **Dapagliflozin or Empagliflozin** **(Amber2 for HF)** **(Amber3 for CKD/T2DM)** | **10mg once daily** | **10mg once daily** | **NB Do not give in Type I Diabetes** | | Does not cause hypotension at these doses | | √ |
| **Neprilysin inhibitor and ARB:** **Sacubitril/ Valsartan (Amber2)** | **24/26mg twice daily** | **97/103mg twice daily** | **Double dose every 2-4 weeks** | | √ | √ | √ |

# Heart Failure: adjunct therapies

| Heart Failure Medication | Indication | Starting Dose | Titration or referral steps |
|---|---|---|---|
| **Ivabradine** | Symptomatic HF with LVEF < 35%<br>On maximal tolerated beta-blocker<br>Sinus rhythm<br>Heart rate > 75bpm and BP > 90mmHg | **Seek specialist opinion first.**<br>2.5mg twice daily | 2.5mg increase every 2-4 weeks<br>Target heart rate 50 to 75bpm<br>Ensure systolic BP > 90mmHg<br>Maximum dose 7.5mg twice daily |
| **Digoxin** | Worsening HF despite optimal therapy<br>Whether patient in AF or sinus rhythm | **Seek specialist opinion if in sinus rhythm.**<br>62.5mcg once daily if in AF | Maintenance dose usually 125mcg OD |
| **Nitrate / Hydralazine** | Worsening HF despite optimal therapy<br>Especially if of African/Caribbean origin<br>And/or ACE-i/ARB dosing limitation if CKD 4-5<br>And/or if severe hypertension | **Seek specialist opinion first.**<br>ISMN MR 30mg once daily<br>Hydralazine 25mg three times daily | Titrate to symptoms; maximum dosing<br><br>ISMN MR 120mg once daily<br>Hydralazine 75mg three times daily |
| **Potassium Binder: Sodium Zirconium Cyclosilicate** | If persistent hyperkalaemia and have serum potassium of at least 6.0 mmol/L Despite low potassium diet<br>If limiting ACE-i/ARB/MRA optimisation | **Seek specialist opinion first.**<br>10g three times daily loading dose<br>5g once daily starting dose<br>Specialists may consider early initiation, before potassium reaches 6mmol/L, in selected patients. | Titrate to potassium levels;<br><br>Maintenance dose range:<br>5g alternate day to 10g once daily |
| **Intravenous Iron** | Symptomatic HF with LVEF < 45%<br>Ferritin <100mcg/L<br>Ferritin 100 to 300mcg/L if TSATs < 20% | N/A | IV Iron Referral Form to NUH HF Team<br>Refer for IV Iron to KMH via Community HF Nurses.<br>Ensure bone profile and vitamin D checked. |

# Advanced Heart Failure




The typical illness trajectory for heart failure is a gradual functional decline with intermittent episodes of decompensation which may mean that death may appear 'sudden'.

Prognostication can be difficult and needs to be personalised with each patient. What can also be difficult to predict is reversibility after a specific therapy is initiated, e.g. medicine combinations, pacemaker device and/or coronary revascularisation. Good communication with the heart failure team is essential so that symptomatic and/or prognostic intervention can be appropriately considered - or indeed, so that important timely reverse-titration of therapy can be advised.

Patients benefit from palliative care given alongside active care.

Two of the following conditions could indicate that a patient may be included within your Palliative Care Register:
1) Severe breathlessness despite optimal medical therapy
2) Question: "I would not be surprised if this patient died in the next 6-12months"?
3) Repeated heart failure hospital admissions:
4) Difficult physical or psychological symptoms despite optimal tolerated therapy

The opposite diagram showing the "I NEED HELP" acronym is a useful aide-memoir.

**Notts APC HF palliative guideline**:
https://www.nottsapc.nhs.uk/media/3gvbware/palliative-care-in-end-stage-heart-failure.pdf