Heart Failure (HF) Pathways for use in General Practice

1. Suspected diagnosis of HF
   
   For use in primary care after the breathlessness algorithm for potential diagnosis of HF

2. Patient on HF register?
   
   For use in primary care for patients with confirmed HF who have recently moved to your practice or under your long term care

3. Expected treatment pathway for HF with left ventricular systolic dysfunction (LVSD) LVEF ≤40%
   
   For use in primary care – a guide outlining the expected treatment of HF with LVSD.

4. Expected treatment pathway for HF with preserved ejection fraction (HF-pEF) LVEF >40%
   
   For use in primary care – a guide outlining the expected treatment of heart failure with preserved ejection fraction

5. General Practice Six Month HF Review

6. Glossary

The guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.
If having completed the **breathlessness algorithm** on DXS and there is...

1. **Suspected new diagnosis of heart failure?**
   
   See [ESC guidelines](#) for further information on symptoms of HF

   - Chest X-ray & ECG
   - Do NOT book open access echo
   - Bloods (FBC, U&E, HbA1c, Chol, TFTs)
   - NT Pro-BNP

   **NT-proBNP**
   - <400 pg/mL
     - Unlikely HF consider alternative diagnosis
   - 400-2000 pg/mL
     - Requires assessment by specialist and echocardiogram in one stop Heart Failure Clinic
     - NHS e-referral seen within 6 weeks
   - >2000 pg/mL
     - NHS e-referral seen within 2 weeks

   Prior history of MI

At KCH and GSTT refer to 2 week or 6 week **Heart Failure Clinic** on NHS e-referral service (for 2 week select ‘urgent’ filter)

For SGH refer to **Rapid Access Heart Failure Clinic** on NHS e-referral service
2. Patient on HF register?
Previous diagnosis by cardiologist or HF specialist
Contact your locality HF team for support

- Stable and well

- Symptomatic despite maximum tolerated first line medical therapy?
  (See pathway 3 & 4)

- Consider referral to heart failure specialist
  If significant comorbidity, frailty and over 70 years consider if more appropriate to be seen in HF older adult clinic with Dr Wilson (KCH) or Dr Schiff (GSTT)
  If unsure you can access electronic frailty score via EMIS or DXS

  If not refer to heart failure cardiologist at KCH or GSTT.

  For SGH refer to heart failure specialist clinic regardless of comorbidity and age.

  If previously known to community heart failure team within last year refer for review

For referral to community heart failure team email: gst-tr.KHPcommunityHF@nhs.net
Please include GP summary and Echo

Need advice?
For support with education and management contact locality team
For complex management advice or admission avoidance email KHP consultant mailbox: gst-tr.KHP-HFconsultant@nhs.net for GSTT and KCH. For SGH email stgh-tr.heartfailureteam@nhs.net
3. Expected treatment pathway for confirmed LVSD (LVEF ≤40%) read code 585f

For further information on the specialist treatment pathway please click [here](https://www.gstt.nhs.uk/)

Following diagnosis and specialist treatment plan:
- Prescription of disease modifying therapy & diuretics: ACE-I/ARB
- Beta Blockers

To maximum tolerated licensed dose

If still symptomatic consider second line medication:
- MRA/AA

If any questions or concerns about patient or medication contact locality team. (See yellow box below)

Screen for co-morbidities
- [ ] Hypertension
- [ ] Renal dysfunction
- [ ] Diabetes
- [ ] Pulmonary disease
- [ ] Ischaemic heart disease

6 monthly review for all HF patients (see pathway 5)

If still symptomatic despite maximum tolerated medication refer for:
- Specialist reassessment of symptoms, LV function and ECG
- Specialist consideration of advanced therapies: including sacubitril valsartan/ivabradine/digoxin/hydralazine + nitrate/device therapy/transplant

See pathway 2 for referral guidance

Need advice?

For support with education and management contact locality team
For complex management advice or admission avoidance email KHP consultant mailbox
gst-tr.KHP-HFconsultant@nhs.net for GSTT and KCH
For SGH email stgh-tr.heartfailureteam@nhs.net
For use in secondary care only

3i. Expected treatment pathway for confirmed LVSD

Commence ACE-I & Beta-blocker and up-titrate to maximum tolerated licensed dose in primary care
Sign post to HF titration guide or contact community team for guidance/education

- Re-assess LV function
- Re-assess symptoms

LVEF ≤35% or NYHA II-IV
Add MRA/AA

LVEF >35% & NYHA I

LVEF ≤35% or NYHA II-IV

QRS>130ms
**Consider CRT**

HR >75bpm
**Consider Ivabradine**
(for patients in sinus rhythm only)

Replace ACE-I/ARB with ARNI (sacubitril valsartan)
see transfer of care doc

If NYHA I-III and LVEF <35% despite OMT or history of VF/VT - implant ICD

Asymptomatic or LVEF >35%:
Long term follow-up in primary care & continue medical therapy, possibly decrease diuretic dose

Refractory symptoms:
Consider digoxin, hydralazine/nitrates;
Referral for advanced therapies in appropriate patients;
Symptomatic management and care planning

Primary care to carry out 6 monthly review for all HF patients
(please see General Practice Six Month Review)
4. Expected treatment pathway for confirmed HF-pEF (LVEF >40%) read code G583 (symptomatic HF with preserved ejection fraction)

No evidence for disease modifying therapies in HF-pEF

Prescribe diuretics to relieve symptoms & signs of congestion and manage co-morbidities

GPs identify and treat co-morbidities

- Hypertension
- Renal dysfunction
- Diabetes
- Pulmonary disease
- Ischaemic heart disease

General Practice carry out 6 monthly review for all HF patients (please see pathway 5)

The ESC recently termed heart failure with LVEF from 41-49% as heart failure with mid-range ejection fraction (HF-mrEF). There are currently no evidence based therapies for this group, these patients can therefore be treated as HF-pEF pending clinical trials.

See pathway 2 for referral guidance

Need advice?
For support with education and management contact locality team
For complex management advice or admission avoidance email KHP consultant mailbox

gst-tr.KHP-HFconsultant@nhs.net for GSTT and KCH
For SGH email stgh-tr.heartfailureteam@nhs.net
5. General Practice Six Month HF Review
(NICE guidelines state that stable patients should be reviewed every six months)

1. Symptoms
- Are symptoms stable (NYHA Class)
- Pulse assessment rate & rhythm
- Weight
- Fluid assessment (dehydrated/overloaded)?

2. Medication Review
- (HF-REF/LVSD only)
  - ACE inhibitor at maximum tolerated licensed dose?
  - Beta-blocker at maximum tolerated licensed dose?
  - MRA/AA (e.g. spironolactone or eplerenone) at maximum tolerated licensed dose?

3. Bloods
- Renal function, potassium, sodium stable?
- Haemoglobin

Consider:
- Optimal management of co-morbidities e.g. hypertension, diabetes
- Cardiac rehabilitation or recommend exercise
- Depression/anxiety screen
- Nutrition assessment (MUST tool)
- Smoking cessation, if appropriate
- Alcohol screen (FAST)
- Flu/pneumococcal vaccine
- Contraception review, if appropriate
- Neurological status assessment
- Annual ECG – if QRS newly >130ms refer for reassessment
- Self management advice and educational films

4. Other

If your patient is symptomatic despite optimal medical therapy, or there is evidence of rapid deterioration, please contact your locality team.

For complex management advice or admission avoidance email consultant mailbox:
gst-tr.KHP-HFconsultant@nhs.net for KCH and GSTT
For SGH email stgh-tr.heartfailureteam@nhs.net
Glossary

ACE-I: Angiotensin Converting Enzyme Inhibitor
AA: Aldosterone Atagonist
ARB: Angiotensin Receptor Blockers
ARNI: Angiotensin-Receptor/Neprilysin Inhibitor
BPM: Beats Per Minute
Chol: Cholesterol
CRT: Cardiac Resynchronisation Therapy
ECG: Electrocardiogram
Echo: Echocardiogram
EMIS: Egton Medical Information System
ESC: European Society of Cardiology
FAST: Fast Alcohol Screening Tool
FBC: Full Blood Count
GP: General Practitioner
GSTT: Guy’s and St Thomas’ NHS Foundation Trust
HbA1c: Glycated Haemoglobin Test
HF: Heart Failure
HR: Heart Rate
HFrEF: Heart Failure with Reduced Ejection Fraction
HfmrEF: Heart Failure with Mid-range Ejection Fraction
HFpEF: Heart Failure with Preserved Ejection Fraction
ICD: Implantable Cardioverter Defibrillator
KCH: King’s College Hospital NHS Foundation Trust
KHP: King’s Health Partners
LV: Left Ventricle
LVEF: Left Ventricular Ejection Fraction
LVSD: Left Ventricular Systolic Dysfunction
MI: Myocardial infarction
MRA: Mineralocorticoid Receptor Antagonist
MUST: Malnutrition Universal Screening Tool
NHS: National Health Service
NICE: National Institute for Clinical Excellence
NTPro-BNP: N-terminal pro B-Type Natriuretic Peptide
NYHA: New York Heart Association
OMT: Optimal Medical Therapy
Pg/mL: Picogram/Milliliter
SGH: St George’s Hospital
TFTs: Thyroid function tests
U&E: Urea and Electrolytes
VF: Ventricular Fibrillation
VT: Ventricular Tachycardia