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

Prior history of MI

NT-proBNP <400 pg/mL

NT-proBNP 400-2000 pg/mL

NT-proBNP >2000 pg/mL

Requires assessment by specialist and echocardiogram in one stop Heart Failure Clinic

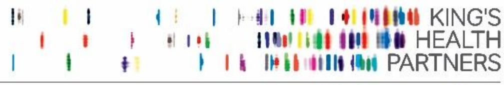
Unlikely HF consider alternative diagnosis

NHS e-referral seen within **6** weeks

NHS e-referral seen within **2** weeks

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

- ☐ If LVSD is patient on maximum tolerated licensed dose: ACE-I, beta-blocker +/- MRA/AA
- ☐ If HF-pEF manage fluid overload with diuretics and address any comorbidities
- ☐ **Consider review at HF virtual clinic**
- ☐ Review 6 monthly either in General Practice or by specialist to ensure stability dependent on complexity (please see pathway 5)

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

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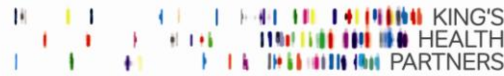

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3. Expected treatment pathway for confirmed LVSD (LVEF ≤40%) read code 585f

For further information on the specialist treatment pathway please click here

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 re-assessment 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

☐ Re-assess LV function ☐ Re-assess symptoms

LVEF >35% & NYHA I

LVEF ≤35% *or* NYHA II-IV

QRS>130ms
Consider CRT

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

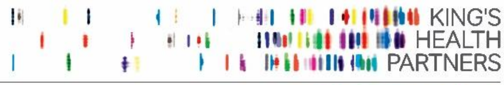
Replace ACE-I/ARB with ARNI (sacubitril valsartan)
see transfer of care doc

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

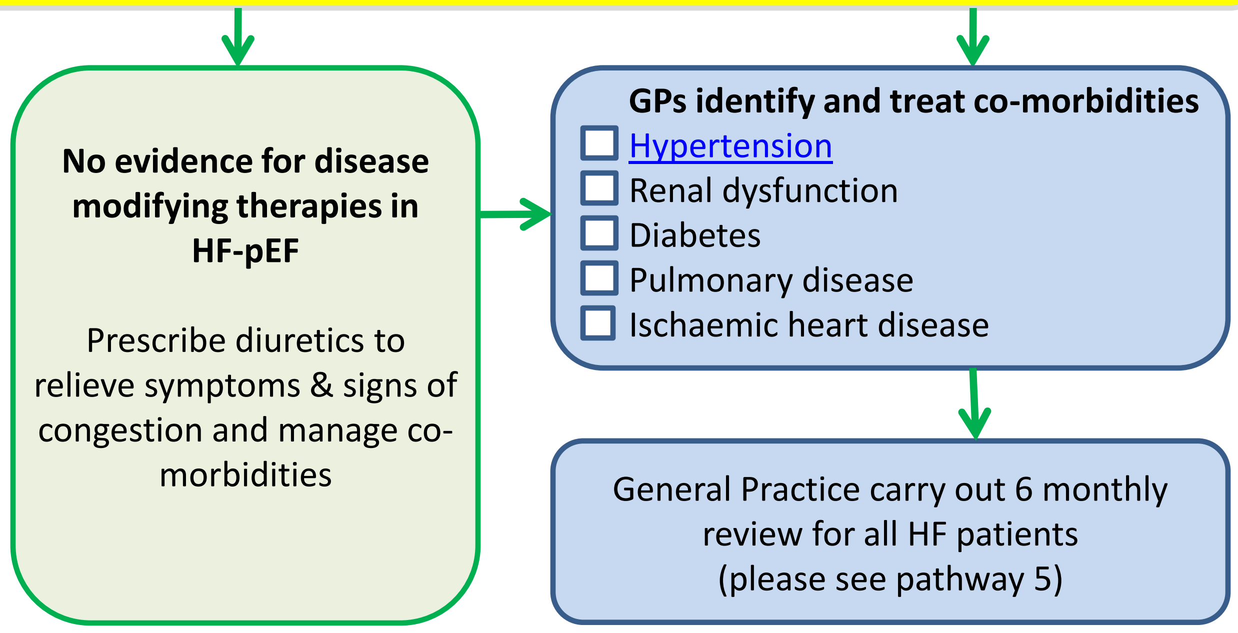
If NYHA I-III and LVEF <35% despite OMT or history of VF/VT - implant ICD

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)



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

4. Other

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**

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