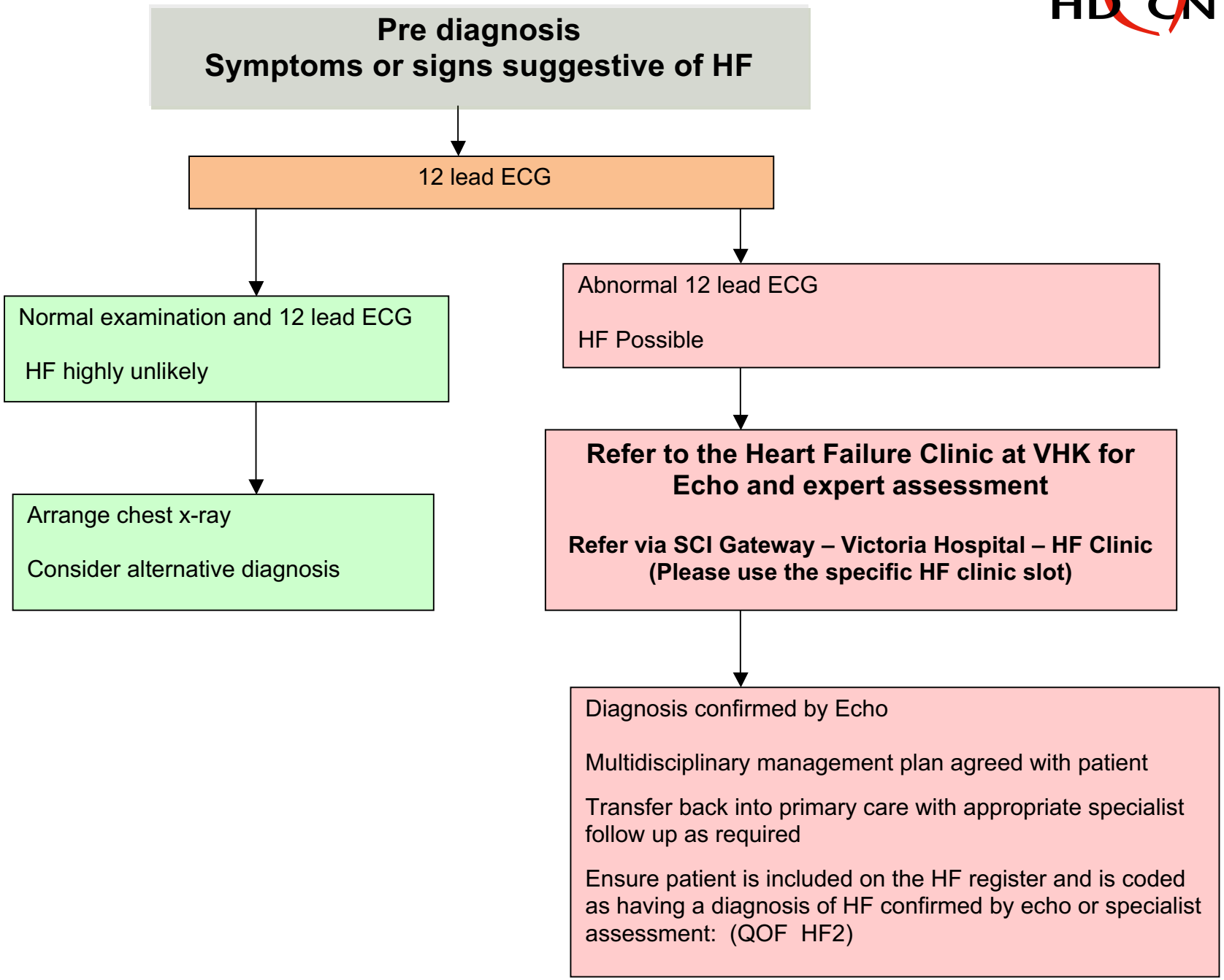
Heart Failure (HF) - Primary Care Flow Charts



Known HF presenting with worsening symptoms

Acute
Rapid deterioration in clinical condition

→ Admit to Cardiology

Chronic
Deterioration over days or weeks

→ Does patient have signs of fluid overload?

NO

→ Rapid expert assessment required

YES

→ Optimise diuretic

→ Consider spironolactone if not prescribed (Appendix 1)

Initiate treatment to ensure patient's symptoms are being managed prior to being seen in HF clinic

Refer to the Heart Failure Clinic at VHK for review and management
(Patient will be seen at next HF clinic – maximum time to appointment 6 days).

Refer via SCI Gateway – Victoria Hospital – HF Clinic
(Please use the specific HF clinic slot)

If a more urgent review is required please email Fife.uhb.heartfailureservice@nhs.net
Patients referred via this route will be seen at a cardiology clinic the following day.

→ Weekly visits to HF clinic until patient stabilizes

→ Multidisciplinary management plan agreed by patient (Appendix 3)

→ If supportive palliative care is required ensure patient is on the non cancer palliative care register

HF Management after diagnosis or discharge from hospital

Is patient on maximum tolerated evidence based treatment?

Yes

Multidisciplinary management plan agreed by patient supported by the Heart Failure Liaison Nurse Service (Appendix 3)

No

Complete optimisation of medical therapy as set out in appendix 2

Multidisciplinary management plan agreed by patient with support of the Heart Failure Liaison Nurse Service (Appendix 3)

The Heart Failure Liaison Service is based at:

Address: **Administration Building,**
Cameron Hospital,
Windygates.
Tel No: **01592-226884**
Fax: **01592-226989**
Email: **Fife-uhb.heartfailureservice@nhs.net**

The Specialist Nurses are available for support and advice and can be contacted by patients, their GPs and carers.

Spironolactone Flow Chart

Indications

Should be considered for patients NYHA III-IV who have been optimised on an ACE-I or ARB and a beta -blocker and continue to be symptomatic

Contra-indications

Patient is treated with both an ACE-I and an ARB
Significant hyperkalaemia >5mmol/l
Significant renal dysfunction Cr >220mmol/l

Pre-initiation checks

- Where appropriate, stop potassium supplements & other potassium sparing diuretics 2 weeks before starting spironolactone.
- Substitute with a loop diuretic e.g. furosemide.
- Check blood chemistry:

Creatinine	<220umol/l
Urea	< 12mmol/l
Potassium	<4.5mmol/l

Commence Spironolactone

Initial dose	Increments	Target
25mg od	double to	50mg od

(Where dose reduction may be required consider 25mg od then 25mg alternate days depending on biochemistry)

Monitoring

Blood chemistry should be checked initially and at weeks 1, 2 & 4
Then 4 weekly for 3 months
3 monthly for 1 year
Then 6 monthly thereafter

Stop spironolactone and seek specialist advice where

The patient develops:

- Diarrhoea
- Vomiting
- Or any other cause of sodium & water depletion
- Gynaecomastia Consider eplerenone as an alternative. Initiate on 25mg daily, and increase to 50mg within four weeks taking into consideration serum potassium levels. Monitor as above
  (Where dose reduction may be required consider 25mg od then 25mg on alternate days depending on serum potassium levels)

Blood chemistry

- Urea ↑ >18mmol/l (or by 50% from baseline)
- Creatinine ↑ ≥ 250umol/l (or by 25% from baseline)
- Potassium > 5.5mmol/l

Appendix 2 HEART FAILURE TITRATION GUIDANCE

CONDITION	EVIDENCE BASED DRUGS	YES	NO	MTD*	OD**	DOCUMENT CONTRAINDICATION
Base line treatment	ACE-I					
	ARB (if intolerant of ACE-I)					
	Betablocker					
Fluid overload	Loop diuretic					
NYHA class III or IV	Aldosterone antagonist					
Atrial fibrillation	Warfarin					

*Maximum tolerated dose
**Optimal dose

ACE INHIBITOR (ACE-I)

Name of drug	Start dose	Target
Ramipril	2.5mg od	10mg od
Perindopril	2mg od	4mg od
Trandolapril	1mg od	4mg od

ANGIOTENSIN RECEPTOR BLOCKER (ARB)

Name of drug	Start dose	Target
Candesartan	4mg od	32mg od
Losartan	25mg od	100mg od

BETA- BLOCKER

Bispoprolol Titration

Week 1	→	1.25mg od
Week 2	→	2.5mg od
Week 3	→	3.75mg od
Week 4	→	5mg od
Week 8	→	7.5mg od
Week 12	→	10mg od

Carvedilol Titration

Week 1	→	3.125mg bd
Week 3	→	6.25mg bd
Week 5	→	12.5 mg bd
Week 7	→	25mg bd
Week 9	→	*50mg bd ***if weight >85kg**

APPENDIX 3 - HEART FAILURE INTEGRATED CARE PATHWAY

Diagnosis of chronic heart failure due to left ventricular systolic dysfunction (LVSD)

Heart Failure Liaison Service aims:

Develop a heart failure register.
Refer to primary care for inclusion on heart failure and palliative care register.
Carry out full assessments and assign treatment pathway based on patient's risk of decompensation.
Introduce core issues relating to lifestyle changes, education, self management, carer support, and benefits advice.
Review medication and plan optimised pharmacological management.
Have access to and will refer to other health care professionals.

Low Risk :
Stable, established on treatment.
Concordant with medication.
Knowledgeable about condition.
Adopting lifestyle changes and self managing.
Receiving adequate social support.
Annual Review within practice.
Self management plan.

Community Nurse:
Address and support lifestyle issues, education and self management.
Access to HF Liaison service as required.

Moderate Risk:
Stable, requiring dose titration.
Not fully concordant with medications.
Minimal understanding of condition and impact of not modifying behaviour.
Requiring support, education and structured case management.
Frequent review.
Anticipatory care plan.

Nurse with Specialist Knowledge:
Address and provide further education on lifestyle issues, carer support, relaxation and anxiety management.
Monitor dose titration.
Intensive support for self management.
Re-assessment/access to HF Liaison Service as required.
Review as required.

High Risk:
Unstable, poor renal function. Symptomatic.
Other co-morbidities, complex case management required.
Poor understanding of condition and not concordant with medication.
Requiring close monitoring of clinical status.
Inadequate social support or haphazard follow-up.
Advanced care plan.

Heart Failure Specialist Service:
Case management plan.
Review by cardiology (when required).
Increased level of social support and carer education.
Symptom control, patient autonomy and choice, access to specialist palliative care as required.
Managed as per Gold Standard Framework and inform GP of process and progress.

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