The new Heart Failure pathway

An integrated and seamless Strategy

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Definition of Heart Failure

- The inability of the heart to pump blood at a rate commensurate with the requirements of metabolising tissues,
- Or can do so only from an elevated filling pressure.

- Heart failure is a complex clinical syndrome of symptoms and signs that suggest the efficiency of the heart as a pump is impaired. It is caused by structural or functional abnormalities of the heart.
Phew!!
Importance of HF....

- Around 900,000 people in the UK have heart failure.
- Almost as many have damaged hearts but no symptoms
- Incidence: 10% after age of 75
- Ever increasing ageing population
- Living longer with CHD
Importance of HF

- Heart failure has a poor prognosis: 30–40% of patients diagnosed with heart failure die within a year
- There is evidence of a trend of improved prognosis in the past 10 years

- Patients on GP heart failure registers have a 5-year survival rate of 58% compared with 93% in the age- and sex-matched general population
The cost to the NHS

- On average, a GP will look after 30 patients with heart failure, and suspect a new diagnosis of heart failure in perhaps ten patients annually.

- Heart failure accounts for a total of 1 million inpatient beddays – 2% of all NHS inpatient beddays – and 5% of all emergency medical admissions to hospital.

- Hospital admissions because of heart failure are projected to rise by 50% over the next 25 years.
You are fired, who, me?
Present OSHFC

- Hospital based
- Not consultant delivered
- 4 patients every week, now 6
- ? NICE compliant
- No HFSN in clinic and not enough in the community
Let’s gear up for the future

- Robust mechanism in place
- Patient centred care
- Community based OSHFC
- Consultant led and delivered service
- Adherence to NICE guidelines
- Care in the community/primary care by multi-disciplinary team including palliative care and rehabilitation
- The new HF pathway
Types of HF

- LVSD
  Reduced LVEF, evidence base
- HFPEF
Etiology

- Coronary heart disease
- Cardiomyopathies
- Valve disease
- Arrhythmias
- HT
- Precipitating factors
Acute Heart Failure

- Signs & symptoms suggest acute heart failure, decompensated chronic heart failure or other cardiac event

- Severe dyspnoea or respiratory distress
- chest pain, palpitations
- Tachycardia, tachypnea, diaphoresis
  - cool clammy skin, cyanosis
  - Pulmonary rales, wheeze
No Brainer
Suspecting and Diagnosing HF
History

- Symptoms: Dyspnoea, is it Cardiac?
  -- Orthopnoea, not specific
  -- PND
  -- Pedal edema

- lung disease -- Persistent cough
  -- Sputum
  -- Wheeze
History

- Other symptoms of fatigue, exercise intolerance
- Duration
- Associated history: CP, palpitations, viral infection...
- Past medical history: CHD, HT, DM, alcohol, smoking..
- Family history: CHD, cardiomyopathy, SCD
Suspecting and Diagnosing HF

Physical examination

- General appearance
- Tachypnoea and tachycardia
- Basal pulmonary crackles
- High JVP, hepatomegaly, ascites, pitting peripheral oedema
- Cardiac murmur, gallop rhythm
JVP
Evolution of man

The shape of things to come
Differential diagnosis

- obesity or poor fitness
- Anemia
- Chronic Pulmonary embolism
- Anxiety, renal failure
- angina equivalent dyspnoea
Other non cardiac causes
Suspected heart failure

- One Stop HF Clinic
- Consultant lead, HFSN for Specialist Assessment and Doppler Echocardiogram
- Time frame:
  1. Previous MI: Within 2 weeks
  2. No previous MI: Further tests
- Consider initial treatment with Diuretics and review
Investigations

- FBC, U&E, LFT, fasting lipids & glucose, TFT, urine
- Peak flow or spirometry, chest X ray
- 12 lead ECG with accurate interpretation and reporting.
- Measurement of BNP/NT – pro BNP
LBBB
AF
<table>
<thead>
<tr>
<th>BNP/NT pro BNP</th>
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<tr>
<td><strong>&lt;100/&lt;400</strong></td>
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<tr>
<td>Heart failure unlikely</td>
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<tr>
<td><strong>&gt;400/&gt;2000</strong></td>
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<tr>
<td>High risk group</td>
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<td><strong>100 - 400/400 - 2000</strong></td>
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<tr>
<td>HF likely</td>
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Other causes of high BNP:
LVH, ischaemia, tachycardia, right ventricular overload, hypoxaemia [including pulmonary embolism]

GFR < 60 ml/minute, sepsis, COPD, diabetes, age > 70 and liver cirrhosis

Low levels: obesity, diuretics, ACE inhibitors, beta-blockers, ARBs and aldosterone antagonists
• Echo and Doppler
• Sees the specialist

“Sounds good. No, wait – that’s my iPod.”
OSHFC

- Specialist confirms diagnosis of HF.
- Assess severity
- aetiology, precipitating factors
- type of cardiac dysfunction
- correctable causes

- Starts appropriate medications
HEART FAILURE CLINIC

WHAT'S YOUR DIET LIKE MR JONES?

MOSTLY TABLETS!!

90% TABLETS, 10% FOOD
Other modalities of imaging

CMRI
TOE
DSE, Radio nuclide scan

Further investigations as appropriate.
Determine etiology
Escalate the level of care
Special tests and Interventions

- Coronary angiogram and PCI/CABG/Medical
- Holter, Cardioversion
- Biventricular pacemaker/ICD

- Referral to Tertiary care:
  - EP unit
  - Transplant Unit
  - Inherited Cardiac Disease Clinic
HFSN
Life style modifications

- Smoking
- Alcohol
- Exercise and Activity
- Diet and fluid intake
- Vaccination
- Air travel
- Driving
Croydon University Hospital
Heart Failure Inpatient Referral Pathway for Clinicians

Symptoms & Signs of HF

Possible new diagnosis of heart failure

Request an inpatient echocardiogram

LVEF > 50%

Is there evidence of > mild valvular heart disease or diastolic left ventricular dysfunction?

No

Consider an alternative cause for the symptoms

Yes

LVEF ≤ 50%

If HFPEF is confirmed

When medically fit for discharge, patients with LVEF ≤ 50% or confirmed HFPEF will receive from the HF Specialist Nurse:

1. An individualised Personal Management Plan (PMP) and if appropriate an Advanced Care Plan.
2. Follow-up by the Integrated HF Specialist Nurse Team within 2 weeks
3. Consideration for recruitment into the Telehealth programme.

Patient known to the Integrated Heart Failure Service*

or

LVEF ≤ 50%

Refer to Heart Failure Outreach Service

(Patients will be reviewed within 2 working days of receipt of the referral)

*To check if a patient is known to the heart failure service contact extension 6416
On Discharge

- Personal management plan which includes a titration plan to manage changes in medication as condition changes.
- Tele-health started for patients meeting criteria.
- HF MDT involving HF Consultant, HFSN, Palliative Care nurse
- Community/Primary care monitoring within 2 weeks
Hot clinic

- Clinical decompensation threatening hospital admission

- same or next working day specialist assessment

- Day case treatment to prevent hospital admission
  
  IV diuretics 24 – 48 hours
Thank you!