Clinical Guidance for the Diagnosis and Management of Heart Failure

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Clinical Guidance for the Diagnosis and Management of Heart Failure

Version Control Sheet

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Lincolnshire Community Health Services

Clinical Guidance for the Diagnosis and Management of Heart Failure - Lincolnshire 2013

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Lincolnshire Community Health Services
Clinical guidance for the management of patients with confirmed Heart Failure in primary care in Lincolnshire
Guideline Statement

Background:
This Clinical guidance provides pathways for ensuring robust diagnosis and treatment of heart failure using best available evidence at time of writing.
The guidance outlines a series of algorithms to support the management of patients with suspected heart failure and diagnosed heart failure.

Statement:
Community Heart Failure Nurses working for LCHS are responsible for updating guidelines every 2 years in collaboration with ULHT, St Barnabas Hospice, PACEF and Medicines Management Committee.

Responsibilities
The heart failure Complex Case Managers deliver education regarding the management of patients with chronic heart failure which is based on the guidance.

Training
Dissemination:
This guidance will be on the LCHS Trust website

Resource implication:
The clinical guidance will be further reviewed Bi-annually and amended in light of the latest NICE guidance
Summary of the purpose of the Guidance

The purpose of this document is to provide guidance and a pathway for the treatment of patients with heart failure. The guidance is separated into two parts; the first addresses best practice in the clinical management of heart failure itself and the second focuses on management of symptoms commonly experienced in advanced heart failure and is concerned with palliative and supportive care.

The guidance takes the form of a series of algorithms supporting the optimal pharmacological and non pharmacological management including appropriate referral pathways to specialist heart failure services.

Terms:
The term Specialist Heart Failure Multidisciplinary team (HFMDT) will be used throughout the guidelines. The MDT comprises of Cardiologists, Heart Failure Complex Case Manager (HFCCM) or Heart Failure Clinical Nurse Specialist (HFCNS) and General Practitioner with a Special Interest in heart failure (GPSI).

The term Advanced Heart Failure MDT is used; this is a monthly meeting comprising of members of the Specialist Heart Failure MDT and other healthcare professionals involved in the care of heart failure patients including St Barnabas Hospice, Macmillan Specialist Nurses and Discharge Community Link Nurses; Palliative Care.

The role of HFCCM or HFCNS is a specialist nursing role incorporating complex case management, clinical assessment, diagnosis, non-medical prescribing and management of patients with chronic heart failure. The role meets the educational standards as set out by the British Heart Foundation.

Indications for the use of the Clinical Guidance

The algorithms should be used in conjunction with the associated national standards and NICE guidance in order to support the stabilisation of a patient’s heart condition through optimising treatment, providing support and where necessary palliative care.

Associated Policies/ Guidance

Department of Health (2000), Heart Failure, Chapter Six, National Services Framework for Coronary Heart disease


European Society of Cardiology (ESC) Guidelines for the diagnosis and treatment of acute and chronic heart failure (2012) available at www.escardio.org
Guidelines and Pathways Index

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Diagnosing Heart Failure including use of Serum Natriuretic Peptides

- High levels – BNP > 400 pg/ml (116 pmol/litre) or NTproBNP >2000 pg/ml (236 pmol/litre)
- Raised levels – BNP 100–400 pg/ml (29–116 pmol/litre) or NTproBNP 400–2000 pg/ml (47–236 pmol/litre)
- Normal levels – BNP < 100 pg/ml (29 pmol/litre) or NTproBNP < 400 pg/ml (47 pmol/litre)

Be aware that:
- obesity or treatment with diuretics, angiotensin-converting enzyme (ACE) inhibitors, beta-blockers, angiotensin II receptor antagonists (ARBs) and aldosterone antagonists can reduce levels of serum natriuretic peptides
- high levels of serum natriuretic peptides can have a cause other than heart failure (for example, left ventricular hypertrophy, ischaemia, tachycardia, right ventricular overload, hypoxaemia [including pulmonary embolism], renal dysfunction [GFR < 60 ml/minute], sepsis, chronic obstructive pulmonary disease [COPD], diabetes, age > 70 years and cirrhosis of the liver).
Algorithm for Treating Heart Failure

Diuretics to relieve symptoms & signs of congestion
Unless contraindicated **ADD**
ACE Inhibitor (or ARB if not tolerated)
Betablocker

Still NYHA II-IV

YES

Sinus rhythm and heart rate ≥ 70bpm

YES

Add Aldosterone or Mineralocorticoid Receptor Antagonist and Monitor clinical condition and renal function, if not contra-indicated

LVEF ≤35%

YES

QRS≥120msec

YES

Consider CRT-P or CRT-D

Consider ICD

NO

Still NYHA II-IV and LVEF ≤35%

NO

Add ivabradine

Consider digoxin and/or H-ISDN
If end stage, consider LVAD and or transplantation

Still NYHA II-IV

NO

No further specific treatment
Continue in disease-management programme

European Society of Cardiology Management of Heart Failure 2012  www.escardio.org
Pathway for Management of Heart Failure in Community

Confirmed Heart Failure Diagnosis and Management Plan from Heart Failure MDT

Primary Care Informed of Diagnosis
Add to Heart Failure Register
- Heart Failure Reduced Ejection Fraction / Left Ventricular Systolic Dysfunction
- Heart Failure Preserved Ejection Fraction / Diastolic Dysfunction
- Valvular Heart Failure

First Consultation
- Patient informed of diagnosis by Practitioner competent in Heart Failure
- Assess Clinical Status including NYHA Classification and Refer for Specialist Management if unstable
- Consider Underlying Cause of HF for example:
  - Ischaemic heart disease
  - Hypertension
  - Valvular heart disease
  - Cardiomyopathy
  - Myocarditis
  - Arrhythmia
  - Other

Provide Heart Failure Information Booklet
Agree Clinical Management and Monitoring Plan to Optimise Pharmacological and Non-Pharmacological Interventions

Stable Heart Failure

2/52 wk review by GP or Nurse Practitioner competent in Heart Failure in Primary Care
1. Continue education and advise on Heart Failure Self Management
2. Consider referral to Expert Patient Programme
3. Assess Clinical Status
4. Continue optimising pharmacological treatment
5. Monitor renal and liver function and full blood count as clinically indicated or required to monitor therapeutic intervention
6. Flu and pneumovax vaccines
7. Arrange next review as indicated by clinical status and pharmacological optimisation requirement

Unstable Heart Failure

Consider referral to a member of the Specialist Heart Failure MDT (Cardiologist, HFCCM/ HFCNS/GPSI)
1. Assessment and management of decompensated patient
2. Significant symptoms despite optimal management
3. Failure to Respond to Treatment
4. Specialist Heart Failure Palliative Care Need
5. Patients with heart failure age< 65 years
6. Arrhythmia
7. Significant Valvular Dysfunction
8. Consideration for revascularisation
9. Congenital Heart Disease

Telephone Advice Available

Follow Up Reviews:
- As clinically indicated
- Within 2 weeks of any significant change in therapy or clinical condition
- 6 monthly routine renal function monitoring and as clinically indicated
- Annual full clinical review

New York Heart Association (NYHA) Class
I - No limitation of physical activity
II - Slight limitation
Ordinary activities cause symptoms
III - Marked limitation. Less than ordinary activity causes symptoms, but comfortable at rest.
IV – Symptoms at rest or minor exertion
Algorithm for the introduction of Angiotensin Converting Enzyme Inhibitors (ACEI) or Angiotensin Receptor Blocker (ARB), if intolerant of ACEI

**Step 1 - Initiation of ACE inhibitor / Angiotensin Receptor Blocker**
- Stop potassium supplements/ Potassium sparing diuretics (hyperkalaemia risk) with the exception of spironolactone or Eplerenone.
- If possible stop NSAID (increased risk of renal dysfunction)
- Discuss purpose / benefits and possible side effects of therapy (ie dizziness, light-headedness, cough).
- Start with low dose

**Lincolnshire Joint Formulary**
- First line ACEI – Lisinopril or ramipril
- First line ARB – Losartan or candesartan

**Specialist advice required before staring ACE inhibitor if any of the following:**
- Creatinine > 200 umol/l
- Urea > 12mmols
- Sodium< 130mmol/l
- Systolic arterial pressure < 100mm Hg
- Diuretic dose > Furosemide 80mg/ day or equivalent
- Known or suspected renal artery stenosis
- Symptomatic or severe aortic stenosis
- Hypertrophic Cardiomyopathy
- History of Angioedema esp. Afro-Caribbean origins

**Step 2 - Review after 1-2 weeks**
- Check U&Es at 10-14 days
- Check for adverse effects
  - Symptomatic hypotension
  - Renal dysfunction worsens by >30%
  - Potassium>5.5mmol/l
  - Intolerable cough (NOT just dry cough)
- *If intolerable cough, consider change to equivalent dose of ARB*
- If tolerated, no adverse effects and U&Es satisfactory, increase dose (usually double but smaller increments if clinically indicated)
- Repeat Step 2 until at maximal tolerated dose.
- **IF ADVERSE EFFECT SEE **BOX

**Step 3 - Maintenance Monitoring 6 monthly**
- Check U&Es
- Check for adverse effects:
  - Symptomatic hypotension
  - Renal dysfunction (e.g. rise in Creatinine to > 200 umol/l)
  - Hyperkalaemia (rise in potassium to > 5.5 mmol/l)
  - Intolerable cough (NOT just dry cough)

**NB: CHOICE OF ACE INHIBITOR OR ANGIOTENSIN RECEPTOR BLOCKER SHOULD TAKE INTO ACCOUNT LINCOLNSHIRE JOINT FORMULARY RECOMMENDATIONS**

**If clinically unstable**
- Seek advice from Heart Failure MDT by telephone or email

**ADVERSE EFFECTS**
- **Intolerable Cough** – try equivalent dose of ARB
- **Symptomatic hypotension** – review clinical status including sitting and standing BP and diuretic regimes:
  - Consider reducing diuretic if not fluid overloaded
  - If no other identifiable cause reduce dose / stop if on lowest dose
- **Hyperkalaemia / Renal Function Concerns**
  - Review clinical status and concomitant therapies to identify if any other cause and address as required e.g urinary tract infection, consider stopping or reducing ACEI/ARB until stabilised then retry initiation/titration
  - If no other precipitant identified reduce ACEI or ARB dose (or stop if on lowest dose) and recheck 10-14 days

**IF TRULY ACEI / ARB INTOLERANT or of Afro-Caribbean Origin**
- Consider Nitrate and Hydralazine Combination
Algorithm for use of Beta blockers in Heart Failure

Confirmed Left Ventricular Systolic Dysfunction (LVSD)

Suitable for initiation of beta blocker?

Review medical history and identify if any current contra-indications

Step 1- Assess whether suitable for treatment
- Monitor for signs of sodium and water retention e.g. oedema, lungs crackles, rise JVP or congestion on CXR.
- Monitor heart rate and blood pressure, i.e. heart rate >60bpm & no heart block on recent ECG and systolic blood pressure >100mmHg

Step 2- Assess where treatment should be initiated
Identify the most appropriate environment for the patient for beta block initiation. The options may include:
- Initiation in primary care at GP surgery
- Initiation in primary care at home
- Primary care beta blocker mass initiation clinics

Step 3- Initiation of Beta blocker
Start with lowest recommended dose
Educate the patient re: purpose, benefits and signs of worsening heart failure, e.g. patients should be taught how to weigh themselves correctly
If taking other rate reducing medication, consider reduction in dose

Step 4- Review and Dose increase
- Review clinical status and consider if any adverse effects, and advise / manage where possible
- If heart rate >50bpm and blood pressure and systolic blood pressure >100mmHg and no adverse effects consider increasing dose towards target dose as indicated in BNF
- Up titration of dose following dose schedule (every 2-4 weeks according to individual drug dosing advice)
- Aim for target dose or the highest tolerated dose – caution is advised in the elderly
- Check U&Es and creatinine 1-2 weeks after initiation and 1-2 weeks after final dose titration

Adverse effects
Marked fatigue - reassure patient of likely improvement in symptoms. Review- 2 weeks
Worsening heart failure - Consider adding or increasing dose of loop diuretic
Symptomatic hypotension - Consider reduction in dose of nitrates, calcium channel blockers or other vasodilators. Consider reducing diuretic if no congestion.
If heart rate <50 bpm, obtain ECG. If taking other rate reducing medication, consider reduction in dose and consider halving or stopping (if on lowest dose) beta blocker.
If adverse effect on higher doses - consider reducing dose and review in 2 weeks.
Beta blockers should not be stopped suddenly unless absolutely necessary

Consider Contacting a member of the Heart Failure MDT for Advice if any concerns about suitability, initiation, adverse effects or titration

Which Betablocker?

Bisoprolol - Stable chronic moderate to severe heart failure (NYHA II-IV) with reduced ventricular function in addition to standard therapy. More cardioselective than carvedilol, therefore may be choice when co-morbid respiratory disease. Once daily dose, hepatic and renal excretion.

Carvedilol Indications- Stable mild to moderate chronic heart failure (NYHA I-III) in addition to standard therapy, additional antioxidant effect .Twice daily dose, mainly hepatic excretion, lipophilic - can be useful if having vivid dreams problematic on other betablockers

Nebivolol - May be considered in light of the seniors trial in patient over the age of 70 and Left Ventricular Ejection Fraction <35%, most cardioselective and may be useful in those with peripheral vascular disease

Primary Care Initiation either in GP surgery or in mass initiation clinics
To be suitable for primary care initiation then the following should apply:
1. Definite echo proven diagnosis of heart failure due to left ventricular dysfunction.
2. Patient already on a loop diuretic
3. No beta blocker contraindications
4. No ongoing fluid overload/oedema

Primary care initiation at home
1. 1-4 as above in addition to:
2. Systolic BP. 120mm/Hg
3. Able bodied partner at home with telephone during initiation.
4. Patient/carer educated to call for help in unlikely (<2%) incidence of untoward symptoms

LINCOLNSHIRE JOINT FORMULARY
1. BISOPROLOL
2. CARVEDILOL
Nebivolol is not currently on the formulary Please see BNF for recommended doses. Dose depending on patients condition and clinical judgement, e.g. in frail, elderly standard up titration may not be possible or may take longer.
Algorithm for the use of angiotensin receptor antagonists (ARB) in Heart Failure

**Confirmed Left Ventricular Systolic Dysfunction (LVSD)**

- ACE I not tolerated due to cough, rash or other adverse effect that does not contra-indicate trial of ARB

- Symptomatic or hypertensive despite therapy with an ACE I, Beta-blocker and Aldosterone Antagonist/ Mineralocorticoid Receptor Antagonist

- Refer to Guideline for Initiation and Titration of ACEI/ARB

- HF MDT Advises addition of ARB to therapy

- Refer to Heart Failure MDT for advice

Lincolnshire Joint Formulary Recommends: Losartan or Candesartan

Management of Hypertension


[www.bhsoc.org](http://www.bhsoc.org)

Algorithm for the use of Hydralazine and Nitrate Combination in Heart Failure

**Confirmed Left Ventricular Systolic Dysfunction (LVSD) AND INTOLERANT TO ACEI and ARB**

Consider:

- Hydralazine 25-50mg bd or tds
- And
- Isosorbide Mononitrate 10-20mg bd

- Start low and increase gradually to a maximum daily dose of hydralazine 300mg and ISMN 40mg

NB. ISMN MR may be used as an alternative as availability of standard release mononitrates has been inconsistent
Algorithm for the use of Loop Diuretics for Confirmed Heart Failure

Confirmed Heart Failure

Step 1: Assess for signs and symptoms of water and sodium Retention
- Increased peripheral oedema - Raised JVP?
- Symptoms of breathlessness – PND and orthopnoea?

IF YES

IF YES - Are they on a loop Diuretic?

Yes

IF YES

Up titrate to MAX 80mg furosemide or equivalent if clinically indicated

Yes

Seek Specialist Advice From Heart Failure MDT

No

Aim to maintain on dry weight minimal dose required. Monitor U+Es

Consider adverse effects/signs of dehydration?
- Dizziness
- Constipation
- Weight loss >1kg/day
- Reduced skin turgor
- Disproportionate rise in urea

Symptoms still present?

Yes

No

Consider adverse effects/signs of dehydration?
- Dizziness
- Constipation
- Weight loss >1kg/day
- Reduced skin turgor
- Disproportionate rise in urea

Suitable for Initiation of loop Diuretic?

Yes

Patient Self Management Education:
- Weight, signs and symptom monitoring, medication information, when to seek help.
- Commence Loop diuretic
  - Furosemide 40mg od – 1st line
  - Bumetanide 1mg od – 2nd line
  - Torasemide 10mg od – not on formulary

Check U+Es 7-14 days after starting.
- Review in 1-2 weeks post initiation to reassess

Symptoms still present

Yes

Symptoms resolved

No

Ensure titration and optimisation of other heart failure treatment. Consider referral to cardiologist and/or nephrologist

No

Aim to maintain on dry weight minimal dose required. Monitor U+Es

Choice of Diuretic:
Lincolnshire Joint Formulary recommends:
- First line Furosemide
- Second line Bumetanide

Bumetanide has greater bioavailability and should be substituted if furosemide not effective or not tolerated

NB: Diuretics should administered in combination with ACE inhibitors ARBs and B- blockers if tolerated
Confirmed Left Ventricular Systolic Dysfunction (LVSD)

Severe Heart Failure with EF≤35% - Spironolactone
Post Acute Myocardial Infarction and LVEF≤40% - Eplerenone
Mild Heart Failure and EF≤30% or EF≤35% and QRS Duration>130msec – Eplerenone

Lincolnshire Joint Formulary Recommends 1. Spironolactone 2. Eplerenone

Step 1 - Assess whether suitable for treatment
- Current or previous symptomatic heart failure (NYHA II-IV)
- Already on optimal pharmacological treatment
- No evidence of hypovolaemia
- Inform patient of purpose, benefits & possible side effects of spironolactone

AA/MRA contraindicated
- Serum potassium > 5mmol/l
- Serum Creatinine >220
- Caution if mild to moderate renal impairment
- Caution if using in the frail and elderly if they are taking ACE inhibitors

Step 2 - Check U&Es and review use of potassium supplements and potassium sparing diuretics
- Potassium must be < 5mmol/l to continue
- Consider stopping potassium supplements and potassium sparing diuretics
- Continue ACE inhibitor, loop diuretics, Digoxin and Beta blocker if also prescribed.

Step 3 – Spironolactone or Eplerenone initiation
- Commence at 25mg od

Step 4 – Monitoring
- Repeat U&E at 1, 4, 8 & 12 weeks and every 3 months thereafter.

If intolerant of spironolactone due to breast enlargement or tenderness – replace with eplerenone and review

Adverse Effects
- Potassium > 5.5mmol/l
  - Consider other factors eg urinary tract infection and manage as appropriate
  - Reduce dose to 25mg on alternate days or 12.5mg daily
  - Repeat bloods 5-7 days later
- Potassium >6mmol/l on 25mg alternate days or 12.5mg - stop and review renal function again in 5-7 days
- Gastro-intestinal disturbance
  - Stop and if has diarrhoea repeat U&Es at earliest convenience
- Breast enlargement or tenderness
  - stop spironolactone and replace with eplerenone

If clinically unstable
- Refer to Specialist Heart Failure MDT
Algorithm for the use of Combination Diuretic (Specialist Initiation and Monitoring)

Oedema despite high dose loop diuretic therapy with diagnosis of confirmed heart failure of cardiac origin

Refer to Heart Failure MDT

Step 1 - Assess whether suitable for treatment
Patient not responding to a loop diuretic who presents one or more of the following signs/symptoms;
- Increase in weight > 2kg
- Evidence of leg oedema and / or abdominal distension
- Basal crepitations
- Gallop rhythm
- Raised Jugular Venous Pressure
- Increased dyspnoea

Step 2 – Consider Regime and Monitoring
- Minimum interval between doses is 24 hours
- Minimum interval between increased doses is one day
- Educate the patient re: purpose, benefits and signs of worsening heart failure e.g. patients should be taught how to weight themselves correctly
- Advised to stop taking thiazide diuretic if weight loss > 3kg in 24 hours
- Consider discussion at MDT Meeting and prepare to present relevant assessments

Thiazide contraindicated
- Weight loss > 3kg in 24 hours
- Blood pressure systolic < 90mmHG
- Serum urea or creatinine rising compared to previous results
- Serum potassium < 3.5mmol
- Serum sodium < 125mmol
- Patients unwilling or able to self medicate
- Renal failure with anuria
- Pregnancy with breast feeding
- Liver Failure
- Porphyria

Refer into Advanced Heart Failure MDT Meeting for discussion and management plan
Algorithm for the use of Ivabradine in Heart Failure (Specialist Initiation)

Confirmed Left Ventricular Systolic Dysfunction (LVSD)  
NYHA Class II-IV Ejection Fraction ≤35%

SINUS RHYTHM

HR≥ 75 on optimal betablocker and ACE Inhibitor therapy or  
High pulse rate and intolerant /contra-indication to betablocker  
And  
Stable heart failure for 4 weeks

Commence Ivabradine 5mg b.d.  
Review 2 weeks  
If:  
Resting Heart Rate > 60bpm - Increase to 7.5mg b.d.  
Resting Heart Rate <50bpm – Decrease to 2.5mg b.d.

Lincolnshire Joint Formulary has approved use of Ivabradine under specialist initiation

Management of Arrhythmias

Bradycardia and atioventricular block in patients with heart failure with reduced ejection fraction and heart failure with preserved ejection fraction – refer for specialist cardiology review and see ESC heart failure guidelines

Atrial Fibrillation

Atrial fibrillation is the most common arrhythmia seen in heart failure and management should include classification, identification and correction/ management of any underlying causes / precipitating factors.  
Management to be informed by current NICE or ESC Guidelines and assessment carried out for thrombo-embolism prophylaxis
Consideration of Anticoagulation for People with Heart Failure

Evidence suggests an increased thrombo-embolic risk associated with heart failure and left ventricular systolic dysfunction compared to the general population (ventricular or deep venous thrombus associated with ventricular dysfunction, arrhythmia, low cardiac output, peripheral oedema and immobility)

Atrial Fibrillation should be classified and managed according to NICE/ ESC Guidance

Assessment for thrombo-embolism prophylaxis should be undertaken using CHA2DS2-VASc Score:

- Cardiac Failure or LVEF ≤ 40 (Score 1)
- Hypertension (Score 1)
- Age ≥75 years (Score 2)
- Diabetes (Score 1)
- Stroke (Score 2)
- Vascular Disease (Score 1)
- Age 65-74yrs (Score 1)
- Sex (female) (Score 1)

CHA2DS2-VASc Score 0 = Recommend no antithrombotic
CHA2DS2-VASc Score 1 = Recommend antithrombotic therapy with oral anticoagulation or antiplatelet (pref oral anticoagulation)
CHA2DS2-VASc Score 2 = Recommend oral antiocoagulation

Where anticoagulation is indicated the HAS-BLED score is advised to assess risk of bleeding:

- Hypertension (systolic blood pressure > 160mmHg) (Score 1)
- Abnormal Renal and Liver Function (Score 1 point each)
- Stroke (Score 1)
- Bleeding Tendency or Predisposition (Score 1)
- Labile international normalized ratio if on warfarin (Score 1)
- Elderly (age >65yrs) (Score 1)
- Drugs (e.g, concomitant aspirin, NSAID) or alcohol (Score 1 point each)

HAS-BLED score ≥3 suggests caution is warranted when prescribing oral anticoagulant and close monitoring is recommended.
Algorithm for the use of cardiac synchronisation (CRT) therapy &/or internal cardioverter defibrillators (ICD), or both (CRT-D) Based on NICE technology appraisal guidance 120 & 95

**Confirmed Left ventricular Systolic Dysfunction (LVSD)**

**Suitable for CRT? Or ICD or CRT-D?**

### Assess whether suitable for CRT?
- They are experiencing or have recently experienced class III-IV symptoms.
- They are in sinus rhythm: 
  - **Either** with a QRS duration of 150 ms or longer estimated by standard
  - Electrocardiogram (ECG)
  - **or** with a QRS duration of 120-149 ms estimated by ECG and mechanical dyssynchrony that is confirmed by echocardiography
- They have a left ventricular ejection fraction of 35% or less
- They are receiving optimal pharmacological therapy

### Assess whether suitable for ICD?
- ‘Secondary prevention’ that is for patients who present, in the absence of a treatable cause, with one of the following:
  - Having survived a cardiac arrest due to either ventricular tachycardia (VT) or ventricular fibrillation (VF)
  - Spontaneous sustained VT causing syncope or significant haemodynamic compromise
  - Sustained VT without syncope or cardiac arrest, and who have an associated reduction in ejection fraction (LVEF of less than 35%) (no worse than class III of the N.Y.H.A. functional classification of heart failure)

### Assess whether suitable for ICD
- ‘Primary prevention’ that is for patients who have: 
  - Either LVSD with LVEF of less than 35% (no worse than class 3 N.Y.H.A and non-sustainable VT on Holter (24 hour ECG monitoring) and inducible VT on electrophysiological (EP) testing 
  - or LVSD with an LVEF of than 30%, no worse than class 3 N.Y.H.A and QRS duration of equal to or more than 120 milliseconds

### Assess whether suitable for CRT-D?
Cardiac resynchronisation therapy with a defibrillator device (CRT-D) may be considered for people who fulfil the criteria for implantation of CRF device and who also separately fulfil the criteria for the use of an ICD device.

If meets criteria refer for cardiology refer for cardiology assessment at tertiary centre

**N.B. Re primary prevention** - A familial cardiac condition with a high risk of sudden death including long QT syndrome, hypertrophic cardiomyopathy, Brugada syndrome or arrhythmogenic right ventricular dysplasia, or have undergone surgical repair of congenital heart disease.
Algorithm for Non Pharmacological Management for ‘Confirmed’ Heart Failure in Primary Care

**Diagnosis**
- Prognosis-explore potential disease progression to include long term condition and symptom control

**Clinical Assessment**
- Explain Anatomy & Physiology
  - Record Height, weight, BMI, BP & HR, respiration rate, Oedema
  - Chest auscultation if competent to do so
  - Identify NHYA Classification
- Discuss Causes
  - Paroxysmal Nocturnal Dyspnoea, Breathlessness, Cough, Sputum, Orthopnoea
  - Fatigue including energy conversation and advise on pacing activities, exercise and sexual activity.
  - Nausea
  - Early recognition of worsening symptoms
  - When and where to seek help

**Self Management**
- Explain general symptom management including
  - Paroxysmal Nocturnal Dyspnoea, Breathlessness, Cough, Sputum, Orthopnoea
  - Fatigue including energy conversation and advise on pacing activities, exercise and sexual activity.
  - Nausea
  - Early recognition of worsening symptoms
  - When and where to seek help
- Diet: Discuss a balanced nutritional intake and explain rationale for the increased risk of malnutrition and cardiac cachexia
- Salt
  - Educate on reducing salt intake
  - Caution on the use of “Low Salt” and raise awareness on the salt in processed food.
- Alcohol
  - Educate on reducing alcohol intake
  - Negotiate intake with individual if appropriate
- Smoking – Advise on benefits of stopping
- Medication – discuss reasons for medications and concordance issues is needed
  - Advise on avoiding aggravating medication, e.g. NSAIDs and rate increasing calcium channel blockers
  - Advise on immunisation
  - Psychological Needs
    - Assess for symptoms of depression- as per NICE guidance (2009)
    - Assess for symptoms of anxiety
    - Advise on support groups- British Heart Foundation, Cardiomyopathy Association
  - Carers Needs
    - Encourage carer involvement including joint attendance at appointments
    - Check their understanding of condition & care
- Home & social situation
  - Assess environment and peer support mechanisms.
- Following initial assessment, frequency of review of Non pharmacological management is indicated by clinical need. Minimum review is annual

**Psychological/Social Needs**
- Next Review
  - If symptoms of depression noted, advise patient to refer self to GP or refer to the local Mental Health team
  - Advise on relaxation techniques
  - Draw patient’s attention to the contact details in the information booklet
  - Consider referral to Social Services including OT assessment
  - Consider benefits advice including attendance disability badge etc.

**Ensure patient/carer has received the Information Booklet, i.e. Living with Heart Failure**

**Consider referral for Cardiac/lifestyle rehabilitation. This may include exercise**

**Consider referral to dietician for patients with cachexia / obesity**

**Consider referral to smoking cessation programme**

**Provide patient / carer with contact numbers for both in office hours and out of hours**

**Consider referral to Social Services including OT assessment**

Chair: Elaine Baylis QPM
Chief Executive: Andrew Morgan
Advanced Heart Failure Management including management of symptoms commonly experienced in advanced heart failure

Indication for the development of this clinical guidance

Heart Failure is very difficult to palliative effectively and there are many disease specific barriers to palliation.

Many previously published guidelines for heart failure focus on active interventional aspects of management rather than palliation of the disease.

Patients with advanced heart failure have a poorer prognosis than that of many cancers. However it is recognised that patients with advanced heart failure do not have the same awareness, knowledge and access to palliative care services that patients with other terminal illnesses have and;

- Tend to be less involved in decision-making regarding treatment or non-treatment
- Do not perceive themselves as “dying”
- Experience frustrations with progressive loss (social and physical), complex medical regimes, social isolation and exclusion, poorly co-ordinated services and little palliation of symptoms

Common Symptoms and Problems Experienced by Heart Failure Patients

- Breathlessness
- Cough
- Fatigue
- Peripheral oedema
- Nausea and Vomiting
- Sleep Disturbance
- Pain
- Anorexia and weight loss
- Agitation and Delirium
- Increasing Dependence on others
- Psychological Concerns: Depression and Anxiety
- Constipation
- Itch
- Carer crisis

These guidelines aim to provide advice on the above. It is important to remember that many symptoms can be iatrogenic in nature; some of these are listed also.
**Guidance as to when a Heart Failure Patient becomes “Palliative”**

1. You would not be surprised if this patient were to die in the next 6-12 months based on your intuition which integrates co-morbidity, social and other factors.

2. Choice/ Need-patient makes a choice to have only comfort care and no curative therapy or is believed to need supportive/ palliative care

3. **Clinical Indicators**
   - **General**
     - Multiple co-morbidities
     - Weight loss greater than 10% over 6 months
     - General physical decline
     - Serum albumin <25g/1
     - Reduced performance status
     - Dependence in most activities of daily living

   **At least 2 of the Indicators specific to Heart Failure**
   - New York Association Class III or IV despite optimal tolerated therapy
   - Repeated episodes of symptomatic heart failure (this may be seen in terms of repeated hospital admissions or intensive community management) often with shorter periods of stability in between episodes.
   - Difficult physical or psychological symptoms despite optimum tolerated therapy
   - Deteriorating renal function Chronic Kidney Disease stage 4 or 5
   - Failure to respond within 2-3 days to changes I diuretic or vasodilating drugs

<table>
<thead>
<tr>
<th>Place patient on Palliative/ Supportive Care Register</th>
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</thead>
<tbody>
<tr>
<td>Issue green Card and Fax Out of Hours/Rapid Response Handover sheet &amp; complete DS1500</td>
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<tr>
<td>If days to weeks prognosis ensure pre-emptive plan and drugs are organised if appropriate</td>
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</table>

**Consider Referral into the Advanced Heart Failure MDT or a member of the Specialist Heart Failure MDT**
Issues for consideration when assessing patient’s needs

**Diagnosis and prognosis** should be discussed using the principles established as good practice for “Breaking Bad News” as per East Midlands Guidance;

http://www.eastmidlands cancernetwork.nhs.uk/Library/BreakingBadNewsGuidelines.pdf

or those available within the Palliative Adult Network Guidelines http://book.pallcare.info

Bear in mind that many heart failure patients and their families have little comprehension of the severity of their illness. Exploration of patient’s expectations may be of benefit.

**Prognosis** is particularly difficult to estimate in heart failure and underlying causes of deterioration in condition/ symptoms such as infection should be treated before considering prognosis in light of indicators.

**Preferred Priorities of Care**

Preferred Priorities of Care should be discussed and documented there are a variety of booklets to assist with planning for future care;


*The complexity of chronic heart failure necessities an individualised approach to the risks and benefits of various medical therapies and should be led by a member of the Specialist Heart Failure MDT (NICE, 2010).*

This multidisciplinary process should always include the patient. Medicines management should be an ongoing process ensuring optimal medical management suitable to stage of disease, e.g. withdrawal of statin therapy in last weeks of life.

**Discussion of resuscitation status** should be undertaken with the patient and their family/carers and documented in patient’s records. When a patient, in conjunction with their healthcare professional has made a decision not to be resuscitated the East Midlands Do Not Attempt Resuscitation documentation should be completed and the original kept in the patients home;

http://www.emas.nhs.uk/EasySiteWeb/getresource.axd?AssetID=37116&type=full&servicetype=Attachment

Further guidance on completing this form can be found at:

http://www.emas.nhs.uk/contact/care-decisions/

Where a decision regarding resuscitation status is required to be made on the patient’s behalf by a senior clinician the local Allow Natural Death Policy should be consulted;


Resuscitation is an important issue for people with heart failure as their risk of **sudden cardiac death** (SCD) is 50% higher than in the general population. SCD is also more prevalent in class I & II heart failure patients. The East Midlands Strategic Health Authority have produced a booklet for patients to consider their options; http://www.eastmidlands.nhs.uk/timetotalk/
Following the issue of NICE guideline (TA11) there are now increasing numbers of people who will be fitted with an implantable cardioverter defibrillators (ICD). If someone has an ICD, there will need to be an open and honest discussion about when and how the defibrillator should be deactivated. Please see the Guidance included within this document for further advice (P44 & 48).

Patients should be asked if they have an Advance Decision to Refuse Treatment (ADRT) or have considered having one, please see the links for patient information and a sample ADRT form;


Most people are able to make decisions regarding their care, however if the clinician is unsure of the persons capacity to make a decision or if it has already been decided please see local guidance;


Information for patients to consider their choices should they lose their ability to make decisions in the future is also available;


A Management Plan should be drawn up with the patient and a written record provided. This should be communicated to other healthcare professionals as appropriate. Please see the included guideline regarding Decision Making in Advanced Heart Failure.

Anticipatory prescribing and planning should be a priority and where appropriate patients should be supplied with a pack of anticipatory medications and local contact numbers, to avoid problems at nights, weekends and public holidays. The issue of a green card and faxing of a handover sheet to Out of Hours (OOH) and Marie Curie Rapid Response will allow OOH and emergency/response services staff to provide care more appropriately.

Provision of supportive printed information should be given where available and appropriate for example the End of Life Booklet;


Carer Support

Consideration needs to be given to carer support and referrals to appropriate agencies made. The Lincolnshire Carers Partnership will perform a Carers Assessment and offer support;

http://lincolnshire.ukcarerspartnerships.info/

Follow up arrangements should be discussed and the patients should have clear understanding of what is likely to happen next, with the Management plan being reviewed at regular intervals.

If Community based LCHS End of Life SystmOne Templates should be completed as part of ongoing documentation within the patient’s Electronic Record.
## Palliative Care Heart Failure: Guidance on Care Package Considerations

Patients identified as being in Advanced Heart Failure should be placed on the GP held Palliative and Supportive Care Register (GSF) and referral made to the Heart Failure Complex Case Manager or a member of the Heart Failure MDT.

### Consider Plan of Care:

<table>
<thead>
<tr>
<th>Days</th>
<th>Days to Weeks</th>
<th>Weeks to Months</th>
<th>Months to Years</th>
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<tbody>
<tr>
<td>Preferred priorities of care</td>
<td>Preferred Priorities of Care</td>
<td>Identify preferred priorities of care and social care package</td>
<td>Social Care</td>
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<td>Funding of Care</td>
<td>Apply for Continuing Care Funding</td>
<td>DS1500 Benefit Continuing Healthcare Checklist</td>
<td>Consider referral to:</td>
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<td></td>
<td>▪ Support Group</td>
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<tr>
<td>Care Package</td>
<td>Care Package according to needs assessment</td>
<td>OOH/Marie Curie Rapid Response Green Card</td>
<td>▪ Benefits Advice</td>
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<td>▪ Community Nurses</td>
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<td>Community Nursing Support</td>
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<td>▪ Therapists</td>
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<td></td>
<td>Advanced HF MDT as indicated</td>
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<td>▪ Cardiac Rehabilitation (low intensity)</td>
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<td></td>
<td>Specialist Palliative Care if required</td>
<td></td>
<td>▪ Day Therapy at Day Hospice</td>
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<td></td>
<td>Carer Support Group</td>
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<td>▪ Advanced HF MDT</td>
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<td>▪ Carer Support Group</td>
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<tr>
<td>Liverpool Care Pathway</td>
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<td>OOH Green Card</td>
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Management of Suspected Acute Confusion / Delirium

**Onset typically hours to days and clinical features, from which underlying cause may be elicited.**

**Common Clinical Features**
- Restlessness, anxiety, sleep disturbance, irritability, emotional lability, anger, sadness, euphoria
- Disorientation
- Memory Impairment
- Disorganised thought processes, altered perception, illusions hallucinations, delusions
- Incoherent speech
- Attention span reduced, easily distracted
- Motor abnormalities such as tremor, altered tone and reflexes

**Non-Pharmacological Management**
- Listen to patient and try to explore their fears and anxieties. Psychological distress can manifest itself in hallucinations and nightmares
- Remain calm and avoid confronting the patient
- Try to keep patient in as normal and familiar a routine and place as is possible.
- Explore perceptions and validate those that are accurate
- Explain clearly what is happening and why to patient and carer(s)
- Try to provide an action plan for what can be done
- Explain management plan and repeat information to assist retention by patient and family
- If medication is required ensure the length of treatment course is discussed and stress that delirium is not mental illness but a state in which periods of lucidity can be expected.
- Do not use restraints and allow to mobilise if safe to

**Treat Underlying Causes**
- Infection
- Hypoxia
- Urinary retention
- Faecal Impaction
- Hyponatraemia
- Hypo/hyperglycaemia
- Renal Impairment
- Hepatic Impairment/congestion
- Drug toxicity-beta blockers, digoxin, anti-cholinergics
- Drug withdrawal-opioids, alcohol, benzodiazepines, SSRIs, nicotine
- Unrelieved pain

**Pharmacological Management**
- Benzodiazepines should not be used alone as they can worsen delirium (unless associated with alcohol withdrawal)
  **Consider:**
  1. **Haloperidol** either PO,SC (low dose in elderly but can be increased if poor response)
  2. **Haloperidol + Benzodiazepine** e.g. diazepam or midazolam
  3. **If severe Midazolam and levomepromazine** combined may be necessary to provide sedation in palliative context
  4. **Consider use of a syringe driver**

**If No Improvement after exclusion of underlying causes or it is inappropriate to treat:**
- Consider whether this is Terminal Restlessness, which is a feature of dying.
- If dying is diagnosed follow Liverpool Care Pathway
Management of Breathlessness

Assessment

Clinical Assessment of fluid overload/pulmonary oedema
Consider other causes during assessment as below

- Assess when they feel breathlessness is a problem
- How much of the day, including investigating its affect on sleep
- Assess effect on functional abilities and activity
- What makes it better or worse

Identify and Treat Underlying Causes

- Consider Heart Failure Status and other causes:
  - Pulmonary Oedema/Pleural effusions
  - Cardiac Ischaemia
  - New onset Atrial Fibrillation
- Anaemia- common in people with kidney impairment as blood cells are damaged and can’t carry as much oxygen
- Infections or respiratory disease
- Pulmonary Embolism
- Pneumothorax
- Obstruction of Bronchus or Vena Cava
- Concomitant Problems e.g. COPD, renal impairment
- Medication e.g. beta blockers
- Poor symptom control- e.g. breathlessness, pain, leg swelling
- Psychological and spiritual issues – e.g. frustration, stress and low mood, anxiety / concerns about what the future holds.
- Is disease management optimal? Advanced Heart Failure MDT
- If blood oxygen saturation impaired consider Spirometry/referral for

Non pharmacological Management

- Consider teaching breathing techniques – refer to physiotherapist or occupational therapist
- Use a fan to improve airflow around face
- Pace activities and plan recovery time
- Consider referral to Cardiac rehabilitation (low intensity) or pulmonary rehabilitation where available.
- Consider Anxiety Management
- Consider referral to Day Hospice e.g for assessment Breathlessness programme
- Consider use of complementary therapies
- Consider Electric Profiling Bed if Orthopnoea/PND

Pharmacological Management

- Diuretics for fluid overload
- Saline nebuliser prn
- Low dose opiates, e.g. codeine phosphate 30mg 4 hourly, low dose oramorph (2.5-5mg PRN) or MST
- GTN Spray if ischaemic underlying cause *
- Consider laxatives if commenced on opiates
- Lorazepam 0.5-1mg chewed or sublingually prn
- Oxygen

Short of breath on exertion (SOBOE)
Consider Lorazepam 0.5mg prn
- GTN Spray *
- Nebuliser
- Oxygen
- Diuretics

Short of breath anxiety related or at rest (SOBAR)
Consider
- Oxygen
- Opiate
- Nebuliser
- Lorazepam 0.5mg PRN or Diazepam 2-5mg BD

Terminal SOB
Consider
- Opiate
- Midazolam
- levomepromazine

* GTN Spray contraindicated in Severe Aortic Stenosis
Management of constipation

Assessment
- If Community based
- Assess using SystmOne Lincs Adult bowel health assessment Adults template
- Establish dietary and fluid intake
- Record stool chart
- Review medication list
- Explore attitudes and current functional capacity e.g. has mobility recently reduced?

Non-Pharmacologist Management
- Encourage adequate diet and fluid intake (within any fluid restriction)
- Consider the use of prune juice
- Stay as active as possible
- Provide information on best position to sit in to pass stool
- Encourage to sit on the toilet 20 minutes after meals to take advantage of the gastro colic reflex
- Consider referral to the Community Nursing Team or Specialist Continence Clinical Nurse Specialist

Pharmacological Management
- Consider use of macrogols e.g. movicol
- Consider stool softener e.g. lactulose, sodium docusate
- Consider stimulant, e.g. senna, glycerine, suppositories, microlax enema, bisacodyl suppository
- Consider combination agent e.g. co-danthramer, this is the first choice laxative when an opioid is prescribed
- Consider sodium docusate enema
- Consider referral to the Community Nursing Team for assessment or Specialist Continence Clinical Nurse Specialist

Identify and treat causative factors
- Immobility
- Inadequate dietary intake
- Dehydration from diuretics or not drinking enough
- Immobility
- Medications such as opioids or iron supplements
- Bowel obstruction

If opioid-induced constipation regular laxatives should be taken.
For further information see: http://book.pallcare.info/
Management of Cough

Assessment
Clinical assessment: pulmonary oedema/infection
- Frequency
- Sputum
- Aggravating factors
- Relieving Factors

Identify and Treat Underlying Causes
Diuretics for pulmonary oedema
Antibiotics if Chest Infections
Concomitant Problems e.g. Respiratory Conditions
Medication e.g. ACE Inhibitors
Is disease management optimal?

Non-Pharmacological management
- Consider teaching breathing techniques-refer to physiotherapist or occupational therapist
- Use a fan to improve airflow around face

Pharmacological Management
- Optimise Heart Failure Management whilst trying to minimise side effects of drugs including diuretics
- Simple linctus or codeine linctus 30mg prn for a dry cough
- Low dose Oramorph, e.g. 2mg prn. Consider prophylactic laxatives if commenced on opiate
- Saline nebuliser for thick secretions
- Consider whether related to ACE I or other therapy
- Consider mucolytics / glycopyrronium in difficulty expectorating
Management of Fatigue

Assessment of symptoms and possible causes

- Low cardiac output is a key cause in heart failure
- Assess when they feel fatigued, how much of the day, including investigating sleep patterns both at night and day
- Assess functional abilities and activity patterns e.g. if able to wash and dress, how long it takes, how they feel afterwards etc.
- Consider if due to Cardio-Respiratory deconditioning
- Consider other causes such as Anaemia/Hypo/Hyperthyroidism

Non-Pharmacological management of Fatigue

- Encourage the patient to:
- Eat small regular meals
- Exercise regularly (even a very small amount)
- Plan activities, but plan to do what they can definitely achieve, nothing what they completed and what they had to stop before finishing
- Plan to rest after each activity and after meals for a short time
- Keep a diary and note when the best and worst parts of the day are, then use the best times to undertake activities
- Plan to do less on days when you will be tired, e.g. plan less on the day of a hospital appointment and the day after as energy will be needed to get there and to recover afterwards
- Consider referral to cardiopulmonary Rehabilitation, Physiotherapy activity programme or palliative rehabilitation
- Make adaptations to home to aid energy conservation
- Energy conservation advice sheet
- Review Home Care package
- Consider referral to support Group or Expert Patient Programme

Pharmacological Management:

- Consider referral to the Heart Failure MDT for a review of medications/whether device therapies would be indicated
- Optimisation of Heart Failure Therapies
- Or reduction in Heart Failure Therapies due to the effects of symptomatic hypotension/hypovolaemia/hyponatraemia
**Management of Itching / Pruritis**

### Assessment

- Where is the itching?
- When does it itch?
- What makes it worse?
- How long does it last?
- Impact on life, functional abilities and sleep?
- What is the condition of the skin like?

### General Management

- Wear Cotton Clothing
- Discourage scratching
- Avoid Hot Baths
- Avoid Soap and Bubble Bath
- Avoid Overheating
- Avoid Sweating
- Loose bedding
- Consider use of fan to aid cooling

### Treat Underlying Causes

#### Dry Skin
- Avoid soap
- Use emulsifying ointment or baby soap
- Consider using Cetraben or Diprobase creams as soap substitutes.
- Apply emollients esp. after washing (note sometimes using greasier preparation such as Epaderm at night and something less greasy e.g. Cetraben in the day works well)
- Note bath emollients are wasteful and costly

#### Wet Skin (incontinence, sweating)
- Use barrier cream
- Consider the use of appropriate fitting incontinence wear, and only when indicated the assessment for a catheter or sheath drainage.
- Protect skin from stool leakage (absorbent pads and barrier cream/ manage constipation or diarrhoea effectively)
- NOTE Co-danthramer can cause unpleasant rash on buttocks or thighs.
- Consider treatable causes of sweating – e.g. infection, hormonal, drug-induced. Cancer related.
- Consider using paracetamol for fever

#### Renal and Liver Impairment
- Consider capsaicin cream (effective on 70% of localised pruritis) – NB. Not on Lincolnshire Joint Formulary
- General measures + antihistamine trial
- Ondansetron 4mg bd orally (unlicensed use)
- Consider levomepromazine 3—6mg orally if resistant
- Consider dexamethasone if severe

#### Opioid Induced
- General Measures + try alternative opioid

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For more guidance or seek local specialist advice (Hospice or Heart Failure MDT)
### Special Issues for Consideration when Managing Pain in Heart Failure

- **Types of Pain**
  - Adequate pain assessment is vital
  - Attempt to define the origin(s) of the patient’s pain
  - Major types of pain are: musculo-skeletal, somatic, neuropathic, spasmodic, pain of a psychical nature (also referred to as spiritual pain).

- **Not all pains are opiate responsive**
  - Somatic pain is usually very responsive to opiates
  - Some musculo-skeletal and neuropathic pains may respond partially to opiates but may require the addition of adjuvant analgesics
  - See Palliative Adult Network Guidelines; http://book.pallcareinfo

- **Remember the Analgesics Ladder**
  - Problems associated with opiate toxicity can be avoided by following the steps outlined in the ladder.
  - Always Start Low with opiate Doses and Go Slow when increasing

- **Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)**
  - NSAIDs ARE NOT RECOMMENDED FOR USE IN HEART FAILURE
  - In RARE circumstances the risk of increased oedema and/or worsening renal function associated with the use of NSAIDs can be outweighed by the benefit to the patient in terms of pain relief

- **Trans-dermal Analgesics**
  - Buprenorphine and Fentanyl Patches are being increasingly used in the management of non-malignant chronic pain. They are designed to be used for **stable opiate sensitive pain and should not be used for acute pain relief or where titration of analgesia is required**.
  - Their use in the terminal, end of life situation is problematic for many reasons and their substitution/replacement with an alternative form of opiate should be considered. The use of a syringe driver should be considered in these situations

- **Routes of Administration**
  - In the presence of extensive peripheral and visceral oedema, the absorption of oral medication may be erratic, unpredictable.
  - Consider other routes of administration sub-lingual, trans-dermal (avoid placing patches on oedematous areas), sub-cutaneous.
Management of Nausea and Vomiting

Assessment
- Consider if related to fluid overload/abdominal distension
- Assess symptom-nausea and or vomiting
- If vomiting, what is being produced?
- When are symptoms present
- Any precipitating factors e.g. eating food
- Any relieving factors
- Consider asking patient to keep a symptom diary
- Review after treating

Non-Pharmacological Management
- Consider psychological and spiritual care to treat anxiety
- Consider relaxation therapy, refer to physiotherapist/Occupational Therapist
- Consider Complementary therapy, suggest self referral to private provider or hospice

Pharmacological Management
Avoid cyclizine (increase heart rate and decreases cardiac output)
- Review medication and identify risk/benefit of any drugs believed to cause nausea or vomiting and discontinue therapy if appropriate.
  - For chemical causes e.g. morphine, renal failure
    - Consider Haloperidol
  - If nausea is constant or there is renal impairment/failure
    - Consider Haloperidol at night
    - Levomepromazine which has a sedative effect but may cause postural hypotension. Use in low doses (3-6mg) and cautiously with elderly people
  - In palliative circumstances where nausea is related to meals or if the patient is vomiting undigested food, a short course of Metoclopramide 10mg tds or Domperidone 10mg tds may be considered following review of risks/benefits NB: Use in people with long QT interval or on drugs that lengthen QT interval or impaired liver function should be avoided

Consider causative factors and correct where possible
- Drugs e.g. morphine or antimuscarinics
- Renal or liver dysfunction
- Gastric stasis caused by enlarged liver, constipation or gastric outflow obstruction
- Gut Oedema
- Constipation
- Anxiety
- Pain
- Infection
- Cough
Management of Peripheral Oedema

Assessment

Assess Tissue Viability
- Colour
- Texture
- Temperature
- Skin assessment
- Cellulitis

Record daily weights if able to

Assess oedema including whether:
- Bilateral
- Height up leg
- Abdominal distension
- Sacral oedema
- Scrotal
- Pitting
- Sub-conjunctival/orbital

Identify and treat if appropriate any alternative underlying causes such as:
- Renal failure
- Low albumin
- Dependant oedema
- Infection
- Deep vein thrombosis
- Liver dysfunction
- Lymphoedema

Non-Pharmacological Management

- Rest
- Restrict fluid intake
- Sit with feet up and legs well supported when possible
- Review home support and arrange additional care as required
- Offer pressure relieving equipment
- Consider electric profiling bed
- Skin care

Pharmacological Management

Optimise diuretic therapy (see guideline diuretics in heart failure)

- First line is loop diuretic (Furosemide or Bumetanide)

- If NYHA II-IV consider the addition of an MRA/aldosterone antagonist (Spironolactone/Eplerenone)

- Resistant oedema may require the addition of a thiazide diuretic periodically and referral for specialist advice should be sought as careful monitoring of clinical status, renal and liver function is required in this group of patients

- Consider admission for Intravenous Diuretic therapy

Lincolnshire Joint Formulary Recommends:
Loop Diuretic – 1. Furosemide 2. Bumetanide
AA/MRA – 1. Spironolactone 2. Eplerenone – use within license see P15 for details
Management of Poor Appetite and Weight Loss/ Cachexia

Assessment
- If Community based use SystmOne Malnutrition Universal screening Tool and LCHS guidelines for management
- Establish daily dietary and fluid intake
- Establish likes and dislikes
- Explore expectations
- Consider environmental factors
- Are there any problems with eating, swallowing?

Non-Pharmacological Management
- As desired diet
- Advise small meals often
- Consider a small amount of alcohol before meals
- Suggest high calorie, high protein, no added salt diet- see local guidelines for details
- Encourage good oral hygiene
- Consider alternative flavouring for foods
- Explore family expectations of food intake
- Refer to dietician

Pharmacological Management
Avoid appetite stimulants – (Dexamethasone progestogens, amphetamines)
- Consider whether related to medication
- Consider discontinuing statins if no longer indicated
- Using local organisational guidelines for nutritional support when required to consider the following:
  1. Fortification of food
  2. Nutritional supplement sip feeds
  3. Referral to dietitian

Identify and treat causative factors
- Drug toxicity e.g. Digoxin
- Renal or liver dysfunction
- Oedema
- Constipation
- Anxiety
- Dry or sore mouth
- Ill fitting dentures or no teeth
- Unable to prepare food
- Overdiuresis
## Psychological Concerns

### Assessment

#### Assess mood for signs of

- Anxiety
- Depression - as per NICE guideline (2009)
- Consider using the Distress Thermometer to assess: [http://www.eastmidlandscancernetwork.nhs.uk/Library/DistressThermometer.pdf](http://www.eastmidlandscancernetwork.nhs.uk/Library/DistressThermometer.pdf)

#### Discuss expectations

- Identify hopes and fears
- Explore beliefs and wishes

### Identify and Treat Underlying Causes of Anxiety and Depression

#### Consider:

Poor symptom control - e.g. breathlessness, pain, leg swelling

Referal to the specialist Heart Failure MDT if uncontrolled symptoms of Heart Failure

#### Psychological and spiritual issues - e.g. frustration, stress, and low mood, anxiety/ concerns about what the future holds.

#### Sleep disturbance and insomnia

#### Fatigue

#### Poor Appetite

### Non-pharmacological Advice

Use the wider MDT to address issues using therapies, where available such as:

- Relaxation
- Cardiac Rehabilitation/low impact exercise
- Counselling
- Imaging techniques
- Complementary therapies
- Spiritual support
- Chaplaincy support
- Day Hospice Therapy
- Support groups
- Carer support
- Cognitive Behavioural therapy
- Psychology
- Mental health referral/ crisis team if stating suicidal intent

### Pharmacological Management

#### Avoid tricyclics as cardio-toxic AVOID St John’s Wort

- **Antidepressant**, e.g. sertraline is first-line treatment
- **Anxiety depression**, e.g. citalopram
- **Nausea and Poor appetite** consider antidepressant e.g. mirtazepine
- **Night sedation**, e.g. Zopiclone, lorazepam, lormetazepam, lорazepam, Trazodone
- **Panic Attacks** lorazepam sub lingual or chewed (short acting)
- **Anxiety**, e.g. diazepam is first-line treatment (longer acting) (buspirone is second line treatment)
Management of Sleep Disturbance and Insomnia

**Assessment**

Assess including investigating sleep patterns both at night and day, e.g.

- What time did you go to bed?
- What did you do beforehand, e.g. activities, food and drink taken?
- Did you get off to sleep right way?
- When did you wake in the night?
- How often did you wake in the night?
- Any other symptoms associated with being awake?
- What naps in the day did you have? (Time, place and length)
- Is snoring a problem?

**Treat Underlying Causes**

Poor symptom control- e.g. breathlessness, pain, leg swelling

Psychological and spiritual issues- e.g. frustration, stress and low mood, anxiety/ concerns about what the future holds.

Sleep Apnoea- see NICE Guidance TA139

http://www.nice.org.uk/TA139

**Non-pharmacological management of Insomnia**

- Encourage the patient:
- To establish a bedtime routine, e.g. having a warm drink but avoiding caffeine/alcohol from mid afternoon and/ or a snack before bed
- To make the bedroom quiet and the right temperature
- If they are lying awake not able to sleep, to get up and do something then come back to bed
- To try to relaxation techniques or mental exercises
- To set the alarm and try to get up at the same time every morning
- To avoid napping late afternoon
- Follow advice given in Sleeping Well Leaflet available at www.rcpsych.ac.uk

**Pharmacological Management**

**AVOID** tricyclics as cardio-toxic

**Night sedation**, e.g. zopiclone, lorazepam, lormetazepam,lorazepam,temazepam, trazodone

**Antidepressant**, e.g. sertaline is first-line treatment

**Anxiety depression**, e.g. citalopram

**Anxiolytics**, e.g. lorazepam sub lingual or chewed especially for panic attacks

**Anxiety**, e.g. diazepam is first-line treatment (buspirone is second line treatment)
Management of Stomatitis / Sore Mouth

Assessment
Undertake assessment in good light and note the colour, moisture, texture of the mucosa.
Note any plaques, lesions, discolouration or injury seen.
Note if dentures or dental prosthesis worn
Ask when last reviewed by dentist
Review medication
Review dietary and fluid intake

Non-Pharmacological Management
- Teach good mouth and lip care regime
- Rinse with water regularly
- Try sucking ice cubes, lollies or ice chips
- Try chewing gum
- Rinse mouth with pineapple juice
- Promote a healthy diet

General Pharmacological Management
- Use paraffin gel on lips if not using oxygen
- If using Oxygen consider humidifying it
- Consider use of antibacterial mouth wash
- Oral balance products/artificial saliva
- Consider dietary supplements/fortification of food if nutritional intake is poor

Treat Underlying Causes
Infection (bacterial or viral)
Oxygen Use via Nasal Cannula
Ulceration
Ill-fitting dental prosthesis
Thrush
Herpes Simplex
Poor blood glucose control
Heart failure causes dry mouth and thirst
Drug Side Effects
Examples include:
Nicolandil which is associated with mouth ulceration in some people
Steroid Inhalers and long term omeprazole use which can be cause thrush

Specific Pharmacological Management
Thrush
- Consider nystatin suspension or lozenges
- If persistent, oral fluconazole may be used—see BNF for prescribing information

Herpes Simplex
Consider acyclovir preparations

Mouth Ulceration
Consider Difflam Mouthwash or Orabase gel
Medicines Management in Advanced Heart Failure

- Review Medications at each visit, look at packs and prescription if possible.
- Discuss with patients any problems or concerns they have.
- Ensure patient understands why they have been prescribed medication, explaining in particular about drugs that are prescribed for longer term mortality and morbidity gains as these are more likely to be stopped by patients who have no symptomatic gain from taking the drug. Many heart failure drugs are given to retard disease progression and fall into this category.
- Try to maintain ACE Inhibition, Betablocker, Mineralocorticoid Receptor Antagonist / Aldosterone Antagonist and Digoxin if possible as these all aid heart function and symptom control
- Consider whether the patient is taking their medication: If concerned that there may be an issue with concordance, consider reviewing dispensing dates on packs, number of tablets left in packs, compare prescriptions issued with those collected.
- Review whether patient or carer is able to dispense medication correctly from packs and if problems identified consider contacting local pharmacist for review in order to improve self management of medication – eg blister patient administration packs delivered weekly.
- Consider discussing any concerns with GP, Pharmacist or at Multidisciplinary Team Meeting.
- In palliative phase, consider stopping medications that derive no short term benefits such as statins.
- Diuretics are used only for symptom control and should be reviewed in light of signs and symptoms. They are often perceived as a nuisance – negotiation around timing is advised to ensure they are taken regularly rather than omitted altogether.
- Weigh up risks/benefits of therapies
- Use therapy guidelines where available to aid a systematic approach to care
- Consider best route for administration of essential medicines
- The use of drugs outside their license is more common in palliative care and there are some clearly identified instances in these guidelines. Clinicians should seek further advice from pharmacist/Specialist Heart Failure MDT/Specialist Palliative Care team before prescribing if they are unfamiliar with the use of that particular drug in these circumstances.
Management of Anaemia

Anaemia is a common problem in heart failure and should be investigated to enable the treatment of the underlying cause.

- Hb < 11g/dl?
  - Assess Renal function and Haematinic's
    - Non renal causes and Haematinic deficiency excluded?

See NICE clinical guideline 114 for further guidance on Anaemia Management in people with chronic kidney disease if GFR < 60 ml/min.


Management of Gout

Gout is common in heart failure due to the use of diuretics.

The use of NSAID’s or Corticosteroids is to be avoided in the management of acute gout in heart failure due to the risks of fluid retention casing decompensating heart failure.

The preferred drug treatment is Colchicine with a view to commencing low dose Allopurinol once the acute attack has been treated.

Please use this advice in the context of the Lincolnshire Joint Formulary Approved Algorithm for management of Gout (P41)
Management of Gout

During initial assessment of acute gout, please consider risk factors

If unsure of diagnosis please refer to a Rheumatologist

ACUTE TREATMENT
Suppress pain and reduce inflammation until acute flare has subsided.
Please consider the following options
- Colchicine 500 mcg twice daily (usually adequate), increase up to four times daily if required (increased risk of diarrhoea).
- OR an NSAID (e.g. naproxen 500mg twice daily or ibuprofen 400mg three times daily). Please consider co-prescribing omeprazole or lansoprazole for gastroprotection.
- OR a corticosteroid (inha-articular, particularly if single joint) OR oral (e.g. prednisolone 20mg for 3 days, then 15mg for 3 days, then 10mg for 3 days then 5mg for 3 days and stop). Steroids preferred if there are contraindications to NSAIDs.

Advise the patient to use an ice-pack. Measure serum urate levels and renal function after the attack. Serum urate levels measured during an attack may be lower than usual levels. Gout is part of the metabolic syndrome. Please look for and treat associated conditions such as diabetes, hypertension, hypercholesterolaemia and obesity.

LONG TERM TREATMENT (DRUG OF CHOICE IS ALLOPURINOL)
Treat to target. Aim for a serum urate of 300μmol/L or less (flare-ups less likely if target achieved)³
(1). Consider allopurinol 100mg daily. Repeat serum urate levels every 2 to 4 weeks and increase dose by 100mg up to 900mg daily in single or divided doses until target urate levels are reached. Most patients will require about 300mg of allopurinol daily.²
(2). Prophylaxis is required during the initial period of therapy in view of the increased risk of flare. Consider an NSAID (see above) or Colchicine 500mcg twice daily. Prophylaxis should continue until the target urate level is reached (maximum period of six months)²
(3). Dietary advice.
(4). Allopurinol should be used with caution in patients with renal impairment. In moderate renal impairment (eGFR 30-50) use lower doses (maximum 100mg daily) and monitor function. Avoid using allopurinol in patients with severe renal impairment (e-GFR less than 30). The risk of hypersensitivity reaction to allopurinol is increased in renal impairment.

ALLOPURINOL SENSITIVITY or CONTRAINDICATION
Treat to target. Aim for a serum urate of 300μmol/L or less (flare-ups less likely if target achieved).
Consider febuxostat 80mg daily; monitor serum urate levels and LFTs at least monthly for the first 6 months and reduce frequency of monitoring afterwards. Febuxostat 80mg is usually adequate but if target is not reached increase to 120mg daily.²
Febuxostat is not recommended in patients with heart failure and ischaemic heart disease.³
Febuxostat should be avoided in patients with severe renal impairment (eGFR less than 30). In renal impairment, febuxostat has an advantage over allopurinol because it is processed primarily by the liver and lowering of dose is not usually required. Renal monitoring is essential.

If febuxostat is contraindicated other options include benzbromarone (secondary care only). Please refer complex cases to a Rheumatology clinic. Sulfinpyrazone and probenecid can also be considered.

Gout flares while taking sUA lowering therapy

Suppress pain and reduce inflammation. Do not interrupt allopurinol or febuxostat therapy unless there is a clinical reason.

*Steroids or colchicine are preferable treatments for patients who have concomitant conditions and who are taking medications that contraindicate the use of NSAIDs (e.g. warfarin) but they should be used with caution.

References
3. NICE Technology Appraisal 164 Febuxostat for the management of hyperuricaemia in people with gout (December 2008)

Produced by Dr Batsi Chikura (Consultant Rheumatologist at Lincoln County Hospital)
May 2013

CAUTION: AVOID NON-Steroidal ANTI-INFLAMMATory DRUGS AND CORTICO-STERIOds IN CONTEXT OF HEART FAILURE
### Pathway for Decision Making and Advance Care Planning for Patients with Chronic Heart Failure

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use agreed assessment tools (GSF/Prognostic Indicators/Holistic Assessment Tools)</td>
<td>To objectively assess the patients condition</td>
</tr>
<tr>
<td>If the indicators suggest that the patient is in Advanced Heart Failure refer in to discuss at the local Heart Failure MDT/or with the wider Heart Failure Specialist Team</td>
<td></td>
</tr>
<tr>
<td>Discuss the current plan of Care at the local Heart Failure MDT/with the wider Heart Failure Specialist Team</td>
<td></td>
</tr>
<tr>
<td>Document Goals of Care in the Patient Held Record/Patients electronic record after discussion with the patient</td>
<td></td>
</tr>
<tr>
<td>Communicate Goals of Care with GP/Community Nursing Team/Other Physicians involved in the patients care i.e Renal Team/Respiratory Physicians/General Medicine</td>
<td></td>
</tr>
<tr>
<td>Provide patient information regarding resuscitation status/Advance Care Planning/ADRT for the patient to discuss with family/significant others</td>
<td></td>
</tr>
<tr>
<td>If the patients wishes to complete an ADRT/Advance Care Plan/Do Not Resuscitate Order provide assistance to complete if required</td>
<td></td>
</tr>
<tr>
<td>Refer onwards to other agencies as indicated (Hospice Services/Specialist Palliative Care) as agreed with the wider MDT and the patient</td>
<td></td>
</tr>
<tr>
<td>Once ADRT/Advance Care Plan/Do Not Resuscitate Order (DNAR) completed: originals to remain in the home, inform all healthcare professionals of the plan/DNAR (GP/Community Nursing Service/Out of Hours/Hospice/Consultant)</td>
<td></td>
</tr>
<tr>
<td>Review the plan with the patient/carers and wider MDT at regular intervals - for example when the patient's condition changes</td>
<td></td>
</tr>
</tbody>
</table>
### Iatrogenic Problems

<table>
<thead>
<tr>
<th>Iatrogenic Problems</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overdiuresis</td>
<td>Hypokalaemia, Hypotension, Falls, Nausea, Loss of appetite, Confusion</td>
</tr>
<tr>
<td>Digoxin Toxicity</td>
<td>Nausea, Loss of appetite, Diarrhoea, Abdominal Pain, Confusion, Bradycardia/ Heart Block, Hypotension, Loss of awareness of impending hypoglycaemia</td>
</tr>
<tr>
<td>Opiates</td>
<td>Confusion, Constipation, Dry Mouth, Nausea, Muscle Spasm (Myoclonus)</td>
</tr>
<tr>
<td>Steroids</td>
<td>Can precipitate deterioration in heart failure, renal function and blood glucose control.</td>
</tr>
</tbody>
</table>

### Drugs to Avoid in Heart Failure

Cyclizine  
NSAIDS  
Steroids  
Calcium Channel Blockers  
Glitazones  
Amphetamines  
Progestogens  
Tricyclic Antidepressants  
St Johns Wort
Pathway for Deactivation of Implantable Cardioverter Defibrillators (ICD’s) at End of Life

**Indications for consideration of deactivation of ICD:**

- Patient preference in advanced disease
- In the event that the patient has completed an Advanced Decision to Refuse Treatment
- Approaching end of life when ICD activation would be inappropriate
- Following withdrawal of anti-arrhythmic drug therapy as per medicines review at end of life
- While an active DNAR order is in force

See British Heart Foundation guidance for further information


**Process prior to deactivation:**

- Open discussion with the patient, next of kin/carer or patient advocate as part of advance care planning
- Multidisciplinary review including cardiologist where appropriate

Use the Arrhythmia Alliance leaflet for patient information:


**Points of discussion may include:**

- Resuscitation status and possible completion of an Advance Care Plan/ADRT/DNAR
- Withdrawal will not result in immediate death but the safety not provided by the device will no longer apply
- Deactivation is achieved using an external programmer and is not painful
- Multi-organ failure associated with electrolyte disturbance may be pro-arrhythmic and result in device discharge
- Inappropriate shocks are uncomfortable and inconsistent with symptomatic care
- Some ICDs incorporate both defibrillation and pacing modalities and it may be appropriate to selectively disable the defibrillation element as untreated bradycardias may exacerbate patient symptoms.

**Procedure for deactivation:**

- The patient should complete the locally agreed deactivation consent form appendix 1
- Liaise with local senior cardiac physiologist based within the local acute hospital to arrange a mutually convenient time and appropriate place identified for deactivation
- Deactivation of ICD by cardiac physiologist
Community Heart Failure Complex Case Manager Service

Specialist Community Heart Failure Nurse Referral Criteria:

- **Objective evidence of significant cardiac dysfunction** – confirmed left ventricular systolic or diastolic dysfunction or at least moderate impairment of aortic or mitral valve function.

  AND EITHER

- **Recent hospital admission for deteriorating heart failure**
- **Newly diagnosed heart failure with high risk of readmission**
- **Unstable clinical condition in community setting**, as indicated by need for recent increase in diuretic dosage, with high risk of admission

NB: Objective evidence e.g. echocardiogram, angiogram, Myocardial Resonance Imaging

Service Offered

- Initial full assessment, from which a decision will be made as to whether case management is appropriate, with referral on to other services as indicated.
- Patients accepted onto caseload will be supported until heart failure symptoms are considered to be stable.
- Patients will be reviewed within 2 weeks if there is any significant change in symptoms / condition or medication relating to heart failure in line with NICE Guidance (2003)
- A review of appropriateness for case management will be undertaken 3 monthly
- The Heart Failure Specialist Team is part of a wider integrated community team which works with partners from other organisations to provide each patient with a suitable package of care to meet their health and social needs. This includes palliative care providers and social services.
- Care will be delivered as close to home as possible, with most patients receiving care in their own home (whether that be a private house, residential or nursing home), supplemented by telephone, clinic and hospital reviews as indicated.

Criteria for Discharge from HFCCM Service

- Symptoms stable and able to self manage or be monitored by case manager / other support
- Patients, who are stable but require further optimisation of established therapies will be referred back to GP practice with a management plan to support this.
- GP Practice will be notified when patients are discharged and routine monitoring will continue via the coronary heart disease, heart failure and/or palliative and supportive care register recall systems.

All patients will be provided with a clear ongoing management plan that details how to monitor their condition and how to seek advice / review when symptoms deteriorate / condition changes significantly.

Exceptions

- Patients unwilling to have nurse-led support
- Other immediately life threatening illness
- < 8 weeks post Acute Myocardial Infarction except via cardiologist or cardiac rehabilitation specialist nurse referral
- Patients registered with GPs outside the Lincolnshire area
- Underlying aetiology of heart failure non-cardiac e.g cor pulmonale
Heart Failure Complex Case Manager Service Information Flow Diagram

Referrer

Referrer completes form and faxes or tasks via systm one.

Referral received by Heart Failure Complex Case Manager

Review notes, diagnostic information and history of current presentation

Assess Patient

Requires Heart Failure Complex Case Management

Provide information to patient and arrange to review / follow up as condition indicates (see below)

Unstable symptoms
Change in condition
Change in treatment
Review < 2 weeks

Stable symptoms and no significant change in management ≥ 2 weeks
Review in 4 weeks

Stable symptoms and no significant changes to management ≥ 8 weeks
Discharge to Open Review

ALL Patients accepted for Heart Failure Complex Case Management will:
- Receive Lincolnshire NHS Living with Heart Failure booklet and other information as required (eg BHF information booklets)
- Have at full clinical review
- Have a management / follow up plan which has been developed in partnership with the specialist case manager
- Have case review at least every 3 months
- Know how to contact the nurse for review should condition change before next planned review
- Be provided with clear information on who is responsible for care after discharged from heart failure complex case manager’s care.

Provide appropriate advice to referrer if not accepting new referral.

If discharged, provide details of patient’s management plan

Does not meet criteria for heart failure complex case management

Unstable Symptoms not responding to specialist management or palliative care needs

Discuss at Multi-Disciplinary Team Meeting

Ensure GP is informed and patient is on palliative and supportive care register
# Appendix One: Community Heart Failure Complex Case Manager Referral Form

<table>
<thead>
<tr>
<th>Patient’s Name:</th>
<th>D.O.B.:</th>
<th>NHS No:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
<td></td>
<td>Past Medical History:</td>
</tr>
<tr>
<td>Post Code:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tel No:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Next Of Kin / contact details:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consultant:</td>
<td>Cardiac Dysfunction / Underlying Aetiology</td>
<td></td>
</tr>
<tr>
<td>Registered GP:</td>
<td></td>
<td>LVSD</td>
</tr>
<tr>
<td>Practice:</td>
<td>Heart Failure Preserved Ejection Fraction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Significant Valve Disease</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RVSD of cardiac origin</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Aetiology:</strong> (eg. Ischaemic Heart Disease)</td>
<td></td>
</tr>
</tbody>
</table>

Please give details of reason for referral / presenting symptoms:

**NB: Essential Criteria:** Objective Evidence of Cardiac Dysfunction and Symptoms of Worsening Heart Failure of cardiac origin.

Please attach/ fax copies of most recent echocardiogram and ECG

If originals not available please provide details below.

(Please note that an echocardiogram / angiogram is essential for an accurate diagnosis of chronic heart failure, referrals cannot be accepted without objective evidence to support diagnosis)

| Other relevant information |

<table>
<thead>
<tr>
<th>Name of Referrer:</th>
<th>Designation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature:</td>
<td>Date Completed:</td>
</tr>
<tr>
<td>Date Faxed:</td>
<td></td>
</tr>
</tbody>
</table>

**Fax Referrals to:**
- **Boston Area:** 01205 312803
- **Sleaford, Grantham, Stamford and Welland Areas:** 01529 220412
- **Spalding Area:** 01775 652370
- **East Lindsey, Louth, Skegness and Costal Areas:** 01507 631 285
- **Lincoln and Gainsborough Areas:** 01522 528987
Appendix Two Request for Deactivation on Implantable Cardioverter Defibrillator

REQUEST FOR DE ACTIVATION OF IMPLANTABLE CARDIOVERTER DEFIBRILLATOR

Patient Name --------------------------------
Address---------------------------------------
---------------------------------------------------------------------
Date of Birth--------------------------------
GP details------------------------------------
---------------------------------------------------------------------

Date/Time of request---------------------------------------------------------------------
Address patient is currently located at --------------------------------------------
---------------------------------------------------------------------
Reason for request---------------------------------------------------------------------
---------------------------------------------------------------------
Signature of authorising Consultant/ Physician-------------------------------------------
---
I understand the reasons for deactivating my ICD and that the decision to deactivate can be reviewed if necessary. I agree to the deactivation of my ICD.
Signature of patient/patient carer/relative--------------------------------------
Date and time device deactivated--------------------------------------------------
A note of any treatments that remain active for symptom relief?
Signature of health care professional deactivating the device
________________________________________________________

ANY OTHER COMMENTS
---------------------------------------------------------------------
---------------------------------------------------------------------
---------------------------------------------------------------------
## Appendix Three: Hospital Heart Failure Pathway

<table>
<thead>
<tr>
<th>Patient Label</th>
<th>Heart Failure Diagnosis supported by</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[ ] Echocardiography (Date…………….)</td>
</tr>
<tr>
<td></td>
<td>[ ] Angiography (Date…………………)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Heart Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] Left Ventricular Systolic Dysfunction</td>
</tr>
<tr>
<td>[ ] Heart Failure -Preserved Ejection Fraction</td>
</tr>
<tr>
<td>[ ] Valvular Heart Failure</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NYHA Class</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
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</table>

On admission:

<table>
<thead>
<tr>
<th>New Diagnosis Y/N</th>
<th>Known to Heart Failure Community team Y/N</th>
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</table>

<table>
<thead>
<tr>
<th>Reason for Admission:</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Medication on admission:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Refer to Cardiologist:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Specific Cardiologist Advice:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Predicted date of discharge:</th>
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</thead>
</table>
### Pharmacological Management

<table>
<thead>
<tr>
<th>Diuretic Type</th>
<th>Route</th>
<th>Start Date</th>
<th>Stop Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loop</td>
<td>IV Bolus / Infusion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loop</td>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thiazide</td>
<td>Oral</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ON oral therapy – consider early supported discharge**

### Left Ventricular Systolic Dysfunction ONLY consider adding:

<table>
<thead>
<tr>
<th>ACE Inhibitor Or /and Angiotensin Receptor Blocker</th>
<th>Established / New Start Why stopped or contra-indicated …………………………..</th>
</tr>
</thead>
<tbody>
<tr>
<td>Betablocker</td>
<td>Established / New Start Why stopped or contra-indicated …………………………..</td>
</tr>
</tbody>
</table>

| Aldosterone Antagonist                          | Consider adding, if still symptomatic despite ACE I and BB. Established / New Start Why stopped or contra-indicated ………………………….. |

### Other Therapies

- Digoxin
- ISDN and Hydralazine
- Inotropes
- Oxygen

**Drugs not tolerated and why?**

### Discharge Management plan: (Clinical and/or Palliative).

**Consider**: Resuscitation status/ DNACPR form.

Preferred place of care/end of life discussed.

Discharge observations:

- BP:
- Pulse:
- O2 saturations:
- Weight:
- NYHA class:
- Medication aims:

**Length of Stay**: Discharged to:

---

Hospital Based Heart Failure Nurses can be contacted at Boston and Lincoln with e-referral available at Lincoln County.
## Useful Weblinks/contacts

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Heart Association</td>
<td><a href="http://www.americanheart.org">www.americanheart.org</a></td>
</tr>
<tr>
<td>British Cardiovascular Society</td>
<td><a href="http://www.bcs.com">www.bcs.com</a></td>
</tr>
<tr>
<td>British Heart Foundation</td>
<td><a href="http://www.bhf.org.uk">www.bhf.org.uk</a> Tel: 0845 70 80 70</td>
</tr>
<tr>
<td>Cardiomyopathy Association</td>
<td><a href="http://www.cardiomyopathy.org">www.cardiomyopathy.org</a></td>
</tr>
<tr>
<td>European Society for Cardiology</td>
<td><a href="http://www.escardio.org">www.escardio.org</a></td>
</tr>
<tr>
<td>National heart and lung library</td>
<td><a href="http://www.nhlbi.nih.gov">www.nhlbi.nih.gov</a></td>
</tr>
<tr>
<td>National Specialist Library for cardiovascular diseases</td>
<td><a href="http://www.library.nhs.uk/cardiovascular">www.library.nhs.uk/cardiovascular</a></td>
</tr>
<tr>
<td>Palliativedrugs.com</td>
<td><a href="http://www.palliativedrugs.com">www.palliativedrugs.com</a></td>
</tr>
<tr>
<td>Prodigy Prescribing Information</td>
<td><a href="http://www.prodigy.nhs.uk">www.prodigy.nhs.uk</a></td>
</tr>
<tr>
<td>Royal College Psychiatrists</td>
<td><a href="http://www.rcpsych.ac.uk">www.rcpsych.ac.uk</a></td>
</tr>
<tr>
<td>Patient Information Sites</td>
<td></td>
</tr>
<tr>
<td></td>
<td><a href="http://www.CHFpatients.com">www.CHFpatients.com</a></td>
</tr>
<tr>
<td></td>
<td><a href="http://www.heart-transplant.uk">www.heart-transplant.uk</a></td>
</tr>
<tr>
<td></td>
<td><a href="http://www.patient.co.uk">www.patient.co.uk</a></td>
</tr>
<tr>
<td></td>
<td><a href="http://www.heartfailurematters.org">www.heartfailurematters.org</a></td>
</tr>
<tr>
<td></td>
<td><a href="http://www.arrhythmiaalliance.org">www.arrhythmiaalliance.org</a></td>
</tr>
<tr>
<td>Local Support Group - HOPE</td>
<td><a href="http://www.hopelinks.org.uk">www.hopelinks.org.uk</a></td>
</tr>
<tr>
<td>Advance Decision to Refuse Treatment</td>
<td><a href="http://www.adrtnhs.co.uk">www.adrtnhs.co.uk</a></td>
</tr>
</tbody>
</table>

### Advance Care Planning:

[www.endoflifecareforadults.nhs.uk/publications/planningforyourfuturecare](http://www.endoflifecareforadults.nhs.uk/publications/planningforyourfuturecare)

### Information about lasting power of attorney:


The East Midlands Palliative Care Network have adopted the Palliative Adult Network Guidelines (PANG), 2011, providing a wealth of symptom management advice these can be accessed via: [http://book.pallcare.info/](http://book.pallcare.info/)


Arrhythmia Alliance (2010) Implantable Cardioverter Defibrillators (ICD’S) in Dying Patients


Blue, L. and Millerick, Y. Heart Failure Liason Servive, NHS Greater Glasgow (2006) Heart Failure/Palliative Care Audit Report, Unpublished


Coronary Heart Disease Collaborative (2004) Supportive and Palliative Care for Advanced Heart Failure. Available at www.heart.nhs.uk


Chair: Elaine Baylis OPM
Chief Executive: Andrew Morgan


Department of Health (2008) End of life Care strategy. London DOH


European Society of Cardiology The Task Force for the Diagnosis and Treatment of Acute and Chronic Heart Failure 2012 of the European Society of Cardiology Developed in collaboration with the Heart Failure Association (HFA)of the ESC (2012) ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure 2012 European Heart Journal. Vol. 33 pp.1787-1847


Goodlin, SJ., Hauptman, PJ., Arnold, R., Grady, K., Hershberger, RE., Kitner, J., Masoudi, F., Spertus, J., Dracup, K., Cleary, JF., Medak, R., Crispell, K., Pina, I., Stuart, B., Whitney, C., Rector, T., Teno, J,


North and East Yorkshire and Northor Lincolnshire Cardiac and Stroke Network (2011) Managing Symptoms in Patients with Heart Failure up to and Including the End of Life available at: [http://www.yorksandhumberhearts.nhs.uk](http://www.yorksandhumberhearts.nhs.uk)

Palliative Care Pocketbook 3 The abridged Mid-Trent Cancer Services Network Palliative Care Guidelines available at: www.mtcn.nhs.uk

Palliative Care in End Stage Heart Failure Pocketbook (2010) Heart Failure Steering Group Nottinghamshire


Prognostic Indicator Guidance Gold Standards Framework, Available at: www.goldstandardsframework.nhs.uk


Tsuyuki, R.T.,Mckelvie, et. al. (2001) Acute Precipitants of Congestive Heart Failure Exacerbations Archives of Internal Medicine


Audit/ Monitoring of policy implementation

<table>
<thead>
<tr>
<th>Minimum requirement to be monitored</th>
<th>Process for monitoring e.g. audit</th>
<th>Responsible individuals/group/committee</th>
<th>Frequency of monitoring/audit</th>
<th>Responsible individuals/group/committee (multidisciplinary) for review of results</th>
<th>Responsible individuals/group/committee for development of action plan</th>
<th>Responsible individuals/group/committee for monitoring of action plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every 2 years</td>
<td>Team Review</td>
<td>Heart Failure Nurse Team</td>
<td>Bi-annually</td>
<td>PACEF / Medicines Management Committee</td>
<td>Heart Failure Nurse Team with PACEF and MMC</td>
<td>Heart Failure Nurse Team and MMC</td>
</tr>
</tbody>
</table>

The implementation of the policy will be audited by the service managers through the Audit Tool attached at Appendix E of the “Guidance on Policy Development” available on the trust website.

Audit is also undertaken via the Gold Standards Framework which will provide information regarding heart failure patients on this register.

Implementation Strategy

The Medicines Management Committee will ensure that the guideline is available, after approval on the LCHST website for dissemination and further supported by a submission via team brief.

In addition, individual teams will also be advised by their team leaders in respect of the guideline availability.

Training will be offered through the Trust's Chronic Heart Failure Study Days, Palliative Care Education Forum and on request where resources allow.
Equality Analysis

Introduction

The general equality duty that is set out in the Equality Act 2010 requires public authorities, in the exercise of their functions, to have due regard to the need to:

- Eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Act.
- Advance equality of opportunity between people who share a protected characteristic and those who do not.
- Foster good relations between people who share a protected characteristic and those who do not.

The general equality duty does not specify how public authorities should analyse the effect of their existing and new policies and practices on equality, but doing so is an important part of complying with the general equality duty. It is up to each organisation to choose the most effective approach for them. This standard template is designed to help LCHS staff members to comply with the general duty.

<table>
<thead>
<tr>
<th>Name of Policy/Procedure/Function*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Guidance for the Diagnosis and Management of Heart Failure Lincolnshire 2013</td>
</tr>
<tr>
<td>Equality Analysis Carried out by:</td>
</tr>
<tr>
<td>Date:</td>
</tr>
<tr>
<td>Equality &amp; Human rights Lead:</td>
</tr>
<tr>
<td>Director/General Manager:</td>
</tr>
</tbody>
</table>

*In this template the term policy/service is used as shorthand for what needs to be analysed. Policy/Service needs to be understood broadly to embrace the full range of policies, practices, activities and decisions: essentially everything we do, whether it is formally written down or whether it is informal custom and practice. This includes existing policies and any new policies under development.
Section 1 – to be completed for all policies

<table>
<thead>
<tr>
<th>A.</th>
<th>Briefly give an outline of the key objectives of the policy; what its intended outcome is and who the intended beneficiaries are expected to be</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To provide guidance to clinicians managing the care of patients with heart failure who are on Lincolnshire GP’s lists. To improve standards of evidence based care thereby improving patient care and experiences.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B.</th>
<th>Does the policy have an impact on patients, carers or staff, or the wider community that we have links with? Please give details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Impacts on all health professionals in wider community who care for people with heart failure. Provides advice on supporting patients and carers. Other organizations such as St Barnabas Hospice and United Lincolnshire Hospitals NHS Trust have been involved in development of this policy and it can be used to support all healthcare staff.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C.</th>
<th>Is there any evidence that the policy/service relates to an area with known inequalities? Please give details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D.</th>
<th>Will/Does the implementation of the policy/service result in different impacts for protected characteristics?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disability</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Sexual Orientation</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Gender Reassignment</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Marriage/Civil Partnership</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Maternity/Pregnancy</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Religion or Belief</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Carers</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

If you have answered ‘Yes’ to any of the questions then you are required to carry out a full Equality Analysis which should be approved by the Equality and Human Rights Lead – please go to section 2

The above named policy has been considered and does not require a full equality analysis

**Equality Analysis Carried out by:** Jane Scrafton  
**Date:** 9/12/14
### Equality analysis

<table>
<thead>
<tr>
<th><strong>Title:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relevant line in:</strong></td>
<td></td>
</tr>
</tbody>
</table>

**What are the intended outcomes of this work?** Include outline of objectives and function aims

**Who will be affected?** e.g. staff, patients, service users etc

---

**Evidence** The Government's commitment to transparency requires public bodies to be open about the information on which they base their decisions and the results. You must understand your responsibilities under the transparency agenda before completing this section of the assessment.

**What evidence have you considered?** List the main sources of data, research and other sources of evidence (including full references) reviewed to determine impact on each equality group (protected characteristic). This can include national research, surveys, reports, research interviews, focus groups, pilot activity evaluations etc. If there are gaps in evidence, state what you will do to close them in the Action Plan on the last page of this template.

<table>
<thead>
<tr>
<th><strong>Disability</strong></th>
<th>Consider and detail (including the source of any evidence) on attitudinal, physical and social barriers.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td>Consider and detail (including the source of any evidence) on men and women (potential to link to carers below).</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td>Consider and detail (including the source of any evidence) on different ethnic groups, nationalities, Roma gypsies, Irish travellers, language barriers.</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>Consider and detail (including the source of any evidence) across age ranges on old and younger people. This can include safeguarding, consent and child welfare.</td>
</tr>
<tr>
<td><strong>Gender reassignment (including transgender)</strong></td>
<td>Consider and detail (including the source of any evidence) on transgender and transsexual people. This can include issues such as privacy of data and harassment.</td>
</tr>
<tr>
<td><strong>Sexual orientation</strong></td>
<td>Consider and detail (including the source of any evidence) on heterosexual people as well as lesbian, gay and bi-sexual people.</td>
</tr>
<tr>
<td><strong>Religion or belief</strong></td>
<td>Consider and detail (including the source of any evidence) on people with different religions, beliefs or no belief.</td>
</tr>
<tr>
<td><strong>Pregnancy and maternity</strong></td>
<td>Consider and detail (including the source of any evidence) on working arrangements, part-time working, infant caring responsibilities.</td>
</tr>
<tr>
<td><strong>Carers</strong></td>
<td>Consider and detail (including the source of any evidence) on part-time working, shift-patterns, general caring</td>
</tr>
</tbody>
</table>
Other identified groups Consider and detail and include the source of any evidence on different socio-economic groups, area inequality, income, resident status (migrants) and other groups experiencing disadvantage and barriers to access.

**Engagement and involvement**
Was this work subject to the requirements of the Equality Act and the NHS Act 2006 (Duty to involve) ? (Y/N)

How have you engaged stakeholders in gathering evidence or testing the evidence available?

How have you engaged stakeholders in testing the policy or programme proposals?

For each engagement activity, please state who was involved, how and when they were engaged, and the key outputs:

**Summary of Analysis** Considering the evidence and engagement activity you listed above, please summarise the impact of your work. Consider whether the evidence shows potential for differential impact, if so state whether adverse or positive and for which groups. How you will mitigate any negative impacts. How you will include certain protected groups in services or expand their participation in public life.

Now consider and detail below how the proposals impact on elimination of discrimination, harassment and victimisation, advance the equality of opportunity and promote good relations between groups.

**Eliminate discrimination, harassment and victimisation** Where there is evidence, address each protected characteristic (age, disability, gender, gender reassignment, pregnancy and maternity, race, religion or belief, sexual orientation).

**Advance equality of opportunity** Where there is evidence, address each protected characteristic (age, disability, gender, gender reassignment, pregnancy and maternity, race, religion or belief, sexual orientation).

**Promote good relations between groups** Where there is evidence, address each protected characteristic (age, disability, gender, gender reassignment, pregnancy and maternity, race, religion or belief, sexual orientation).

**What is the overall impact?** Consider whether there are different levels of access experienced, needs or experiences, whether there are barriers to engagement, are there regional variations and what is the combined impact?

**Addressing the impact on equalities** Please give an outline of what broad action you or any other bodies are taking to address any inequalities identified through the evidence.
**Action planning for improvement** Please give an outline of the key actions based on any gaps, challenges and opportunities you have identified. Actions to improve the policy/programmes need to be summarised (An action plan template is appended for specific action planning). Include here any general action to address specific equality issues and data gaps that need to be addressed through consultation or further research.

Please give an outline of your next steps based on the challenges and opportunities you have identified. Include here any or all of the following, based on your assessment

- **For the record**
  - Name of person who carried out this assessment:
  - Date assessment completed:
  - Name of responsible Director/ General Manager:
  - Date assessment was signed: