



South London
Cardiac and Stroke Network

GUIDE FOR COMMISSIONING A QUALITY HEART FAILURE SERVICE

South East London Heart Failure Workstream

December 2011

COMMISSIONING GUIDE FOR QUALITY HEART FAILURE SERVICES

RATIONALE

Heart failure (HF) is one of the most common medical conditions affecting almost a million people in the UK, accounting for 2 per cent of the entire NHS budget. There is substantive evidence that mitigating treatment improves the prognosis of heart failure. After an acute admission, patients who receive no treatment have a 50-60 per cent one-year mortality rate in comparison to a 10-15 per cent mortality rate for those who have been treated. Unfortunately, many UK patients remain sub-optimally treated¹ resulting in a one-year mortality for these patients of 30 per cent for 2009. This may be partly attributed to the fact that heart failure is a disease which lacks clear care pathways and effective management.

Further elements which exacerbate the issue include high levels of avoidable emergency admissions and re-admissions (approximately one in four patients is readmitted within three months²), high levels of undiagnosed cases and a general lack of confidence within primary care about managing chronic heart failure.

In short, this is an area where better healthcare can be delivered at less cost, leading to improved health outcomes.

As commissioning evolves, it is increasingly important that the various areas of commissioning join together. Commissioners must be well informed on patient choice, the basic minimum standards of care and performance measures that need to be in place, regardless of how services are delivered.

BACKGROUND

Definition of heart failure

Heart failure is a syndrome characterised by shortness of breath, fatigue and fluid retention. The syndrome can result from any structural or functional cardiac disorder that impairs the ability of the heart to function as a pump to support a physiological circulation.³

¹ National Clinical Guideline Centre. (2010) Chronic heart failure: the management of chronic heart failure in adults in primary and secondary care. London: National Clinical Guideline Centre. Available from: <http://guidance.nice.org.uk/CG108/Guidance/pdf/English>

² National Clinical Guideline Centre. (2010) Chronic heart failure: the management of chronic heart failure in adults in primary and secondary care. London: National Clinical Guideline Centre. Available from: <http://guidance.nice.org.uk/CG108/Guidance/pdf/English>

³ NICE Chronic heart failure quality standard. London: National Clinical Guideline Centre. Available from: <http://www.nice.org.uk/guidance/qualitystandards/chronicheartfailure/home.jsp>

The most common cause of HF in the UK is coronary artery disease; many patients have suffered a myocardial infarction in the past. A history of hypertension is also common, as is atrial fibrillation (AF). Heart damage of unknown cause – such as dilated cardiomyopathy – accounts for less than 15 per cent of cases in those under the age of 75.

The typical HF patient is of Caucasian descent. People of African or Afro-Caribbean origin are likely to develop heart failure due to hypertension rather than coronary artery disease. Conversely, those of South Asian origin have a greater risk of developing heart failure due to coronary artery disease rather than hypertension, often accompanied by obesity and diabetes mellitus.

Aims of this commissioning guide

This commissioning guide is based on the NICE clinical guidance 108⁴ and NICE quality standards for chronic heart failure⁵. It has been developed by local and national experts, local GPs and community nurses, patients and commissioners.

This guide aims to demonstrate what ‘good heart failure services’ looks like. The hope is that it will help improve and standardise care nationally, where service provision and resources vary. The guide aims to inform *what* needs to be included in commissioning a quality heart failure service (i.e. the core basics), not *how* or *where* this is to be delivered (i.e., not suggest methods of delivery or how to address gaps in the service). Models of care (delivery) and new ways of thinking which ensure added value and better outcomes in delivering a HF service must be determined locally. This guide provides commissioners the ‘must haves’ that cannot be lost as creative and new ways of delivering HF services locally are explored. It also serves to inform commissioners about the potential compromises being made pending financial decisions to cut or to decommission certain aspects of care.

Note: Whilst cardiovascular disease (CVD) prevention is important, it has not been included in the scope and remit of this guide.

It aims to ensure that:

Heart failure services across the patient pathway are commissioned in a ‘seamless’ manner across primary, secondary and community care. As commissioning is currently divided it is important that HF services commissioned along the pathway complement each other. For example, in South East London (SEL), secondary/acute care is commissioned by the cluster acute commissioning units, community commissioning is done by the Business Support Units (BSUs) with their Clinical Commissioning Groups (CCG) and implemented in primary care through the various forms of local CCGs (formerly Practice Based Commissioning groups). As CCGs evolve more fully and these commissioning divisions dissolve,

⁴ National Clinical Guideline Centre. (2010) Chronic heart failure: the management of chronic heart failure in adults in primary and secondary care. London: National Clinical Guideline Centre. Available from: <http://guidance.nice.org.uk/CG108/Guidance/pdf/English>

⁵ NICE Chronic heart failure quality standard. London: National Clinical Guideline Centre. Available from: <http://www.nice.org.uk/guidance/qualitystandards/chronicheartfailure/home.jsp>

pathway commissioning will become the norm, making a seamless HF pathway more possible. In the interim, for convenience, the minimum standards of care have been labelled to help commissioners easily identify those standards which are most relevant.

Services are commissioned, evaluated and managed against NICE quality standards, best practice and good clinical guidelines. It is essential that these must be in place as the bare minimum, though additional key performance indicators (KPIs) can be determined at a local level. Comprehensive NICE guidelines⁶ on HF include: diagnosis, pharmacological treatment, disease monitoring, cardiac rehabilitation and invasive procedures. In addition, NICE quality standards⁷ and the NICE commissioning guide for HF⁸ have been published to support this.

Cost

The cost of general practitioner (GP) consultations has been estimated at £45 million per year, with an additional £35 million for GP referrals to outpatient clinics. On top of this, community-based drug therapy costs the NHS approximately £129 million per year.

HF accounts for a total of one million inpatient bed days – 2 per cent of all NHS inpatient bed days – and 5 per cent of all emergency medical admissions to hospital. It is estimated that the total annual cost of heart failure to the NHS is approximately 2 per cent of the total NHS budget; about 70 per cent of this total is due to the costs of hospitalisation. Admissions tend to be protracted: The median length of stay is seven to eight days, with 99 per cent of patients discharged within 10 days.

As well as the costs to the NHS, HF places a burden (financial and operational) on other agencies such as social services and the benefits system and, of course, on the patients with heart failure and their families and caregivers.

Key commissioning outcomes

Underpinning this commissioning guide are the following key outcomes that good commissioning⁹ aims to achieve:

- Preventing people from dying prematurely (commissioning multidisciplinary care for HF patients may contribute to achievement of health outcomes from Domain 1 of the NHS Outcomes Framework¹⁰).
- Enhancing the quality of life for people with long-term conditions

⁶ National Clinical Guideline Centre. (2010) Chronic heart failure: the management of chronic heart failure in adults in primary and secondary care. London: National Clinical Guideline Centre. Available from: <http://guidance.nice.org.uk/CG108/Guidance/pdf/English>

⁷ NICE Chronic heart failure quality standard. London: National Clinical Guideline Centre. Available from: <http://www.nice.org.uk/guidance/qualitystandards/chronicheartfailure/home.jsp>

⁸ NICE Heart failure service commissioning guide Available from: <http://www.nice.org.uk/media/822/4D/HeartFailureServiceCommissioningGuide.pdf>

⁹ NICE Heart failure service commissioning guide Available from: <http://www.nice.org.uk/media/822/4D/HeartFailureServiceCommissioningGuide.pdf>

¹⁰ NHS Outcomes Framework 2011/12. Available at: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_122944

- Helping people to recover from episodes of ill health or following injury
- Ensuring that people have a positive experience of care
- Early identification of HF patients so that they promptly access the care they need
- Reduction in non-elective admissions and re-admissions

With the increasing importance of measuring outcomes, performance and improvements, data accuracy and timeliness of reporting becomes even more crucial to good decision making. Commissioners must therefore consider how, where and by whom this information will be collected, ensuring that the necessary arrangements are made to accomplish this. Clinicians should not be burdened with this responsibility in lieu of patient-facing time.

PREVALENCE OF HEART FAILURE

It is estimated that 900,000 people in the UK today have HF¹¹. Both the incidence and prevalence of heart failure increase steeply with age; the average age at first diagnosis is 76 years. The prevalence of HF is expected to rise through a combination of improved survival rates of people with ischaemic heart disease, more effective treatments for HF and the effects of an ageing population. The recent rise in the prevalence of HF seems to mirror the rise in the prevalence of hypertension, diabetes mellitus, atrial fibrillation and obesity. The risk of HF is higher in men than in women in all age groups, but the number of women with HF is higher than men due to population demographics.

Patients on GP heart failure registers, representing prevalent cases of HF, continue to be at significant mortality risk, with a five year survival of 58 per cent as compared to 93 per cent in the age- and sex- matched general population.

On average, a general practitioner will look after 30 patients with heart failure annually, and suspect a new diagnosis of HF in 10 of those patients. GPs who work in more deprived areas are likely to care for more HF cases.

The main sources of information about the prevalence of heart failure are from GP heart failure disease registers and heart failure hospital admissions. South East London data is used as an example to demonstrate how data can be analysed.

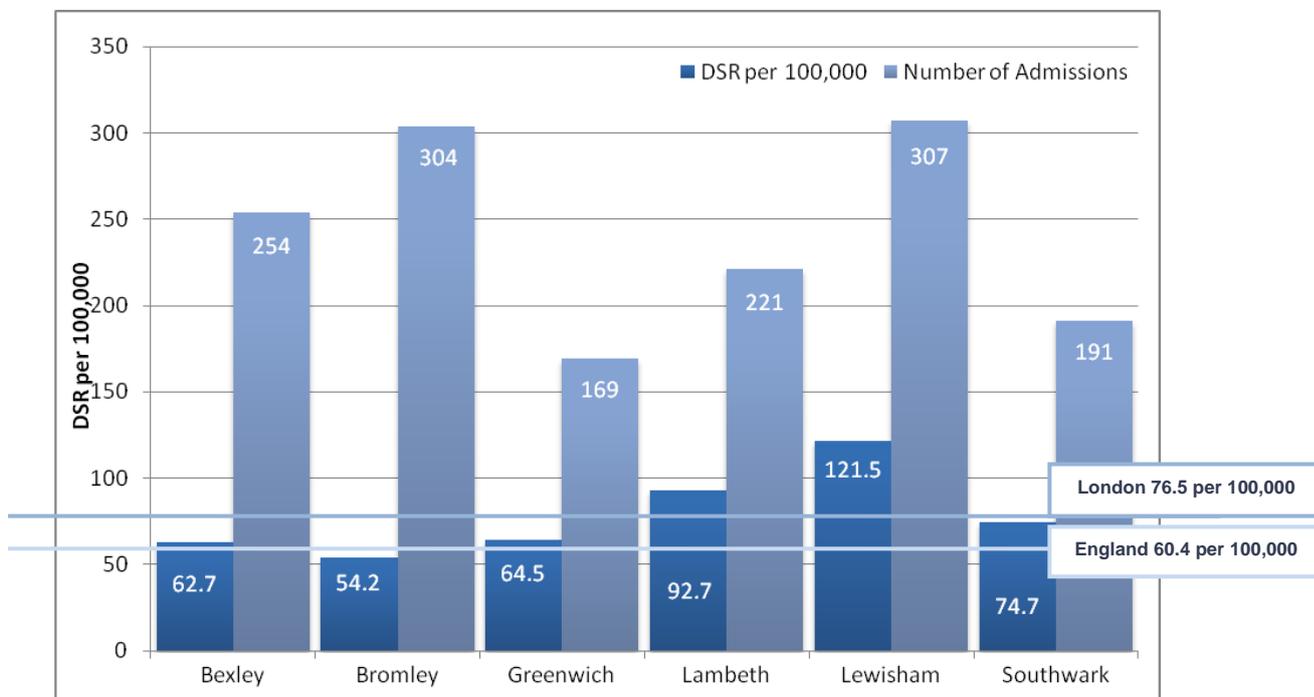
Heart failure admissions

The following table compares the emergency admission rates across SEL. It demonstrates how actual numbers of admissions are not comparable because they don't take into account for the differences in the age of the different populations. However, directly standardized rates (DSR) adjusts the number of admissions by the age distribution of the population. Since the prevalence of HF increases in older population, direct standardization compensates for the impact of the age of the

¹¹ National Clinical Guideline Centre. (2010) Chronic heart failure: the management of chronic heart failure in adults in primary and secondary care. London: National Clinical Guideline Centre. Available from: <http://guidance.nice.org.uk/CG108/Guidance/pdf/English>

population, allowing for a fair comparison between areas.¹² Local emergency admission DSR can also be compared against London and England DSR for benchmarking.

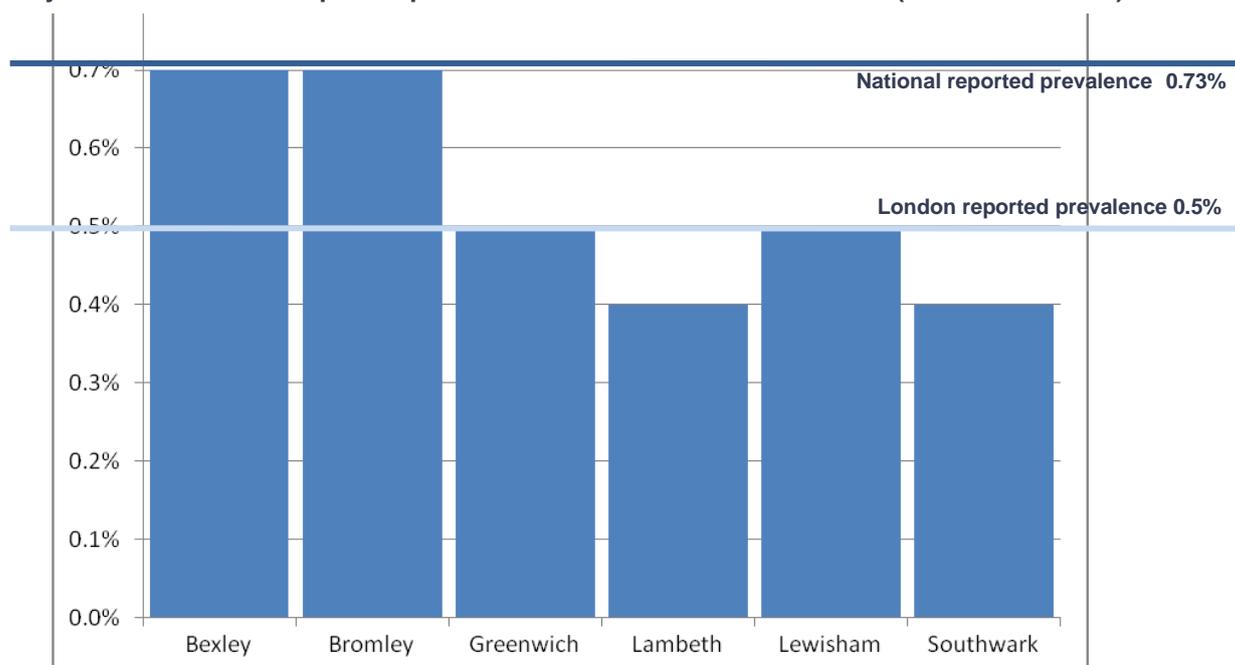
Heart failure emergency admission rates for all ages (2009/10)



Source: South East Public Health Observatory (SEPHO)

GP heart failure disease registers

Unadjusted heart failure reported prevalence: South East London PCTs (2008-9 QOF data)



¹² www.sepho.org.uk Available from: http://www.sepho.org.uk/NationalCVD/CVD_FAQs.pdf

South London Average reported prevalence:

SEL = 0.53%

SWL = 0.44%

NOTE: This table is not age adjusted.

2008-9	Reported prevalence		Expected prevalence		Unidentified HF patients	
	%	Number	%	Number	%	Number
Bexley	0.7	1,514	1.5	3,293	0.8	1,779
Bromley	0.7	2,168	1.5	4,998	0.8	2,830
Greenwich	0.5	1,198	1.0	2,517	0.5	1,319
Lambeth	0.4	1,374	0.7	2,641	0.3	1,267
Lewisham	0.5	1,454	0.9	2,648	0.4	1,194
Southwark	0.4	1,180	0.7	2,234	0.3	1,054

Source: NHS Comparators

Note: This table is to serve as a guide and is not indicative of true prevalence.

- Bexley and Bromley have the largest gap between reported (as found in QOF data) and expected prevalence; Lambeth and Southwark have the smallest gap.
- HF patients are considered *unidentified* if they are not included in the GP HF register (whether or not they have been identified in hospital).
- Anecdotal evidence suggests that the late presentation of HF means the disease is further progressed, which will then increase the burden of the disease downstream (e.g. a potential increase in A&E attendances, hospital admissions and possible higher mortality rates). This will have an economic impact on delivering services.
- There was no change between 2009/10 and 2008/9 reported prevalence.

CURRENT SERVICES

(As of October 2011)

The table below provides a snapshot of the current heart failure specialist nurse (HFSN) service provision in SEL, demonstrating the variations in resources and provision. It does not reflect all the HF work being done both in primary care and by the consultant cardiologists. Unfortunately, this data is not available.

Borough	BNP	NT-Pro BNP	WTE hospital - based HFSN	WTE community-based HFSN (based on funding)	Community clinics available	Home visits available
Bromley		✓	1	1.5	No	Yes
Bexley		✓	1	0.3	Yes	No
Greenwich		✓		HFSN 2; Cardiac Comm. Matrons 2.6; HCA 0.5	Yes	Yes
Lambeth		✓	3.7	3	Yes	Yes
Lewisham		✓	1	3	Yes	Yes
Southwark	✓		3	3	Yes	Yes

Management of heart failure

	Bexley	Bromley	Greenwich	Lambeth	Lewisham	Southwark	London	England
Percentage of heart failure patients diagnosed after 1 st April 2006 with diagnosis confirmed by an echocardiogram (echo) or specialist assessment	96.7	95.2	97.4	96.7	95.1	96.2	96.1	95.9
Percentage of patients with a current diagnosis of heart failure due to left ventricular dysfunction (LVD) treated with an ACE inhibitor or angiotensin receptor blocker	92.1	91.4	93.7	90.6	93.1	93.7	91.8	90.0

Source: SE Public Health Observatory 2011 - Quality and Outcomes Framework 2009/10, Cardiovascular disease health profile: www.sepho.org.uk

Re-admissions due to heart failure

An SMR is essentially a comparison of the number of the observed deaths in a population with the number of expected deaths if the age-specific death rates were the same as a standard population. It is expressed as a ratio of observed to expected deaths, multiplied by 100. A SMR is calculated as the number of deaths observed within an area divided by the expected number of deaths within that area. This ratio is then multiplied by 100. To arrive at the expected number of deaths, for each age group, the standard age-specific death rate is multiplied by the local population in that age group. The number of expected deaths in each age group are then summed across all ages to arrive at the expected number of deaths for the local population.

	Admission rates 2007-8	Re-admission rates (%) 2007-8		Re-admission rates (%) 2008-9		Standardised mortality ratio 2007-8 SMR England = 100 SMR London = 116.29
		Within 14 Days	Within 28 Days	Within 14 Days	Within 28 Days	
Bexley	48.69	2.48	4.13	2.27	3.79	Not available
Bromley	38.13	1.8	3.0	6.28	6.72	126.84
Greenwich	63.96	3.31	4.14	14.62	16.93	108.67
Lambeth	83.50	5.88	7.35	8.22	12.33	93.86
Lewisham	88.97	4.89	8.15	3.17	4.23	109.22
Southwark	65.09	5.36	10.72	16.88	16.88	98.45

Source: London Health Observatory

Note: Although this data is up to four years old, it is the most up-to-date available. It may not reflect current re-admission rates. However, this table serves as a good example of the types of information (i.e. HES data) that can be looked at and compared when analysing readmission.

OTHER SPECIFIC CONDITIONS FOR CONSIDERATION

Although this guide focuses on left ventricular systolic dysfunction heart failure, commissioners must consider how and where other forms of heart disease are identified, treated and monitored. Often not part of the HF service inclusion criteria, provision must be considered for their care. These include:

Diastolic dysfunction (heart failure with preserved ejection fraction [HFPEF])

- Accounts for up to 50 per cent of all HF cases.
- Shares the same KPIs as systolic HF, save for the lack of evidence with beta blockers or ACE inhibitors.

Pulmonary hypertension

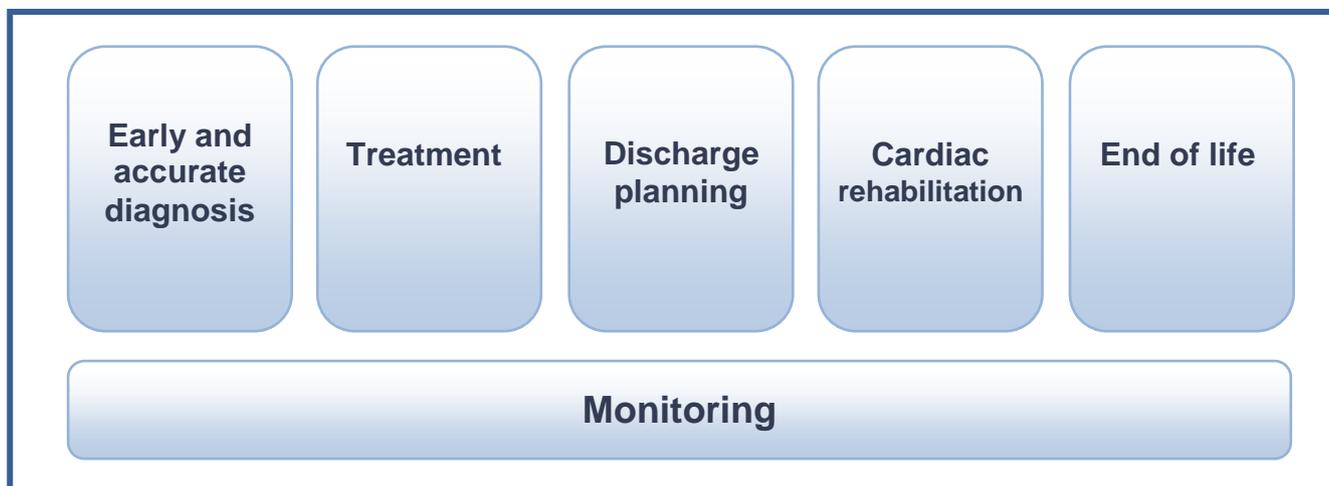
- Commissioning for this should be managed by designated centres of the National Specialised Commissioning Group (NSCG), which oversees the national commissioning of highly specialised services, to ensure that services are safe, patient-centred, effective and of high quality.

Inherited cardiac conditions (ICCs)

- ICCs should be seen in a cardiac genetics clinic. Conditions include: sudden arrhythmic death syndrome (SADS), hypertrophic cardiomyopathy (HCM), dilated cardiomyopathy (DCM), arrhythmogenic right ventricular cardiomyopathy (ARVC), long QT syndrome (LQTS), Brugada syndrome, catecholaminergic polymorphic ventricular tachycardia (CPVT).

SUGGESTED PATHWAY OF CARE

This commissioning guide will address the patient HF pathway according to the diagram below.



Because patients will receive their care in a variety of settings (primary, secondary and community), this guide provides the relevant protocols and standards that apply in each area of care, regardless of setting. This pathway is therefore not linear. Rather, it represents the type of care a HF patient needs to receive from diagnosis to end of life, no matter where that care is delivered. These ‘must haves’ included in this guide can apply to different models of care/delivery. All references to HF nurses or HF patients will generally apply (unless specified) across all settings.

Each part will be discussed in terms of:

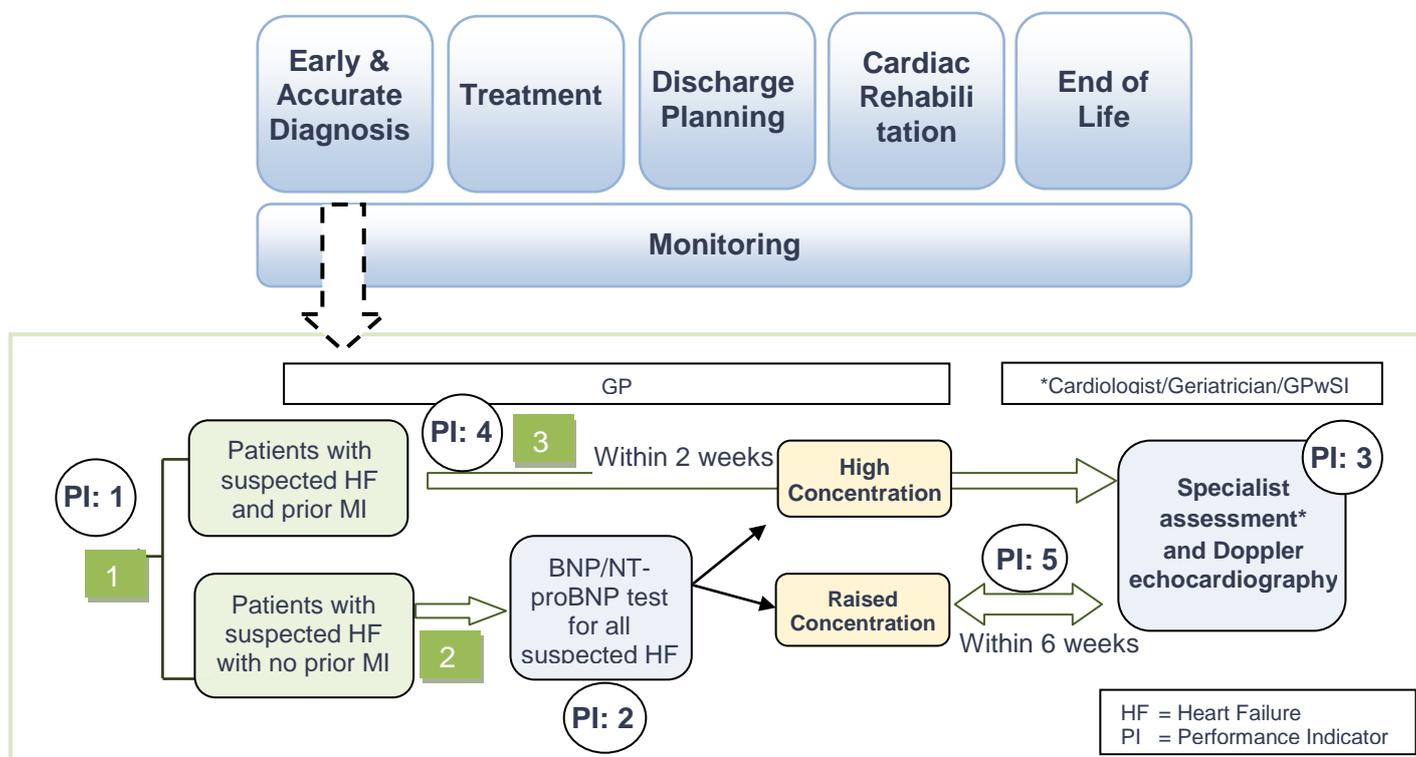
- Key commissioning benefits - *The benefits/ advantages of commissioning this area of care*
- Minimum standard of care: Workforce, governance, data collection, IT, commissioning considerations - *The top priority areas to be commissioned*
- Key clinical performance indicators - *Agreed performance measures or NICE quality standards*
- Services required (where relevant) - *Interconnected services required by HF services*

Note: It was found that accurate and timely collection of the data required to meet the NICE quality standards (APPENDIX A), particularly in primary care, was not always possible. Alternative KPIs which are more realistically achievable were therefore agreed upon and are suggested.

Guideline review

It is recommended that service guidelines set locally by commissioners are reviewed annually to ensure that they are up-to-date and in line with the changing commissioning environment. Goals set within this guideline have been set for one year (unless specified otherwise) and it is recommended that these are also reviewed annually in accordance with local performance.

EARLY AND ACCURATE DIAGNOSIS



- 1 Consider HF diagnosis if patient presents with symptoms of breathlessness and swollen ankles.
- 2 For patients with no previous MI, BNP/NT-proBNP testing is done to rule out HF.
- 3 Patients with previous MI and those with abnormal levels of BNP/ NT-proBNP are sent for specialist assessment and echo for a confirmed diagnosis

REFER: NICE Guideline 108, Chronic Heart Failure (APPENDIX B)

Key commissioning benefits

Improve HF identification and access to treatment to improve quality of life and prolong patient lives

- The large gap between reported and expected prevalence suggests that current prevalence rates are under reported in QOF.
- Prevalence increases with age for both men and women: approximately 1 per cent (aged under 65); 6-7 per cent (aged 75 to 84); 12-22 per cent (aged 85 and over)¹³ as well as with improved survival post myocardial infarction¹⁴
- There are approximately 63,000 new cases annually in the UK and 878,000 people who suffer from definite or probable HF, increasing the demand on the health service.

¹³The Health Foundation Inspiring Improvement - <http://www.health.org.uk/public/cms/75/76/313/583/Bridging%20the%20quality%20gap%20Heart%20Failure.pdf?realName=cXqFcz.pdf>

¹⁴ NHS Information Centre, National Heart Failure Audit. Available online at: http://www.ic.nhs.uk/webfiles/publications/002_Audits/NHS_IC_National_Heart_Failure_Audit_2010_04-01-11.pdf.

Ensure that HF patients have a diagnosis confirmed by an echo, as recommended by NICE

- Echocardiography, a key investigation for HF, was performed in 79 per cent of cases¹⁵.

Reduce mortality rates and long-term financial impact on the health economy

- The majority of HF patients still present for the first time via an acute emergency admission and have a mean length of stay of 10 days.
- Newly diagnosed patients have a 40 per cent risk of dying within a year of diagnosis¹⁶.
- As one of the most common reasons for emergency medical admissions (approximately 5 per cent), HF re-admissions and hospital bed days occupancy have a large financial impact on the health economy. Almost 90 per cent of HF admissions are emergency admissions¹⁷.

Minimum standard of care - Commissioning priorities

Workforce

Generalist care

- **Required competencies for GPs (against an agreed, standardised level of skill across the locality):**
 - Recognising HF symptoms (breathlessness and swollen ankles), as 50 per cent of HF patients are not identified.
 - Using BNP/NT-proBNP in diagnosing HF (which costs less than an echo), ensuring only those with a higher likelihood of HF are referred for an echo, thereby reducing diagnostic costs. Those with abnormal BNP/NT-proBNP levels and without HF usually have other structural heart problems.
 - Medicines management, as most HF patients are complex and have co-morbidities.

Specialist care

- **HF diagnosis must include specialist assessment (in addition to an echo).** NICE¹⁸ defines a specialist as 'a physician with subspecialty interest in heart failure (often a consultant cardiologist) who leads a specialist multidisciplinary heart failure team of professionals with appropriate competencies from primary and secondary care'. NICE further defines specialist assessment as the 'specialist multidisciplinary heart failure team'. Diagnosis is traditionally still done by a consultant cardiologist, though this could also include a geriatrician, a GP with a Special Interest (GPwSI) in HF with the support of a cardiologist. This does not include nurse consultants, as diagnosis is traditionally not part of their role.

¹⁵ NHS Information Centre, National Heart Failure Audit. Available online at: www.ic.nhs.uk/webfiles/publications/002_Audits/NHS_IC_National_Heart_Failure_Audit_2010_04-01-11.pdf

¹⁶ NHS Information Centre, National Heart Failure Audit. Available online at: www.ic.nhs.uk/webfiles/publications/002_Audits/NHS_IC_National_Heart_Failure_Audit_2010_04-01-11.pdf

¹⁷ NHS Information Centre, National Heart Failure Audit. Available online at: www.ic.nhs.uk/webfiles/publications/002_Audits/NHS_IC_National_Heart_Failure_Audit_2010_04-01-11.pdf

¹⁸ National Clinical Guideline Centre. (2010) Chronic heart failure: the management of chronic heart failure in adults in primary and secondary care. London: National Clinical Guideline Centre. Available from: <http://guidance.nice.org.uk/CG108/Guidance/pdf/English>

Training of the aforementioned roles in HF diagnosis would enable more clinicians to correctly diagnose these patients, increasing HF identification rates.

- **Hospitals must proactively identify and diagnose HF of in-patients.** BNP/ NT-proBNP testing and early in-patient echos need to be readily available to ensure in-patients are diagnosed within their hospital stay and can access the relevant treatment. Pressure to shorten length of stay will impact diagnosis turnaround times.

Governance and data collection

Generalist care

- **GP practices should ensure their HF registers are accurate** and reflect the appropriate proportion of HF patients against their practice lists (e.g. proactive searches can start with COPD patients aged over 65).
- **GP practices must provide activity data (outside of QOF registers)** in the early and accurate diagnosis of their patients, as reflected in the key performance indicators.

Specialist care

- **Six month audits should be regularly conducted** for echo waiting times and time taken to see a HF specialist for in- and out-patients with suspected HF.

Commissioning considerations

Resources

Generalist care

- **BNP or NT-proBNP is available to GPs and its use is encouraged.** NT-proBNP is the preferred testing method for GP use. BNP or NT-proBNP results should be available within 48 hours, costing between £15 -25 per test¹⁹. Refer to APPENDIX C for a user guide of BNP testing in primary care.

Specialist care

- **Hospitals must meet the two week and six week turnaround times for echos.** Early and accurate HF diagnosis requires access to a Doppler echocardiography and specialist opinion within two weeks (for patients with prior MI) or within six weeks (for patients without prior MI²⁰). This is best done in a one-stop shop clinic. Echos provided must be accredited by BSE (or linked to a BSE-accredited department if based in the community).

Public health

- **Public health must be consulted when commissioning primary, secondary and community care** to ensure that the service specifications consider the impact of ethnicity, which influences the profile of HF patients and the kind of care needed. For example, HF services typically cater to those aged over 65 years so

¹⁹ NICE Chronic heart failure quality standard. London: National Clinical Guideline Centre. Available from: <http://www.nice.org.uk/guidance/qualitystandards/chronicheartfailure/home.jsp>

²⁰ National Clinical Guideline Centre. (2010) Chronic heart failure: the management of chronic heart failure in adults in primary and secondary care. London: National Clinical Guideline Centre. Available from: <http://guidance.nice.org.uk/CG108/Guidance/pdf/English>

localities with large Afro-Caribbean populations (who develop HF at a younger age, well under 65 years old) need to adjust their local services accordingly.

Key clinical performance indicators (in lieu of NICE quality standards)

Trusts must determine their individual mode of data collection.

Generalist care

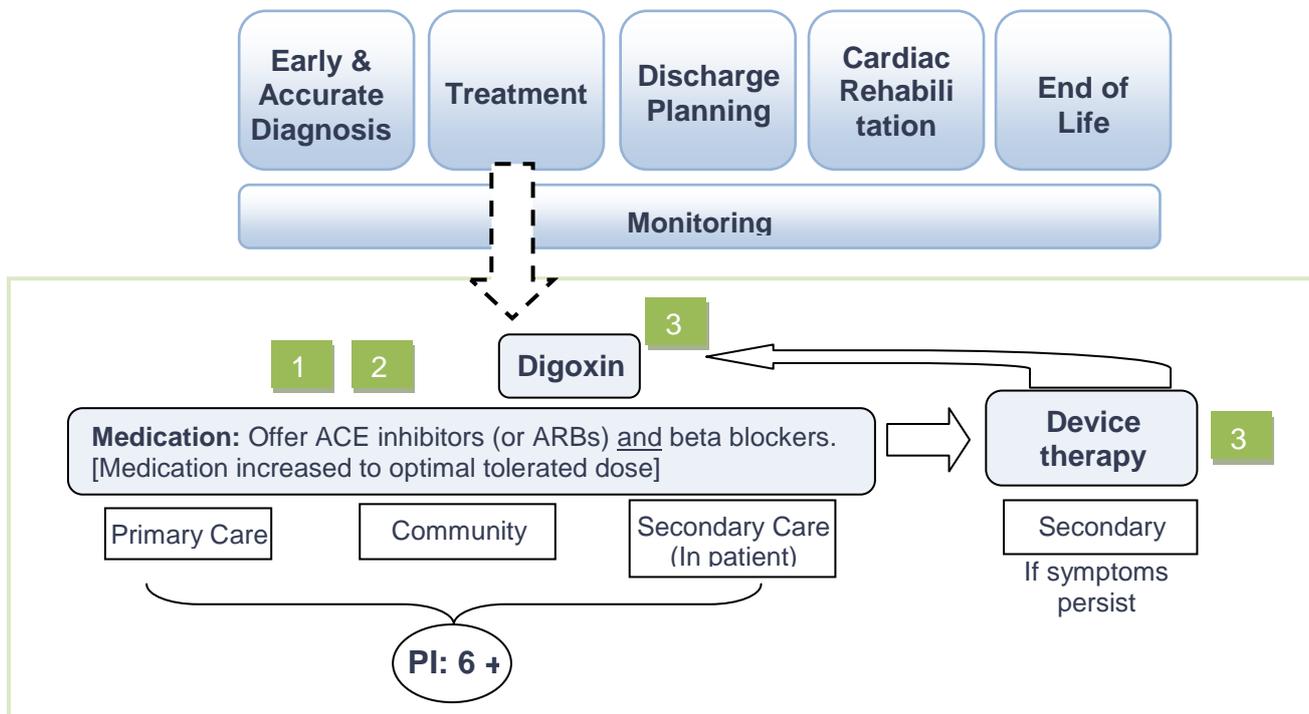
No.	Performance indicator	Numerator	Denominator
1	Heart failure register is 50% that predicted in GP practice (age/sex standardised)	Number of patients on the HF register (QOF)	Number of expected prevalence of HF
2	Percentage of GP population of over 45 year olds who have a BNP/NT-proBNP test. NICE recommends this should be 36 people per 1000 population ²¹ . Local average target: Year 1 – 60% (Practice targets to be determined locally)	Number of BNP/NT-proBNPs done in over 45 year olds per GP population	Number of expected prevalence of HF in the population
3	Percentage of patients who have a high BNP/NT-proBNP concentration and receive an echo	Number of patients who have a high BNP/NT-proBNP concentration and receive an echo	Total number of high BNP/NT-proBNPs concentration tests done

Specialist care

No.	Performance indicator	Numerator	Denominator
4	Percentage of referrals of patients with suspected HF (with a previous MI) <i>and</i> patients (with no prior MI) and high BNP/NT-proBNP concentration levels who have a specialist assessment and receive an echo within two weeks 10% above two week waiting time	Number of referrals of patients with suspected HF (with previous MI) <i>and</i> patients (with no prior MI) high BNP/NT-proBNP concentration levels who have a specialist assessment and receive an echo within two weeks	Number of referrals of patients with suspected HF (with previous MI) <i>and</i> patients (with no prior MI) with high BNP/NT-proBNP concentration levels who have an echo and specialist assessment.
5	Percentage of referrals of patients with suspected HF without prior MI and raised BNP/NT-proBNP concentration levels who have a specialist assessment and receive an echo within six weeks 10% above six week waiting time	Number referrals of patients with suspected HF without prior MI and raised BNP/NT-proBNP concentration levels who have a specialist assessment and receive an echo within six weeks	Number of referrals of patients with suspected HF (with no previous MI) and raised BNP/NT-proBNP concentration levels who have an echo and specialist assessment

²¹ NICE Heart failure service commissioning guide Available from:
<http://www.nice.org.uk/media/822/4D/HeartFailureServiceCommissioningGuide.pdf>

TREATMENT



*** Follow NICE guidelines with aim to use the ESC guidelines in the future

- 1 Offer both ACE inhibitors (or use ARB if intolerant to ACE) and beta blockers licenced for HF as first line treatment for LVSD
 - 2 If symptoms persist, seek specialist advice and consider adding:
 - Aldosterone antagonist licenced for HF or possible MI (Spironolactone for NYHA [New York Heart Association functional classification] III, Eplerenone if post MI or NYHA II) OR
 - Hydralazine in combination with nitrate (especially in people of African or Caribbean origin with moderate to severe HF)
 - Ivabradine with SR (sinus rhythm) Heart Rate ≥ 70 , with contraindications to or on maximum tolerated beta blocker dose
 - 3 If symptoms persist, consider
 - CRT (Cardiac Resynchronization Therapy) pacing with or without a defibrillator
 - Digoxin
 - ARB licenced for HF (especially in mild to moderate HF)
- REFER: NICE
Guideline 108, Chronic
Heart Failure
(APPENDIX D)

Key commissioning benefits

Improve patient outcomes through specialist input and follow up

“Outcomes for these patients can be significantly improved by having specialist cardiology input to their care, administration of appropriate evidence-based doses of key drugs and follow-up by specialist services.” Dr Theresa McDonagh, Chair of the British Society for Heart Failure and National HF audit clinical lead²²

²² NHS Information Centre, Available on <http://www.ic.nhs.uk/news-and-events/news/big-difference-in-heart-failure-mortality-rates-shown-by-largest-ever-audit-in-england-and-wales>

- Patients admitted to cardiology wards are more likely to access HF liaison services (63 per cent) than those admitted to general medicine (33 per cent) or to other wards (28 per cent)²³.

Reduced mortality rates through evidence-based medicines

- Many patients are prescribed less than 50 per cent of the target dose for drugs like ACE inhibitors or beta blockers. These drugs can effectively reduce mortality in the year after discharge by approximately one-half and one-third, respectively²⁴.
 - Of the patients with recorded data about the use of beta blockers, 60 per cent were prescribed them. However the level of dosage was often not recorded and for the patients with a dosage record – two thirds received less than 50 per cent of the target dose.²⁵
 - Of the patients with a record of ACE inhibitors; half received less than 50 per cent of the target dose.

Improve symptom control, reduce admissions and increase survival rates as a result of multi-disciplinary team interventions.

- HF nurses help improve access by patients to these interventions and achieve quality and outcome framework (QOF) targets by organising careful initiation and titration of HF medications²⁶.

Improve quality of life with better access to psychological support for anxiety and depression

- HF patients have high levels of anxiety and depression, which are related to increased morbidity and poor prognosis. HFSNs can assess the mental health of patients and refer on appropriately²⁷.

Minimum standard of care - Commissioning priorities

Workforce

Generalist care

- **At a practice level, at least one GP should be confident in treating of HF patients** and up-titrating the medication of HF patients to their maximum tolerated dose. This is important when reviewing the medication of their patients and ensuring that patients, following a non-HF admission where their medication is altered, are picked up and their medications are managed appropriately.

Specialist care

- **There is regular cardiologist clinical support and supervision for HF nurses** as part of their professional development. This is important (particularly in the

²³ NHS Information Centre, National Heart Failure Audit. Available online at: http://www.ic.nhs.uk/webfiles/publications/002_Audits/NHS_IC_National_Heart_Failure_Audit_2010_04-01-11.pdf.

²⁴ NHS Information Centre, National Heart Failure Audit. Available online at: http://www.ic.nhs.uk/webfiles/publications/002_Audits/NHS_IC_National_Heart_Failure_Audit_2010_04-01-11.pdf.

²⁵ NHS Information Centre, National Heart Failure Audit. Available online at: http://www.ic.nhs.uk/webfiles/publications/002_Audits/NHS_IC_National_Heart_Failure_Audit_2010_04-01-11.pdf

²⁶ 2008 BHF Heart Failure Nurse Services Full Report

²⁷ 2008 BHF Heart Failure Nurse Services Full Report

community) as HF patients tend to be complex cases. This requires formal agreement and funding to ensure full support for nurses.

- **HF specialists are able to identify patients who would benefit from non-pharma therapy (for example, devices),** for which strong clinical evidence exists. This should be considered in follow-up care. Current UK device implant rates are lower than those in Europe. It is aimed that by 2016 UK device implant rates will reach that of 2005 European 2005 implant rates. Local implant levels are influenced by patient demographics and ethnicity. As NICE guidelines for this are not updated, it is recommended that European Society of Cardiology (ESC) guidelines are followed, which provide clear clinical evidence.

Governance and data collection

Generalist and specialist care

- **The proportion of HF patients being up-titrated to their maximum tolerated dosage of ACEi and beta blockers must be monitored** and this information shared between clinicians involved in the patient's care. This is currently not monitored under QOF. Thus, clinicians sharing the care of HF patients do not know what has or has not been tried and whether patients are on their maximum tolerated dose.
- **Patient management plans or changes to patient medication must be communicated to the patient's primary HF clinician in a timely manner.** As the care of HF patients is often shared across primary, secondary and community care, timely information sharing and receipt should be the responsibility of the clinician making the change. Involving community pharmacists in the information exchange on any drug treatment may reduce medicines management issues across the workforce.

Specialist care

- **All HF patients should be discussed in multidisciplinary team (MDT) meetings.** MDTs should be held regularly and include other services as appropriate (e.g. cardiac rehabilitation and palliative care).
- **All hospital departments should refer HF patients to their HF team for specialist assessment.** Referred patients should be made known to the HF team in order to access the necessary HF care.
- **All hospitals should be registered with CCAD to submit data to the National Heart Failure Audit.** To be compliant, 240 in-patient cases at minimum must be annually submitted (i.e. 20 per month).

Key clinical performance indicators (in lieu of NICE Quality Standards)

Generalist care

No.	Performance indicator	Numerator	Denominator
6	85% of HF patients are on ACE inhibitors (or ARB if intolerant to ACE) and 70% are on beta blockers. Local targets can be set 10% above current achievement.	Number of HF patients on ACE inhibitors (or ARB if intolerant to ACE) Number of HF patients on beta blockers	Total number of HF patients on registers or databases

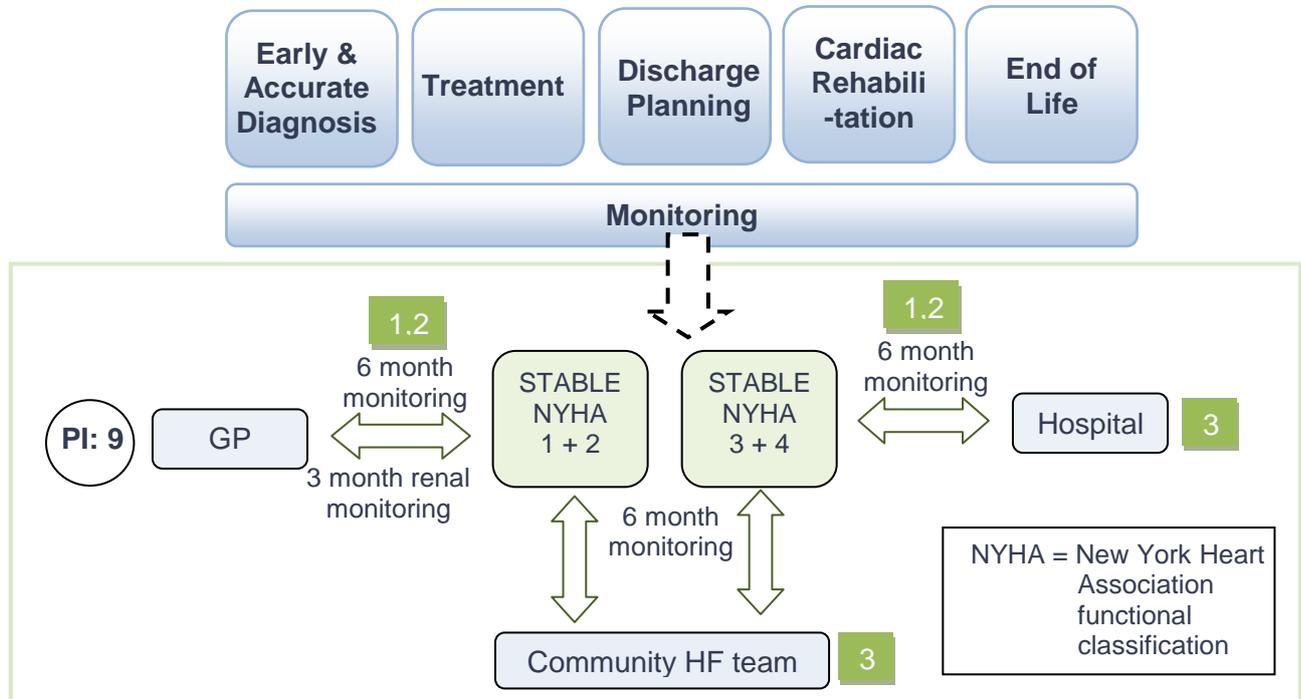
Generalist / Specialist care

No.	Performance indicator	Numerator	Denominator
7	Proportion of HF in-patients seen by the HF team (HFSN, consultant cardiologist)	Year 1: 50%; Year 2: 65%; Year 3: 80%	All HF admissions in hospital
8	Proportion of newly diagnosed HF in-patients who have had an echo within the last six months. Target = 70%	Number of HF patients who have had an echo within the last six months	All HF admissions in hospital

Recommended services

- **Local Improving Access to Psychological Therapies (IAPT) scheme** - All existing HF services should be linked in with the local IAPT scheme, and ensure there is no duplication of work between GPs, cardiac rehab and HF services. HF patients should be able to directly access psychological help regardless of where they are in the pathway. There needs to be agreement on standardising psychological testing for depression and anxiety in primary, secondary and community care for early identification.
- **Lifestyle services** - Primary and secondary care should be able to signpost patients to the relevant lifestyle help to ensure that patients access support as early in the pathway as possible and shared with all those involved in the patient's care to ensure consistent support (e.g. ensure referral to smoking cessation services, alcohol advice and support, healthy eating and physical activity services). This was traditionally done by community care.

Monitoring (ongoing management of chronic heart failure)



Renal monitoring for all patients every three months (at minimum) to be coordinated by the HF team and patient

Clinical reviews

- 1 At least a six-month review (i.e. every 6 months) for stable patients (APPENDIX F), where there has been NO change in their clinical condition / drug treatment; sooner (i.e. days to - two weeks) for patients discharged from hospital where there *has* been a change in their condition / drug treatment.
- 2 Offer patients information and support; identify at what level they wish to be involved in monitoring their condition; ensure they know what to do if their condition deteriorates.
- 3 When a patient is admitted to hospital due to HF, seek advice on their management plan from a HF specialist.

Serum natriuretic peptides

1. Consider specialist monitoring in some patients (e.g. those in whom up-titration is problematic or those admitted to hospital).

REFER: NICE Guideline 108,
Chronic Heart Failure (APPENDIX E)

Key commissioning benefits

Increase shared responsibility of monitoring HF patients across primary, community and secondary care

- Keep stable patients out of hospital - Educate, support and manage stable HF patients, address medicines management issues such as up-titration, adherence and access to medicines.

- Focus on more complex patients with advanced HF - Monitoring (clinically assess patients, adjust medication according to clinical status, screen blood chemistry following medication adjustment, and check for clinical and renal deterioration), education (help patients and their carers understand and manage their condition, provide advice about HF, its treatment and what to do if they have a problem) and co-ordinate care (to navigate the patient pathway).²⁸

Reduce re-admission rates

- Inappropriate unplanned admissions are avoided through close monitoring. Patients managed by HF nurse specialists (HFNS) will require fewer necessary planned admissions than those who are not properly monitored. A per patient saving of approximately £1,826 can be achieved (after deducting HFNS costs).²⁹

Minimum standard of care - Commissioning priorities

Workforce

Generalist care

- **GPs should monitor HF patients in coordination with the community nurses**, especially to ensure consistent medication changes. Improved GP engagement and HF management are found where collaboration with GPs is part of the community HF nurse remit. (Ref. APPENDIX G Sample template)

Specialist care

- **All HF nurses, particularly those in the community, should be able to prescribe.** Community HF nurses, who tend not to be nurse prescribers, rely on GPs to make the medication changes. This may delay or result in conflicting treatment. This would be avoided if all HF nurses were prescribers.
- **All HF nurses and cardiologists with a special interest in HF must be competent** in determining whether patients with deteriorating symptoms require further interventions like CRT pacing/ arrhythmia management, the palliative care team for symptom control or end of life care.
- **Community pharmacists must be involved in the monitoring of HF patients.** As community pharmacists see patients regularly to refill prescriptions, they are best placed to identify any medicines management issues between their six-month reviews.

Generalist/ specialist care

- **All suitable HF patients should be taught how to self-alter diuretics and how to contact their HF team.** All carers of HF patients should be reviewed in support of their needs regarding their understanding of HF and its implications. Clear communication between the patient's GP, HF team and palliative care must identify the patient's ability to self-manage, and outline patient adherence and understanding of their life trajectory. These teams should agree how the patient's competence and cognitive ability to adjust doses will be assessed.

²⁸ 2008 BHF Heart Failure Nurse Services Full Report

²⁹ 2008 BHF Heart Failure Nurse Services Full Report

Governance and data collection

Generalist care

- **New York Heart Association functional classification (NYHA) Classes I and II³⁰ HF patients should have their six-month review by their GP** (in most cases), or by their primary HF clinician (e.g. community HF team).
- **Stable NYHA Class II HF patients should be on ACE inhibitors and beta blockers (+/- aldosterone antagonist)** and have renal function monitoring every three months. These are to be done by GPs (who often do their six-month monitoring).
- **Primary care data (outside QOF requirements) needs to be collected on the number of HF patients stable enough for six-month monitoring**, clearly stating who should be responsible to collate this data. This is needed to enforce quality standards, measure performance indicators and to plan a HF service's capacity and potential demand. [Ref: "Determining Service Demand and Capacity" of this guide]

Specialist care

- **All HF patients (non-complex and stable) should be rapidly up-titrated and discharged to their GP** as appropriate. Community HF teams must be able to maintain a high rate of throughput where possible to ensure access by newly diagnosed patients.
- **NYHA Classes III and IV HF patients should have their six-month reviews in the hospital** as they are more complex. These reviews may be done by the community HF team as appropriate. A clear pathway must be agreed for complex patients or those with prescribing issues to access specialist cardiac clinical pharmacy advice.

Generalist/ specialist care

- **Regular service reviews are needed** to assess service provision and its effectiveness. This requires key stakeholder engagement which should include: admitting and receiving medical teams, lead clinicians, health professionals from primary, community and secondary care, pharmacists, service managers, patients and carers. Baseline data of the service provision is needed and should represent all stakeholders' input.

IT

Generalist care

- **Electronic reminders (alerts) for reviews on GP systems** should be addressed for those reviews that are not part of the QOF requirements. Alerts already exist for all reviews linked to QOF.

Specialist care

- **The community HF team must have remote access to the hospital clinical system** to ensure timely access to test results and clinical input by other clinicians.

³⁰ American Heart Association (1994) AHA medical/scientific statement. 1994 revisions to classification of functional capacity and objective assessment of patients with diseases of the heart. *Circulation* **90**(1), 644-645.

Commissioning considerations - patients

Generalist/ specialist care

- **Local patient support groups should be established** to provide patients support in managing their HF. These also encourage patient input into future service development.

Commissioning considerations - resources

Specialist care

- **Budget for transportation provision** when commissioning community HF services in order to ensure that patients are able attend their HF clinic appointment. A 2009 audit of HF clinic DNA rates in Southwark (London) showed that providing a transport service significantly increased attendance rates and reduced the demand for home visits. This ensures better monitoring of patients and better management of HF nurse capacity.

Commissioning considerations – guidelines and protocols

Generalist/ specialist care

- **Local HF guidelines must be reviewed every two years and revised** in line with current evidence and practice with NICE guidance (e.g. as is the case with diabetes), including those for CRT and ICD (implantable cardioverter defibrillator) implants for HF patients.
- **A uniform definition for a “stable HF patient” must be agreed**, to guide in the discharging of patients from hospital or from the community HF team to the GP. (*Ref Appendix I for suggested criteria.*) Similar consensus must be reached for the identification of HF patients which need specialist monitoring. The option of a monitoring clinic could be considered if monitoring demand significantly impacts the HF service team’s workload.

Commissioning considerations – linking with other projects

Specialist care

- **The HF pathway should link with local Business Support Units (BSU) Quality, Innovation, Productivity and Prevention (QIPP) plans.** Improved diagnosis and better management leads to better patient quality of life, lower readmissions and therefore future savings. Eg. education resource is a QIPP marker which supports the training requirements in improving HF care.
- **The HF pathway should link with local pharmacists** to comprehensively monitor the medicines management of HF patients. In some cases, pharmacists often see patients more than their GPs and are more likely to identify issues with a patient’s medication.

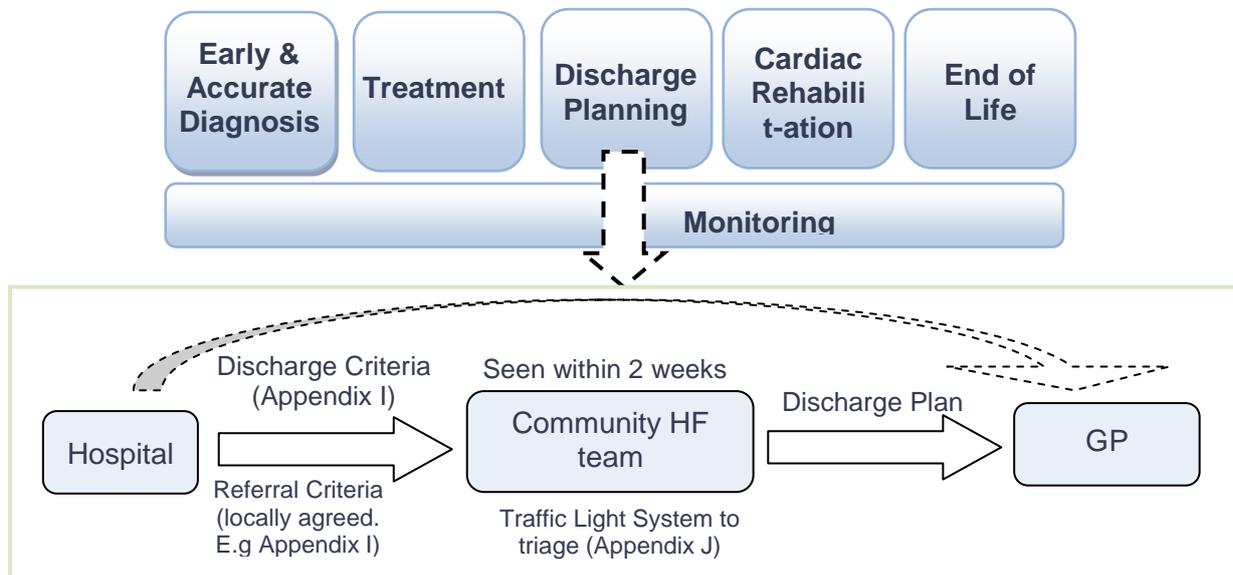
Key clinical performance indicators (in lieu of NICE quality standards)

Generalist care

No.	Performance indicator	Numerator	Denominator
9	Percentage of HF patients on a register see for a six-month review Target: 50% of existing prevalence (for Year 1)	Number of HF patients who have had a six-month review	Practice HF register

Year 1 target is suggested at 50% so that it is achievable and realistic, with the aim of increasing this.

DISCHARGE PLANNING



Discharge from hospital

1. Patient has a confirmed diagnosis of HF (with established etiology, if possible).
2. Patient's condition is stable and their management plan is optimised.
3. Patient and carer wishes are considered regarding the level of care and support available in the community
4. Patient has a clear discharge plan.

Discharge from community HF service

1. Patient on maximum titrated or maximum tolerated evidence base medications.
2. Patient remains stable for 3-6 months. As evidenced by:
 - Patient has not required changes in diuretics for three months.
 - Renal function remains stable for patient.
 - Patient has not had a HF-related ER visit or hospital admission.
 - Patient has not had an urgent HR-related home visit by own GP/out-of-hours doctor or HF nurse.
3. Medical need for community service no longer present.
 - Patient is stable enough to see own GP, regardless of transport situation.
4. Patient has a clear discharge plan.

Discharge plan- To be shared with patient, carer(s), primary care, non-NHS agencies, and pharmacists. This should include:

1. Patient self-monitoring, management and medication plans (medications initiated, date of follow up appointment)
2. Relevant tests done (renal and liver function test, echo, ECG, angiogram) compared to baseline, date of next blood review
3. Contact details for community HF team, GP (including times available) and advice lines, particularly in the high-risk period immediately after discharge
4. Conditions requiring a visit by the community HF team and the process for contacting them,
5. Educational needs of any non-NHS agency carers (as required).
6. Scheduled relevant referrals (cardiac rehabilitation, community HF team).

REFER: NICE Guideline
108, Chronic Heart Failure
(APPENDIX H)

Key commissioning benefits

Timely follow-up after discharge results in reduced mortality rates

- Of patients discharged, evidence indicates that 26 per cent will die within the following year³¹.
- Outcomes were significantly better for those that were referred to cardiology or specialist HF services for follow-up (23 per cent mortality within the year), compared to the overall mortality figure (32 per cent)³².

Minimum standards of care - Commissioning priorities

Workforce

Specialist care

- **All admitted HF patients must be seen at least within two weeks of discharge**, including housebound patients (through a home visit service). Early rapid titration is key to reducing mortality by 50 per cent, making this a commissioning priority, especially for the more complex patients. Community HF services should manage their service demand and capacity to ensure this. [Refer to the “Determining Service Demand and Capacity” section of this guide].

Governance and data collection

Generalist/ specialist care

- **All discharge letters for HF patients (from hospital and the community) should be written in clear, concise language.** Letters should define next steps and what is expected of the clinician the patient is being discharged to. A standardised letter template (agreed by all clinicians) will ensure that relevant information is included (e.g. a medication review with clear steps on what to do if medication has been stopped). GP actions should be clearly stated upfront.
- **All HF patients (non-complex and stable) should be discharged to their GP or community HF service** as appropriate. Historically, out-patient clinics run by hospital HF services competed with community HF clinics. By discharging patients to their GP or community HF service, the hospital HF team are able to focus more on in-patients rather than out-patients (save for complex cases and those patients who choose to remain).

IT

Generalist/ specialist care

- **Electronic discharge letters to GPs should be used where possible.** This information must be sent to GPs within 24 hours of discharge. Electronic letters would be sent and received instantaneously.

Commissioning considerations - productivity

Generalist/ specialist care

- **Throughput of HF patients should be monitored along the pathway.** This depends on the rate of discharge from the hospital and from the community

³¹ http://www.ic.nhs.uk/webfiles/publications/002_Audits/NHS_IC_National_Heart_Failure_Audit_2010_04-01-11.pdf

³² http://www.ic.nhs.uk/webfiles/publications/002_Audits/NHS_IC_National_Heart_Failure_Audit_2010_04-01-11.pdf

service to the GPs. Higher throughput levels translate to increased access by patients to relevant treatment. As the number of identified patients increases, service capacity and rates of discharge will need to be addressed.

Key clinical performance indicators (Based on NICE quality standards)

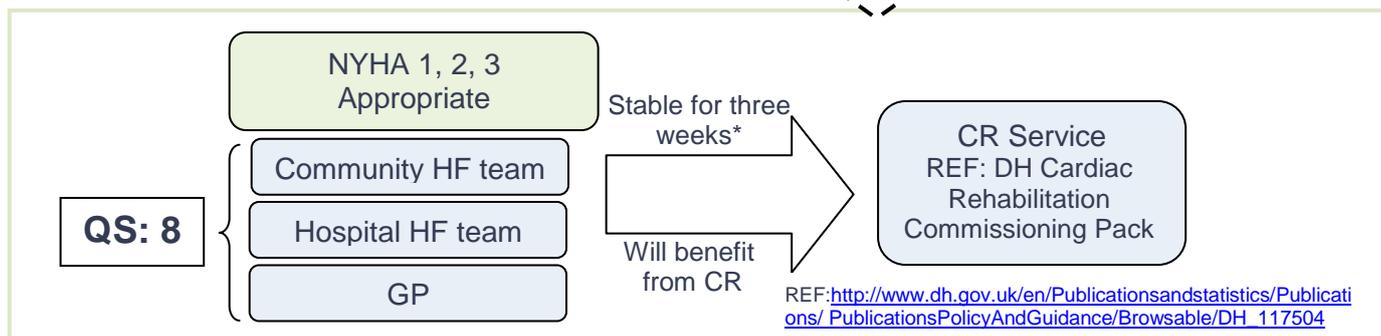
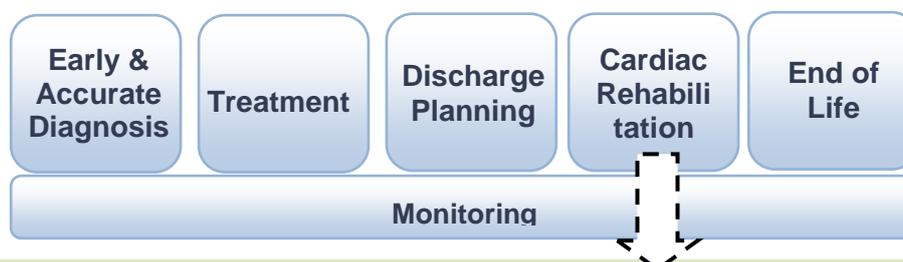
Generalist care

No.	NICE quality standard	Numerator	Denominator
12.	People admitted to hospital because of heart failure are discharged only when stable and receive a clinical assessment from a member of the multidisciplinary heart failure team within two weeks of discharge.		
Quality Measure			
Structure	Evidence of local arrangements to ensure that people admitted to hospital because of heart failure are discharged only when stable and receive a clinical assessment from a member of the multidisciplinary HF team within two weeks of discharge.		
Process	Proportion of people admitted to hospital because of HF who receive a clinical assessment from a member of the multi-disciplinary HF team within two weeks of discharge	Number of people in the denominator receiving a clinical assessment by a member of the multidisciplinary heart failure team within two weeks of discharge	Number of people discharged following an admission to hospital for HF
Outcome	Re-admissions because of HF within 30 days for people with HF discharged from hospital following an admission to hospital for HF	Number of people in the denominator re-admitted to hospital because of HF within 30 days.	Number of people discharged following an admission to hospital for HF

Recommended services

- **Arrangements must be in place for HF patients discharged with no available aetiology.** Most community HF services are limited to only accepting patients with a confirmed diagnosis of left ventricular systolic dysfunction (LVSD). Where this is not possible (dilated cardiomyopathy patients, for example, do not get their aetiology for 3-4 months), clear guidelines must be in place which define where to refer these patients.
- **Occupational therapy / social care assessments and plans must be done on a timely basis.** Arrangements should be made on admission to ensure that things are in place upon discharge. As length of stay (LOS) decreases, planning becomes more difficult which may delay discharge.

CARDIAC REHABILITATION (CR)



1. Identify NYHA Class I, II, or III HF patients who would benefit from CR
2. Ensure that they have been stable for three weeks (with no step-change in their condition or drug treatment)
3. Refer to local cardiac rehabilitation service (where patients are risk assessed)

REFER: NICE Guideline 108, Chronic Heart Failure (APPENDIX K)

* It is recommended that patients with absolute contraindications are not referred to the CR service. HF patients who are stable and have relative contraindications should be referred to the CR service in order to determine the patient's suitability to do cardiac rehabilitation. [Ref: APPENDIX L]

Key commissioning benefits

CR is recommended for HF patients (NICE guidelines 108, 2010)

- The current uptake (2009-10) of CR in England is 43 per cent of post-MI, PCI or CABG patients.³³
- The 2009-10 uptake of heart failure patients was 1 per cent³⁴. A significant reason is that a fifth of programmes still routinely exclude people with heart failure and under a fifth exclude people with an implanted cardiac defibrillator or angina.
- Patients who have CR find a 26 per cent relative reduction in cardiac mortality within three years³⁵.

Better quality of life for patients who take up CR

- The biggest gains were in physical fitness, overall health, social and daily activities and reduced dependence of social support. These are all important towards helping people return to a 'normal life'³⁶.

³³2011 National Audit of Cardiac Rehabilitation (BHF)

³⁴2011 National Audit of Cardiac Rehabilitation (BHF)

³⁵NSF for CHD - http://www.csnlc.nhs.uk/uploads/files/stroke/events/external/rehab_conference_2010/1_24062010_Cardiac_Rehabilitation_The_National_View_Prof_PD.pdf

CR is cost effective

- CR is second only to aspirin and beta-blockers in terms of cost effectiveness (£1,100 per life year gained compared with £1,957). The cost effectiveness of CR, usually measured in terms of the number of quality adjust life years, is also clear in comparison. The costs per quality adjusted life year:
 - £47,000 for PCI (angioplasty)
 - £22,000 for coronary artery bypass surgery
 - £15,700 approximately for CR (averaged up to 5% from 1997 costs)

Minimum standards of care - Commissioning priorities

Workforce

Generalist/ specialist care

- CR and HF clinicians must be confident about each other's service.** To encourage the referral of HF patients into CR, concerns by the HF and CR clinicians must be addressed. These may include the HF patient's ability to do CR, associated risks and the impact on current services.

Commissioning considerations – public health

- Local demographics and ethnicity should be considered.** When reviewing the commissioning of CR services, local demographics and ethnicity should be taken into account, as CR services have traditionally been set up for patients aged over 65 years. Ethnically diverse localities tend to have younger (40 year olds) and fitter patients who may develop heart failure and must be accommodated.

Commissioning considerations – links for seamless pathway

- CR and HF services patient lifestyle education must be coordinated.** Both HF and CR include a lifestyle component which needs to be coordinated to avoid duplication and adjusted so they complement each other.

Key clinical performance indicators (Based on NICE quality standards)

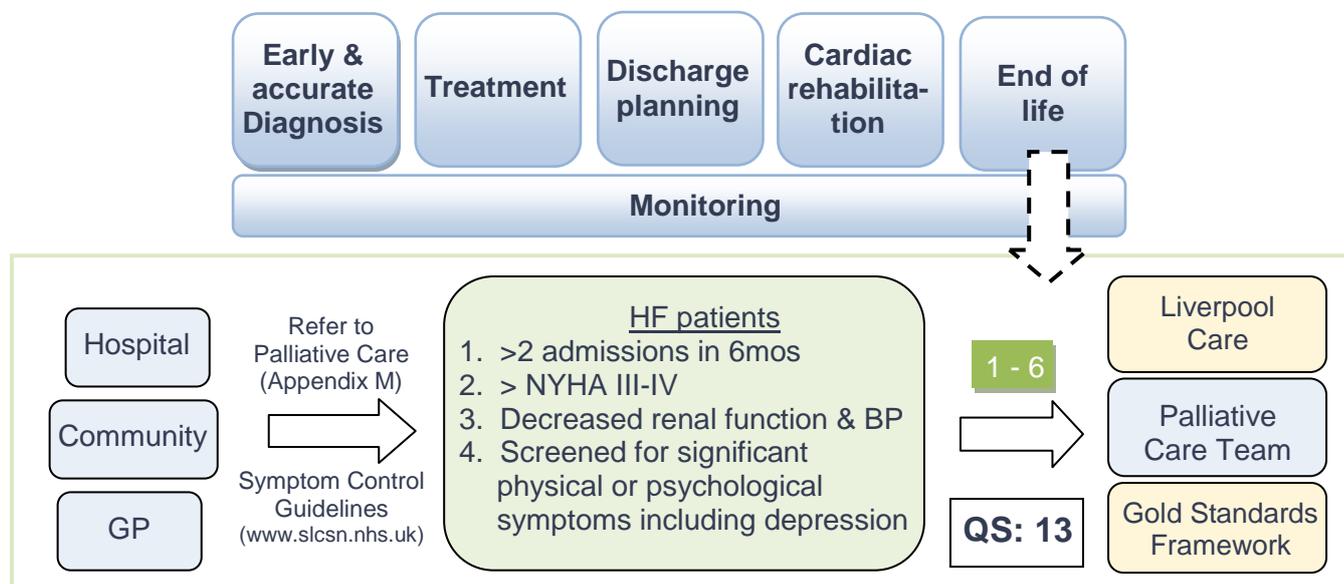
No.	NICE quality standard	Numerator	Denominator
8.	People with stable chronic HF and no precluding condition or device are offered a supervised group exercise-based CR programme that includes education and psychological support. The target is 25 per cent. Local targets should be based on local performance		
Quality Measure			
Structure	Evidence of local arrangements to ensure the availability of a supervised group exercise-based CR programme that includes education and psychological support for people with stable chronic HF.		
Process	a) Proportion of people with stable chronic HF and no precluding condition or device who <i>attend</i> a supervised group exercise-based CR programme that includes education & psychological support.	Number of people in the denominator attending a supervised group exercise -based CR programme that includes education & psychological support.	Number of people with stable chronic HF and no condition or device that precludes them from exercise-based CR.
	b) Proportion of people with stable chronic HF & no precluding condition or device who <i>complete</i> a supervised group exercise-based CR programme that incl education & psychological support.	Number of people in the denominator completing a supervised group exercise-based CR programme that includes education & psychological support.	Number of people with stable chronic HF and no condition or device that precludes them from exercise-based CR.

³⁶2011 National Audit of Cardiac Rehabilitation (BHF)

Recommended services

Broaden the inclusion criteria of CR services. Traditionally, CR services have not been commissioned to accept HF patients (ref: DH CR Commissioning Pack, Oct 2010). NICE 108, 2010 and the NICE HF Quality Standards Jun 2011 both recommend referring HF patients to cardiac rehab. CR services must be reviewed to ensure their inclusion criteria accommodates the 'in-scope' patients as indicated in the commissioning pack and they have the necessary capacity to do this. The DH commissioning pack should be used as a guide for all commissioning of CR services.

END OF LIFE



Patients with advanced HF (NYHA Classes II, III, and IV)

1. Identify palliative care needs as soon as possible and notify the palliative care team
 2. Ensure that patients and carers have the opportunity at all stages of care to discuss issues of sudden death and living with uncertainty
 3. Offer an Advanced Care Plan / Care plan
 3. Assess carer arrangements and carer needs for support
 4. Communicate the care plan to all those involved
 5. Use the Liverpool Care Pathway or Gold Standards Framework in 50 per cent of people who die with HF as a primary cause
- REFER: NICE Guideline 108, Chronic Heart Failure (APPENDIX H)

Key commissioning benefits

Improve end of life experience for the patient and their family by accessing palliative care services

- Referral to palliative care is very low; less than 4 per cent of HF patients access these services³⁷.

Positive patient experience results from close, regular communication between health professionals, patients and carers

- The difficulty in predicting the disease trajectory of HF patients affects their end of life planning.
- Structured MDT working is essential for individualised, flexible patient-centred care.

³⁷ http://www.ic.nhs.uk/webfiles/publications/002_Audits/NHS_IC_National_Heart_Failure_Audit_2010_04-01-11.pdf

Minimum standards of care - Commissioning priorities

Workforce

Specialist care

- **The HF team must be confident and competent** in the following:
 - Communication skills in end of life discussions (Sage and Thyme training at a minimum and advanced communication skills, where appropriate)
 - When to refer (recognising early when a patient is near end of life)
 - Basic symptom control
- **The Palliative care team must be aware of the ICD deactivation policy and process.** This means that the HF and Palliative care team have clear agreed implantable cardioverter defibrillator (ICD) deactivation guidelines clearly defining their roles and responsibilities.

Governance and data collection

Generalist / specialist care

- **Palliative patients must be discussed by the MDT**, including primary, community and secondary care. MDTs should meet regularly and include social care, hospices, etc. as necessary to ensure a positive end of life experience.
- **All palliative patients need to be part of the Gold Standards Framework or Liverpool Care Pathway.** This ensures that they are discussed at an MDT and receive the appropriate support and advice for them and their family.
- **All patients recognised to be at their end of life stage, should have an Advance Care Plan.** This is to be reviewed every six months by the patient and their GP to ensure that end of life care plans are up-to-date and are understood by all involved in the patient's care.

Commissioning considerations – links for seamless pathway

Generalist/ specialist care

- **There must be clear agreement on which clinician has the end of life conversation with the patient.** This decision should be based on the person with whom the patient has the most positive interaction. Patient and carer information must be available. Advanced care planning should be discussed with NYHA Classes III and IV patients, including preferred place of death.

Commissioning considerations – guidelines and protocols

Generalist/ specialist care

- **Agreed guidelines should be in place for the HF and palliative care teams** and updated regularly (every two years). These should include:
 - Referral guidelines into home and community palliative care service, plus information on related available services (Refer: APPENDIX M)
 - Symptom control guidelines
 - ICD deactivation policy

Key clinical performance indicators (Based on NICE quality standards)

No.	NICE quality standard
13.	People with moderate to severe chronic HF, and their carer(s), have access to a specialist in HF and a palliative care service.
Quality Measure	
Structure	a) Evidence of local arrangements to provide people with moderate to severe chronic HF, and their carer(s), with access to a specialist in HF.
	b) Evidence of local arrangements to provide people with moderate to severe chronic HF, and their carer(s), with access to a palliative care service.
Process	a) Evidence from experience surveys that people with moderate to severe chronic HF, and their carer(s), felt they had access to a specialist in HF.
	b) Evidence from experience surveys that people with moderate to severe chronic HF, and their carer(s), felt they had access to a palliative care service.

Recommended services

A core palliative care team has been identified and agreed, to include a 0.25 FTE Programmed Activity (PA) per week palliative medicine consultant or CNS with an interest in palliative care. The core team is involved in monthly MDT meetings at minimum, where potential palliative patients are discussed and arrangements are made.

COST BENEFIT ANALYSIS

HF costs and impact

HF is a leading cause of death in the UK, and affects approximately 1 per cent of the UK population, or one out of 100 people. These numbers increase with age (approximately 7 per cent for those aged over 75) and is expected to rise over the next 20 years due to an ageing population and higher survival rates from heart attacks³⁸.

Cost of treatment

Treatment of HF costs 2 per cent of the entire NHS budget³⁹. Providing services to patients with heart failure costs the NHS an estimated £625 million per year. The cost of HF has increased by two- to three-fold in the past decade in most countries.

The cost of a HF admission 2011-12 (DH PbR Tariff)

HRG code	HRG name	Combined day case / Elective tariff (£)	Non-elective spell tariff (£)
EB03H	Heart failure or shock with CC	5,384	3,833
EB03I	Heart failure or shock without CC	3,119	2,411
Average		4,251.5	3,122

The analysis tool developed by the SLCSN, *Financial analysis of a HF Community Service* is an excel file that accompanies this commissioning guide, which provides a clearer picture of the financial impact of a HF service.

Mortality rates

The mortality rate for HF patients is 40 per cent during the first year, raising 10 percent per year thereafter⁴⁰. Survival rates for HF in epidemiological studies are worse than for breast and prostate cancer. The prognosis remains poor for hospitalised HF patients, too, who have an annual mortality of 30 per cent at one year.

Admission / re-admission rates

HF is one of the most common reasons for emergency medical admissions, re-admissions and hospital bed day occupancy, which has a large financial impact on the health economy. Nearly 90 per cent of HF admissions are emergency admissions⁴¹. It is anticipated that hospital admissions attributed to HF will rise by 50 per cent over the next 25 years⁴².

³⁸http://www.ic.nhs.uk/webfiles/publications/002_Audits/NHS_IC_National_Heart_Failure_Audit_2010_04-01-11.pdf

³⁹ 2008 BHF Heart Failure Nurse Services Full Report

⁴⁰ 2008 BHF Heart Failure Nurse Services Full Report

⁴¹ 2008 BHF Heart Failure Nurse Services Full Report

⁴²<http://www.healthambitions.co.uk/Uploads/BetterForLess/23%20BETTER%20FOR%20LESS%20Heart%20Failure.pdf>

Up to 40 per cent of patients are re-admitted within six months of discharge after an acute event⁴³. Ten per cent of re-admissions under 29 days were patients with HF. The government has proposed that re-admissions following an elective admission and up to 25% of those following a non-elective admission would not be paid to hospitals in the future. This means that providers will strive to reduce unnecessary readmissions. For example, 20 patients re-admitted within 30 days with HF at an average LOS of five days could cost £30,000 i.e. 10% of the 20 patients could potentially not be paid⁴⁴.

LOS and bed days

The mean length of stay for HF is 11.76 days, with a median of eight days, according to 2009/10 Hospital Episode Statistics (HES) data⁴⁵.

HF is among the top 10 conditions that account for the highest number of bed days in England – a total of 1 million inpatient bed days, or 2 per cent of all NHS inpatient bed days. HF accounts for nearly 10 percent of bed occupancy nationally⁴⁶.

Quality of life

HF patients also have a poor quality of life, with over a third experiencing severe and prolonged depressive illness⁴⁷.

Benefits of HF services

Prolonging life, improving the quality of life, improving clinical outcomes

Evidence demonstrates that specialist services (in-patient and out-patient) can improve quality of life, help reduce morbidity and mortality and reduce hospital admission when they ensure⁴⁸:

- Accurate and timely diagnosis
- Optimal treatment
- Ongoing support
- Better management of depression for chronic HF patients and their carers
- Better prescribing

This is particularly so for the post-discharge management of older chronic HF patients⁴⁹.

Savings through reduced hospital re-admissions

Recurrent hospital use by HF patients in end of life stage account for a disproportionate amount of healthcare resources and expenditure⁵⁰. The most cost

⁴³ 2008 BHF Heart Failure Nurse Services Full Report

⁴⁴ 2011 NHS Improvement, A guide for review and improvement of hospital based heart failure services.

⁴⁵ 2011 NHS Improvement_A guide for review and improvement of hospital based heart failure services

⁴⁶ <http://www.healthyambitions.co.uk/Uploads/BetterForLess/23%20BETTER%20FOR%20LESS%20Heart%20Failure.pdf>

⁴⁷ http://www.ic.nhs.uk/webfiles/publications/002_Audits/NHS_IC_National_Heart_Failure_Audit_2010_04-01-11.pdf

⁴⁸ <http://www.nice.org.uk/media/822/4D/HeartFailureServiceCommissioningGuide.pdf>

⁴⁹ <http://eurjhf.oxfordjournals.org/content/7/3/423.full>

⁵⁰ <http://eurjhf.oxfordjournals.org/content/7/3/423.full>

effective strategies, beyond preventative interventions, are those which target these “high risk/high cost” patients, including delivery of HF services.

In 2000, HF services, UK-wide, were estimated to cost approximately £70 million per year. This cost was reasonably consistent when applying a clinic or community-based approach (cost variation £2–3 million per annum). Using this approach, a specialist HF service serving 1 million patients is likely to cost around £1.4 million.⁵¹ It is estimated that the establishment of a UK-wide HF service would reduce readmission rates i.e. each 10 per cent reduction in re-admissions associated with optimal HF management could translate to nominal cost-savings of £18million per year within a yearly case-load of 120,000 patients. (These savings include both reductions in hospital bed use and post-discharge care in the community)⁵².

The analysis tool - *Financial analysis of a HF Community Service* provides a clearer picture of where and how the savings of a HF community HF service is calculated.

Better value for money

Commissioners can boost the efficiency of resources – and thus, manage their budgets more effectively – through service redesign support, effective diagnosis and coordinated specialist care (which can reduce recurrent hospital stay and associated costs), and the use of B-type natriuretic peptides (BNP or NT-proBNP) to triage access to echocardiography to support timely diagnosis and treatment and reduce patient waiting times⁵³.

HF specialist nurses also may have the potential to save significant sums of money through reductions in admissions. Economic modelling of PCT-level HES data showed a median cost saving of £1,826 for patients diagnosed with HF who saw a HFSN as compared to patients who had not. HFSNs were associated with a total saving to the NHS of £8,050,834 over one year, through reductions in re-admissions⁵⁴. This savings dwarfs the costs of providing the HFSN service.

APPENDIX N, *Re-admission savings from HF patients who saw a HF nurse* from the British Heart Foundation, provides the potential savings impact of reduced re-admissions.

Reduced recurrent hospital stay

The provision of coordinated specialist care, including support for high risk patients, through optimisation of their management plan and effective communication between the primary care team, patient and carers has been found to reduce re-admissions for some chronic HF patients⁵⁵. This is reflected in Commissioning for Quality and Innovation (CQUIN) schemes, which often include such.

However, although patients seen by HFSN were far less likely to be re-admitted than the overall population, when they were admitted, they tended to be admitted for a longer duration (11.6 nights compared to 8.6 nights before the nurses were in post).

⁵¹ <http://eurjhf.oxfordjournals.org/content/7/3/423.full>

⁵² <http://eurjhf.oxfordjournals.org/content/7/3/423.full>

⁵³ <http://www.nice.org.uk/media/822/4D/HeartFailureServiceCommissioningGuide.pdf>

⁵⁴ 2008 BHF Heart Failure Nurse Services Full Report

⁵⁵ <http://www.nice.org.uk/media/822/4D/HeartFailureServiceCommissioningGuide.pdf>

This is similar to the national average, (12.7 nights) and may reflect the planned nature of the intervention or local policies rather than the patient needing to be there. This demonstrates the positive role HFNSs play in preventing unnecessary readmissions, thereby ensuring those readmissions that do occur are valid and necessary.

Improved access

Gender inequalities will be reduced through improved access to diagnostics, angiotensin converting enzyme (ACE) inhibitors, cardiac rehabilitation programmes and palliative care for women (who are less likely than men to access these services). There exists evidence of deficiencies in the HF information available to patients from ethnic minority groups.

These gaps may be reduced by improving the availability of information on HF. Commissioners may also wish to assess their provision of patient information and how they target high risk groups.

Increased patient choice

Patient choice can be increased through improved partnership working, patient experience and engagement. As patient choice extends to long term conditions, commissioners will need to take account of treatment options for people with chronic HF.

DETERMINING SERVICE DEMAND AND CAPACITY

Service demand

Understanding the local demand for HF services is integral to understanding what needs to be commissioned.

Demand: The total number of requests and referrals from all sources

Determining the demand for HF services depends on the local incidence and prevalence of HF, which sharply increases with age, improved survival rates from ischaemic heart disease and more effective HF treatments.

Reported prevalence represents only those diagnosed HF patients included in the GP HF register. This may not necessarily be representative of *all* HF patients. This figure is recorded through QOF (the sole data source of prevalence).

Expected prevalence estimates what the local HF prevalence *should be* based on the local population. A formula is used to do this as shown in the section below.

The difference between the expected and reported prevalence is the number of HF patients who have not yet been diagnosed or are not accessing HF care. These patients are more likely to have more progressed HF, which increases the burden of the disease downstream (that is, a potential increase in A&E attendance, hospital admissions and possible higher mortality rates). These will impact patient quality of life, mortality and the economics of delivering services.

Local patient demographics (age and ethnicity) and levels of deprivation will also influence prevalence and demand which need to be accounted for.

As a percentage

Reported prevalence = QOF prevalence

Expected prevalence = 1.3 cases per 1000 population per year for those aged 25 years or over (crude age adjusted incidence rate) X 100 to convert to a percentage. In the 1999 study, the incidence rate of HF by age group was⁵⁶:

- 0.02 cases per 1000 population per year for those aged 25 – 34 years
- 0.2 cases per 1000 population per year for those aged 35 – 54 years
- 1.2 cases per 1000 population per year for those aged 55 – 64 years
- 3.0 cases per 1000 population per year for those aged 65 – 74 years
- 7.4 cases per 1000 population per year for those aged 75 – 84 years
- 11.6 cases per 1000 population per year for those aged 85 years +

QOF prevalence is presented as a rate and in order to get a good idea of demand, these rates need to be converted into actual numbers of patients.

Actual patient numbers

Reported prevalence = Numerator in QOF HF1 (ref: www.gpcontract.co.uk/browse.php?year=9)

⁵⁶ Incidence and Aetiology of Heart Failure [European Heart Journal (1999) 20, 421 -428]

Expected prevalence = as above

The total number of reported HF prevalence does not represent all patients who have accessed HF services, as a portion of them will still not be known to the service or have been actively managed by their HF team. A 2008 BHF study⁵⁷ found that 34 per cent of all patients diagnosed with HF had seen a HF nurse specialist. There is a high likelihood that an additional percentage saw a cardiologist but not a HFSN, increasing the percentage of reported prevalence.

Service capacity

Understanding current HF service provision (available resources and current capacity) is critical to knowing what additional resources may be needed in order to meet the service demand.

Capacity - Refers to all resources currently available to do the work. For example, the number of pieces of equipment available multiplied by the hours of staff time available to run them.

In order to understand the service's current capacity, consider the following factors which will impact HF nurse capacity:

- Location (hospital or community based) and current remit of the HF services (hospital based services focus on in-patients and / or outpatients; community services offer clinic appointments and / or home visits)
- Geographical spread of patients
- Case mix of NYHA classes
- Locality geography and size
- Ethnicity of the patients (including language, etc.)

The 2008 BHF report '*The development and impact of the British Heart Foundation and Big Lottery Fund heart failure specialist nurse services in England* recommends an ideal "active" caseload of 50-60 patients for community HF nurses. The remainder of the caseload should be classed "inactive" and managed and monitored by other community staff. However, this is not always possible in reality, particularly where the case mix of patients is predominantly NYHA Classes III and IV, as they require a lot more care. Assuming that hospital based HF nurses focus on in-patients, have no community remit and have a caseload like community HF nurses, this will be neither appropriate nor accurate.

Consideration of the available direct clinical time of a consultant cardiologist or HFSN must be done in the context of their workplan and the other demands on their time as below.

⁵⁷ 2008 BHF Heart Failure Nurse Services Full Report

	Consultant cardiologist with a special interest in HF	Heart failure specialist nurse
Direct clinical care	<ul style="list-style-type: none"> ▪ 7.5 PAs (Programmed Activities x 4hrs) per week (DCC) Direct Clinical Care ▪ In patient work ▪ Outpatients ▪ Lab/specialised clinical work ▪ MDT meetings ▪ Clinical administration ▪ On Call 	<ul style="list-style-type: none"> ▪ Home visits (community based) ▪ In patient work (hospital based) ▪ Clinical sessions (6 per week for community; 6 per week for hospital based) ▪ Clinical administration ▪ MDT meetings
Supporting clinical care	<ul style="list-style-type: none"> ▪ 2.5 PAs (Programmed Activities x 4hrs) per week (SPA) Supporting Professional Activities) ▪ Audits ▪ Clinical governance ▪ Appraisal and revalidation ▪ Teaching, assessment of trainees ▪ Continuous medical education ▪ Continuous professional development ▪ Clinical supervision of HFSN ▪ General Admin (non clinical) 	<ul style="list-style-type: none"> ▪ Audits ▪ Clinical governance ▪ Continuous medical education (eg. prescribing for community HF nurses) ▪ Continuous professional development ▪ Clinical supervision from a cardiologist ▪ Joint GP working (community based) ▪ Joint HFSN working (hospital & community based)
(Part of SPA) Additional NHS responsibilities	<ul style="list-style-type: none"> ▪ Management roles and responsibilities (service development and redesign) 	<ul style="list-style-type: none"> ▪ Service development and redesign ▪ Collecting patient feedback and ensuring they are reflected in the redesign

[Ref: British Cardiovascular Society: Guidance on appropriate workload for consultant cardiologists 2010]

* MDT meetings may include physiotherapist, OT, palliative care team, arrhythmia nurses, cardiac surgeons, pharmacists, physiologists, cardiac rehabilitation, social services.
Refer to the Financial Analysis excel file.

NATIONAL DRIVERS AND GUIDANCE FOR HF SERVICES

NHS Operating Framework (2011-12)

Chapter 4: Service Quality; Chapter 6: Accountability

'Service Quality' promotes making wider productivity gains and quality improvement through service improvements as outlined in QIPP (Quality, Innovation, Productivity and Prevention). Each locality should have a clear vision for improvements in quality and productivity. Chapter 6 sets out a single operational plan which should identify how QIPP will be delivered in 2011-12.

NHS Outcomes Framework (2011-12)

Domain 2: Enhancing Quality of Life for people with long-term conditions

A final indicator will be released in January 2012 to measure the health-related quality of life for people with long-term conditions. This is aimed to become a recurrent measure.

CQUIN (Commissioning for Quality and Innovation) Framework

Many providers have signed up to a locally developed CQUIN scheme. Many of these include plans to reduce readmission rates – with a focus on Heart Failure as one of the main sources of readmissions.

NICE guidance (2003/2010)

NICE guideline 108: Management of chronic heart failure in adults in primary & secondary care (2003/10)

Heart Failure services promote appropriate diagnosis of heart failure and evidence based management of patients. The service develops comprehensive management plans in consultation with patients, supporting self-management and facilitating joint working between healthcare professionals. All patients referred to the community service receive the following components of rehabilitation as part of their care: Education, Psycho-social, Lifestyle modification, Stress management

NICE technology appraisal guidance 120: Heart Failure - cardiac resynchronisation (2007)

HF services assess the suitability for cardiac resynchronisation therapy based on NICE guidance and will refer patients on as appropriate

NICE technology appraisal guidance 95: Implantable cardioverter defibrillators for arrhythmias (2006)

HF services assess suitability for implantable cardioverter defibrillators based on NICE guidance and will refer patients on as appropriate

NICE Quality Standards for Heart Failure (2011)

NICE has published 13 Quality Standards which cover the assessment, diagnosis and management of chronic heart failure in adults. They describe markers of high-

quality, cost-effective care, that when delivered collectively should contribute to improving the effectiveness, safety and experience of care for people with chronic HF.

NHS 2010-2015: from good to great. Preventative, people-centred, productive (2009)

This sets out the vision for improving HF care. The key issues relating to heart failure highlighted within this document seeks to improve care through ensuring:

- accurate diagnosis
- optimisation of medications , rehabilitation and devices
- multi-disciplinary team approach for accurate diagnosis and effective treatment
- care co-ordinators helping those with complex needs navigate through their care
- access to palliative care

National Service Framework for Coronary Heart Disease (2000)

Chapter 6: Heart Failure

HF Services promote the utilisation of appropriate investigations within primary care to ensure patients have their diagnosis by echocardiogram. It will initiate the appropriate treatment and up-titrate evidence-based medications whilst patients are in their care. Upon discharge, a comprehensive care plan is developed to support GPs in their ongoing management of the patient.

Chapter 8: Arrhythmias and Sudden Cardiac Death (2004)

HF Services ensure that people presenting with Arrhythmias, with a definitive HF diagnosis, receive timely, high quality support and information, based on their needs.

- *Standard 11: Heart Failure & Palliative Care for People with Coronary Heart Disease*
The team promotes and assists in the inclusion of non-cancer patients on to the Gold Standards Framework Register. There are well established links with palliative care teams, community matrons and GPs and the service undertakes joint visits as appropriate.
- *Standard 12: Cardiac Rehabilitation*
The HF Services encourage patients, who would benefit, to attend a rehabilitation programme, and has close links with both specialist rehabilitation programmes within acute trusts and the Exercise on Referral programme within the community.

National Service Framework for Older People (Relevant Core Standards set)

Standard 2: Person-centred Care

HF Services seek to deliver person-centred care. This is achieved by the development of personalised plans of care, designed in collaboration with patients, carers and health care professionals.

Standard 3: Intermediate Care

HF Services provides intermediate care with the aim of reducing hospital admissions. It is also a goal of the service to enable patients to access HF Services within an environment of their choice (e.g. home, clinics).

Standard 8: The Promotion of Health and Active Life in Older Age

HF Services promote the rehabilitation of older people with HF, through advice, guidance and referral to appropriate rehabilitation programmes

National Service Framework for Long-term Conditions (Relevant Core Standards set)

Quality requirement 6: Vocational rehabilitation

HF Services offer expert support and advice in returning to work or hobbies. This includes honest assessment of functionality and appraisal of occupational requirements.

Quality requirement 10: Supporting Family and Carers

HF Services place great importance on the role of carers and relatives in the life of a person with a long-term condition. This is therefore a core objective of the service.

These are key drivers for much of the heart failure work. Commissioners have the responsibility of ensuring that national guidance is implemented locally. It is therefore imperative that HF services are commissioned so that this is possible. The burden is on commissioners to ensure that performance expectations, recourse and performance data to monitor progress and gaps are mutually discussed, agreed and reflected in their commissioning. It is hoped that this guide will inform these discussions as much more work needs to be done to transform heart failure care.

ACKNOWLEDGEMENTS

We acknowledge all those who took part in the consultation and agreed to this guide:

Philippa Askew, Heart Failure Nurse Specialist-Community, University Hospital Lewisham

John Balazs, GP Commissioner, NHS Lambeth

Alison Basa, Senior Project Manager, South London Cardiac and Stroke Network

Ian Blades, Information Governance Manager & Employee Systems Manager, NHS Lewisham

Teresa Beynon, Palliative Care Consultant, Guys' and St. Thomas' NHS Trust

Nick Bunce, Cardiac Clinical Lead, South London Cardiac and Stroke Network

Eric Cajeat, GP CVD Lead, NHS Lambeth

Gerry Carr-White, Consultant Cardiologist, Guys' and St. Thomas' NHS Trust

Netsayi Chanakira, Heart Failure Nurse Specialist, Kings College Hospital

Rebecca Curran, Community Heart Failure Pharmacist, Lambeth Community Health

Julia DeCoursey, Nurse Consultant – Heart Failure, Kings College Hospital

Russell Don, Assistant Director, South London Cardiac and Stroke Network

Ana Frappell, Heart Failure Nurse Specialist, Guys' and St. Thomas' NHS Trust

Arun Gupta, GP CVD Lead, Lewisham Business Support Unit

Imran Hafiz, Sr Cardiac Pharmacist, Guys' and St. Thomas' NHS Trust

Penny Hansford, Director of Nursing, St. Christophers' Hospice

Fiona Hodson, Heart Failure Nurse Specialist, Guys' and St. Thomas' NHS Trust

Felicity Hunter, General Manager – Cardiovascular, Guys' and St. Thomas' NHS Trust

Candy Jeffries, National Improvement Associate, NHS Improvement - Heart

Glain Jones, Head of Nursing, Kings College Hospital

Stam Kapenakis, Consultant Cardiologist, Guys' and St. Thomas' NHS Trust

Stefan Karwatowski, Consultant Cardiologist, Princess Royal University Hospital

Sab Kaur, Commissioner, NHS Bexley

Peter Kettle, Patient

Harprit Lally, Service Transformation Manager, Lambeth Business Support Unit

Mauricio Lomba, Primary and Community Care Commissioner, Southwark Business Support Unit

Kosta Manis, GP-Principal, Bexley Medical Group

Andrea Marlow, Sr Communications Manager, South London Cardiac and Stroke Network

Kathy Marshall, Consultant Nurse Cardiology, University Hospital Lewisham

Amanda Martin, Heart Failure Nurse Specialist, Lambeth Community Health

Gary Mayo, System Intelligence Analyst, Lewisham Business Support Unit

Theresa A McDonagh, Professor, Consultant Cardiologist, King's College Hospital

Claire McLeod, Heart Failure Nurse Specialist, Guys' and St. Thomas' NHS Trust

Jane Miller, Joint Deputy Director of Public Health, Public Health Lewisham

Mary Nash, Cardiac, Community Matron, OXLEAS Greenwich

William Nti-Nimako, Heart Failure Nurse Specialist-Community, University Hospital Lewisham

Michaela Nuttall, CHD Co-ordinator, NHS Bromley

Annie O'Donnague, Heart Failure Nurse Specialist, Guys' and St. Thomas' NHS Trust

Andrew Parson, GP Clinical Lead, Bromley Clinical Commissioning Group

Simon Radford, Heart Failure Nurse Specialist, Lambeth Community Health

Tracey Ronne, Heart Failure Nurse Specialist-Hospital, University Hospital Lewisham

Jane Sanders, Cardiac Rehabilitation Nurse Specialist, Guys' and St. Thomas' NHS Trust

Dorothy Tande, Service Redesign – GP Consortium Greenwich, Greenwich Business Support Unit

Ray Upchurch, Heart Failure Nurse Specialist, Bromley HealthCare

Eileen Vandervennin, Heart Failure Nurse Specialist, South London Healthcare Trust

Brian White, Senior Financial Accountant, NHS South East London

Helen Williams, Consultant Pharmacist for Cardiovascular Disease – Prescribing Lead,
South London Cardiac and Stroke Network

Jane Williams, Service Manager, Kings College Hospital

We thank you for all your contributions, reviews and feedback!