

Excellence in heart failure

Oxford 
Academic Health
Science Network





Introduction

Foreword	2
Scope	3
Heart failure pathway	4
Introduction to Excellence in heart failure	5

Section 1: Background information

What is heart failure?	7
Incidence of heart failure in the UK	8
Lived experience of people with heart failure	9
Impact of heart failure on the NHS	10
Best practice guidelines	11

Section 2: Excellence in heart failure

Excellence in heart failure methodology	13
Planning your Excellence in heart failure project	14
Data sources	15
Developing MDTs or integrated care pathways	16
Considerations when planning your project	17
Clinical review	18
Data to collect	19

Section 3: Case studies highlighting potential models

Buckinghamshire CCG	21
Leeds Teaching Hospital NHS Trust	22
South Lincolnshire	23

Section 4: Delivering your Excellence in heart failure project

Code cleansing search	25
Desk top review of the HFREF (LVSD) register	26
Review of patients	27
Education	28
Quality improvement	29

Section 5: Evaluating your Excellence in heart failure project

Evaluating your Excellence in heart failure project	31
Project checklist	32
Acknowledgements	33

Foreword

The NHS Long Term Plan, Getting It Right First Time (GIRFT) and National Cardiac Pathways Improvement Programme (CPIP) all have a common and clear message: that improved heart failure care is a critical agenda for both patients and NHS resilience alike.

Whilst the NHS has many priorities, there is little doubt that a pro-active focus on identifying and optimising patients living with heart failure, particularly those in deprived communities will have a profound positive impact on their quality of life. In contrast, a 'do nothing' strategy will lead to increasing emergency admissions, bed-occupancy, and unsustainable capacity challenges over time. As such, and at the very least, we all have a moral obligation to show robust leadership, with a clear and shared purpose across our healthcare systems to deliver sustainable heart failure care across the whole patient journey through quality improvement, population health management and the development of integrated care processes.

There is a huge amount of work to be done in terms of population health, coding reviews, early detection, diagnosis including access to NTproBNP and imaging, optimisation, advice and guidance, admission avoidance, integrated reviews and care of patients with frailty and end of life. I'm delighted to recommend this toolkit which offers a fantastic guide to support colleagues in reviewing their processes and developing sustainable systems to improve outcomes for patients with heart failure across our NHS.



Dr Raj Thakkar

Primary Care Cardiology lead, Oxford AHSN
National Primary Care Workstream Lead,
GP Lead Cardiac Pathway Improvement Programme,
NHS England and Improvement

“...we all have a moral obligation to show robust leadership, with a clear and shared purpose across our healthcare systems to deliver sustainable heart failure care across the whole patient journey through quality improvement, population health management and the development of integrated care processes.”



Scope

This implementation toolkit is designed to be used by clinicians, programme and project managers working at AHSN, ICS, CCG or PCN level. It describes the steps required to plan and implement 'Excellence in heart failure' a methodology for optimising medication in heart failure patients.



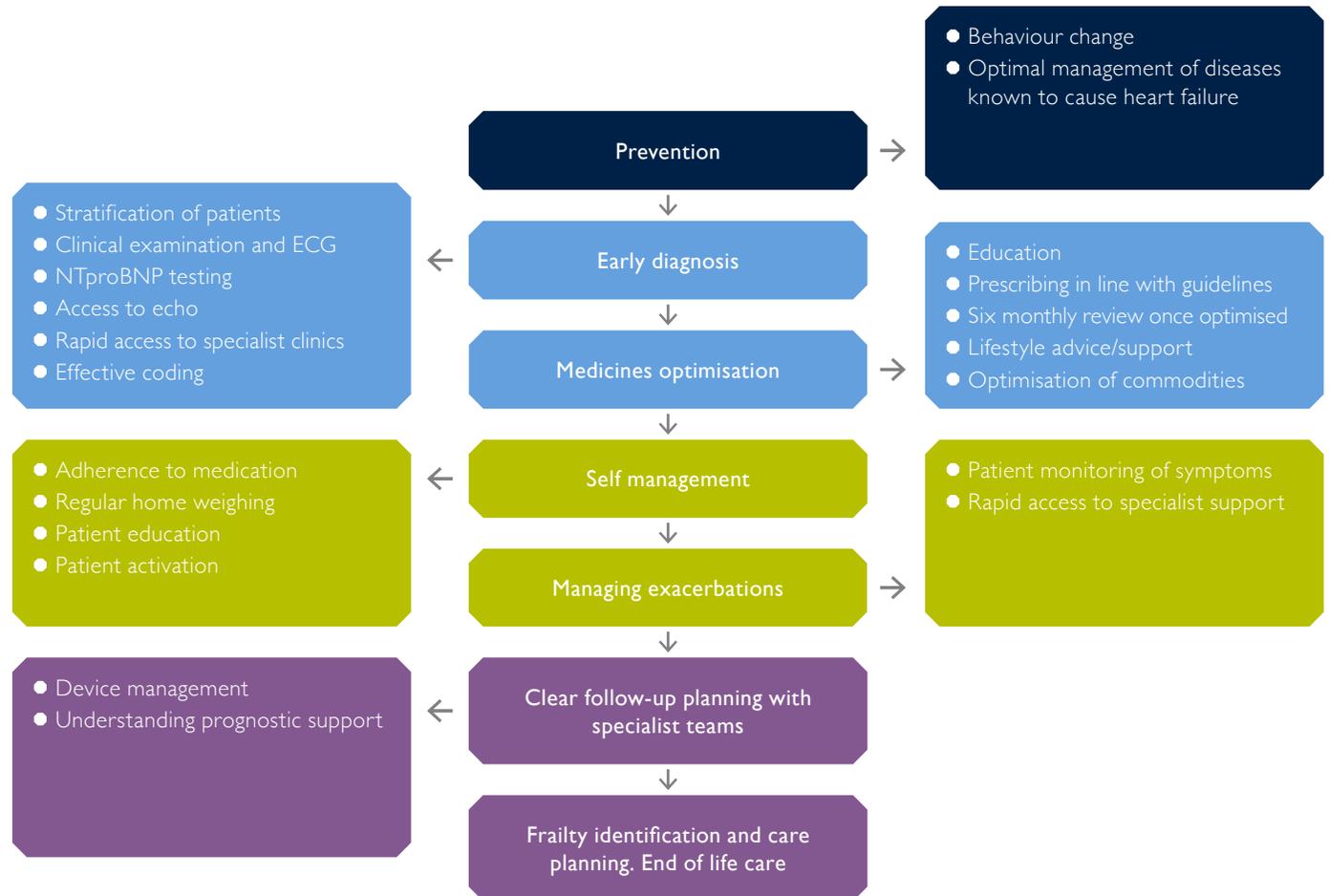
Heart failure pathway

There are opportunities for improvement across the whole heart failure pathway as highlighted in the diagram below.

This toolkit focuses on medicines optimisation which has been shown to improve outcomes and quality of life for patients. To maximise patient benefit this toolkit could be considered alongside other innovations, for example, improving early diagnosis of heart failure care or increasing opportunities for self-care and self-management.

Education for primary care clinical staff and rapid access to high quality advice and guidance are also important areas to address.

Care model for heart failure with reduced ejection fraction



Population health, clear focus on deprived communities, integrated across primary, community and secondary care



Aligned to national cardiac pathway improvement programme

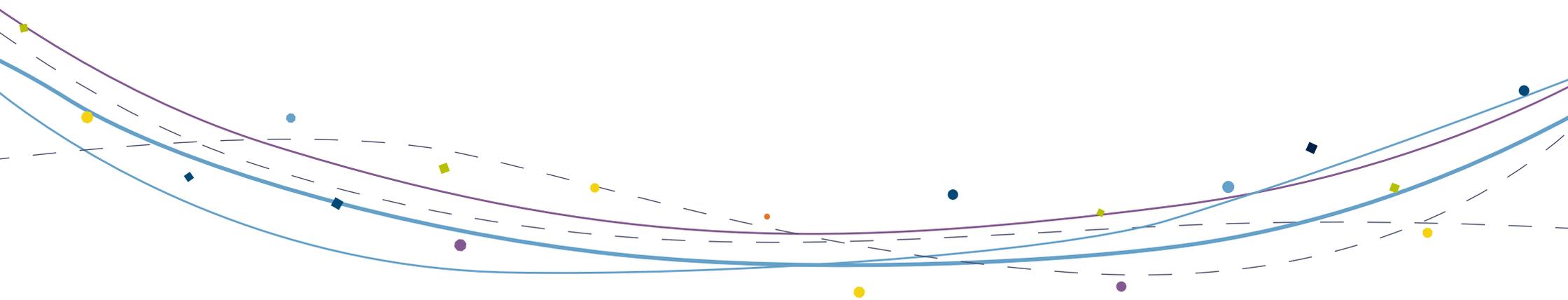
Introduction to Excellence in heart failure

Evidence shows that patients with heart failure with reduced ejection fraction (HFrEF) who are prescribed the optimum medication for their condition experience an improvement in quality of life, are less likely to be admitted to hospital and have a lower mortality rate.

'Excellence in heart failure' is a structured methodology for delivering improved care and optimised medication for people living with heart failure. This methodology has been used to deliver significant improvements in heart failure care in several localities across England.

The Excellence in heart failure methodology includes:

- A code cleaning exercise to ensure that:
 - All patients with heart failure are given a [heart failure code](#)
 - All patients with HFrEF are given the appropriate code
 - Relevant echocardiogram findings are coded
- Desk-top review of all patients coded as having HFrEF to identify patients who are not on optimal treatment
- Face to face (or virtual) review of patients who require optimisation of their medication
- Integration of primary, community and secondary heart failure services (e.g. via a multidisciplinary team set-up) to ensure that there is access to advice and guidance and that referral routes are in place for patients requiring specialist input
- Encouraging self-care





Section I:

Background information





What is heart failure?

Heart failure (HF) is a common complex clinical syndrome of symptoms and signs that occur when the heart is unable to pump blood around the body as effectively as it should. HF can occur at any age but is most common in older people. It is caused by structural or functional abnormalities of the heart and usually occurs because the heart has become too weak or stiff. HF is a long-term condition that tends to get gradually worse over time. Whilst it cannot usually be cured, with appropriate medication the symptoms can often be controlled for many years.

The main symptoms of HF are breathlessness, fatigue and oedema (fluid retention). Symptoms can develop quickly (acute heart failure) or gradually over weeks or months (chronic heart failure).

Causes of heart failure

Conditions that can lead to heart failure include:

- Coronary heart disease
- High blood pressure
- Damage or other problems with the heart valves
- Arrhythmias, such as atrial fibrillation
- Cardiomyopathy (conditions affecting the heart muscle)
- Congenital heart disease

Types of heart failure

The terminology used to describe heart failure is based on measurement of the left ventricular ejection fraction (LVEF). Heart failure patients with an ejection fraction of **50% or more are classed as having heart failure with preserved ejection fraction (HFpEF)**. In HFpEF the heart can pump blood out but is unable to relax to fill with blood sufficiently.

Patients with an ejection fraction of less than **40% are classed as having heart failure with reduced ejection fraction (HFrEF)**. HFrEF is also referred to as left ventricular systolic dysfunction (LVSD). When a patient has HFrEF the left ventricle of the heart does not pump well enough to adequately meet the needs of the body. Around **60% of all heart failure patients have HFrEF**, however in England only **33% of heart failure patients have an LVSD/HFrEF code in their primary care clinical record**. There is a **strong evidence base** showing that optimisation of medication can reduce morbidity and mortality in patients with HFrEF.

Ejection fraction definition

The ejection fraction (EF) is a measure of how much blood the left ventricle pumps out with each contraction. It is expressed as percentage. **A normal ejection fraction is considered to be greater than or equal to 55%.**



Incidence of heart failure in the UK

Around **0.9%** people in the UK today have a diagnosis of HF coded in their primary care clinical record. However **true prevalence is thought to be 1.4%**, representing a detection **gap of over 300,000 people**. Both the incidence and prevalence of heart failure increase steeply with age, and **the average age at diagnosis is 77**. Less data exists about heart failure in younger age groups but there is increasing recognition that this condition **affects a proportion of patients aged less than 65 years**. The most common cause of heart failure in the UK is coronary artery disease.

Mortality

Mortality rates for people with established heart failure are high. The prognosis is poorer in those who require hospital admission at the time of diagnosis and in those with co-morbidities.

0.9%

of people in the UK today have a diagnosis of HF coded in their primary care clinical record

1.4%

Estimated true prevalence

300,000

The gap between diagnosed patients and the true prevalence

77

Average age at diagnosis



Lived experience of people with heart failure

Heart failure can have a profound impact on a person's life, as well as on their family. People with heart failure have a significantly impaired quality of life when compared to people with good health and those with other chronic conditions. Patients with heart failure can experience a range of distressing symptoms which include shortness of breath, dizziness, fatigue, swollen feet and ankles, difficulty sleeping, and chest pain. Many of these symptoms can be eased with appropriate medication. As well as physical symptoms, patients can also experience anxiety and depression.

'**Healthtalk online**' is an extremely useful resource that provides information about health conditions from the patient perspective. Patients interviewed by Healthtalk interviewers reported shortness of breath (or dyspnoea) as the most common symptom. Some patients reported being short of breath when they exerted themselves or did too much in one day. Medication helped with this as well as avoiding activities that exacerbated the breathlessness.

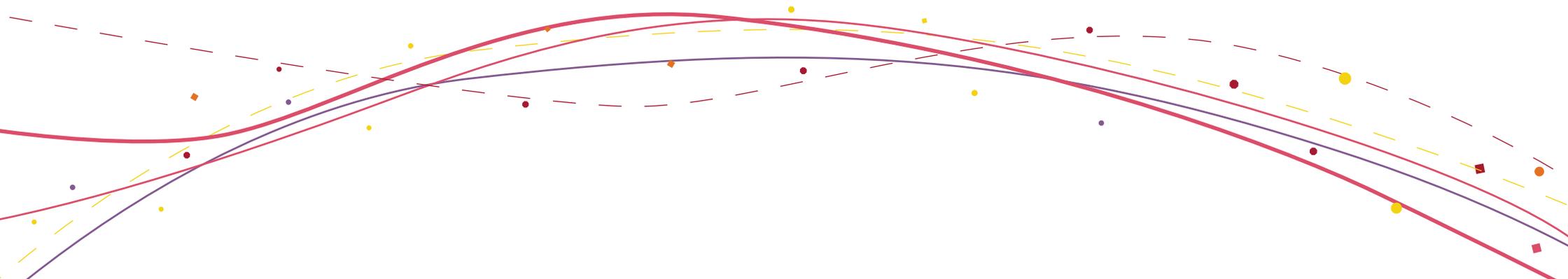
Many patients reported difficulty sleeping through the night. Some people described how they would wake themselves up with coughing but that this was eased with a change in medication.

Patients with HF typically take multiple medications. In the cohort of patients interviewed for Healthtalk online there was significant variation in understanding medication regimens. Some patients reported being well informed about their condition whilst others demonstrated poor understanding. Some reported that it was not always easy to remember to take all their medications at the correct time.

Further reading: patient experience

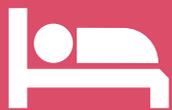
HF personal stories can be found here:

heart.org/en/health-topics/heart-failure/heart-failure-personal-stories
healthtalk.org





Impact of heart failure on the NHS



Heart failure accounts for a total of **1 million inpatient bed days** (around 2% of all NHS inpatient bed days) and **5% of all emergency medical admissions** to hospital.



The NICOR audit highlights that readmission is **higher in patients who were not seen by a consultant cardiologist or heart failure specialist**.

50%

Hospital admissions due to heart failure are projected to **rise by 50% over the next 25 years**, largely due to ageing of the population.



Readmissions are common with about **1 in 4 patients being readmitted in the 3 months** following discharge. Unplanned admissions may be the result of patients not being on optimal medication and therefore at an increased risk of an unplanned admission or an acute decompensation.



It is estimated that the **total annual cost of heart failure** to the NHS is around **2% of the total NHS budget**: approximately **70% of this total is due to the costs of hospitalisation**.



Best practice guidelines

There is clear evidence to show that medications can reduce mortality and hospitalisation for patients with HFrEF/LVSD. The Cardio-Renal-Metabolic (CaReMe) partnership have developed a **heart failure algorithm**, modified from the management algorithm for the NICE guideline 'chronic heart failure in adults: diagnosis and management'. This algorithm reflects the addition of SGLT-2 inhibitors into the chronic heart failure pathway.

COVID-19

During the COVID-19 pandemic HF care has been disrupted due to the requirement for social distancing, the conversion of face to face healthcare to virtual interactions and capacity issues as staff in primary, community and secondary care were redeployed to work on COVID wards and on the vaccination programme.

Additionally, some patients may have been reluctant to seek advice from healthcare professionals due to fear of contracting COVID-19. The British Society for Heart Failure (BSHF) has released a clear **position statement** for HF care in the restoration and recovery phase of the COVID-19 pandemic.

The BSHF recommend that patients at intermediate and highest risk be priorities to ensure that they are initiated and/or optimised on medication to prevent their condition deteriorating. The pro-active management of patients who may have experienced treatment delays will improve prognosis and also better prepare services to safely manage future peaks of COVID-19 infection.

¹CaReMe is a collaboration between the British Cardiovascular Society, the Renal Association and the Association of British Clinical Diabetologists. The three professional Societies, along with the Primary Care Cardiovascular Society and the Primary Care Diabetes Society have formed the **Cardio-Renal-Metabolic (CaReMe) partnership** with the aim of improving the management of patients with diabetes, cardiovascular and renal disease.



Section 2:

Excellence in heart failure



Excellence in heart failure methodology

Pathway Review

- Improved integration between primary and secondary care (virtual MDT or similar)
- Education sessions for primary care clinicians



Code cleansing

- Patients who have HF but do not have a QOF recognised HF code
- Patients who have HFrEF/LVSD but do not have a QOF recognised LVSD code



Desk top review of all patients with HFrEF/LVSD

- Risk stratification of patients who are not receiving optimal care



Face to face review of patients

- Optimisation of medication
- Identification of patients who require specialist support

Overview of Excellence in heart failure

The Excellence in heart failure programme aims to ensure that patients with heart failure with HFrEF/LVSD are coded correctly on GP systems and are receiving optimal treatment.

The expected outcomes of the project are:

- Overall increase in heart failure prevalence
- Overall increase in LVSD coding
- Increase in the number of patients receiving optimal care according to NICE guidelines

The expected benefits of the project are:

For the patient:

- Initiation and optimisation of evidence-based therapy
- Improved symptom control and quality of life as a result of medicines optimisation
- Education and empowerment to self-manage
- Reduction in non-elective admission and readmission

For Primary Care Networks (PCNS) and GP practices:

- Increase in QOF income linked to increase in heart failure prevalence
- Improved coding of heart failure register means ongoing review is easier
- Improved management of this cohort of patients
- Education and upskilling

For the NHS as a whole:

- Reduction in non-elective admissions and readmissions for heart failure
- Improved integration between primary and secondary care

Planning your Excellence in heart failure project

Stakeholder identification

Firstly identify the key stakeholders in your project. Who are the groups, organisations or individuals that will influence the successful delivery or be impacted by the project?

Typically, for excellence in heart failure you would expect the following to be key stakeholders:

- Practice staff (including GPs, clinical pharmacists, practice manager, practice nurses)
- PCN staff (clinical directors, pharmacists)
- Secondary care staff (cardiologists, heart failure nurses)
- Community heart failure nurses
- Patient groups (e.g. through BHF or practice participation groups)
- Integrated Care System staff

Importance of a clinical champion

Identifying a local clinical champion is important to the success of your project. Strong clinical leadership will improve clinical engagement with the project and will also be essential in supporting any pathway changes that are proposed. A local GPwSI in Cardiology, a Consultant Pharmacist or a PCN Clinical Director with an interest in long-term conditions, would typically be a good candidate for a clinical lead for Excellence in Heart Failure.





Data sources

Quality and Outcomes Framework (QOF data)

QOF data is published annually, usually six months after the end of a financial year. **It can be found here.** QOF data is available at national, regional, STP, CCG and practice level and can be a rich source of information.

The most useful QOF data for heart failure is the prevalence data. Here you can see the list size of the practice (or CCG, STP, or region), the size of the heart failure register and prevalence.

Within a CCG or STP, practices with lower recorded prevalence of heart failure might stand to gain the most from the code-cleansing element of Excellence in heart failure. Public Health England has produced **Primary Care Intelligence Packs** for cardiovascular disease which contain useful graphs showing the variation in prevalence across practices. These graphs can be helpful in engaging stakeholders at CCG and practice level. Public Health England has also produced modelled HF prevalence figures which indicate the true burden of disease and the true prevalence gap:

fingertips.phe.org.uk/profile/prevalence

There are currently three QOF indicators focused on medicines optimisation in HF. These are:

HF003

In those patients with a current diagnosis of heart failure due to left ventricular systolic dysfunction (LVSD), the percentage of patients who are currently treated with an ACE-I or ARB.

HF006

The percentage of patients with a current diagnosis of heart failure due to LVSD, who are currently treated with a betablocker licensed for heart failure.

HF007

The percentage of patients with a diagnosis of heart failure on the register, who have had a review in the preceding 12 months, including an assessment of functional capacity and a review of medication to ensure medicines optimisation at maximal tolerated doses.

The difficulty with interpreting the data for HF006 and HF007 is that LVSD coding is known to be extremely variable, therefore the denominator (number of people with HF due to LVSD) is inaccurate and is an underestimate of the total LVSD burden. Additionally, the QOF data only records if a patient has been prescribed a drug, not if they have been prescribed the maximum tolerated dose. The Excellence in heart failure project addresses the quality of LVSD coding which will improve the interpretation of QOF data.

Heart Failure High Impact Intervention Tool

Imperial College Health Partners have developed a **Heart Failure Dashboard**. This model uses real world data from QOF, HES and open prescribing to enable clinicians and commissioners to easily identify gaps in diagnosis and treatment of heart failure.

Admission data

Local data on the number of non-elective admissions with a primary diagnosis of heart failure can be useful in determining variation between CCGs or practices. Dividing the number of admissions per annum by the practice list size, or the heart failure register size will give a rate that is comparable across different size practices. Practices who have a higher rate of admission may have a lower rate of prescribing of evidence-based therapies and may benefit most from Excellence in heart failure.

Population health management approach

A population health management approach can be used to develop an understanding of the health needs of the heart failure population and to understand the impact that health inequalities can have on heart failure outcomes – for example by overlaying admission rates with deprivation indices. Population health management can be a power tool for supporting disease prevention initiatives, as well as understanding variation in outcomes. More information on population health management can be found **here**.

Developing MDTs or integrated care pathways

The project will identify a group of patients who require input or review by a heart failure specialist – this may include patients indicated for device therapy and patients who are still symptomatic on optimal medication.

In order to reduce pressure on secondary care, particularly in the recovery phase of the COVID-19 pandemic, systems should consider reviewing their pathways to improve access to secondary care advice or input, without requiring a referral to secondary care.

For example, virtual multidisciplinary teams could be developed to review patients who require secondary care input. A HF MDT could include a heart failure specialist physician and a specialist heart failure nurse as well as a pharmacist. The MDT can provide advice back to primary care, initiate therapies and refer onwards to secondary care for patients who require review by a consultant.

MDTs could also consist of a wider range of health care professionals including physiotherapists, dieticians and rehabilitation specialists. This would support a holistic approach to heart failure care.



Considerations when planning your project

Clinical audit support

Clinical audit is an important part of the Excellence in heart failure project. Audit of the GP clinical system is required in order to:

- **Identify patients with heart failure** who are not on the heart failure register and make recommendations for coding
- **Identify and risk stratify** patients on the heart failure register who are not being optimally treated
- **Identify patients on the heart failure register** who require secondary care input

There are several options for resourcing audit support:

- Resource from within each practice
- Resource at PCN level
- Resource at CCG level
 - e.g. medicines management team
- Procure external audit support

Points you may wish to consider when choosing between these options are shown here:

	Pro	Con
Practice resource	Good for sustainability	Would need to ensure search methodology was the same across practices
PCN resource	Good for sustainability Less resource intensive than practice level	May be slower to roll out across a PCN
CCG resource	Can usually run remote searches Can ensure same search methodology applied	May be slower to roll out across a CCG
External	Highly experienced in these projects Will have their own search methodology Likely to have more capacity	Potential to be more expensive



Clinical review

A clinician (GP, specialist nurse or clinical pharmacist) will be required to:

- Sign off additions to the heart failure register
- Perform a desk-top review of all patients with HFrEF LVSD to determine whether they are receiving optimal treatment
- Deliver clinical reviews of patients (face to face or virtual)

This support can be structured in different ways, depending on how you wish to run your project and the resource and skills available within primary care.

The example here shows how a multidisciplinary approach could be take to the project.

Role	Potential role in project
GP	<ul style="list-style-type: none"> ● Sign off on HF register additions ● Review of patients triaged as being at highest risk ● Sign off/approve onward referrals
Clinical Pharmacist	<ul style="list-style-type: none"> ● Run audit ● Run desk-top review ● Clinical review of patients triaged as being at medium or low risk
Practice Nurse	<ul style="list-style-type: none"> ● Run audit ● Run desk-top review ● Clinical review of patients triaged as being at medium or low risk
Health care assistant	<ul style="list-style-type: none"> ● Support patients with lifestyle measures ● Support patients with self-management (e.g. counsel on daily weighing, tracking symptoms etc)
Heart failure specialists (multidisciplinary)	<ul style="list-style-type: none"> ● Deliver education sessions to support primary care ● Participate in MDT discussion

Data to collect

The core data set you will need to collect for each practice includes:

- List size
- HF register size at project start
- LVSD register size at project start
- Number of patients added to HF register
- Number of patients added to LVSD register
- Number of patients who are virtually reviewed (aim to review the whole LVSD register)
- Number of patients on LVSD register who are not optimally managed at project start
- Number of patients called for face to face review
- Number of patients receiving face to face review
- Number of patients receiving a pharmacological intervention (e.g. initiation, stopping, increase in dose, decrease in dose, change within class of medicine)
- Number of patients referred for secondary care advice or opinion
- Reason for referral for advice or opinion
- If possible, outcome of referral for advice or opinion
- Ethnicity and other demographic details

There are many other metrics that you may wish to consider collecting but this will depend on the level of audit and data analysis support available. Other areas that might be of interest to collect include:

- Number of patients with echocardiogram recorded
- Number of patients with a record of the ejection fraction
- Number of patients with a coded heart failure review in the past 6 months, 12 months or ever





Section 3:

Case studies highlighting potential models

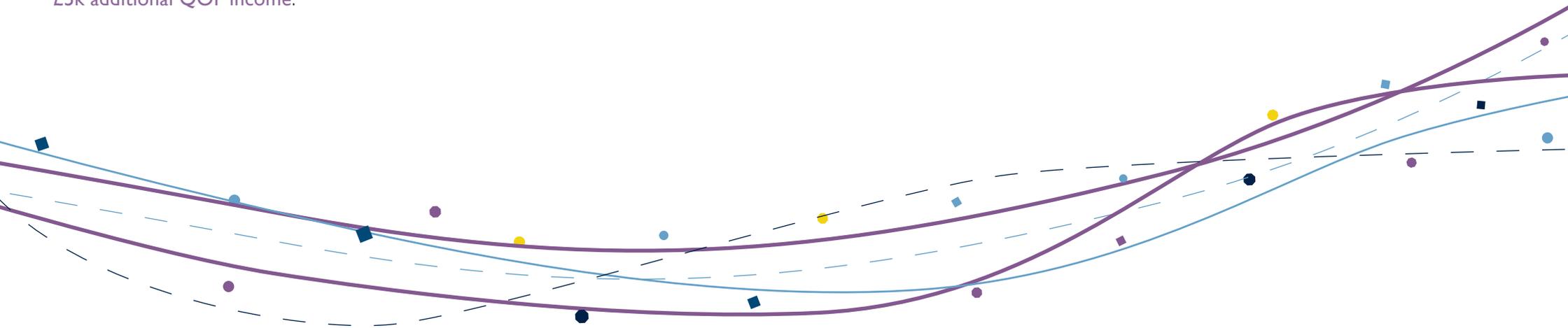


Buckinghamshire CCG

Oxford AHSN and Buckinghamshire CCG commenced the Excellence in Heart Failure Project in 2019. The aim of the project was to reduce the variation between practices in heart failure prevalence and rate of admission. The project was delivered through a joint working agreement with Novartis through which audit support was supplied.

The first step in the project was an audit of the heart failure registers. This was carried out remotely by an external audit provider and then practices were given a list of patients to review. In most practices this review was carried out by practice pharmacists working together with GPs. The aim of the first step was to improve coding to develop a true understanding of the size of the heart failure register and improve recorded prevalence. This proved to be effective with a **22% increase in the HF register across Buckinghamshire** and a **95% increase in LVSD coding**. Through cleansing their HF registers in this way, practices in Buckinghamshire now have a clear list of patients who will require HF reviews and due to the improved coding can expect, on average, **£5k additional QOF income**.

The second step involved a desk-top review of all patients on the LVSD register by a pharmacist, followed by face to face review of those patients who appeared to not be on optimal treatment. Just over **half of all patients on the LVSD register were called for face to face review**. Practices varied in how they carried out the review clinics – some GPs preferred to review their own patients, others utilised pharmacists from an external provider. **Just over half (55%) of the patients who were reviewed had a pharmacological intervention** e.g. medicine started or dose changed. **A quarter of the patients who were reviewed required specialist input**. These patients were referred to the Cardiac Triage Service, run by specialist GPs, who were able to advise on management in primary care or refer onwards to secondary care for initiation of specialist medicines or device therapy.





Leeds Teaching Hospital NHS Trust

The primary aim of the Leeds project was to improve the detection and treatment of heart failure in primary care. This was delivered through the development of integrated care clinics and a quality improvement programme.

The project included:

- Code cleansing in primary care to improve prevalence and ensure the heart failure register was accurate
- Identification and virtual triage of patients receiving suboptimal care
- Development of Leeds HF guidelines and streamlined pathways of care to reduce variation in management
- Increased awareness and competence in non-specialist primary healthcare professionals in the management of HF, including a designated HF champion at practice level
- HF patients receiving six monthly reviews
- HF template and care plan as a foundation for six monthly reviews
- Development of a specialist MDT including remote access via virtual clinic/e-consultation

High level results:

17%

Increase in heart failure register
(0.91% prevalence to 0.98%)

156%

Increase in the LVSD register

£5k

QOF income uplift per practice (circa)

947

Patients had face to face reviews

426

Patients had a pharmacological intervention, the majority of which were up-titration of ACEi, beta blocker or ARB

400

Patients were recommended for onward referral

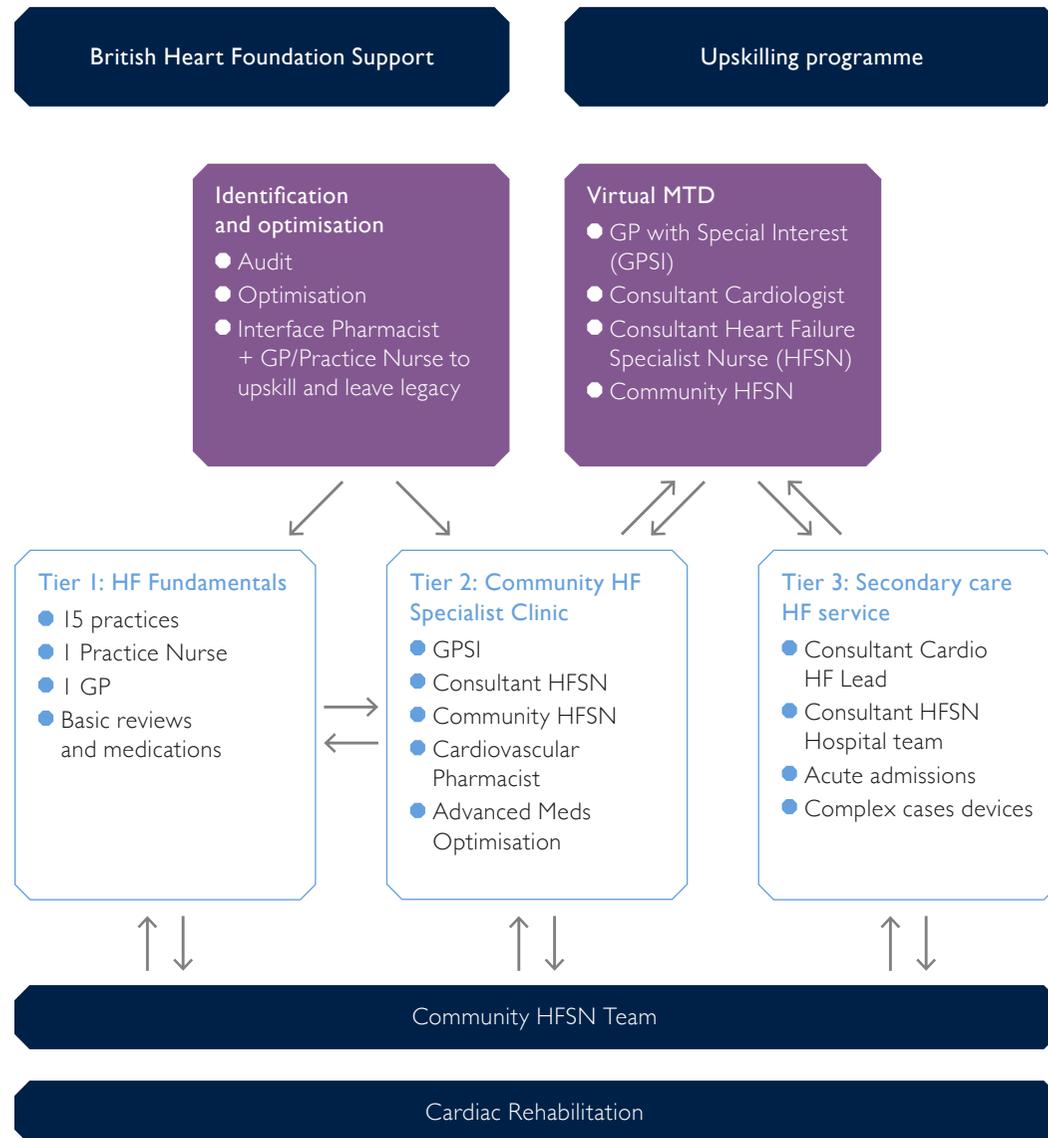
South Lincolnshire

South Lincolnshire CCG commenced a project aimed at strengthening the delivery of routine care to heart failure patients, to allow them to live longer and healthier lives, and to minimise unwanted variations in care.

They delivered the project through:

- Code cleansing of the heart failure registers
- Practice Nurses supported by Clinical Pharmacists undertaking virtual reviews, risk stratification and triage
- Face to face clinics delivered by practice nurses to review and optimise treatment
- Development of a virtual MDT, supported by specialist heart failure nurses, to review patients identified by the practice nurses as needing secondary care input or initiation of specialist medicines
- An important part of the project was creation of a legacy framework for practice nurses to continue providing heart failure patient reviews

A schematic summarising the approach is shown here:





Section 4:

Delivering your Excellence in heart failure project





Code cleansing search

The aim of the code cleansing search is to identify patients where a diagnosis of HF has been made previously but has not been correctly coded. This includes the coding of both the overarching diagnosis of HF and of HFrEF/LVSD. It is important to identify people with HFrEF because we know this condition has a strong evidence base for treatment and that those on the LVSD register are more likely to receive a review of their condition.

Suggested search criteria are included below.

Note that these search criteria are not 100% specific and so the record of each patient identified by the searches should be reviewed to see whether a diagnosis of heart failure has been made previously. Usually this would be found in a letter from cardiology, a hospital discharge letter or an echocardiogram report.

Search	Aim	Rules
1	Identify patients with a current prescription for an aldosterone antagonist but not on the heart failure register	<ul style="list-style-type: none"> Search for patients with current prescription for spironolactone or eplerenone Exclude patients from rule 1 who are already on the heart failure register
2	Identify patients with a previously high NTproBNP but not on the heart failure register (note patients with raised NT-proBNP should have an echocardiogram to diagnose heart failure)	<ul style="list-style-type: none"> Search for patients with an NT-proBNP level above 400ng/l Exclude patients from rule 1 who are already on the heart failure register
3	Identify patients where LVSD is recorded but not heart failure	<p>Include patients who have one of the following codes:</p> <ul style="list-style-type: none"> Left ventricular systolic dysfunction Echocardiogram shows left ventricular systolic dysfunction Left ventricular cardiac dysfunction <p>Exclude patients from rule 1 who are already on the heart failure register</p>
4	Identify patients where a code has been used that is not a QOF recognised heart failure code but indicates potential heart failure	<p>Include patients who have one of the following codes:</p> <ul style="list-style-type: none"> H/O heart failure Heart failure annual review Congestive heart failure monitoring Seen in heart failure clinic Referral to heart failure clinic New York Heart Association classification heart failure symptoms <p>Exclude patients from rule 1 who are already on the heart failure register</p>
5	Identify patients who are on the heart failure register and on an ACE inhibitor but not coded with LVSD	<p>Include patients who are on the heart failure register</p> <p>Include patients from rule 1 who have a current prescription for an ACE-I</p> <p>Exclude patients who have one of the following codes:</p> <ul style="list-style-type: none"> Left ventricular systolic dysfunction Echocardiogram shows left ventricular systolic dysfunction Left ventricular cardiac dysfunction



Desk top review of the HFrEF (LVSD) register

Having completed and actioned the code-cleansing search you will have an up to-date list of patients within the practice who have HF and a sub-list of those who have HF with HFrEF/LVSD.

The next step is to perform virtual review of patients who have HFrEF/LVSD. The result of the review should be a risk-stratified list of patients, some of whom will need further action. Each patient should be reviewed with respect to the NICE guidance. Patients who are symptomatic are more likely to require intervention. If the practice routinely records NYHA (New York Heart Association) classification then this could be a good starting point to identify symptomatic patients. Otherwise look for evidence that they are experiencing symptoms such as oedema, shortness of breath and fatigue. The following table may help in risk stratifying patients:

Clinical features	Potential intervention
Stable – not symptomatic and no unplanned admissions in past six months	Check therapy optimised. Review as part of normal HF review cycle
Symptomatic and/or unplanned admission in the past six months and not fully optimised on the range of medications available in primary care	Optimise medicines in primary care
Symptomatic and/or unplanned admission in the past six months and fully optimised on medications available in primary care	Refer for specialist opinion. MDT discussion could prevent the need for a secondary care referral

Review of patients

Following the desk-top review, you will have a list of patients who may benefit from a review appointment. This could be in-person, over the telephone or via video-call, as appropriate to the patient, the practice and the social distancing requirements in place (reviews should ideally be face to face to allow assessment of blood pressure and pulse). Experience from pilot projects would suggest that around half of patients on with HFrEF/LVSD will need a review appointment.

You will need to decide how to organise these appointments. An effective way of reviewing patients who potentially require intervention would be to organise clinics to be delivered by a practice or PCN based pharmacist.

Some patients may already be receiving specialist heart failure care (e.g. from a Community Heart Failure Nursing team) and can be reviewed by their specialist team.

Template for review

Kent, Surrey and Sussex AHSN have created a template for **medication reviews** for HF patients.

People with HFpEF

This toolkit focuses on the optimisation of patients with HF with reduced ejection fraction (LVSD). Kent Surrey and Sussex AHSN have an **pathway for the treatment of heart failure with preserved ejection fraction in primary care**.



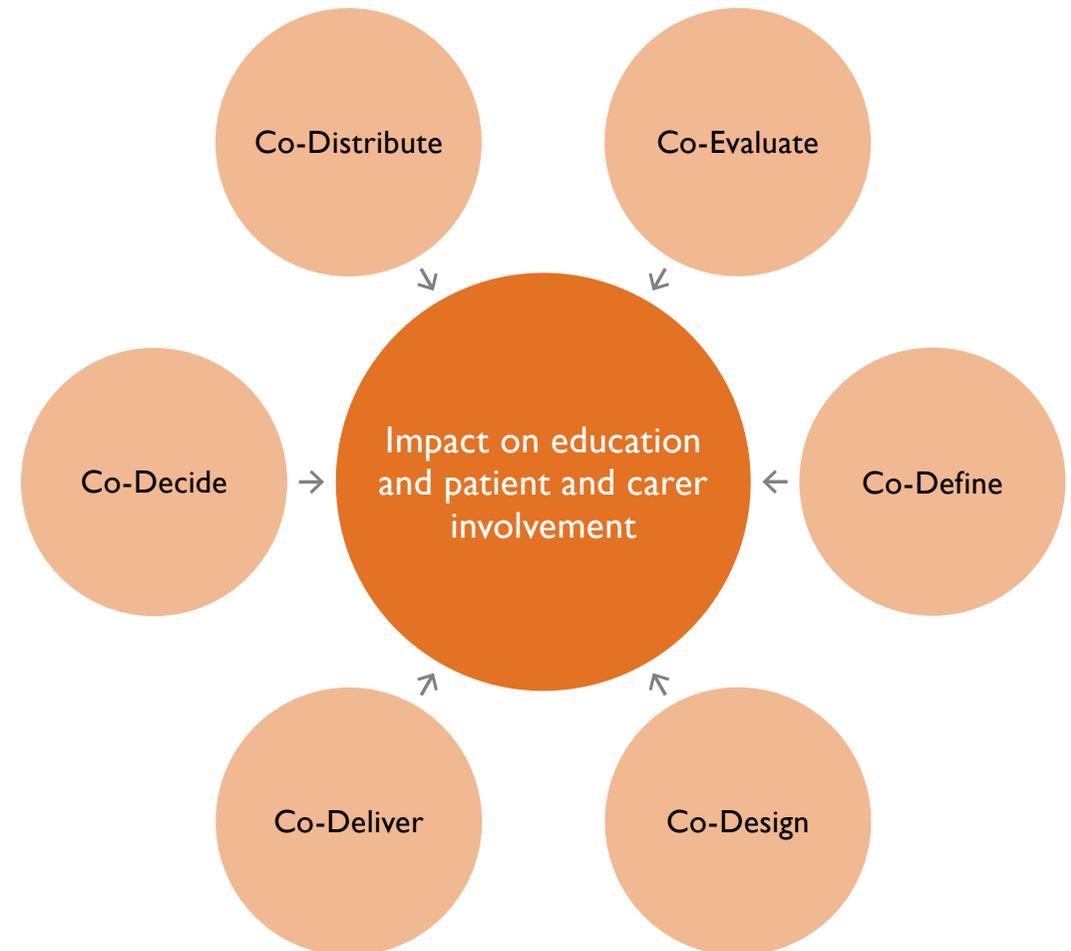
Education

An education/upskilling programme for primary care staff will enhance the delivery of your project and provide supporting information for staff who are carrying out the education and review process. Educational resources to support your project can be found [here](#).

Patient and carer involvement

Think about how you can involve people with heart failure and their carers in your project. You can involve people at the planning, delivery and evaluation stages in several ways.

Oxford AHSN has developed a helpful toolkit which can support you in developing a [patient and carer involvement plan](#).



Quality improvement

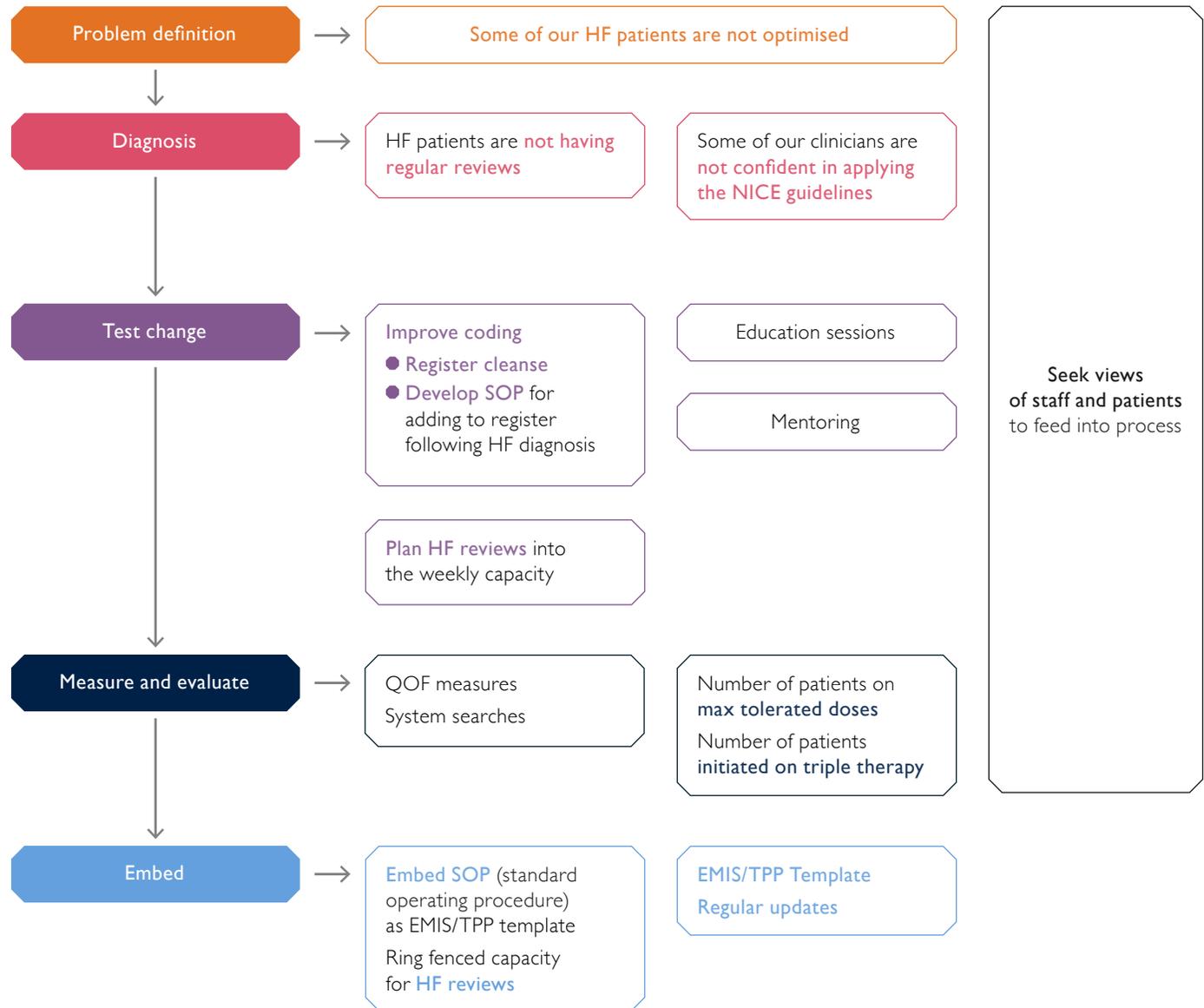
It is important that any improvements in care delivered through this project are sustained. Building in a quality improvement approach can help with this and ensure that the project leaves a legacy.

Quality improvement is a systematic approach that uses a cycle of improvement including:

- Problem definition and diagnosis
- Small tests of change
- Data collection and analysis
- Implementation
- Evaluation

The schematic shows how this could be applied to your heart failure project.

Additional resources to support a quality improvement project can be found [here](#).





Section 5:

Evaluating your Excellence in heart failure project





Evaluating your Excellence in heart failure project

Your plans for evaluation should form part of your overall project plan. Setting out the evaluation framework at an early stage will help shape your project, ensure that the correct metrics are collected and demonstrate the value of the project.

A combination of qualitative and quantitative data can be used to evaluate your project. Qualitative analysis through survey, focus group or discussion can be used to determine patient views of how their heart failure care changed after involvement in the project.

Key quantitative metrics for evaluation could include:

Metric	Rationale	Collection method
Increase in size of HF register	To measure whether there has been increase in the number of patients with a coded diagnosis of HF over the lifetime of the project	<ul style="list-style-type: none"> ● Baseline data available through QOF ● Also straightforward to extract from practice systems
Increase in size of LVSD register	This will give a measure of an increase in the number of patients who are accurately recorded as having HF with LVSD. Accurate coding is important because there is a defined, evidence-based pathway for these patients	<ul style="list-style-type: none"> ● Baseline data available through QOF ● Also straightforward to extract from practice systems
Number of HF patients with LVSD reviewed as part of the project	To understand the number of patients who required a review. This will give an indication of potential unmet need when planning further roll out	<ul style="list-style-type: none"> ● Extraction from practice systems if booked in specific clinics ● Manual collation following desk top review
Number of HF patients with LVSD that received an intervention	To understand the number of patients who benefited from the project – e.g. had a medicine optimised or were referred on for specialist care	<ul style="list-style-type: none"> ● Manual collation
HF admissions	To understand whether admissions for HF from participating practices reduced over the course of the project	<ul style="list-style-type: none"> ● Secondary care data



Project checklist

1

Do you understand your data?

- Prevalence
- Admissions
- Variation between practices
- Can you use a population health management approach to identify health-inequalities?

2

Have you completed stakeholder analysis?

- Identify clinical champion
- Develop stakeholder engagement plan

3

Have you reviewed your heart failure pathway?

- Are there opportunities for greater integration between primary care and secondary and community heart failure services?
- Would a virtual MDT add value to your patient review process?

4

Have you identified the resources you will use?

- Who will do the code cleansing?
- Who will do the desk top reviews?
- Who will do the face to face reviews?
- Is additional resource required?

5

Have you developed a case for change?

- What improvements can you deliver – mortality, admissions?
- How much will the project cost?
- What are the projected savings?
- Have you done an equality impact assessment?

6

Have you developed an evaluation plan?

- Have you agreed which metrics you will collect?
- Have you agreed your methodology for collecting the data?
- What approach will you take to qualitative analysis?

7

Have you agreed your education strategy?

- E-learning
- Face to face or webinar

8

How will you involve patients and carers in your project?

- Have you developed a patient involvement plan?

9

What approach will you take to quality improvement?

- How will you ensure your project delivers sustainable change?



Acknowledgements

Oxford AHSN acknowledges with thanks, the following contributions to the development of this toolkit.

Case studies provided by:

- South Lincolnshire CCG
- Buckinghamshire CCG
- Leeds Teaching Hospitals NHS Trust

Data provided by:

Buckinghamshire CCG and Leeds Teaching Hospitals NHS Trust. With thanks to Interface Clinical Services for collation and analysis of the data.

Code-cleansing searches provided by:

East Berkshire CCG.

Oxford Academic Health Science Network have developed this Excellence in heart failure toolkit pursuant to a Joint Working Agreement with Novartis Pharmaceuticals UK Ltd. Please note that Novartis provided some advisory input in the development of the toolkit. However, the Oxford Academic Health Science Network retained final editorial control of the toolkit.

¹ QOF 2019/20
digital.nhs.uk/data-and-information/publications/statistical/quality-and-outcomes-framework-achievement-prevalence-and-exceptions-data/2019-20

² [bmj.com/content/364/bmj.l223](https://www.bmj.com/content/364/bmj.l223)

³ Juenger J, Schellberg D, Kraemer S, Haunstetter A, Zugck C, Herzog W, Haass M. Health related quality of life in patients with congestive heart failure: Comparison with other chronic diseases and relation to functional variables. Heart Mar; 2002 87(3):235–241. [PubMed: 11847161]

For more information please get in touch:

+44 (0)1865 784 944

info@oxfordahsn.org

oxfordahsn.org

