

Acute heart failure: diagnosis and management in adults

NICE quality standard

Draft for consultation

June 2015

Introduction

This quality standard covers the care of adults (aged 18 years or older) who have a diagnosis of acute heart failure or are being investigated for acute heart failure. The long-term management of chronic heart failure is not covered in the quality standard because it is covered by a separate NICE guideline (CG108) and quality standard referral (QS9). For more information see the [topic overview](#).

Why this quality standard is needed

Acute heart failure refers to the rapid onset of a clinical syndrome where the heart is unable to pump adequate blood to provide for the needs of the body. It is caused by dysfunction of the heart due to muscle damage (systolic or diastolic dysfunction), valvular dysfunction, arrhythmias or other rare causes. Acute heart failure can present as new-onset heart failure in people without known cardiac dysfunction, or as acute decompensation of chronic heart failure.

Acute heart failure is a common cause of admission to hospital (over 67,000 admissions in England and Wales a year) and is the leading cause of hospital admission in people 65 years or older in the UK.

The quality standard is expected to contribute to improvements in the following outcomes:

- Mortality rates
- Incidence of major cardiovascular events (non-fatal myocardial infarction, stroke)
- Length of hospital stay
- Readmission rates

- Incidence of adverse events (withdrawal of beta-blockers and other disease-modifying drugs)
- Quality of life.

How this quality standard supports delivery of outcome frameworks

NICE quality standards are a concise set of prioritised statements designed to drive measurable improvements in the 3 dimensions of quality – patient safety, patient experience and clinical effectiveness – for a particular area of health or care. They are derived from high-quality guidance, such as that from NICE or other sources accredited by NICE. This quality standard, in conjunction with the guidance on which it is based, should contribute to the improvements outlined in the following 2 outcomes frameworks published by the Department of Health:

- [NHS Outcomes Framework 2015–16](#)
- [Public Health Outcomes Framework 2013–2016.](#)

Tables 1 and 2 show the outcomes, overarching indicators and improvement areas from the frameworks that the quality standard could contribute to achieving.

Table 1 [NHS Outcomes Framework 2015–16](#)

Domain	Overarching indicators and improvement areas
1 Preventing people from dying prematurely	<p><i>Overarching indicators</i></p> <p>1a Potential Years of Life Lost (PYLL) from causes considered amenable to healthcare</p> <p>i Adults</p> <p>1b Life expectancy at 75</p> <p>i Males ii Females</p> <p>1.1 Under 75 mortality rate from cardiovascular disease* (PHOF 4.4*)</p>
3 Helping people to recover from episodes of ill-health or following injury	<p><i>Overarching indicator</i></p> <p>3b Emergency readmissions within 30 days of discharge from hospital* (PHOF 4.11*)</p>

4 Ensuring that people have a positive experience of care	<p>Overarching indicators</p> <p>4b Patient experience of hospital care</p> <p>4c Friends and family test</p> <p>4d Patient experience characterised as poor or worse</p> <p>i. Primary care</p> <p>ii. Hospital care</p> <p>Improvement areas</p> <p>Improving people's experience of outpatient care</p> <p>4.1 Patient experience of outpatient services</p> <p>Improving hospitals' responsiveness to personal needs</p> <p>4.2 Responsiveness to in-patients' personal needs</p> <p>Improving people's experience of accident and emergency services</p> <p>4.3 Patient experience of A&E services</p>
5 Treating and caring for people in a safe environment and protecting them from avoidable harm	<p>Overarching indicators</p> <p>5a <i>Deaths attributable to problems in healthcare</i></p> <p>5b <i>Severe harm attributable to problems in healthcare</i></p> <p>Improvement area</p> <p>Improving the culture of safety reporting</p> <p>5.6 Patient safety incidents reported</p>
<p>Alignment with Public Health Outcomes Framework</p> <p>* Indicator shared</p> <p>** Indicator complementary</p> <p><i>Indicators in italics are in development</i></p>	

Table 2 [Public health outcomes framework for England, 2013–2016](#)

Domain	Objectives and indicators
4 Healthcare public health and preventing premature mortality	<p>Objective</p> <p>Reduced numbers of people living with preventable ill health and people dying prematurely, while reducing the gap between communities</p> <p>Indicators</p> <p>4.4 Under 75 mortality rate from cardiovascular disease* (NHSOF 1.1*)</p> <p>4.11 Emergency readmissions within 30 days of discharge* from hospital (NHSOF 3b*)</p> <p>4.13 Health-related quality of life for older people</p>
<p>Alignment with NHS Outcomes Framework</p> <p>* Indicator shared</p>	

Patient experience and safety issues

Ensuring that care is safe and that people have a positive experience of care is vital in a high-quality service. It is important to consider these factors when planning and delivering services relevant to acute heart failure.

NICE has developed guidance and an associated quality standard on patient experience in adult NHS services (see the NICE pathway on [patient experience in adult NHS services](#)), which should be considered alongside this quality standard. They specify that people receiving care should be treated with dignity, have opportunities to discuss their preferences, and are supported to understand their options and make fully informed decisions. They also cover the provision of information to patients and service users. Quality statements on these aspects of patient experience are not usually included in topic-specific quality standards. However, recommendations in the development sources for quality standards that impact on patient experience and are specific to the topic are considered during quality statement development.

Coordinated services

The quality standard for acute heart failure specifies that services should be commissioned from and coordinated across all relevant agencies encompassing the whole acute heart failure care pathway. A person-centred, integrated approach to providing services is fundamental to delivering high-quality care to people with acute heart failure.

The Health and Social Care Act 2012 sets out a clear expectation that the care system should consider NICE quality standards in planning and delivering services, as part of a general duty to secure continuous improvement in quality. Commissioners and providers of health and social care should refer to the library of NICE quality standards when designing high-quality services. Other quality standards that should also be considered when choosing, commissioning or providing a high-quality acute heart failure service are listed in Related quality standards.

Training and competencies

The quality standard should be read in the context of national and local guidelines on training and competencies. All healthcare professionals involved in assessing, caring for and treating adults with acute heart failure should have sufficient and appropriate training and competencies to deliver the actions and interventions described in the quality standard. Quality statements on staff training and competency are not usually included in quality standards. However, recommendations in the development source on specific types of training for the topic that exceed standard professional training are considered during quality statement development.

Role of families and carers

Quality standards recognise the important role families and carers have in supporting adults with acute heart failure. If appropriate, healthcare professionals should ensure that family members and carers are involved in the decision-making process about investigations, treatment and care.

List of quality statements

[Statement 1](#). Adults admitted to hospital with suspected acute heart failure have early and ongoing input from a dedicated specialist heart failure team.

[Statement 2](#). Adults with acute heart failure have a follow-up clinical assessment by a member of the community specialist heart failure team within 2 weeks of hospital discharge.

[Statement 3](#). Adults admitted with new suspected acute heart failure have a single measurement of natriuretic peptide.

[Statement 4](#). Adults presenting with new suspected acute heart failure and raised natriuretic peptide levels have a transthoracic doppler 2D echocardiogram undertaken within 48 hours of admission.

[Statement 5](#). Adults admitted with acute heart failure who are already taking beta-blockers do not stop this treatment unless they have a heart rate less than 50 beats per minute, second or third degree atrioventricular block, or shock.

[Statement 6.](#) Adults with acute heart failure due to left ventricular systolic dysfunction are started or restarted on beta-blocker treatment during their hospital admission once their condition has been stabilised.

[Statement 7.](#) Adults admitted to hospital with acute heart failure and reduced left ventricular ejection fraction are offered an aldosterone antagonist and an angiotensin-converting enzyme (ACE) inhibitor or angiotensin receptor blocker [ARB] if there are intolerable side effects.

Questions for consultation

Questions about the quality standard

Question 1 Does this draft quality standard accurately reflect the key areas for quality improvement?

Question 2 If the systems and structures were available, do you think it would be possible to collect the data for the proposed quality measures?

Question 3 For each quality statement what do you think could be done to support improvement and help overcome barriers?

Questions about the individual quality statements

Question 4 For draft quality statement 1: What is the specific quality improvement area for this statement? Is it the dedicated specialist heart failure team's early input OR their ongoing input? Please detail your answer.

If you do think that ongoing input is most important for quality improvement, please can you define concisely what specific ongoing input is involved from the heart failure team and its frequency?

Quality statement 1: Organisation of care: specialist input

Quality statement

Adults admitted to hospital with suspected acute heart failure have early and ongoing input from a dedicated specialist heart failure team.

Rationale

A dedicated specialist heart failure team with early involvement is important for cost-effective care. It can also positively contribute to rapid diagnosis. Ongoing input of the team will also help ensure appropriate care with stability before hospital discharge, for example, and make subsequent readmission less likely.

Quality measures

Structure

a) Evidence of local arrangements to ensure that adults admitted to hospital with suspected acute heart failure have early input from a dedicated specialist heart failure team.

Data source: Local data collection.

b) Evidence of local arrangements to ensure that adults admitted to hospital with suspected acute heart failure have ongoing input from a dedicated specialist heart failure team.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

Process

a) Proportion of adults admitted to hospital with suspected acute heart failure who have early input from a dedicated specialist heart failure team.

Numerator – the number in the denominator who receive early input from a dedicated specialist heart failure team.

Denominator – the number of adults admitted to hospital with suspected acute heart failure.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

b) Proportion of adults admitted to hospital with suspected acute heart failure who have ongoing input from a dedicated specialist heart failure team.

Numerator – the number in the denominator who receive ongoing input from a dedicated specialist heart failure team.

Denominator – the number of adults admitted to hospital with suspected acute heart failure.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

Outcome

a) Mortality rates.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

b) Readmission rates.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

What the quality statement means for service providers, healthcare professionals and commissioners

Service providers (Cardiac services) ensure that adults admitted to hospital with suspected acute heart failure have early and ongoing input from a dedicated specialist heart failure team.

Healthcare professionals ensure that adults admitted to hospital with suspected acute heart failure have early and ongoing input from a dedicated specialist heart failure team.

Commissioners (Clinical commissioning groups) ensure that adults admitted to hospital with suspected acute heart failure have early and ongoing input from a dedicated specialist heart failure team.

What the quality statement means for patients, service users and carers

Adults admitted to hospital with suspected acute heart failure have a team that specialises in treating heart failure and is involved in their early and ongoing care.

Source guidance

- [Acute heart failure](#) (2014) NICE guideline CG187, recommendation 1.1.2 (key priority for implementation)

Definitions of terms used in this quality statement

Early input

Input within 48 hours of admission.

[Expert consensus]

Dedicated specialist heart failure team

This team includes doctors, nurses (including heart failure specialist nurses), pharmacists, physiotherapists and a palliative care specialist led by the consultant specialist in heart failure ideally on the cardiology ward. This team will have appropriate competencies from primary and secondary care with close links with community heart failure services who play a vital role in monitoring patients after discharge.

[Adapted from [Acute heart failure](#) (2014) NICE guideline CG187 and expert consensus]

Question for consultation

What is the specific quality improvement area in this statement? Is it the dedicated specialist heart failure team's early input OR their ongoing input? Please detail your answer. If you think that ongoing input is most important for quality improvement,

please can you concisely define what specific ongoing input is involved from the heart failure team and its frequency?

Quality statement 2: Follow-up clinical assessment

Quality statement

Adults with acute heart failure have a follow-up clinical assessment by a member of the community specialist heart failure team within 2 weeks of hospital discharge.

Rationale

It is important that patients have early specialist heart failure follow-up within 2 weeks of hospital discharge to reduce early readmissions and achieve better long-term outcomes.

Quality measures

Structure

Evidence of local arrangements to ensure that adults with acute heart failure have a follow-up clinical assessment by a member of the community specialist heart failure team within 2 weeks of hospital discharge.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

Process

Proportion of adults with acute heart failure who have a follow-up clinical assessment by a member of the community specialist heart failure team within 2 weeks of hospital discharge.

Numerator – the number in the denominator who have a follow-up clinical assessment by a member of the community specialist heart failure team within 2 weeks of hospital discharge.

Denominator – the number of episodes of adults with acute heart failure who have been discharged from hospital.

Data source: Local data collection.

Outcome

a) Mortality rates.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

b) Readmission rates.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

What the quality statement means for service providers, healthcare professionals and commissioners

Service providers (Cardiac services) ensure that adults with acute heart failure have a follow-up clinical assessment by a member of the community specialist heart failure team within 2 weeks of hospital discharge.

Healthcare professionals ensure that a follow-up clinical assessment for adults with acute heart failure is undertaken by a member of the community specialist heart failure team within 2 weeks of hospital discharge.

Commissioners (Clinical commissioning groups) ensure that adults with acute heart failure have a follow-up clinical assessment by a member of the community specialist heart failure team within 2 weeks of hospital discharge.

What the quality statement means for patients, service users and carers

Adults with acute heart failure have a follow-up assessment by a member of the community specialist heart failure team within 2 weeks of hospital discharge.

Source guidance

- [Acute heart failure](#) (2014) NICE guideline CG187, recommendation 1.1.4

Quality statement 3: Single measurement of natriuretic peptide

Quality statement

Adults admitted with new suspected acute heart failure have a single measurement of natriuretic peptide.

Rationale

Natriuretic peptide testing (B-type natriuretic peptide [BNP] or N-terminal pro-B-type natriuretic peptide [NT-proBNP]) is an important tool for rapidly assessing adults admitted with new suspected acute heart failure. It can be used to rule out a diagnosis of heart failure or to determine whether further investigation with echocardiography is needed. It can save time and distress for the adult presenting with new suspected acute heart failure.

Quality measures

Structure

Evidence of local arrangements to ensure that adults admitted with new suspected acute heart failure have a single measurement of natriuretic peptide.

Data source: Local data collection.

Process

a) Proportion of adults admitted with new suspected acute heart failure who have a single measurement of natriuretic peptide.

Numerator – the number in the denominator who have a single measurement of natriuretic peptide.

Denominator – the number of episodes of adults presenting at hospital with new suspected acute heart failure.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

b) Proportion of hospitals that use appropriate assay thresholds of plasma BNP less than 100 ng/litre and plasma NT-proBNP less than 300 ng/litre.

Numerator – the number in the denominator that use appropriate assay thresholds of plasma BNP less than 100 ng/litre and plasma NT-proBNP less than 300 ng/litre.

Denominator – the number of hospitals.

Data source: Local data collection.

Outcome

a) Mortality rates.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

b) Length of stay.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

c) Readmission rates.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

What the quality statement means for service providers, healthcare professionals and commissioners

Service providers (Cardiac services) ensure that adults admitted with new suspected acute heart failure have a single measurement of natriuretic peptide undertaken by the cardiac team as a rapid triaging tool to rule out the diagnosis of heart failure.

Healthcare professionals ensure that adults admitted with new suspected acute heart failure have a single measurement of natriuretic peptide to rule out the diagnosis of heart failure.

Commissioners (Clinical commissioning groups) ensure that adults admitted with new suspected acute heart failure have a single measurement of natriuretic peptide to rule out the diagnosis of heart failure.

What the quality statement means for patients, service users and carers

Adults presenting at hospital with suspected new acute heart failure have their natriuretic peptide (also known as BNP or NT-proBNP) level in their blood measured. This test is a quick way for doctors to find out whether the adults are likely to have heart failure or whether their symptoms are caused by something else.

Source guidance

- [Acute heart failure](#) (2014) NICE guideline CG187, recommendation 1.2.2 (key priority for implementation)

Definitions of terms used in this quality statement

Natriuretic peptide

A protein substance secreted by the wall of the heart when it is stretched or under increased pressure. It has several forms and its level can be raised in a number of conditions, including heart failure. A normal natriuretic peptide level means that heart failure is unlikely, and its measurement can be used to exclude a diagnosis of heart failure. [Adapted from [Acute heart failure](#) (NICE guideline CG187) full guideline]

Specific thresholds to rule out the diagnosis of heart failure

- Plasma BNP less than 100 ng/litre
- Plasma NT-proBNP less than 300 ng/litre.

[Adapted from [Acute heart failure](#) (NICE guideline CG187) full guideline]

Quality statement 4: Transthoracic doppler 2D echocardiography

Quality statement

Adults presenting with new suspected acute heart failure and raised natriuretic peptide levels have a transthoracic doppler 2D echocardiogram undertaken within 48 hours of admission.

Rationale

Performing a transthoracic doppler 2D echocardiogram within 48 hours of admission for adults presenting with new suspected acute heart failure and raised natriuretic peptide levels will enable earlier diagnosis and appropriate management in terms of pharmacological treatment, care location, and relevant input from the heart failure team.

Quality measures

Structure

Evidence of local arrangements to ensure that adults presenting with new suspected acute heart failure and raised natriuretic peptide levels have a transthoracic doppler 2D echocardiogram undertaken within 48 hours of admission.

Data source: Local data collection.

Process

Proportion of adults presenting with new suspected acute heart failure and raised natriuretic peptide levels who have a transthoracic doppler 2D echocardiogram undertaken within 48 hours of admission.

Numerator – the number in the denominator who have a transthoracic doppler 2D echocardiogram undertaken within 48 hours of admission.

Denominator – the number of episodes of adults presenting with new suspected acute heart failure and raised natriuretic peptide levels.

Data source: Local data collection.

Outcome

a) Mortality rates.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

b) Length of stay.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

c) Incidence of adverse events (withdrawal of beta-blockers and other disease-modifying drugs).

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

d) Readmission rates.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

What the quality statement means for service providers, healthcare professionals and commissioners

Service providers (Secondary care services) ensure that adults presenting with new suspected acute heart failure and raised natriuretic peptide levels have a transthoracic doppler 2D echocardiogram undertaken within 48 hours of admission.

Healthcare professionals ensure that adults presenting with new suspected acute heart failure and raised natriuretic peptide levels have a transthoracic doppler 2D echocardiogram undertaken within 48 hours of admission.

Commissioners (Clinical commissioning groups) ensure that adults presenting with new suspected acute heart failure and raised natriuretic peptide levels have a transthoracic doppler 2D echocardiography undertaken within 48 hours of admission.

What the quality statement means for patients, service users and carers

Adults presenting with new suspected acute heart failure have their natriuretic peptide (also known as BNP or NT-proBNP) levels in their blood measured. If the level is raised, they have an echocardiogram within 48 hours to help find out if there is something wrong with their heart.

Source guidance

- [Acute heart failure](#) (2014) NICE guideline CG187, recommendation 1.2.3 (key priority for implementation) and 1.2.4 (key priority for implementation)

Definitions of terms used in this quality statement

Transthoracic doppler 2D echocardiogram

An echocardiogram is a test that uses ultrasound waves to measure the pumping action and structure of the heart, including the heart valves. A probe is moved over the surface of the chest and picks up echoes of sound (similar to an ultrasound scan used in pregnancy), which are shown as a picture on a screen.

[Adapted from Information for the public for [Acute heart failure: diagnosis and assessment](#)]

Quality statement 5: Continued beta-blocker treatment

Quality statement

Adults admitted with acute heart failure who are already taking beta-blockers do not stop this treatment unless they have a heart rate less than 50 beats per minute, second or third degree atrioventricular block, or shock.

Rationale

Continuing treatment with beta-blockers after admission with acute heart failure is supported for significantly improved longer-term use without an increase in mortality and adverse events such as bradycardia and hypotension.

Quality measures

Structure

Evidence of local arrangements to ensure that adults admitted with acute heart failure who are already taking beta-blockers do not stop this treatment unless they have a heart rate less than 50 beats per minute, second or third degree atrioventricular block, or shock.

Data source: Local data collection.

Process

Proportion of adults admitted with acute heart failure who are already taking beta-blockers who do not stop this treatment unless they have a heart rate less than 50 beats per minute, second or third degree atrioventricular block, or shock.

Numerator – the number in the denominator who do not stop this treatment.

Denominator – the number of hospital admissions of adults with acute heart failure who are already taking beta-blockers and have a heart rate less than 50 beats per minute, second or third degree atrioventricular block, or shock.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

Outcome

Mortality rates.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

What the quality statement means for service providers, healthcare professionals and commissioners

Service providers (Cardiac services) ensure that adults admitted with acute heart failure who are already taking beta-blockers are advised to continue this treatment unless they have a heart rate less than 50 beats per minute, second or third degree atrioventricular block, or shock.

Healthcare professionals advise adults admitted with acute heart failure who are already taking beta-blockers to continue this treatment unless they have a heart rate less than 50 beats per minute, second or third degree atrioventricular block, or shock.

Commissioners (Clinical commissioning groups) ensure that they commission services for adults admitted with acute heart failure who are already taking beta-blockers to enable them to continue this treatment unless they have a heart rate less than 50 beats per minute, second or third degree atrioventricular block, or shock.

What the quality statement means for patients, service users and carers

Adults admitted with acute heart failure who are already taking beta-blockers are advised to continue with this treatment unless they have a heart rate less than 50 beats per minute, heart block (where the electrical activity in the heart is disrupted), or shock (an emergency condition where the blood flow in the body suddenly drops).

Source guidance

- [Acute heart failure](#) (2014) NICE guideline CG187, recommendation 1.5.1 (key priority for implementation)

Definitions of terms used in this quality statement

Beta-blocker

Treatment for heart failure, heart rhythm disturbances, angina and heart attacks, high blood pressure. [Adapted from [Acute heart failure](#) (NICE guideline CG187) full guideline]

Second or third degree atrioventricular block, or shock

Atrioventricular block is the impairment of the conduction between the atria and the ventricles of the heart.

Cardiogenic shock is a life-threatening condition resulting from an inadequate circulation of blood due to failure of the heart to function effectively.

[Expert consensus]

Quality statement 6: Starting or restarting beta-blocker treatment

Quality statement

Adults with acute heart failure due to left ventricular systolic dysfunction are started or restarted on beta-blocker treatment during their hospital admission once their condition has been stabilised.

Rationale

In-hospital introduction of beta-blockers is associated with increased use of beta-blockers at follow-up and better long-term outcomes such as fewer adverse events and reduced mortality. It is important that the adult's condition is stable for typically 48 hours after starting or restarting beta-blockers and before hospital discharge.

Quality measures

Structure

Evidence of local arrangements to ensure that adults with acute heart failure due to left ventricular systolic dysfunction are started or restarted on beta-blocker treatment during their hospital admission once their condition has been stabilised.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

Process

a) Proportion of adults with acute heart failure due to left ventricular systolic dysfunction who are started on beta-blocker treatment during their hospital admission once their condition has been stabilised.

Numerator – the number in the denominator who are started on beta-blocker treatment during their hospital admission once their condition has been stabilised.

Denominator – the number of hospital admissions of adults with acute heart failure due to left ventricular systolic dysfunction in which the patient is not already taking a beta-blocker.

Data source: Local data collection.

b) Proportion of adults presenting with acute heart failure due to left ventricular systolic dysfunction who are restarted on beta-blocker treatment during their hospital admission once their condition has been stabilised.

Numerator – the number in the denominator who are restarted on beta-blocker treatment during their hospital admission once their condition has been stabilised.

Denominator – the number of hospital admissions of adults with acute heart failure due to left ventricular systolic dysfunction in which the patient is not already taking a beta blocker but has previously done so.

Data source: Local data collection.

Outcome

a) Mortality rates.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

b) Readmission rates.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

c) Incidence of adverse events (withdrawal of beta-blockers and other disease-modifying drugs).

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

d) Beta-blocker use at follow-up.

Data source: Local data collection.

e) Readmission rates.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

What the quality statement means for service providers, healthcare professionals and commissioners

Service providers (Cardiac services) ensure that adults presenting with acute heart failure due to left ventricular systolic dysfunction are started or restarted on beta-blocker treatment during their hospital admission, if clinically appropriate.

Healthcare professionals ensure that adults presenting with acute heart failure due to left ventricular systolic dysfunction are started or restarted on beta-blocker treatment during their hospital admission, if clinically appropriate.

Commissioners (Clinical commissioning groups) ensure that adults presenting with acute heart failure due to left ventricular systolic dysfunction are started or restarted on beta-blocker treatment during their hospital admission, if clinically appropriate.

What the quality statement means for patients, service users and carers

Adults with acute heart failure due to left ventricular dysfunction (known as LVSD, where the pumping chamber of the heart is not pumping well) start or restart beta-blockers while they are in hospital, once their condition has been stabilised, before discharge.

Source guidance

- [Acute heart failure](#) (2014) NICE guideline CG187, recommendations 1.5.2 (key priority for implementation) and 1.5.3 (key priority for implementation)

Definitions of terms used in this quality statement

Beta-blocker

Treatment for heart failure, heart rhythm disturbances, angina and heart attacks, high blood pressure.

[Adapted from [Acute heart failure](#) (NICE guideline CG187) full guideline]

Quality statement 7: Drug therapy

Quality statement

Adults admitted to hospital with acute heart failure and reduced left ventricular ejection fraction are offered an aldosterone antagonist and an angiotensin-converting enzyme (ACE) inhibitor or angiotensin receptor blocker [ARB] if there are intolerable side effects.

Rationale

Early initiation of aldosterone antagonists for adults with acute heart failure or either ACE inhibitors or ARBs is positively associated with improved outcomes such as lower mortality and readmission rates.

Quality measures

Structure

Evidence of local arrangements to ensure that adults admitted to hospital with acute heart failure and reduced left ventricular ejection fraction are offered an aldosterone antagonist and an angiotensin-converting enzyme (ACE) inhibitor or angiotensin receptor blocker [ARB] if there are intolerable side effects.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

Process

a) Proportion of new hospital admissions for adults with acute heart failure and reduced left ventricular ejection fraction when an ACE inhibitor and an ARB cannot be tolerated, that are treated with an aldosterone antagonist.

Numerator – the number in the denominator treated with an aldosterone antagonist.

Denominator – the number of new hospital admissions for adults with acute heart failure and reduced left ventricular ejection fraction when an ACE inhibitor and an ARB cannot be tolerated.

Data source: Local data collection.

b) Proportion of new hospital admissions for adults with acute heart failure and reduced left ventricular ejection fraction when an ARB cannot be tolerated, that are treated with an aldosterone antagonist and an ACE inhibitor.

Numerator – the number in the denominator treated with an aldosterone antagonist and an ACE inhibitor.

Denominator – the number of new hospital admissions for adults with acute heart failure and reduced left ventricular ejection fraction when an ARB cannot be tolerated.

Data source: Local data collection.

c) Proportion of new hospital admissions for adults with acute heart failure and reduced left ventricular ejection fraction when an ACE inhibitor cannot be tolerated, that are treated with an aldosterone antagonist and an ARB.

Numerator – the number in the denominator treated with an aldosterone antagonist and an ARB.

Denominator – the number of new hospital admissions for adults with acute heart failure and reduced left ventricular ejection fraction when an ACE cannot be tolerated.

Data source: Local data collection.

Outcome

a) Mortality rates.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

b) Readmission rates.

Data source: Local data collection. National data are collected in the National Institute for Cardiovascular Outcomes Research [heart failure audit 2012–2013](#).

What the quality statement means for service providers, healthcare professionals and commissioners

Service providers (Cardiac services) ensure that adults admitted to hospital with acute heart failure and reduced left ventricular ejection fraction are offered an aldosterone antagonist and an angiotensin-converting enzyme (ACE) inhibitor or angiotensin receptor blocker [ARB] if there are intolerable side effects.

Healthcare professionals ensure that adults admitted to hospital with acute heart failure and reduced left ventricular ejection fraction are offered an aldosterone antagonist and an angiotensin-converting enzyme (ACE) inhibitor or angiotensin receptor blocker [ARB] if there are intolerable side effects.

Commissioners (Clinical commissioning groups) ensure that adults admitted to hospital with acute heart failure and reduced left ventricular ejection fraction are offered an aldosterone antagonist and an angiotensin-converting enzyme (ACE) inhibitor or angiotensin receptor blocker [ARB] if there are intolerable side effects.

What the quality statement means for patients, service users and carers

Adults admitted to hospital with acute heart failure and reduced left ventricular ejection fraction are offered an aldosterone antagonist and an angiotensin-converting enzyme (ACE) inhibitor or angiotensin receptor blocker [ARB] if there are intolerable side effects.

Source guidance

- [Acute heart failure](#) (2014) NICE guideline CG187, recommendation 1.5.4 (key priority for implementation)

Definitions of terms used in this quality statement

Reduced left ventricular ejection fraction

The fraction of the outbound blood pumped by the heart with each heartbeat. It is measured on echocardiography. In healthy people it is around 60%. It is reduced in heart failure. [Expert consensus]

Status of this quality standard

This is the draft quality standard released for consultation from 15 June to 13 July 2015. It is not NICE's final quality standard on acute heart failure. The statements and measures presented in this document are provisional and may change after consultation with stakeholders.

Comments on the content of the draft standard must be submitted by 5pm on 13 July 2015. All eligible comments received during consultation will be reviewed by the Quality Standards Advisory Committee and the quality statements and measures will be refined in line with the Quality Standards Advisory Committee's considerations. The final quality standard will be available on the [NICE website](#) from December 2015.

Using the quality standard

Quality measures

The quality measures accompanying the quality statements aim to improve the structure, process and outcomes of care in areas identified as needing quality improvement. They are not a new set of targets or mandatory indicators for performance management.

We have indicated if current national indicators exist that could be used to measure the quality statements. These include indicators developed by the Health and Social Care Information Centre through its [Indicators for Quality Improvement Programme](#). If there is no national indicator that could be used to measure a quality statement, the quality measure should form the basis for audit criteria developed and used locally.

See NICE's [What makes up a NICE quality standard?](#) for further information, including advice on using quality measures.

Levels of achievement

Expected levels of achievement for quality measures are not specified. Quality standards are intended to drive up the quality of care, and so achievement levels of

100% should be aspired to (or 0% if the quality statement states that something should not be done). However, NICE recognises that this may not always be appropriate in practice, taking account of safety, choice and professional judgement, and therefore desired levels of achievement should be defined locally.

Using other national guidance and policy documents

Other national guidance and current policy documents have been referenced during the development of this quality standard. It is important that the quality standard is considered alongside the documents listed in Development sources.

Diversity, equality and language

During the development of this quality standard, equality issues have been considered and [equality assessments](#) are available.

Good communication between healthcare professionals and people with acute heart failure is essential. Treatment, care and support, and the information given about it, should be culturally appropriate. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English. People with acute heart failure should have access to an interpreter or advocate if needed.

Commissioners and providers should aim to achieve the quality standard in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations. Nothing in this quality standard should be interpreted in a way that would be inconsistent with compliance with those duties.

Development sources

Further explanation of the methodology used can be found in the quality standards [Process guide](#).

Evidence sources

The documents below contain recommendations from NICE guidance or other NICE-accredited recommendations that were used by the Quality Standards Advisory Committee to develop the quality standard statements and measures.

- [Acute heart failure](#) (2014) NICE guideline CG187

Policy context

It is important that the quality standard is considered alongside current policy documents, including:

- Department of Health (2014) [Living well for longer: national support for local action to reduce premature avoidable mortality](#)
- NHS England (2014) [Increase uptake of cardiac rehabilitation for people with coronary artery disease and following acute heart failure](#)
- Scottish Government (2014) [Heart disease improvement plan](#)
- Welsh Government (2014) [Together for health: a heart disease delivery plan](#)
- British Heart Foundation (2013) [The national audit of cardiac rehabilitation](#)
- Department of Health (2013) [Living well for longer: a call to action to reduce avoidable premature mortality](#)
- The Healthcare Quality Improvement Partnership (2013) [National heart failure audit 2012–2013](#)
- NHS Improvement (2011) [A guide for review and improvement of hospital based heart failure services](#)
- Health and Social Care Information Centre (2010) [National heart failure audit 2010](#)
- Healthcare Improvement Scotland (2010) [Clinical standards for heart disease](#)
- Greater Manchester and Cheshire Cardiac Network (2008) [Guidelines for the management of heart failure](#)

Definitions and data sources for the quality measures

- British Heart Foundation (2013) [The national audit of cardiac rehabilitation](#)
- The Healthcare Quality Improvement Partnership (2013) [National heart failure audit 2012–2013](#)

- NHS Improvement (2011) [A guide for review and improvement of hospital based heart failure services](#)
- Healthcare Improvement Scotland (2010) [Clinical standards for heart disease](#)
- Health and Social Care Information Centre (2010) [National heart failure audit 2010](#)

Related NICE quality standards

Published

- [Patient experience in adult NHS services](#) (2012) NICE quality standard 15
- [Chronic heart failure](#) (2011) NICE quality standard 9. Publication update expected 2015 or 2016.

In development

- [Cardiovascular risk assessment](#). Publication expected September 2015.
- [Secondary prevention of myocardial infarction](#). Publication expected September 2015.

Future quality standards

This quality standard has been developed in the context of all quality standards referred to NICE, including the following topics scheduled for future development:

- Acute medical admissions in the first 48 hours

The full list of quality standard topics referred to NICE is available from the [quality standards topic library](#) on the NICE website.

Quality Standards Advisory Committee and NICE project team

Quality Standards Advisory Committee

This quality standard has been developed by Quality Standards Advisory Committee 1. Membership of this committee is as follows:

Dr Gita Bhutani

Professional Lead, Psychological Services, Lancashire Care NHS Foundation Trust

Mrs Jennifer Bostock

Lay member

Dr Helen Bromley

Locum Consultant in Public Health, Cheshire West and Chester Council

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The following specialist members joined the committee to develop this quality standard:

Professor Martin Cowie

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Consultant Cardiologist, Whittington Health

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About this quality standard

NICE quality standards describe high-priority areas for quality improvement in a defined care or service area. Each standard consists of a prioritised set of specific, concise and measurable statements. NICE quality standards draw on existing NICE or NICE-accredited guidance that provides an underpinning, comprehensive set of recommendations, and are designed to support the measurement of improvement.

The methods and processes for developing NICE quality standards are described in the [quality standards process guide](#).

This quality standard has been incorporated into the NICE pathway on [acute heart failure](#).

NICE produces guidance, standards and information on commissioning and providing high-quality healthcare, social care, and public health services. We have agreements to provide certain NICE services to Wales, Scotland and Northern Ireland. Decisions on how NICE guidance and other products apply in those countries are made by ministers in the Welsh government, Scottish government, and Northern Ireland Executive. NICE guidance or other products may include references to organisations or people responsible for commissioning or providing care that may be relevant only to England.

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