

Hypertension in adults

Quality standard

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This standard is based on NG136.

This standard should be read in conjunction with QS21, QS15, QS35, QS52, QS68, QS92, QS93, QS100, QS99, QS2, QS6 and QS196.

Introduction and overview

Introduction

Hypertension (high blood pressure) is one of the most important preventable causes of premature morbidity and mortality in the UK. It increases the risk of atrial fibrillation and is a major risk factor for stroke (ischaemic and haemorrhagic), myocardial infarction, heart failure, chronic kidney disease, cognitive decline and premature death. Raised blood pressure is one of the three main modifiable risk factors for cardiovascular disease, which account for 80% of all cases of premature coronary heart disease (CHD).

This quality standard covers the management of primary hypertension in adults, including diagnosis and investigations, treatment to reduce risk of cardiovascular disease, monitoring of treatment efficacy, and specialist referral. For more information see the [scope for 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. They draw on existing guidance, which provides an underpinning, comprehensive set of recommendations, and are designed to support the measurement of improvement. The quality standard, in conjunction with the guidance on which it is based, should contribute to the improvements outlined in the following frameworks:

- [NHS outcomes framework 2013 to 2014](#)
- [Improving outcomes and supporting transparency: Part 1: a public health outcomes framework for England, 2013 to 2016](#)

Overview

The quality standard for hypertension states that services should be commissioned from and coordinated across all relevant agencies encompassing the hypertension care pathway. A person-

centred approach to provision of services is fundamental in delivering high-quality care to adults with hypertension.

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 cross refer across the library of NICE quality standards when designing high-quality services.

Patients, service users and carers may use the quality standard to find out about the quality of care they should expect to receive; support asking questions about the care they receive; and to make a choice between providers of social care services.

The quality standard should be read in the context of national and local guidelines on training and competencies. All health and social care professionals involved in assessing, caring for and treating adults with hypertension should have sufficient and appropriate training and competencies to deliver the actions and interventions described in the quality standard.

List of quality statements

Statement 1 People with suspected hypertension are offered ambulatory blood pressure monitoring (ABPM) to confirm a diagnosis of hypertension.

Statement 2 People with newly diagnosed hypertension receive investigations for target organ damage within 1 month of diagnosis.

Statement 3 This statement has been replaced by quality statements on primary and secondary prevention of cardiovascular disease in [NICE's quality standard for cardiovascular disease risk assessment and lipid modification](#).

Statement 4 People with treated hypertension have a clinic blood pressure target set to below 140/90 mmHg if aged under 80 years, or below 150/90 mmHg if aged 80 years and over.

Statement 5 People with hypertension are offered a review of risk factors for cardiovascular disease annually.

Statement 6 People with resistant hypertension who are receiving 4 antihypertensive drugs and whose blood pressure remains uncontrolled are referred for specialist assessment.

Other quality standards that should also be considered when choosing, commissioning or providing a high-quality hypertension service are listed in [related NICE quality standards](#).

Quality statement 1: Diagnosis – ambulatory blood pressure monitoring

Quality statement

People with suspected hypertension are offered ambulatory blood pressure monitoring (ABPM) to confirm a diagnosis of hypertension.

Rationale

ABPM is the most accurate method for confirming a diagnosis of hypertension, and its use should reduce unnecessary treatment in people who do not have true hypertension. ABPM has also been shown to be superior to other methods of multiple blood pressure measurement for predicting blood pressure-related clinical events.

Quality measure

Structure

Evidence of local arrangements to ensure people with suspected hypertension are offered ABPM to confirm a diagnosis of hypertension.

Process

Proportion of people with suspected hypertension who receive ABPM to confirm a diagnosis of hypertension.

Numerator – the number of people in the denominator who receive ABPM to confirm a diagnosis of hypertension.

Denominator – the number of people with suspected hypertension.

What the quality statement means for different audiences

Service providers ensure systems are in place to offer ABPM to confirm a diagnosis of

hypertension.

Healthcare professionals offer ABPM to confirm a diagnosis of hypertension.

Commissioners ensure they commission services that offer ABPM to confirm a diagnosis of hypertension.

People with suspected hypertension (high blood pressure) are offered ambulatory blood pressure monitoring (which involves wearing a blood pressure monitor during their normal waking hours) to confirm whether or not they have hypertension.

Source guidance

Hypertension in adults: diagnosis and management. NICE guideline NG136 (2019), recommendation 1.2.3

Data source

Structure

Local data collection.

Process

Local data collection.

Definitions

Ambulatory blood pressure monitoring (ABPM)

ABPM involves a cuff and bladder connected to electronic sensors which detect changes in cuff pressure and allow blood pressure to be measured oscillometrically. Systolic and diastolic pressure readings are deduced from the shape of oscillometric pressure changes using an algorithm built into the measuring device. A patient's blood pressure can be automatically measured at repeated intervals throughout the day and night, while they continue routine activities. Systolic and diastolic pressure can be plotted over time, with most devices providing average day, night and 24-hour pressures. NICE recommends recording a daytime average to confirm diagnosis. [[NICE's 2011 full guideline on hypertension in adults](#)]

Suspected hypertension

Clinic blood pressure of 140/90 mmHg or higher without a confirmed diagnosis of hypertension.

[[NICE's guideline on hypertension in adults](#)]

Equality and diversity considerations

ABPM may not be suitable for everyone, for example people with particular learning or physical disabilities. Some people may be unable to tolerate ABPM and some people may decline it.

Home blood pressure monitoring (HBPM) should be offered as an alternative to ABPM in such cases, in line with [NICE's guideline on hypertension in adults](#), recommendation 1.2.4. If a person is unable to tolerate ABPM, HBPM is a suitable alternative to confirm the diagnosis of hypertension.

Quality statement 2: Investigations for target organ damage

Quality statement

People with newly diagnosed hypertension receive investigations for target organ damage within 1 month of diagnosis.

Rationale

Assessment of target organ damage can alert the clinician to possible secondary causes of hypertension, some of which are potentially life threatening and some that may be amenable to potentially curative interventions. It can also support the clinician to decide the appropriate blood pressure threshold at which to consider drug therapy for the treatment of hypertension.

Quality measure

Structure

Evidence of local arrangements for people with newly diagnosed hypertension to receive all investigations for target organ damage within 1 month of diagnosis.

Process

Proportion of people with newly diagnosed hypertension who receive all investigations for target organ damage within 1 month of diagnosis.

Numerator – the number of people in the denominator who receive all investigations for target organ damage within 1 month of diagnosis.

Denominator – the number of people with newly diagnosed hypertension.

What the quality statement means for different audiences

Service providers ensure systems are in place for people with newly diagnosed hypertension to

receive all investigations for target organ damage within 1 month of diagnosis.

Healthcare professionals carry out all investigations for target organ damage for people with newly diagnosed hypertension within 1 month of diagnosis.

Commissioners ensure they commission services that carry out all investigations for target organ damage for people with newly diagnosed hypertension within 1 month of diagnosis.

People with newly diagnosed hypertension (high blood pressure) receive tests within 1 month of being diagnosed to check for any damage to organs such as their eyes, heart or kidneys.

Source guidance

[Hypertension in adults: diagnosis and management. NICE guideline NG136 \(2019\), recommendations 1.2.5 and 1.3.3](#)

Data source

Structure

Local data collection.

Process

Local data collection.

Definitions

Investigations for target organ damage

For all people with hypertension, healthcare professionals should offer to:

- test for the presence of protein in the urine by sending a urine sample for estimation of the albumin:creatinine ratio and test for haematuria using a reagent strip
- take a blood sample to measure glycated haemoglobin (HbA1C), electrolytes, creatinine, estimated glomerular filtration rate, serum total cholesterol and HDL cholesterol
- examine the fundi for the presence of hypertensive retinopathy

- arrange for a 12-lead electrocardiograph to be performed.

[[NICE's guideline on hypertension in adults](#), recommendation 1.3.3]

Target organ damage

Damage to organs such as the heart, brain, kidneys and eyes. Examples are left ventricular hypertrophy, chronic kidney disease, hypertensive retinopathy or increased urine albumin:creatinine ratio. [[NICE's guideline on hypertension in adults](#), terms used in this guideline]

Quality statement 3: Statin therapy

Quality statement 3 has been replaced by quality statements on primary and secondary prevention of cardiovascular disease in [NICE's quality standard for cardiovascular risk assessment and lipid modification](#).

Quality statement 4: Blood pressure targets

Quality statement

People with treated hypertension have a clinic blood pressure target set to below 140/90 mmHg if aged under 80 years, or below 150/90 mmHg if aged 80 years and over.

Rationale

Hypertension is associated with a higher risk of cardiovascular events. Setting blood pressure to recommended levels aims to promote primary and secondary prevention of cardiovascular disease, and to lower the risk of cardiovascular events.

Quality measure

Structure

- a) Evidence of local arrangements to ensure people aged under 80 years with treated hypertension have a clinic blood pressure target set to below 140/90 mmHg.
- b) Evidence of local arrangements to ensure people aged 80 years and over with treated hypertension have a clinic blood pressure target set to below 150/90 mmHg.

Outcome

People with treated hypertension whose target blood pressure is achieved.

What the quality statement means for different audiences

Service providers ensure systems are in place for people aged under 80 years with treated hypertension to have a clinic blood pressure target set to below 140/90 mmHg, and for people aged 80 years and over with treated hypertension to have a clinic blood pressure target set to below 150/90 mmHg.

Healthcare professionals ensure that people aged under 80 years with treated hypertension have a

clinic blood pressure target set to below 140/90 mmHg, and people aged 80 years and over with treated hypertension have a clinic blood pressure target set to below 150/90 mmHg. They should use clinical judgement when agreeing blood pressure targets with people with frailty or multimorbidity.

Commissioners ensure they commission services that have arrangements for people aged under 80 years with treated hypertension to have a clinic blood pressure target set to below 140/90 mmHg, and for people aged 80 years and over with treated hypertension to have a clinic blood pressure target set to below 150/90 mmHg.

People who are receiving treatment for hypertension (high blood pressure) have a target clinic blood pressure (blood pressure measured in their GP practice or clinic) below 140/90 mmHg if they are aged under 80 years, or a clinic blood pressure below 150/90 mmHg if they are aged 80 years or over.

Source guidance

[Hypertension in adults: diagnosis and management. NICE guideline NG136 \(2019\), recommendations 1.4.20 and 1.4.21](#)

Data source

Structure

a) and b) Local data collection.

Outcome

Local data collection.

Definitions

Clinic blood pressure

Blood pressure measured in the clinic.

For a clinic blood pressure of 140/90 mmHg, the corresponding ambulatory blood pressure monitoring (ABPM) daytime average or home blood pressure monitoring (HBPM) average blood pressure is 135/85 mmHg.

For a clinic blood pressure of 160/100 mmHg or higher, the corresponding ABPM daytime average or HBPM average blood pressure is 150/95 mmHg or higher. [[NICE's guideline on hypertension in adults](#), terms used in this guideline]

Treated hypertension

Treated hypertension includes treatment with antihypertensive drugs. [[NICE's guideline on hypertension in adults](#)]

Equality and diversity considerations

Targets are based on evidence of safe practice. A person aged 80 years or over with treated hypertension would not have a target clinic blood pressure of 150/90 mmHg if their blood pressure was already treated to below this threshold. Healthcare professionals should use clinical judgement when agreeing blood pressure targets with people with frailty or multimorbidity.

Quality statement 5: Review of cardiovascular disease risk factors

Quality statement

People with hypertension are offered a review of risk factors for cardiovascular disease annually.

Rationale

People's blood pressure and cardiovascular disease risk will increase over time. A review of risk factors for cardiovascular disease delivered as part of an annual review of care should support identification of increased risk and provide an opportunity to address modifiable risk factors.

Quality measure

Structure

Evidence of local arrangements to ensure people with hypertension are offered a review of risk factors for cardiovascular disease annually.

Process

Proportion of people who have had hypertension for 12 months or longer who have had a review of risk factors for cardiovascular disease within the past 12 months.

Numerator – the number of people in the denominator who have had a review of risk factors for cardiovascular disease within the past 12 months.

Denominator – the number of people who have had hypertension for 12 months or longer who do not have established cardiovascular disease.

What the quality statement means for different audiences

Service providers ensure systems are in place to offer people with hypertension a review of risk factors for cardiovascular disease annually.

Healthcare professionals offer people with hypertension a review of risk factors for cardiovascular disease annually.

Commissioners ensure they commission services that offer people with hypertension a review of risk factors for cardiovascular disease annually.

People with hypertension (high blood pressure) are offered a review of risk factors for cardiovascular disease annually.

Source guidance

Hypertension in adults: diagnosis and management. NICE guideline NG136 (2019), recommendation 1.4.23

Data source

Structure

Local data collection.

Process

Local data collection. NHS Quality and Outcomes Framework (INLIQ) indicator CVD-PP02 reports the percentage of patients diagnosed with hypertension (diagnosed on or after 1 April 2009) who are given lifestyle advice in the preceding 12 months for: smoking cessation, safe alcohol consumption and healthy diet.

Definitions

Annual review of care

An annual review to monitor blood pressure, provide people with support and discuss their lifestyle, symptoms and medication. [NICE's guideline on hypertension in adults, recommendation 1.4.23]

Review of risk factors for cardiovascular disease

Review of risk factors for cardiovascular disease could include:

- smoking status
- alcohol consumption
- blood pressure
- body mass index or other measure of obesity
- total cholesterol, non-HDL cholesterol, HDL cholesterol and triglycerides
- HbA1c
- renal function and estimated glomerular filtration rate
- transaminase level (alanine aminotransferase or aspartate aminotransferase)
- thyroid-stimulating hormone.

[Adapted from [NICE's guideline on cardiovascular disease: risk assessment and reduction, including lipid modification](#), recommendation 1.3.13]

Quality statement 6: Referral to a specialist for people with resistant hypertension

Quality statement

People with resistant hypertension who are receiving 4 antihypertensive drugs and whose blood pressure remains uncontrolled are referred for specialist assessment.

Rationale

People with resistant hypertension will usually be at high risk of cardiovascular disease. Specialist assessment and evaluation supports management of their condition.

Quality measure

Structure

Evidence of local arrangements for people with resistant hypertension who are receiving 4 antihypertensive drugs and whose blood pressure remains uncontrolled to be referred for specialist assessment.

Process

Proportion of people with resistant hypertension who are receiving 4 antihypertensive drugs and whose blood pressure remains uncontrolled who are referred for specialist assessment.

Numerator – the number of people in the denominator who are referred for specialist assessment.

Denominator – the number of people with resistant hypertension who are receiving 4 antihypertensive drugs and whose blood pressure remains uncontrolled.

What the quality statement means for different audiences

Service providers ensure local arrangements are in place for people with resistant hypertension who are receiving 4 antihypertensive drugs and whose blood pressure remains uncontrolled to be

referred for specialist assessment.

Healthcare professionals refer people with resistant hypertension who are receiving 4 antihypertensive drugs and whose blood pressure remains uncontrolled for specialist assessment.

Commissioners ensure they commission services that refer people with resistant hypertension who are receiving 4 antihypertensive drugs and whose blood pressure remains uncontrolled for specialist assessment.

People with resistant hypertension (high blood pressure that is difficult to control) who are receiving 4 antihypertensive drugs are referred for a specialist assessment.

Source guidance

Hypertension in adults: diagnosis and management. NICE guideline NG136 (2019), recommendations 1.4.44, 1.4.46 and 1.4.50

Data source

Structure

Local data collection.

Process

Local data collection.

Definitions

Resistant hypertension

Hypertension that is not controlled in adults taking the optimal tolerated doses of an angiotensin-converting enzyme (ACE) inhibitor or an angiotensin II receptor blocker (ARB) plus a calcium-channel blocker (CCB) and a thiazide-like diuretic. [[NICE's guideline on hypertension in adults, recommendation 1.4.44](#)]

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.

See [how to use quality standards](#) 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 by commissioners, providers, health and social care practitioners, patients, service users and carers alongside the documents listed in [development sources](#).

Diversity, equality and language

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

Good communication between health and social care services and people with hypertension 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 hypertension 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 avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this quality standard should be interpreted in a way that would be inconsistent with compliance with those duties.

Development sources

Evidence sources

The document below contains recommendations from NICE guidance or other NICE-accredited sources that were used by the Topic Expert Group to develop the quality standard statements and measures.

[Hypertension in adults: diagnosis and management. NICE guideline NG136 \(2019\)](#)

Policy context

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

[UK National Screening Committee. The UK NSC policy on hypertension screening in adults \(2006\)](#)

Definitions and data sources for the quality measures

References included in the definitions and data sources sections:

[Cardiovascular disease: risk assessment and reduction, including lipid modification \(2014, updated 2016\) NICE guideline CG181](#)

Related NICE quality standards

Published

- [Medicines optimisation. NICE quality standard 120 \(2016\)](#)
- [Cardiovascular risk assessment and lipid modification. NICE quality standard 100 \(2015\)](#)
- [Hypertension in pregnancy. NICE quality standard 35 \(2013, updated 2019\)](#)
- [Patient experience in adult NHS services. NICE quality standard 15 \(2012, updated 2019\)](#)

Future quality standards

[Secondary care management of malignant hypertension](#)

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Update information

September 2015: This quality standard has been updated to ensure alignment with the NICE quality standard for [NICE's quality standard for cardiovascular disease and lipid modification](#) published in September 2015.

Statement 3 on statin therapy has been removed and replaced by statements in the quality standard for cardiovascular disease and lipid modification that cover primary and secondary prevention of cardiovascular disease.

Minor changes since publication

August 2019: Changes have been made to align this quality standard with the updated [NICE guideline on hypertension in adults](#). Links, definitions and source guidance references have been updated throughout.

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.

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, this may not always be appropriate in practice. Taking account of safety, shared decision-making, choice and professional judgement, desired levels of achievement should be defined locally.

Information about [how NICE quality standards are developed](#) is available from the NICE website.

This quality standard has been incorporated into the [NICE Pathway for hypertension](#), which brings together everything we have said on a topic in an interactive flowchart.

NICE has produced a [quality standard service improvement template](#) to help providers make an initial assessment of their service compared with a selection of quality statements. This tool is updated monthly to include new quality standards.

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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Supporting organisations

Many organisations share NICE's commitment to quality improvement using evidence-based

guidance. The following supporting organisations have recognised the benefit of the quality standard in improving care for patients, carers, service users and members of the public. They have agreed to work with NICE to ensure that those commissioning or providing services are made aware of and encouraged to use the quality standard.

- [Arrhythmia Alliance](#)
- [Blood Pressure UK](#)
- [British Hypertension Society](#)
- [Royal College of Obstetricians and Gynaecologists](#)