NICE National Institute for Health and Care Excellence

NICE quality standard

Hypertension in adults

Quality standard
Published: 20 March 2013
Last updated: 1 September 2015

www.nice.org.uk/guidance/qs28

Contents

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.

Quality statements

Statement 1 Adults with suspected hypertension have ambulatory blood pressure monitoring (ABPM) or home blood pressure monitoring (HBPM) to confirm a diagnosis of hypertension.

Statement 2 Adults 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Statement 3 This statement has been replaced by quality statements on primary and secondary prevention of cardiovascular disease in NICE's quality standard for cardiovascular disease risk assessment and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 Adults with hypertension have a blood pressure target set that is appropriate for their age and whether blood pressure is measured in clinic or by ambulatory or home monitoring

Statement 5 Adults with hypertension have an annual review of risk factors for cardiovascular disease.

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

Quality statement 1: Diagnosis – ambulatory blood pressure monitoring

Quality statement

Adults with suspected hypertension have ambulatory blood pressure monitoring (ABPM) or home blood pressure monitoring (HBPM) 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 adults 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. HBPM may be used if ABPM is unsuitable or the person is unable to tolerate ABPM, for example, for adults with particular learning or physical disabilities.

Quality measures

The following measures can be used to assess the quality of care or service provision specified in the statement. They are examples of how the statement can be measured, and can be adapted and used flexibly.

Process

Proportion of adults with a new diagnosis of hypertension whose diagnosis has been confirmed by ABPM or HBPM.

Numerator – the number of adults in the denominator whose diagnosis has been confirmed by ABPM or HBPM.

Denominator – the number of adults with a new diagnosis of hypertension.

Data source: Data can be collected from information recorded on GP systems.

What the quality statement means for different audiences

Service providers (such as general practices and community pharmacies) ensure that systems are in place to offer ABPM and HBPM to confirm a diagnosis of hypertension.

Healthcare professionals (such as GPs, practice nurses or community pharmacists) offer ABPM or HBPM to confirm a diagnosis of hypertension.

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

Adults with suspected hypertension (high blood pressure) have ambulatory blood pressure monitoring (which involves wearing a blood pressure monitor during their normal waking hours) or home blood pressure monitoring to confirm whether they have hypertension.

Source guidance

Hypertension in adults: diagnosis and management. NICE guideline NG136 (2019, updated 2023), recommendations 1.2.3 and 1.2.4

Definitions of terms used in this quality statement

Suspected hypertension

Clinic blood pressure between 140/90 mmHg and 180/120 mmHg without a confirmed diagnosis of hypertension. [NICE's guideline on hypertension in adults, recommendation 1.2.3]

Ambulatory blood pressure monitoring (ABPM)

ABPM involves a cuff and bladder connected to electronic sensors that 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, section 5.7.3]

Home blood pressure monitoring (HBPM)

HBPM devices are oscillometric and measure blood pressure on the upper arm, the wrist or the finger. Home monitoring potentially offers some similar benefits to ABPM. Frequent measurement produces average values that may be more reproducible and reliable than traditional clinic measurement. To confirm a diagnosis of hypertension, blood pressure should be measured twice daily, ideally in the morning and evening and continued for at least 4 days, ideally 7 days. For each blood pressure recording, 2 consecutive measures should be taken at least 1 minute apart when seated. [NICE's 2011 full guideline on hypertension in adults, section 5.7.3, and NICE's guideline on hypertension in adults, recommendation 1.2.7]

Quality statement 2: Investigations for target organ damage

Quality statement

Adults 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 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 measures

The following measures can be used to assess the quality of care or service provision specified in the statement. They are examples of how the statement can be measured, and can be adapted and used flexibly.

Process

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

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

Denominator – the number of adults with newly diagnosed hypertension.

Data source: Data can be collected from information recorded locally by healthcare professionals and provider organisations, for example, from patient records.

What the quality statement means for different audiences

Service providers (such as general practices) ensure that systems are in place for adults with newly diagnosed hypertension to receive all investigations for target organ damage within 1 month of diagnosis.

Healthcare professionals (such as GPs and practice nurses) carry out all investigations for target organ damage for adults with newly diagnosed hypertension within 1 month of diagnosis.

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

Adults 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, updated 2023), recommendations 1.2.5 and 1.3.3

Definitions of terms used in this quality statement

Investigations for target organ damage

For all adults 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, electrolytes, creatinine, estimated glomerular filtration rate, serum total cholesterol and high-density lipoprotein 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

Adults with hypertension have a blood pressure target set that is appropriate for their age and whether blood pressure is measured in clinic or by ambulatory or home monitoring.

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. The target depends on the person's age (aged under 80 or 80 and over) and whether blood pressure is measured in a clinic setting or by ambulatory blood pressure monitoring (ABPM) or home blood pressure monitoring (HBPM).

Quality measures

The following measures can be used to assess the quality of care or service provision specified in the statement. They are examples of how the statement can be measured, and can be adapted and used flexibly.

Outcome

a) The proportion of adults aged under 80 years with hypertension who have a blood pressure below 140/90 mmHg, or below 135/85 mmHg if measured using ABPM or HBPM.

Numerator – the number of adults in the denominator who have a blood pressure below 140/90 mmHg, or below 135/85 mmHg if measured using ABPM or HBPM.

Denominator – the number of adults aged under 80 years with hypertension.

Data source: Quality and Outcomes Framework indicator HYP008 reports the percentage

of patients aged 79 years or under with hypertension in whom the last blood pressure reading (measured in the preceding 12 months) is 140/90 mmHg or less (or equivalent home blood pressure reading). CVD Prevent indicator CVDP002HYP reports the percentage of patients aged 18 to 79 years with GP-recorded hypertension in whom the last blood pressure reading within the preceding 12 months is equal to 140/90 mmHg or less.

b) The proportion of adults aged 80 years and over with hypertension who have a blood pressure below 150/90 mmHg, or below 145/85 mmHg if measured using ABPM or HBPM.

Numerator – the number of adults in the denominator who have a blood pressure below 150/90 mmHg, or below 145/85 mmHg if measured using ABPM or HBPM.

Denominator – the number of adults aged 80 years and over with hypertension.

Data source: Quality and Outcomes Framework indicator HYP009 reports the percentage of patients aged 80 years or over with hypertension in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less (or equivalent home blood pressure reading). CVD Prevent indicator CVDP003HYP reports the percentage of patients aged 80 years or over with GP-recorded hypertension in whom the last blood pressure reading within the preceding 12 months is 150/90 mmHg or less.

What the quality statement means for different audiences

Service providers (such as general practices) ensure that systems are in place for adults with hypertension have a blood pressure target set that is appropriate for their age and whether blood pressure is measured in clinic or by ambulatory or home monitoring.

Healthcare professionals (such as GPs and practice nurses) ensure that adults with hypertension have a blood pressure target set that is appropriate for their age and whether blood pressure is measured in clinic or by ambulatory or home monitoring. They should use clinical judgement when agreeing blood pressure targets with adults with frailty or multimorbidity.

Commissioners ensure that they commission services that have arrangements for adults with hypertension to have a blood pressure target set that is appropriate for their age and

whether the blood pressure is measured in clinic or by ambulatory or home monitoring.

Adults who have hypertension (high blood pressure) have a target clinic blood pressure) that is appropriate for their age and whether blood pressure is measured in their GP practice or clinic or by ambulatory or home monitoring.

Source guidance

Hypertension in adults: diagnosis and management. NICE guideline NG136 (2019, updated 2023), recommendations 1.4.20 to 1.4.22

Equality and diversity considerations

Targets are based on evidence of safe practice. An adult aged 80 years or over with diagnosed 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 adults with frailty or multimorbidity.

Quality statement 5: Review of cardiovascular disease risk factors

Quality statement

Adults with hypertension have an annual review of risk factors for cardiovascular disease.

Rationale

Adult's blood pressure and cardiovascular disease risk increases 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 measures

The following measures can be used to assess the quality of care or service provision specified in the statement. They are examples of how the statement can be measured, and can be adapted and used flexibly.

Process

Proportion of adults 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 adults in the denominator who have had a review of risk factors for cardiovascular disease within the past 12 months.

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

Data source: Data can be collected from information recorded locally by healthcare professionals and provider organisations, for example, from patient records. CVD Prevent indicator CVD004HYP reports the percentage of patients aged 18 and over with GP-

recorded hypertension who have had a blood pressure reading within the preceding 12 months. CVD Prevent indicator CVDP001SMOK reports the percentage of patients aged 18 and over with GP-recorded cardiovascular disease or risk factors (including hypertension) who are GP-recorded current smokers or have no smoking status recorded, whose notes record smoking status in the preceding 12 months. Quality and Outcomes Framework indicator SMOK002 reports the percentage of patients with hypertension whose notes record smoking status in the preceding 12 months. Quality and Outcomes Framework indicators no longer in QOF (INLIQ) indicator CVD-PP02 reports the percentage of patients diagnosed with hypertension (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.

What the quality statement means for different audiences

Service providers (such as general practices) ensure that systems are in place to offer adults with hypertension an annual review of risk factors for cardiovascular disease.

Healthcare professionals (such as GPs and practice nurses) offer adults with hypertension an annual review of risk factors for cardiovascular disease.

Commissioners ensure that they commission services that offer adults with hypertension an annual review of risk factors for cardiovascular disease.

Adults with hypertension (high blood pressure) are offered a review of risk factors for cardiovascular disease each year.

Source guidance

Hypertension in adults: diagnosis and management. NICE guideline NG136 (2019, updated 2023), recommendation 1.4.24

Definitions of terms used in this quality statement

Annual review

An annual review to monitor blood pressure, provide adults with support and discuss their lifestyle, symptoms and medication. [NICE's guideline on hypertension in adults, recommendation 1.4.24]

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
- full lipid profile
- diabetes status
- renal function
- transaminase level (alanine aminotransferase or aspartate aminotransferase)
- thyroid-stimulating hormone in people with symptoms of underactive or overactive thyroid.

[Adapted from NICE's guideline on cardiovascular disease: risk assessment and reduction, including lipid modification, recommendation 1.5.5]

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

Quality statement

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

Rationale

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

Quality measures

The following measures can be used to assess the quality of care or service provision specified in the statement. They are examples of how the statement can be measured, and can be adapted and used flexibly.

Process

Proportion of adults 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 adults in the denominator who are referred for specialist assessment.

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

Data source: Data can be collected from information recorded locally by healthcare

professionals and provider organisations, for example, from patient records.

What the quality statement means for different audiences

Service providers (such as general practices) ensure that local arrangements are in place for adults with resistant hypertension who are receiving 4 antihypertensive drugs and whose blood pressure remains uncontrolled to be referred for specialist assessment.

Healthcare professionals (such as GPs) refer adults with resistant hypertension who are receiving 4 antihypertensive drugs and whose blood pressure remains uncontrolled for specialist assessment.

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

Adults with resistant hypertension (high blood pressure that is difficult to control) who are receiving 4 antihypertensive drugs (drugs to treat high blood pressure) and whose blood pressure is still high are referred for specialist assessment.

Source guidance

Hypertension in adults: diagnosis and management. NICE guideline NG136 (2019, updated 2023), recommendations 1.4.46, 1.4.48 and 1.4.52

Definitions of terms used in this quality statement

Resistant hypertension

Hypertension that is not controlled in adults taking the optimal tolerated doses of an angiotensin-converting enzyme inhibitor or an angiotensin II receptor blocker plus a calcium-channel blocker and a thiazide-like diuretic. [NICE's guideline on hypertension in adults, recommendation 1.4.46]

Update information

September 2015: This quality standard has been updated to ensure alignment with NICE's quality standard for cardiovascular risk assessment and lipid modification published in September 2015.

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

Minor changes since publication

March 2024: Data sources have been reviewed and references to national data sources added to measures in statements 1, 4 and 5. Statements 1 and 4 have been amended to reflect the use of ambulatory blood pressure monitoring and home blood pressure monitoring. Structure measures have been removed.

December 2023: Changes have been made to align this quality standard with the updated NICE guideline on cardiovascular disease: risk assessment and reduction, including lipid modification. The definition for review of risk factors for cardiovascular disease has been updated in statement 5.

May 2023: Changes have been made to align this quality standard with the updated NICE guideline on cardiovascular disease: risk assessment and reduction, including lipid modification. Source guidance references have been updated for a definition used in quality statement 5.

March 2022: Changes have been made to align this quality standard with the updated NICE guideline on hypertension in adults. Source guidance references have been updated throughout.

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.

See our webpage on quality standards advisory committees for details about our standing committees. Information about the topic experts invited to join the standing members is available from the webpage for this quality standard.

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 guidance and quality standards apply in England and Wales. Decisions on how they apply in Scotland and Northern Ireland are made by the Scottish government and Northern Ireland Executive. NICE quality standards may include references to organisations or people responsible for commissioning or providing care that may be relevant only to England.

Resource impact

NICE quality standards should be achievable by local services. The potential resource impact is considered by the quality standards advisory committee, drawing on resource

impact work for the source guidance. Organisations are encouraged to use the resource impact tools for NICE's guideline on hypertension in adults to help estimate local costs.

Diversity, equality and language

Equality issues were considered during development and equality assessments for this quality standard are available. Any specific issues identified during development of the quality statements are highlighted in each statement.

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.

ISBN: 978-1-4731-0092-3

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 and Irish Hypertension Society
- Royal College of Obstetricians and Gynaecologists