NICE National Institute for Health and Care Excellence

NICE quality standard

Hypertension in pregnancy

Quality standard

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Contents

This standard is based on NG133 and NG201.

This standard should be read in conjunction with QS22, QS28, QS32, QS3, QS37, QS15, QS46, QS60, QS105, QS135 and QS192.

Quality statements

Quality statement 2 updates and replaces quality statement 7: risk assessment – pre-eclampsia in NICE's quality standard on antenatal care.

Statement 1 Women of childbearing potential with treated hypertension are given information annually about safe antihypertensive treatment during pregnancy.

Statement 2 Pregnant women at increased risk of pre-eclampsia at the booking appointment are offered a prescription of 75 mg to 150 mg of aspirin to take daily from 12 weeks until birth.

Although this use is common in UK clinical practice, in August 2021, this was an off-label use of aspirin. See NICE's information on prescribing medicines.

Statement 3 Pregnant women taking antihypertensive medication have a blood pressure target of 135/85 mmHg or less.

Statement 4 Pregnant women with severe hypertension are admitted for a full assessment, carried out by a healthcare professional trained in managing hypertension in pregnancy.

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pregnancy and lifetime cardiovascular risks during a medical review at their 6 to 8 week postnatal medical check.

Quality statement 1: Pre-pregnancy advice for women with treated hypertension

Quality statement

Women of childbearing potential with treated hypertension are given information annually about safe antihypertensive treatment during pregnancy.

Rationale

Information can be provided to women who may become pregnant about safe antihypertensive treatment during pregnancy as part of an annual review of hypertension care. Women should be informed about potential risks, including the risk of congenital abnormalities, linked to particular antihypertensive drugs. This should enable women to arrange a discussion with the healthcare professional responsible for managing their hypertension about alternative antihypertensive treatments if they are planning pregnancy or become pregnant.

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.

Structure

Evidence of local arrangements to ensure that women of childbearing potential with treated hypertension are given information annually about safe antihypertensive treatment during pregnancy.

Data source: Local data collection.

Process

Proportion of women who have had treated hypertension for 12 months or longer who received information about safe antihypertensive treatment during pregnancy in the past 12 months.

Numerator – the number of women in the denominator who received information about safe antihypertensive treatment during pregnancy in the past 12 months.

Denominator – the number of women of childbearing potential who have had treated hypertension for 12 months or longer.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure that systems are in place to give women of childbearing potential with treated hypertension information annually about safe antihypertensive treatment in pregnancy.

Healthcare professionals give information annually to women of childbearing potential with treated hypertension about safe antihypertensive treatment in pregnancy.

Commissioners ensure they commission services that give information annually to women of childbearing potential with treated hypertension about safe antihypertensive treatment in pregnancy.

Women who are having treatment for hypertension (high blood pressure) and who may become pregnant are given information annually about safe treatment for high blood pressure during pregnancy.

Source guidance

Hypertension in pregnancy: diagnosis and management. NICE guideline NG133 (2019), recommendations 1.3.2, 1.3.4 and 1.3.5

[The 12-month timeframe is not derived from the NICE guideline on hypertension in pregnancy. It is considered a practical timeframe to enable stakeholders to measure performance]

Definitions of terms used in this quality statement

Safe antihypertensive treatment

Women taking angiotensin-converting enzyme (ACE) inhibitors or angiotensin II receptor blockers

(ARBs) should be provided with information to advise that there is an increased risk of congenital abnormalities if these drugs are taken during pregnancy, and discuss alternative antihypertensive treatment with the healthcare professional responsible for managing their hypertension, if they are planning pregnancy. The Medicines and Healthcare products Regulatory Agency (MHRA) drug safety update on ACE inhibitors and angiotensin II receptor antagonists: not for use in pregnancy states 'Use in women who are planning pregnancy should be avoided unless absolutely necessary, in which case the potential risks and benefits should be discussed'. If ACE inhibitors or ARBs are being taken for other conditions such as renal disease, alternative treatment should be discussed with the healthcare professional responsible for managing their condition.

Women taking thiazide or thiazide-like diuretics should be provided with information to advise that: there may be an increased risk of congenital abnormality and neonatal complications if these drugs are taken during pregnancy, and to discuss alternative antihypertensive treatment with the healthcare professional responsible for managing their hypertension, if they are planning pregnancy.

Women who take antihypertensive treatments other than ACE inhibitors, ARBs or thiazide or thiazide-like diuretics should be provided with information to advise that the limited evidence available has not shown an increased risk of congenital malformation with such treatments. [NICE's guideline on hypertension in pregnancy, recommendations 1.3.2 to 1.3.5]

Treated hypertension

Hypertension that is treated with 1 or more antihypertensive drug. [Adapted from NICE's full guideline on hypertension in pregnancy]

Annual review

Women with childbearing potential are given information annually about safe antihypertensive treatment during pregnancy. [Expert opinion]

Equality and diversity considerations

'Childbearing potential' should be determined for women on an individual basis. Access to information about safe antihypertensive treatment during pregnancy should not be determined solely by age, because childbearing potential is also dependent on factors other than age.

Where information is provided, there must be equal access to information for all women, including those with additional needs, such as physical or learning disabilities, and those who do not speak or

read English. Women receiving information should have access to an interpreter or advocate if needed.

For women with additional needs related to a disability, impairment or sensory loss, information should be provided as set out in NHS England's Accessible Information Standard or the equivalent standards for the devolved nations.

Quality statement 2: Antenatal assessment of pre-eclampsia risk

This quality statement updates and replaces quality statement 7: risk assessment – pre-eclampsia in NICE's quality standard on antenatal care.

Quality statement

Pregnant women at increased risk of pre-eclampsia at the booking appointment are offered a prescription of 75 mg to 150 mg of aspirin to take daily from 12 weeks until birth.

Although this use is common in UK clinical practice, in August 2021, this was an off-label use of aspirin. See NICE's information on prescribing medicines.

Rationale

Aspirin prophylaxis, unless contraindicated, reduces the occurrence of pre-eclampsia, preterm birth and fetal and neonatal mortality in women at increased risk of developing the condition (if they have 1 high risk factor or more than 1 moderate risk factor for pre-eclampsia).

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.

Structure

a) Evidence of local arrangements to ensure that pregnant women have their risk factors for pre-eclampsia identified and recorded at the booking appointment.

Data source: Local data collection.

b) Evidence of local arrangements to ensure that pregnant women at increased risk of pre-eclampsia at the booking appointment are offered a prescription of 75 mg to 150 mg of aspirin (unless contraindicated) to take daily from 12 weeks until birth.

Data source: Local data collection.

Process

a) Proportion of pregnant women who have their risk factors for pre-eclampsia identified and recorded at the booking appointment.

Numerator – the number of women in the denominator whose risk factors for pre-eclampsia are identified and recorded.

Denominator – the number of pregnant women attending a booking appointment.

Data source: The Maternity Services Data Set collects data on the following risk factors at the booking appointment: hypertension, renal disease, diabetes, autoimmune disease and obstetric diagnoses from previous pregnancies including 'severe pre-eclampsia requiring preterm birth', 'eclampsia' and 'gestational hypertension'.

b) Proportion of pregnant women at increased risk of pre-eclampsia at the booking appointment who are offered a prescription of 75 mg to 150 mg of aspirin (unless contraindicated) to take daily from 12 weeks until birth.

Numerator – the number of women in the denominator offered a prescription of 75 mg to 150 mg of aspirin to take daily from 12 weeks until birth.

Denominator – the number of pregnant women at increased risk of pre-eclampsia and without contraindications to aspirin at the booking appointment.

Data source: Local data collection.

Outcome

Incidence of pre-eclampsia in women at increased risk of developing pre-eclampsia.

Data source: The Maternity Services Data Set collects data on obstetric conditions diagnosed in the current pregnancy, including severe pre-eclampsia, severe pre-eclampsia requiring preterm birth and eclampsia.

What the quality statement means for different

audiences

Service providers ensure that systems are in place to offer pregnant women at increased risk of pre-eclampsia at the booking appointment a prescription of 75 mg to 150 mg of aspirin (unless contraindicated) to take daily from 12 weeks until birth.

Healthcare professionals offer pregnant women at increased risk of pre-eclampsia at the booking appointment a prescription of 75 mg to 150 mg of aspirin (unless contraindicated) to take daily from 12 weeks until birth.

Commissioners ensure they commission services that offer pregnant women at increased risk of pre-eclampsia at the booking appointment a prescription of 75 mg to 150 mg of aspirin (unless contraindicated) to take daily from 12 weeks until birth.

Pregnant women who have a higher risk of developing pre-eclampsia (a pregnancy-related rise in blood pressure with protein in the urine that happens in some pregnancies) are offered a prescription of aspirin (unless this is unsuitable) to take every day from 12 weeks of pregnancy until their baby is born.

Source guidance

- Antenatal care. NICE guideline NG201 (2021), recommendation 1.2.23
- Hypertension in pregnancy: diagnosis and management. NICE guideline NG133 (2019), recommendations 1.1.2 and 1.1.3

Definitions of terms used in this quality statement

Increased risk of pre-eclampsia

Women are at an increased risk of pre-eclampsia if they have 1 high risk factor or more than 1 moderate risk factor for pre-eclampsia.

High risk factors include:

- hypertensive disease in a previous pregnancy
- chronic kidney disease
- autoimmune disease, such as systemic lupus erythematosus or antiphospholipid syndrome

- type 1 or type 2 diabetes
- chronic hypertension.

Moderate risk factors include:

- first pregnancy
- age 40 years or older
- pregnancy interval of more than 10 years
- body mass index (BMI) of 35 kg/m^2 or more at first visit
- family history of pre-eclampsia
- multi-fetal pregnancy.

[NICE's full guideline on hypertension in pregnancy]

Pre-eclampsia

New hypertension (over 140 mmHg systolic or over 90 mmHg diastolic) presenting after 20 weeks of pregnancy and the coexistence of 1 or more of the following new-onset conditions:

- proteinuria (urine protein:creatinine ratio 30 mg/mmol or more, **or** albumin:creatinine ratio of 8 mg/mmol or more, **or** at least 1 g/litre [2+] on dipstick testing) **or**
- other maternal organ dysfunction:
  - renal insufficiency (creatinine 90 micromol/litre or more, 1.02 mg/100ml or more)
  - liver involvement (elevated transaminases [alanine aminotransferase or aspartate aminotransferase over 40 IU/litre] with or without right upper quadrant or epigastric abdominal pain)
  - neurological complications such as eclampsia, altered mental status, blindness, stroke, clonus, severe headaches or persistent visual scotomata
  - haematological complications such as thrombocytopenia (platelet count below 150,000/microlitre), disseminated intravascular coagulation or haemolysis

- uteroplacental dysfunction such as fetal growth restriction, abnormal umbilical artery doppler waveform analysis, or stillbirth.

[NICE's guideline on hypertension in pregnancy, terms used in this guideline]

Booking appointment

The first antenatal appointment. [NICE's guideline on antenatal care, recommendation 1.2.23]

Quality statement 3: Antenatal blood pressure targets

Quality statement

Pregnant women taking antihypertensive medication have a blood pressure target of 135/85 mmHg or less.

Rationale

Antihypertensive treatment should aim to lower blood pressure from the moderate or severe range, while avoiding excessive reductions that may affect fetal growth.

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.

Structure

Evidence of local arrangements to ensure that pregnant women taking antihypertensive medication have a blood pressure target of 135/85 mmHg or less.

Data source: Local data collection.

Outcome

Rate of pregnant women with hypertension who maintain their target blood pressure throughout their pregnancy.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure that there are local arrangements to set target blood pressure for pregnant women taking antihypertensive medication to 135/85 mmHg or less, and to maintain this blood pressure throughout their pregnancy.

Healthcare professionals set target blood pressure for pregnant women taking antihypertensive medication to 135/85 mmHg or less, and ensure that this blood pressure is maintained throughout pregnancy.

Commissioners ensure they commission services that set target blood pressure for pregnant women taking antihypertensive medication to 135/85 mmHg or less, and ensure that this blood pressure is maintained throughout pregnancy.

Pregnant women taking medication for hypertension (high blood pressure) have a blood pressure target of 135/85 mmHg or less.

Source guidance

Hypertension in pregnancy: diagnosis and management. NICE guideline NG133 (2019), recommendations 1.3.7 to 1.3.9, 1.4.3 and 1.5.5

Quality statement 4: Assessing women with severe hypertension in pregnancy

Quality statement

Pregnant women with severe hypertension are admitted for a full assessment, carried out by a healthcare professional trained in managing hypertension in pregnancy.

Rationale

Effective and safe control of severe hypertension is the most important aspect of critical care management, because the main causes of maternal death and severe maternal morbidity (including stroke) are the consequence of poorly controlled hypertension. Women with severe hypertension in pregnancy should be referred from primary care or emergency departments as soon as possible to receive assessment from healthcare professionals with expertise in managing hypertensive disorders. This is essential to ensure early identification of pre-eclampsia and the provision of critical care where it is needed.

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.

Structure

Evidence of local arrangements for pregnant women with severe hypertension to be admitted for a full assessment, carried out by a healthcare professional trained in managing hypertensive disorders in pregnancy.

Data source: Local data collection.

Process

Proportion of women with severe hypertension who are admitted for a full assessment, carried out by a healthcare professional trained in managing hypertensive disorders in pregnancy.

Numerator – the number of women in the denominator who are admitted for a full assessment, carried out by a healthcare professional trained in managing hypertensive disorders in pregnancy.

Denominator – the number of pregnant women with severe hypertension.

Data source: Local data collection.

Outcome

Number of women with severe hypertension in pregnancy who have a stroke.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure that there are local arrangements for pregnant women with severe hypertension to be admitted for a full assessment, carried out by a healthcare professional trained in managing hypertensive disorders in pregnancy.

Healthcare professionals admit pregnant women with severe hypertension for a full assessment, carried out by a healthcare professional trained in managing hypertensive disorders in pregnancy.

Commissioners ensure they commission services that admit pregnant women with severe hypertension for a full assessment, carried out by a healthcare professional trained in managing hypertensive disorders in pregnancy.

Pregnant women with severe hypertension (high blood pressure) are admitted to hospital for a full assessment, carried out by a healthcare professional trained in managing high blood pressure and related conditions in pregnancy.

Source guidance

Hypertension in pregnancy: diagnosis and management. NICE guideline NG133 (2019), recommendations 1.4.1 and 1.4.3

Definitions of terms used in this quality statement

Severe hypertension

Blood pressure over 160 mmHg systolic, or over 110 mmHg diastolic. [NICE's guideline on hypertension in pregnancy, terms used in this guideline]

Full assessment

This should include blood pressure measurements, proteinuria testing and blood tests in accordance with those set out for severe gestational hypertension and pre-eclampsia with severe hypertension in the NICE guideline on hypertension in pregnancy. [NICE's guideline on hypertension in pregnancy, recommendation 1.4.3, table 1]

Hypertension in pregnancy

This definition includes chronic hypertension (present at the booking visit or before 20 weeks of pregnancy; this could include pre-existing hypertension), gestational hypertension (new hypertension presenting after 20 weeks without proteinuria) and pre-eclampsia (new hypertension presenting after 20 weeks of pregnancy and the coexistence of 1 or more of the following new-onset conditions):

- proteinuria (urine protein:creatinine ratio 30 mg/mmol or more, **or** albumin:creatinine ratio of 8 mg/mmol or more, **or** at least 1 g/litre [2+] on dipstick testing) **or**
- other maternal organ dysfunction:
  - renal insufficiency (creatinine 90 micromol/litre or more, 1.02 mg/100 ml or more)
  - liver involvement (elevated transaminases [alanine aminotransferase or aspartate aminotransferase over 40 IU/litre] with or without right upper quadrant or epigastric abdominal pain)
  - neurological complications such as eclampsia, altered mental status, blindness, stroke, clonus, severe headaches or persistent visual scotomata
  - haematological complications such as thrombocytopenia (platelet count below 150,000/microlitre), disseminated intravascular coagulation or haemolysis
- uteroplacental dysfunction such as fetal growth restriction, abnormal umbilical artery doppler waveform analysis, or stillbirth.

[NICE's guideline on hypertension in pregnancy, terms used in this guideline]

Quality statement 5: Admission to hospital for women with pre-eclampsia

Quality statement

Women with pre-eclampsia who have severe hypertension or are at a high risk of adverse events, or if there are any clinical concerns, are admitted to hospital and monitored.

Rationale

Women with pre-eclampsia who have severe hypertension or are at a high risk of adverse events, or if there are any clinical concerns for the wellbeing of the woman or baby, should be admitted to hospital to enable their condition to be fully assessed and its progress monitored. High-quality care should include an integrated package of care for these women that includes admission and monitoring. Some women may need to stay in hospital until after the birth of their baby. For other women, monitoring may be possible if pre-eclampsia is stable and if the woman has access to monitoring services, and can be readmitted to hospital if her clinical condition deteriorates.

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.

Structure

a) Evidence of local arrangements to ensure that women with pre-eclampsia who have severe hypertension or are at a high risk of adverse events, or if there are any clinical concerns, are admitted to hospital.

Data source: Local data collection.

b) Evidence of local arrangements for women with pre-eclampsia who have severe hypertension or are at a high risk of adverse events or if there are any clinical concerns, to receive an integrated package of care that includes monitoring of their condition.

Data source: Local data collection.

Process

The proportion of women with pre-eclampsia who have severe hypertension or are at a high risk of adverse events, or if there are any clinical concerns, who are admitted to hospital and monitored.

Numerator – the number of women in the denominator who are admitted to hospital and monitored.

Denominator – the number of women with pre-eclampsia who have severe hypertension or are at a high risk of adverse events, or if there are any clinical concerns.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure that local arrangements are in place for women with pre-eclampsia who have severe hypertension or are at a high risk of adverse events, or if there are any clinical concerns for the wellbeing of the woman or baby, to be admitted to hospital and for their condition to be monitored.

Healthcare professionals admit women with pre-eclampsia who have severe hypertension or are at a high risk of adverse events, or if they have any clinical concerns for the wellbeing of the woman or baby, to hospital and monitor their condition.

Commissioners ensure they commission services that admit women with pre-eclampsia who have severe hypertension or are at a high risk of adverse events, or if there are any clinical concerns for the wellbeing of the woman or baby, to hospital and monitor their condition.

Women with pre-eclampsia (a pregnancy-related rise in blood pressure with protein in the urine that happens in some pregnancies) are admitted to hospital if they have very high blood pressure or a high risk of complications, or if their healthcare professional has concerns about the wellbeing of the mother or baby. The women have their condition monitored while in hospital and in the community if they go home before their baby is born.

Source guidance

Hypertension in pregnancy: diagnosis and management. NICE guideline NG133 (2019), recommendations 1.5.2 and 1.5.5

Definitions of terms used in this quality statement

Pre-eclampsia

New hypertension (over 140 mmHg systolic or over 90 mmHg diastolic) presenting after 20 weeks of pregnancy and the coexistence of 1 or more of the following new-onset conditions:

- proteinuria (urine protein:creatinine ratio 30 mg/mmol or more, **or** albumin:creatinine ratio of 8 mg/mmol or more, **or** at least 1 g/litre [2+] on dipstick testing) **or**
- other maternal organ dysfunction:
  - renal insufficiency (creatinine 90 micromol/litre or more, 1.02 mg/100 ml or more)
  - liver involvement (elevated transaminases [alanine aminotransferase or aspartate aminotransferase over 40 IU/litre] with or without right upper quadrant or epigastric abdominal pain)
  - neurological complications such as eclampsia, altered mental status, blindness, stroke, clonus, severe headaches or persistent visual scotomata
  - haematological complications such as thrombocytopenia (platelet count below 150,000/microlitre), disseminated intravascular coagulation or haemolysis
- uteroplacental dysfunction such as fetal growth restriction, abnormal umbilical artery doppler waveform analysis, or stillbirth.

[NICE's guideline on hypertension in pregnancy, terms used in this guideline]

Severe hypertension

Blood pressure over 160 mmHg systolic or over 110 mmHg diastolic. [NICE's guideline on hypertension in pregnancy, terms used in this guideline]

High risk of adverse events

High risk of adverse events suggested by the fullPIERS or PREP-S risk prediction models. [NICE's guideline on hypertension in pregnancy, recommendation 1.5.5, table 2]

Clinical concerns

Concerns for the wellbeing of the woman or baby that could include any of the following:

- sustained systolic blood pressure of 160 mmHg or higher
- any maternal biochemical or haematological investigations that cause concern, for example, a new and persistent:
  - rise in creatinine (90 micromol/litre or more, 1 mg/100 ml or more) **or**
  - rise in alanine transaminase (over 70 IU/litre, or twice upper limit of normal range) **or**
  - fall in platelet count (under 150,000/microlitre)
- signs of impending eclampsia
- signs of impending pulmonary oedema
- other signs of severe pre-eclampsia
- suspected fetal compromise
- any other clinical signs that cause concern.

[NICE's guideline on hypertension in pregnancy, recommendation 1.5.2]

Admitted to hospital and monitored

Monitoring should include blood pressure measurements, proteinuria testing, blood tests and fetal assessments in accordance with those set out in the NICE guideline for hypertension in pregnancy. [NICE's guideline on hypertension in pregnancy, recommendation 1.5.5, table 2]

Quality statement 6: Timing of birth for women with pre-eclampsia

Quality statement

Women with pre-eclampsia have a senior obstetrician involved in any decisions about the timing of birth.

Rationale

Some women who have pre-eclampsia with mild or moderate hypertension will progress to severe pre-eclampsia, which is associated with serious adverse outcomes. Because the progress of the condition differs between women, a senior obstetrician should be involved in any decisions about the timing of birth.

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.

Structure

Evidence of local arrangements to ensure that women with pre-eclampsia have a senior obstetrician involved in decisions about the timing of birth.

Data source: Local data collection.

Process

Proportion of women with pre-eclampsia who have given birth who had a senior obstetrician involved in decisions about the timing of birth.

Numerator – the number of women in the denominator who had a senior obstetrician involved in decisions about the timing of birth.

Denominator – the number of women who have given birth who had pre-eclampsia.

Data source: Local data collection.

Outcome

a) Number of maternal deaths of women with pre-eclampsia.

Data source: Local data collection. The 2019 and 2016 Confidential Enquiries into Maternal Deaths and Morbidity reported on deaths from pre-eclampsia and related causes.

b) Number of fetal deaths for women with pre-eclampsia.

Data source: Local data collection.

c) Number of admissions of women with pre-eclampsia to intensive care units (ICU).

Data source: Local data collection.

d) Number of admissions of babies born to women with pre-eclampsia to neonatal intensive care units (NICU).

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure that there are local arrangements in place for women with pre-eclampsia to have a senior obstetrician involved in decisions about the timing of birth.

Healthcare professionals ensure that women with pre-eclampsia have a senior obstetrician involved in decisions about the timing of birth.

Commissioners ensure they commission services that assign a senior obstetrician to women with pre-eclampsia.

Women with pre-eclampsia (a pregnancy-related rise in blood pressure with protein in the urine that happens in some pregnancies) have a senior specialist (called an obstetrician) involved in

decisions about the timing of birth.

Source guidance

Hypertension in pregnancy: diagnosis and management. NICE guideline NG133 (2019), recommendation 1.5.8

Definitions of terms used in this quality statement

Pre-eclampsia

New hypertension (over 140 mmHg systolic or over 90 mmHg diastolic) presenting after 20 weeks of pregnancy and the coexistence of 1 or more of the following new-onset conditions:

- proteinuria (urine protein:creatinine ratio 30 mg/mmol or more, **or** albumin:creatinine ratio of 8 mg/mmol or more, **or** at least 1 g/litre [2+] on dipstick testing) **or**
- other maternal organ dysfunction:
  - renal insufficiency (creatinine 90 micromol/litre or more, 1.02 mg/100 ml or more)
  - liver involvement (elevated transaminases [alanine aminotransferase or aspartate aminotransferase over 40 IU/litre] with or without right upper quadrant or epigastric abdominal pain)
  - neurological complications such as eclampsia, altered mental status, blindness, stroke, clonus, severe headaches or persistent visual scotomata
  - haematological complications such as thrombocytopenia (platelet count below 150,000/microlitre), disseminated intravascular coagulation or haemolysis
- uteroplacental dysfunction such as fetal growth restriction, abnormal umbilical artery doppler waveform analysis, or stillbirth.

[NICE's guideline on hypertension in pregnancy, terms used in this guideline]

Timing of birth

For indications for timing of birth, see NICE's guideline on hypertension in pregnancy, recommendations 1.5.7 to 1.5.12

Severe pre-eclampsia

Pre-eclampsia with severe hypertension that does not respond to treatment or is associated with ongoing or recurrent severe headaches, visual scotomata, nausea or vomiting, epigastric pain, oliguria and severe hypertension, as well as progressive deterioration in laboratory blood tests such as rising creatinine or liver transaminases or falling platelet count, or failure of fetal growth or abnormal doppler findings. [NICE's guideline on hypertension in pregnancy, terms used in this guideline]

Quality statement 7: Transfer of information about ongoing management

Quality statement

Women who have had hypertension in pregnancy have a plan for ongoing antihypertensive management included in their postnatal care plan, which is communicated to their GP when they are transferred to community care after the birth.

Rationale

There are particular risks to women who have had hypertension in pregnancy (such as the risk of stroke) in the immediate postnatal period. The development of an individualised care plan for women who have had hypertension in pregnancy before they are transferred to community care should support ongoing antihypertensive management and enable risks to be monitored and addressed, including variations in blood pressure.

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.

Structure

Evidence of local arrangements to communicate a plan for ongoing antihypertensive management for women who had hypertension in pregnancy to their GP when they are transferred to community care after the birth.

Data source: Local data collection.

Process

The proportion of women with hypertension in pregnancy for whom a plan for ongoing antihypertensive management is communicated to their GP when they are transferred to community care after the birth.

Numerator – the number of women in the denominator for whom a plan for ongoing antihypertensive management is communicated to their GP when they are transferred to community care after the birth.

Denominator – the number of women who have given birth who had hypertension in pregnancy.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure that local arrangements are in place to communicate a plan for ongoing antihypertensive management to GPs of women who had hypertension in pregnancy when they are transferred to community care after the birth.

Healthcare professionals communicate a plan for ongoing antihypertensive management to GPs of women who had hypertension in pregnancy when they are transferred to community care after the birth.

Commissioners ensure they commission services that communicate a plan for ongoing antihypertensive management to GPs of women who had hypertension in pregnancy when they are transferred to community care after the birth.

Women who had hypertension (high blood pressure) in pregnancy have a plan for continuing management of their blood pressure, which is communicated to their GP when they go home after their baby is born.

Source guidance

Hypertension in pregnancy: diagnosis and management. NICE guideline NG133 (2019), recommendations 1.3.20, 1.4.14, 1.5.20 and 1.10.2

Definitions of terms used in this quality statement

Hypertension in pregnancy

This definition includes chronic hypertension (present at the booking visit or before 20 weeks of pregnancy; this could include pre-existing hypertension), gestational hypertension (new

hypertension presenting after 20 weeks without proteinuria) and pre-eclampsia (new hypertension presenting after 20 weeks of pregnancy and the coexistence of 1 or more of the following new-onset conditions):

- proteinuria (urine protein:creatinine ratio 30 mg/mmol or more, **or** albumin:creatinine ratio of 8 mg/mmol or more, **or** at least 1 g/litre [2+] on dipstick testing) **or**
- other maternal organ dysfunction:
  - renal insufficiency (creatinine 90 micromol/litre or more, 1.02 mg/100 ml or more)
  - liver involvement (elevated transaminases [alanine aminotransferase or aspartate aminotransferase over 40 IU/litre] with or without right upper quadrant or epigastric abdominal pain)
  - neurological complications such as eclampsia, altered mental status, blindness, stroke, clonus, severe headaches or persistent visual scotomata
  - haematological complications such as thrombocytopenia (platelet count below 150,000/microlitre), disseminated intravascular coagulation or haemolysis
- uteroplacental dysfunction such as fetal growth restriction, abnormal umbilical artery doppler waveform analysis, or stillbirth.

[NICE's guideline on hypertension in pregnancy, terms used in this guideline]

A plan for ongoing hypertensive management

This should include information about postpartum management, including a plan for ongoing management. A care plan should be written for women with gestational hypertension or pre-eclampsia who have given birth and are being transferred to community care that includes all of the following:

- who will provide follow-up care, including medical review if needed
- frequency of blood pressure monitoring needed
- thresholds for reducing or stopping treatment
- indications for referral to primary care for blood pressure review
- self-monitoring for symptoms.

[NICE's guideline on hypertension in pregnancy, recommendation 1.5.20]

Quality statement 8: Communicating information about future risks

Quality statement

Women who have had gestational hypertension or pre-eclampsia discuss future pregnancy and lifetime cardiovascular risks during a medical review at their 6- to 8-week postnatal medical check.

Rationale

The long-term risks for women who have had hypertension in pregnancy include developing high blood pressure and an increased lifetime cardiovascular risk. Increased awareness and surveillance may lead to earlier intervention, such as antihypertensive treatment, with likely benefits for the woman. Women should be made aware of risks in future pregnancies resulting from hypertension in a previous pregnancy.

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.

Structure

Evidence of local arrangements for all women who have had gestational hypertension or pre-eclampsia to have a discussion about future related risks during the medical review at their 6 to 8 week postnatal medical check.

Data source: Local data collection.

Process

The proportion of women who have had gestational hypertension or pre-eclampsia who have a discussion about future related risks during the medical review at their 6 to 8 week postnatal medical check.

Numerator – the number of women in the denominator who have a discussion about future related risks.

Denominator – the number of women who have had gestational hypertension or pre-eclampsia who have a medical review at their 6 to 8 week postnatal check.

Data source: Local data collection.

Source guidance

Hypertension in pregnancy: diagnosis and management. NICE guideline NG133 (2019), recommendations 1.4.16, 1.5.22, 1.10.1 and 1.10.2

What the quality statement means for different audiences

Service providers ensure that local arrangements are in place for all women who have had gestational hypertension or pre-eclampsia to have a discussion about future related risks during the medical review at their 6 to 8 week postnatal medical check.

Healthcare professionals discuss future related risks with all women who have had gestational hypertension or pre-eclampsia during the medical review at their 6 to 8 week postnatal medical check.

Commissioners ensure that they commission services that discuss future related risks with all women who have had gestational hypertension or pre-eclampsia during the medical review at their 6 to 8 week postnatal medical check.

Women who have had gestational hypertension (new high blood pressure starting after 20 weeks of pregnancy) or pre-eclampsia (a pregnancy-related rise in blood pressure with protein in the urine that happens in some pregnancies) have an appointment with their GP or specialist 6 to 8 weeks after they have had their baby, at which they discuss their risk of having problems with their blood pressure or pregnancies in the future.

Definitions of terms used in this quality statement

Gestational hypertension

New hypertension presenting after 20 weeks of pregnancy without significant proteinuria. [NICE's guideline on hypertension in pregnancy, terms used in this guideline]

Pre-eclampsia

New hypertension (over 140 mmHg systolic or over 90 mmHg diastolic) presenting after 20 weeks of pregnancy and the coexistence of 1 or more of the following new-onset conditions:

- proteinuria (urine protein:creatinine ratio 30 mg/mmol or more, **or** albumin:creatinine ratio of 8 mg/mmol or more, **or** at least 1 g/litre [2+] on dipstick testing) **or**
- other maternal organ dysfunction:
  - renal insufficiency (creatinine 90 micromol/litre or more, 1.02 mg/100 ml or more)
  - liver involvement (elevated transaminases [alanine aminotransferase or aspartate aminotransferase over 40 IU/litre] with or without right upper quadrant or epigastric abdominal pain)
  - neurological complications such as eclampsia, altered mental status, blindness, stroke, clonus, severe headaches or persistent visual scotomata
  - haematological complications such as thrombocytopenia (platelet count below 150,000/microlitre), disseminated intravascular coagulation or haemolysis
- uteroplacental dysfunction such as fetal growth restriction, abnormal umbilical artery doppler waveform analysis, or stillbirth.

[NICE's guideline on hypertension in pregnancy, terms used in this guideline]

Future pregnancy and lifetime cardiovascular risk

Women who have had gestational hypertension or pre-eclampsia should be told that these conditions are associated with an increased risk of developing high blood pressure and its complications in later life.

Women who have had gestational hypertension should be told that the risk of developing:

- gestational hypertension in a future pregnancy is approximately 1 in 7 (between 11% and 15%)
- pre-eclampsia in a future pregnancy is approximately 1 in 14 (7%).

Women who have had pre-eclampsia should be told that the risk of developing:

- gestational hypertension in a future pregnancy is up to 1 in 8 (between 6% and 12%)
- pre-eclampsia in a future pregnancy is up to about 1 in 6 (16%)
- pre-eclampsia in a future pregnancy is about 1 in 3 (33%) if their pre-eclampsia led to birth between 28 and 34 weeks.

[NICE's guideline on hypertension in pregnancy, recommendation 1.10.1 (table 5)]

Medical review

Women who have had gestational hypertension or pre-eclampsia should be offered a medical review by a GP or specialist at their postnatal check, which takes place 6 to 8 weeks after birth. [NICE's guideline on hypertension in pregnancy, recommendation 1.5.22]

Equality and diversity considerations

Where information is provided, there must be equal access to it for all women, including those with additional needs, such as physical or learning disabilities, and those who do not speak or read English. Women receiving information should have access to an interpreter or advocate if needed.

For women with additional needs related to a disability, impairment or sensory loss, information should be provided as set out in NHS England's Accessible Information Standard or the equivalent standards for the devolved nations.

Update information

July 2019: Changes have been made to align this quality standard with the NICE guideline on hypertension in pregnancy. Statement 2 has been amended to reflect the recommended dose of aspirin for pregnant women at increased risk of pre-eclampsia. The blood pressure target in statement 3 was changed for pregnant women taking antihypertensive medication, in line with the updated guideline. In statement 5 the criteria for hospital admission and frequency of monitoring were changed. In statement 6 the involvement of a senior obstetrician in decisions on the timing of birth for women with pre-eclampsia was highlighted. References and links to source guidance have also been updated.

Minor changes since publication

August 2021: Recommendation numbers, references and links to source guidance have been updated to align statement 2 with the updated NICE guideline on antenatal care. Data sources and 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.

Information about the topic expert group members is available from the webpage for this quality standard.

This quality standard has been included in the NICE Pathways on antenatal care and hypertension in pregnancy which bring 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 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 products for the source guidance to help estimate local costs:

- resource impact statement for NICE's guideline on antenatal care
- resource impact statement for NICE's guideline on hypertension in pregnancy.

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.

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Endorsing organisation

This quality standard has been endorsed by NHS England, as required by the Health and Social Care Act (2012)

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.

- Action on Pre-eclampsia
- British Cardiovascular Society
- British Hypertension Society
- Royal College of General Practitioners (RCGP)
- Royal College of Midwives
- Royal College of Nursing (RCN)
- Royal College of Radiologists