Meningitis (bacterial) and meningococcal septicaemia in children and young people

Quality standard
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Quality statements

Statement 1 Parents and carers of children and young people presenting with non-specific symptoms and signs are given 'safety netting' information that includes information on bacterial meningitis and meningococcal septicaemia.

Statement 2 Children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia have their temperature, respiratory rate, pulse, blood pressure, urine output, oxygen saturation and neurological condition monitored at least hourly until stable.

Statement 3 Children and young people presenting with a petechial rash receive antibiotics in accordance with NICE guidance.

Statement 4 Children and young people with suspected bacterial meningitis or meningococcal septicaemia receive intravenous or intraosseous antibiotics within an hour of arrival at hospital.

Statement 5 Children and young people with suspected bacterial meningitis have a lumbar puncture.

Statement 6 Children and young people with suspected bacterial meningitis have their cerebrospinal fluid (CSF) microscopy result available within 4 hours of lumbar puncture.

Statement 7 Children and young people with suspected bacterial meningitis or meningococcal septicaemia have whole blood meningococcal polymerase chain reaction (PCR) testing.

Statement 8 Children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia, who have signs of shock or raised intracranial pressure, are assessed by a consultant paediatrician.
Statement 9 Children and young people with meningococcal septicaemia undergoing tracheal intubation and mechanical ventilation have the procedure undertaken by an anaesthetist experienced in paediatric airway management.

Statement 10 Children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia being transferred within or between hospitals are escorted by a healthcare professional trained in advanced paediatric life support.

Statement 11 Children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia requiring transfer to a paediatric intensive care unit or high dependency unit in another hospital are transferred by a specialist paediatric retrieval team.

Statement 12 Children and young people who have had bacterial meningitis or meningococcal septicaemia, and/or their parents and carers, are given information before discharge about the disease, its potential long-term effects and how to access further support.

Statement 13 Children and young people who have had bacterial meningitis or meningococcal septicaemia have an audiological assessment before discharge.

Statement 14 Children and young people who have had bacterial meningitis or meningococcal septicaemia have a follow-up appointment with a consultant paediatrician within 6 weeks of discharge.
Quality statement 1: 'Safety netting' information

Quality statement

Parents and carers of children and young people presenting with non-specific symptoms and signs are given 'safety netting' information that includes information on bacterial meningitis and meningococcal septicaemia.

Quality measure

Structure

Evidence of local arrangements for parents and carers of children and young people presenting with non-specific symptoms and signs to be given 'safety netting' information that includes information on bacterial meningitis and meningococcal septicaemia.

Data source: Local data collection.

Process

Proportion of parents or carers of children and young people presenting with non-specific symptoms and signs who are given 'safety netting' information that includes information on bacterial meningitis and meningococcal septicaemia.

Numerator – the number of people in the denominator who are given 'safety netting' information that includes information on bacterial meningitis and meningococcal septicaemia.

Denominator – the number of parents or carers of children and young people presenting with non-specific symptoms and signs.

Data source: Local data collection.
Outcome

Parent/carer satisfaction with information received.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure systems are in place for parents and carers of children and young people presenting with non-specific symptoms and signs to be given 'safety netting' information that includes information on bacterial meningitis and meningococcal septicaemia.

Healthcare professionals give ‘safety netting’ information to parents and carers of children and young people presenting with non-specific symptoms and signs, including information on bacterial meningitis and meningococcal septicaemia.

Commissioners ensure they commission services that enable parents and carers of children and young people presenting with non-specific symptoms and signs to be given 'safety netting' information that includes information on bacterial meningitis and meningococcal septicaemia.

Parents and carers of children and young people with general symptoms are given 'safety netting' information (for example, advice on what symptoms to look out for and how and when to seek further care) that includes information on bacterial meningitis and meningococcal septicaemia (blood poisoning).

Source guidance

Fever in under 5s: assessment and initial management. NICE guideline NG143 (2019), recommendations 1.4.4, 1.5.25 and 1.7.3
Definitions

Non-specific symptoms and signs

Non-specific symptoms and signs are detailed in table 1 of the NICE guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s.

'Safety netting' information

'Safety netting' information comprises oral and/or written information on what symptoms to look out for, how to access further care, likely time course of expected illness and, if appropriate, the uncertainty of the diagnosis.

Information on warning symptoms should include a specific instruction for parents and carers looking after a feverish child to seek further advice if any of the following occur:

- The child develops a non-blanching rash.
- The parent or carer feels that the child is less well than when they previously sought advice.
- The parent or carer is more worried than when they previously sought advice.
- The fever lasts 5 days or longer.
- The parent or carer is distressed, or concerned that they are unable to look after the child.
- The child is lethargic or irritable.
- The child stops feeding (infants only).
- The child has a fit.

[NICE's guideline on fever in under 5s, recommendations 1.5.25 and 1.7.3]
Quality statement 2: Monitoring

Quality statement

Children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia have their temperature, respiratory rate, pulse, blood pressure, urine output, oxygen saturation and neurological condition monitored at least hourly until stable.

Quality measure

Structure

Evidence of local arrangements for children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia to have their temperature, respiratory rate, pulse, blood pressure, urine output, oxygen saturation and neurological condition monitored at least hourly until stable.

Data source: Local data collection.

Process

Proportion of children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia who have their temperature, respiratory rate, pulse, blood pressure, urine output, oxygen saturation and neurological condition monitored at least hourly until stable.

Numerator – the number of people in the denominator who have their temperature, respiratory rate, pulse, blood pressure, urine output, oxygen saturation and neurological condition monitored at least hourly until stable.

Denominator – the number of children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia.

Data source: Local data collection. Contained within the baseline assessment for the NICE...
What the quality statement means for different audiences

Service providers ensure systems are in place for children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia to have their temperature, respiratory rate, pulse, blood pressure, urine output, oxygen saturation and neurological condition monitored at least hourly until stable.

Healthcare professionals monitor the temperature, respiratory rate, pulse, blood pressure, urine output, oxygen saturation and neurological condition of children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia at least hourly until stable.

Commissioners ensure they commission services for children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia to have their temperature, respiratory rate, pulse, blood pressure, urine output, oxygen saturation and neurological condition monitored at least hourly until stable.

Children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia (blood poisoning) have their temperature, breathing, pulse, blood pressure, urine production, blood oxygen levels and level of consciousness monitored at least every hour until they are stable.

Source guidance

- Meningitis (bacterial) and meningococcal septicaemia in under 16s: recognition, diagnosis and management. NICE guideline CG102 (2010, updated 2015), recommendations 1.1.6 and 1.4.47

- Fever in under 5s: assessment and initial management. NICE guideline NG143 (2019), recommendation 1.2.1
Definitions

Monitoring

Children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia have the physiological observations described in the statement assessed regularly throughout their care pathway, whether presenting in primary care or after they have been admitted to hospital.

Be aware that some pulse oximeters can underestimate or overestimate oxygen saturation levels, especially if the saturation level is borderline. Overestimation has been reported in people with dark skin. See also the NHS England Patient Safety Alert on the risk of harm from inappropriate placement of pulse oximeter probes.

Neurological condition is assessed using observations that include pupillary reactions, motor function and levels of consciousness (Glasgow Coma Scale or AVPU [Alert, Voice, Pain, Unresponsive]). [NICE’s guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s, recommendations 1.1.6, 1.3.37 and 1.4.47]
Quality statement 3: Management of petechial rash

Quality statement

Children and young people presenting with a petechial rash receive antibiotics in accordance with NICE guidance.

Quality measure

Structure

Evidence of local arrangements for children and young people presenting with a petechial rash to receive antibiotics in accordance with the NICE guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s.

Data source: Local data collection.

Process

Proportion of children and young people presenting with a petechial rash who receive antibiotics in accordance with NICE guidance.

Numerator – the number of people in the denominator who receive antibiotics in accordance with NICE guidance.

Denominator – the number of children and young people presenting with a petechial rash.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure systems are in place for children and young people presenting...
with a petechial rash to receive antibiotics in accordance with NICE guidance.

**Healthcare professionals** give antibiotics to children and young people presenting with a petechial rash in accordance with NICE guidance.

**Commissioners** ensure they commission services that ensure children and young people presenting with a petechial rash receive antibiotics in accordance with NICE guidance.

Children and young people with a rash of small red or purple spots that doesn't fade when a glass is pressed firmly against the skin (a non-blanching rash) have appropriate investigations and receive antibiotics if their healthcare professional considers them at risk of bacterial meningitis or meningococcal septicaemia (blood poisoning).

**Source guidance**

Meningitis (bacterial) and meningococcal septicaemia in under 16s: recognition, diagnosis and management. NICE guideline CG102 (2010, updated 2015), recommendations 1.3.2 (key priority for implementation) and 1.3.3 to 1.3.6

**Definitions**

The NICE guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s provides information on the correct prescribing of antibiotics for children and young people presenting with a petechial rash.
Quality statement 4: Initiation of antibiotics

Quality statement

Children and young people with suspected bacterial meningitis or meningococcal septicaemia receive intravenous or intraosseous antibiotics within an hour of arrival at hospital.

Quality measure

Structure

Evidence of local arrangements for children and young people with suspected bacterial meningitis or meningococcal septicaemia to receive intravenous or intraosseous antibiotics within an hour of arrival at hospital.

Data source: Local data collection.

Process

Proportion of children and young people with suspected bacterial meningitis or meningococcal septicaemia who receive intravenous or intraosseous antibiotics within an hour of arrival at hospital.

Numerator – the number of people in the denominator who receive intravenous or intraosseous antibiotics within an hour of arrival at hospital.

Denominator – the number of children and young people with suspected bacterial meningitis or meningococcal septicaemia arriving in hospital.

Data source: Local data collection.
What the quality statement means for different audiences

Service providers ensure systems are in place for children and young people with suspected bacterial meningitis or meningococcal septicaemia to receive intravenous or intraosseous antibiotics within an hour of arrival at hospital.

Healthcare professionals give children and young people with suspected bacterial meningitis or meningococcal septicaemia intravenous or intraosseous antibiotics within an hour of arrival at hospital.

Commissioners ensure they commission services for children and young people with suspected bacterial meningitis or meningococcal septicaemia to receive intravenous or intraosseous antibiotics within an hour of arrival at hospital.

Children and young people with suspected bacterial meningitis or meningococcal septicaemia (blood poisoning) are given antibiotics intravenously (directly into a vein through a needle or thin tube) or intraosseously (directly into the bone through a needle or thin tube) within an hour of arrival at hospital.

Source guidance

Meningitis (bacterial) and meningococcal septicaemia in under 16s: recognition, diagnosis and management. NICE guideline CG102 (2010, updated 2015), recommendations 1.2.4 and 1.4.1 to 1.4.3

Definitions

Antibiotics should be administered for children and young people with suspected bacterial meningitis or meningococcal septicaemia as soon as possible in order to optimise chances of recovery, and within an hour of arrival in secondary care. [NICE’s guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s, recommendations 1.4.1 to 1.4.3]

While antibiotics should be given at the earliest opportunity, either in primary or secondary care (without delaying urgent transfer to hospital to do so), this statement concerns children and young people with suspected bacterial meningitis or meningococcal septicaemia for whom there has been no delay in their transfer to hospital, either from
their GP or through attendance at an accident and emergency department.

For children and young people for whom urgent transfer to hospital is not possible (for example, in remote locations or adverse weather conditions), antibiotics may be given in primary or community care. [NICE’s guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s, recommendations, 1.2.3 and 1.2.4]
Quality statement 5: Lumbar puncture for suspected bacterial meningitis

Quality statement

Children and young people with suspected bacterial meningitis have a lumbar puncture.

Quality measure

Structure

Evidence of local arrangements for children and young people with suspected bacterial meningitis to have a lumbar puncture.

Data source: Local data collection.

Process

Proportion of children and young people with suspected bacterial meningitis who have a lumbar puncture.

Numerator – the number of people in the denominator who have a lumbar puncture.

Denominator – the number of children and young people with suspected bacterial meningitis.

Data source: Local data collection. Contained within the baseline assessment for the NICE guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s.

What the quality statement means for each audience

Service providers ensure systems are in place for children and young people with
suspected bacterial meningitis to have a lumbar puncture.

**Healthcare professionals** perform a lumbar puncture for children and young people with suspected bacterial meningitis.

**Commissioners** ensure they commission services for children and young people with suspected bacterial meningitis to have a lumbar puncture.

**Children and young people with suspected bacterial meningitis** have a procedure called a lumbar puncture, in which a sample of the fluid surrounding the brain and spinal cord is taken using a hollow needle inserted into the lower part of the back.

**Source guidance**

Meningitis (bacterial) and meningococcal septicaemia in under 16s: recognition, diagnosis and management. NICE guideline CG102 (2010, updated 2015), recommendations 1.3.18 (key priority for implementation) and 1.3.19

**Definitions**

It is important that children and young people with suspected bacterial meningitis have a lumbar puncture as soon as possible, but only when it is safe to do so. Contraindications to lumbar puncture include:
signs suggesting raised intracranial pressure:
  - reduced or fluctuating level of consciousness (Glasgow Coma Scale score less than 9 or a drop of 3 or more)
  - age-relative bradycardia and hypertension
  - focal neurological signs
  - abnormal posture or posturing
  - unequal, dilated or poorly responsive pupils
  - papilloedema
  - abnormal 'doll's eye' movements
  - tense, bulging fontanelle

• shock

• extensive or spreading purpura

• convulsions until stabilised

• coagulation abnormalities:
  - coagulation results (if obtained) outside the normal range
  - platelet count below 100×10^9/litre
  - receiving anticoagulant therapy

• superficial infection at the lumbar puncture site

• respiratory insufficiency (lumbar puncture is considered to have a high risk of precipitating respiratory failure in the presence of respiratory insufficiency).

[NICE's guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s, recommendation 1.3.18]
Quality statement 6: CSF microscopy for suspected bacterial meningitis

Quality statement

Children and young people with suspected bacterial meningitis have their cerebrospinal fluid (CSF) microscopy result available within 4 hours of lumbar puncture.

Quality measure

Structure

Evidence of local arrangements for children and young people with suspected bacterial meningitis to have their CSF microscopy result available within 4 hours of lumbar puncture.

Data source: Local data collection.

Process

Proportion of children and young people with suspected bacterial meningitis who have their CSF microscopy result available within 4 hours of lumbar puncture.

Numerator – the number of people in the denominator who have their CSF microscopy result available within 4 hours of lumbar puncture.

Denominator – the number of children and young people with suspected bacterial meningitis who have had a lumbar puncture.

Data source: Local data collection. Contained within the baseline assessment for the NICE guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s.
What the quality statement means for different audiences

**Service providers** ensure systems are in place for children and young people with suspected bacterial meningitis to have their CSF microscopy result available within 4 hours of lumbar puncture.

**Healthcare professionals** ensure children and young people with suspected bacterial meningitis have their CSF microscopy result available within 4 hours of lumbar puncture.

**Commissioners** ensure they commission services for children and young people with suspected bacterial meningitis to have their CSF microscopy result available within 4 hours of lumbar puncture.

**Children and young people with suspected bacterial meningitis** have the results of their lumbar puncture within 4 hours of the procedure being done.

Source guidance

**Meningitis (bacterial) and meningococcal septicaemia in under 16s: recognition, diagnosis and management. NICE guideline CG102** (2010, updated 2015), recommendation 1.3.20

Definitions

CSF microscopy provides the CSF white blood cell count, which is the most important investigation for a diagnosis of meningitis. Samples should also be routinely processed for total protein and glucose concentrations.

It is important that samples are processed rapidly given that white cell counts decrease significantly with time. [NICE's guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s, recommendation 1.3.20]
Quality statement 7: Blood tests

Quality statement

Children and young people with suspected bacterial meningitis or meningococcal septicaemia have whole blood meningococcal polymerase chain reaction (PCR) testing.

Quality measure

Structure

Evidence of local arrangements for children and young people with suspected bacterial meningitis or meningococcal septicaemia to have whole blood meningococcal PCR testing.

Data source: Local data collection.

Process

Proportion of children and young people with suspected bacterial meningitis or meningococcal septicaemia who have whole blood meningococcal PCR testing.

Numerator – the number of people in the denominator who have whole blood meningococcal PCR testing.

Denominator – the number of children and young people with suspected bacterial meningitis or meningococcal septicaemia.

Data source: Local data collection. Contained within the baseline assessment for the NICE guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s.

What the quality statement means for different audiences

Service providers ensure systems are in place for children and young people with
suspected bacterial meningitis or meningococcal septicaemia to have whole blood meningococcal PCR testing.

Healthcare professionals carry out whole blood meningococcal PCR testing for children and young people with suspected bacterial meningitis or meningococcal septicaemia.

Commissioners ensure they commission services for children and young people with suspected bacterial meningitis or meningococcal septicaemia to have whole blood meningococcal PCR testing.

Children and young people with suspected bacterial meningitis or meningococcal septicaemia (blood poisoning) have a blood sample taken for a type of DNA laboratory test called PCR that will help confirm the diagnosis.

Source guidance

Meningitis (bacterial) and meningococcal septicaemia in under 16s: recognition, diagnosis and management. NICE guideline CG102 (2010, updated 2015), recommendation 1.3.8 (key priority for implementation)

Definitions

PCR testing

PCR is a DNA-based diagnostic test.

PCR testing may not always be appropriate (for example, if the diagnosis has been confirmed by positive blood or cerebrospinal fluid cultures).
Quality statement 8: Access to specialists

Quality statement

Children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia, who have signs of shock or raised intracranial pressure, are assessed by a consultant paediatrician.

Quality measure

Structure

Evidence of local arrangements for children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia who have signs of shock or raised intracranial pressure to be assessed by a consultant paediatrician.

Data source: Local data collection. Contained within the baseline assessment for the NICE guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s.

Process

Proportion of children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia who have signs of shock or raised intracranial pressure that are assessed by a consultant paediatrician.

Numerator – the number of people in the denominator who are assessed by a consultant paediatrician.

Denominator – the number of children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia who have signs of shock or raised intracranial pressure.

Data source: Local data collection.
What the quality statement means for different audiences

**Service providers** ensure systems are in place for children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia who have signs of shock or raised intracranial pressure to be assessed by a consultant paediatrician.

**Healthcare professionals** ensure that children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia who have signs of shock or raised intracranial pressure are assessed by a consultant paediatrician.

**Commissioners** ensure they commission services for children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia who have signs of shock or raised intracranial pressure to be assessed by a consultant paediatrician.

**Children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia** (blood poisoning) who have signs of shock (for example unusual skin colour or breathing difficulty) or raised pressure in the brain are assessed by a consultant paediatrician.

Source guidance

Fever in under 5s: assessment and initial management. NICE guideline NG143 (2019), recommendation 1.5.27
Quality statement 9: Tracheal intubation and mechanical ventilation in meningococcal septicaemia

Quality statement

Children and young people with meningococcal septicaemia undergoing tracheal intubation and mechanical ventilation have the procedure undertaken by an anaesthetist experienced in paediatric airway management.

Quality measure

Structure

Evidence of local arrangements for children and young people with meningococcal septicaemia undergoing tracheal intubation and mechanical ventilation to have the procedure undertaken by an anaesthetist experienced in paediatric airway management.

Data source: Local data collection.

Process

Proportion of children and young people with meningococcal septicaemia undergoing tracheal intubation and mechanical ventilation who have the procedure undertaken by an anaesthetist experienced in paediatric airway management.

Numerator – the number of people in the denominator who have the tracheal intubation and mechanical ventilation procedure undertaken by an anaesthetist experienced in paediatric airway management.

Denominator – the number of children and young people with meningococcal septicaemia undergoing tracheal intubation and mechanical ventilation.
Data source: Local data collection. Contained within the baseline assessment for the NICE guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s.

What the quality statement means for different audiences

Service providers ensure systems are in place for children and young people with meningococcal septicaemia undergoing tracheal intubation and mechanical ventilation to have the procedure undertaken by an anaesthetist experienced in paediatric airway management.

Healthcare professionals ensure that children and young people with meningococcal septicaemia undergoing tracheal intubation and mechanical ventilation have the procedure undertaken by an anaesthetist experienced in paediatric airway management.

Commissioners ensure they commission services for children and young people with meningococcal septicaemia undergoing tracheal intubation and mechanical ventilation to have the procedure undertaken by an anaesthetist experienced in paediatric airway management.

Children and young people with meningococcal septicaemia (blood poisoning) receiving help to breathe using a tube inserted into their windpipe (tracheal intubation) through which air is pushed into the lungs via a ventilator machine (ventilation), have the procedure undertaken by an experienced specialist (an anaesthetist experienced in paediatric airway management).

Source guidance

Meningitis (bacterial) and meningococcal septicaemia in under 16s: recognition, diagnosis and management. NICE guideline CG102 (2010, updated 2015), recommendations 1.4.30 (key priority for implementation) and 1.4.35

Definitions

Tracheal intubation with mechanical ventilation is required for the following indications.
• Threatened (for example, loss of gag reflex) or actual loss of airway patency.

• The need for any form of assisted ventilation, for example bag–mask ventilation.

• Clinical observation of increasingly laboured breathing.

• Hypoventilation or apnoea.

• Features of respiratory failure, including:
  
  – reduced or fluctuating level of consciousness (Glasgow Coma Scale score less than 9 or a drop of 3 or more)
  
  – irregular respiration (for example, Cheyne–Stokes breathing)
  
  – hypoxia (PaO\textsubscript{2} less than 13 kPa or 97.5 mmHg) or decreased oxygen saturations in air
  
  – hypercapnia (PaCO\textsubscript{2} greater than 6 kPa or 45 mmHg).

• Continuing shock following infusion of a total of 40 ml/kg of resuscitation fluid.

• Signs of raised intracranial pressure.

• Impaired mental status, including:

  – reduced or fluctuating level of consciousness (Glasgow Coma Scale score less than 9 or a drop of 3 or more)

  – moribund state.

• Control of intractable seizures.

• Need for stabilisation and management to allow brain imaging or transfer to the paediatric intensive care unit or another hospital.

Be aware that some pulse oximeters can underestimate or overestimate oxygen saturation levels, especially if the saturation level is borderline. Overestimation has been reported in people with dark skin. See also the NHS England Patient Safety Alert on the risk of harm from inappropriate placement of pulse oximeter probes. [NICE’s guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s, recommendation 1.4.37]

An anaesthetist experienced in paediatric airway management is an anaesthetist who has maintained their skills in paediatric resuscitation to the level of advanced paediatric life support.
support or equivalent (for example by undertaking regular supernumerary attachments to paediatric lists or secondments to specialist centres/paediatric simulator work).

In the absence of an anaesthetist, another clinician experienced in paediatric airway management may undertake tracheal intubation and mechanical ventilation for children and young people with meningococcal septicaemia.

A paediatric intensivist should be consulted by the clinician undertaking tracheal intubation and mechanical ventilation.
Quality statement 10: Transfer within and between hospitals

Quality statement

Children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia being transferred within or between hospitals are escorted by a healthcare professional trained in advanced paediatric life support.

Quality measure

Structure

Evidence of local arrangements for children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia being transferred within or between hospitals to be escorted by a healthcare professional trained in advanced paediatric life support.

Data source: Local data collection.

Process

Proportion of children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia being transferred within or between hospitals who are escorted by a healthcare professional trained in advanced paediatric life support.

Numerator – the number of people in the denominator who are escorted by a healthcare professional trained in advanced paediatric life support.

Denominator – the number of children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia being transferred within or between hospitals.

Data source: Local data collection.
What the quality statement means for different audiences

**Service providers** ensure systems are in place for children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia being transferred within or between hospitals to be escorted by a healthcare professional trained in advanced paediatric life support.

**Healthcare professionals** ensure children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia being transferred within or between hospitals are escorted by a healthcare professional trained in advanced paediatric life support.

**Commissioners** ensure they commission services for children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia being transferred within or between hospitals to be escorted by a healthcare professional trained in advanced paediatric life support.

**Children and young people** with suspected or confirmed bacterial meningitis or meningococcal septicaemia (blood poisoning) being transferred within or between hospitals are escorted by a healthcare professional trained in life saving treatment for children (advanced paediatric life support).

Source guidance

Topic Expert Group consensus.
Quality statement 11: Transfer to intensive care

Quality statement

Children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia requiring transfer to a paediatric intensive care unit or high dependency unit in another hospital are transferred by a specialist paediatric retrieval team.

Quality measure

Structure

Evidence of local arrangements for children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia requiring transfer to a paediatric intensive care unit or high dependency unit in another hospital to be transferred by a specialist paediatric retrieval team.

Data source: Local data collection.

Process

Proportion of children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia requiring transfer to a paediatric intensive care unit or high dependency unit in another hospital who are transferred by a specialist paediatric retrieval team.

Numerator – the number of people in the denominator who are transferred by a specialist paediatric retrieval team.

Denominator – the number of children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia requiring transfer to a paediatric intensive care unit or high dependency unit in another hospital.
Data source: Local data collection. Contained within the baseline assessment for the NICE guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s.

What the quality statement means for different audiences

Service providers ensure systems are in place for children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia requiring transfer to a paediatric intensive care unit or high dependency unit in another hospital to be transferred by a specialist paediatric retrieval team.

Healthcare professionals ensure children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia requiring transfer to a paediatric intensive care unit or high dependency unit in another hospital are transferred by a specialist paediatric retrieval team.

Commissioners ensure they commission services for children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia requiring transfer to a paediatric intensive care unit or high dependency unit in another hospital to be transferred by a specialist paediatric retrieval team.

Children and young people with suspected or confirmed bacterial meningitis or meningococcal septicaemia (blood poisoning) who need to be transferred to a paediatric intensive care unit or high dependency unit in another hospital are taken by a team of healthcare professionals that specialises in caring for and transporting seriously ill children (a paediatric retrieval team).

Source guidance

Meningitis (bacterial) and meningococcal septicaemia in under 16s: recognition, diagnosis and management. NICE guideline CG102 (2010, updated 2015), recommendation 1.4.50
Definitions

Specialist paediatric retrieval team

A specialist paediatric retrieval team comprises medical and nursing staff with specialist training in the transfer of sick children and young people from hospitals to paediatric intensive care or high dependency units. [NICE's guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s, recommendation 1.4.50]
Quality statement 12: Information provision

Quality statement

Children and young people who have had bacterial meningitis or meningococcal septicaemia, and/or their parents and carers, are given information before discharge about the disease, its potential long-term effects and how to access further support.

Quality measure

Structure

Evidence of local arrangements for children and young people who have had bacterial meningitis or meningococcal septicaemia, or their parents and carers, to be given information before discharge about the disease, its potential long-term effects and how to access further support.

Data source: Local data collection.

Process

Proportion of children and young people who have had bacterial meningitis or meningococcal septicaemia, or their parents or carers, who receive information before discharge about the disease, its potential long-term effects and how to access further support.

Numerator – the number of people in the denominator or their parents or carers who receive information before discharge about the disease, its potential long-term effects and how to access further support.

Denominator – the number of children and young people who have had bacterial meningitis or meningococcal septicaemia.
Data source: Local data collection.

Outcome

Patient and/or parent or carer satisfaction with information received before discharge.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure systems are in place for children and young people who have had bacterial meningitis or meningococcal septicaemia, and/or their parents and carers, to be given information before discharge about the disease, its potential long-term effects and how to access further support.

Healthcare professionals give information before discharge to children and young people who have had bacterial meningitis or meningococcal septicaemia and/or their parents and carers about the disease, its potential long-term effects and how to access further support.

Commissioners ensure they commission services for children and young people who have had bacterial meningitis or meningococcal septicaemia, and/or their parents and carers, to be given information before discharge about the disease, its potential long-term effects and how to access further support.

Children and young people who have had bacterial meningitis or meningococcal septicaemia (blood poisoning), and/or their parents and carers, are given information before leaving hospital about the disease, its potential long-term effects and how to access further support.

Source guidance

Meningitis (bacterial) and meningococcal septicaemia in under 16s: recognition, diagnosis and management. NICE guideline CG102 (2010, updated 2015), recommendations 1.5.1 and 1.5.2
Definitions

Further support

Further support can be provided for children and young people who have had bacterial meningitis or meningococcal septicaemia, and their parents or carers by the GP, or hospital paediatrician and by patient support organisations, including meningitis charities that can offer support, befriending, in-depth information, advocacy, counselling, and written information to signpost families to further help. [NICE's guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s, recommendation 1.5.2]
Quality statement 13: Audiological assessment

Quality statement

Children and young people who have had bacterial meningitis or meningococcal septicaemia have an audiological assessment before discharge.

Quality measure

Structure

Evidence of local arrangements for children and young people who have had bacterial meningitis or meningococcal septicaemia to have an audiological assessment before discharge.

Data source: Local data collection.

Process

Proportion of children and young people who have had bacterial meningitis or meningococcal septicaemia who have an audiological assessment before discharge.

Numerator – the number of people in the denominator who have an audiological assessment before discharge.

Denominator – the number of children and young people who have had bacterial meningitis or meningococcal septicaemia.

Data source: Local data collection.
What the quality statement means for different audiences

**Service providers** ensure systems are in place for children and young people who have had bacterial meningitis or meningococcal septicaemia to have an audiological assessment before discharge.

**Healthcare professionals** ensure children and young people who have had bacterial meningitis or meningococcal septicaemia have an audiological assessment before discharge.

**Commissioners** ensure they commission services for children and young people who have had bacterial meningitis or meningococcal septicaemia to have an audiological assessment before discharge.

Children and young people who have had bacterial meningitis or meningococcal septicaemia (blood poisoning) have a hearing test before they leave hospital.

Source guidance

*Meningitis (bacterial) and meningococcal septicaemia in under 16s: recognition, diagnosis and management. NICE guideline CG102 (2010, updated 2015), recommendation 1.5.3*

Definitions

It may not be possible to arrange an audiological assessment before discharge in all circumstances. Where this is the case the assessment should be undertaken within 4 weeks of the child or young person being fit to undergo testing (that is, once they are no longer critically ill). [NICE's guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s, recommendation 1.5.3]
Quality statement 14: Follow-up

Quality statement

Children and young people who have had bacterial meningitis or meningococcal septicaemia have a follow-up appointment with a consultant paediatrician within 6 weeks of discharge.

Quality measure

Structure

Evidence of local arrangements for children and young people who have had bacterial meningitis or meningococcal septicaemia to have a follow-up appointment with a consultant paediatrician within 6 weeks of discharge.

Data source: Local data collection.

Process

Proportion of children and young people who have had bacterial meningitis or meningococcal septicaemia who have a follow-up appointment with a consultant paediatrician within 6 weeks of discharge.

Numerator – the number of people in the denominator who have a follow-up appointment with a consultant paediatrician within 6 weeks of discharge.

Denominator – the number of children and young people who are discharged after having had bacterial meningitis or meningococcal septicaemia.

Data source: NHS Digital Hospital Episode Statistics contain the data necessary for the monitoring of outpatient follow-up. Also contained within the baseline assessment for the NICE guideline on meningitis (bacterial) and meningococcal septicaemia in under 16s.
What the quality statement means for different audiences

**Service providers** ensure systems are in place for children and young people who have had bacterial meningitis or meningococcal septicaemia to have a follow-up appointment with a consultant paediatrician within 6 weeks of discharge.

**Healthcare professionals** ensure that children and young people who have had bacterial meningitis or meningococcal septicaemia have a follow-up appointment with a consultant paediatrician within 6 weeks of discharge.

**Commissioners** ensure they commission services for children and young people who have had bacterial meningitis or meningococcal septicaemia to have a follow-up appointment with a consultant paediatrician within 6 weeks of discharge.

**Children and young people who have had bacterial meningitis or meningococcal septicaemia** (blood poisoning) have an appointment with a specialist (a consultant paediatrician) within 6 weeks of leaving hospital.

Source guidance

Meningitis (bacterial) and meningococcal septicaemia in under 16s: recognition, diagnosis and management. NICE guideline CG102 (2010, updated 2015), recommendations 1.5.5 (key priority for implementation) and 1.5.7
Update information

Minor changes since publication

March 2023: We added text to the definitions sections in statements 2 and 9 to indicate that pulse oximetry may be less reliable in people with dark skin. We also added a link to the NHS patient safety alert on the risk of harm from inappropriate placement of pulse oximeter probes.

November 2019: Changes have been made to the source guidance references to reflect the updated NICE guideline on fever in under 5s.

October 2018: Changes have been made to this quality standard to update source guidance and policy context references, and links to data sources.

July 2015: References for the evidence sources were amended to reflect that the NICE guideline on fever in under 5s has been updated.
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.

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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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.

- Royal College of Paediatrics and Child Health
- Meningitis Research Foundation
- Royal College of Pathologists
- Meningitis Now