NICE National Institute for Health and Care Excellence

NICE quality standard

Meningitis (bacterial) and meningococcal disease

Quality standard

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www.nice.org.uk/guidance/qs19

Contents

This standard is based on NG240.

This standard should be read in conjunction with QS15, QS64, QS75, QS112, QS131, QS145 and QS162.

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Statement 2 People with suspected meningitis have lumbar puncture without neuroimaging unless they have a contraindication to lumbar puncture that requires neuroimaging. **[New 2024]**

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Statement 5 People who have had bacterial meningitis or meningococcal disease have a follow-up appointment in secondary care within 6 weeks of discharge from hospital. **[2012, updated 2024]**

In 2024 this quality standard was updated, and statements prioritised in 2012 were updated [2012, updated 2024] or replaced [new 2024]. For more information, see update information.

Quality statement 1: Safety netting advice

Quality statement

People sent home after clinical assessment indicates that they are unlikely to have bacterial meningitis or meningococcal disease are given safety netting advice. **[2012, updated 2024]**

Rationale

Bacterial meningitis and meningococcal disease can be difficult to diagnose or distinguish from other conditions. People who are unlikely to have bacterial meningitis or meningococcal disease and have had clinical assessment, and, if appropriate, their family and carers, should be given advice on how to monitor their symptoms for any changes that could indicate bacterial meningitis or meningococcal disease. This will help to ensure they seek further medical advice if 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.

Process

Proportion of people sent home after clinical assessment shows that they are unlikely to have bacterial meningitis or meningococcal disease who are given safety netting advice.

Numerator – the number in the denominator who are given safety netting advice.

Denominator – the number of people sent home after clinical assessment shows that they are unlikely to have bacterial meningitis or meningococcal disease.

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

What the quality statement means for different audiences

Service providers (such as primary care, out of hours and secondary care services) ensure that systems are in place to give safety netting advice to people (and their family and carers, if appropriate) who are being sent home because clinical assessment indicates they are unlikely to have bacterial meningitis or meningococcal disease. This advice should include information on symptoms that should prompt people to seek further medical advice. Service providers ensure that information can be given verbally and in writing, and that online resources are available.

Healthcare professionals (such as GPs and emergency department clinicians) provide safety netting advice to people (and their family and carers, if appropriate) who are being sent home because clinical assessment indicates they are unlikely to have bacterial meningitis or meningococcal disease. They provide people with information that includes the symptoms that should prompt them to seek further medical advice. They provide this information verbally and in writing, and they also refer people to the online resources that are available.

Commissioners ensure they commission services that give safety netting advice to people (and their family and carers, if appropriate) who are being sent home because clinical assessment indicates they are unlikely to have bacterial meningitis or meningococcal disease.

People who are being sent home after clinical assessment indicates that they are unlikely to have bacterial meningitis or meningococcal disease, and, if appropriate, their family and carers, are given advice about which symptoms and signs to look out for, and which changes should prompt them to seek further medical attention.

Source guidance

Meningitis (bacterial) and meningococcal disease: recognition, diagnosis and management. NICE guideline NG240 (2024), recommendations 1.1.16 and 1.3.2

Definitions of terms used in this quality statement

Safety netting advice

Information given to people who are being sent home because clinical assessment indicates that they are unlikely to have bacterial meningitis or meningococcal disease. It should:

- explain which symptoms and signs to look out for, and what changes should prompt them to seek further medical attention
- direct to sources of online information.

[Adapted from NICE's guideline on meningitis (bacterial) and meningococcal disease: recognition, diagnosis and management, recommendation 1.3.2]

Equality and diversity considerations

One symptom of bacterial meningitis or meningococcal disease that should be included in the safety netting information is a non-blanching rash. It is important that the information clearly explains how this rash may present differently depending on skin colour, and how best to identify it on different skin tones, such as where on the body to look for it. It could also include links to any resources that can help people identify this symptom on different skin tones, such as Black & Brown Skin's Mind the Gap clinical handbook and web resource, and Bliss's symptom spotting on darker skin tones webpage. In addition, the Meningitis Research Foundation has produced a guide to meningitis and septicaemia symptoms and symptom checkers for babies, toddlers (children aged under 5) and teenagers and young adults (aged 13 to 24). These resources have not been produced by NICE and are not maintained by NICE. We have not made any judgement about the quality and usability of the resources. Other resources may also be available.

People should be provided with safety netting information that they can easily read and understand themselves, or with support, so they can communicate effectively with health care services. Information should be in a format that suits their needs and preferences. It should be accessible to people who do not speak or read English, and it should be culturally appropriate and age appropriate. People should have access to an interpreter or advocate if needed.

For people 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: Lumbar puncture

Quality statement

People with suspected meningitis have lumbar puncture without neuroimaging unless they have a contraindication to lumbar puncture that requires neuroimaging. **[New 2024]**

Rationale

Lumbar puncture is the only test that can directly confirm a diagnosis of bacterial meningitis. Most people with suspected bacterial meningitis do not need neuroimaging before a lumbar puncture. This is only needed if the person has risk factors for an evolving space-occupying lesion, or symptoms or signs of raised intracranial pressure. Performing lumbar puncture without delay reduces the time in starting tailored antibiotic treatment, which in turn may reduce rates of mortality, neurological problems, hearing problems and functional impairment.

Quality measures

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

Process

a) Proportion of people with suspected bacterial meningitis who had lumbar puncture without prior neuroimaging.

Numerator – the number in the denominator who did not have neuroimaging before lumbar puncture.

Denominator – the number of people with suspected bacterial meningitis who had lumbar puncture.

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

professionals and provider organisations, for example from patient records. NHS England's Emergency Care Data Set includes data on suspected and confirmed bacterial meningitis and meningococcal disease.

b) Proportion of people with suspected bacterial meningitis who had neuroimaging before lumbar puncture and had a documented clinical indication for neuroimaging.

Numerator – the number in the denominator who had a documented clinical indication for neuroimaging.

Denominator – the number of people with suspected bacterial meningitis who had neuroimaging before lumbar puncture.

Data source: Data can be collected from information recorded locally by healthcare professionals and provider organisations, for example from patient records. NHS England's Emergency Care Data Set includes data on suspected and confirmed bacterial meningitis and meningococcal disease.

What the quality statement means for different audiences

Service providers (secondary care services) ensure that systems are in place for people with suspected bacterial meningitis to have lumbar puncture without undergoing neuroimaging unless they have a contraindication to lumbar puncture that requires neuroimaging. This includes ensuring that clinicians are aware that lumbar puncture should not be delayed because of neuroimaging and knowing the circumstances in which neuroimaging may be required, such as signs of raised intracranial pressure.

Healthcare professionals (such as emergency department doctors, paediatricians and physicians working in other hospital departments) ensure that people with suspected bacterial meningitis have lumbar puncture without undergoing neuroimaging unless they have a contraindication to lumbar puncture that requires neuroimaging. They ensure that they are aware of the circumstances which would necessitate neuroimaging before lumbar puncture, such as signs of raised intracranial pressure.

Commissioners ensure that they commission services in which people with suspected bacterial meningitis do not have neuroimaging before lumbar puncture unless they have a

contraindication to lumbar puncture that requires neuroimaging.

People with suspected bacterial meningitis have a lumbar puncture, where a needle is used to obtain fluid from the lower back to help diagnose whether they have bacterial meningitis, without having a scan of their brain (neuroimaging) unless this is clinically required.

Source guidance

Meningitis (bacterial) and meningococcal disease: recognition, diagnosis and management. NICE guideline NG240 (2024), recommendations 1.4.6 and 1.4.12

Definitions of terms used in this quality statement

Contraindications to lumbar puncture that require neuroimaging

Neuroimaging should be performed before lumbar puncture if the person has:

- risk factors for an evolving space-occupying lesion or
- any of these symptoms or signs of raised intracranial pressure:
  - new focal neurological features (including seizures or posturing)
  - abnormal pupillary reactions
  - a Glasgow Coma Scale (GCS) score of 9 or less, or a progressive and sustained or rapid fall in level of consciousness.

[Adapted from NICE's guideline on meningitis (bacterial) and meningococcal disease: recognition, diagnosis and management, recommendations 1.4.7 and 1.4.12]

Quality statement 3: Antibiotic treatment

Quality statement

People with suspected bacterial meningitis or suspected meningococcal disease receive intravenous (IV) antibiotics within 1 hour of their arrival at hospital. **[2012, updated 2024]**

Rationale

Suspected bacterial meningitis and suspected meningococcal disease are medical emergencies. Intravenous (IV) antibiotics should be started within 1 hour of the person's arrival at hospital to improve clinical outcomes, potentially reducing rates of mortality, neurological problems, hearing problems and functional impairment. Some people will have received antibiotic treatment in primary care or during ambulance transfer. Primary care services and ambulances do not have the IV antibiotics needed for bacterial meningitis or meningococcal disease. Therefore, these groups of people should also receive IV antibiotics within 1 hour of arrival at hospital.

Quality measures

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

Process

Proportion of people with suspected bacterial meningitis or suspected meningococcal disease who receive IV antibiotics within 1 hour of their arrival at hospital.

Numerator – the number in the denominator who receive IV antibiotics within 1 hour of their arrival at hospital.

Denominator – the number of people attending hospital with suspected bacterial meningitis or suspected meningococcal disease.

Data source: Data can be collected from information recorded locally by healthcare professionals and provider organisations, for example from patient records. NHS England's Emergency Care Data Set includes data on suspected and confirmed bacterial meningitis and meningococcal disease. It also includes data on the urgent and emergency care start date and time.

Outcome

Mortality due to bacterial meningitis and meningococcal disease.

Data source: The Office of National Statistics collects data on mortality, including mortality due to bacterial meningitis and meningitis, and meningococcal infection.

What the quality statement means for different audiences

Service providers (secondary care services) ensure that systems are in place so that people with suspected bacterial meningitis or suspected meningococcal disease receive IV antibiotics within 1 hour of their arrival at hospital. This includes having communication channels in place to ensure medications are available when needed.

Healthcare professionals (such as emergency department nurses and doctors) ensure that people with suspected bacterial meningitis or suspected meningococcal disease receive IV antibiotics within 1 hour of their arrival at hospital.

Commissioners ensure that they commission services in which people with suspected bacterial meningitis or suspected meningococcal disease receive IV antibiotics within 1 hour of their arrival at hospital.

People with suspected bacterial meningitis or suspected meningococcal disease are given intravenous antibiotics, which are antibiotics given directly into the vein, within 1 hour of their arrival at hospital.

Source guidance

Meningitis (bacterial) and meningococcal disease: recognition, diagnosis and management. NICE guideline NG240 (2024), recommendations 1.4.1 and 1.5.1.

Definitions of terms used in this quality statement

Within 1 hour of arrival at hospital

The arrival time is the time that the person presents at the emergency department, either self-presenting or via another means such as arrival in an ambulance.

The Emergency Care Data Set states that the urgent and emergency care activity start date and time is when handover occurs, or 15 minutes after the emergency ambulance arrives at the emergency department, whichever is the sooner, and this is the 'clock start' time. This is the time that can be used for measurement purposes for this quality statement for those arriving by ambulance.

The person's booking-in time can be used for measurement purposes, if they do not arrive by ambulance. [Adapted from NHS England's Emergency Care Data Set and user guidance and expert opinion]

Quality statement 4: Audiological assessment

Quality statement

People who have had bacterial meningitis or meningococcal disease have an audiological assessment within 4 weeks of being well enough for testing. **[2012, updated 2024]**

Rationale

Bacterial meningitis and meningococcal disease can cause severe or profound deafness. In many cases, cochlear implants can improve hearing. It is important that the audiological assessment takes place promptly, preferably before discharge from hospital, to allow for an urgent referral for cochlear implants if needed. This is because these devices are only fully effective if they are implanted within 6 months of the onset of bacterial meningitis or meningococcal disease.

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. Note that, in all cases, audiological assessment should preferably be carried out before discharge, however, it is acknowledged that this will not always be possible.

Process

a) Proportion of people discharged from hospital within 1 week of being diagnosed with bacterial meningitis or meningococcal disease who have an audiological assessment before being discharged or within 4 weeks of discharge.

Numerator – the number in the denominator who have an audiological assessment before discharge or within 4 weeks of discharge.

Denominator – the number of people discharged from hospital within 1 week of being diagnosed with bacterial meningitis or meningococcal disease.

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

b) Proportion of people who were admitted to hospital for more than 1 week with bacterial meningitis or meningococcal disease who have an audiological assessment within 5 weeks of admission.

Numerator – the number in the denominator who have an audiological assessment within 5 weeks of admission.

Denominator – the number of people who were admitted to hospital for more than 1 week with bacterial meningitis or meningococcal disease.

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

Outcome

Rates of cochlear implantation for severe or profound deafness caused by bacterial meningitis and meningococcal disease.

Data source: The British Cochlear Implant Group collects data on referral for, and receipt of, cochlear implants. It does not include the cause of deafness requiring referral for cochlear implants, this data can be collected from information recorded locally by healthcare professionals and provider organisations, for example from patient records.

What the quality statement means for different audiences

Service providers (secondary care services) ensure that systems are in place for people who have had bacterial meningitis or meningococcal disease to have an audiological assessment within 4 weeks of being well enough for testing.

Healthcare professionals (hospital doctors, including paediatricians) identify when people

who have had bacterial meningitis or meningococcal disease are well enough for audiological assessment. They then carry out an assessment within 4 weeks, explaining to the person why prompt assessment is needed.

Commissioners ensure that they commission services in which people who have had bacterial meningitis or meningococcal disease have an audiological assessment within 4 weeks of being well enough for testing.

People who have had bacterial meningitis or meningococcal disease have a hearing assessment within 4 weeks of being well enough for the test. This is to make sure that, if they have severe or profound deafness caused by the illness, they can be urgently referred for cochlear implants which can help improve their ability to hear and understand speech.

Source guidance

Meningitis (bacterial) and meningococcal disease: recognition, diagnosis and management. NICE guideline NG240 (2024), recommendation 1.12.7

Definitions of terms used in this quality statement

Well enough for audiological testing

People who are no longer critically ill should have an audiological assessment within 4 weeks, and preferably before discharge.

For measurement purposes, this could be:

- before discharge from hospital or within 4 weeks of discharge, if the person was admitted for up to 1 week
- within 5 weeks of hospital admission if the person was admitted for longer than 1 week.

[Adapted from NICE's guideline on meningitis (bacterial) and meningococcal disease: recognition, diagnosis and management, recommendation 1.12.7 and expert opinion]

Quality statement 5: Follow-up in secondary care

Quality statement

People who have had bacterial meningitis or meningococcal disease have a follow-up appointment in secondary care within 6 weeks of discharge from hospital. **[2012, updated 2024]**

Rationale

People who have had bacterial meningitis or meningococcal disease should have a follow-up appointment in secondary care within 6 weeks of discharge. This is so that short-term effects of the illness can be reviewed and long-term issues can be identified early, ensuring prompt referrals.

Quality measures

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

Process

Proportion of people who have had bacterial meningitis or meningococcal disease who have a follow-up appointment in secondary care within 6 weeks of discharge from hospital.

Numerator – the number in the denominator who have a follow-up appointment in secondary care within 6 weeks of discharge from hospital.

Denominator – the number of people who have had bacterial meningitis or meningococcal disease and have been discharged from hospital.

Data source:NHS Digital Hospital Episode Statistics contain the data necessary for the monitoring of outpatient follow-up, including those people who have had bacterial meningitis or meningococcal disease.

What the quality statement means for different audiences

Service providers (secondary care services) ensure that systems are in place for people who have had bacterial meningitis or meningococcal disease to have a follow-up appointment in secondary care within 6 weeks of discharge from hospital. This appointment should be carried out by a paediatrician for children and by a hospital doctor for adults. Because these conditions are associated with a wide range of potential complications, the appointment can be with a general physician who can refer the person to the relevant specialities.

Healthcare professionals (secondary care nurses and doctors, including paediatricians) ensure that people who have had bacterial meningitis or meningococcal disease have a follow-up appointment within 6 weeks of discharge from hospital. During this appointment, current symptoms can be reviewed, ongoing needs can be reviewed and assessed, and any further follow up can be agreed. This includes the arrangement of an additional review of babies under 12 months who have had bacterial meningitis or meningococcal disease, which should take place with a paediatrician 1 year after discharge from hospital.

Commissioners ensure that they commission services in which people who have had bacterial meningitis or meningococcal disease have a follow-up appointment in secondary care within 6 weeks of discharge from hospital.

People who have had bacterial meningitis or meningococcal disease are seen in hospital for a follow-up appointment within 6 weeks of their discharge from hospital. At this appointment, their current symptoms can be reviewed and ongoing needs can be reviewed and assessed. Adults are seen by a hospital doctor, and children and young people are seen by a paediatrician.

Source guidance

Meningitis (bacterial) and meningococcal disease: recognition, diagnosis and management. NICE guideline NG240 (2024), recommendations 1.13.1 and 1.13.2

Definitions of terms used in this quality statement

Follow-up appointment in secondary care

This is a follow-up with a secondary care doctor for adults, or a paediatrician for babies, children and young people, within 6 weeks of discharge from hospital. This review should cover:

- the results of their audiological assessment and whether cochlear implants are needed
- damage to bones and joints
- skin complications (including scarring from necrosis)
- psychosocial problems
- neurological problems
- care needs (for adults)
- developmental problems (in children and young people), in liaison with community child development services.

To ensure a full review of any possible complications, this appointment should take place in person and not virtually. [Adapted from NICE's guideline on meningitis (bacterial) and meningococcal disease: recognition, diagnosis and management, recommendations 1.13.1 and 1.13.2 and expert opinion]

Equality and diversity considerations

People who have had bacterial meningitis or meningococcal disease, and their family and carers, should be given information at the follow-up appointment that they can easily read and understand themselves, or with support, so they can communicate effectively with healthcare professionals. Information should be in a format that suits their needs and preferences. It should be accessible to people who do not speak or read English, and it should be culturally appropriate and age appropriate. People should have access to an interpreter or advocate if needed.

For people 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

December 2024: This quality standard was updated and statements prioritised in 2012 were replaced. The topic was identified for update following the annual review of quality standards. The review identified:

- changes in the priority areas for improvement
- updated guidance on meningitis (bacterial) and meningococcal disease: recognition, diagnosis and management.

Statements are marked as:

- **[new 2024]** if the statement covers a new area for quality improvement
- **[2012, updated 2024]** if the statement covers an area for quality improvement included in the 2012 quality standard and 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.

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 statement for NICE's guideline on meningitis (bacterial) and meningococcal disease: recognition, diagnosis and management to help estimate local costs.

Diversity, equality and language

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

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

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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.

- Meningitis Now
- British Society of Physical and Rehabilitation Medicine
- Meningitis Research Foundation
- Paediatric Critical Care Society