Trust Clinical Guideline for the Diagnosis and Management of bacterial meningitis, including Meningococcal disease, in all patients aged 16 and over

Document Control:

For Use In:	All Adult Clinical areas within Norfolk and Norwich University Hospital		
	All Personnel who work within the Trust		
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4.2	July 2018	Micro and IP&C	Management of the individual case and Antibiotic Treatment reviewed with new guidance, P8.
5	November 2022	Micro and IP&C	Links updated

Previous Titles for this Document:

Previous Title/Amalgamated Titles	Date Revised
None	Not applicable

Distribution Control

Printed copies of this document should be considered out of date. The most up to date version is available from the Trust Intranet.

Consultation

The following were consulted during the development of this document:

Workplace Health & Wellbeing	Accident and Emergency
Matrons/Senior Nurses	AMU

Sisters/Charge Nurses	Critical Care Complex
Pharmacy	EAUS
Drugs & Therapeutics Committee	Microbiology
HICC members	Neurology
IP&C Link Staff	Paediatrics
Lead Resuscitation Officer	

Monitoring and Review of Procedural Document

The document owner is responsible for monitoring and reviewing the effectiveness of this Procedural Document. This review is continuous however as a minimum will be achieved at the point this procedural document requires a review e.g. changes in legislation, findings from incidents or document expiry.

Relationship of this document to other procedural documents

This document is a clinical guideline applicable to Norfolk and Norwich University Hospital please refer to local Trust's procedural documents for further guidance, as noted in Section 5.

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Contents Page

1. Introduction

1.1. Rationale

Meningitis refers to the inflammation of the protective membrane covering the brain and spinal cord.

Bacterial meningitis is inflammation of the meninges secondary to bacterial infection, with elevated intracranial pressure and increased white blood count in cerebrospinal fluid due to bacteria in subarachnoid space and ventricles.

1.1.1. Epidemiology/Clinical features

Bacterial

Most Cases of community acquired meningitis are caused by Neisseria meningitidis (N. meningitidis) and Streptococcus pneumoniae in immunocompetent infants (>4 weeks), children and adults. Other less frequent causes include Staphylococcus aureus, Listeria monocytogenes, Group B Streptococcus (agalactiae), Escherichia coli, Streptococcus pyogenes, Mycobacterium tuberculosis and Haemophilus influenzae (H. Influenzae). Since the introduction of the Hib vaccination, meningitis caused by the capsular b strains of H. influenzae has become rare.

In **immunocompromised patients**, the most common agents are Streptococcus pneumoniae, Listeria monocytogenes, Cryptococcus neoformans and Gram-negative bacteria.

Viral

Aetiology is unidentified in most cases. Enteroviruses are currently the leading recognisable cause of aseptic meningitis and account for most of the cases in which a pathogen is identified. Infants and children are the primary victims of enteroviral meningitis but adults and patients on immunosuppressive are also at risk of infection.

In an unimmunised population, mumps or measles should be considered as a possible cause of aseptic meningitis and encephalitis.

Herpes simplex viruses (HSV) accounts for <4% of all cases of aseptic meningitis. HSV meningitis is most commonly associated with primary genital infection (HSV type 2) and is more likely to develop in women than men with primary infection.

Meningitis is less likely with recurrences of genital herpes.

Clinical Features

In adults at least two of the following symptoms are classically present:

- Headache
- Photophobia
- Fever
- Neck stiffness
- Altered mental status (may range from drowsiness, confusion, stupor to coma)

Skin rash (initially macular then petechial) occurs in patients with meningococcal septicaemia but can also occur in pneumococcal, haemophilus or streptococcal septicaemia.

1.2. Objective

This guideline has been written to optimise the investigation and management of patients admitted with suspected bacterial meningitis and prevent its spread.

The objective of the clinical guideline is to present the rationale and recommendations for the diagnosis and management of cases of acute bacterial meningitis, following hospital admission, and to help in the control of meningococcal disease.

1.3. Scope

Investigation and Management for patients aged 16 & over with suspected/ confirmed Meningitis.

This document does not deal with the management and treatment of meningitis due to other organisms other than bacteria e.g., viral, fungal or parasitic meningitis.

This document excludes management of meningitis in paediatrics and neonatal cases.

1.4. Glossary

The following terms and abbreviations have been used within this document:

Term	Definition
AGPs	Aerosol Generating Procedures
CCDC	Consultant in Communicable Disease Control
CSF	Cerebral Spinal Fluid
FFP3	Filtering Face Piece 3
HSV	Herpes simplex viruses
IMD	Invasive Meningococcal Disease
IP&CT	IP&C Team
LP	Lumbar Puncture
RCUK	Resuscitation Council UK
OPAT	Outpatient therapy
UKHSA	UK Health Security Agency
WHWB	Workplace Health and Wellbeing

2. Responsibilities

Chief Executive has overall responsibility for ensuring there are effective procedures and resources in place to enable the implementation of this guideline including staff protection.

DIPC has strategic responsibility within the Trust for the development and implementation of Infection Prevention and Control (IP&C) best practice and guidelines.

Divisional Managers/Matrons/Ward Managers are responsible for ensuring they have a process in place to reassure the organisation that all staff are aware and have received appropriate training They are responsible for ensuring that appropriate and timely staff contact tracing is undertaken in liaison with Workplace Health & Wellbeing in the event that a staff member has an exposure.

IP&C Team (IP&CT) is responsible for reviewing the IP&C aspects of this guidance and amend as required on the review date, or prior to this, following new developments to reflect current best practice. The IP&CT has a responsibility to offer training, specialist advice and support to staff regarding the IP&C aspects of this guideline.

The Antimicrobial and Neurology team are responsible for reviewing the treatment aspect of this guideline, advising on diagnosis and clinical management, processing specimens, reporting the results, sending the suspected specimens to the reference laboratory, informing the IP&CT, the patient's clinicians, and the Consultant in Communicable Disease Control (CCDC).

All Staff have a responsibility to ensure they follow the advice in this guideline and must ensure they attend appropriate training. Any deviations from these guidelines must be clearly documented in the patient's care notes, including risk assessments made.

It is the responsibility of each employee to be aware of the procedural documents which relate to their department/area of practice.

Workplace Health and Wellbeing (WHWB) is responsible for undertaking the contact tracing process after receiving timely information from ward managers / person in charge for the shift that day. WHWB will provide staff with appropriate advice following exposure.

UK Health Security Agency (UKHSA) is responsible for giving advice to community contacts and for community contact tracing.

3. Processes to be followed

Admitting hospital doctors <u>should ask if antibiotic(s) have been given</u>.
It is vital that antibiotics are administered as quickly as possible (e.g., within 30 minutes of presentation). If a Lumbar Puncture (LP) not contraindicated, Cerebral Spinal Fluid (CSF) sample should be sent as soon as possible in order to avoid reduced cell count and culture sensitivity thus affecting the overall patient management. The UK joint specialist societies guideline on the diagnosis and management of acute meningitis and meningococcal sepsis in immunocompetent adults

Suspected case

For paediatric patients see specific paediatric guidelines (Trust Guideline for management of: Bacterial Meningitis and Meningococcal Septicaemia in Children).

All patients with suspected acute bacterial meningitis should be hospitalised as soon as possible and empiric treatment commenced immediately. Once the organism has

been identified after gram staining and culture of CSF, pathogen- specific treatment should be instituted.

Isolation

All cases of suspected and confirmed acute bacterial meningitis should be nursed in a **single room with respiratory precautions** (to be documented in the patient care record) until they have had 24 hours of appropriate antibiotics and there is clinical improvement, or the diagnosis of meningococcus or other infectious agent is ruled out. This reduces the risk of cross infection and allows nursing in a quieter environment. For further guidance, see Trust Guideline for the Management of Isolation Procedures. Link to Mask poster

Isolation for suspected and confirmed cases of viral meningitis is depending on the causative organism and symptoms.

Antibiotics should be discontinued if the CSF culture is negative and clinical features are consistent with viral meningitis. A negative Gram stain does not exclude bacterial meningitis and interventions such as prior antibiotic use may influence culture results. Discuss with Microbiology if in doubt.

3.1. Management of the individual case and Antibiotic Treatment

3.1.1. Early Management of Suspected Meningitis and Meningococcal Sepsis in Immunocompetent Adults

3.1.2. Empirical Treatment of Community Acquired Meningitis	
Antibiotic of choice	**Penicillin Allergy** (Clear history of anaphylaxis or angioneurotic oedema with penicillins or cephalosporins)
Cefotaxime IV 2g 6-hourly **OR Ceftriaxone** IV 2g 12-hourly + **Dexamethasone** IV 10mg qds Start immediately prior to antibiotics or simultaneously. If antibiotics already started commence within 12 hours of starting antibiotics. If pneumococcal meningitis is confirmed, or thought probable based on clinical, epidemiological and CSF parameters continue for 4 days If another cause of meningitis is confirmed or thought probable stop dexamethasone	**Chloramphenicol** IV 25mg/kg 6-hourly + **Dexamethasone** IV 10mg qds Start immediately prior to antibiotics or simultaneously. If antibiotics already started commence within 12 hours of starting antibiotics. If pneumococcal meningitis is confirmed, or thought probable based on clinical, epidemiological and CSF parameters continue for 4 days. If another cause of meningitis is confirmed or thought probable stop dexamethasone **Pts ≥60 years OR Immunocompromised patients (including diabetics and alcohol misuse).** Add in to above regimen **Co-trimoxazole** IV 10-20mg/kg of the trimethoprim component in 4 divided doses **If patient been to country where penicillin resistant pneumococcal are prevalent in the last 6 months (discuss with Microbiology if unsure)**

Pts ≥60 years OR Immunocompromised patients (including diabetics and alcohol misuse). Add in to above regimen **Amoxicillin** IV 2g 4 hourly **If patient been to country where penicillin resistant pneumococcal are prevalent in the last 6 months (discuss with Microbiology if unsure)** Add to the above regimen **Vancomycin IV (see vancomycin policy for dose, aim for trough level 15-20 mg/L)** (see vancomycin policy for dose, aim for trough level 15-20 mg/L) **OR** **Rifampicin** PO/IV 600mg 12 hourly	Add to the above regimen **Vancomycin IV** (see vancomycin policy for dose, aim for trough level 15-20 mg/L) **OR** **Rifampicin** PO/IV 600mg 12 hourly
3.1.3. Definite treatment for Community Acquired Meningitis	
PATHOGEN	**Suggested duration of treatment**
No pathogen found	**10 days** if the patient has clinically recovered. If Streptococcus pneumoniae is suspected continue dexamethasone for 4 days
Neisseria meningitidis	
Continue **Cefotaxime** IV 2g 6 hourly (give STAT Ciprofloxacin PO 500mg) Or Continue **Ceftriaxone** IV 2g bd (no STAT ciprofloxacin needed) Or change to **Benzylpenicillin** IV 2.4g 4 hourly (and give STAT Ciprofloxacin PO 500mg if Ceftriaxone not given as initial therapy) Rifamipicin PO 600mg bd for 2 days can be given if a	**5 days if the patient has fully recovered**

stat Ciprofloxacin is contraindicated If clear history of anaphylaxis or angioneurotic oedema with beta-lactams: **Chloramphenicol** IV 25mg/kg 6-hourly (and give STAT Ciprofloxacin PO 500mg **STOP dexamethasone IV**		
Streptococcus pneumoniae		
Sensitivities unknown or penicillin resistant, cephalosporin sensitive	Continue **Cefotaxime** IV 2g qds or **Ceftriaxone** IV 2g bd If clear history of anaphylaxis or angioneurotic oedema with beta-lactams: **Chloramphenicol** IV 25mg/kg 6-hourly	**Antibiotics: 10 days (**up to 14 days if taking longer to respond or if penicillin or cephalosporin resistant strain) **Dexamethasone IV: 4 days**
Penicillin sensitive MIC ≤0.06 mcg/ml	Continue **Cefotaxime** IV 2g qds or **Ceftriaxone** IV 2g bd (or **Benzylpenicillin** 2.4g IV 4-hourly is an alternative) If clear history of anaphylaxis or angioneurotic oedema with beta-lactams: **Chloramphenicol** IV 25mg/kg 6-hourly	
Penicillin and cephalosporin non susceptible Penicillin MIC >0.06 or cefotaxime/ceftriaxone MIC >0.5	Continue **Cefotaxime** IV 2g qds or **Ceftriaxone** IV 2g bd OR If clear history of anaphylaxis or angioneurotic oedema with beta-lactams: **Chloramphenicol** 25mg/kg IV 6-hourly **AND** **Vancomycin** (see Vancomycin policy for dose, aim for trough level 15-20mg/L) & if necessary, add **Rifampicin** 300mg PO or IV (if oral route not available) 12-hourly	
Listeria monocytogenes		

Stop Cefotaxime/Ceftriaxone **Start Amoxicillin IV** 2g 4-hourly If clear history of anaphylaxis or angioneurotic oedema with beta-lactams: **Co-trimoxazole** IV 10-20mg /kg (of the trimethoprim component) 6-hourly OR **chloramphenicol** 25mg/kg IV 6-hourly **STOP dexamethasone IV**	**21 days**
Haemophilus influenzae	
Continue Cefotaxime IV 2g qds or Ceftriaxone IV 2g bd If clear history of anaphylaxis or angioneurotic oedema with beta-lactams: Moxifloxacin PO 400mg od **STOP dexamethasone IV**	**10 days**

3.1.4. Use of Steroids

Use of Dexamethasone (except in patients with septic shock)

- Start 10mg IV Dexamethasone 6 hourly on admission either shortly before or simultaneously with antibiotics
- If antibiotics already started, commence Dexamethasone if within 12 hours of starting antibiotics
- If pneumococcal meningitis is confirmed, or thought probable based on clinical, epidemiological and CSF parameters continue for 4 days.

If another cause of meningitis is confirmed or thought probable stop dexamethasone.

3.1.5. Outpatient therapy (OPAT) of meningitis and meningococcal disease

The decision to commence OPAT must be made by a physician familiar with OPAT and should be carried out by a specialist OPAT team and include regular review of cases by a physician after discussion with microbiology.

The patient should:

- Be afebrile and clinically improving
- Have received 5 or more days of inpatient therapy and monitoring
- Have reliable IV access
- Be able to access medical advice/care from the OPAT team 24 hr a day
- Have no other acute medical need other than the need for IV antibiotics

- The patient and family must be willing to participate in OPAT

Regimens that could be used in the community

Ceftriaxone 2 g bd IV (4 g od IV can be used after the first 24 h of therapy)
Ceftriaxone 2 g bd IV and Rifampicin 600 mg bd PO for penicillin resistant Streptococcus pneumoniae

3.2. Measures undertaken to prevent secondary cases

3.2.1. Notification

It is the legal obligation of the clinician(s) looking after the patient to formally notify and contact the CCDC to let him/her know that a suspected case has been admitted under their care. Contact during office hours should be made through the Health Protection Team (HPT) (Norfolk, Suffolk and Cambridgeshire HPT telephone number

03003038537 (out of hours 01603 481221). PHE should oversee chemoprophylaxis /vaccination of close contacts of meningococcal/Hib meningitis.

The microbiologist or where applicable the virologist should also be informed of infections notified to the CCDC so that appropriate tests can be organised on specimens received.

3.2.2. Control of Spread in the Hospital

Isolation: All patients with suspected meningitis or meningococcal sepsis should be isolated with Respiratory Precautions until meningococcal or sepsis is excluded or thought unlikely OR they have received 24 hours of Ceftriaxone OR a single dose of Ciprofloxacin This reduces the risk of cross infection and allows nursing in a quieter environment. See Trust Guideline for the Management of Isolation Procedures for guidance.

Preventative measures

Face Fitted Filtering Face Piece 3 (FFP3) masks and eye protection must be worn when performing Aerosol Generating Procedures (AGPs) such as resuscitation or airway management procedures in cases of probable or confirmed Meningococcal Disease.

Staff working in Critical Care Units and Admission Units (e.g., A&E and AMUs) may be at risk of frequent exposure. They should reduce such risks by minimising exposure to nasopharyngeal secretions and large droplets by taking precautions such as wearing surgical type masks.

Closed suction should be used for all AGP's. AGP's as per NHS England and NHS Improvement, 2022 include:

- Awake* bronchoscopy (including awake tracheal intubation)
- Awake* ear, nose, and throat (ENT) airway procedures that involve respiratory suctioning
- Awake* upper gastro-intestinal endoscopy
- Dental procedures (using high speed or high frequency devices, for example ultrasonic scalers/high speed drills)

- Induction of sputum
- Respiratory tract suctioning
- Surgery or post-mortem procedures (like high-speed cutting / drilling) likely to produce aerosol from the respiratory tract (upper or lower) or sinuses.
- Tracheostomy procedures (insertion or removal).

*Awake including 'conscious' sedation (excluding anaesthetised patients with secured airway)

NB *"On the advice of the RCUK the use of FFP3 masks or respirators as well as eye protection is still recommended when performing chest compressions for patients with suspected or confirmed COVID-19. AGP PPE, in particular FFP3 mask/respirator and eye protection, should be donned as swiftly as possible to avoid any delays in treatment."*

3.2.3. Vaccination of the Index Case for Meningococcal disease

- Any unimmunised index case under the age of 25 years (whatever the capsule serogroup) should be offered vaccination according to the national schedule
- Cases of confirmed serogroup C disease that are eligible for vaccination and have previously been immunised with Meningococcal C conjugate (or polysaccharide) vaccines should be offered a booster dose of Meningococcal C conjugate vaccinate around the time of discharge from hospital.
- If 2 or more cases of probable/confirmed IMD due to the same vaccinate preventable strain in the same educational or residential setting within a few weeks period occur than wider vaccination may be offered in line with national guidance.

3.2.4. Antibiotic Chemoprophylaxis in Staff contacts

Chemoprophylaxis recommended if:

- Staff have had exposure to direct nasopharyngeal secretions (i.e., WITHOUT a mask) from a known or highly probable case of meningococcal disease (i.e., mouth to mouth resuscitation, airway management (suction / intubation) or prolonged close care (within 1 metre/ 3 feet) where the patient has been coughing/sneezing droplet secretions.
- WHWB must be informed within 12 hours of a patient being suspected or confirmed bacterial meningitis infection for timely contact with staff members defined as close contacts to be undertaken to determine if prophylaxis is required. Ideally prophylaxis needs to be given within 24 hours of exposure but can be given at a later date depending on level of contact.

Workplace Health & Wellbeing will prescribe prophylaxis to staff.

Prescriptions for staff defined as close contacts will need to be collected by staff member from NNUH pharmacy.

Out of hours cases suspected or confirmed meningitis must be notified to the Site Manager (Bleep 1228) by the clinical area where patient has been. Refer to Workplace Health and Wellbeing out of Hours policy for details.

Out of hours

The list of staff with potential exposure will be collated by the Operations Manager. A

risk assessment for staff will be conducted by the Consultant Microbiologist on call with input from CCDC if required. Following this risk assessment, staff deemed to have had significant exposure will be directed to A&E by the operations Manager for chemoprophylaxis. The on-call pharmacist may be consulted for any antibiotic supply queries. Staff identified as close contact and prescribed chemoprophylaxis must contact WHWB on the next working day

Meningococcal Infection

Ciprofloxacin 500mg PO STAT In those unable to take Ciprofloxacin, **Rifampicin** (counsel patients on side effects) can be given as an alternative (PO 600mg bd for 2 days for those ages 12 and over).

Pregnancy: Ciprofloxacin PO 500mg STAT OR Ceftriaxone injection OR Azithromycin PO STAT

Workplace Health & Wellbeing Contact details:
Weekdays - 0830 to 1700 Telephone 01603 287035 (Internal 3035)
Out of hours cases suspected or confirmed meningitis must be notified to the Site Manager (Bleep 1228) by the clinical area where patient has been. Refer to Workplace Health and Wellbeing out of Hours policy for details.

Vaccination

Vaccination after contact with a confirmed or probable case of meningococcal disease for HCW's is not recommended because the exposure is invariably transient and those at increased risk will be offered chemoprophylaxis

3.2.5. The community, family, and close contacts

The rationale for giving antibiotic chemoprophylaxis to close contacts of IMD cases is to eliminate established carriage from the close contact group and, thereby, to reduce onward transmission. Antibiotic chemoprophylaxis also eradicates carriage in those who have newly acquired the invasive strain and may they be at risk. Close contact is defined as prolonged close contact with the case in a household type setting during the seven days before the onset of illness. Examples of such contacts would be those living and/or sleeping in the same household, pupils in the same dormitory, boy/girlfriends, or university students sharing a kitchen in a hall of residence.

It is the responsibility of the clinician(s) looking after the patient to formally notify and contact the CCDC to let him/her know that a suspected case has been admitted under their care.

It is the responsibility of the proper officer CCDC to recommend and organise prophylaxis, where appropriate for community contacts of meningococcal and Hib disease.

Contact during office hours should be made through the UKHSA Health Protection Team (HPT) (Norfolk, Suffolk and Cambridgeshire HPT telephone **0300 303 8537 and out-hour HPT on-call 01603 481 221**).

The CCDC is responsible for ensuring that appropriate prophylaxis is given and **will** discuss the arrangements for the immediate family with the clinical team looking after the patient.

When dealing with close relatives who are unable to leave the bedside or unable to contact their General Practitioner (GP) and it has been agreed that prophylaxis for confirmed meningococcal disease is required, the NNUH clinician looking after the index case may occasionally offer prophylaxis following discussion with the CCDC.

3.3. Confirming the diagnosis

Identification of the causative organism is important for the appropriate management of cases and contacts. The "gold standard" is to culture the causative agent of meningitis from blood, CSF, or other normally sterile site. When parenteral penicillin has been given before admission, the yield from blood culture is low, but the organism can still be recovered from throat swab.

Interpretation of CSF findings of meningitis in adults				
	Acute bacterial meningitis	**Viral meningitis**	**Tuberculous meningitis**	**Normal CSF**
Characteristics	Turbid, cloudy, purulent	Clean	Clear, cloudy	Clear
Opening pressure (mmH2O)	>180	>180	>180	180 (upper limit)
WBC count (cells/mm^3)	1000-10000	5-1000	25-100	0-5
Neutrophils (cells/mm^3)	100-10000 (may be normal)	Usually <100	Usually <100	0
Lymphocytes (cells/mm^3)	Usually <100	10-1000 (may be normal)	50-1000 (may be normal)	<5
Protein (g/l)	>0.45	<1	>0.45	015-0.45
Glucose (m/L)	<2.5	2.5-4.5	<2.5	2.5-4.5
CSF/blood glucose ratio	<0.3	>0.5	<0.5	0.6

4. References

Brouwer, M.C. et al., 2013. Corticosteroids for acute bacterial meningitis. The Cochrane database of systematic reviews, 6, p.CD004405. Available at: http://www.ncbi.nlm.nih.gov/pubmed/23733364 [Accessed May 28, 2014].

Fitch, M.T. & van de Beek, D., 2007. Emergency diagnosis and treatment of adult meningitis. The Lancet infectious diseases, 7(3), pp.191–200. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17317600 [Accessed June 22, 2014].

McGill, F. et al., 2016. The UK joint specialist societies guideline on the diagnosis and management of acute meningitis and meningococcal sepsis in immunocompetent adults. Journal of Infection, 72, pp. 405-438. Available at: https://www.journalofinfection.com/article/S0163-4453(16)00024-4/fulltext [Accessed July 13, 2018].

Schut, E.S., de Gans, J. & van de Beek, D., 2008. Community-acquired bacterial meningitis in adults. Practical neurology, 8(1), pp.8–23. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18230706 [Accessed June 22, 2014].

5. Associated Documentation

Early management of suspected bacterial meningitis and meningococcal septicaemia in British infection society Early management of suspected meningitis and meningococcal sepsis in immunocompetent adults – 1 page table
https://www.britishinfection.org/application/files/5414/5674/3289/algorithm.pdf

Haemophilus influenza type b (Hib): the Green Book, chapter 16
https://www.gov.uk/government/publications/haemophilus-influenzae-type-hib-the-green-book-chapter-16

Meningococcal: the Green Book, chapter 21
https://www.gov.uk/government/publications/meningococcal-the-green-book-chapter-22
NHS England and NHS Improvement, 2022, National infection prevention and control manual for England V2.1 updated 21st July 2022
https://www.england.nhs.uk/publication/national-infection-prevention-and-control/
Accessed: 08/08/2022

Meningococcal disease: guidance on public health management - GOV.UK (www.gov.uk) Accessed: 08/08/2022
Guidance for public health management of meningococcal disease in the UK

Updated August 2019
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/829326/PHE_meningo_disease_guideline.pdf

Respiratory Isolation Poster

PHE, 2019, Guidance for the public health management of meningococcal disease in the UK. PHE publications.
Sources used by Caroline Hallam:

ESCMID guideline - diagnosis and treatment of acute bacterial meningitis 2016
The UK joint specialist society's guideline on the diagnosis and management of acute meningitis and meningococcal sepsis in immunocompetent adults, British infection association, 2016

Guidance for the public health management of meningococcal disease in the UK 2018.

British infection society Early management of suspected meningitis and meningococcal sepsis in immunocompetent adults – 1 page table
https://www.britishinfection.org/application/files/5414/5674/3289/algorithm.pdf

6. Monitoring Compliance

Compliance with the process will be monitored through the following:

Key elements	Process for Monitoring	By Whom (Individual / group /committee)	Responsible Governance Committee /dept	Frequency of monitoring

Compliance with isolation guidance	Electronic Audit tools Business object	IP&CT	IP&C Monthly report Clinical Governance HICC	Every 2 years
Compliance with appropriate antibiotic treatment	Electronic Audit tools Business object	Antibiotics pharmacist, Microbiology SpR	IP&C Monthly report Clinical Governance HICC	Every 2 years

The audit results are to be discussed at relevant governance meetings to review the results and recommendations for further action. Then sent to HICC who will ensure that the actions and recommendations are suitable and sufficient.

7. Appendices

There are no appendices for this document.

8. Equality Impact Assessment (EIA)

Type of function or policy	Existing

Division	Clinical Support Services	**Department**	Infection Prevention and Control
Name of person completing form	Sarah Morter	**Date**	October 2022

Equality Area	Potential Negative Impact	Impact Positive Impact	Which groups are affected	Full Impact Assessment Required YES/NO
Race	None			N/A
Pregnancy & Maternity	None			N/A
Disability	None			N/A
Religion and beliefs	None			N/A
Sex	None			N/A
Gender reassignment	None			N/A
Sexual Orientation	None			N/A
Age	None			N/A
Marriage & Civil Partnership	None			N/A
EDS2 – How does this change impact the Equality and Diversity Strategic plan (contact HR or see EDS2 plan)?	N/A			

- **A full assessment will only be required if: The impact is potentially discriminatory under the general equality duty**
- **Any groups of patients/staff/visitors or communities could be potentially disadvantaged by the policy or function/service**
- **The policy or function/service is assessed to be of high significance**

IF IN DOUBT A FULL IMPACT ASSESSMENT FORM IS REQUIRED

The review of the existing policy re-affirms the rights of all groups and clarifies the individual, managerial and organisational responsibilities in line with statutory and best practice guidance.