Health
Justice Health &
Forensic Mental Health Network

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Management of Suspected Cases of Meningococcal Disease

Policy Number 1.275

Policy Function Continuum of Care

Issue Date 10 October 2017

Summary This policy ensures patients who are suspected of having invasive meningococcal disease are managed appropriately and according to best practice and national guidelines.

Responsible Officer Executive Director Clinical Operations

Applicable Sites

- ☐ Administration Centres
- ☐ Community Sites (e.g. Court Liaison Service, Community Integration Team, etc.)
- ☒ Health Centres (Adult Correctional Centres or Police Cells)
- ☒ Health Centres (Juvenile Justice Centres)
- ☒ Long Bay Hospital
- ☒ Forensic Hospital

Previous Issue(s) Policy 1.275 (May 2014; Jul 2010)

Change Summary

- JH&FMHN Adult Standing Order Protocols and JH&FMHN Adolescent Standing Order Protocols, revised March 2017
- Meningococcal disease - Response Protocol for NSW Public Health Units, revised July 2012
- NSW Health Meningococcal Disease Fact Sheet, revised January 2017

TRIM Reference POLJH/1275

Authorised by Chief Executive, Justice Health & Forensic Mental Health Network

1. Preface

Effective management of an individual with invasive meningococcal disease requires early intervention and rapid treatment with effective antibiotics, and close monitoring and treatment of clinical deterioration such as hypotension, shock or coagulopathy.

Delays in diagnosis and treatment of invasive meningococcal disease increase the likelihood of death.

Invasive meningococcal disease is a medical emergency. Patients with suspected meningococcal infection **must** receive emergency administration of benzylpenicillin, followed by urgent transfer by ambulance to an Emergency Department. In the case of penicillin allergy, health centres must also stock ceftriaxone 2g as an alternative to benzylpenicillin.

2. Policy Content

2.1 Mandatory Requirements

- Any patient who is suspected of having invasive meningococcal disease must receive immediate antibiotic treatment with benzylpenicillin, and then be transferred urgently by ambulance to an Emergency Department.
- All health centres and inpatient units must have a supply of benzylpenicillin (1.2g x 2 or 600mg x 4) for intramuscular (IM) use plus Water for Injection x 10, labelled 'For emergency use for suspected cases of invasive meningococcal disease'.
- All health centres must also stock ceftriaxone 2g as an alternative to benzylpenicillin (anaphylactic or an immediate hypersensitivity reaction).

2.2 Implementation - Roles & Responsibilities

It is the responsibility of every clinician to follow this policy.

3. Procedure Content

3.1 Management of Suspected Cases of Invasive Meningococcal Disease

3.1.1 Introduction

- Meningococcal disease is caused by a bacterial infection and can lead to serious illness. Historically winter and spring have been the peak seasons for meningococcal disease, however cases can occur year round.
- People with meningococcal disease can become extremely unwell very quickly. Five to ten per cent of patients with meningococcal disease die, even despite rapid treatment.
- Between five and twenty five per cent of people carry meningococcal bacteria at the back of the nose and throat without showing any illness or symptoms.
- Meningococcal bacteria are not easily spread from person to person and the bacteria do not survive well outside the human body.

- The bacteria are passed between people in the secretions from the back of the nose and throat. This generally requires close and prolonged contact (e.g. living in the same household or intimate/deep kissing) with a person carrying the bacteria who is usually completely well.
- Meningococcal bacteria are not easily spread by sharing drinks or food.
- Meningococcal disease is caused by infection with *Neisseria meningitidis* of which there are several serogroups. Disease is caused by serogroups A, B, C, W and Y.
- Vaccination does not cover all types of meningococcal disease. Refer to meningococcal disease in the *Australian Immunisation Handbook*.

3.1.2 Clinical Presentation of Invasive Meningococcal Disease

Invasive meningococcal disease usually presents as meningitis, septicaemia, or as a combination of both. Septicaemia, with or without meningitis can be very severe and has a higher mortality rate than meningococcal meningitis.

Meningococcal disease can sometimes follow on from other respiratory infections.

Meningococcal disease typically presents with:

- Sudden onset of fever
- Meningeal signs (e.g. headache, neck stiffness, photophobia) and altered mental status
- Muscle aches, joint pain, vomiting
- Leg pain, cold extremities, and abnormal skin colour (pallor or mottling) frequently reported in the first 12 hours of meningococcal disease, particularly in children and adolescents
- Haemorrhagic (i.e. petechial or purpuric) rash that does not blanch under pressure. In the early stages of illness, a maculopapular rash may blanch under pressure.

3.1.3 Clinical Management of Invasive Meningococcal Disease

Any clinician (medical or nursing) who suspects meningococcal disease in a patient **must** immediately administer benzylpenicillin according to the JH&FMHN Standing Order Protocols *JH&FMHN Adult Standing Order Protocols* and *JH&FMHN Adolescent Standing Order Protocols* AND arrange for the urgent transfer by ambulance to an Emergency Department.

While waiting for transfer, the patient must be isolated in single cell accommodation and Droplet Precautions implemented without delay.

Immediate dose of IM benzylpenicillin for suspected meningococcal disease:

Adults 2,400 mg IM

Children 60mg/kg up to 2,400mg IM

For optimal benefit, benzylpenicillin should be given by the intravenous route, however if a medical officer is not present or is unable to establish intravenous access, then registered nurses must administer by the intramuscular route as per the JH&FMHN Standing Order Protocols.

OR

*Ceftriaxone 50mg/kg up to 2g IM (all ages)

*Ceftriaxone may be used as an alternative to benzylpenicillin if the patient has history of either an anaphylactic or an immediate hypersensitivity reaction to benzylpenicillin.

3.1.4 Contraindications to Benzylpenicillin

Benzylpenicillin should be withheld only if an individual has a clear history of either an anaphylactic or an immediate hypersensitivity reaction (such as difficulty in breathing, angioedema, or a generalised urticarial rash) after a previous dose of penicillin.

If there is a history of either an anaphylactic or an immediate hypersensitivity reaction, then do not administer penicillin. Ceftriaxone should be given instead as per JH&FMHN Standing Order Protocols whilst awaiting urgent ambulance transfer to an Emergency Department.

Documentation of treatment given must accompany the patient to hospital. When arranging the urgent transfer to a hospital of suspected cases of meningococcal disease, the Emergency Department of the referral hospital must be advised in advance.

Refer to Appendix 1 – Management of Suspected Cases of Meningococcal Disease Flow Chart.

3.2 Notification

The following must be notified as soon as possible of any suspected meningococcal cases –

State-wide:

- On Call Medical Service and After House Nurse Manager phone 13000 ROAMS / 1300 076 267; and
- Nurse Manager/Nursing Unit Manager; and
- Clinical Nurse Consultant Infection Prevention & Communicable Diseases by phone or email.

Forensic Hospital:

- Patient's Registrar, Consultant or On Call Registrar; and
- Nurse Unit Manager, Deputy Director of Nursing or After Hours Nurse Manager
- Clinical Nurse Consultant Infection Prevention & Communicable Diseases by phone or email.

3.3 Protection of Staff and other Patients

Staff and patients are not at increased risk unless they have been directly exposed to a patient's nasopharyngeal secretions. For example, if performed mouth-to-mouth resuscitation was performed or the patient was intubated and staff did not wear a face mask.

Strict adherence to Standard Precautions plus Additional Precautions i.e. Droplet Precautions (long sleeved impervious gown, surgical mask, gloves) will prevent exposure to the patient's blood, body fluids and respiratory droplets.

JH&FMHN staff must inform Corrective Services NSW or Juvenile Justice NSW staff or the private operators staff about the requirement to adhere to Standard Precautions plus Droplet Precautions, both verbally and on the Health Problem Notification Form. Information about the particular disease must not be disclosed.

Refer to JH&FMHN policies 1.231 *Health Problem Notification Form (Adults)* or 1.235 *Health Problem Notification and Escort Form (Adolescents)*.

3.4 Public Health Management of a Suspected or Confirmed Case

Population Health will identify individuals (if any) who have been close to the ill person (depending on the duration and the nature of their exposure); these people are called contacts. Population Health will coordinate the public health management and follow-up of suspected or confirmed cases and contacts in accordance with NSW Ministry of Health policy directives and national guidelines.

4. Definition

Must

Indicates a mandatory action to be complied with.

Should

Indicates a recommended action to be complied with unless there are sound reasons for taking a different course of action.

5. Legislation and Related Documents

JH&FMHN Policies and Procedures	1.231 *Health Problem Notification Form (Adults)* 1.235 *Health Problem Notification and Escort Form (Adolescents)*
JH&FMHN Protocols and Guidelines	*JH&FMHN Adult Standing Order Protocols* *JH&FMHN Adolescent Standing Order Protocols*
NSW Ministry of Health Guidelines	*NSW Health Meningococcal Disease factsheet*
Australian Government Department of Health and Aging	*National Guidelines Invasive Meningococcal Disease* *Australian Immunisation Handbook*

Appendix 1 – Management of Suspected Cases of Meningococcal Disease Flow Chart

If a patient presents with these symptoms **suspect** meningococcal infection:

- Sudden onset of fever
- Meningeal signs (e.g. headache, neck stiffness, photophobia) and altered mental status
- Muscle aches, joint pain, vomiting
- Leg pain, cold extremities and abnormal skin colour (pallor or mottling)
- Haemorrhagic (i.e. petechial or purpuric) rash that does not blanch under pressure.

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Immediately
Administer benzylpenicillin
Adults 2,400 mg IM
Children 60mg/kg up to 2,400mg IM
OR
*Ceftriaxone 50mg/kg up to 2g IM (all ages)
(*Alternative to benzylpenicillin if history of either an anaphylactic or an immediate hypersensitivity reaction to benzylpenicillin)

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Arrange **urgent** ambulance transport to Emergency Department
AND

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As soon as possible
Isolate and contain
suspected patient in
single cell accommodation
AND
Implement **Droplet Precautions**
(long sleeve gown, surgical mask, gloves)

As soon as possible **notify**

On Call Medical Service & AHHNM
130000 ROAMS / 1300 076 267
and
NM/NUM
and
Clinical Nurse Consultant Infection Prevention & Communicable Diseases