Infection Prevention and Control Team (IPCT)

SECTION 14

GUIDELINES FOR THE CONTROL OF MENINGOCOCCAL DISEASE

WARNING – This document is uncontrolled when printed. Check local intranet site for current version

Section - 14, Guidelines for the control of meningococcal disease
Issue No 4, April 2012
Page 1 of 9
Title of Policy: Guidelines for the control of meningococcal disease

Policy Reference: Issue no 4, April 2012

Scope: Organisation wide

Controlled document: This document shall not be copied in part or whole without the express permission of the author or the author's representative.

Expiry Date: April 2015

Author: William Cullinane, Health Protection Nurse Specialist

Policy application / Target Audience Throughout NHS Ayrshire and Arran

RESPONSIBILITIES FOR IMPLEMENTATION

Organisation: Public Health Department, Senior Management Teams and Chief Executive

Directorate: Directors

Corporate: Senior Managers

Departmental: Heads of Wards or Departments

Local: All relevant staff

Policy Statement: It is the responsibility of all clinical staff to ensure that they are aware of the content of this guidance in order to minimise the risks from meningococcal disease.

Last reviewed: April 2012

Agreed by: Infection Prevention and Control Policy Review Group

Electronic approval by: Professor Robert G Masterton

Date: 26 April 2012
TABLE OF CONTENTS

1.0 INTRODUCTION ................................................................. 4
2.0 CONTROL POLICY ............................................................. 4
3.0 ISOLATION PRECAUTIONS .................................................. 6
4.0 THE ROLE OF PUBLIC HEALTH ........................................... 7
5.0 CONTACTS .................................................................. 8
6.0 BIBLIOGRAPHY ................................................................. 9
1.0 INTRODUCTION

*Neisseria meningitidis* is one of the three most common causes of bacterial meningitis and leads to both epidemic and endemic disease worldwide. *Neisseria meningitidis* is a normal inhabitant of the human nasopharynx and is transmitted from person to person by droplets or secretions from the upper respiratory tract. The adult carriage rate is around 10%.

The majority of cases of invasive meningococcal disease are sporadic. Invasive infection may occur in the form of septicaemia and/or meningitis. The incubation period is 2 to 7 days but usually 3 to 5 days. The period of communicability continues until meningococci are no longer present in discharges from the nose or mouth. The vast majority of individuals who are colonised with meningococci remain asymptomatic.

1.1 Immediate care of cases

The importance of early recognition, prompt antibiotic treatment and speedy referral to hospital when meningococcal disease is suspected is paramount. Early treatment in primary or secondary care with parenteral antibiotics (intramuscular or intravenous benzylpenicillin) is recommended in the United Kingdom (UK) to reduce case fatalities. However, rapid admission to hospital is the highest priority when meningococcal disease is suspected and admission to hospital should not be delayed in order to give parenteral antibiotics. Refer to British National Formulary (BNF) for appropriate drug dosage and contra-indications. See also NHS Ayrshire and Arran Antimicrobial guidelines for locally approved treatment.

2.0 CONTROL POLICY

2.1 Notification

Meningococcal disease is notifiable under the Public Health Etc. (Scotland) Act 2008. This should be notified as soon as there is reasonable clinical suspicion of the diagnosis by the responsible clinician.

Initial notification should be made by telephone to the Consultant in Public Health (Medicine) (CPHM) at Afton House, Ailsa Campus on 01292 885858 or out of hours contact the CPHM via Crosshouse Hospital switchboard on 01563 521133. The CPHM should then be formally notified within 3 days using the Scottish Care Information (SCI) system or SCI form.

Continued good communication between hospital clinicians, General Practitioners (GPs), Consultant Microbiologists, the Infection Prevention and Control Team (IPCT) and the Health Protection Team (HPT) based at the Public Health Department, will facilitate the early recognition, diagnosis and management of cases and contacts.

The IPCT should be informed of all suspected or confirmed inpatient cases.
2.2 Confirmation of diagnosis of the clinical case

The following specimens should be collected on, or as soon after, admission to hospital from all patients where meningococcal infection is included in the differential diagnosis:

- Blood for culture
- Blood for Polymerase Chain Reaction (PCR) (Ethylenediaminetetraacetic acid (EDTA) or other unclotted blood specimen)
- Serum for serology (on admission and 2-6 weeks later)
- **CSF (cerebral spinal fluid) for microscopy, culture, PCR**
- Aspirate from other sterile sites suspected of being infected for microscopy, culture, PCR
- Naso-pharyngeal swab normally taken through the mouth (per-nasal if patient unable to co-operate)

**Although CSF offers the best chance of yielding an organism for culture, lumbar puncture should not be done until the patient’s condition has been stabilised and assessment made to rule out raised intracranial pressure.**

Where appropriate, specimens should be taken for alternative diagnosis e.g. naso-pharyngeal swab and stool for viral culture.

2.3 Cases due to rare serogroups or recurrent infection

In children and young adults with meningococcal disease caused by rare serogroups or recurrent infection due to any serogroup, the CPHM should discuss immunological investigation with the physician.

2.4 Blood specimens

Blood samples for culture and PCR testing are essential and should be obtained from all suspected cases. This is important as sensitivity falls to 5% or less if antibiotics have been given more than 1 to 2 hours before collection. However, antibiotics must not be delayed. Although benzylpenicillin may reduce the chance of isolating the causative organism, this is outweighed by the benefit to the patient, and PCR techniques are available that facilitate the diagnosis of meningococcal disease even after antibiotics have been given.

In addition, send 5ml-10ml of serum for meningococcal serology. If the diagnosis remains unconfirmed, a convalescent serum specimen should be taken after 14 to 21 days, or on discharge from hospital. If the possibility of meningococcal infection is not considered until some time after admission, it may still be possible to retrieve earlier samples from Haematology and Biochemistry Departments.
3.0 ISOLATION PRECAUTIONS
(see manual page Section 2 Transmission Based Precautions)

All hospital inpatients confirmed or suspected as suffering from meningococcal meningitis or septicaemia should be nursed in accordance with the following precautions.

3.1 Patient accommodation

The patient should be nursed in a single room with en-suite facilities. Transmission based isolation precautions should continue until the patient has been on appropriate antibiotic therapy for 24 hours.

If an individual requires care in another area e.g. high care, intensive care, staff must liaise with the receiving ward prior to transfer. The patient should be nursed, where possible, in a single room until they have completed 24 hours of appropriate antibiotic treatment.

3.2 Standard Infection Control Precautions (SICPs)

Staff must adhere to manual page Section 1 Standard Infection Control Precautions

3.2.1 Face protection

Although not required routinely on entering the room, a face mask and eye protection must be worn by staff involved in procedures that may generate respiratory droplets (e.g. naso-pharyngeal suctioning, intubation) which could splash into the face or eyes of the healthcare worker (HCW).

Normal surgical type masks are suitable for this purpose.

Prior to use, staff must refer to the manufacturers’ instructions on the correct use of facemasks. When being discarded, facemasks should be handled by the tapes only and placed in the clinical waste bin provided.

Hand hygiene must be carried out after removal of Personal Protective Equipment (see manual page Section 1 Standard Infection Control Precautions)

3.3 Waste disposal

All waste must be treated as clinical waste and disposed of according to local policy. A clinical waste bin must be positioned in the room.

3.4 Laboratory specimens

Specimens obtained for laboratory analysis should be sent to the laboratory promptly (refer to Laboratory Handbook).
3.5 Staff

The number of staff in contact with the patient should be kept to a minimum. Staff dealing with the patient must be aware of the risks and must wear appropriate PPE (see manual page Section 1 Standard Infection Control Precautions) when required.

3.6 Visitors

While patients are infectious (i.e. until they have completed 24 hours of appropriate antibiotics), visitors should be limited to essential visitors only. Anyone who is immunocompromised should refrain from visiting and parents should be advised that children should not visit during this period.

3.7 Routine and terminal cleaning

Rooms that have been used for confirmed or suspected infectious patients will require terminal cleaning. Refer to manual page Section 29 Terminal Cleaning Guidelines.

4.0 THE ROLE OF PUBLIC HEALTH

Within NHS Ayrshire and Arran, responsibility for the management of the public health aspects of meningococcal disease is vested in the CPHM (Health Protection).

The CPHM will be responsible for initiating epidemiological investigation of the case and arranging prophylactic antibiotics and other control measures for any close contacts.

Click link for more detailed NHS Ayrshire and Arran guidance on the public health management of single cases and clusters of meningococcal disease.

4.1 Management of contacts

The investigation and management of contacts is the responsibility of the CPHM. Details will be taken of all individuals who have had close contact with the index case during the 7 days prior to the onset of illness. The risk of secondary spread of infection to close contacts is low.

The principal reason for offering prophylactic antibiotics is to eliminate nasopharyngeal carriage of meningococci in household members and other close contacts and thereby reduce transmission to susceptible individuals.

4.2 Close contact tracing

Ideally this should be completed within the first 24 hours of notification, as the risk of a secondary case is greatest in the 7 days following close contact, but even if this is delayed, it may still prevent late onset cases.
4.3 Healthcare Workers (HCWs)

Antibiotic prophylaxis for HCWs is not normally required, as HCWs should routinely reduce the possibility of exposure to large droplets e.g. by wearing PPE (see manual page Section 1 Standard Infection Control Precautions) including surgical masks and eye protection when splashing/spraying of respiratory secretions is possible, and by using closed suction.

Antibiotic prophylaxis is recommended for those whose mouth or nose is directly exposed to large droplets/secretions from the respiratory tract of a probable or confirmed case of meningococcal disease when exposure occurs between the time the case became unwell until the case has completed 24 hours of appropriate antibiotic treatment.

Exposure to eyes only is not an indication for antibiotic prophylaxis.

General medical or nursing care of cases is not an indication for prophylaxis.

5.0 CONTACTS

<table>
<thead>
<tr>
<th>CPHM on duty for Health Protection</th>
<th>Monday to Friday 9am – 5pm 01292 885858</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Protection Team</td>
<td>All other times including Public Holidays</td>
</tr>
<tr>
<td>Afton House</td>
<td>On-call Consultant in Public Health Medicine (CPHM) via UHC Switchboard (01563 521133)</td>
</tr>
<tr>
<td>Ailsa Hospital</td>
<td></td>
</tr>
<tr>
<td>Dalmellington Road</td>
<td></td>
</tr>
<tr>
<td>Ayr, KA6 6AB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consultant Microbiologist on call</th>
<th>Monday to Friday 9:00am to 5:00pm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microbiology Department</td>
<td>Telephone 01563 521133 (UHC switchboard), or out of hours by radiopage via UHC switchboard.</td>
</tr>
<tr>
<td>Area Laboratory</td>
<td></td>
</tr>
<tr>
<td>UHC Crosshouse</td>
<td></td>
</tr>
<tr>
<td>KA2 0BE</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IPCT</th>
<th>Monday to Friday 9am – 5pm</th>
</tr>
</thead>
<tbody>
<tr>
<td>46 Lister Street</td>
<td>01563 521133 Ext 25765</td>
</tr>
<tr>
<td>UHC Crosshouse</td>
<td>01563 825765 Direct Dial</td>
</tr>
<tr>
<td>KA2 0BE</td>
<td>Infection Control Nurse Radiopage via Crosshouse Hospital switchboard (01563 521133)</td>
</tr>
<tr>
<td></td>
<td>All other times including Public Holidays</td>
</tr>
<tr>
<td></td>
<td>On-call Consultant Microbiologist via UHC switchboard (01563 521133)</td>
</tr>
</tbody>
</table>
6.0  BIBLIOGRAPHY

