Managing meningococcal disease (septicaemia or meningitis) in higher education institutions
Managing meningococcal disease (septicaemia or meningitis) in higher education institutions
Foreword

Students face many pressures today – pressure to be successful, financial worries and uncertainty about future career prospects. But good health is often taken for granted. It has taken publicity about recurring cases on meningococcal disease at university to bring home to students, universities and their associated doctors that students are at risk.

In response, the British Association of Health Services in Higher Education (BAHSHE), the Association of Managers of Student Services in Higher Education (AMOSSHE), the Health Protection Agency (HPA), the National Public Health Service for Wales, the Scottish Centre for Infection and Environmental Health, the Public Health Medicine Environment Group (PHMEG), and the Student Experience Strategy Group of Universities UK have revised practical guidelines on the management of meningococcal disease. This will help universities and health protection units prepare before meningitis or septicaemia occur, and indicate the action to take following a case or outbreak.

This publication represents the great strengths of working in partnership. I am delighted to commend to institutions these guidelines – particularly as they have been endorsed by the Meningitis Trust and Meningitis Research Foundation.

Professor Diana Green
Vice-Chancellor, Sheffield Hallam University and
Chair, Universities UK Student Experience Strategy Group

July 2004
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Executive summary

Universities and colleges are increasingly aware that cases of meningococcal disease cause great stress on campuses. Students are at risk. Their living arrangements and lifestyles often pose particular problems in public health management.

This publication summarises the issues facing students, staff, universities and colleges and their associated health services and health protection units. It provides advice on drawing up plans for universities and health protection units with recommended action before and after a case occurs.

The guidelines propose that each higher education institution ensures that it has a management protocol for dealing with such cases. In particular, such policies should ensure that there are:

- good channels of communication with students, staff and the public;
- effective support arrangements for students;
- strong links to health protection units and local GPs; and
- direct access to appropriate advice on the management of meningococcal disease.
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Approved by the Meningitis Trust and the Meningitis Research Foundation

Important contributions to these new guidelines, especially with regard to the care of ill students while at university, were suggested by Aidan, Anne, Paul, Neal and Philip Cadden of Chester. Their daughter and sister, Helen, a first year student, died in her university room from meningococcal septicaemia on 8 January 2001. Seven weeks later, Helen’s close school friend Richard Murphy, a first year student at another university, contracted meningococcal meningitis. He died on 26 February 2001.
Definitions

Meningococcal disease is an acute infectious disease caused by Neisseria meningitidis. This bacterium lives in the human throat and is commonly carried without ill effect. However, illness can develop very rapidly and is fatal in five to ten per cent of cases. Illness is due to septicaemia (blood poisoning), meningitis (inflammation of the brain lining) or a combination of the two. Other parts of the body eg. joints, heart, eye may occasionally be infected. Urgent antibiotic treatment is needed.

Prophylaxis is preventive treatment. A short course of antibiotics (chemoprophylaxis) is recommended for close contacts of a case to reduce the risk of further cases by eradicating carriage of the organism in the throats of those contacts.

Case definitions

Initial diagnosis of meningococcal disease (meningitis or septicaemia) is often based on clinical findings. In the absence of microbiological confirmation, the nature and level of response will depend largely on the certainty of clinical diagnosis. The following are recommended case definitions for public health action [1]. National guidelines for the management of meningococcal disease can also be found at: http://www.hpa.org.uk/cdph/issues/CDPHVol5/no3/Meningococcal_Guidelines.pdf

- **Confirmed case**: person with a clinical diagnosis of meningococcal meningitis or septicaemia, which has been confirmed microbiologically by culture or non-culture methods.

- **Probable case**: person with a clinical diagnosis without microbiological confirmation, where the clinician and public health doctor consider that meningococcal disease is the most likely diagnosis.

- **Possible case**: person with a clinical diagnosis of meningococcal meningitis or septicaemia without microbiological confirmation, where the clinician and public health doctor consider that diagnoses other than meningococcal disease are at least as likely.

Outbreak

Cases of meningococcal disease will normally be deemed related and an outbreak declared if two confirmed or probable cases of meningococcal disease occur at the same university within a four week period in the same term which are, or could be, caused by the same serogroup, serotype and serosubtype and for which a common link (e.g. same social network, same hall of residence) can be determined.
Two or more cases often occur at the same university which do not meet the outbreak definition above. After initial investigation, the CCDC will have to make a judgement whether or not to declare an outbreak.

In the following circumstances, cases of meningococcal disease at the same university will not normally constitute an outbreak:

- if there are two confirmed cases due to different strains, whatever the interval between them;
- if there are two confirmed or probable cases with no evidence of any common links in spite of intensive enquiry (eg. no social contact, different halls of residence, different courses), whatever the interval between; or
- if there are two possible cases (or one possible and one confirmed/probable case), whatever the interval or link between them.

University is used in the rest of this paper to refer to any institution of higher education.

*Health protection unit* is used in the rest of this paper to refer to the local public health department that is responsible for communicable disease control.

*Consultant in communicable disease control (CCDC)* is used in the rest of this paper to refer to the public health consultant responsible for control of communicable diseases.

*Local arrangements for communicable disease control vary considerably in the United Kingdom, particularly between the home countries.*

In England, following the abolition of district health authorities, the Health Protection Agency (HPA) now provides communicable disease control services through a network of local and regional health protection units. Local units comprise a small team of public health doctors, nurses and support staff and are usually headed by a consultant in communicable disease control. At the local level, legal responsibility for protecting the health of the public lies with the Primary Care Trust (PCT), drawing on the advice of its Director of Public Health. The HPA local and regional services provide support and expertise to PCTs in order for them to discharge this function.

In Wales, where health authorities were also abolished, similar arrangements apply. The National Public Health Service for Wales (NPHS), rather than the HPA, employs local health protection teams and these provide a communicable disease control service to Local Health Boards, the Welsh equivalent of PCTs.
In Scotland, communicable disease control is the responsibility of the Health Board. Each Board has its own directly accountable health protection unit, which is headed by a consultant in public health medicine (communicable disease and environmental health). The Scottish Centre for Infection and Environmental Health (SCIEH) provides specialist backup.

In Northern Ireland, local responsibility lies with the Health and Social Services Board each of which employs a consultant in communicable disease control with responsibility for health protection issues. Specialist backup for Northern Ireland is provided by the HPA.
1 Introduction

Cases of meningococcal disease in higher education institutions can cause considerable consternation and pose problems in public health management. Unlike cases of disease in young children, the close circle of contacts may be difficult to define and trace. Normal assumptions may not apply, as students will often be living in a hall of residence and may also be part of an active social network outside the hall. Misinformation about the incident may spread quickly by word of mouth and panic can easily result. Students who have recently left home may feel vulnerable especially if they have not yet established good access to local primary care services.

This publication describes the preparation that health protection units and higher education institutions should make before cases of meningococcal disease occur, and the action to be taken following a case or an outbreak. Prompt and accurate communication to raise awareness of symptoms in students and health care providers, and to provide reassurance to students, is essential.

Meningitis or septicaemia can be caused by other organisms, most commonly bacteria such as pneumococci or viruses such as echovirus. Public health action is rarely required after infection due to these other organisms either because they do not cause outbreaks or because there is no effective prevention. This document is therefore focused on the management of meningitis or septicaemia caused by meningococci.

This guidance was first published in 1998. It has been revised to take account of new national guidelines (1) and the introduction of new meningococcal vaccine against Group C strains.
2 Background

Incidence of meningococcal disease

Around 2,000 cases of meningococcal disease are reported each year in England and Wales. Over ninety per cent of cases are currently due to Group B strains, for which there is still no vaccine. Most occur in children under five years of age. A second peak of incidence occurs at age 15-19 years, corresponding with the age at which most students start further or higher education [2;3]. University undergraduate students are at higher risk compared with non-students of the same age group, especially those in universities with a high proportion of students in catered accommodation [4]. The risk is highest among first year students who make up the majority of residents in catered accommodation, especially in the first term [HPA CDSC, unpublished data]. Outbreaks in this group are well documented [5;6]. A higher risk of meningococcal disease among first year students in dormitories has also been observed in the USA [7]. Postgraduate students and staff are not thought to be at above average risk, but it is important to remember that anyone of any age can get meningococcal disease. It is also important to remember that the peak season for meningococcal disease extends through the winter months.

Why might this be? Meningococcal carriage rates in the 15-19 year old age group are twenty-five per cent higher than those in the general population (ten per cent) [8]. Students starting university are likely to be exposed to a wide variety of meningococcal strains, many of which they may not have encountered previously and in a setting where extensive social interaction occurs. This exposure is likely to be higher among students living in communal halls of residence. Indeed, it has been shown that carriage rates rise rapidly during the first term among first year students [9]. Although most strains of meningococci do not cause illness and help to build up immunity, a small proportion of strains are virulent and can cause illness.

Active and passive smoking have been linked with meningococcal carriage, and passive smoking with disease [10;11] – one outbreak in a US university was associated with a crowded smoky bar [12]. In one recent UK study, meningococcal disease was linked to halls of residence with bars but, surprisingly, not to smoky bars [13].

Meningococcal disease (septicaemia or meningitis) is notoriously difficult to diagnose in the early stages. It usually starts with fever, aches and pains, and feeling unwell, just like flu. At this stage doctors cannot make an accurate diagnosis. In meningococcal disease however, the illness can get worse very rapidly [see 3.9].

Antibiotics by injection are an essential and effective part of treatment. An injection of penicillin given by the GP before admission to hospital may be life saving. The fatality rate is around five to ten per cent, which is in line with the expected fatality rate for all cases of meningococcal disease [see Table 1]. The Table shows that while incidence in university students is falling, the fatality rate show no sign of change. Overwhelming septicaemia (blood poisoning) is usually the main cause of death.
Not only is meningococcal disease difficult to diagnose, but it also presents particular difficulties in public health management. These can arise in relation to defining, tracing and alerting contacts, communicating with fellow students and staff, and alerting relevant health care professionals. The arrangements for student health services vary considerably. In some institutions, there may be a university or college general practice with which all students and most staff and their families are registered. Elsewhere, a university or college health centre may provide a limited range of services, but students and staff are registered with a variety of local general practices. Therefore, when a case of meningococcal disease occurs in a student or staff member, the nature of the response will vary depending on the exact circumstances. It will need to take account of the certainty of diagnosis, the place of residence of the case, the local configuration of student health services and the occurrence of any other recent cases of meningococcal disease in the same higher education institution.

In November 1999 the Department of Health introduced a new vaccine against Group C strains, the MenC vaccine. Children and teenagers up to the age of 18 years were offered vaccination. The impact of this programme was dramatic with a rapid fall in the incidence rate of Group C disease (14). The vaccination is now recommended in the UK for all under 25 year olds (and first year university students irrespective of age). However, even before vaccination, disease due to Group B strains was more common than Group C disease, and as no vaccine that protects against Group B is currently available, it is important not to become complacent.

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>77</td>
<td>4 (5.2%)</td>
</tr>
<tr>
<td>2000</td>
<td>60</td>
<td>5 (8.3%)</td>
</tr>
<tr>
<td>2001</td>
<td>57</td>
<td>6 (10.5%)</td>
</tr>
<tr>
<td>2002</td>
<td>54</td>
<td>4 (7.4%)</td>
</tr>
</tbody>
</table>

Meningococcal disease is still with us.
3 Recommended action

3.0 These recommendations should be read together with existing guidance[1]

Action before a case occurs (Table 2)

3.1 The health protection unit and university (and student health services where appropriate) should agree responsibility for the following actions.

Before arrival

3.2 MenC vaccination should be strongly encouraged

Universities should send out information and advice on meningitis in joining packs to students. UK undergraduates should already have been offered MenC vaccine at school or college during 1999/2000, but students should be advised to check if they have been vaccinated before arrival. Universities should also send information about meningitis and available vaccinations to international students who may not have been routinely vaccinated.

3.3 At enrolment, universities should encourage students to register with a local doctor as soon as possible, and to ask for MenC vaccine if not already vaccinated.

Raising awareness among students

3.4 At the start of the academic year, all new students should be encouraged to:

- acquaint themselves with the symptoms and signs of meningococcal disease;
- register with a local general practice and inform warden at hall of residence of doctor’s name;
- look out for each other’s welfare; and
- inform someone (a friend or hall warden) if they are feeling ill, so that they can be monitored and prompt medical attention sought if their condition deteriorates.

3.5 The following are suggested methods for raising awareness:

- distribute leaflets and symptom cards to all new students on arrival (see Appendix);
- display posters and leaflets throughout the university and in all halls of residence (see Appendix);
- incorporate information on meningococcal disease in handbooks for new students, including the national meningitis charity helplines;
- make leaflets and symptom cards available through general practices and the university health centre;
- involve the Students’ Union in awareness raising campaigns;
- use the student newspaper and local media to highlight the message;
- use the computer network through the use of log on messages and information on Internet or Intranet web pages;
- arrange displays at the “Freshers Fair”; and
- consider using services of the meningitis charities (see Appendix).
Raising awareness among staff

The following are suggested methods for raising awareness:

- use the staff newsletter to highlight the issue of meningococcal disease from time to time and particularly at the start of the academic year;
- encourage the development of no-smoking policies in university premises, bars and halls of residence;
- write to heads of departments and deans at the start of the academic year to alert them to their role if an episode of meningococcal disease occurs;
- ensure that tutors are aware of their role in helping to defuse anxiety and in providing sound information; and
- arrange training for hall wardens and sub-wardens so that they are aware of the signs and symptoms of meningococcal disease and know how to respond appropriately.

Managing meningococcal disease (septicaemia or meningitis) in higher education institutions
Raising awareness among general practitioners and hospital doctors

3.7

General practitioners, including deputising services, should be reminded by the CCDC:

- to carry benzylpenicillin in their emergency bag and to give it intravenously (or failing this, intramuscularly) to any patient they suspect may be suffering from meningococcal disease, before the patient is transferred to hospital, unless there is a history of anaphylaxis (severe allergy) to penicillin [1]. If other antibiotics are available, third-generation cephalosporins may be used. If there is a history of immediate allergic reactions to penicillin or cephalosporins, chloramphenicol may be used; and

- to maintain a high level of suspicion for meningococcal disease in students (information available from meningitis charities, Appendix).

Hospital doctors should be reminded by the CCDC:

- to maintain a high level of suspicion (especially Accident and Emergency staff) for meningococcal disease in students;
- to ensure that a full range of specimens [1] are collected from patients with suspected meningococcal disease; and
- to notify the duty public health doctor immediately of any suspected case.

Action in the event of student illness

3.8

Students should be encouraged to look out for each other, and to report illness to a friend or warden [if in hall of residence]. Students should know how to get help and advice from a general practitioner if they are ill. This information should be widely available through the university and Students’ Union eg. university website, notice boards. It is important that contact information for local general practitioners is readily available, particularly in halls of residence. NHS Direct and the meningitis charities are available for telephone advice [Appendix].

When a doctor is called to see an ill student, it is important that a friend or warden is aware of this. If the doctor advises that the student be kept under observation, it is vital that clear arrangements are made by the doctor for regular monitoring by duty warden, flat-mate or friend [suggested frequency 3-4 hours]. In halls of residence, standing arrangements for monitoring a student with possible symptoms of meningitis are essential. This is especially important at night-time.
Meningococcal disease is notoriously difficult to diagnose in the early stages. It usually starts with fever, aches and pains, and feeling unwell, just like many infections. There may also be vomiting. At this stage it is usually very difficult to make an accurate diagnosis. In meningococcal disease, however, the illness can get worse very rapidly.

Early admission to hospital is advised if a student’s condition is worsening, especially during an outbreak. It is important to keep looking for signs that help in making the diagnosis.

ANY of the signs below in an ill student is an indication that medical help must be summoned as a matter of utmost urgency. If a doctor is not immediately available, call an ambulance or take the student to the nearest Accident and Emergency department. Signs are:

- a rash that does not fade when pressed with a glass (due to bleeding under the skin, a very useful sign);
- loss of consciousness;
- severe neck stiffness;
- very cold hands and feet; or
- severe and worsening headache (without other obvious cause).

**Action when a single case occurs**

**Dealing with a case of possible meningococcal disease**

Contacts do not need antibiotics [14]. However, if there is concern or alarm among fellow students, it is advisable to issue information to contacts. The information should emphasise that they are not considered at any risk from the incident even if they were in close contact with the case, that antibiotic prophylaxis is not necessary, and that no follow-up action is required unless further evidence emerges that changes the diagnostic category to a probable or confirmed case. Alerting general practices serving the hall of residence (if applicable) may be necessary if only to inform them that this was a possible case and that no preventive action is necessary. Meningitis charities can provide information on symptoms (cards, leaflets and posters).

**Dealing with a case of probable or confirmed meningococcal disease**

3.11 The actions outlined in Table 3 on page 19 are recommended.
<table>
<thead>
<tr>
<th>Action</th>
<th>Person/organisation responsible*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Inform and liaise with the university doctor or senior nurse (where applicable).</td>
<td>CCDC</td>
</tr>
<tr>
<td>2 Inform and liaise with the Vice-Chancellor’s office, Dean of Students and other relevant university staff.</td>
<td>CCDC</td>
</tr>
<tr>
<td>3 Arrange for close contacts to be alerted and to be issued with antibiotic prophylaxis (and offered vaccine where appropriate).</td>
<td>CCDC</td>
</tr>
<tr>
<td>4 Inform and alert the general practitioners of all close contacts who are thus treated.</td>
<td>CCDC</td>
</tr>
<tr>
<td>5 Provide public health information and advice to the university.</td>
<td>CCDC</td>
</tr>
<tr>
<td>6 Issue information letter urgently (same day) to students in same hall of residence (where relevant) and students on same course.</td>
<td>University</td>
</tr>
<tr>
<td>7 Consider issuing information to all departments and halls of residence.</td>
<td>University</td>
</tr>
<tr>
<td>8 Consider arranging a meeting for students in the same hall or teaching group.</td>
<td>University</td>
</tr>
<tr>
<td>9 Consider alerting national meningitis helplines/NHS Direct.</td>
<td>University</td>
</tr>
<tr>
<td>10 Alert all general practices serving university students.</td>
<td>CCDC</td>
</tr>
<tr>
<td>11 Draw up a reserve press statement.</td>
<td>University/health protection unit (jointly)</td>
</tr>
</tbody>
</table>

* blank lines to be completed taking account of local arrangements and circumstances

CCDC = Consultant in communicable disease control
University = normally Dean of Students or equivalent

Universities UK management guidelines
The social contact network will need to be elicited carefully from the case (or a close friend). The following methods are suggested:

(a) identify all students who share an accommodation sub-unit eg. shared kitchen and bathroom facilities;
(b) identify closest friends; and
(c) compile a social diary of the student’s movements in the week before illness to include non-university friends.

(a) and (b) should allow identification of students who share a “household setting” for prophylaxis. Close contacts should be defined according to normal practice (1).

(c) is useful as a cross-check on close contacts and as a means of identifying links between cases if further cases should occur. The student should be asked specifically about recent sexual contacts. Staff would not normally be offered prophylaxis unless they fall into the close contact group.

As antibiotic prophylaxis cannot be relied upon to prevent illness in a contact who has recently acquired infection, all close contacts (at home or university) should also be alerted to the range of symptoms caused by meningitis or septicaemia (1). Where feasible this would include close contacts who have just left the university setting eg. if a case is diagnosed at the end of term. Although antibiotics will have less overall effect on transmission within a dispersed social network, prophylaxis is recommended for close contacts who have recently dispersed where practicable (1).

Information should be provided to other students and staff in the same hall of residence (where relevant) and on the same course(s) as the affected student. Students need not only to be advised of the early symptoms and signs of meningococcal disease, but also on how to promptly access medical care. This information will need to be transmitted speedily and accurately both during and outside working hours. A variety of channels of communication such as university websites, email to students and staff, bulletin boards, helplines and a university or college radio station may be useful. Students can be encouraged to inform friends eg. through mobile phone text message or email. Invaluable assistance is also available from the Meningitis Trust, Meningitis Research Foundation, and NHS Direct (NHS 24 in Scotland) all of whom operate 24-hour helplines and will deal with enquiries from anxious members of the public. They should be informed of cases and of the action taken so that they can support the public health management. Local general practitioners should also be alerted as speedily as possible. Follow-up action may be necessary if the patient dies or if further suspect cases are admitted to hospital.

If a CCDC becomes aware of a case in a university student who is resident, or admitted to hospital, outside their university health district, they should inform the CCDC responsible for that university.
Action when more than one case occurs

Dealing with unrelated cases of meningococcal disease

In these instances the CCDC or duty public health doctor will normally seek advice on further action (1). The action outlined in Table 3 is recommended. In some circumstances, it may be helpful to convene an Incident Control Team as part of the health protection unit outbreak management plan. Wider public health action, other than issuing preventive antibiotics to close contacts of individual cases, is not usually indicated. Widespread anxiety amongst students, staff and parents should be anticipated. There should be contingency plans for setting up a helpline, which may be provided by the students themselves (under the auspices of the Students’ Union), by the university, or through NHS Direct. Arrangements for handling press enquiries should also be agreed in advance between the university and health protection unit. A press statement should be prepared. Follow-up action may be necessary if a patient dies, if further suspect cases are admitted to hospital or if new evidence linking cases comes to light.

Dealing with an outbreak of meningococcal disease

The public health action outlined in Table 4 on page 23 should be taken urgently. An Incident Control Team should be convened and the local outbreak control plan followed. The team should include representatives of the university (management, Students’ Union and health service) and local acute hospital. The roles and responsibilities of the members of the team should be clearly defined. Where students have already dispersed, the Incident Control Team should make decisions on action in the light of local circumstances.

The immediate priority is to alert all students and staff to the symptoms of meningococcal disease and to inform local general practices and acute hospitals of the incident. In outbreaks of meningococcal disease, further cases often occur within two or three days of the index case. Antibiotic prophylaxis or immunisation in individuals already incubating disease will not prevent illness. Raising clinical awareness to ensure prompt diagnosis and rapid referral for treatment is therefore of paramount importance. Rapid communication of accurate information and advice to health professionals is also vital. General practitioners, deputising services, hospital doctors, emergency admission units and Accident and Emergency departments should be alerted to prevent any delays in diagnosis or treatment of suspect cases. Clear advice should be given to achieve consistency of approach. Colleagues in other public health departments and microbiology laboratories should be alerted.
Responsibility for decisions on wider prophylaxis rests with the Incident Control Team. It is important to consider a target group at higher risk, e.g., students in the same hall of residence or same social group, for prophylaxis. If uncertain, advice should be sought from regional/national epidemiologists and/or reference laboratories. Organising mass antibiotic prophylaxis can present a considerable logistical challenge. The local hospital pharmacy can order and prepare medication. Ciprofloxacin is the drug of choice for use in students because it can be given as a single oral dose and does not interact with the oral contraceptive pill [1]. Information sheets should be handed out to the target group. An example is available in Appendix B of the national guidelines which can be found at: http://www.hpa.org.uk/cdph/issues/CDPHVol5/no3/Meningococcal_Guidelines.pdf.

Following the introduction of the MenC vaccine, no Group C outbreaks have been reported in UK universities. In the unlikely event of outbreaks due to uncommon strains [A, W135, Y], mass vaccination programmes may still be needed.

Handling the media during an outbreak of communicable disease requires consummate skill. It will be necessary for the Incident Control Team to agree on spokespersons for the health protection unit and the institution involved. Communication with the media should all be channelled through a public relations department where available. Press conferences can be a helpful way to ensure that a consistent message is conveyed to the media and of preventing intense media interest from interfering with the investigation and management of the outbreak.

**Action after a case or outbreak**

After a case or outbreak, action should be reviewed by the Incident Control Team to identify remediable errors in management and ensure any corrective action is taken.

Universities should consider the pastoral and after-care of the affected student, the student’s family and friends, and staff both in the immediate aftermath of an incident of meningococcal disease. There is an urgent need during and immediately after a case to give reassurance and support. Later, when the student returns, low profile support is essential; for example, such practicalities as helping affected students formulate letters to have “special circumstances” taken into account in the examination periods, or helping them with living arrangements. Referring families affected to the meningitis charities for help and support would be appropriate if this has not already happened.
<table>
<thead>
<tr>
<th>Action</th>
<th>Person/organisation responsible*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Activate the outbreak plan and convene an Incident Control Team.</td>
<td>CCDC</td>
</tr>
<tr>
<td>2 Consult with regional/national epidemiologists.</td>
<td>CCDC</td>
</tr>
<tr>
<td>3 Issue information immediately [within four hours] to students in the same hall of residence (where relevant).</td>
<td>University</td>
</tr>
<tr>
<td>4 Issue information urgently (same day) to all departments and halls of residence.</td>
<td>University</td>
</tr>
<tr>
<td>5 Alert local Accident &amp; Emergency departments and acute hospitals.</td>
<td></td>
</tr>
<tr>
<td>6 Consider establishing emergency ward arrangements.</td>
<td></td>
</tr>
<tr>
<td>7 Alert all general practices serving students urgently (same day) by telephone or fax.</td>
<td></td>
</tr>
<tr>
<td>8 Consider notifying other local universities (where applicable).</td>
<td></td>
</tr>
<tr>
<td>9 Alert all local general practices as soon as possible (next working day) eg. via public health link</td>
<td></td>
</tr>
<tr>
<td>10 Consider prophylaxis for defined target group. Incident Control Team</td>
<td></td>
</tr>
<tr>
<td>11 Convene meeting with the target group.</td>
<td>University</td>
</tr>
<tr>
<td>12 Check for acute illness in members of the target group.</td>
<td></td>
</tr>
<tr>
<td>13 If agreed, issue preventive antibiotics to the target group.</td>
<td>University</td>
</tr>
<tr>
<td>14 Consider setting up a helpline for students, staff and parents, ensuring national charity helplines are available as back up.</td>
<td>University</td>
</tr>
<tr>
<td>15 Notify details of the incident to the meningitis charities and NHS Direct (NHS 24 in Scotland).</td>
<td>CCDC</td>
</tr>
<tr>
<td>16 Consider informing all CCDCs by email.</td>
<td>CCDC</td>
</tr>
<tr>
<td>17 Agree public communication strategy.</td>
<td>University/health protection unit (jointly)</td>
</tr>
</tbody>
</table>

* blank lines to be completed taking account of local arrangements and circumstances  
  CCDC = Consultant in communicable disease control  
  University = normally Dean of Students or equivalent  

Table 4: Action for an outbreak of meningococcal disease
4 Drawing up plans

Plans for universities

Existing plans

Many institutions will already have an emergency plan or crisis management procedure, which could be used or adapted to deal with an incident of meningococcal disease, which should include action to be taken before a case arises, after a case and in the event of an outbreak. In addition, institutions will have protocols or procedures for dealing with the death of a student.

Key individuals

Institutions should consider which individuals will need to be involved in drawing up plans and in responding to a case or cases of meningococcal disease. It is advisable for one person to coordinate operations and to receive and disseminate all information. It may be necessary to devise a rota of people to undertake this responsibility. At the very least, it should be clear who assumes this task if the person responsible is unavailable.

The following individuals may also need to be involved in any incident:

- A member of the senior management team;
- Staff from the University Health Service;
- Student Services personnel;
- The Public Relations Officer;
- The warden or manager of any halls involved;
- The head of the appropriate academic department(s); and
- Students’ Union representatives.

Consideration should be given to which of these should be part of the Incident Control Team. Straightforward contact arrangements within working hours and out of hours should be planned.

It is also necessary for universities to plan their responses if the campuses span more than one Health Authority.

Communication

The fear and anxiety engendered by a case of meningococcal disease are often out of all proportion to the risk. It is essential, therefore, that clear, consistent and accurate information is provided within the institution.
The type of information provided may vary according to the target group concerned but the following might be considered:

**Students**
- those in the same residence;
- those in residences on the same site;
- those on the same course; and
- The general student population who may not be at increased risk but who may perceive themselves to be.

**Staff**
- residence staff, particularly those who have had recent contact with the affected student, such as cleaners or porters;
- those in the same academic department;
- others within the institution who may not be at increased risk but who may perceive themselves to be;
- parents and relatives of students who may not be at increased risk but who may be perceived to be by others; and
- local and possibly national media [see below for more about press strategy].

University websites can provide a useful source of information and links to meningitis charity websites. Other areas of the institution may be able to assist in ensuring that information reaches certain audiences. For example, Personnel and/or Occupational Health departments can be recruited to help disseminate information to staff groups and Registry departments can aid in tracing students and getting information to them.

As far as possible, information that may need to be disseminated in the event of a case or cases should be prepared in advance. Although the final versions may depend on details relevant to the specific incident, general frameworks can be developed in draft format and be ready for rapid circulation.

**Helplines**

In the event of an outbreak it may prove necessary to provide helplines to field large numbers of incoming telephone calls. It may be possible to employ existing resources within the community such as NHS Direct (NHS 24 in Scotland) or meningitis charities. Some queries and concerns, however, are clearly best dealt with by the institution involved and plans should be made to enable such a line to be set up at short notice. This will include identifying a suitable location, and recruiting and training helpline volunteers. National meningitis charities may be able to assist with support and training.
Facilities for public health action

In the event of an outbreak of meningococcal disease, it may be necessary to administer antibiotics and immunisation to a large target group. A suitable venue will be required. For example, if a particular hall is involved it may make sense to use the hall, canteen or common room. Institutions should consider the variety of accommodation, which could be used, and how they would be mobilised.

Institutions need to know how such sessions would be staffed. Although Public Health departments may be able to provide the necessary medical personnel, institutions may need to provide clerical staff to facilitate the process.

Public relations

A public relations strategy is required since recent events in universities have shown that an outbreak of meningococcal disease can be of national interest. Most institutions will have their own public relations professionals.

Issues to be considered include the potential conflict, which may arise because of the media’s desire for information and the confidentiality of a student. This may be tempered to some extent if institutions are seen to disclose openly other, less sensitive, information. Regular press conferences are one way of ensuring that accurate and timely information is conveyed but institutions should be aware that representatives of the media may well pursue their own lines of enquiry by other means.

As far as possible, press statements should be prepared in advance in such a way that they can be completed with any specific details at short notice. Thought should also be given to possible venues for any press conferences and who should represent the institution.
Plans for health protection units

Liaison between health protection units and university

Consultants in communicable disease control (CCDC) should identify and make contact with universities in their area to ensure that:

- good working relationships are developed with all relevant agencies, e.g. including Public Relations, University Health Service, Occupational Health Services (where available);
- training needs of university wardens and other staff are identified and awareness-raising campaigns for students and staff are considered; and
- plans and protocols are established to deal with cases of meningococcal disease.

Issues to be covered in a health protection plan

Issues in plans for responding to a cluster or outbreak of meningococcal disease in a local university will include:

- situations in which an Incident Control Team will be established;
- composition, terms of reference and location of the Team;
- roles and responsibilities of individual members of the Team;
- pharmacy arrangements for supply of large quantities of ciprofloxacin at short notice;
- practical arrangements for antibiotic prophylaxis including information sheets on contra-indications and side-effects [1], and arrangements for dealing with adverse reactions;
- practical arrangements for establishing and staffing a telephone helpline; and
- arrangements for responding to media interest.

Plans should be reviewed annually.
Good channels of communication and effective support arrangements need to be established in advance of any incident of meningococcal disease. The public health department needs to establish good links with management and health services in local universities and with local general practices. This will help ensure that the department becomes aware of any incident promptly and that universities have access to appropriate advice on the management of meningococcal disease. The university needs to be sure that it can communicate information speedily and efficiently to its students and staff. Outside normal office hours there may need to be alternative means of communication available. We suggest that all universities develop management protocols for dealing with meningococcal disease and other communicable disease incidents in conjunction with their local public health department and student health services.

5 Conclusion

Good channels of communication and effective support arrangements need to be established in advance of any incident of meningococcal disease. The public health department needs to establish good links with management and health services in local universities and with local general practices. This will help ensure that the department becomes aware of any incident promptly and that universities have access to appropriate advice on the management of meningococcal disease. The university needs to be sure that it can communicate information speedily and efficiently to its students and staff. Outside normal office hours there may need to be alternative means of communication available. We suggest that all universities develop management protocols for dealing with meningococcal disease and other communicable disease incidents in conjunction with their local public health department and student health services.
Appendix

Helplines and Leaflets

Meningitis charities and NHS Direct

The meningitis charities may be contacted when there is a case of meningococcal disease. They need to have sufficient information so that they can support callers with appropriate advice. The information given to these bodies should include anonymised details of the case and of public health action taken.

Leaflets available from
Meningitis Trust 01453 768000
Meningitis Research Foundation 01454 281811
Meningitis Association Scotland 0141 427 6698
Meningitis Cymru 01656 646414

24 hour helplines
Meningitis Trust 0845 6000 800 (local call rate)
Meningitis Research Foundation 0808 800 3344 (freephone)
Meningitis Cymru 0800 652 9996 (freephone)
NHS Direct 0845 4647 (local call rate)
NHS 24 [Scotland] 08454 242424 (local call rate)

Websites
Meningitis Research Foundation http://www.meningitis.org
Meningitis Trust http://www.meningitis-trust.org
Meningitis Cymru http://www.meningitiscymru.co.uk

NB. Leaflets “Look after your mate” are also available from the Department of Health website http://www.immunisation.nhs.uk/files/loymleaflet.pdf
Reference List


