POLICY FOR THE CONTROL OF INVASIVE HAEMOPHILUS INFLUENZAE INFECTION (INCLUDING H. INFLUENZAE MENINGITIS)

Printed copies must not be considered the definitive version

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<tr>
<td>Author</td>
<td>Dr David Breen</td>
<td>Version no.</td>
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<tr>
<td>Reviewer</td>
<td>Dr Nigel Calvert</td>
<td>Implementation date</td>
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1. **PURPOSE AND SCOPE**

The purpose of this policy is to detail required procedures for the surveillance, investigation, management, and prevention of Haemophilus Meningitis infection in order to provide clarity to team members in regard to fulfilling their responsibilities. The policy is applicable to all members of the multidisciplinary team within NHS Dumfries and Galloway responsible for control of meningococcal infection. This includes public health, infection control, Microbiology Laboratory and community and acute service clinical staff. Procedures cover action to be taken in addressing possible, probable and confirmed cases (definitions provided in Appendix 1) and in tackling sporadic cases, clusters and outbreaks.

This policy also provides relevant background information so members of the multi-disciplinary team understand the context of and reasons for their role. The policy is not exhaustive and if in any doubt the Health Protection Team (HPT) at Public Health (PH) should be consulted.

This Protocol is based on the ‘Revised recommendations for the prevention of secondary Haemophilus influenza type b (Hib) disease’ (updated July 2013)

2. **AIMS**

The aims of this policy are to:
- ensure early identification and appropriate management and treatment of all possible cases and contacts
- ascertain whether the case is part of an outbreak
- determine possible sources and vehicles of the infection
- implement appropriate control measures as early as possible
- prevent further cases of infection
- prevent and reduce mortality / morbidity
- maximise opportunities to communicate, educate, advise and reassure individuals and communities affected.
3. RESPONSIBILITIES AND ORGANISATIONAL ARRANGEMENTS

3.1 SPECIFIC RESPONSIBILITIES

3.1A GP / A&E (Clinician First Suspecting Haemophilus Meningitis)

H. influenzae meningitis is a laboratory diagnosis. Action required by a clinician who first suspects a diagnosis of invasive H. influenzae meningitis is summarised in the Flow-Chart in Section 3.2G.

Cefotaxime and ceftriaxone is the main therapy for H. influenzae meningitis.

3.1B Admitting Consultant Paediatrician / Physician / Responsible Clinician

Action required by clinicians responsible for the admission, care and treatment of a suspected case of H. influenzae meningitis is summarised in the Flow-Chart in Section 3.2G.

The clinician will prioritise and ensure optimal clinical management of the patient at all times.

Early Notification:

Prompt and effective communication between clinicians, Microbiology Laboratories and the HPT is essential to ensure successful control of invasive H. influenzae meningitis. Formal notification of all forms of Haemophilus influenzae disease is a legal requirement. An early telephone alert should be made to the HPT in the first instance:

Office Hours Tel: 01387 272724
Out of Hours Public Health On-call via DGRI switchboard: 01387 246246

This enables appropriate chemoprophylaxis for ‘at-risk’ contacts to be administered within the recommended 24 hour period (See Sections 3.2A 3.2B). Chemoprophylaxis may be dispensed on the ward to ‘at risk’ contacts under the guidance of the HPT. Early measures can also be taken by the HPT to help to minimise potential public anxiety (See Section 3.2F). If a case is suspected through the night an urgent notification early the next morning is sufficient and greatly appreciated.

Diagnostic tests:

Precise identification of the causative organism is crucial in the control and management of both case and contacts. This information is also crucial to the surveillance of clusters, outbreaks and incidence trends of invasive Haemophilus influenzae infection within Dumfries and Galloway and nationally.
### Classical CSF findings in acute meningitis

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<th></th>
<th>Cells</th>
<th>Gram stain for bacteria</th>
<th>Bacterial antigen detection</th>
<th>Protein g/l (normal 0.1-0.4)</th>
<th>Glucose mmol/l (normal 2.3-4.5)</th>
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<tr>
<td><strong>Viral</strong></td>
<td>10⁴-10⁷ lymphocytes</td>
<td>Negative</td>
<td>Negative</td>
<td>Normal or slightly high</td>
<td>Usually normal</td>
</tr>
<tr>
<td><strong>Bacterial</strong></td>
<td>10⁴-10⁷ predominantly polymorphs</td>
<td>Positive</td>
<td>Positive</td>
<td>High</td>
<td>Less than 70% of blood glucose</td>
</tr>
<tr>
<td><strong>Tuberculosis</strong></td>
<td>10⁴-10⁷ predominantly lymphocytes</td>
<td>Positive or negative</td>
<td>Negative</td>
<td>High or very high</td>
<td>Less than 60% of blood glucose</td>
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</table>

**3.1C  Consultant Microbiologist**

Action required by the Consultant Microbiologist is summarised in the Flow-Chart in Section 3.2G.

The Consultant Microbiologist will:

- ensure that all specimens with request forms are processed urgently.
- inform the responsible clinician of initial and subsequent test results as soon as possible within the same day of confirmation.
- inform the HPT urgently of all initial specimen results confirming H. influenzae meningitis. If a case is confirmed through the night an urgent notification early the next morning is sufficient and greatly appreciated.

Office Hours  Tel: 01387 272724  
Out of Hours  Public Health On-call via DGRI switchboard: 01387 246246

All other subsequent results will be made available by e-mail on the same day.

**3.1D  Health Protection Team**

Action required by the HPT is summarised in the Flow-Chart in Section 3.2G.

The Health Protection Team (HPT) will:

- confirm the diagnosis of notifiable H. influenzae meningitis; see appendix 1 for case definitions.
- conduct any required investigation, contact identification and tracing; see appendix 2 for contact tracing tool.
• arrange chemoprophylaxis through the individuals GP or Out of Hours service (OOHs), ensuring appropriate chemoprophylaxis and advice (appendix 3) is administered to all designated close contacts within 24 hours (See Sections 3.2A 3.2B).

• alert GPs and appropriate OOHs to advise them of the case.

• provide further information and guidance to GPs as required

• communicate with education settings and provide parental guidance (Appendix 4). The Director of Education will be informed of all cases of diagnosed Haemophilus influenzae infection attending schools within their jurisdiction.

• inform NHS Dumfries and Galloway Head of Communications of all cases of confirmed Haemophilus influenzae infection and communicate with the media in accordance with agreed policy (See Section 3.2F).

• inform Health Protection Scotland (HPS) and Chief Medical Officers Office at Scottish Government of all confirmed cases of Invasive Haemophilus influenzae. The Enhanced Invasive Haemophilus Influenzae Infection Surveillance Form (See Appendix 5) will be completed on; all confirmed cases aged 5 years and under and isolate type b cases of any age, and returned to HPS within 24 hours.

• take appropriate actions in the event of further cases of invasive H.Influenzae infection within a 4 week interval (See Section 3.2C).

• assist clinicians in providing information and advice for the family and close contacts of a case in regard to diagnostic tests, treatment, prophylaxis and the need for public awareness but not panic.

All actions taken by HPT to be documented on HPzone

3.1E Pharmacy Department
Action required by the Pharmacy Department is summarised in the Flow-Chart in Section 3.2G.

• Pharmacy will provide supplies of appropriate chemoprophylaxis accompanied by information sheets on a 24 hour basis as required (See Sections 3.2A 3.2B)
3.2 ORGANISATIONAL ARRANGEMENTS

3.2A Management of ‘at-risk’ contacts associated with a sporadic index case

Chemoprophylaxis aims to reduce the risk of secondary disease in the index case and among close contacts by eliminating carriage. The criteria for assessing contacts of Haemophilus influenzae Group B infection for chemoprophylaxis differ from those for meningococcal infection. Action is only required if an individual fulfils the criteria for a confirmed or probable case and either

1) The index case is younger than 10 years old, or
2) There is a vulnerable individual in the household
   (an immunocompromised or asplenic person of any age, or any child younger than 10 years of age)

The following groups are recommended to receive prophylaxis:
- All household contacts of the index case (prolonged close contact in a household type setting during the seven days before the onset of illness).
- For all index cases younger than 10 years of age all pre-school or primary school group contacts (including teachers) if there has been a case of invasive Hib infection in a child within the previous 120 days which can be related to the present index case;
- The index case with confirmed or probable invasive Hib if younger than 10 years old before discharge from hospital.
- Index case of all ages with confirmed or probable invasive Hib disease if there is a vulnerable individual in the household.

Chemoprophylaxis should be offered to all eligible contacts up to 4 weeks after onset of illness in the index case.

32.B Rifampicin prophylaxis

Unless contraindicated (e.g. jaundice, known hypersensitivity, drug interactions) rifampicin is the drug of choice for H.Influenzae meningitis chemoprophylaxis. Recommended doses are as follows:

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<th>Category</th>
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<tr>
<td>Adults and children over 12 years of age</td>
<td>600 mg daily on 4 consecutive days</td>
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<td>Children aged 3 months - 12 years</td>
<td>20 mg/kg daily on 4 consecutive days</td>
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<tr>
<td>Child 1-3 months</td>
<td>10 mg/kg daily on 4 consecutive days</td>
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</table>

Dosage correct at time of writing protocol, check the current BNF at time of prescribing

Persons who are prescribed rifampicin should be given verbal advice and written information (See Appendix 3).

Warnings should include:
- The drug may cause urine and other body fluids to turn orange red.
- Soft contact lenses should not be worn until urine returns to normal colour.
- Interactions with other medications such as anticoagulants, anticonvulsants and particularly the oral contraceptive pill; patients should be advised to take additional precautions following the Family Planning Association’s advice for a ‘missed pill’ as outlined in the British National Formulary.

**Pregnancy and breastfeeding**

Pregnant and breastfeeding women should also receive rifampicin prophylaxis if there is a vulnerable individual among the household contacts because the benefits outweigh any potential risks.

### 3.2C Vaccination

For index cases unimmunised children younger than 10 years should be fully immunised after recovering from infection, while vaccinated children should have convalescent antibody levels measured and a booster dose of vaccine given if levels are below protective levels.

Children younger than 10 years who have never been immunised should receive the following course:

- **0-2 months**: Await routine infant immunisation at two, three and four months, followed by the scheduled booster dose at twelve months.
- **3-9 months**: three doses of a Hib-containing vaccine at monthly intervals, followed by the scheduled booster dose at twelve months, which should be given at least a month after the last dose.
- **10 months**: two doses of a Hib-containing vaccine at monthly intervals, followed by the scheduled booster dose at twelve months, which should be given at least a month after the last dose.
- **11 months**: one dose of a Hib-containing vaccine followed by the scheduled booster dose at twelve months, which should be given at least a month after the last dose.
- **12 months and older**: one dose of a Hib-containing vaccine, which may be the scheduled booster dose at twelve months.

### 3.2D Action if a further case is identified within 4 weeks

In the event of a further case of H.Influenzae meningitis identified within 4 weeks of the first case the following actions will be required:

- Any connection with the first case should be established by careful and rapid investigation eg attendance at the same preschool or primary school setting, date of onset of illness. Although sensitivity is required it is acceptable to breach confidentiality in such situations and discuss the name and address of the index case with subsequent cases or their families. If practical, consent for revealing the name and address of the index case should be sought.
• Precise identification of the causative organism is crucial in confirming any connection. (See Section 3.1B).

• The HPT should be alerted urgently to enable appropriate investigation, contact tracing, chemoprophylaxis and vaccination to proceed.

• The formation of an Outbreak Control Team (OCT) will be considered.

• Communication with all relevant partners and agencies will be appropriately cascaded (See Section 3.2F).

3.2E A Cluster of Cases in an Educational Setting

A cluster of cases is defined as two or more cases in the same educational establishment involving organisms with the same serogroups within a four week time period. An association of cases like this, in time and place, requires further rapid and careful investigation to establish if the two cases are linked by chance or genuinely associated. A definite cluster (two cases of the same serogroup) or a potential cluster (one confirmed case and another that could potentially be of the same group) require further public health action. Two cases of different serogroups are coincidental and unlinked sporadic cases.

In addition to management of identified individual ‘at-risk’ contacts (See Section 3.2A 3.2B) the HPT will give specific advice regarding chemoprophylaxis for any additional institutional contacts according to the specific circumstances of the case. The feasibility of clear identification of any ‘at-risk’ cohort or sub-group will need to be considered. If there is a definite or likely cluster, the Major Outbreak Plan will be implemented and an OCT assembled without delay.

3.2F Communication

Specific responsibilities of individuals for notifying, alerting and communicating with other members of the multi-disciplinary team and with colleagues in other local and national agencies and departments are specified in Section 3.1.

Media

In addition to the above necessary communication Haemophilus influenzae infection often attracts considerable media interest. Doctors are accountable to the General Medical Council and nurses to the Nursing and Midwifery Council for their professional practice including matters of confidentiality. We are often approached by the media for details of suspected and confirmed cases. The following guidance is intended to help health professionals maintain appropriate confidentiality, and to help the media understand the level of detail they can expect.

• We will not give names or addresses to the media
• We will not send out press releases relating to sporadic cases
• If approached by the media for confirmation of reports from other sources the following is the maximum level of detail that we can release
- Approximate age
- Approximate place of residence (eg "Dumfries area")
- Sex
- Hospital where the case is being treated
- Whether the infection is classified as possible, probable or confirmed

We will not discuss individual clinical matters with the media, but will discuss public health aspects of the case, such as:

- Levels of risk to immediate family members, school and work contacts etc.
- The role of antibiotics and vaccination in the control of the infection
- Advice to the public about symptoms and signs of H.Influenzae meningitis infection
- Sources of further information for the public

If a person suffering from H. influenzae meningitis infection, or their family, expresses concern about releasing details such as those outlined we reserve the right to reduce the level of detail in accordance with their wishes.

**Special Circumstances**

Very occasionally, it may be considered in the best interests of public health to release additional information eg if we are dealing with a potential cluster of invasive H.influenzae meningitis disease among pupils at a particular school or nursery, or among residents of a particular town or locality. In such cases it may be necessary to issue press releases in order to brief the media and ensure that accurate information is available to the public. However, the privacy of families is paramount and confidentiality will be respected.
 Clinician suspecting diagnosis of meningitis
- Administer appropriate antibiotic (See Section 3.1A)
- Arrange urgent hospital admission

Admitting Consultant / Clinician
- Ensure optimal clinical management
- Urgently notify Health Protection Team (See Section 3.1B)
- Arrange appropriate urgent diagnostic samples and tests (See Section 3.1B)

Health Protection Team
- Confirm diagnosis (See Appendix 1)
- Conduct investigation and contact tracing
- Communicate with Pharmacy and arrange through GP or OOHs appropriate prophylaxis within 24 hours (See Sections 3.2A 3.2B)
- Communicate with and provide information for appropriate relevant colleagues and agencies eg GPs, OOHs, Communications, Schools, Education Services, Health Protection Scotland, Scottish Government (See Sections 3.1D 3.2F)
- Take appropriate action in the event of further cases (See Sections 3.2C 3.2D 3.2E)

Consultant Microbiologist
- Ensure all samples from suspect case are processed urgently
- Inform responsible clinician and HPT urgently of all results confirming H.Influenzae meningitis infection

Pharmacy Department
- Provide supplies of appropriate chemoprophylaxis accompanied by information sheets
4. POLICY DISSEMINATION, IMPLEMENTATION AND MONITORING

4.1 Dissemination and Implementation

This policy, once approved through the process defined below, will be placed in the DGHPS website on the intranet. All key personnel involved in the surveillance, investigation, management and prevention of invasive haemophilus influenzae infection to whom this policy applies will be informed of the reviewed policy by e-mail. Document control procedures will apply and the intranet copy of the document will always be considered the definitive copy.

4.2 Monitoring, Audit, Review and Approval

The Infection Control Committee (ICC) is responsible for monitoring of implementation and compliance with this policy. The policy will be reviewed as a minimum every two years. As part of any review an audit will be conducted to ascertain implementation and compliance using the audit tool in section 4.4. The reviewer of the policy will take responsibility for conducting an audit and all members of the multi-disciplinary team will be involved and included. Any changes as a result of audit and review will be consulted on for a period of four weeks. Following audit, review and consultation the ICC will approve any new versions of the policy prior to dissemination and implementation.

4.3 Risk Management

This policy has been risk assessed. The overarching risk is that a preventable outbreak of H. influenzae meningitis infection may occur with consequent morbidity and mortality. The likelihood of this is rare but consequences are major giving a risk rating of medium. A preventable outbreak may occur due to delays in communication and action or errors in decision making. Comprehensive control mechanisms are in place. However, regular audit (on an annual basis) using the tool in section 4.4 will help identify any further areas of concern and enable more robust risk assessment.
### 4.1 AUDIT TOOL

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<td>Diagnostic samples taken and sent to lab urgently</td>
<td>Patient notes, Lab request forms</td>
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<td>Samples processed and reported urgently</td>
<td>Lab reports</td>
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<td>Clinician informed of results urgently by telephone</td>
<td>Lab report and clinical notes</td>
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<td>HPT informed by telephone urgently</td>
<td>HPzone</td>
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<td>HPT communicate urgently with HPS, SG, Communications and other relevant agencies eg GPs, OOH, schools</td>
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5. EQUALITY AND DIVERSITY

NHS Dumfries and Galloway are committed to equality and diversity in respect of the six equality groups defined by age, disability, gender, race, religion/belief and sexual orientation. A rapid impact assessment has been carried out on this policy. The issues identified were:

- Provision of accessible information in alternative formats.
- Access to prompt medical attention and investigation across the region.

We believe these issues are addressed as far as reasonably possible within the policy.
6. DOCUMENT CONTROL SHEET

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<td>Dr David Breen</td>
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<tr>
<td>Approver</td>
<td>Infection Control Committee</td>
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<td>Health Protection Team</td>
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<tr>
<td>Place on Intranet DGHPS website</td>
<td>Health Protection Team</td>
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CASE DEFINITIONS

Confirmed Case

A confirmed case of Hib is defined as any individual whom presents with clinical diagnosis of infection and Hib is isolated from a normally sterile site.

Unlike meningococcal disease, conjunctivitis is not considered to be an invasive disease for Hib

Probable case of Hib (revised definition)

Individuals with epiglottitis where Haemophilus influenza was isolated from a sterile site.

Household contacts of index cases that fulfil the revised ‘Probable Hib’ definition should be managed in the same way as confirmed cases for the purposes of chemoprophylaxis
Appendix 2

HAEMOPHILUS INFLUENZAE INVASIVE INFECTION CONTACT TRACING FORM

Please list the full names and ages of contacts of the index case in the seven days prior to onset of illness including:-
(i) family and household contacts who have been living with the index case (ii) close intimate “kissing” contacts (iii) health care
workers who gave the case mouth to mouth resuscitation.

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<th>Name</th>
<th>Address</th>
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<th>GP</th>
<th>HIB vaccination status</th>
<th>Rifampicin arranged</th>
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Appendix 3

RIFAMPICIN INFORMATION LEAFLET
Advice for close contacts (or their parents or guardians)

It is important that you read all of this leaflet before starting your course of Rifampicin

You have been in contact with Haemophilus influenzae meningitis disease. Fortunately the risk of developing the disease is very small (less than 1%) but it is still significantly greater than that of the general population (x 500-1200 times). The risk is greater in the first few days following contact with a person who has developed the infection and may persist for months.

The aim of giving Rifampicin is to eliminate throat carriage of the Haemophilus meningitis organism, thereby reducing transmission to susceptible individuals. In most instances of Haemophilus influenzae meningitis disease, the source of infection for the first case (index case) and any subsequent (secondary) case is believed to be a member of the household (or a mouth kissing contact) who had close contact with the case(s) within 7 days prior to onset of illness in the case(s).

However, Rifampicin is not 100% effective. Contacts and parents should be advised:

- Increased risk of developing illness is greater in the first few days following contact but persists for several months.
- Awareness of symptoms and signs of Haemophilus influenzae meningitis infection.
- The need to contact their family doctor urgently should they develop relevant symptoms.

The dose of Rifampicin to be taken is:

**Adults:** Two capsules (total of two capsules 600mg) twice a day for four days.

**Children:** This depends on the age and weight of the child and will be decided by your doctor. The medicine should also be taken twice a day for four days.
These doses should be taken one hour before meals (e.g. breakfast and supper) to obtain best effect. No drug is free of side effects, nor does it work in every case. Please note the following points:-

1. If any of the following apply, do not take this medicine but contact your own doctor:
   - If you are pregnant or think you may be pregnant.
   - If you have previously had a severe reaction to Rifampicin.
   - If you are jaundiced.
   - If you have liver or kidney disease.

2. Rifampicin can interfere with the action of oral contraceptives (“the Pill”). Women using oral contraception, combined or progesterone only pills, who need to take a short course of Rifampicin (one week or less) should note that:
   - You will need to take extra contraceptive precautions as soon as you start taking Rifampicin
   - You should continue taking your pill
   - You should take your pill continuously, omitting any pill-free interval, whilst you are taking Rifampicin
   - You should continue to take your pill continuously, omitting any pill-free interval during the 7 days after the last dose of Rifampicin
   - You should continue using extra contraceptive precautions while taking Rifampicin and for four weeks after the last dose of Rifampicin.

3. If you are taking any other medication, it is advised that you contact your own doctor before taking Rifampicin as the dose of your medication may need temporary adjustment.

4. Rifampicin is an intensely red coloured medicine and this colouration may be seen in the urine, sputum and tears, and can permanently stain soft contact lenses. It is advised that you do not wear soft contact lenses while taking Rifampicin or for 48 hours after the course is finished.

In the unlikely event of you developing any symptoms of fever, severe headache, neck stiffness, fear of light, unexplained rash or vomiting in the next few days, consult your doctor urgently and tell him/her that you have been in contact with Haemophilus influenzae meningitis.

Health Protection Team
Directorate of Public Health
Appendix 4

HAEMOPHILUS MENINGITIS

Dear Parent

There has been a case of meningitis, caused by the bacterium Haemophilus influenzae, in the School. Those pupils who have very close contact with this case have been given a course of antibiotics to reduce the risk of becoming ill. Antibiotics have not been given to other members of the school for the following reasons:

- The risk of catching the disease is very small.
- There is a small, but significant, risk of developing side effects from the antibiotic.
- If this type of antibiotic is given to too many people, then there is a real risk that the germ that causes meningitis will become resistant to the effects of the antibiotic.

Although the risk of another child catching meningitis is very small indeed, please look out for the following symptoms in your child over the next few weeks:

- high fever
- severe headache
- neck stiffness
- aversion to light (photophobia)
- unexplained vomiting
- unexplained rash

If you notice these symptoms, then you should immediately call your own doctor. Make sure that he or she knows that the child may have been exposed to haemophilus infection.

Yours sincerely

Dr Nigel Calvert
Consultant in Public Health Medicine
Appendix 5

Surveillance of invasive *Haemophilus influenzae* infection: NHS Board

**LABORATORY DATA**

<table>
<thead>
<tr>
<th>Date of sample:</th>
<th>d</th>
<th>m</th>
<th>y</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Genotype (please tick)</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
<th>f</th>
<th>non typeable</th>
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</table>

<table>
<thead>
<tr>
<th>Source of isolate</th>
<th>Blood</th>
<th>CSP</th>
<th>Other</th>
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<table>
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<th>Submitting laboratory sample No.</th>
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**PATIENT DETAILS**

<table>
<thead>
<tr>
<th>Surname:</th>
<th>Forename(s):</th>
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<tbody>
<tr>
<td>Address:</td>
<td>Postcode:</td>
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<tr>
<td>SEX:</td>
<td>f</td>
</tr>
<tr>
<td>Age:</td>
<td>y</td>
</tr>
<tr>
<td>Date of birth:</td>
<td>d</td>
</tr>
</tbody>
</table>

| Date of onset of illness: | d | m | y |
| GP name: | |
| GP address: | |

| Date of admission: | d | m | y |
| Consultant clinician: | |

| Hospital: | Hospital number: |
| Ward: | CHI number: |

**CLINICAL PRESENTATION, OUTCOMES AND VACCINATION HISTORY**

<table>
<thead>
<tr>
<th>Disease: (tick as many as apply)</th>
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<tbody>
<tr>
<td>Meningitis</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
<th>(if Other, please specify)</th>
</tr>
</thead>
</table>

| Final outcome: | Discharged alive | Dead | Date of death: | d | m | y |

<table>
<thead>
<tr>
<th>Any predisposing illness?</th>
<th>Yes</th>
<th>No</th>
<th>(if Yes, please specify)</th>
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<td>(e.g. immunosuppression, chronic illness)</td>
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<table>
<thead>
<tr>
<th>Born at term?</th>
<th>Yes</th>
<th>No</th>
<th>If no, gestational age at birth:</th>
<th>weeks</th>
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<table>
<thead>
<tr>
<th>Vaccination status:</th>
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<tr>
<td>Dose of Hib vaccine:</td>
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<th>d</th>
<th>m</th>
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<table>
<thead>
<tr>
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<th>date given:</th>
<th>d</th>
<th>m</th>
<th>y</th>
<th>Batch number:</th>
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</thead>
</table>

Please fax completed form to F. Johnston at HPB: 0141-300 1172