

# ***Haemophilus Influenzae,*** **Invasive Disease** **Investigation Guideline**

## **CONTENTS**

### **Investigation Protocol:**

- **Investigation Guideline**

### **Investigation Forms / Documentation Worksheets:**

- **General Investigation Form(s)**
- **Bacterial Meningitis Supplemental Form**
- ***H. influenzae* type B Vaccine Worksheet**
- **CDC Expanded Worksheet Option (*optional*)**

### **Supporting Material:**

- **Sample Letter, Parent Prophylaxis Needed**
- **Sample Letter, Parent No Prophylaxis Needed**
- **Sample Letter, Physician Notification**
- **Fact Sheet**

# ***Haemophilus Influenzae*, Invasive Disease**

## **Disease Management and Investigative Guidelines**

---

### **CASE DEFINITION (CDC 1997)**

#### **A. Clinical Description for Public Health Surveillance:**

- Invasive disease caused by *Haemophilus influenzae* may produce any of several clinical syndromes, including meningitis, bacteremia, epiglottitis, or pneumonia. Positive antigen test results from urine or serum samples are unreliable for diagnosis of *H. influenzae* disease

#### **B. Laboratory Criteria for Case Classification:**

- Isolation of *H. influenzae* from a normally sterile site (e.g., blood or cerebrospinal fluid [CSF] or, less commonly, joint, pleural, or pericardial fluid).

#### **C. Case Classification:**

- Confirmed: A clinically compatible case that is laboratory confirmed.
- Probable: A clinically compatible case with detection of *H. influenzae* type b (Hib) antigen in CSF.
- Suspect: Positive antigen detection test results from urine or serum samples.

#### **D. Laboratory Testing:**

- Gram stains and cultures performed routinely by commercial laboratories.
- Specimen: Blood, CSF or, less commonly, joint, pleural or pericardial fluid.
- Serotyping: The CDC and American Academy of Pediatricians recommend that microbiology laboratories perform serotype testing of all invasive Hib isolates; especially in children <5 years of age to monitor the occurrence of invasive Hib disease and in children 5-14 years of age to monitor vaccine effectiveness.
- Submission of isolates to the Kansas Health and Environmental Laboratories (KHEL): Not required by law; but the KHEL can identify *H. influenzae* and assist with serotyping of isolates, if requested.
- Shipping of isolates: Use Miscellaneous Infectious Disease (IDS) Shipper.
- For additional information and/or questions concerning isolate submission, and laboratory kits call (785) 296-1620 or refer to online guidance at [http://www.kdheks.gov/labs/lab\\_ref\\_guide.htm](http://www.kdheks.gov/labs/lab_ref_guide.htm) .

#### **E. Bioterrorism Potential: None.**

#### **F. Outbreak Definition:**

- A single case of *H. influenzae* type b (Hib) should be actively pursued to determine whether there is an outbreak with unidentified cases and/or contacts. The situation should be treated as public health emergency and appropriate resources allocated until additional cases have been ruled out.

## INVESTIGATOR RESPONSIBILITIES

### A. Investigation Related Tasks and Activities:

**Note:** Investigational activities should begin as soon as possible. Ideally within 24 hours after diagnosis, the investigator should assure that prophylaxis was received by all significantly exposed contacts.

Non-invasive cases, including conjunctivitis and positive sputum culture without pneumonia or epiglottitis, do not require any investigation.

- 1) Confirm diagnosis with appropriate medical provider.
  - Before contacting the patient or family, first determine what information has been released about the patient's diagnosis and identify if the needed epidemiologic data can be found in the clinical record alone.
  - Obtain information that supports clinical findings in the case definition and information on the onset date of the symptoms.
  - Obtain information on any laboratory tests performed and results.
    - Gram stain results should be available within 1 hour of CSF collection. Culture results may take more than 48 hours.
    - Serotyping; if needed, coordinate sending isolate to the KHEL.
  - For hospitalization, obtain medical records, including admission notes, progress notes, lab report(s), and discharge summary.
- 2) Conduct contact investigation to locate additional cases and/or contacts.
  - For invasive cases, do not wait for serotype to begin the investigation.
  - Invasive cases that are confirmed "not serotype b" are reported but do not require any contact investigation.
  - All invasive cases that have not been serotyped are investigated to determine need for further action. Consider the information needed to assess the situation under Contact Investigation on page 5.
  - Invasive Hib cases require immediate, thorough contact investigations.
- 3) Initiate control and prevention measures to prevent spread of disease.
  - Evaluate Hib immunization status of contacts; update as appropriate.
  - Assure that appropriate treatment and/or prophylactic measures were received by case(s) and/or contact(s) within 24 hours.
    - Decisions about chemoprophylaxis should be made after consulting with a KDHE epidemiologist and/or the contact's physician.
  - Provide education that includes basic information about the disease including means of transmission, symptoms, incubation period and the importance of seeking medical attention if symptoms develop.
  - If necessary, prepare/distribute a press release in conjunction with senior health department staff and/or Office of Surveillance and Epidemiology.
- 4) Conduct case investigation to identify potential source of infection.
- 5) Report all confirmed, probable and suspect cases to the KDHE Office of Surveillance and Epidemiology at KDHE (1-877-427-7317) within 4 hours of the initial report.

**B. Notifications:**

- 1) Report all cases by telephone to the Local Health Officer, the local on-call epidemiologist and KDHE (1-877-427-7317) within 4 hours of initial report.
- 2) The CDC requests a provisional report be filed by the state within 2 weeks of the initial report of disease to the state or local health department.
- 3) As appropriate, use the notification letter(s) and the disease fact sheet to notify the case, contacts and other individuals or groups.

**EPIDEMIOLOGY**

*Haemophilus influenzae* occurs worldwide. Before the use of conjugate vaccine, Hib was a leading cause of bacterial meningitis in the United States among children < 5 years of age. Invasive Hib disease now occurs in unvaccinated or under-vaccinated children and adults. It is most prevalent in children 2 months to 3 years in age with a peak incidence in children 6-12 months of age. Secondary cases in households, daycare centers and other institutional settings are rare.

**DISEASE OVERVIEW****A. Agent:**

*H. influenzae* is caused by a gram-negative coccobacilli that is either encapsulated (types a -f) or unencapsulated (non-typeable).

**B. Clinical Description:**

Invasive Hib disease may produce various syndromes, including septicemia, pneumonia, epiglottitis, cellulitis, pericarditis, peritonitis, and septic arthritis. Onset is frequently sudden with symptoms of fever, vomiting, lethargy, and/or meningeal irritation, consisting of bulging fontanel in infants or a stiff neck and back in older children. Otitis media or sinusitis may be a precursor of illness.

**C. Reservoirs:** Humans.**D. Mode(s) of Transmission:**

Transmission is by droplet infection and direct/indirect contact with discharges from nose and throat during the infections.

**E. Incubation Period:**

Unknown; probably 1 - 4 days.

**F. Period of Communicability:**

As long as organisms are present. Communicability ends within 24 - 48 hours of the initiation of effective antibiotic therapy.

**G. Susceptibility and Resistance:**

Susceptibility is universal and immunity may be acquired transplacentally, from prior infection, or from appropriate immunization. Hib disease is not common beyond 5 years of age. In the prevaccine era, peak attack rates occurred at 6-7 months of age, declining thereafter.

**H. Treatment:**

Patients with life-threatening *H. influenzae* illness should receive initial therapy with chloramphenicol or an effective third-generation cephalosporin (i.e.,

cefotaxime or ceftriaxone). Rifampicin is received prior to discharge from hospital to ensure elimination of the organism from the nasopharynx.

## STANDARD CASE INVESTIGATION AND CONTROL METHODS

Note the date investigation was started; standard activities include the following:

- 1) Confirmation of diagnosis using case definition.
- 2) Collection of demographic data (birth date, county, sex, race/ethnicity)
  - If less than 6 years of age, note any daycare attendance.
- 3) Collection of clinical and vaccine status data:
  - Date of illness onset.
  - Type of disease syndrome (meningitis, bacteremia, epiglottitis, pneumonia, arthritis, osteomyelitis, pericarditis, cellulitis, septic abortion, amnionitis)
  - Outcome: Survived or date of death
  - Specimen: Collection date, date first positive culture obtained; type of specimen from which organism isolated
  - Isolate: Serotype and antibiotic susceptibility
  - Hib vaccine status (for Hib or unknown serotypes only; especially in those <15 years of age): dates of vaccination, type, manufacturer, number of doses or why not vaccinated
  - Extended information that could be collected:
    - Underlying causes or prior illness
    - Outcome of fetus if case pregnant/post partum at time of positive culture
    - Gestational age, birth weight and time for those cases <1 month of age
    - Residence in long term care facility.
    - This information is collected if the “Expanded Worksheet Option” from the CDC is used (optional; use as an investigation guide, as needed)
- 4) Determination of risk factors and transmission settings (i.e., vaccine failures)
- 5) Investigation of epi-links among cases (cluster, household, co-workers, etc).

**Note:** Non-Hib cases do not require further investigation beyond the collection and reporting of this initial case information.

Standard investigation **includes** completion of the General Investigation Form and Bacterial Meningitis Supplemental Form.

If a Hib case is identified in a child under the age of 15 years who had received a complete primary Hib vaccine series, the CDC’s “Haemophilus influenzae type b Vaccine and Extended Information Worksheet” should also be completed.

Further activity should include:

### A. Case Investigation - Identify Potential Source of Infection:

- Due to the high number of asymptomatic carriers it may not be possible to identify the source. Efforts are best spent on the contact investigation.
- Possible sources of infection do include:
  - Household contacts.
  - Association with daycare or children.
  - Recent illness in contacts.

## **B. Contact Investigation – Identify Exposed Individuals / Populations:**

- Interview case or case's family or close acquaintances to identify at risk activities 7 days prior to and after onset of symptoms:
  - Case's occupation and living and/or sleeping accommodations;
  - Association with young children or infants in childcare or nursery school.
- Contacts to consider when dealing with a Hib investigation include:
  - Household and close contacts:
    - All persons residing with index case; or
    - Nonresidents who spent  $\geq 4$  hours with the index case for at least 5 of the 7 days preceding the case's date of hospital admission.
  - Daycare: All direct caregivers and roommates of a case.
  - School: All close personal contacts, educators and classmates of case.
  - Incompletely immunized contacts do not have:
    - At least 1 dose of conjugate vaccine at  $\geq 15$  months; or
    - 2 doses between 12 and 14 months; or
    - A 2- or 3-dose primary series when  $< 12$  months.
- For household, close, daycare or school contact management, consider:
  - If serotype is unknown, when will it be available?
  - The ages of the children considered contacts in each setting.
  - The Hib immunization status of children  $< 48$  months.
  - Presence of immunocompromised children in the setting.

## **C. Isolation, Work and Daycare Restrictions**

- K.A.R 28-1-6 for Meningitis caused by *Haemophilus influenzae*:
  - Each infected person shall remain in respiratory isolation for 24 hours after initiation of antibiotic therapy.
- Droplet precautions should be implemented until 24 hours have passed following initiation of antibiotic therapy.

## **D. Case Management, Including Follow-up of cases:**

- Cases and their contacts should be followed closely to assure compliance with control measures.
- Assure that the case received a regimen including cefotaxime or ceftriaxone before returning to a daycare or nursery school setting.
- Cases treated with a regimen other than cefotaxime or ceftriaxone, should receive rifampin chemoprophylaxis prior to hospital discharge if the case is:
  - $\leq 2$  years of age, or
  - A member of the household is a susceptible contact.

## **E. Contact Management, Including Protection of Contacts:**

- Not all contacts will need chemoprophylaxis (see below) but all should be:
  - Informed about their risk of disease and the need to seek immediate medical attention if febrile illness or other symptoms develop.
  - Under active surveillance for at least 7 days after their last contact with the case to monitor for fever and other early signs of infection.
- The use of rifampin chemoprophylaxis should be evaluated on an individual

basis with the assistance of the medical officer and the Office of Surveillance and Epidemiology. The following guidelines are presented:

- For household and close contacts meeting the following criteria, rifampin is recommended for all household and close contacts:
  - o Households with  $\geq 1$  contact younger than 4 years of age who is unimmunized or incompletely immunized, or
  - o Households with a child  $< 12$  months of age who has not received the primary Hib series, or
  - o Households with an immunocompromised child, regardless of that child's Hib immunization status.
- For daycares or nursery schools:
  - o When  $\geq 2$  cases of Hib invasive disease have occurred within 60 days, rifampin prophylaxis to all children and staff in the classroom may be recommended.
  - o When a single case has occurred, the advisability of rifampin prophylaxis in exposed child care groups with unimmunized or incompletely immunized children is controversial and will need to be evaluated on a case by case basis.
- Rifampin is generally not recommended in the following circumstances:
  - Settings with no children  $\leq 4$  years of age other than the index case, or:
    - o Contacts 12-48 months of age are immunocompetent and have completed their Hib immunization series, and
    - o Contacts  $< 12$  months have completed the primary Hib series.
  - Only 1 index case in daycare and nursery school, especially when contacts are  $\geq 2$  years of age.
  - For pregnant women.
- Additional control strategies should be discussed with an epidemiologist from the Office of Surveillance and Epidemiology.

#### **F. Environmental Measures:**

- None.

#### **G. Education:**

- Exposed unimmunized or incompletely immunized children who are household, child care, or nursery contacts of patients with invasive Hib disease require careful observation for at least 7 days following the exposure to an infectious case.
- Parents or guardians should be instructed to monitor their exposed children for early signs of infection and to seek medical care immediately should any illness occur.
- Early signs of infection include: fever, lethargy, irritability, loss of appetite, vomiting, or other signs of illness.

## MANAGING SPECIAL SITUATIONS

### A. Outbreak Investigation:

- Notify KDHE immediately, 1-877-427-7317.
- Active case finding will be an important part of any investigation.

### B. Nursery School or Child Care Settings:

- Coordinate activities with school nurse and/or administration.
- Each childcare situation should be evaluated on an individual basis with the assistance of the medical officer and the State Immunization Program. The following general guidelines are presented:
  - In child care centers attended by children < 2 years of age, the occurrence of a single case of Hib justifies written notification to all parents that their children are at slightly increased risk. The notice should list the symptoms and recommend prompt medical attention if symptoms occur. Chemoprophylaxis is usually not recommended in instances when there is only a single case.
  - When  $\geq 2$  cases occur within 60 days of each other, administration of rifampin prophylaxis to all attendees and staff may be recommended. If prophylaxis is recommended, it must be done promptly.
- Nasopharyngeal carriage studies should not be used as a guide for implementation of chemoprophylaxis.

## DATA MANAGEMENT AND REPORTING TO THE KDHE

### A. Organize, collect and report data with the “General Investigation Form(s)” and “Bacterial Meningitis Supplemental Form”.

- CDC’s “Haemophilus influenzae type b Vaccine and Extended Information Worksheet” – if needed, can be faxed to 1-877-427-7317.

### B. Report data electronically via KS-EDSS or by fax, include:

- At a minimum, all essential data that was collected during the investigation that helps to confirm or classify a case. (For epi-linked cases, please include the KS-EDSS investigation ID of the related case.)
- All information collected on the General Investigation and supplemental forms. \*
- Report all cases as “Haemophilus influenzae, Invasive”
  - Cases identified as “non-invasive” will later be changed to ‘not a case’
  - Isolates that are serotyped as “Type b” will be indicated under Laboratory Reports – Organism Information; with [Serotype: **Other**] chosen and [Organism Serotype Other: **b**] recorded.

\* **Note:** Meningitis cases will only be counted if “meningitis” is marked on the supplemental form.

If the CDC’s Expanded Worksheet Option is used, information that cannot be reported in the KS-EDSS data entry fields (general and supplemental) can be recorded in the Case Notes section under the Notes tab. (The use of this worksheet is optional, but it is a useful guide to relevant case information.)

## ADDITIONAL INFORMATION / REFERENCES

- A. **Treatment / Differential Diagnosis:** American Academy of Pediatrics. 2006 Red Book: Report of the Committee on Infectious Disease, 27th Edition. Illinois, Academy of Pediatrics, 2006.
- B. **Epidemiology, Investigation and Control:** Heymann. D., ed., Control of Communicable Diseases Manual, 18th Edition. Washington, DC, American Public Health Association, 2004.
- C. **Case Definitions:** CDC Division of Public Health Surveillance and Informatics, Available at: [http://www.cdc.gov/ncphi/diss/nndss/casedef/case\\_definitions.htm](http://www.cdc.gov/ncphi/diss/nndss/casedef/case_definitions.htm)
- D. **Quarantine and Isolation:** Kansas Community Containment Isolation/ Quarantine Toolbox Section III, Guidelines and Sample Legal Orders <http://www.waldcenter.org/Quarantine%20and%20Isolation%20Information%20for%20Health%20Officers.pdf>
- E. **Kansas Regulations/Statutes Related to Infectious Disease:** <http://www.kdheks.gov/epi/regulations.htm>
- F. **Pink Book:** Epidemiology and Prevention of Vaccine-Preventable Diseases. Available at: <http://www.cdc.gov/vaccines/pubs/pinkbook/default.htm>
- G. **Manual for the Surveillance of Vaccine-Preventable Diseases:** Available at: <http://www.cdc.gov/vaccines/pubs/surv-manual/default.htm> .
- H. **Additional Information (CDC):** <http://www.cdc.gov/health/default.htm>

# Kansas Disease Investigation Guidelines

## General Investigation Form

Investigation Information		
<b>Case Type:</b> <input type="checkbox"/> Human Case <input type="checkbox"/> Non-human Case	<b>Disease Name:</b> _____	
<b>Classification:</b> <input type="checkbox"/> Suspect <input type="checkbox"/> Probable <input type="checkbox"/> Confirmed	<b>KS-EDSS Investigation ID:</b> _____	
<b>Outbreak:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Outbreak Name:</b> _____	<b>Outbreak #:</b> _____
<b>Onset Date:</b> _____	<b>Diagnosis Date:</b> _____	<b>Report Date:</b> _____
<b>Assigned to (Investigator):</b> _____	<b>Patient Died:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Patient Information		
<b>Name Type:</b> <input type="checkbox"/> Default/Common <input type="checkbox"/> Legal <input type="checkbox"/> Maiden <input type="checkbox"/> Nickname		
<b>Last:</b> _____	<b>First:</b> _____	<b>Middle:</b> _____
<b>Street:</b> _____	<b>City/State:</b> _____	<b>Zip:</b> _____
<b>Evening Phone #:</b> _____	<b>Daytime Phone #:</b> _____	
<b>Sex:</b> <input type="checkbox"/> Failure to Report <input type="checkbox"/> Female <input type="checkbox"/> Male <input type="checkbox"/> Other <input type="checkbox"/> Transexual <input type="checkbox"/> Unknown		
<b>Race:</b> <input type="checkbox"/> American Indian or Alaska Native <input type="checkbox"/> Asian <input type="checkbox"/> Black or African American <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> White <input type="checkbox"/> Unknown		
<b>Hispanic / Latino Ethnicity:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		
<b>Date of Birth:</b> _____	<b>Age:</b> _____	<b>Age Unit:</b> <input type="checkbox"/> Days <input type="checkbox"/> Weeks <input type="checkbox"/> Months <input type="checkbox"/> Years
Parent Information (if under 18)		
<b>Last:</b> _____	<b>First:</b> _____	<b>Middle:</b> _____
<b>Street:</b> _____	<b>City/State:</b> _____	<b>Zip:</b> _____
<b>Evening Phone #:</b> _____	<b>Daytime Phone #:</b> _____	
Work / Occupation or School / Grade		
<b>Worksites / School:</b> _____		
<b>Occupations / Grade:</b> _____		
Travel History		
<b>1<sup>st</sup></b>	<b>Destination:</b> _____	<b>Depart Date:</b> _____ <b>Return Date:</b> _____
<b>2<sup>nd</sup></b>	<b>Destination:</b> _____	<b>Depart Date:</b> _____ <b>Return Date:</b> _____
<b>3<sup>rd</sup></b>	<b>Destination:</b> _____	<b>Depart Date:</b> _____ <b>Return Date:</b> _____
<b>4<sup>th</sup></b>	<b>Destination:</b> _____	<b>Depart Date:</b> _____ <b>Return Date:</b> _____



# Supplemental Laboratory Report Form

**Lab Reports**

Laboratory Name: \_\_\_\_\_

Lab Report Date: \_\_\_\_\_

Ordering Provider Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Facility: \_\_\_\_\_

Specimen Accession Number: \_\_\_\_\_

Specimen Collection Date: \_\_\_\_\_

Organism Name: \_\_\_\_\_

Organism Species: \_\_\_\_\_

Organism Serogroup: \_\_\_\_\_

Organism Serotype: \_\_\_\_\_

**PFGE Results**

Pattern 1      KS: \_\_\_\_\_

Other State: \_\_\_\_\_

CDC: \_\_\_\_\_

Pattern 2      KS: \_\_\_\_\_

Other State: \_\_\_\_\_

CDC: \_\_\_\_\_

Pattern 3      KS: \_\_\_\_\_

Other State: \_\_\_\_\_

CDC: \_\_\_\_\_

**Additional Results Information**

Reported Test Name:

Coded Result:

Text Result:

Numeric Result:

Comments:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Supplemental Contact Form

**Contacts**

**Last:** \_\_\_\_\_ **First:** \_\_\_\_\_ **Middle:** \_\_\_\_\_

**Street:** \_\_\_\_\_ **City/State:** \_\_\_\_\_ **Zip:** \_\_\_\_\_

**Evening Phone #:** \_\_\_\_\_ **Daytime Phone #:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**Sex:**  Failure to Report  Female  Male  Other  Transexual  Unknown

**Race:**  American Indian or Alaska Native  Asian  Black or African American  Native Hawaiian or Other Pacific Islander  White  Unknown

**Hispanic / Latino Ethnicity:**  Yes  No

**Date of Birth:** \_\_\_\_\_ **Age:** \_\_\_\_\_ **Age Unit:**  Days  Weeks  Months  Years

**Worksites / School:** \_\_\_\_\_

**Occupations / Grade:** \_\_\_\_\_

**Exposure Information**

**Contact Type:**  Household  Sexual  Other: \_\_\_\_\_ **Partner / Cluster Code:** \_\_\_\_\_

**Date of First Exposure:** \_\_\_\_\_ **Date of Last Exposure:** \_\_\_\_\_ **Frequency:** \_\_\_\_\_

**Nature of Exposure:** \_\_\_\_\_ **Comments:** \_\_\_\_\_

**Testing and Treatment Information**

**Clinic Code:** \_\_\_\_\_ **Examination Date:** \_\_\_\_\_

**Examination Test:** \_\_\_\_\_ **Examination Result:** \_\_\_\_\_

**Prophylaxis/empiric treatment date:** \_\_\_\_\_ **Drug / Dosage:** \_\_\_\_\_

**Provider (Name / Facility):** \_\_\_\_\_

**Disposition and Diagnosis Information**

**Initiation Date:** \_\_\_\_\_ **Disposition Date:** \_\_\_\_\_ **Disposition:** \_\_\_\_\_

**Diagnosis:** \_\_\_\_\_ **Referral Type:**  Patient  Provider **Post-test Counseled :**  Yes  No

**Currently Assigned To:** \_\_\_\_\_ **Follow-up Date:** \_\_\_\_\_

**Risk Factors**

**Pregnant:**  Yes  No **If Yes, # of Weeks:** \_\_\_\_\_

**Risk factors for complications in contact:**  None  Pregnant Woman  HIV Seropositive  Unimmunized  Index case is a super-spreader

Child younger than 5  Age > 65  Otherwise immunosuppressed (s/p transplant, high dose steroids, etc)

# National Bacterial Meningitis and Bacteremia Supplemental Form

Kansas Department of Health and Environment

## Epidemiologic Case History

\* indicates required fields

<b>Case Type*</b> <i>Human Case    Non Human Case</i>	<b>Classification*</b> <i>Confirmed    Not a Case    Probable    Suspect    Deleted    Unknown</i>
--	---

<b>Supplemental Form Status</b> <i>Not Done    Form Complete    Form in Progress    Form Approved    Form Sent to CDC</i>
--

<b>Report Date*</b> <small>mm/dd/yyyy</small>
--

<b>Date Investigation Started</b> <small>mm/dd/yyyy</small>
--

## Patient Demographic Information

\* indicates required fields

<b>Last Name*</b>	<b>First Name*</b>	<b>Middle Name</b>	<b>Name Type*</b>	<b>Age</b>
-------------------	--------------------	--------------------	-------------------	------------

<b>Age Unit</b> <i>Days    Weeks    Months    Years</i>	<b>Date of Birth</b> <small>mm/dd/yyyy</small>
--	---

<b>Race*</b> <small>(Check all that apply)</small>				
<i>American Indian or Alaska Native</i>	<i>Asian</i>	<i>Black or African American</i>		
<i>Native Hawaiian or Other Pacific Islander</i>	<i>White</i>	<i>Unknown</i>		

<b>Ethnicity*</b> <i>Hispanic or Latino    Not Hispanic or Latino    Unknown</i>
---

<b>Sex*</b> <i>Failure to Report    Female    Male    Other    Transexual    Unknown</i>
---

<b>Street Address</b>			
<b>City</b>	<b>County</b>	<b>State</b>	<b>Zip</b>

<b>Evening Phone</b> <small>###-###-####</small>	<b>Daytime Phone</b> <small>###-###-####</small>
---	---

<b>Occupation</b>
-------------------

## Person Providing Report

<b>Name of Reporting Facility*</b>
------------------------------------

# National Bacterial Meningitis and Bacteremia Case Report

<b>If &lt;6 years of age, is the patient in daycare?</b> <small>Daycare is defined as a supervised group of 2 or more unrelated children for greater than 4 hours per week</small> Yes    No    Unknown	<b>Patient Outcome?</b> Survived    Died    Unknown
---	--

<b>Type of Infection Caused by Organism</b> <small>(Check all that apply)</small> Primary Bacteremia    Meningitis    Otitis media    Pneumonia    Cellulitis Epiglottitis    Peritonitis    Pericarditis    Septic arthritis    Conjunctivitis Septic abortion    Amnionitis    Other (specify) _____
--

<b>Bacterial Species Isolated From Any Normally Sterile Site</b> Neisseria meningitidis    Haemophilus influenzae Group A Streptococcus    Group B Streptococcus Lysteria monocytogenes    Streptococcus pneumoniae (pneumococcus) Escherichia coli    Staph aureus Staph epidermidis    Klebsiella species Enterobacter species    Serratia species Acinetobacter species    Group A streptococcus Group D streptococcus    Other streptococcus Other Bacterial Species (Specify: include mycobacteria, fungi) _____
--

<b>Has Patient Received Cochlear Implants?</b> Yes    No    Unknown	<b>If yes, date</b> <small>mm/dd/yyyy</small>	<b>Physician</b>
--	--	------------------

## -Important- Please Complete For The Following Organisms:

<b>Haemophilus Influenzae</b> <b>Did the Patient Receive Haemophilus b Vaccine</b> <small>If YES, please complete the list below.</small> Yes    No    Unknown
---

Dose	Date Given	Vaccine Name	Vaccine Manufacturer	Lot Number
	<small>mm/dd/yyyy</small>			
1				
2				
3				
4				

If H. Influenzae was isolated from blood or CSF, was it resistant to:		
<b>Ampicillin</b> Yes    No    Not Tested or Unknown	<b>Chloramphenicol</b> Yes    No    Not Tested or Unknown	<b>Rifampin</b> Yes    No    Not Tested or Unknown

Meningococcal vaccine

**Did the patient receive meningococcal vaccine**

*Yes No Unknown*

Dose	Date Given	Vaccine Name	Vaccine Manufacturer	Lot Number
	mm/dd/yyyy			
1				
2				
3				
4				

**Did the patient receive the Streptococcus pneumoniae (pneumococcus) vaccine**

*Yes No Unknown*

Dose	Date Given	Vaccine Name	Vaccine Manufacturer	Lot Number
	mm/dd/yyyy			
1				
2				
3				

If N. meningitidis was isolated from blood or CSF, was it resistant to:

<b>Sulfa</b> <i>Yes No Not Tested or Unknown</i>	<b>Rifampin</b> <i>Yes No Not Tested or Unknown</i>
---	--



# CDC • National Center for Immunization and Respiratory Diseases

## Haemophilus influenzae type b Vaccine and Extended Information Worksheet



This worksheet should be completed for all cases of Hib in children <15 years who had received a primary Hib vaccine series.

STATE ID:

State: \_\_\_\_\_

CDC ID:

**1. Immunization dates and vaccine type from all sources (shot card, health care providers):**

	Dates of Immunizations*				
	Dose 1	Dose 2	Dose 3	Dose 4	Dose 5
DT, DTP, DTaP (alone, if combination check Hib box)	____/____/____ <input type="checkbox"/> DT <input type="checkbox"/> DTP <input type="checkbox"/> DTaP	____/____/____ <input type="checkbox"/> DT <input type="checkbox"/> DTP <input type="checkbox"/> DTaP	____/____/____ <input type="checkbox"/> DT <input type="checkbox"/> DTP <input type="checkbox"/> DTaP	____/____/____ <input type="checkbox"/> DT <input type="checkbox"/> DTP <input type="checkbox"/> DTaP	____/____/____ <input type="checkbox"/> DT <input type="checkbox"/> DTP <input type="checkbox"/> DTaP
Hib *See codes below	____/____/____ Vaccine Type* ____ Lot# _____	____/____/____ Vaccine Type* ____ Lot# _____	____/____/____ Vaccine Type* ____ Lot# _____	____/____/____ Vaccine Type* ____ Lot# _____	
Hepatitis B (alone if combination check Hib box)	____/____/____ <input type="checkbox"/> Administered at birth				
Polio	____/____/____ <input type="checkbox"/> OPV <input type="checkbox"/> IPV	____/____/____ <input type="checkbox"/> OPV <input type="checkbox"/> IPV	____/____/____ <input type="checkbox"/> OPV <input type="checkbox"/> IPV	____/____/____ <input type="checkbox"/> OPV <input type="checkbox"/> IPV	
MMR	____/____/____	____/____/____	____/____/____		
Varicella	____/____/____	____/____/____			

\*Hib vaccine types (trade name-company)

- |   |  |
|---|--|
| 1. HbOC (HibTITER® Wyeth)<br>2. HbOC-DTP (Terramune® Wyeth)<br>3. PRP-T (OmniHib® GlaxoSmithKline)<br>4. PRP-T (ActHib® sanofi pasteur/Connaught/Merieux)<br>5. PRP-T-DTaP (TriHibit® sanofi pasteur/Connaught/Merieux) | 6. PRP-D (ProHIBit® Connaught) [no longer available]<br>7. PRP-OMP (PedvaxHIB® Merck)<br>8. PRP-OMP-HepB (COMVAX® Merck)<br>9. PRP-T—DTaP-IPV (Pentacel sanofi pasteur)<br>10. Unknown<br>11. Other (specify): _____ |
|---|--|

**2. Birthweight:** \_\_\_\_\_ lbs. \_\_\_\_\_ oz. OR \_\_\_\_\_ Grams

**Household Information**

**3. What type of Medical insurance does the family have**

- Private insurance such as through an employer or Blue Cross
- No insurance or self pay
- Medicaid
- Other (specify): \_\_\_\_\_
- Unknown

**4. Country of Child's Birth:** \_\_\_\_\_

**5. Number of children aged <18 years who stay at same address at least 2 nights a week (including case-patient):** \_\_\_\_\_

**6. Number of people who stay at same address at least 2 nights a week (including case-patient):** \_\_\_\_\_

**7. Is there known previous contact with a person with Hib disease within the preceding 2 months?**  Yes  No

If Yes, specify type of contact: \_\_\_\_\_

**8. Significant past medical History** If none check here  If unknown check here

[check all that apply]

- |  |  |
|--|--|
| <input type="checkbox"/> Preterm birth(<37 weeks), Specify weeks _____ | <input type="checkbox"/> Ventricular hardware (VP shunt, etc.) |
| <input type="checkbox"/> Immunosuppression and/or HIV, specify _____   | <input type="checkbox"/> Other, specify _____                  |
| <input type="checkbox"/> Cochlear implant                              |  |





<p><b>HOSPITAL</b></p> <p><b>36. Was the patient hospitalized for this illness?</b>  <input type="checkbox"/> Yes    <input type="checkbox"/> No    <input type="checkbox"/> UNKNOWN</p> <p><b>37. Hospital name:</b> _____</p> <p><b>38. Hospital ID:</b> _____</p> <p><b>39. Hospital ID Type:</b> _____</p> <p><b>40. Admission Date:</b>                      <b>41. Discharge Date:</b>  <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/>    <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/>  <small>MONTH    DAY    YEAR                      MONTH    DAY    YEAR</small></p> <p><b>42. Total duration of stay within hospital:</b> <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/> Days</p>	<p><b>43a. Hospital/lab ID where culture identified:</b>  <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></p>	<p><b>43b. Hospital ID where patient treated:</b>  <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></p>
<p><b>47. Types of infection caused by organism (CHECK ALL THAT APPLY)</b></p> <p><input type="checkbox"/> Bacteremia without focus    <input type="checkbox"/> Abscess (not skin)    <input type="checkbox"/> Empyema</p> <p><input type="checkbox"/> Meningitis    <input type="checkbox"/> Peritonitis    <input type="checkbox"/> Endocarditis</p> <p><input type="checkbox"/> Otitis media    <input type="checkbox"/> Pericarditis    <input type="checkbox"/> Endometritis</p> <p><input type="checkbox"/> Pneumonia    <input type="checkbox"/> Septic abortion    <input type="checkbox"/> STSS</p> <p><input type="checkbox"/> Cellulitis    <input type="checkbox"/> Chorioamnionitis    <input type="checkbox"/> Necrotizing fasciitis</p> <p><input type="checkbox"/> Epiglottitis    <input type="checkbox"/> Septic arthritis    <input type="checkbox"/> Puerperal sepsis</p> <p><input type="checkbox"/> Hemolytic uremic syndrome (HUS)    <input type="checkbox"/> Osteomyelitis    <input type="checkbox"/> Other infection _____</p>	<p><b>44a. Was patient transferred from another hospital?</b>  <input type="checkbox"/> Yes    <input type="checkbox"/> No    <input type="checkbox"/> Unknown</p>	<p><b>44b. If Yes, hospital ID</b>  <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></p>
<p><b>49. Sterile sites from which organism isolated: (CHECK ALL THAT APPLY)</b></p> <p><input type="checkbox"/> Blood    <input type="checkbox"/> Peritoneal fluid    <input type="checkbox"/> Bone</p> <p><input type="checkbox"/> CSF    <input type="checkbox"/> Pericardial fluid    <input type="checkbox"/> Muscle</p> <p><input type="checkbox"/> Pleural fluid    <input type="checkbox"/> Joint</p> <p>Specify  <input type="checkbox"/> Internal body site _____  <input type="checkbox"/> Other normally sterile site _____</p>	<p><b>45. Illness Onset Date:</b>  <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/>  <small>MONTH    DAY    YEAR</small></p>	<p><b>46. Illness End Date:</b>  <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/>  <small>MONTH    DAY    YEAR</small></p>
<p><b>52. Underlying causes or prior illness: (CHECK ALL THAT APPLY)</b></p> <p><input type="checkbox"/> Current smoker                      <input type="checkbox"/> Hodgkin disease                      <input type="checkbox"/> HIV infection                      <input type="checkbox"/> Heart failure / CHF</p> <p><input type="checkbox"/> Multiple myeloma                      <input type="checkbox"/> Asthma                      <input type="checkbox"/> AIDS or CD4 count &lt;200                      <input type="checkbox"/> Obesity</p> <p><input type="checkbox"/> Sickle cell anemia                      <input type="checkbox"/> Emphysema / COPD                      <input type="checkbox"/> Cochlear implant                      <input type="checkbox"/> CSF leak</p> <p><input type="checkbox"/> Splenectomy / asplenia                      <input type="checkbox"/> Systemic lupus erythematosus (SLE)                      <input type="checkbox"/> Deaf / profound hearing loss                      <input type="checkbox"/> IVDU</p> <p><input type="checkbox"/> Immunoglobulin deficiency                      <input type="checkbox"/> Diabetes mellitus                      <input type="checkbox"/> Cirrhosis / Liver failure                      <input type="checkbox"/> Cerebral vascular accident (CVA) / Stroke</p> <p><input type="checkbox"/> Immunosuppressive therapy (Steroids, Chemotherapy, Radiation)                      <input type="checkbox"/> Nephrotic syndrome                      <input type="checkbox"/> Alcohol Abuse                      <input type="checkbox"/> Complement deficiency</p> <p><input type="checkbox"/> Leukemia                      <input type="checkbox"/> Renal failure/Dialysis                      <input type="checkbox"/> Atherosclerotic Cardiovascular Disease (ASCVD) / (CAD)</p> <p>Specify  <input type="checkbox"/> Other malignancy _____  <input type="checkbox"/> Organ transplant _____  <input type="checkbox"/> Other prior illness _____</p>	<p><b>48a. Bacterial species isolated from any normally sterile site (CHECK ALL THAT APPLY)</b></p> <p><input type="checkbox"/> <i>Neisseria meningitidis</i>                      <input type="checkbox"/> Abscess (not skin)</p> <p><input type="checkbox"/> <i>Haemophilus influenzae</i>                      <input type="checkbox"/> Group A streptococcus</p> <p><input type="checkbox"/> Group B streptococcus                      <input type="checkbox"/> <i>Streptococcus pneumoniae</i></p> <p><b>48b. Other bacterial species isolated from any normally sterile site</b>  _____  _____  _____</p>	<p><b>50. Date first positive culture obtained: (date specimen drawn)</b>  <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/>  <small>MONTH    DAY    YEAR</small></p>
<p><b>53. Was patient pregnant / post partum at time of first positive culture?</b> <input type="checkbox"/> Yes    <input type="checkbox"/> No    <input type="checkbox"/> Unknown</p> <p>If yes, outcome of fetus</p> <p><input type="checkbox"/> Survived, no apparent illness    <input type="checkbox"/> Live birth / neonatal death    <input type="checkbox"/> Induced abortion</p> <p><input type="checkbox"/> Survived, clinical infection    <input type="checkbox"/> Abortion / stillbirth    <input type="checkbox"/> Unknown</p>	<p><b>51. Other nonsterile sites from which organism isolated: (CHECK ALL THAT APPLY)</b></p> <p><input type="checkbox"/> Placenta                      <input type="checkbox"/> Middle ear</p> <p><input type="checkbox"/> Amniotic fluid                      <input type="checkbox"/> Sinus</p> <p><input type="checkbox"/> Wound                      <input type="checkbox"/> Other nonsterile site _____</p>	
<p><b>54. Is the patient &lt;1 month of age?</b> <input type="checkbox"/> Yes    <input type="checkbox"/> No    <input type="checkbox"/> Unknown    If yes, time of birth: _____:_____</p> <p style="margin-left: 100px;">Gestational age: <input type="checkbox"/><input type="checkbox"/> (wks)    Birth weight: <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/> (gms)</p>	<p><b>55. Did the patient die from this illness?</b> <input type="checkbox"/> Yes    <input type="checkbox"/> No</p>	

**56. What was the serotype?**

a       d       Not Typable

b       e       Not Tested or Unknown

c       f       Other \_\_\_\_\_

**59. Type of insurance: (CHECK ALL THAT APPLY)**

Medicare

Military/VA

Medicaid/state assistance program

Indian Health Service (IHS)

Private/HMO/PPO/managed care plan

No health care coverage

Unknown

Other Insurance \_\_\_\_\_

**57. Was the patient <15 years of age at the time of the first positive culture**  Yes  No  Unknown

**58. Birth Country:** \_\_\_\_\_

**60. Is there a known previous contact with Hib disease within the preceding two months?**  Yes  No  Unknown

**If yes specify type of contact:** \_\_\_\_\_

**61. Significant past medical history:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**If pre-term birth (<37 weeks). Specify weeks:** \_\_\_\_\_

**Serum availability**

Is acute serum available?  Yes  No  Unknown      Is convalescent serum available?  Yes  No  Unknown

Date:            Date:

MONTH      DAY      YEAR      MONTH      DAY      YEAR

**62. If <15 years of age and serotype "b" or "unk", did patient receive *Haemophilus influenzae* b vaccine?**  Yes  No  Unknown

Dose	Date Given			Vaccine Name/Manufacturer	Lot Number
	MONTH	DAY	YEAR		
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	_____	_____
2	<input type="text"/>	<input type="text"/>	<input type="text"/>	_____	_____
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	_____	_____
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	_____	_____

Epidemiologic

**63. Does this patient: (CHECK ALL THAT APPLY)**

**Attend a day care\* facility**  Yes  No  Unknown      **Facility name** \_\_\_\_\_

\*DAY CARE IS DEFINED AS A SUPERVISED GROUP OF 2 OR MORE UNRELATED CHILDREN FOR >4 HOURS PER WEEK.

**Reside in a long term care facility?**  Yes  No  Unknown      **Facility name** \_\_\_\_\_

**64. Is this case part of an outbreak?**  Yes  No  Unknown      **Outbreak name** \_\_\_\_\_

Where was this disease acquired? \_\_\_\_\_

Imported Country: \_\_\_\_\_ Imported City: \_\_\_\_\_

Imported State: \_\_\_\_\_ Imported County: \_\_\_\_\_

**CONFIRMATION METHOD**

**65. Case status:**

Confirmed       Not a case

Probable       Unknown

Suspect

**66. Does this patient have recurrent disease with the same pathogen?**

Yes  No  Unknown

**If yes, previous (1st) state I.D.**

**67. CRF Status:**

Complete       Chart unavailable after 3 requests

Incomplete

Edited & Correct

**General Comments:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date:

To Parent of Children at \_\_\_\_\_.

Dear Parent:

A child who attends the above named facility has been diagnosed as having bacterial meningitis caused by Haemophilus influenzae type b (Hib). So that others do not get this illness, the Health Department recommends your child receive preventive medication. Preventive treatment will help protect your child from Hib disease and is recommended even if your child has been vaccinated with the Hib vaccine. An antibiotic called rifampin is usually used for this treatment.

Your child may also need to receive Hib vaccine if your child is not up-to-date with their immunizations. A review of your child's immunization records has determined that your

child does\_\_\_\_\_ does not\_\_\_\_\_ need to receive Hib vaccine.

Receiving the vaccine is important since the antibiotic only provides short-term protection. The Health Department can provide Hib vaccine to your child.

Hib disease is rare in persons over five years of age, but all persons who were in contact with the sick child should be watched. A child who has an unusual fever, headache or any other unusual symptoms should be given immediate medical care. Meningitis may begin with an ear or sinus infection and go on to fever, vomiting, listlessness, or stiff neck. Some children with meningitis may have long-lasting neurological problems and, in some cases, death may occur. An information sheet on Hib disease is enclosed.

If you have additional questions, please contact your physician or the Health Department.

Sincerely,

Investigator Name, Title

Phone #

Address Line 1

Address Line 2

City, State Zip Code

Date:

To Parent of Children at \_\_\_\_\_.

Dear Parent:

A child who attends the above named facility has been diagnosed as having bacterial meningitis caused by Haemophilus influenzae type b (Hib). The risk of other children getting Hib disease depends on the age of the exposed children, the vaccine coverage among children at the facility, and the number of cases that have occurred at the facility recently.

We are not currently recommending preventive antibiotic treatment, however we are recommending all children to be up-to-date on their Hib vaccinations. A review of your child's immunization records has determined that your child

does\_\_\_\_\_ does not\_\_\_\_\_ need to receive Hib vaccine.

Hib disease is rare in persons over five years of age, but all persons who were in contact with the sick child should be watched. A child who has an unusual fever or headache or any other unusual symptoms should be given immediate medical care. Meningitis may begin with an ear or sinus infection and go on to fever, vomiting, listlessness, or stiff neck. Some children with meningitis may have long-lasting neurological problems and, in some cases, death may occur. An information sheet on Hib disease is enclosed.

If you have additional questions, please contact your physician or the Health Department.

Sincerely,

Investigator Name, Title

Phone #

Address Line 1

Address Line 2

City, State Zip Code

Date:

Dear Dr. \_\_\_\_\_,

A case of Haemophilus influenzae type b invasive disease (Hib) has been diagnosed in a child at the \_\_\_\_\_.

Children from this facility are being referred to their physicians for chemoprophylaxis with Rifampin. We are also recommending that children be up-to-date with their Hib immunization(s). Please be alert to the presence of this disease in our community.

If you have any questions, please contact the Health Department.

Sincerely,

Investigator Name, Title

Phone #

Address Line 1

Address Line 2

City, State Zip Code

# Public Health Fact Sheet

## Haemophilus Influenzae and Hib

### What is Haemophilus Influenzae?

*Haemophilus influenza* is bacteria that may cause different types of infections in infants and children. It most commonly causes ear, eye, or sinus infections, and pneumonia. A more serious strain of the bacteria is called *H. influenzae* type b or Hib.

### What is Hib?

*Haemophilus influenzae* type b (Hib) is a serious bacterial disease that may cause death. Before the Hib vaccine about 20,000 children in the United States under the age of 5 got Hib disease and nearly 1,000 died every year.

### How is Hib spread?

Hib is spread through the air when an infected person coughs or sneezes. The cough/sneeze creates airborne droplets that may be inhaled by susceptible individuals causing new infections.

### What are the symptoms of Hib?

Onset is often sudden and symptoms include: fever, vomiting, lethargy and meningeal irritation consisting of bulging fontanel in infants or a stiff neck and back in older children. Otitis media or sinusitis may be a precursor. Hib may also cause septicemia, pneumonia, epiglottitis, cellulitis, pericarditis and septic arthritis.

### Who gets Hib?

Black, Latino, Native American, and poor children are at higher risk of getting Hib. Children < 6 who attend daycare may also be at a higher risk. Children and adults with sickle cell anemia, no spleen, weakened immune systems or on drugs or treatments that weaken the immune system also are at higher risk for Hib.

### How can I prevent Hib disease?

Vaccination of children prevents disease. All infants should get a series of 4 Hib shots starting when they are 2 months old. The remaining shots are given at 4, 6, and 15 months. There are different schedules for babies between 7-15 months old who missed the shots when they were younger. Children 15 months through 4 years of age need at least 1 dose. Children 5 years of age and older and adults with the special health problems need at least 1 dose also.

*This fact sheet is for information only and is not intended for self-diagnosis or as a substitute for consultation. If you have any questions about the disease described above or think that you may have an infection, consult with your healthcare provider. This fact sheet is based on the Centers for Disease Control and Prevention's topic fact sheets.*

**Is the Hib vaccine safe?**

Yes, it is safe for most people, but like any vaccine it can sometimes cause mild side effects. Approximately one in four children who receive Hib vaccine will have a little redness or swelling where the shot was given and 5% will run a fever of 101° F or higher. These reactions are not serious and usually go away in a few days. More severe reactions can happen, but they are rare.

**Should people exposed to a Hib infected person be treated?**

A medicine called Rifampin is given to some exposed people. This medicine clears the bacteria from their bodies to prevent the bacteria from spreading to children who are not fully protected from the illness by vaccinations. Your local health department will look at the vaccination status of all children that could be exposed to the bacteria to decide who should receive this medicine. Those exposed to a person infected with a type of *H. influenzae* that is not Hib do not require any medicine.

**Where can I get more information?**

- Your Local Health Department
- Kansas Department of Health and Environment, Epidemiologic Services Section (877) 427-7317
- <http://www.cdc.gov/health/default.htm>
- Your doctor, nurse, or local health center

*This fact sheet is for information only and is not intended for self-diagnosis or as a substitute for consultation. If you have any questions about the disease described above or think that you may have an infection, consult with your healthcare provider. This fact sheet is based on the Centers for Disease Control and Prevention's topic fact sheets.*