

Case Definition

Confirmed Case:

Clinical evidence¹ of invasive disease with laboratory confirmation of infection:

- Isolation of *H. influenzae* (serotypes a, b, c, d, e, f, undifferentiated, and non-typeable isolates) from a normally sterile site²
OR
- Isolation of *H. influenzae* (serotypes a, b, c, d, e, f, undifferentiated, and non-typeable isolates) from the epiglottis in a person with epiglottitis³

Probable Case:

Clinical evidence¹ of invasive disease with laboratory evidence of infection:

- Demonstration of *H. influenzae* DNA by an appropriately validated nucleic acid amplification test (NAAT) from a normally sterile site²
OR
- Demonstration of *H. influenzae* type b antigen⁴ in cerebrospinal fluid
OR
- Buccal cellulitis or epiglottitis in a child < 5 years of age with no other causative organisms isolated^{3, 5}

Clinical Evidence

Clinical illness associated with invasive disease due to *H. influenzae* includes meningitis, bacteraemia, epiglottitis, pneumonia, pericarditis, septic arthritis and empyema.

¹ See Clinical Evidence section

² Blood, cerebrospinal fluid, pleural fluid, pericardial fluid, peritoneal fluid, deep tissue specimen taken during surgery (e.g., muscle collected during debridement for necrotizing fasciitis), bone or joint fluid excluding the middle ear and superficial wound aspirates (e.g., skin and soft tissue abscesses)

³ For cases involving non-sterile samples, investigation of a potential invasive *H. influenzae* case may be initiated based on clinical judgement in the presence of clinical evidence of invasive disease. Cases should be classified as Confirmed or Probable based on laboratory confirmation or laboratory evidence of infection, or as Case – not a Case, in the absence of laboratory evidence of invasive *H. influenzae*.

⁴ Detection of type b antigen is specific to *H. influenzae* serotype b (Hib). This method cannot provide laboratory evidence of infection with other serotypes, undifferentiated, or non-typeable strains.

⁵ Buccal and epiglottal samples are not sterile samples. Buccal cellulitis/epiglottitis is classified as a probable case of invasive *H. influenzae* disease without laboratory confirmation of *H. influenzae* or typing, when no other causative organism is identified.

Laboratory Comments

Detection of *H. influenzae* type b antigen is considered a probable case— not confirmed — because the presence of the antigen does not confirm the presence of viable bacteria.

Detection of *H. Influenzae* DNA is considered a probable case — not confirmed — because the bacteria may be present in a non-pathogenic role and thus, depending on the site, may NOT reflect the actual pathogen.

Hospitalized Case

A confirmed or probable case who was admitted to hospital in which the disease under investigation caused or contributed to the hospitalization.

Deceased Case

A death resulting from invasive *H. influenzae* disease in a confirmed or probable case. This disease does not need to be the primary cause of death.⁶

Reporting Requirements

Report confirmed and probable cases to DHW Public Health Surveillance via Panorama.

⁶ This includes deaths identified through death certificates that list *H. influenzae* disease as an immediate cause of death, an antecedent cause giving rise to the immediate cause, or another significant condition contributing to, but not causally related to, the immediate cause.

Appendix I: DHW Public Health Surveillance Required Minimum Data Set for *Haemophilus influenzae*, invasive

Panorama variable	Description	Surveillance Rationale
Client details		
First Name	First name of case	
Last Name	Last name of case	
Date of Birth	Date case was born	Allows for demographic analysis.
Gender	Field is called gender in Panorama but may refer to sex or gender.	Allows for demographic analysis.
HCN	Health card number of case	Allows for linkage with administrative health data.
Address, including postal code	Address where case resides	Allows for geographic analysis.
Investigation details		
Disease	Disease under investigation	
Microorganism	Name of microorganism causing the specific disease	
Classification	Case classification. Do not close a case as a PUI	Used for counting of cases in surveillance reporting.
Serotype	<p>Serotype of organism – choose from:</p> <ul style="list-style-type: none"> • Type A • Type B (Hib) • Type C • Type D • Type E • Type F • Non-type B • Non-typeable • Undifferentiated <p>Non-type B indicates isolates that are typable and not Type B (Hib). Type A, C-F indicates specific non-B serotypes, when further typing is available. Undifferentiated indicates <i>H. influenzae</i> when no serotyping available.</p>	Used for enhanced epidemiological analysis.
Disposition	Case disposition	Allows for exclusion of cases as applicable for surveillance reporting.
Responsible organization	Investigating organization	Allows for geographical analysis when address information is unknown.
Client address at time of investigation	Where client was residing at time of disease event, including postal code	Allows for geographical analysis.

Panorama variable	Description	Surveillance Rationale
Sensitive environment/occupation	Indicates whether the case resides/spends time in a setting considered high-risk for exposure, such as a long-term care residence, childcare facility, school, etc.	Allows for assessment of transmission risk in high-risk settings.
Laboratory – only if manually entering lab results		
Laboratory ID/Accession Number	ID assigned by the PPHLN	Allows for data linkage.
Test Name	Type of test carried out	Used for analysis of laboratory data.
Specimen Type	Type of specimen collected: CSF, blood, etc.	Allows for analysis by specimen type.
Specimen Site	Site of specimen collected	Allows for analysis by specimen site.
Specimen Collection Date	The date when the specimen was collected	Used to place disease event in time, allows for accurate epidemiological analysis.
Result Name	Test result description	Used for analysis of laboratory data.
Result Status	Status of test result (e.g., preliminary, final, etc.)	Used for analysis of laboratory data.
Interpreted Result	Laboratory interpretation of test performed	Used for analysis of laboratory data.
Disease	Disease for which testing carried out	Used for analysis of laboratory data.
Microorganism	Name of microorganism causing the specific disease	Used for analysis of laboratory data.
Serotype	<p>Serotype of organism – choose from:</p> <ul style="list-style-type: none"> • Type A • Type B (Hib) • Type C • Type D • Type E • Type F • Non-type B • Non-typeable • Undifferentiated <p>Non-type B indicates isolates that are typable and not Type B (Hib). Type A, C-F indicates specific non-B serotypes, when further typing is available. Undifferentiated indicates <i>H. influenzae</i> when no serotyping available.</p>	Used for analysis of laboratory data.
Signs and symptoms (include onset dates)		

Panorama variable	Description	Surveillance Rationale
Enter onset date for each symptom	Used to place disease event in time, allows for accurate epidemiological analysis.	
Bacteremia	Exhibited during illness.	Allows analysis of disease presentation and severity
Cellulitis	Exhibited during illness.	Allows analysis of disease presentation and severity
Coma	Exhibited during illness.	Allows analysis of disease presentation and severity
Empyema	Exhibited during illness.	Allows analysis of disease presentation and severity
Epiglottitis	Exhibited during illness.	Allows analysis of disease presentation and severity
Meningitis	Exhibited during illness.	Allows analysis of disease presentation and severity
Neck stiffness	Exhibited during illness.	Allows analysis of disease presentation and severity
Pericarditis	Exhibited during illness.	Allows analysis of disease presentation and severity
Pneumonia	Exhibited during illness.	Allows analysis of disease presentation and severity
Septic arthritis	Exhibited during illness.	Allows analysis of disease presentation and severity
Other (specify)	Other symptom of invasive disease not listed exhibited during illness.	Allows analysis of disease presentation and severity
Enter all outcomes related to disease under investigation	Enter all outcomes investigator becomes aware of during the course of investigation. All cases must have at least one outcome entered.	Allows for analysis of severity of illness.
Exposure - Contact - contact with a case (confirmed, probable or suspect)	In the 4 days prior to symptom onset or diagnosis (use earlier date), did the case have contact with anyone presenting similar symptoms, or with a known probable or confirmed case of invasive <i>H. influenzae</i> ?	Allows analysis of exposure
Medical - Cancers	Did the case have cancer at the time of disease onset	Immune deficiency is a known risk factor for Hi
Medical - Cochlear implant	Did the case have a cochlear implant in place at the time of symptom onset	Known risk factor for Hi meningitis
Medical - Congenital immunodeficiency	Does the case have congenital immunodeficiency	Known risk factor for Hi
Medical - Splenic disorders including sickle cell disease or other hemoglobinopathies	Does the case have splenic disorders including sickle cell disease or other hemoglobinopathies	Known risk factor for Hi
Medical - Transplant related immunosuppression	Does the case have transplant related immunosuppression	Known risk factor for Hi
Medical - Unimmunized for disease	Case was unimmunized against Hib	Used to analyze occurrence by vaccine status

Panorama variable	Description	Surveillance Rationale
Medical - Under or incomplete vaccination for disease	Case has been vaccinated against Hib but does not have a complete series.	Used to analyze occurrence by vaccine status
Medical - Unknown immunization history	Case's Hib immunization history is unknown	Used to analyze occurrence by vaccine status
Medical - HIV positive	Has the case been diagnosed with HIV	Known risk factor for Hi
Special population - Unhoused	In the 3 months prior to symptom onset/diagnosis, was the case ever unsheltered (e.g., street, vehicle, encampment) or living in emergency shelter/transitional housing?	Used to monitor trends in transmission among unsheltered persons as a population group, as specific public health actions may be required.

Appendix II: Updates to *Haemophilus influenzae*, invasive surveillance guidelines

Date	Updates
April 2026	<ul style="list-style-type: none">• Inclusion of non-type b <i>H. influenzae</i> to confirmed and probable case definition• Addition of footnotes: 2 - examples of non-sterile samples; 3 - clarifying that cellulitis/epiglottitis is classified as a probable case without laboratory confirmation of <i>H. influenzae</i>, when no other causative organism is identified; 4 - specifying that lab evidence based on antigen detection is specific to Hib; 5 & 6 - clarifying procedure for non-sterile samples• Addition of definitions of Hospitalized Case and Deceased Case• Addition of minimum dataset (Appendix I)