

Infectious Disease Epidemiology Report

Haemophilus influenzae, Maine 2015



Background

Haemophilus influenzae (*H. influenzae*) is a bacterium that can cause a severe infection, occurring mostly in children and those individuals greater than 65 years of age. It can be spread from person to person through droplets in the air when a person who is infected sneezes or coughs. The bacteria can cause meningitis and infections in joints, lungs, and blood.

There are six identifiable types of *H. influenzae*, and other non-identifiable types (called nontypeable). The one that most people are familiar with is *H. influenzae* type b or Hib. There is a vaccine that can prevent disease caused by Hib, but not the other types.

Methods

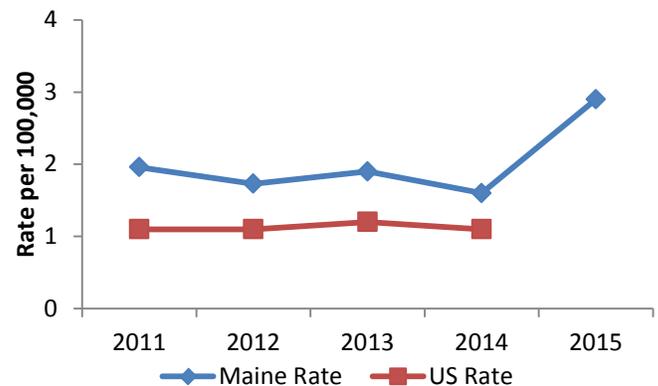
Invasive *H. influenzae* is a reportable condition in Maine. Maine CDC investigates all reports of invasive disease and completes standardized case report forms. Cultures or clinical specimens are required to be forwarded to Maine's Health and Environmental Testing Laboratory (HETL) for serotyping.

Cases of invasive *H. influenzae* are defined as persons with isolation of *H. influenzae* from a normally sterile site (e.g. blood or cerebrospinal fluid or, less commonly, joint, pleural, or pericardial fluid).

Results

A total of 39 cases of invasive *H. influenzae* were reported in Maine in 2015, for a rate of 2.9 cases per 100,000 population (Figure 1). Rates were calculated using 2015 US census population estimates. This is an increase from 21 cases in Maine in 2014, and remains slightly higher than the national rate. The 2015 annual incidence of invasive *H. influenzae* was 4.6 per 100,000 children younger than 5 years of age and 7.2 per 100,000 adults 65 years of age or older.

Figure 1: Rate of invasive *H. influenzae* by year – Maine and US, 2010-2015



The age range of cases was 2 months to 93 years, and the median age was 62 years. One case in a child under the age of 5 years was serotype b (Hib) (Table 1). The child was unvaccinated but wouldn't have received the full series because they were underage to receive all recommended doses of Hib vaccine.

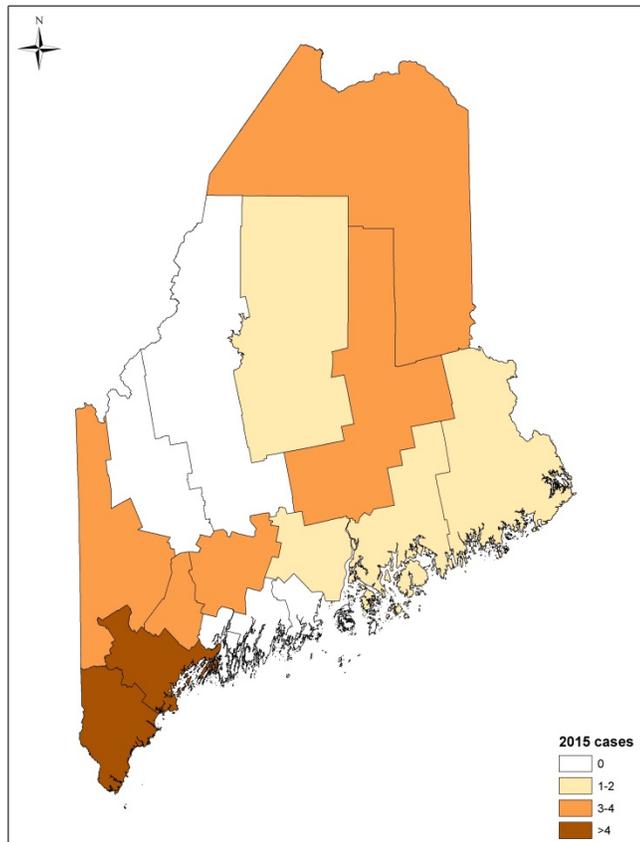
Table 1: Number of invasive *H. influenzae* cases by age and serotype – Maine, 2015

Age (years)	Serotype				Total
	b	Non-b	Non-Typeable	Un-known	
<5	1	1	1	0	3
5-17	0	1	0	0	1
18-34	0	1	2	0	3
35-44	0	1	1	0	2
45-64	0	5	7	0	12
≥65	0	6	9	3	18
Total	1	15	20	3	39

Of the 39 invasive *H. influenzae* cases reported in 2015, 29 had pneumonia, 2 had meningitis and 17 had bacteremia (cases could have multiple manifestations). 37 cases (95%) were hospitalized. Six deaths (15%) were associated with invasive *H. influenzae* disease in 2015.

Invasive *H. influenzae* disease was identified among residents in 11 (69%) of Maine's counties (Figure 2).

Figure 2: Invasive *H. influenzae* cases – Maine, 2015



Discussion

H. influenzae serotype b is vaccine preventable. In 2015, there was one pediatric Hib cases identified in Maine. Unvaccinated household and child care contacts of a known Hib case are at higher risk for disease because the bacteria are spread from person to person by airborne droplets through coughing or sneezing.

Prophylaxis with antibiotics is recommended for all household members and close contacts of someone diagnosed with Hib disease only if there is

- at least one unvaccinated child under 4 years of age or
- a child or adult with a weak immune system in the home.

A vaccine against Hib is available in the United States and is recommended for the following individuals:

- All infants beginning at 2 months of age
- Persons older than 59 months of age who have high-risk conditions including sickle cell disease, HIV/AIDS, asplenia, bone marrow transplant, or are immune compromised

Hib vaccine is not recommended for healthy persons older than 59 months of age.

Maintaining high vaccination rates, particularly among children in child care settings, is important to prevent Hib. There are no vaccines for use against non-serotype b disease.

All cases of invasive *H. influenzae* disease in Maine must be reported by calling 1-800-821-5821, or by faxing reports to 1-800-293-7534. For more information, contact your healthcare provider or local health center.

Additional information about *H. influenzae* can be found at:

- Maine CDC <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/airborne/haemophilus.shtml>
- Federal CDC <http://www.cdc.gov/hidisease/index.html>