

Infectious Disease Epidemiology Report

Haemophilus influenzae, Maine 2014



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

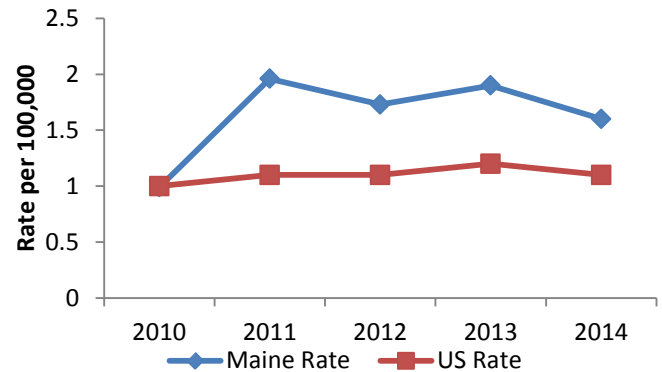
Invasive *H. influenzae* is a reportable condition in Maine. Maine CDC investigates all reports of invasive disease and completes standardized case report forms. Cultures or clinical specimens are required to be forwarded to Maine's Health and Environmental Testing Laboratory (HETL) for serotyping.

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 21 cases of invasive *H. influenzae* were reported in Maine in 2014, for a rate of 1.6 cases per 100,000 population (Figure 1). Rates were calculated using 2014 US census population estimates. This is a decrease from 25 cases in 2013, but it remains slightly higher than the national rate.

Figure 1: Rate of invasive *H. influenzae* by year – Maine and US, 2010-2014



The age range of cases was 6 months to 93 years, and the median age was 63 years. One case in a child under the age of 5 years was serotype b (Hib) (Table 1). The child was vaccinated but had not received the full series since the child was underage.

Table 1: Number of invasive *H. influenzae* cases by age and serotype – Maine, 2014

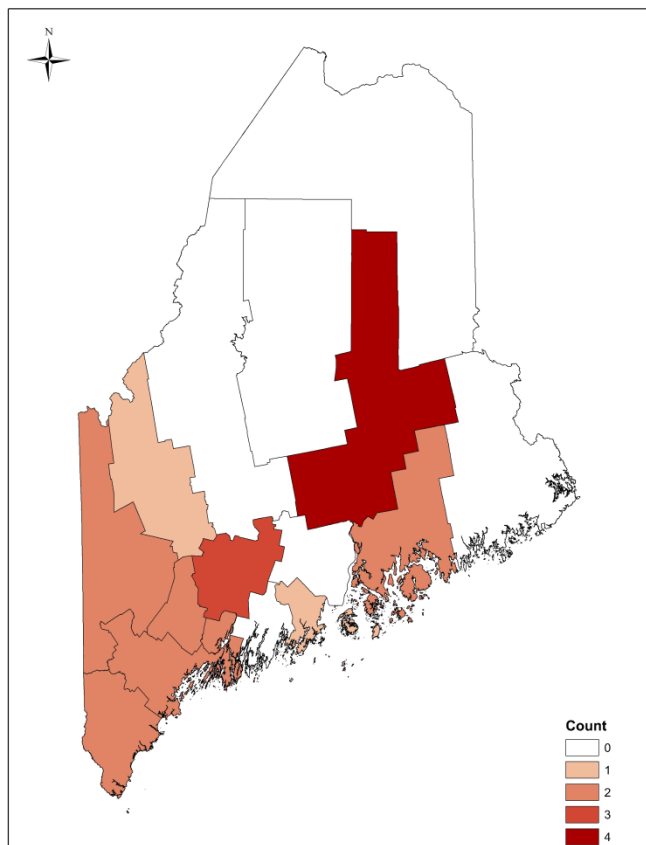
Age (years)	Serotype			Total
	b	Non-b	Non-Typeable	
<5	1	0	2	3
5-17	1	1	0	2
18-34	0	0	1	1
35-44	0	1	0	1
45-64	1	2	1	4
≥65	2	4	4	10
Total	5	8	8	21

Of the 21 invasive *H. influenzae* cases reported in 2014, 11 had pneumonia, 6 had meningitis, 2 had bacteremia, and 1 had septic arthritis (cases could have multiple manifestations). Nineteen cases (90%) required hospitalization; and four deaths (19%) were associated with invasive *H. influenzae* disease in 2014.

Haemophilus influenzae, 2014

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

Figure 2: Invasive *H. influenzae* cases – Maine, 2014



Discussion

H. influenzae serotype b is vaccine preventable. In 2014, there were two 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>