

Haemophilus influenzae Invasive Disease

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|-----------------|-----|---------------------|------------------|
| 2011 Case Total | 73 | 2011 Incidence Rate | 1.94 per 100,000 |
| 2010 Case Total | 105 | 2010 Incidence Rate | 2.85 per 100,000 |

Invasive *Haemophilus influenzae* (*H. flu*) disease is a reportable condition in Oklahoma, and all *H. flu* sterile-site isolates are required to be submitted to the OSDH Public Health Laboratory (PHL) for confirmation and serotype identification. In 2011, 73 cases of invasive *H. flu* were reported to the OSDH, a 30.5% decrease from 2010. All *H. flu* isolates forwarded to the OSDH PHL are serotyped based on the presence of a capsule (serotypes a through f) or absence of a capsule (non-typeable). Both capsulated and nonencapsulated isolates have the ability to cause severe disease. Of the 69 isolates (94% of reported cases) available for serotype identification by the PHL, 44 (63.8%) were non-typeable, 14 (20.3%) were serotype f, 8 (11.6%) were serotype e, and 3 (4.3%) were serotype a.

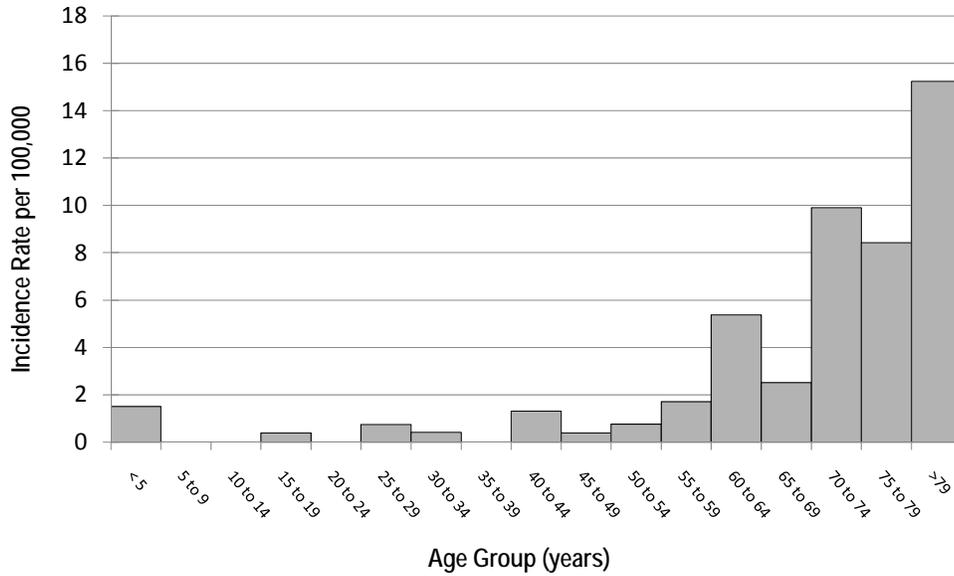
During 2011, cases of invasive *H. flu* ranged in age from 1 month to 97 years, with a median age of 71 years. The highest age-specific incidence rates per 100,000 population occurred among persons 80 years and older (refer to graph). Four (5.5%) cases occurred among children less than 5 years of age, an age-specific incidence rate of 1.51 per 100,000 population. The highest proportion of cases occurred during the winter months, with almost half of reported cases (47%, n = 34) occurring during the months from November through February.

When a case of invasive *Haemophilus influenzae* type b (Hib) is identified, an active contact investigation commences to locate all close contacts less than 4 years of age, review vaccination history, and recommend antibiotic prophylaxis if needed. If any exposed children less than 4 years of age who are either unvaccinated or have not yet received the full primary series of the Hib vaccine are identified, then chemoprophylaxis is recommended for household members to eradicate carriage of the organism. No cases of serotype b were identified in 2011.

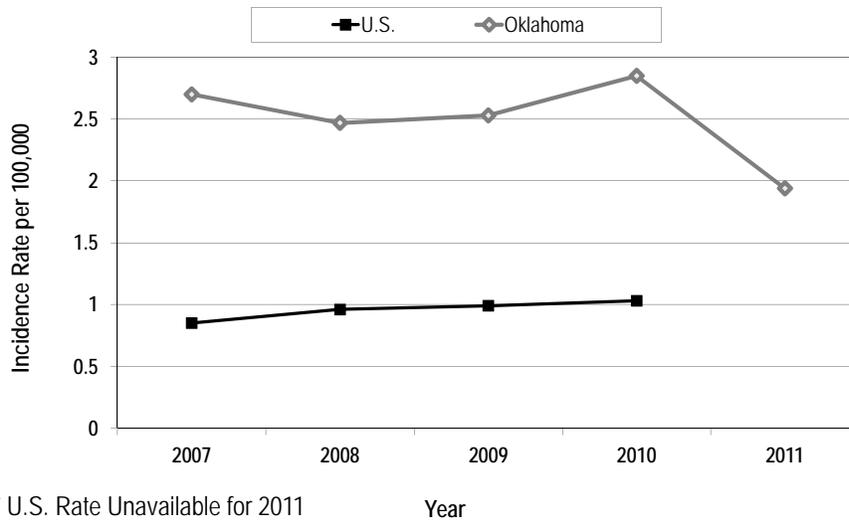
Demographic Summary of Reported *Haemophilus influenzae* Invasive Disease Cases, Oklahoma, 2011 (N = 73)

| | Number (%) | Incidence Rate per 100,000 |
|--|---|----------------------------|
| Gender | | |
| Male | 33 (45%) | 1.78 |
| Female | 40 (55%) | 2.11 |
| Age | Median = 71 years (Range: 1 month – 97 years) | |
| Hospitalized for <i>H. flu</i> | 51 (70%) | - |
| Deaths due to <i>H. flu</i> | 9 (11%) | - |
| Race | | |
| White | 60 (82%) | 2.22 |
| Black | 4 (6%) | 1.44 |
| Asian | 1 (1%) | 1.54 |
| Multiracial | 1 (1%) | 0.45 |
| Unknown | 7 (10%) | - |
| Hispanic or Latino Ethnicity | 2 (3%) | 0.60 |
| Infection Types (not mutually exclusive) | | |
| Bacteremia/sepsis | 71 (97%) | - |
| Meningitis | 1 (1%) | - |
| Pneumonia | 48 (66%) | - |

Incidence Rate of Reported Invasive *Haemophilus influenzae* Cases by Age Group, Oklahoma, 2011



Haemophilus influenzae Incidence Rate by Year, Oklahoma and U.S., 2007-2011*



* U.S. Rate Unavailable for 2011