



## **HAEMOPHILUS INFLUENZAE TYPE B DISEASE**

### **ETIOLOGY**

*Haemophilus influenzae* is a gram-negative bacillus. Several serotypes may cause invasive disease apart from serotype b. Non-invasive disease, such as conjunctivitis and respiratory infections, are not investigated or reported, regardless of serotype.

### **DISEASE ABSTRACT**

In 1996 only four confirmed cases of invasive disease caused by serotype b strains of *Haemophilus influenzae* were reported; the lowest number ever. All had bacteremia and all survived. Because of the small number of cases, each one is presented below.

Case #1 occurred in February to a 15-year-old Hispanic girl residing in an institution because of cerebral palsy and mental retardation. She presented with fever and pneumonia; her blood culture was positive for Hib. No additional cases were found in the home.

Case #2 occurred in April to a 13-month-old Hispanic infant. She had received three doses of Hib-containing vaccine during the first 7 months of life, appropriate for her age. Clinically she had pneumonia and bacteremia. She suffered from a rare genetic musculoskeletal disease not associated with immune dysfunction.

Case #3 was a six-year-old White boy with onset of acute sinusitis and fever in July. He had received four doses of Hib-containing vaccine during the first two years of life. He suffered from a chronic dermatologic condition and sinusitis.

Case #4 was a 32-year-old Hispanic woman who became ill in late November with pneumonia and bacteremia. She had no underlying illness and no known association with another case of Hib.

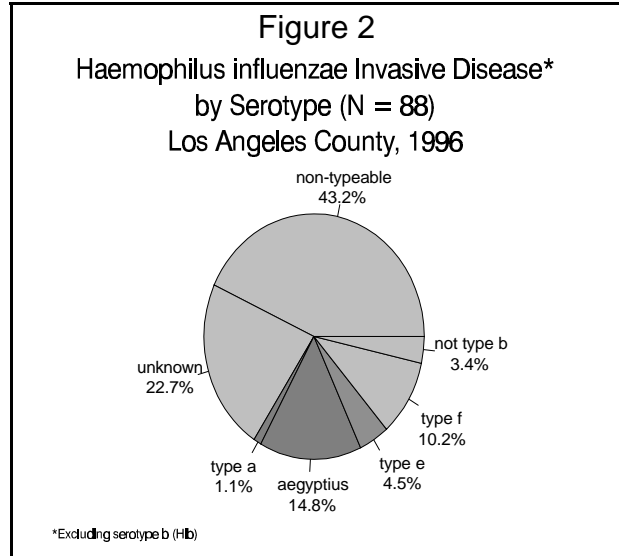
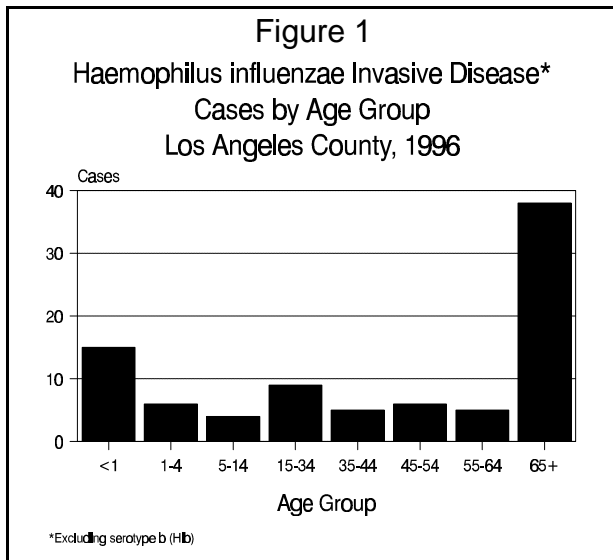
The widespread use of conjugate Hib vaccines has dramatically reduced invasive disease by this organism in the population, but vaccinated and unvaccinated persons may continue to become infected. Even those who were appropriately vaccinated may experience disease, as demonstrated by cases 2 and 3. It is interesting that the three pediatric cases of Hib each had some underlying chronic medical condition.



## HAEMOPHILUS INFLUENZAE DISEASE DUE TO SEROTYPES OTHER THAN B

In addition to the cases of *H. influenzae* disease caused by serotype b, 88 cases of invasive disease caused by *H. influenzae* of other or unknown serotypes were reported in 1996. The mean age at onset for invasive non-b *Haemophilus* disease was 49 years (range 1 day to 100 years), with a median of 55 years.

Most individuals (77, 88%) had sepsis (demonstrated by a positive blood culture). Six sepsis cases also had pneumonia; an additional pneumonia case without sepsis was positive on culture from an open lung biopsy. There were ten cases of culture-confirmed meningitis, of which seven also had sepsis, and one case of sepsis with otitis media. Three isolated infections were reported: appendicitis, thyroglossal duct abscess, and ethmoid sinusitis. Three uterine or placental infections were reported; two of these occurred during pregnancy, and both fetuses survived without infection. One perinatal infection (sepsis) occurred where the mother was not confirmed with infection; this infant too survived. In 66 cases with outcome data available, 3 died; all were elderly.



## PREVENTION

Contact investigation is not conducted and prophylaxis is not administered for non-b serotypes since there is no evidence for effectiveness. The present vaccines for Hib offer no protection against other serotypes of the bacteria.