

## Haemophilus Influenzae (Invasive Disease)

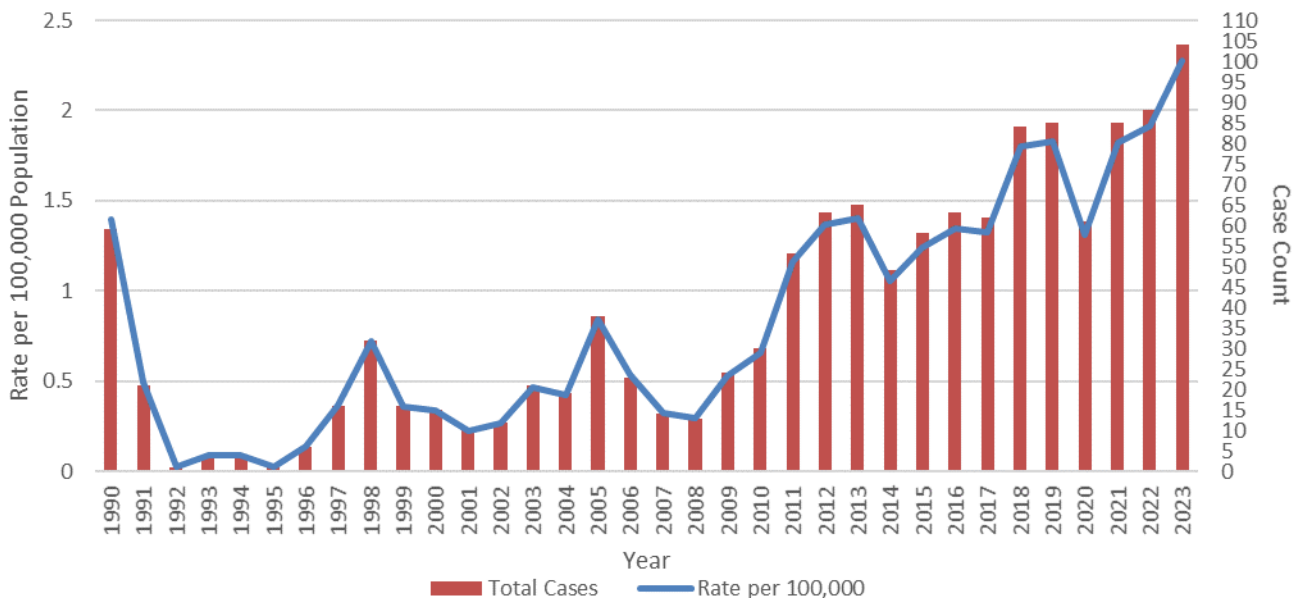
*Haemophilus influenzae* invasive disease is a Class A Disease and must be reported to the Office of Public Health within 24 hours.

*Haemophilus influenzae* is a gram-negative bacterium that can cause a range of illnesses, from mild respiratory infections to life-threatening invasive disease such as meningitis, sepsis, and pneumonia. *H. influenzae* infections become “invasive”, when the bacteria has spread to areas normally unaffected by pathogens such as the blood and cerebrospinal fluid.

### Incidence

The incidence of *Haemophilus influenzae* invasive disease in Louisiana has steadily increased since the early 2000s. In 2023, Louisiana recorded the highest incidence rate observed in over three decades, with a case count of 104 (Figure 1).

**Figure 1:** Incidence of *Haemophilus influenzae* Invasive Disease, All Types  
Louisiana, 1990-2023



### Haemophilus influenzae Type b (Hib) vs. Non-Type b

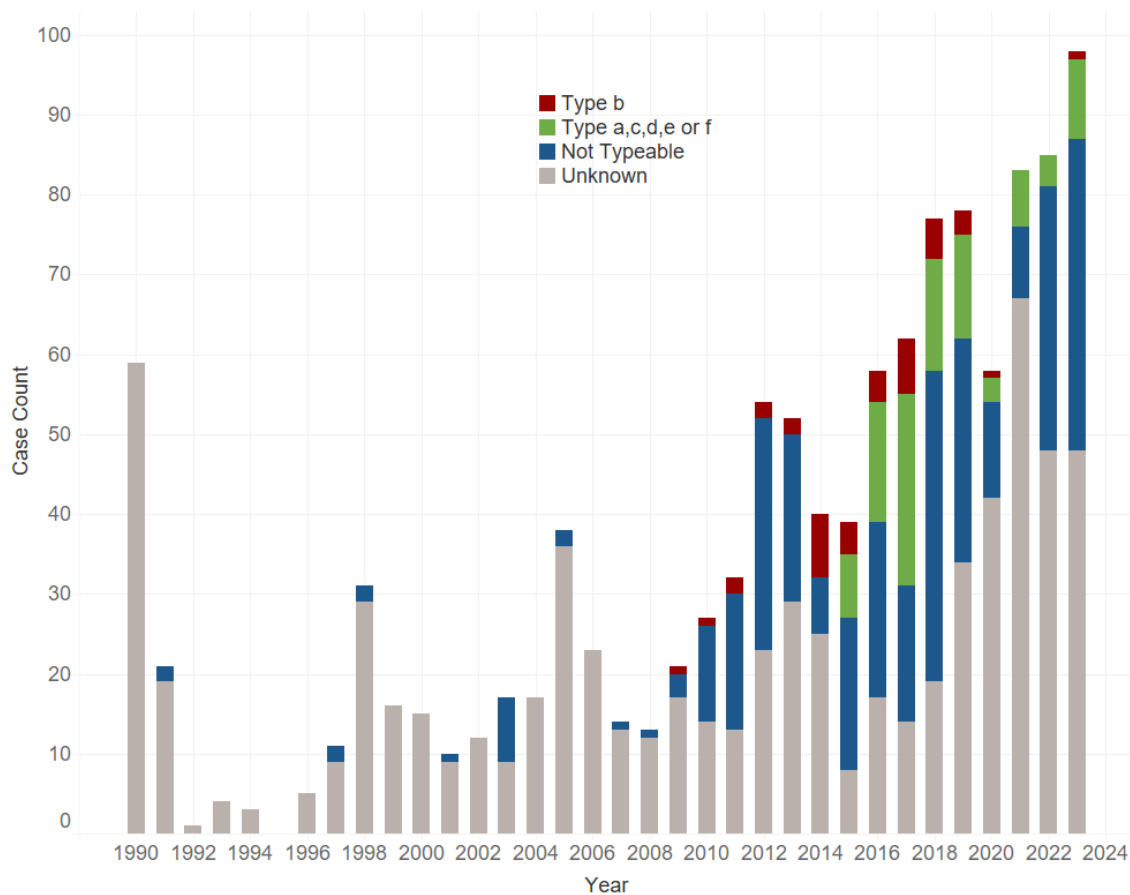
There are six serotypes of *Haemophilus influenzae* bacteria, “a” through “f,” and other *H. influenzae* that are non-typeable. A vaccine is available for *Haemophilus influenzae* serotype b (Hib). Before the advent of effective vaccines, *Haemophilus influenzae* type b (Hib) was the most common cause of serious bacterial infections and meningitis in children in the United States. It occurs primarily in under immunized or unimmunized children and in infants too young to have completed the primary vaccination series. It can cause severe disease including pneumonia, bacteremia, and meningitis. Up to 20% of

patients who survive Hib meningitis have permanent hearing loss or other long-term neurological sequelae. Between 3% and 6% of Hib cases in children are fatal.

The first Hib vaccine was licensed in 1985 for use in the United States. In 1987, the vaccine was reformulated to be effective in children younger than 18 months of age. The current Hib vaccines are safe in children as young as six-weeks old.

Since Hib vaccines were introduced, Hib disease has dramatically decreased and is no longer common. While Hib invasive infections declined dramatically following widespread vaccination, there is currently no vaccine that protects against other types of *Haemophilus influenzae* (types a, c-f, and non-typeable). Although serotype is unknown for most reported cases, it is likely that disease caused by types other than b is increasing (Figure 2).

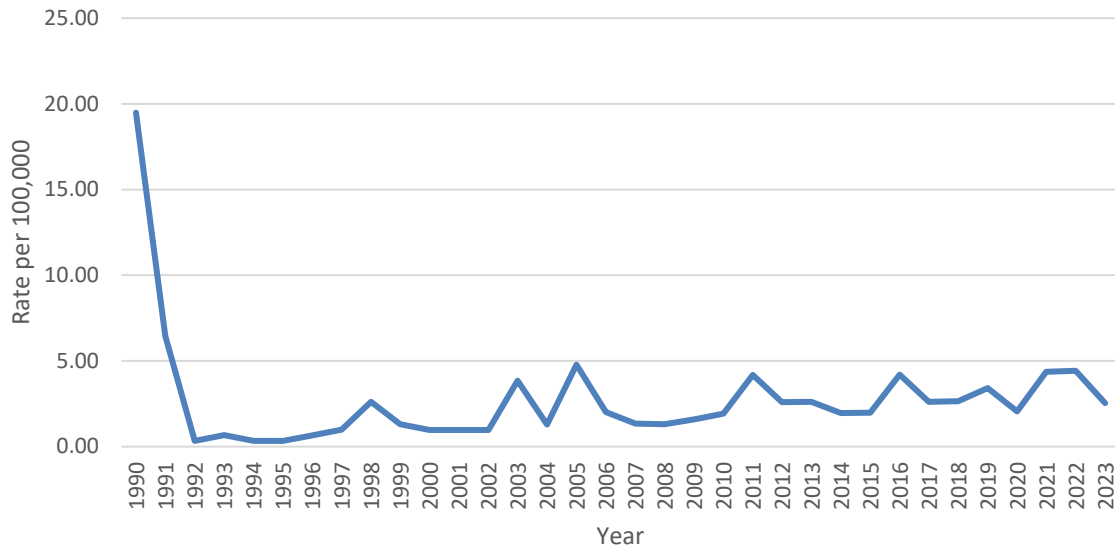
**Figure 2:** Reported *Haemophilus influenzae* Invasive Disease Cases, by Type - Louisiana, 1990-2023



## Age

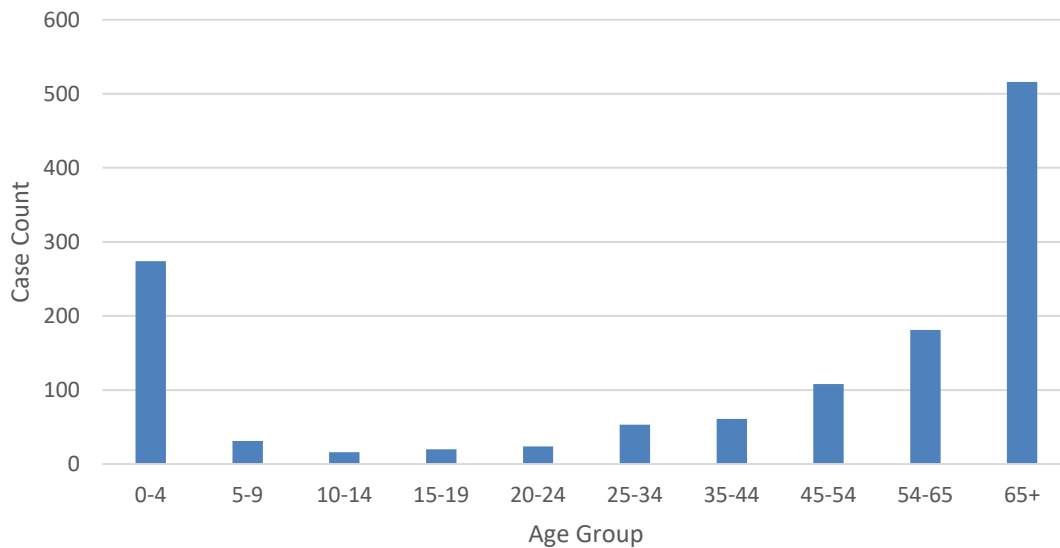
Much of the decrease in *Haemophilus* cases seen since the introduction of Hib vaccine occurred in children younger than four years of age (Figure 3).

**Figure 3:** Reported Incidence of *Haemophilus Influenzae* Invasive Disease Aged Newborn to Four Years - Louisiana, 1990-2023



However, in the last decade, invasive *Haemophilus* infection has been reported more frequently in older age groups due to non-type b strains (Figure 4).

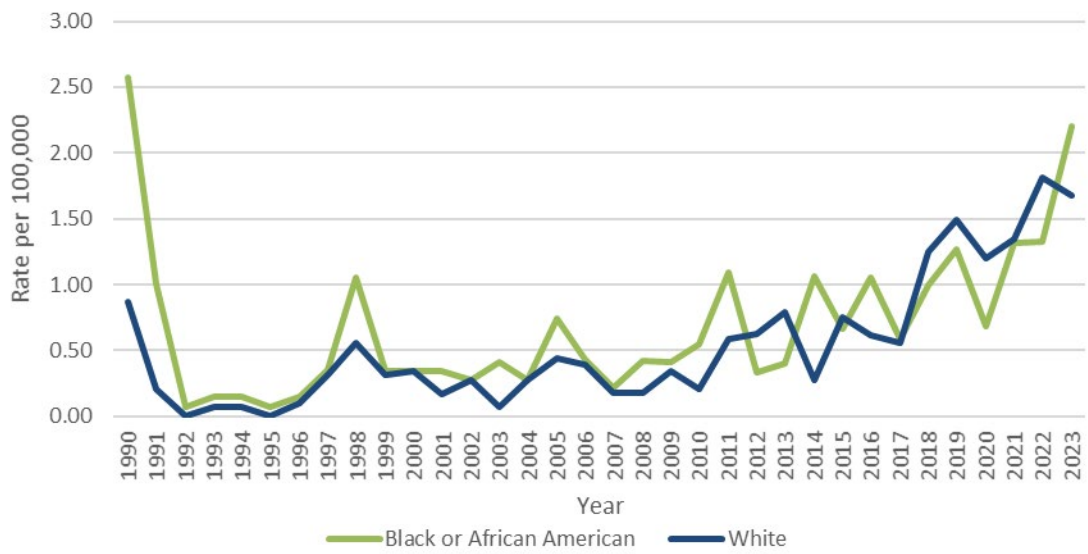
**Figure 4:** Reported Incidence of *Haemophilus Influenzae* Invasive Disease - All Types by Age Louisiana, 2012-2023



## Race

On average, incidence rates among African-American individuals are slightly higher than incidence rates among White individuals since 1990 (Figure 5).

**Figure 5:** *Haemophilus influenza* Invasive Disease - All Types – Rates by Race - Louisiana, 1990-2023



## Sex

Incidence rates are generally similar for both men and women (Figure 6).

**Figure 6:** *Haemophilus influenza* Invasive Disease - All Types – Rates by Sex - Louisiana, 1990-2023

