

Streptococcus pneumoniae Infection

Streptococcus pneumoniae is a Class C Disease and must be reported to the state within five business days.

Streptococcus pneumoniae (pneumococcus) is a bacterial pathogen that affects children and adults worldwide. It is a leading cause of illness in young children and causes illness and death among the elderly and persons who have certain underlying medical conditions. Severe pneumococcal infections result from dissemination of bacteria to the bloodstream and the central nervous system. *S. pneumoniae* is also the most common cause of community-acquired bacterial pneumonia, occurring most frequently among the elderly and young children.

Symptoms

Streptococcus pneumoniae can cause different types of illnesses depending on the site of infection, such as ear infections, sinus infections, meningitis, or bloodstream infections (bacteremia). Pneumococcal pneumonia is a serious form of lung infection which causes fever, chills, cough, difficulty breathing, and chest pains.

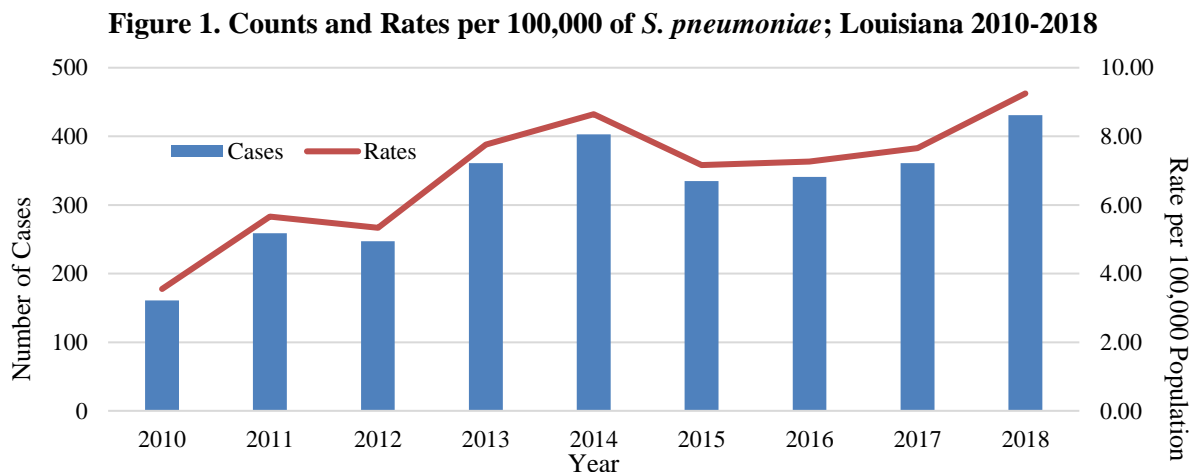
Prevention and Treatment

There is a pneumococcal vaccine which has decreased the numbers of pneumococcal disease; however, the vaccine is not guaranteed to prevent illness in all people. Two separate varieties of the vaccine are available and individuals should discuss with their provider whether each, both, or neither would be appropriate.

Pneumococcal disease can be traditionally be treated with antibiotics; however, some strains of the bacteria have become resistant to some antibiotics. The CDC estimates that 30% of infections are resistant to one or more antibiotic. For this reason, many treatments begin with 'broad-spectrum' antibiotics to determine which medications the infection is sensitive to.

Incidence

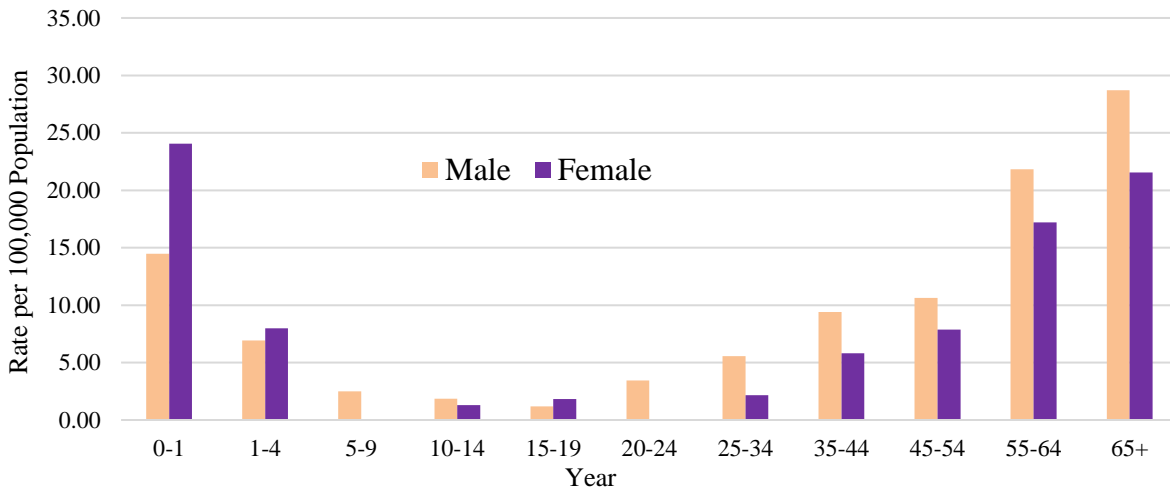
Incidence of *S. pneumoniae* has decreased nationally since the vaccines were introduced. The increase in cases over time is likely due to increased reporting and not an actual increase in cases in Louisiana (Figure 1).



Age, Sex, and Race Distribution

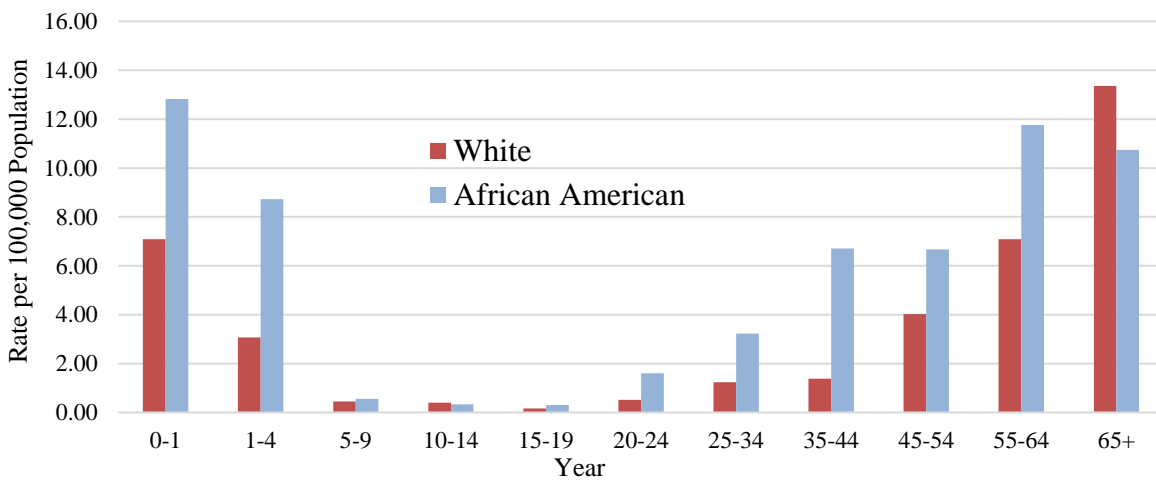
There is a relatively even distribution of cases between male and females, with males accounting for 51% of cases between 2010 and 2018. However, there is a marked difference between age groups, with 57% of cases occurring in individuals older than 55, and 9% occurring in individuals under 5 years of age (Figure 2).

Figure 2. Rates of *S. pneumoniae* by Gender and Age Group; Louisiana 2010-2018



S. pneumoniae is more commonly reported in African Americans in every age group except for individuals over 65 years of age (Figure 3).

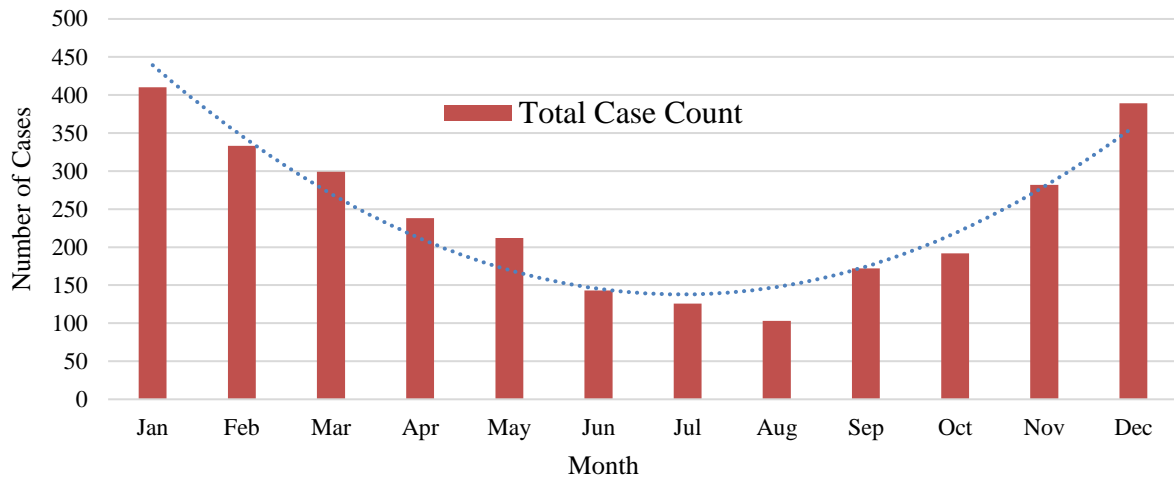
Figure 3. Rates of *S. pneumoniae* by Race and Age Group; Louisiana 2010-2018



Seasonal Variation

There are distinct seasonal patterns with *S. pneumoniae*, with most cases occurring in the colder months. Between 2010 and 2018, nearly half (49%) of cases occurred between December and March.

Figure 4. Number of Cases of *S. pneumoniae* by Month; Louisiana 2010-2018



Geographic Distribution**Table 1. Rate per 100,000 Population by Parish; Louisiana 2010-2018**

Parish	Rate	Parish	Rate
Acadia	8.69	Madison	6.22
Allen	8.75	Morehouse	2.69
Ascension	4.51	Natchitoches	4.34
Assumption	3.67	Orleans	6.15
Avoyelles	7.91	Ouachita	6.64
Beauregard	2.11	Plaquemines	1.40
Bienville	8.23	Pointe Coupee	8.01
Bossier	5.69	Rapides	13.55
Caddo	8.93	Red River	5.91
Calcasieu	6.30	Richland	8.81
Caldwell	5.30	Sabine	3.99
Cameron	3.14	Saint Bernard	5.09
Catahoula	8.26	Saint Charles	4.27
Claiborne	3.12	Saint Helena	4.79
Concordia	5.16	Saint James	1.94
De Soto	5.24	Saint John the Baptist	1.87
East Baton Rouge	10.25	Saint Landry	9.02
East Carroll	5.54	Saint Martin	6.80
East Feliciana	15.37	Saint Mary	3.34
Evangeline	8.22	Saint Tammany	3.68
Franklin	9.31	Tangipahoa	8.51
Grant	12.52	Tensas	4.09
Iberia	5.87	Terrebonne	4.70
Iberville	8.36	Union	11.82
Jackson	3.30	Vermilion	7.59
Jefferson	6.65	Vernon	2.67
Jefferson Davis	6.46	Washington	4.57
La Salle	12.26	Webster	5.21
Lafayette	7.66	West Baton Rouge	11.26
Lafourche	2.90	West Carroll	4.16
Lincoln	1.38	West Feliciana	6.42
Livingston	7.55	Winn	12.63