Group A *Streptococcus* (GAS)

Group B *Streptococcus* (GBS)

Haemophilus influenzae (HFlu)

Neisseria meningitidis (NMen)

Streptococcus pneumoniae (SPN)

Bact Facts 🏠

Topic

Cases and Deaths

Case Rates

Death Rates

Syndromes

Serotypes

Antibiotic Resistance

Surveillance Report

Year

2020 ⌄

Dataset version: Jul 2022
Final run: Sep 20, 2022

Note: Click **here** to access and download Surveillance Reports.

[CDC logo] Centers for Disease Control and Prevention

Data Download

Active Bacterial Core Surveillance (ABCs) Report Emerging Infections Program Network *Streptococcus pneumoniae*, 2020

ABCs Areas: California (3 county San Francisco Bay area); Colorado (5 county Denver area); Connecticut; Georgia (20 county Atlanta area); Maryland (6 county Baltimore area); Minnesota; New Mexico; New York (15 county Rochester and Albany areas and children <5 years in Erie county); Oregon (3 county Portland area); Tennessee (20 counties).

ABCs Population: The surveillance areas represent 34,747,463 persons. Source: National Center for Health Statistics bridged-race vintage 2020 postcensal file.

ABCs Case Definition: Disease is defined as isolation of *S. pneumoniae* from a normally sterile site or detection of pathogen-specific nucleic acid in a specimen obtained from a normally sterile body site, using a validated molecular test in a resident of one of the surveillance areas.

ABCs Methodology: ABCs personnel routinely contacted microbiology laboratories serving acute care hospitals to identify cases. Standardized case report forms that include information on demographic characteristics, clinical syndrome, and outcome of illness were completed for each identified case. Whole genome sequencing (WGS) based characterization was conducted on all pneumococcal isolates, which includes deduction of capsular serotype and minimum inhibitory concentration (MIC) predictions (including PBP typing system for determining beta lactam antibiotic MICs). Conventional MIC testing is conducted on selected strains. Regular laboratory audits assessed completeness of active surveillance and detected additional cases.
Rates of invasive pneumococcal disease were calculated using population estimates from the bridged-race vintage postcensal file. For national estimates, race- and age-specific rates of disease were applied from the aggregate surveillance area to the age and racial distribution of the U.S. population. Cases with missing data, excluding ethnicity, were multiply imputed using sequential regression imputation methods.¶

ABCs Profiles

Race	No.	Rate*
Black	474	7.9
White	1,258	5.0
Other	148	4.3

Age (years)	Cases No.	Cases Rate*	Deaths No.	Deaths Rate*
<1	24	6.1	1	0.25
1	18	4.5	0	0.00
2-4	22	1.8	3	0.24
5-17	29	0.5	1	0.02
18-34	138	1.7	6	0.07
35-49	325	4.8	47	0.69
50-64	658	9.9	89	1.33
65-74	360	11.0	67	2.04
75-84	196	12.4	36	2.27
≥85	110	16.8	21	3.20
Total	1,880	5.4	271	0.78

*Rates are per 100,000 population for ABCs areas

¶ Surveillance Note

Missing race (n=173) data were multiply imputed using sequential regression imputation methods.

Antibiotic Susceptibility

Antibiotic	S*	I†	R‡
TMPsulfa	79.7	13.3	6.9
Erythromycin	69.6	0.0	29.3
Levofloxacin	99.7	0.0	0.0
Penicillin+	96.0	1.6	1.7
Cefotaxime	97.2	1.8	0.3
Tetracycline	88.0	0.0	12.0
Vancomycin	100.0	0.0	0.0

Based on reference lab testing of 1,545 isolates.
*Susceptible; †Intermediate; ‡Resistant based on 2020 CLSI definitions. +Penicillin CLSI breakpoints changed in 2009.

National Estimates of Invasive Disease

Total Cases: 17,680 (5.40/100,000 population)
Deaths: 2,580 (0.78/100,000 population)

Syndromes

Syndrome	No.	%*
Meningitis	140	7.4
Bacteremia Without Focus	272	14.5
Bacteremia With Pneumonia	1,305	69.4

*Percent of Cases

Citation

Centers for Disease Control and Prevention. 2020. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Streptococcus pneumoniae, 2020.
www.cdc.gov/abcs/downloads/SPN_Surveillance_Report_2020.pdf