



Active Bacterial Core Surveillance (ABCs) Report

Emerging Infections Program Network

Streptococcus pneumoniae, 2010



ABCs Areas

California (San Francisco County and children < 5 years in Alameda and Contra Costa counties); 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 29,757,552 persons.
Source: National Center for Health Statistics bridged-race vintage 2010 postcensal file

ABCs Case Definition

Invasive pneumococcal disease: isolation of *Streptococcus pneumoniae* from normally sterile site in resident of a surveillance area in 2010.

ABCs Methodology

ABCs personnel routinely contacted all microbiology laboratories serving acute care hospitals in their area 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. Pneumococcal isolates were collected and sent to reference laboratories for susceptibility testing using CLSI methods and serotyping. Regular laboratory audits assessed completeness of active surveillance and detected additional cases.

Rates of invasive pneumococcal disease were calculated using population estimates for 2010. 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 2010 U.S. population. Cases with missing data, excluding ethnicity, were multiply imputed using the sequential regression imputation method[†]

Reported ABCs Profiles

Race	No. (Rate*)
White	2,789 (12.2)
Black	843 (17.6)
Other	190 (9.4)

* Cases per 100,000 population for ABCs areas

[†] Surveillance Note

At the start of this surveillance year (2010), missing race (n=538) and deaths (n=2) data were multiply imputed using sequential regression imputation methods. Previously, missing race data were distributed in the same proportion as known cases. For comparison, a 2010 surveillance report based on the previous method can be found at: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu10-orig.pdf>

Age (years)	Cases		Deaths	
	No.	(Rate*)	No.	(Rate*)
< 1	142	(34.2)	1	(0.24)
1	112	(26.6)	1	(0.24)
2-4	171	(13.1)	1	(0.08)
5-17	111	(2.2)	1	(0.02)
18-34	260	(3.8)	18	(0.26)
35-49	670	(10.5)	43	(0.68)
50-64	1,064	(18.8)	104	(1.84)
≥ 65	1,292	(36.4)	200	(5.63)
Total	3,822	(12.8)	369	(1.24)

* Cases or deaths per 100,000 population for ABCs areas

Syndrome	No.	(%*)
Meningitis	229	(6.0)
Bacteremia without focus	642	(16.8)
Pneumonia with bacteremia	2,686	(70.3)

* Percent of cases

Antibiotic Susceptibility	S* %	I [†] %	R [‡] %
Penicillin	89.4	5.5	5.1
Cefotaxime	91.4	6.8	1.8
Erythromycin	73.8	0.5	25.7
TMP/Sulfa	77.6	6.7	15.7
Tetracycline	84.9	0.6	14.5
Levofloxacin	99.7	0.0	0.3
Vancomycin	100.0	0.0	0.0

Based on reference lab testing of 3,446 isolates

* Susceptible; [†] Intermediate; [‡] Resistant based on year 2011 CLSI definitions

National Estimates of Invasive Disease

Cases: 39,750 (12.9/100,000)
Deaths: 4,000 (1.3/100,000)

Healthy People 2020 Update

Objective: Decrease the incidence of invasive pneumococcal infections to 12 per 100,000 persons less than 5 years of age and to 31 per 100,000 persons aged 65 and older.

Age (year)	2020 Objective	2010 Rate*
< 5	12/100,000	19/100,000
≥ 65	31/100,000	36/100,000

* Cases per 100,000 U.S. population < 5 years or ≥ 65 years

Citation

Centers for Disease Control and Prevention. 2012. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2010. Available via the internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu10.pdf>