



Active Bacterial Core Surveillance (ABCs) Report

Emerging Infections Program Network

Group A *Streptococcus*, 2018



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); Oregon (3 county Portland area); Tennessee (20 urban counties).

ABCs Population

The surveillance areas represent 34,410,192 persons.
Source: National Center for Health Statistics bridged-race vintage 2018 postcensal file.

ABCs Case Definition

Invasive group A streptococcal disease: isolation of group A *Streptococcus* from a normally sterile site or from a wound culture accompanied by necrotizing fasciitis or streptococcal toxic shock syndrome in a resident of a surveillance area in 2018.

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. All group A *Streptococcus* (GAS) isolates were subject to whole genome sequencing (WGS) to derive *emm* types and T types. A strategic subset was targeted for conventional minimum inhibitory concentration (MIC) determination. Regular laboratory audits assessed completeness of active surveillance and detected additional cases.

All rates of invasive group A streptococcal disease were calculated using population estimates for 2018 from the bridged-race vintage 2018 postcensal file. For national estimates of cases, race- and age-specific rates of disease were applied from the aggregate surveillance area to the age and racial distribution of the 2018 U.S. population. Cases with missing data, excluding ethnicity, were multiply imputed using sequential regression imputation methods.[¶]

Reported ABCs Profiles

Race	No.	(Rate [*])
Black	410	(7.1)
White	1983	(7.8)
Other	225	(6.7)

* Per 100,000 population for ABCs areas

Ethnicity	No.	(Rate [*])
Hispanic	337	(6.9)
Non-Hispanic	1942	-----
Unknown	339	-----

* Per 100,000 population for ABCs areas

¶ Surveillance Note

Missing race (n=262) data were multiply imputed using sequential regression imputation methods.

Age (years)	Cases		Deaths	
	No.	(Rate [*])	No.	(Rate [*])
< 1	20	(5.1)	1	(0.25)
1	9	(2.2)	0	(0.00)
2-4	33	(2.7)	0	(0.00)
5-17	96	(1.7)	5	(0.09)
18-34	415	(5.1)	8	(0.10)
35-49	498	(7.3)	31	(0.45)
50-64	679	(10.1)	71	(1.06)
65-74	412	(13.5)	55	(1.80)
75-84	280	(19.1)	38	(2.60)
≥ 85	176	(27.3)	30	(4.65)
Total	2618	(7.6)	239	(0.69)

* Per 100,000 population for ABCs areas

ABCs Area	Most common <i>emm</i> types [*]	% of area isolates
California	43,92,1,49,59,12,82	66.4
Colorado	11,92,1,82,12,49,59,89,91,28	76.4
Connecticut	1,89,77,12,28	56.9
Georgia	1,89,12,4,28,3,11,87	70.8
Maryland	49,82,1,169,89	67.6
Minnesota	1,89,12,28,82	62.1
New Mexico	92,43,91,1,89,12,28	73.8
New York	1,28,3,89,6,11,2,4	76.8
Oregon	82,49,1,92,83,89,28,59	77.4
Tennessee	92,1,89,11,28	68.3
Total	1,92,89,82,49,12,28	58.3

* Requires ≥3 or more isolates and ≥ 5% of isolates typed
Based on reference lab testing of 2,281 isolates

Syndrome	No.	(%)
Cellulitis	1,101	(42.1)
Necrotizing fasciitis	149	(5.7)
Pneumonia	381	(14.6)
Primary bacteremia	554	(21.2)
Streptococcal toxic shock syndrome	47	(1.8)

Note: Some cases had more than one syndrome.

Potentially preventable invasive group A streptococcal disease

During 2018, 1 case of invasive GAS disease was detected in a female patient with varicella, age 74 years.

National Estimates of Invasive Disease

Cases: 25,160 (7.69/100,000)

Deaths: 2,320 (0.71/100,000)

Citation

Centers for Disease Control and Prevention. 2018. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*—2018. Available via the internet: <http://www.cdc.gov/abcs/reports-findings/surveys/gas18.pdf>