



# Active Bacterial Core Surveillance (ABCs) Report

## Emerging Infections Program Network

### *Streptococcus pneumoniae*, 2011



#### 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 30,075,050 persons.  
Source: National Center for Health Statistics bridged-race vintage 2011 postcensal file

#### ABCs Case Definition

Invasive pneumococcal disease: isolation of *Streptococcus pneumoniae* from normally sterile site in resident of a surveillance area in 2011.

#### 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 2011. 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 2011 U.S. population. Cases with missing data, excluding ethnicity, were multiply imputed using the sequential regression imputation method<sup>†</sup>

#### Reported ABCs Profiles

| Race  | No.   | (Rate <sup>*</sup> ) |
|-------|-------|----------------------|
| White | 2,545 | (11.0)               |
| Black | 806   | (16.6)               |
| Other | 188   | (9.1)                |

\* Cases per 100,000 population for ABCs areas

#### <sup>†</sup> Surveillance Note

At the start of this surveillance year (2011), missing race (n=399) data were multiply imputed using sequential regression imputation methods. Previously, missing race data were distributed in the same proportion as known cases.

| Age (years) | Cases |                      | Deaths |                      |
|-------------|-------|----------------------|--------|----------------------|
|             | No.   | (Rate <sup>*</sup> ) | No.    | (Rate <sup>*</sup> ) |
| < 1         | 88    | (21.0)               | 4      | (0.96)               |
| 1           | 71    | (16.9)               | 2      | (0.48)               |
| 2-4         | 108   | (8.3)                | 3      | (0.23)               |
| 5-17        | 101   | (2.0)                | 1      | (0.02)               |
| 18-34       | 226   | (3.2)                | 11     | (0.16)               |
| 35-49       | 568   | (9.1)                | 50     | (0.80)               |
| 50-64       | 1,095 | (18.7)               | 103    | (1.76)               |
| ≥ 65        | 1,282 | (35.0)               | 221    | (6.03)               |
| Total       | 3,539 | (11.77)              | 395    | (1.31)               |

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

| Syndrome                  | No.   | (% <sup>*</sup> ) |
|---------------------------|-------|-------------------|
| Meningitis                | 234   | (6.6)             |
| Bacteremia without focus  | 512   | (14.5)            |
| Pneumonia with bacteremia | 2,579 | (72.9)            |

\* Percent of cases

| Antibiotic Susceptibility | S <sup>*</sup><br>% | I <sup>†</sup><br>% | R <sup>‡</sup><br>% |
|---------------------------|---------------------|---------------------|---------------------|
| Penicillin                | 90.9                | 4.9                 | 4.2                 |
| Cefotaxime                | 92.0                | 6.7                 | 1.3                 |
| Erythromycin              | 73.4                | 0.4                 | 26.2                |
| TMP/Sulfa                 | 78.3                | 7.4                 | 14.3                |
| Tetracycline              | 86.7                | 0.2                 | 13.1                |
| Levofloxacin              | 99.7                | 0.0                 | 0.3                 |
| Vancomycin                | 100.0               | 0.0                 | 0.0                 |

Based on reference lab testing of 3,197 isolates

\* Susceptible; † Intermediate; ‡ Resistant based on year 2012 CLSI definitions

#### National Estimates of Invasive Disease

Cases: 36,850 (11.8/100,000)  
Deaths: 4,250 (1.4/100,000)

#### 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 | 2011 Rate <sup>*</sup> |
|------------|----------------|------------------------|
| < 5        | 12/100,000     | 12/100,000             |
| ≥ 65       | 31/100,000     | 35/100,000             |

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

#### Citation

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