



# Infectious Disease Epidemiology Report

## *Streptococcus pneumoniae*, Maine, 2011



### Background

The Infectious Disease Epidemiology Program of the Maine Center for Disease Control and Prevention (Maine CDC) monitors the incidence of invasive pneumococcal disease through mandatory reporting by health care providers, clinical laboratories and other public health partners. This report summarizes 2011 surveillance of cases of invasive pneumococcal disease.

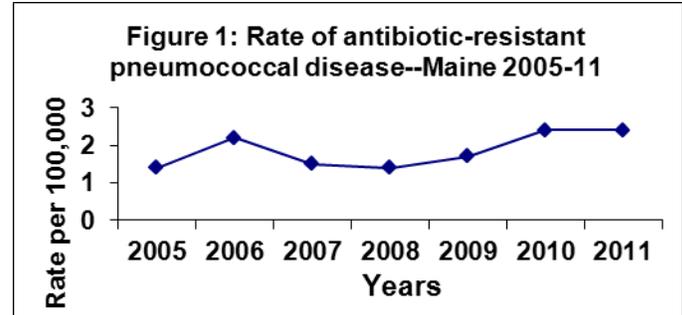
### Methods

Invasive pneumococcal disease is defined as isolation of *Streptococcus pneumoniae* from a normally sterile site (e.g., blood or cerebrospinal fluid [CSF] or, less commonly, joint, pleural, or pericardial fluid). Antibiotic-resistant invasive pneumococcal disease meets the invasive definition and is resistant to at least one antibiotic. Standardized case reports are completed for all invasive cases, including those that are antibiotic resistant.

### Results

A total of 136 cases of invasive pneumococcal disease were reported in Maine during 2011, for a rate of 10.2 cases per 100,000 persons. Of these, 98 (72.1%) were sensitive to all antibiotics tested. Four invasive pneumococcal cases were in children less than five years. The rate of invasive pneumococcal disease in children less than five years was 5.6 cases per 100,000 persons. Of cases in children less than five years, 75% had received the pneumococcal vaccine.

Thirty two cases of antibiotic-resistant invasive pneumococcal disease were reported in Maine during 2011 for a rate of 2.4 cases per 100,000 persons (Figure 1). Of antibiotic-resistant invasive pneumococcal disease reported in 2011, no cases were identified in children less than five years of age (Table 1).



Of the 32 cases of antibiotic-resistant invasive pneumococcal disease reported in 2011, no cases were identified in children less than five years of age (Table 1).

**Table 1: Invasive and antibiotic-resistant pneumococcal disease by age – Maine, 2011**

Age	All Invasive	Antibiotic-Resistant	
		#	%
Years	#	#	%
<1	1	0	0
1-4	3	0	0
5-9	6	1	16.7
10-19	2	1	50
20-29	4	2	50
30-39	7	1	14.3
40-49	10	2	20.0
50-64	46	7	15.2
>=65	57	18	31.6
Total	136	32	23.5

The majority of cases of antibiotic-resistant invasive pneumococcal disease were clinically diagnosed with pneumonia (Table 2). Of the 32 antibiotic-resistant cases, there were four deaths.

**Table 2: Invasive pneumococcal disease by site of infection\* – Maine, 2011**

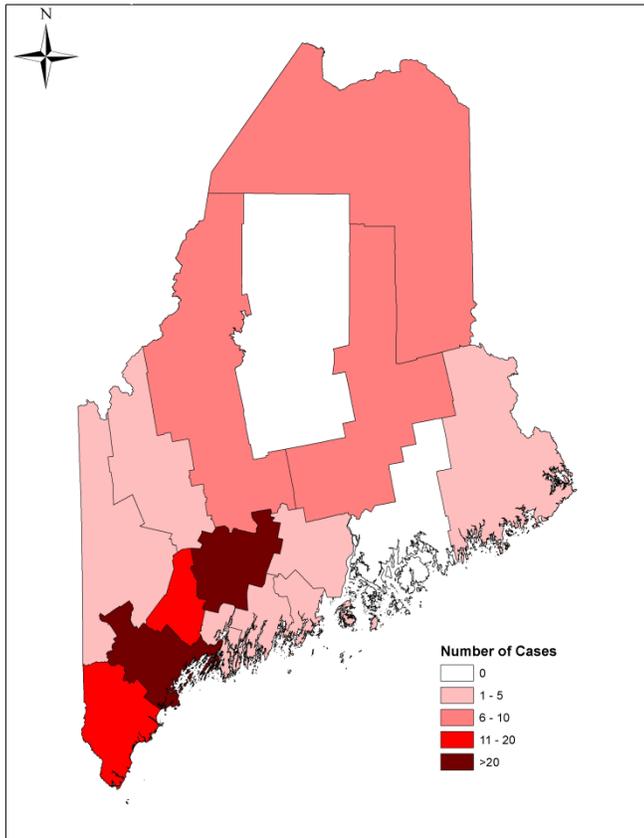
Site of infection	#	%
Bacteremia without focus	27	19.9
Meningitis	4	2.9
Pneumonia	46	33.8
Pneumonia/Bacteremia without focus	38	26.0

\* Cases may have had more than one site of infection

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Antibiotic-resistant invasive pneumococcal disease was identified among residents of 10 Maine counties in 2011 (Figure 2).

**Figure 2: Invasive pneumococcal disease by county-  
Maine, 2011**



### **Discussion**

Maine CDC conducts routine surveillance on all invasive pneumococcal cases. Changes in federal CDC's pneumococcal disease reporting led to modifications in Maine's surveillance in 2010.

Health care providers are encouraged to promote the use of pneumococcal vaccines. Pneumococcal conjugate vaccine (PCV13) is approved for all infants and children younger than five years of age. It protects against the 13 types of pneumococcal bacteria most likely to cause disease in infants and young children.

All adults 65 years and older as well as persons with certain health conditions are encouraged to receive the polysaccharide pneumococcal vaccine

(PPV23) that provides protection against 23 serotypes of pneumococcal infection.

The following persons are encouraged to receive PPV23:

- Anyone 2 years of age or older with long term health problems such as diabetes, leaks of cerebrospinal fluid; heart, lung ( not including asthma) kidney, or liver disease; or alcoholism
- Adults 19 and older who smoke or have asthma
- People who live in nursing homes or other long-term care facilities

Invasive pneumococcal disease should be reported to Maine CDC by calling 1-800-821-5821 or faxing to 1-800-293-7534. For more information contact your healthcare provider or local health center.

Additional information about invasive pneumococcal disease can be found at:

- Maine CDC  
<http://www.mainepublichealth.gov>
- Federal CDC  
<http://www.cdc.gov/vaccines/vpd-vac/pneumo/default.htm>