

**Cases, Rates and Case Fatality of Invasive Pneumococcal Disease by Age Group:  
Denver Metropolitan Area^ and Colorado, 2010**

<b>AGE GROUP (years)</b>	<b>Cases (Rates)</b>				<b>Deaths</b>	
	<b>EIP^ No.</b>	<b>(EIP Rate*)</b>	<b>State No.</b>	<b>(State rate*)</b>	<b>State No.</b>	<b>(% of cases)</b>
<1	16	(23.4)	21	(15.7)	0	.
1	7	(6.6)	13	(6.2)	2	(15.4)
2-4	13	(3.8)	26	(3.8)	0	.
5-17	10	(3.2)	22	(3.2)	0	.
18-34	18	(4.7)	40	(5.5)	3	(7.5)
35-49	67	(12.4)	107	(10.0)	5	(4.7)
50-64	89	(19.6)	158	(16.2)	10	(6.3)
65+	85	(34.4)	160	(28.8)	13	(8.1)
<b>Total</b>	<b>305</b>	<b>(12.5)</b>	<b>547</b>	<b>(10.8)</b>	<b>33</b>	<b>(6.0)</b>

*Statewide includes 1 probable case*

*\*Rates are per 100,000 population and based upon 2011-based population estimates, State Demography Office - DOLA*

*^Emerging Infections Program area: Adams, Arapahoe, Denver, Douglas, and Jefferson counties*

**Rates of Invasive Pneumococcal Disease by County:  
Denver Metropolitan Area<sup>^</sup>, 2010**

<i><b>COUNTY OF RESIDENCE</b></i>	<b>Cases</b>	
	<b>No.</b>	<b>(Rate*)</b>
<b>ADAMS</b>	57	(12.8)
<b>ARAPAHOE</b>	61	(10.6)
<b>DENVER</b>	98	(16.2)
<b>DOUGLAS</b>	20	(7.0)
<b>JEFFERSON</b>	70	(13.1)

*\*Rates are per 100,000 population and based upon 2011-based population estimates, State Demography Office - DOLA*

*<sup>^</sup>Emerging Infections Program area: Adams, Arapahoe, Denver, Douglas, and Jefferson counties*

**Sterile Sites from which *Streptococcus pneumoniae* was Isolated:  
Denver Metropolitan Area^, 2010**

<b><i>SITE OF ISOLATION</i></b>	<b>No.*</b>	<b>(% of cases)</b>
Blood	280	(91.5)
CSF	13	(4.2)
Pleural fluid	13	(4.2)
Joint fluid	6	(2.0)
Peritoneal fluid	1	(0.3)
Bone	1	(0.3)
Middle ear	1	(0.3)
Body site	1	(0.3)

***\*SP was isolated from one site in 291 cases and multiple sites in 15 cases (Total cases=306)***

***SP was isolated only from blood in 265 cases (86.6%)***

***^Emerging Infections Program area: Adams, Arapahoe, Denver, Douglas, and Jefferson counties***

## Clinical Syndromes Associated with Invasive Pneumococcal Disease: Denver Metropolitan Area<sup>^</sup>, 2010

<b>CLINICAL SYNDROME</b>	<b>No.*</b>	<b>(% of cases)</b>
Bacteremic pneumonia	219	(71.6)
Bacteremia only	44	(14.4)
Meningitis	18	(5.9)
Empyema	12	(3.9)
Septic arthritis	6	(2.0)
Otitis media	5	(1.6)
Cellulitis	5	(1.6)
Abscess	5	(1.6)
Osteomyelitis	3	(1.0)
Epiglottitis	2	(0.7)
Peritonitis	2	(0.7)
Endocarditis	1	(0.3)

*\*Some cases had more than one syndrome (Total cases=306)*

*<sup>^</sup>Emerging Infections Program area: Adams, Arapahoe, Denver, Douglas, and Jefferson counties*

## Underlying Conditions Associated with Invasive Pneumococcal Disease: Denver Metropolitan Area<sup>^</sup>, 2010

<b>UNDERLYING CONDITION</b>	<b>No.*</b>	<b>(% of cases)</b>
Current Smoker	80	(26.1)
Emphysema/COPD	56	(18.3)
Diabetes	40	(13.1)
Alcohol Abuse	33	(10.8)
Immunosuppressive Therapy	28	(9.2)
Asthma	21	(6.9)
Atherosclerotic Cardiovascular Disease	19	(6.2)
Obesity	19	(6.2)
Heart Failure/CHF	18	(5.9)
Systemic Lupus Erythematosus	11	(3.6)
Cirrhosis/Liver Failure	10	(3.3)
Cerebral Vascular Accident/Stroke	9	(2.9)
HIV	8	(2.6)
Hodgkin"s Disease	5	(1.6)
Leukemia	4	(1.3)
Renal Failure/Dialysis	4	(1.3)
Intravenous Drug Use	4	(1.3)
Multiple Myeloma	3	(1.0)
AIDS	3	(1.0)
Splenectomy/Asplenia	1	(0.3)
Immunoglobulin Deficiency	1	(0.3)

*\*118 cases had more than one underlying condition*

*74 (24.2%) had no underlying conditions; 3 cases were unknown (Total cases=306)*

*<sup>^</sup>Emerging Infections Program area: Adams, Arapahoe, Denver, Douglas, and Jefferson counties*



### Invasive Pneumococcal Disease Serotypes: Denver Metropolitan Area^, 2010

<i>Serotype</i>	No.*	(% of isolates)
07F	72	(26.9)
19A	33	(12.3)
003	30	(11.2)
22F	24	(8.9)
06C	17	(6.3)
008	14	(5.2)
15A	11	(4.1)
09N	10	(3.7)
11A	8	(2.9)
038	6	(2.2)
23B	5	(1.8)
06A	4	(1.4)
23A	4	(1.4)
031	3	(1.1)
35B	3	(1.1)
16F	2	(0.7)
12F	2	(0.7)
15B	2	(0.7)
15C	2	(0.7)
034	2	(0.7)
33F	2	(0.7)
09V	1	(0.3)
NT	1	(0.3)
35F	1	(0.3)
07C	1	(0.3)

005	1	(0.3)
23F	1	(0.3)
10A	1	(0.3)
004	1	(0.3)
19F	1	(0.3)
037	1	(0.3)
020	1	(0.3)
Total	267	(100.0)

*\*Based upon reference lab testing of 267 (87.3%) isolates (Total cases=306)  
Testing performed by the Centers for Disease Control and Prevention: Atlanta, GA  
^Emerging Infections Program area: Adams, Arapahoe, Denver, Douglas, and Jefferson counties*