

**Rates and Case Fatality Percents of Invasive Pneumococcal Disease by  
Age Group:  
Denver Metropolitan Area^ and Colorado, 2007**

<b>AGE GROUP (years)</b>	<b>Cases</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	17	(23.2)	36	(25.6)	3	(8.3)
2-4	6	(5.4)	18	(8.4)	0	.
5-14	9	(2.7)	16	(2.4)	1	(6.3)
15-24	5	(1.5)	15	(2.0)	0	.
25-34	18	(5.7)	24	(3.7)	4	(16.7)
35-49	54	(9.5)	81	(7.1)	6	(7.4)
50-64	80	(18.8)	130	(14.6)	13	(10.0)
65+	77	(35.6)	138	(28.6)	12	(8.7)
<b>Total</b>	<b>266</b>	<b>(11.1)</b>	<b>458</b>	<b>(9.3)</b>	<b>39</b>	<b>(8.5)</b>

*\*Rates are per 100,000 population and based upon 2008-based population estimates, State Demography Office - DOLA  
^Emerging Infections Program area: Adams, Arapahoe, Denver, Douglas, and Jefferson counties*

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## Rates of Invasive Pneumococcal Disease by County: Denver Metropolitan Area<sup>^</sup>, 2007

<i>COUNTY OF RESIDENCE</i>	Cases	
	No.	(Rate*)
ADAMS	49	(11.5)
ARAPAHOE	54	(9.8)
DENVER	93	(15.6)
DOUGLAS	15	(5.5)
JEFFERSON	55	(10.2)

*\*Rates are per 100,000 population and based upon 2008-based population estimates, State Demography Office - DOLA  
^Emerging Infections Program area: Adams, Arapahoe, Denver, Douglas, and Jefferson counties*

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## Sterile Sites from which *Streptococcus pneumoniae* was Isolated: Denver Metropolitan Area<sup>^</sup>, 2007

<i>SITE OF ISOLATION</i>	No.*	(% of cases)
Blood	244	(91.7)
CSF	11	(4.1)
Pleural fluid	9	(3.4)
Joint fluid	1	(0.4)
Wound	1	(0.4)

*\*SP was isolated from one site in 253 cases and multiple sites in 13 cases (Total cases=266)*

*SP was isolated only from blood in 231 cases (86.8%)*

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

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## Clinical Syndromes Associated with Invasive Pneumococcal Disease: Denver Metropolitan Area<sup>^</sup>, 2007

<b>CLINICAL SYNDROME</b>	<b>No.*</b>	<b>(% of cases)</b>
Bacteremic pneumonia	173	(65.0)
Bacteremia only	63	(23.7)
Meningitis	15	(5.6)
Empyema	5	(1.9)
Septic arthritis	3	(1.1)
Streptococcal Toxic Shock	3	(1.1)
Epiglottitis	1	(0.4)
Hemolytic Uremic Syndrome	1	(0.4)
Peritonitis	1	(0.4)
Pericarditis	1	(0.4)
Septic abortion	1	(0.4)

*\*Some cases had more than one syndrome (Total cases=266)*

*<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>, 2007

<i><b>UNDERLYING CONDITION</b></i>	<b>No.*</b>	<b>(% of cases)</b>
Current Smoker	68	(25.6)
Emphysema/COPD	37	(13.9)
Alcohol Abuse	34	(12.8)
Diabetes	30	(11.3)
Renal Failure/Dialysis	26	(9.8)
Atherosclerotic Cardiovascular Disease	24	(9.0)
Heart Failure/CHF	20	(7.5)
HIV	15	(5.6)
Asthma	13	(4.9)
Immunosuppressive Therapy	11	(4.1)
Cirrhosis/Liver Failure	11	(4.1)
Intravenous Drug Use	10	(3.8)
Obesity	9	(3.4)
Cerebral Vascular Accident/Stroke	7	(2.6)
Leukemia	5	(1.9)
AIDS	5	(1.9)
Hodgkin"s Disease	3	(1.1)
Systemic Lupus Erythematosus	3	(1.1)
Multiple Myeloma	2	(0.8)
Sickle Cell Anemia	1	(0.4)
Organ transplant	1	(0.4)

***\*98 cases had more than one underlying condition***

***57 (21.4%) had no underlying conditions; 7 cases were unknown (Total cases=266)***

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

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## Invasive Pneumococcal Disease Serotypes: Denver Metropolitan Area<sup>^</sup>, 2007

<i>Serotype</i>	No.*	(% of isolates)
19A	31	(14.9)
07F	30	(14.4)
003	23	(11.1)
22F	17	(8.2)
09N	13	(6.2)
12F	12	(5.7)
06C	11	(5.3)
35B	6	(2.8)
008	6	(2.8)
014	4	(1.9)
15A	4	(1.9)
33F	4	(1.9)
23B	4	(1.9)
031	4	(1.9)
004	3	(1.4)
038	3	(1.4)
17F	3	(1.4)
10A	3	(1.4)
15C	2	(0.9)
16F	2	(0.9)
11A	2	(0.9)
19F	2	(0.9)
06B	2	(0.9)
020	2	(0.9)
09V	2	(0.9)

15B	2	(0.9)
034	2	(0.9)
06A	2	(0.9)
23F	2	(0.9)
23A	1	(0.4)
18C	1	(0.4)
013	1	(0.4)
35F	1	(0.4)
Total	207	(100.0)

***\*Based upon reference lab testing of 207 (77.8%) isolates (Total cases=266)  
Testing performed by the Centers for Disease Control and Prevention: Atlanta, GA  
^Emerging Infections Program area: Adams, Arapahoe, Denver, Douglas, and Jefferson counties***