

**Cases, Rates and Case Fatality of Invasive Pneumococcal Disease by
Age Group:
Denver Metropolitan Area^ and Colorado, 2009**

AGE GROUP (years)	Cases (Rates)				Deaths	
	EIP^ No.	(EIP Rate*)	State No.	(State rate*)	State No.	(% of cases)
<1	11	(15.0)	22	(15.5)	3	(13.6)
1	5	(4.4)	13	(6.0)	0	.
2-4	8	(2.3)	19	(2.8)	1	(5.3)
5-17	18	(5.2)	37	(4.9)	2	(5.4)
18-34	34	(10.5)	62	(9.2)	1	(1.6)
35-49	68	(11.9)	111	(9.8)	5	(4.5)
50-64	95	(20.5)	164	(17.0)	13	(7.9)
65+	107	(46.0)	192	(37.2)	27	(14.1)
Total	346	(14.0)	620	(12.2)	52	(8.4)

**Rates are per 100,000 population and based upon 2009-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[^], 2009

<i>COUNTY OF RESIDENCE</i>	<i>Cases</i>	
	<i>No.</i>	<i>(Rate*)</i>
ADAMS	81	(18.3)
ARAPAHOE	67	(11.7)
DENVER	107	(17.3)
DOUGLAS	17	(5.8)
JEFFERSON	74	(13.6)

**Rates are per 100,000 population and based upon 2009-based population estimates, State Demography Office - DOLA
^Emerging Infections Program area: Adams, Arapahoe, Denver, Douglas, and Jefferson counties*

**Sterile Sites from which *Streptococcus pneumoniae* was Isolated:
Denver Metropolitan Area[^], 2009**

<i>SITE OF ISOLATION</i>	No.*	(% of cases)
Blood	329	(95.1)
Pleural fluid	13	(3.8)
CSF	9	(2.6)
Joint fluid	3	(0.9)
Body site	1	(0.3)

****SP was isolated from one site in 319 cases and multiple sites in 27 cases (Total cases=346)***

SP was isolated only from blood in 303 cases (87.6%)

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

Clinical Syndromes Associated with Invasive Pneumococcal Disease: Denver Metropolitan Area[^], 2009

<i>CLINICAL SYNDROME</i>	No.*	(% of cases)
Bacteremic pneumonia	247	(71.4)
Bacteremia only	74	(21.4)
Meningitis	17	(4.9)
Empyema	11	(3.2)
Septic arthritis	4	(1.2)
Peritonitis	2	(0.6)
Otitis media	1	(0.3)
Abscess	1	(0.3)

****Some cases had more than one syndrome (Total cases=346)***

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

Underlying Conditions Associated with Invasive Pneumococcal Disease by Age Group: Denver Metropolitan Area[^], 2009

<i>UNDERLYING CONDITION</i>		No.*	(% of cases)
Age Group			
5 - 34 yrs	Current Smoker	9	(17.3)
	Asthma	7	(13.5)
	Alcohol Abuse	3	(5.8)
35 - 49 yrs	Current Smoker	27	(39.7)
	Asthma	9	(13.2)
	Alcohol Abuse	20	(29.4)
	Diabetes	9	(13.2)
	Cirrhosis/Liver Failure	8	(11.8)
	HIV	5	(7.4)
	Obesity	4	(5.9)
	Emphysema/COPD	3	(4.4)
	Intravenous Drug Use	3	(4.4)
50+ yrs	Current Smoker	52	(25.7)
	Asthma	12	(5.9)
	Alcohol Abuse	16	(7.9)
	Diabetes	36	(17.8)
	Cirrhosis/Liver Failure	9	(4.5)
	HIV	4	(2.0)
	Obesity	10	(5.0)
	Emphysema/COPD	67	(33.2)
	Intravenous Drug Use	3	(1.5)
	Atherosclerotic Cardiovascular Disease	28	(13.9)
	Renal Failure/Dialysis	24	(11.9)

Immunosuppressive Therapy	18	(8.9)
Heart Failure/CHF	16	(7.9)
Multiple Myeloma	10	(5.0)
Cerebral Vascular Accident/Stroke	4	(2.0)
AIDS	3	(1.5)

****127 cases had more than one underlying condition***

72(20.8%) had no underlying conditions; 4 cases were unknown (Total cases=346. Only conditions with a frequency >2 are displayed.

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

Serotype Distribution of Invasive Pneumococcal Disease by Age Group: Denver Metropolitan Area[^], 2009

Serotype		No.*	(% of isolates by age group)
Age Group			
< 5 yrs	07F	7	(38.8)
	19A	6	(33.3)
	Other	5	(27.7)
	Total	18	(100.0)
5 - 34 yrs	07F	19	(44.1)
	19A	4	(9.3)
	22F	3	(6.9)
	Other	17	(39.5)
	Total	43	(100.0)
35 - 49 yrs	003	8	(13.1)
	07F	18	(29.5)
	09N	5	(8.2)
	19A	7	(11.4)
	22F	4	(6.5)
	23A	4	(6.5)
	Other	15	(24.6)
	Total	61	(100.0)
50+ yrs	003	27	(15.5)
	008	7	(4.0)
	020	3	(1.7)
	031	4	(2.3)
	038	4	(2.3)
	06C	7	(4.0)
	07F	31	(17.8)

09N	4	(2.3)
10A	3	(1.7)
11A	5	(2.8)
15A	3	(1.7)
17F	3	(1.7)
19A	24	(13.7)
22F	10	(5.7)
23A	8	(4.6)
23B	5	(2.8)
35B	3	(1.7)
NT	3	(1.7)
Other	20	(11.4)
Total	174	(99.9)

**Based upon reference lab testing of 277(80%) isolates (Total cases=346). Only serotypes with a frequency >2 are displayed.*

Testing performed by the Centers for Disease Control and Prevention: Atlanta, GA

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