

**Cases, Rates and Case Fatality of Invasive Haemophilus influenzae Disease
in Five-County Denver Metropolitan Area^ by Age Group, 2013**

Haemophilus influenzae	Cases (Rate)		Deaths	
	No.	(Rate)	No.	(% of cases)
Age Group (years)				
<1	4	(12.0)	1	(25.0)
1	2	(5.8)	0	.
2-4	1	(0.9)	0	.
5-17	2	(0.4)	0	.
18-34	9	(1.4)	1	(11.1)
35-49	6	(1.0)	0	.
50-64	8	(1.6)	1	(12.5)
65+	23	(8.3)	4	(17.3)
Total	55	(2.1)	7	(12.7)

*Rates are computed using 2012-based population estimates, State Demography Office - DOLA
^ Emerging Infections Program area: Adams, Arapahoe, Denver, Douglas, and Jefferson counties*

***Rates of Invasive Haemophilus influenzae Disease by County
Denver Metropolitan Area[^], 2013***

Haemophilus influenzae	Cases (Rate)	
	No.	(Rate)
ADAMS	14	(3.0)
ARAPAHOE	12	(2.0)
DENVER	17	(2.6)
DOUGLAS	2	(0.6)
JEFFERSON	10	(1.8)

***Rates are computed using 2012-based population estimates, State Demography Office - DOLA
[^] Emerging Infections Program area: Adams, Arapahoe, Denver, Douglas, and Jefferson counties***

***Sites from which Invasive Haemophilus influenzae was Isolated
Denver Metropolitan Area[^], 2013***

Site of Isolation	No.*	(% of cases)
Blood	47	(85.4)
CSF	5	(9.0)
Joint	2	(3.6)
Pleural fluid	1	(1.8)
Bone	1	(1.8)
Muscle	1	(1.8)

****Not mutually exclusive; H. influenzae was isolated from one site in 52 cases and multiple sites in 3 cases (Total cases=55)***

H. influenzae was isolated only from blood in 45 cases (81.8%)

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

***Syndromes Associated with Invasive Haemophilus influenzae Disease, by Age Group
Denver Metropolitan Area[^], 2013***

Clinical Syndrome		No.*	(% of cases)
Age Group (years)			
<=17	Meningitis	5	(55.5)
	Pneumonia	3	(33.3)
	Bacteremia only	1	(11.1)
	Other syndrome	1	(11.1)
18-49	Pneumonia	5	(33.3)
	Bacteremia only	4	(26.6)
	Other syndrome	1	(6.6)
	Epiglottitis	1	(6.6)
	Septic abortion	1	(6.6)
	Chorioamnionitis	1	(6.6)
	Osteomyelitis	1	(6.6)
	Endometritis	1	(6.6)
	Septic shock	1	(6.6)
	Unknown	1	(6.6)

(Continued)

** Some cases had more than one syndrome*

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

***Syndromes Associated with Invasive Haemophilus influenzae Disease, by Age Group
Denver Metropolitan Area[^], 2013***

Clinical Syndrome		No.*	(% of cases)
Age Group (years)			
50+	Meningitis	1	(3.2)
	Pneumonia	23	(74.1)
	Bacteremia only	5	(16.1)
	Osteomyelitis	1	(3.2)
	Septic shock	6	(19.3)
	Unknown	4	(12.9)
	Septic arthritis	2	(6.4)

** Some cases had more than one syndrome*

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

***Underlying Conditions Associated with Invasive Haemophilus influenzae Disease
Denver Metropolitan Area[^], 2013***

Underlying Condition		No.*	(% of cases)
Age Group (years)			
<=17	None	6	(66.6)
	Premature birth	2	(22.2)
	Unknown	1	(11.1)
18-49	None	8	(53.3)
	Current smoker	4	(26.6)
	AIDS	1	(6.6)
	Diabetes	1	(6.6)
	HIV	1	(6.6)
	Hodgkins disease	1	(6.6)
50+	None	3	(9.6)
	Unknown	2	(6.4)
	Current smoker	7	(22.5)
	Diabetes	9	(29.0)
	Hodgkins disease	1	(3.2)
	Emphysema/COPD	10	(32.2)
	Atherosclerotic Cardiovascular Disease	4	(12.9)

(Continued)

0% of cases in the <=17 age group, 13% of cases in the 18-49 age group, and 45% of cases in the 50+ age group had >1 underlying condition

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

***Underlying Conditions Associated with Invasive Haemophilus influenzae Disease
Denver Metropolitan Area[^], 2013***

Underlying Condition		No.*	(% of cases)
Age Group (years)			
50+	Asthma	3	(9.6)
	Cirrhosis/liver failure	3	(9.6)
	Immunosuppressive therapy	3	(9.6)
	Heart failure/CHF	2	(6.4)
	Renal Failure/Dialysis	2	(6.4)
	Deaf/Hearing loss	1	(3.2)
	Leukemia	1	(3.2)
	Organ malignancy	1	(3.2)

0% of cases in the <=17 age group, 13% of cases in the 18-49 age group, and 45% of cases in the 50+ age group had >1 underlying condition

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

***Invasive Haemophilus influenzae Disease Serotypes
Denver Metropolitan Area[^], 2013***

Haemophilus influenzae	No.	(% of isolates)
Type		
NT	42	(80.7)
F	5	(9.6)
A	3	(5.7)
E	2	(3.8)
Total	52	(100.0)

***Based upon reference lab testing of 52 isolates (Total cases=55)
Testing performed by the Centers for Disease Control and Prevention, Atlanta, GA
[^]Emerging Infections Program area: Adams, Arapahoe, Denver, Douglas, and Jefferson counties***