

Pertussis

2008 Case Total	100	2008 Rate	2.8 per 100,000
2007 Case Total	58	2007 Rate	1.7 per 100,000

In 2008, 100 cases of *Bordetella pertussis*, or "whooping cough," were reported in Oklahoma, a 72% increase from 2007. Fifty-six (56%) cases were laboratory confirmed by polymerase chain reaction (PCR) and/or isolation of the *Bordetella pertussis* bacterium. Of those, 32 (57%) were confirmed by both culture and PCR, 19 (34%) by PCR only, and 5 (9%) culture only. Thirteen cases were epidemiologically-linked symptomatic contacts identified by the county health department communicable disease nurse (CDN) during case investigations, and 31 were probable cases with no confirmatory (i.e. direct fluorescent antibody (DFA) or serology) laboratory testing.

Pertussis occurs in persons of all ages, but disproportionately affects those children less than one year. In 2008, ages of reported cases ranged from 4 days to 63 years; however the median age of cases was 1 year. Children less than one year of age accounted for almost 49% of cases resulting in an age-specific incidence rate of 88.15 per 100,000 infants. The incidence rate of pertussis among infants was significantly higher than all other age groups (refer to graph). Ninety-five percent of reported pertussis cases among infants were hospitalized for pertussis. No deaths due to pertussis were reported in 2008.

Pertussis is characterized by a prolonged cough lasting several weeks to months. Cases reported a cough duration that ranged from 5 days to 245 days with median cough duration of 35 days. Symptoms characteristic of pertussis experienced by cases included paroxysms or coughing fits (91%), vomiting after paroxysms (67%), and an inspiratory whoop (66%). Most symptoms experienced by infants were similar to other ages which included cough (100%), paroxysms (92%), and inspiratory whoop (65%). Unlike adults and other children, infants also experienced apnea (59%) and cyanosis (61%). No seasonal distribution of pertussis was identified in 2008.

Pertussis cases were identified throughout the state with the highest rates occurring in Major County (14.1/100,000), Kingfisher County (14/100,000), Lincoln County (12.4/100,000) and Pawnee County (12.3/100,000). County health department public health personnel conduct investigations of pertussis to identify close contacts that are recommended to receive post-exposure prophylaxis (PEP) to prevent develop of illness and control continued transmission. In 2008, a total of 282 close contacts (median=1, range 0-21 contacts) of cases were recommended to receive PEP. Twenty-two cases were associated with a high-risk setting such as a childcare center, school, or doctor's office.

Pertussis vaccine is recommended for all children beginning at two months of age with the primary 3-dose series followed by a booster vaccination at 12-15 months of age. An adolescent vaccine (Tdap) is recommended for persons 11-64 years of age and should replace one booster dose of Td. This dose is especially important in for persons who reside in a household or may have contact with persons at highest risk of developing disease.

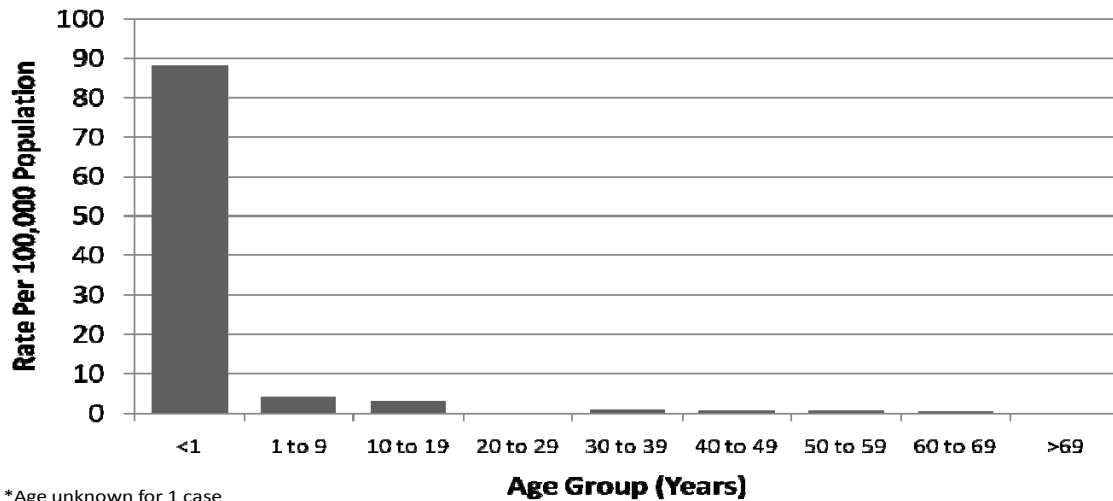
Descriptive Summary of Reported Pertussis Cases, All Ages, Oklahoma, 2008 (N=100)

Total Cases	Frequency (%)	Rate/100,000
Gender		
Male	42 (42%)	2.33
Female	58 (58%)	3.15
Age	Median Age: 1 year (Range: 4 Days – 63 years)	
Hospitalized for Disease	41 (41%)**	--
Deaths to Pertussis	0	--
Race		
White	75 (75%)	2.64
Black	2 (2%)	0.69
American Indian or Alaska Native	9 (9%)	3.09
Persons reporting 2 or more races	8 (8%)	5.40
Unknown	6 (6%)	--
Hispanic Ethnicity	11 (11%)	3.95
Symptoms†		
Cough	100 (100%)	--
Duration of Cough	Median Cough Duration: 35 days (Range: 5 days – 245 days)	
Paroxysms	91 (91%)	--
Post-tussive vomiting	67 (67%)	--
Inspiratory whoop	66 (66%)	--

**Frequency of Symptoms Experienced by Reported Pertussis Cases
Among Children Less Than One Year Old, 2008 (N=49)**

Cases <1 year of age	Frequency (%)
Symptoms	
Cough	49 (100%)
Duration of Cough	Median Cough Duration: 35 days (Range: 5 days – 245 days)
Paroxysms	45 (92%)
Apnea	29 (59%)
Post-tussive vomiting	32 (65%)
Inspiratory whoop	32 (65%)
Cyanosis	30 (61%)
Age-Appropriately Vaccinated (N=20)	15 (75%)

Rate of Reported Pertussis Cases by Age Group, Oklahoma, 2008*



Incidence Rate of Pertussis Cases, United States and Oklahoma, 2000-2008*

