

## **Pertussis**

Agent: *Bordetella pertussis* (bacteria)

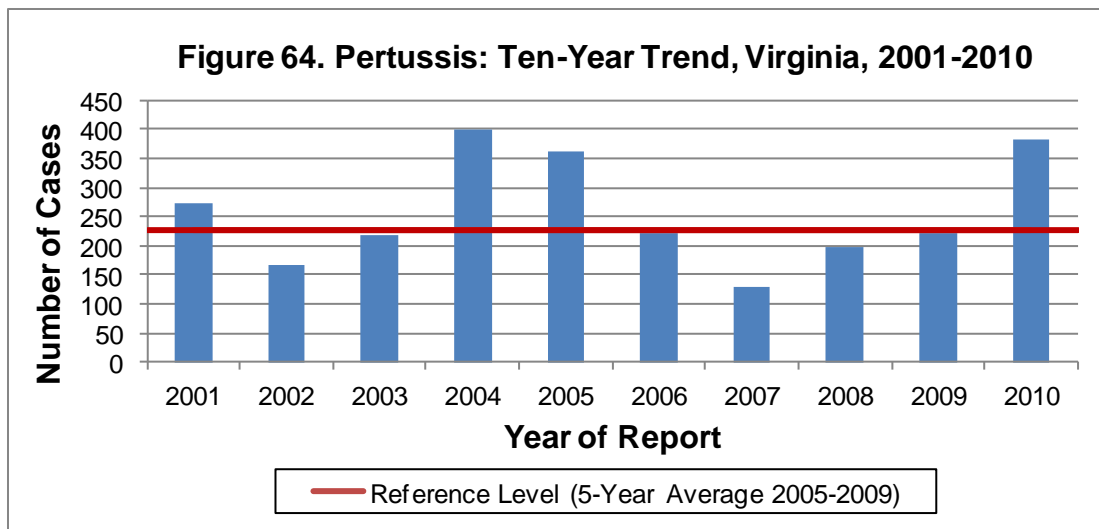
Mode of Transmission: Person-to-person transmission by contact with respiratory droplets from infected patients.

Signs/Symptoms: Insidious cough that progresses to paroxysmal coughing (i.e., severe, sequential coughs with difficulty inhaling) and may be accompanied by post-cough vomiting.

Prevention: Vaccination beginning at 2 months of age.

Other Important Information: Pertussis is also known as whooping cough. Coughing fits can last up to 10 weeks or more. In vaccinated populations, the case-fatality rate is low. When deaths occur, they are generally in children less than six months old who are too young to have been vaccinated.

In 2010, 384 cases of pertussis were reported in Virginia. This is a 73% increase from the 222 cases reported in 2009 and a 70% increase from the five-year average of 226.4 per year (Figure 64). Cases of pertussis typically occur in waves, with peak numbers appearing every 3-5 years. A large number of cases (400) were reported in 2004 with a downward trend through 2007. This general downward trend in pertussis cases since 2004 was also observed nationally. The number of pertussis cases has been increasing since 2007 in Virginia and across the country.



In Virginia, pertussis cases were reported from every age group, but the <1 year age group had a substantially higher incidence rate than any of the others, with 53.5 cases per 100,000 population. The next highest incidence rates were observed in the 1-9 year and 10-19 year age groups, with 15.5 and 9.2 cases per 100,000, respectively (Figure 65). Thirty-one percent of cases were missing race data. Among cases with race reported, incidence in the white population was more than twice the rate in the black population (4.1 and 1.7 per 100,000, respectively), and more than four times the rate in the “other” race population. Females had a higher incidence rate than males (5.1 and 4.6 per 100,000, respectively).

Among regions, the northwest region had the highest number of cases and incidence (167 cases, 13.7 per 100,000). Rates in other regions ranged from 2.9-4.1 per 100,000. The largest proportion of cases (37%) occurred in the fourth quarter of the year. Ten outbreaks related to pertussis were reported in 2010. Nine of the outbreaks were linked to schools; one was a community-based outbreak involving children and adults. The largest outbreak occurred in the northwest region and involved 32 cases. One death due to pertussis was reported in 2010 in an adult female from the 50-59 year age group.

