

## **Legionellosis**

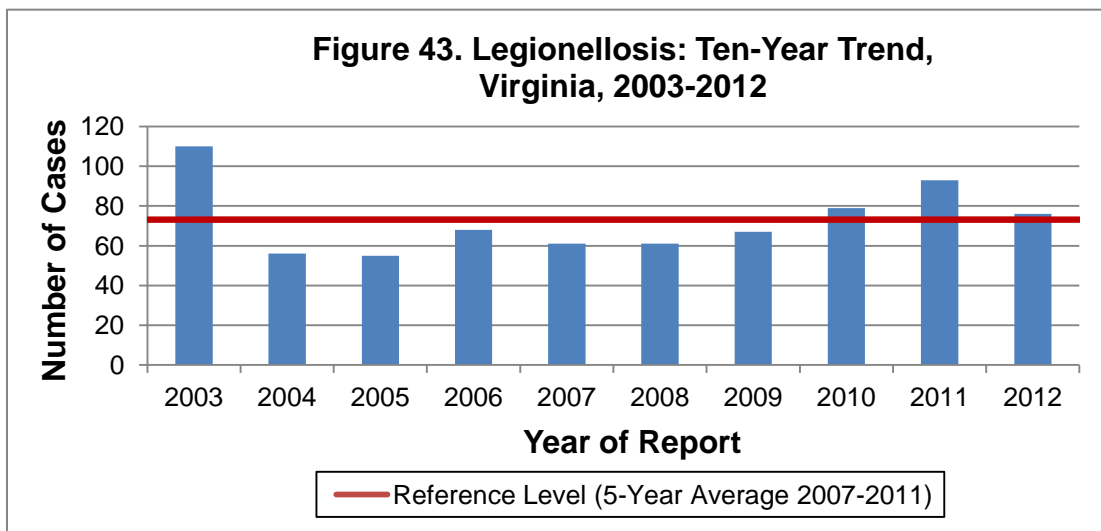
Agent: *Legionella* species (bacteria); most infections in the United States are caused by *Legionella pneumophila*

Mode of Transmission: Inhalation of contaminated aerosolized water (e.g., sprays, mists).

Signs/Symptoms: Infection with *L. pneumophila* causes two distinct illnesses: Legionnaires' disease, characterized by fever, muscle aches, headaches, malaise, cough, and pneumonia with progressive respiratory distress; and Pontiac fever, a milder influenza-like illness without pneumonia characterized by quick onset. Pontiac fever and Legionnaires' disease are referred to as "legionellosis", separately or together.

Prevention: For outbreaks, control measures include disinfection of contaminated water sources by chlorination or superheating of water from 160°-170°F, and appropriate mechanical cleaning.

Other Important Information: Legionellosis is more common among people who are elderly, are immunocompromised, or have underlying lung disease. Virginia has experienced a pattern seen nationally, in which there was an increase in legionellosis cases in 2003, followed by a higher incidence in the post-2003 period than in the pre-2003 period. The cause of this increase is not clearly understood. Factors that may contribute to the higher number of cases in 2003 and later include an increasing population of older persons or persons at high risk for infection and improved diagnosis and reporting of the condition. An additional factor may include CDC's call for more active and timely surveillance of travel-associated legionellosis.



During 2012, 76 cases of legionellosis were reported in Virginia. This represents an 18% decrease from the 93 cases reported in 2011, and a 4% increase from the five-year average of 73.2 cases per year (Figure 43).

Legionellosis incidence is closely associated with age. The highest incidence occurred in the 60 year and over age group (2.4 per 100,000), followed by the 50-59 and 40-49 year age groups (1.8 and 1.1 per 100,000, respectively). No cases were reported among persons younger than 20 years of age (Figure 44). Although information on race was missing for 18% of cases, the available information suggests that incidence was higher in the black population

than the white population (1.2 and 0.7 per 100,000, respectively). Incidence among males was twice the rate among females (1.2 and 0.6 per 100,000, respectively). By region, the highest incidence rate occurred in the northwest region (1.4 per 100,000), followed by the central region (1.2 per 100,000) and the lowest rate was seen in the northern region (0.6 per 100,000). Cases occurred throughout the year, with the smallest proportion in the first quarter of the year (9.2%) and the largest proportion (41%) in the third quarter of the year. Among cases reported in 2012, two deaths were attributed to legionellosis and occurred in males over 40 years of age. One outbreak attributed to *Legionella pneumophila* was reported in 2012. This outbreak involved an out-of-state hotel setting and cases in multiple states. The investigation was led by the health department in the out-of-state jurisdiction. As part of the outbreak, one laboratory-confirmed and two epidemiologically linked cases were reported in Virginia.

