

Tuberculosis

Agent: *Mycobacterium tuberculosis* (bacteria)

Mode of Transmission: Inhalation of tubercle bacilli via airborne droplets produced when patients with pulmonary or respiratory tract tuberculosis (TB) exhale the bacilli through coughing, singing, or sneezing.

Signs/Symptoms: Dependent on the organ(s) affected. General systemic signs and symptoms include fever, chills, night sweats, weight loss and fatigue. Symptoms of pulmonary tuberculosis may also include a prolonged (i.e., greater than 3 weeks) productive cough and coughing up blood.

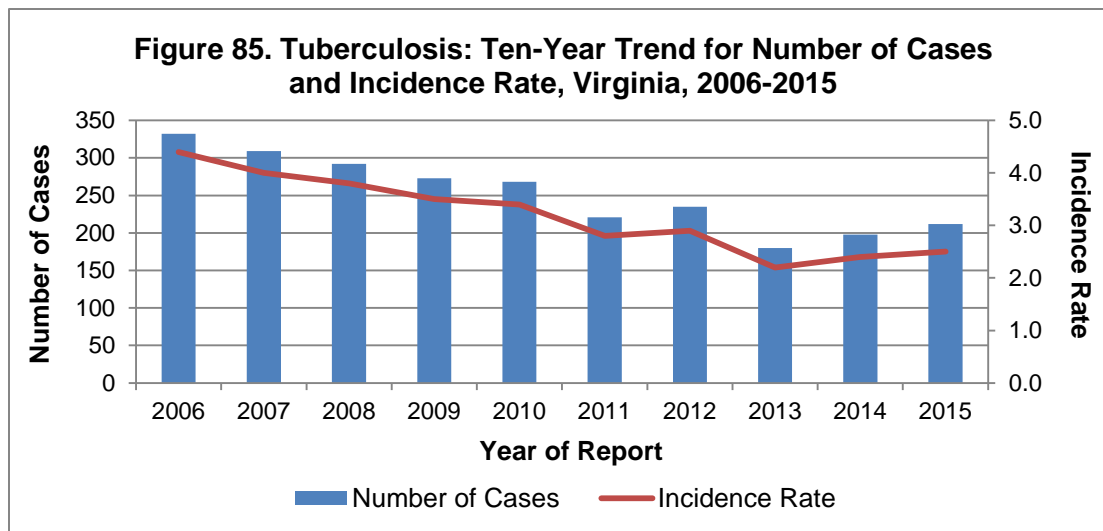
Prevention: Control measures include the prompt identification, diagnosis and treatment of persons with infectious tuberculosis, followed by timely contact investigations to identify and treat additional persons with active tuberculosis disease and persons with latent tuberculosis infection. Special infection control measures should be practiced in high-risk settings.

Other Important Information: Persons with latent tuberculosis infection do not have any signs or symptoms of disease. These persons do not spread tuberculosis bacteria. Approximately 10% of those infected with tuberculosis will develop active disease during their lifetime, with the greatest risk for disease progression during the two years following infection. Co-infection with HIV and other immune suppressing conditions represent the greatest risks for progression to active disease.

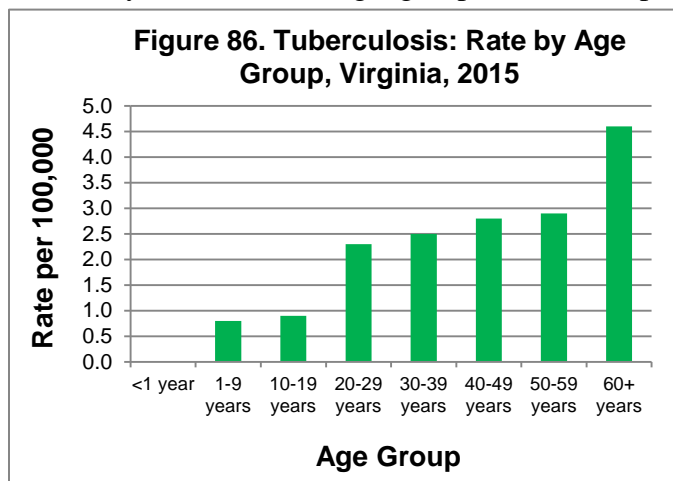
Tuberculosis: 2015 Data Summary	
Number of Cases:	212
5-Year Average Number of Cases:	220.4
% Change from 5-Year Average:	-4%
Incidence Rate per 100,000:	2.5

The 212 cases of tuberculosis reported in Virginia during 2015 were less than the 5-year average of 220.4 cases per year, but represent a 7% increase in reported cases compared to 2014. This is the second consecutive year of increase and may indicate a slowing in the decline of TB in Virginia (Figure 85). After two decades of decline in the United States, CDC reports a leveling of TB incidence for 2013-2015 to 3.0 per 100,000 persons. Virginia ranked seventh in the nation for reported TB cases with an incidence rate of 2.5 per 100,000 population.

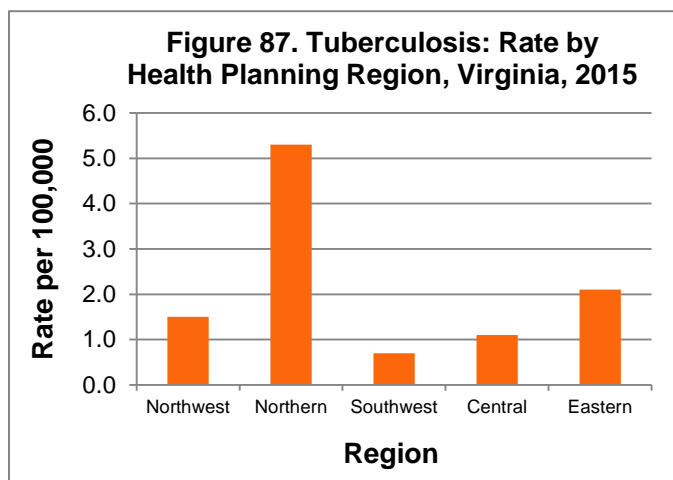
The increase in reported cases of tuberculosis in Virginia in 2015 can largely be attributed to a 14% increase in cases among foreign-born persons, from 147 in 2014 to 167 in 2015. For 2015, the five most frequent countries of origin for persons with TB born outside the U.S. were the Philippines, India, Viet Nam, Ethiopia, and Korea. Among U.S. born cases, the number decreased 12% from 51 persons in 2014 to 45 in 2015.



Incidence rates were higher in adults compared to children and adolescents. The highest incidence occurred among those in the 60 year and older age group (4.6 cases per 100,000), followed by those aged 50-59 (2.9 per 100,000) (Figure 86). Incidence among other adult age groups ranged from 2.3 to 2.8 cases per 100,000. Incidence among children ranged from 0.8 per 100,000 in the 1-9 year age group to 0.9 per 100,000 in the 10-19 year age group. No cases occurred among infants in 2015. Information on race was provided for all reported cases. The highest incidence was observed in the “other” race population (14.9 per 100,000), while incidence was substantially lower in the black and white populations (3.1 and 1.1 per 100,000, respectively). Males had slightly higher incidence (2.7 per 100,000) than females (2.5 per 100,000).



The highest number of cases and highest incidence rate (129 cases, 5.3 per 100,000) occurred in the northern region, where 72% of the foreign-born TB cases live (Figure 87). Incidence in the other regions ranged from 0.7 per 100,000 in the southwest region to 2.1 per 100,000 in the eastern region. Incidence by locality can be seen in the map below.



During 2015, drug susceptibility testing was performed for 171 culture positive cases. Of these, 12 cases (7%) were found to be drug resistant to one or more first-line drugs, most frequently being the drug isoniazid. In addition, one case (1%) was found to be multidrug-resistant (resistant to isoniazid and rifampin). Drug resistance to one or more first-line drugs has shown a general decline over the previous four years, while the number of multidrug-resistant cases has remained relatively stable. For treatment outcomes, 2014 is the most recent year for complete data with 96% of the drug-susceptible cases completing therapy within 12 months. No outbreaks were attributed to TB during 2015.

Tuberculosis Incidence Rate by Locality Virginia, 2015

