

## **Tuberculosis**

Agent: *Mycobacterium tuberculosis* (bacteria)

Mode of Transmission: Inhalation of tubercle bacilli via airborne droplets produced when patients with pulmonary or respiratory tract tuberculosis 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.

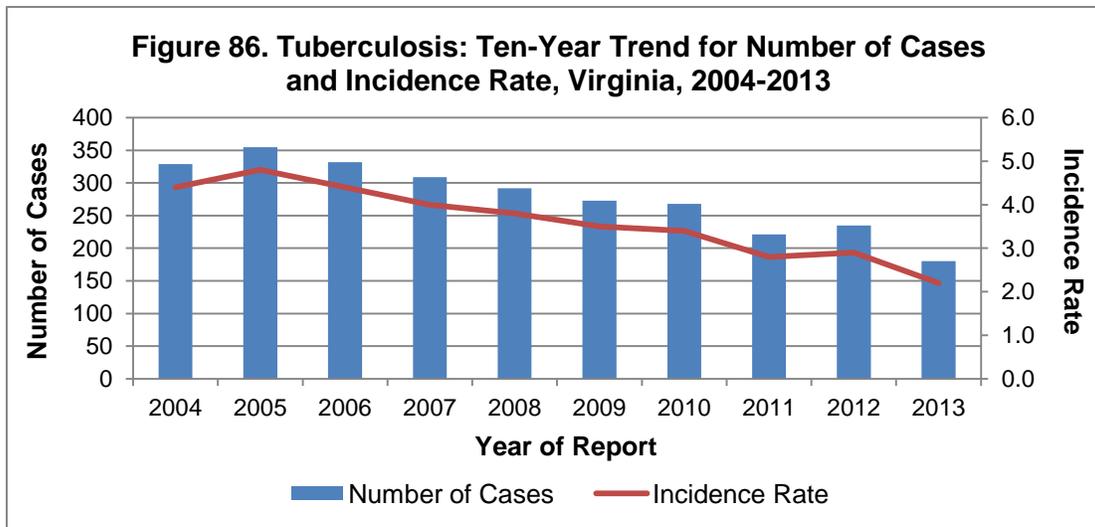
Prevention: Control measures include the prompt identification, diagnosis and treatment of persons with infectious tuberculosis, followed by timely contact investigations to identify and treat additional persons with active tuberculosis disease and persons with latent tuberculosis infection. Special 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.

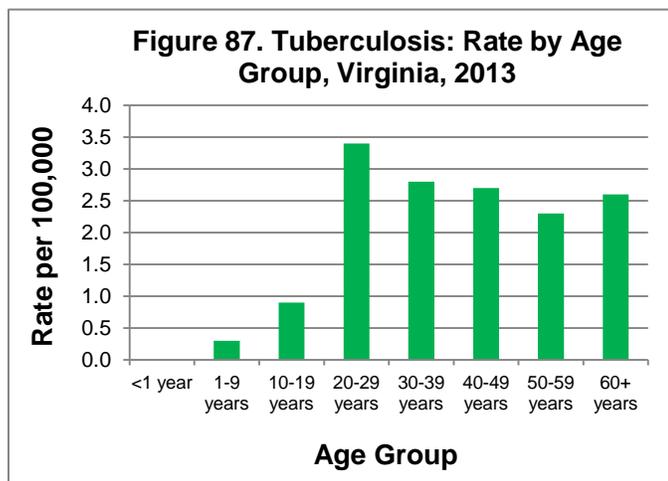
<b>Tuberculosis: 2013 Data Summary</b>	
Number of Cases:	180
5-Year Average Number of Cases:	257.8
% Change from 5-Year Average:	-30%
Incidence Rate per 100,000:	2.2

Virginia continues to see a general decline in TB cases, but not quite as consistently as has been seen at the national level. 2013 was the twenty-first consecutive year of declining rates of TB in the United States.

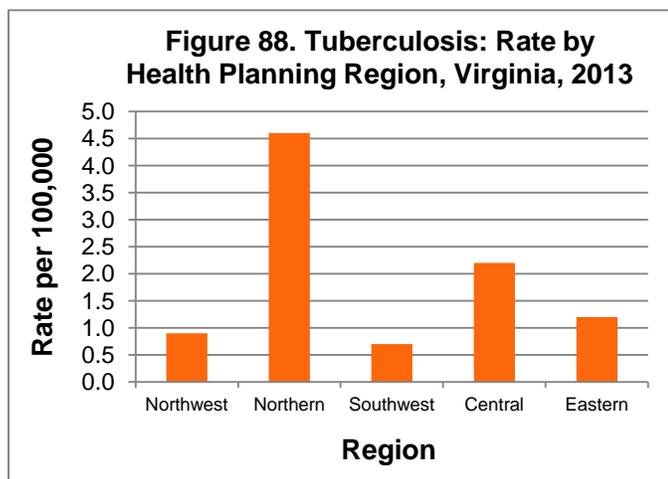
Although the 235 cases reported in Virginia in 2012 was slightly higher than the number reported during the previous year, the 180 cases reported in 2013 represent a 30% decline in cases from the five-year average of 257.8 cases per year (Figure 86). In Virginia, TB cases among those born in the U.S. decreased by 40%, from 52 in 2012 to 31 in 2013. The significant and sustained decline among the U.S.-born cases represents years of persistent TB control efforts to identify and treat active TB disease. A decrease in cases was also seen among the foreign-born, where the number of new cases declined by 19% from 183 cases in 2012 to 149 cases in 2013. Most TB infections among the foreign-born are believed to occur among people who were infected with TB before immigration to the United States. The five most frequent countries of origin for foreign-born TB cases were Ethiopia, India, Viet Nam, the Philippines, and El Salvador. As the burden of TB disease decreases, the focus of TB control will shift from controlling active disease to identification and treatment of TB infection.



Incidence was higher in adults than in children and adolescents. The highest incidence rate occurred among those in the 20-29 year age group (3.4 cases per 100,000). Rates among other adult age groups ranged from 2.3 to 2.8 cases per 100,000. Rates among children ranged from 0.3 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 2013 (Figure 87). By race, the highest incidence was observed in the “other” race group (12.9 per 100,000), while rates were substantially lower in the black and white populations (3.5 and 0.8 per 100,000, respectively). Males experienced a higher rate (2.7 per 100,000) than females (1.7 per 100,000).



The highest number of cases and highest incidence rate (107 cases, 4.6 per 100,000) occurred in the northern region, where 70% of the foreign-born TB cases lived (Figure 88). Rates among the other regions ranged from 0.7 per 100,000 in the southwest to 2.2 per 100,000 in the central region. Incidence by locality can be seen in the map below.



For culture-positive cases with drug sensitivity reported, 13% had resistance to at least one first-line

drug. One case was multidrug resistant (resistant to isoniazid and rifampin). In 2013, two deaths were attributed to TB. Both deaths occurred in adult females, one from the northern region and the other from the central region. No outbreaks were attributed to TB during 2013.

## Tuberculosis Incidence by Locality Virginia, 2013

