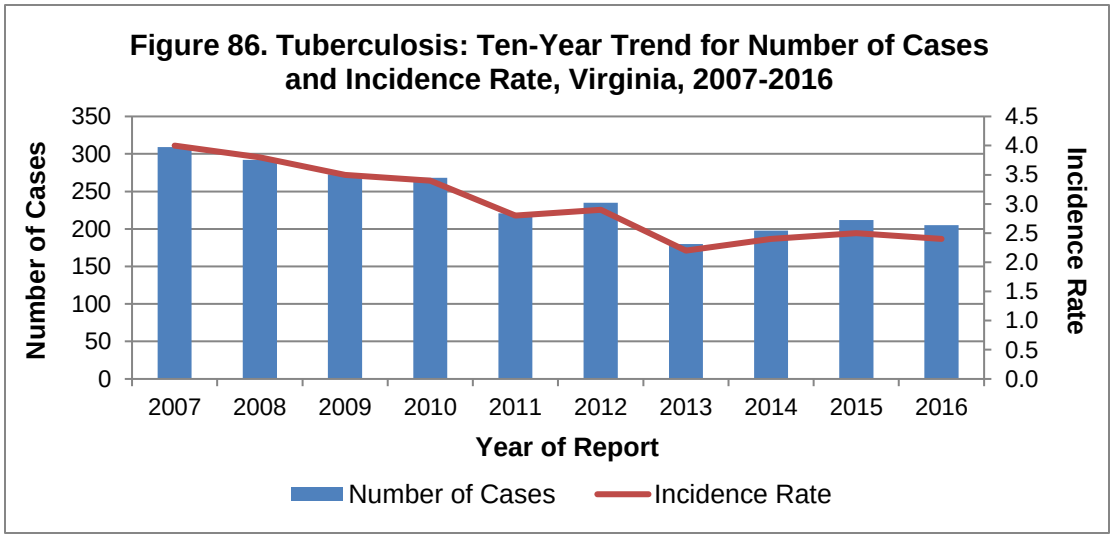
Tuberculosis

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.

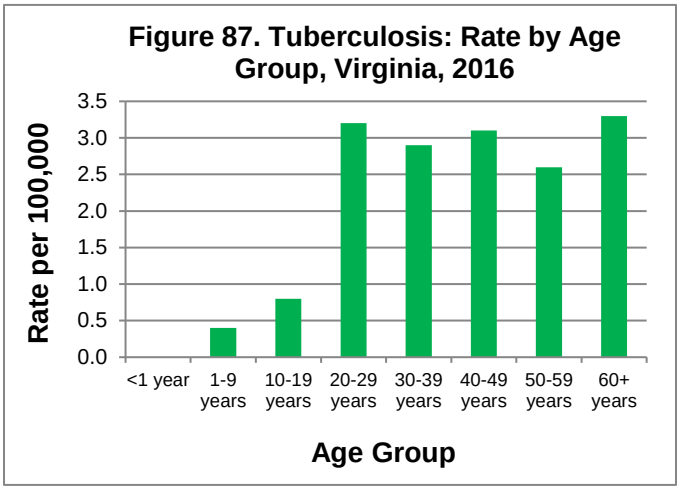
Tuberculosis: 2016 Data Summary	
Number of Cases:	205
5-Year Average Number of Cases:	209.2
% Change from 5-Year Average:	-2%
Incidence Rate per 100,000:	2.4

In 2016, 205 cases of tuberculosis were reported in Virginia. This is less than the 5-year average of 209.2 cases per year, and represents a 3% decrease in reported cases compared to 2015. This may signify a leveling of cases in Virginia, as seen in Figure 86. Nationally, CDC reported 9,287 TB cases, a new historic low, for an incidence rate of 2.9 per 100,000 population. Virginia ranked tenth in the U.S. for reported TB cases, with an incidence rate of 2.4 per 100,000 population.

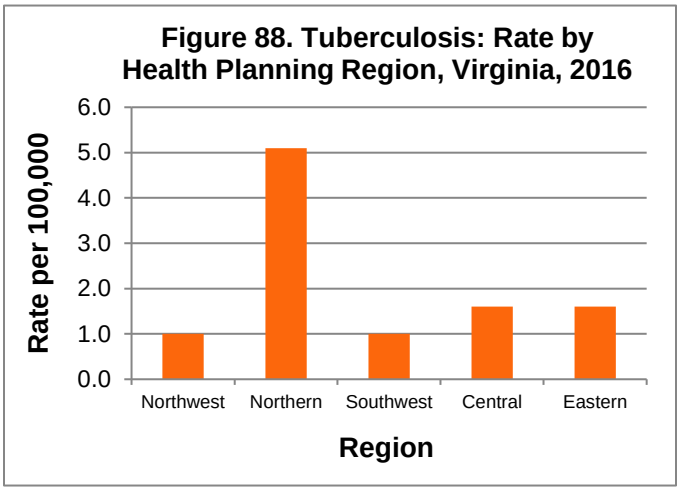
The decrease in reported cases of tuberculosis in Virginia in 2016 can largely be attributed to a 13% decrease in cases among U.S.-born persons, from 45 in 2015 to 39 in 2016. The number of foreign-born cases remained consistent with 166 cases reported in 2016 compared to 167 cases reported in 2015. In 2016, among persons with TB born outside the U.S., the five most common countries of origin were India, the Philippines, Viet Nam, Ethiopia, and El Salvador.



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 (3.3 cases per 100,000), followed closely by those aged 20-29 years (3.2 per 100,000) (Figure 87). Incidence among other adult age groups ranged from 2.6 to 3.1 cases per 100,000. Incidence among children ranged from 0.4 per 100,000 in the 1-9 year age group to 0.8 per 100,000 in the 10-19 year age group. No cases occurred among infants in 2016. Information on race was available for all cases. The highest incidence was observed in the "other" race population (14.3 per 100,000); while incidence was substantially lower in the black and white populations (2.9 and 1.0 per 100,000, respectively). No difference was observed in the incidence rates for males (2.5 per 100,000) and females (2.4 per 100,000)



The highest number of cases and incidence rate (126 cases, 5.1 per 100,000) both occurred in the northern region (Figure 88), where 70% of the foreign-born TB cases were reported. Incidence in the other regions ranged from 1.0 to 1.6 per 100,000. Incidence by locality can be seen in the map below.



During 2016, drug susceptibility testing was performed for 167 culture-positive cases. Of these, 21 (13%) were found to be drug-resistant to one or more first-line drugs, most frequently the drug isoniazid. In addition, one (1%) was found to be multidrug-resistant (resistant to isoniazid and rifampin). For treatment outcomes, 2015 is the most recent year for complete data. In 2015, 92% of the drug-susceptible cases completed therapy within 12 months. No outbreaks were attributed to TB during 2016. One death, in an adult male older than 60 years of age, was attributed to tuberculosis during 2016.

Tuberculosis Incidence Rate by Locality
Virginia, 2016