

Streptococcal Disease, Group A, Invasive or Toxic Shock Syndrome

Agent: *Streptococcus pyogenes* (bacteria)

Mode of Transmission: Person-to-person transmission through respiratory droplets, contact with infected wounds or sores, or (rarely) through indirect contact with objects contaminated with the body fluids of infected persons.

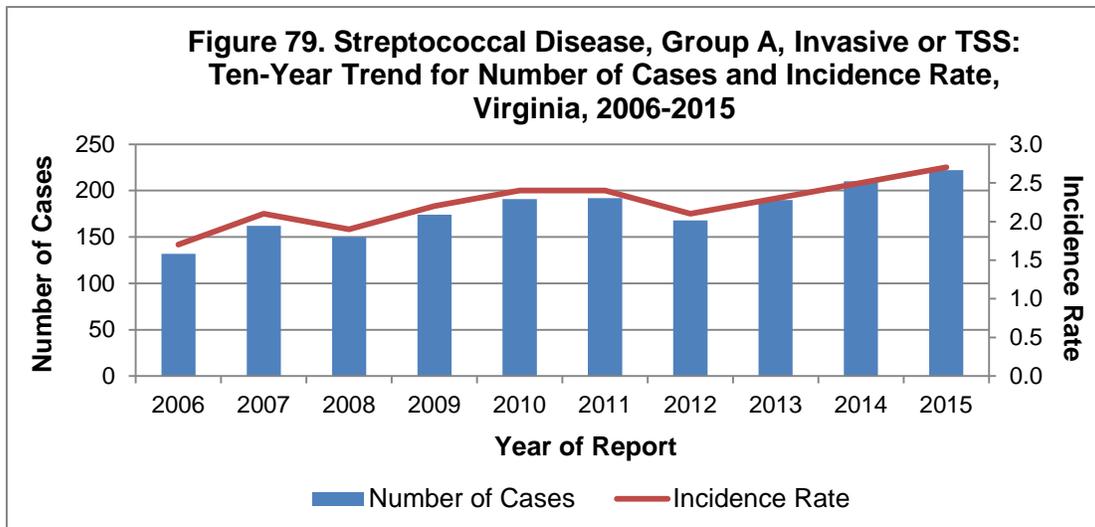
Signs/Symptoms: People may carry group A streptococci in the throat or on the skin and have no symptoms of illness. Most Group A Strep infections are relatively mild, such as “strep throat” or impetigo (a skin infection). Rarely, the bacteria can lead to severe invasive infections of the blood or other internal body fluids if they enter a normally sterile site. Invasive infections often require hospitalization and may cause death.

Prevention: The spread of all types of Group A Strep infection can be reduced by careful attention to hand washing, especially after coughing or sneezing. Other preventive measures include prompt identification and treatment of non-invasive cases (such as strep throat) and temporary exclusion of infected persons from work, school or daycare until 24 hours after taking an appropriate antibiotic. Wounds should be kept clean, and medical care should be sought at the first signs of infection.

Other Important Information: Most people who come into contact with Group A Strep will not develop invasive disease. Persons at higher risk for developing invasive Group A Strep infections include older persons, immunocompromised persons, and those with chronic, underlying conditions (such as diabetes). The two most severe, but least common, forms of invasive Group A Strep infections are necrotizing fasciitis (NF) and streptococcal toxic shock syndrome (TSS). NF infections present with severe pain and rapid destruction of muscles, fat, and skin tissue. Streptococcal TSS infections are characterized by shock and rapid organ failure.

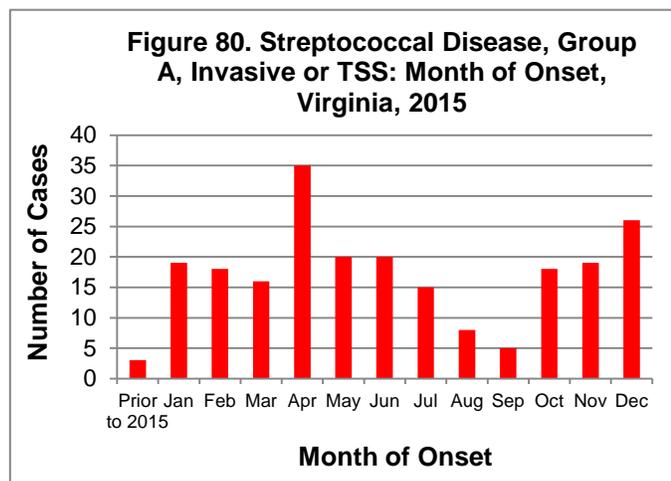
| Streptococcal Disease, Group A, Invasive or TSS: 2015 Data Summary | |
|---|-------|
| Number of Cases: | 222 |
| 5-Year Average Number of Cases: | 190.2 |
| % Change from 5-Year Average: | +17% |
| Incidence Rate per 100,000: | 2.7 |

During 2015, 222 cases of invasive Group A Strep infection were reported in Virginia. This represents an almost 6% increase from the 210 cases reported in 2014, and a 17% increase from the five-year average of 190.2 cases per year. This is the third consecutive year that the number of cases of invasive Group A Strep reported in Virginia has increased (Figure 79). Among the 222 cases, 203 persons were reported with invasive Group A Strep infections (age range: less than one to 95 years), and 19 persons were reported with streptococcal toxic shock syndrome (age range: 36 to 73 years).



The highest number and incidence rate of invasive Group A Strep infections occurred in the 60 year and older age group (99 cases, 6.1 per 100,000). This was followed by the 50-59 and 40-49 year age groups, with incidence rates of 2.8 and 2.3 per 100,000, respectively. The other age groups had rates between 0.5 and 2.1 per 100,000. Information on race was provided for 85% of reported cases. Incidence rates did not vary widely between races, with the highest rate reported in the black population (2.4 per 100,000), followed by the white and “other” race populations (2.2 and 2.1 per 100,000, respectively). Incidence was similar among males and females (2.6 and 2.7 per 100,000, respectively). Geographically, incidence was highest in the southwest region (3.9 per 100,000), followed by the northwest region (3.3 per 100,000). Rates in the other regions ranged from 2.0 to 2.7 per 100,000. Information on incidence rates for individual localities is presented in the map below.

While cases occurred throughout the year, the majority of cases (34%) were reported during the second quarter with a peak in April (Figure 80). Among the 222 cases reported in 2015, nine persons died as a result of invasive Group A Strep infection (age range: 48 to 93 years), and six died from streptococcal toxic shock syndrome (age range: 41 to 73 years). Of these fifteen total deaths, 67% occurred in individuals aged 60 years and older.



Three invasive Group A Strep outbreaks were reported in 2015; one occurred in a nursing home, one occurred in a medical facility (non-long-term care), and one occurred in an assisted living facility. Two invasive Group A Strep outbreaks occurred in the southwest region and one occurred in the central region. Additionally, nine non-invasive Group A Strep outbreaks were reported in 2015. Non-invasive Group A Strep outbreaks typically cause respiratory or rash illnesses, primarily

presenting as “strep throat”. Of the nine non-invasive Group A Strep outbreaks, five occurred in a school (K-12) setting, and four occurred in a daycare/pre-K facility. Three of these outbreaks due to non-invasive strep infections were reported from the central region, three from the northwest region, and three from the northern region.

Streptococcal Disease, Group A, Invasive or TSS Incidence Rate by Locality, Virginia, 2015

