

## **Streptococcal Disease, Group A (GAS), 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.

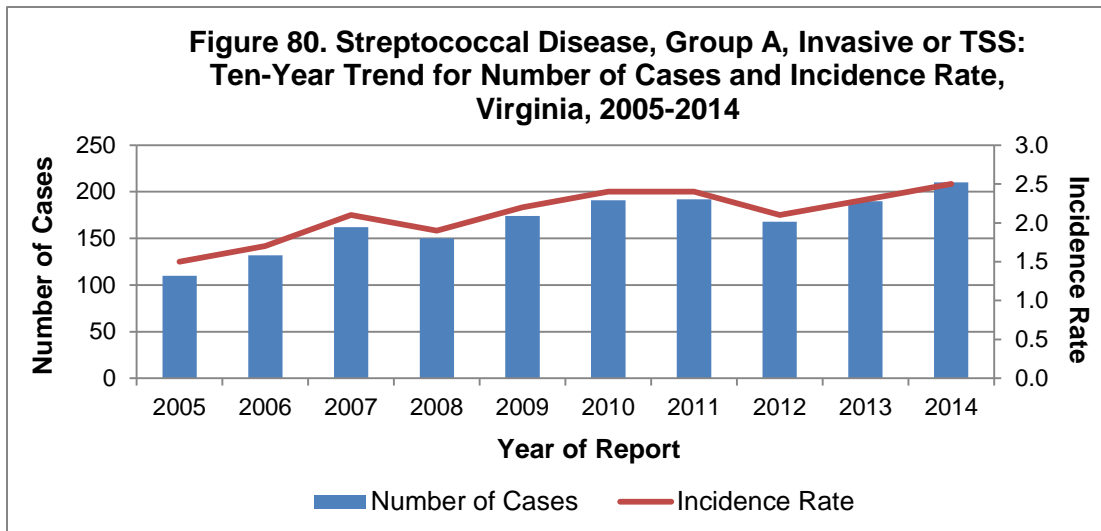
Signs/Symptoms: People may carry group A streptococci in the throat or on the skin and have no symptoms of illness. Most GAS infections are relatively mild, such as “strep throat” or impetigo (a skin infection). Rarely, the bacteria can lead to severe invasive infections of the blood or other internal 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 GAS 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 healthcare employees/others from work and other group settings for the first 24 hours of antibiotic therapy. Wounds should be kept clean, and medical care should be sought at the first signs of infection.

Other Important Information: Persons at higher risk for developing invasive GAS 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 GAS 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.

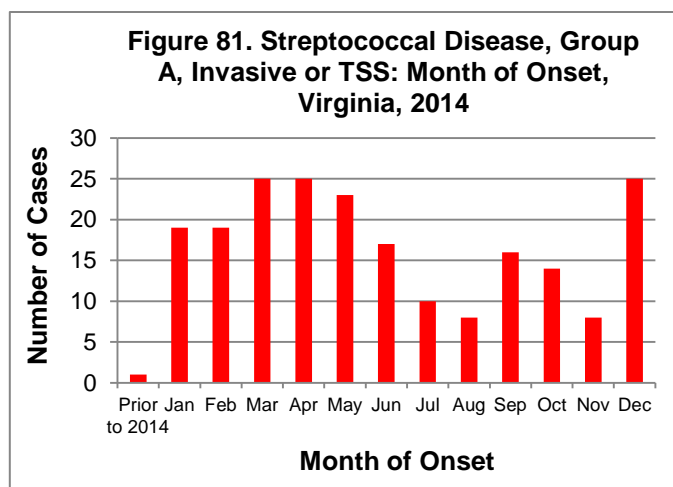
<b>Streptococcal Disease, Group A, Invasive or TSS: 2014 Data Summary</b>	
Number of Cases:	210
5-Year Average Number of Cases:	183.0
% Change from 5-Year Average:	+15%
Incidence Rate per 100,000:	2.5

During 2014, 210 cases of invasive GAS infection were reported in Virginia. This represents an 11% increase from the 190 cases reported in 2013, and a 15% increase from the five-year average of 183 cases per year (Figure 80).



The highest number and incidence rate of invasive GAS infections occurred in the 60 year and older age group (92 cases, 5.9 per 100,000). This was followed by the 50-59 and 40-49 year age groups, with incidence rates of 3.3 and 2.0 per 100,000, respectively. The other age groups had rates between 0.6 and 1.8 per 100,000. Race information was not provided for nearly 30% of reported cases. Among cases with a known race, incidence was highest in the white population (2.0 per 100,000) compared to the black and “other” populations (1.6 and 0.3 per 100,000, respectively). Incidence was similar among males and females (2.7 and 2.4 per 100,000, respectively). Geographically, incidence was highest in the northwest region (4.2 per 100,000), followed by the southwest region (3.3 per 100,000). Rates in the other regions ranged from 1.5 to 2.5 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 were reported from January through May and the month of December (Figure 81). This general late-winter to spring pattern is also typically seen with “strep throat”, a non-invasive GAS infection. Among the 210 cases reported in 2014, 24 persons died from invasive GAS infection. One death was attributed to streptococcal toxic shock syndrome. Of all deaths, fourteen (58%) occurred in individuals aged 60 years and older. Three outbreaks were attributed to invasive GAS infection in 2014; two of the outbreaks occurred in nursing homes, and one outbreak occurred in a medical facility (non-long-term care). One outbreak each occurred in the central, northwest and southwest regions. Additionally, twelve non-invasive outbreaks of streptococcal disease were reported. These outbreaks caused respiratory or rash illnesses (primarily presenting as “strep throat”). Of the twelve outbreaks,



Of the twelve outbreaks, three outbreaks were attributed to invasive GAS infection in 2014; two of the outbreaks occurred in nursing homes, and one outbreak occurred in a medical facility (non-long-term care). One outbreak each occurred in the central, northwest and southwest regions. Additionally, twelve non-invasive outbreaks of streptococcal disease were reported. These outbreaks caused respiratory or rash illnesses (primarily presenting as “strep throat”). Of the twelve outbreaks,

eight occurred in school (K-12) settings, three in daycare/pre-K facilities, and one in an assisted living facility. One of the outbreaks in daycare/pre-K settings included a single case of invasive GAS infection and numerous cases of non-invasive illness.

## Streptococcal Disease, Group A, Invasive or TSS Incidence Rate by Locality, Virginia, 2014

