

## **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.

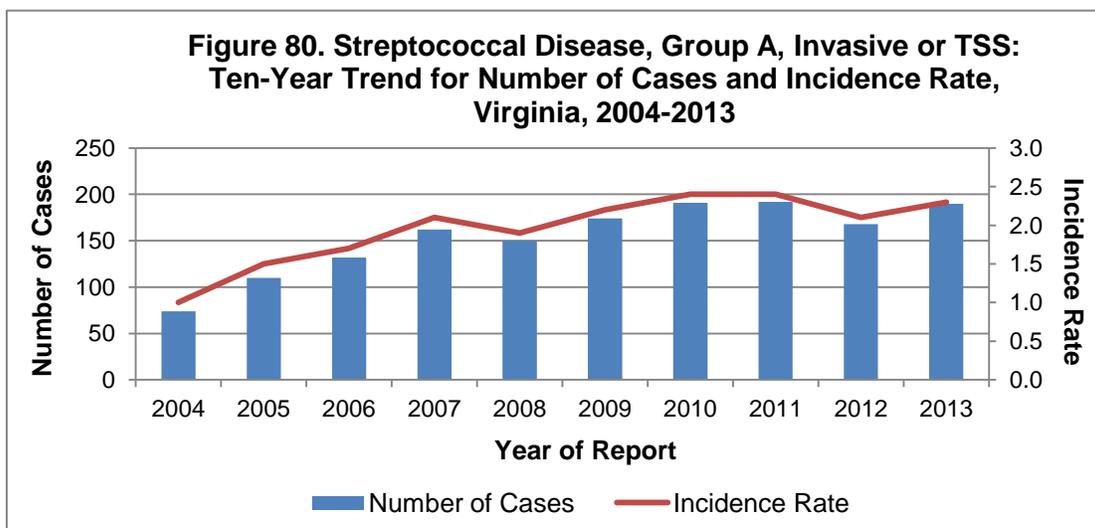
Signs/Symptoms: People may carry group A streptococci in the throat or on the skin and have no symptoms of illness. Most GAS infections are relatively mild, such as “strep throat” or impetigo (a skin infection). Rarely, the bacteria can lead to severe invasive infections of the blood or other internal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

Prevention: Preventive measures include prompt identification and treatment of non-invasive cases 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. 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.

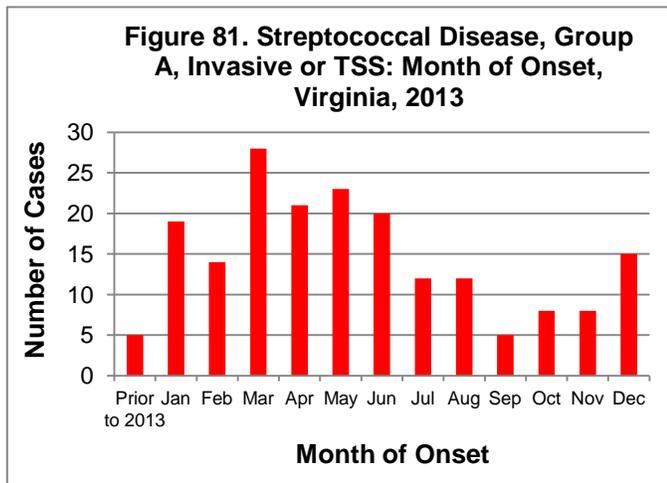
<b>Streptococcal Disease, Group A, Invasive or TSS: 2013 Data Summary</b>	
Number of Cases:	190
5-Year Average Number of Cases:	175.0
% Change from 5-Year Average:	+9%
Incidence Rate per 100,000:	2.3

During 2013, 190 cases of invasive GAS infection were reported in Virginia. This is a 13% increase from the 168 cases reported in 2012 and similar to the five-year average of 175 cases per year (Figure 80).



The highest number and incidence rate of invasive GAS infections occurred in the 60 year and older age group (88 cases, 5.8 per 100,000). This was followed by the 30-39 and 40-49 year age groups, which had incidence rates of 2.3 and 2.1 per 100,000, respectively. No cases were reported in those less than 1 year of age. The other age groups had rates between 0.5 and 1.8 per 100,000. Race information was missing for 36% of reported cases. Among cases for which race was reported, the incidence rate was higher in the white and black populations (1.6 and 1.5 per 100,000, respectively) than in the “other” population (0.3 per 100,000). Incidence was similar among males and females (2.4 and 2.2 per 100,000, respectively). Geographically, the incidence rate was highest in the northwest and southwest regions (3.2 per 100,000 each). Rates in the other regions ranged from 1.3 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, a seasonal trend was observed with 54% of cases occurring during the months of January through May, including a peak of 28 cases in March (Figure 81). This general late-winter to spring pattern is also typically seen with “strep throat”, a non-invasive GAS infection. Among the 190 cases reported in 2013, 17 deaths were attributed to invasive GAS infection. Two of the deaths were due to streptococcal toxic shock syndrome. Eleven (65%) of the deaths occurred in individuals aged 60 years and older. Four outbreaks, accounting for 9 cases, were attributed to invasive GAS infection in 2013; two of the outbreaks occurred in nursing homes, one case was associated with an assisted living facility and one was associated with the delivery of medical care services.



## Streptococcal Disease, Group A, Invasive or TSS Incidence Rate by Locality, Virginia, 2013

