

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

Agent: *Streptococcus pyogenes* (bacteria)

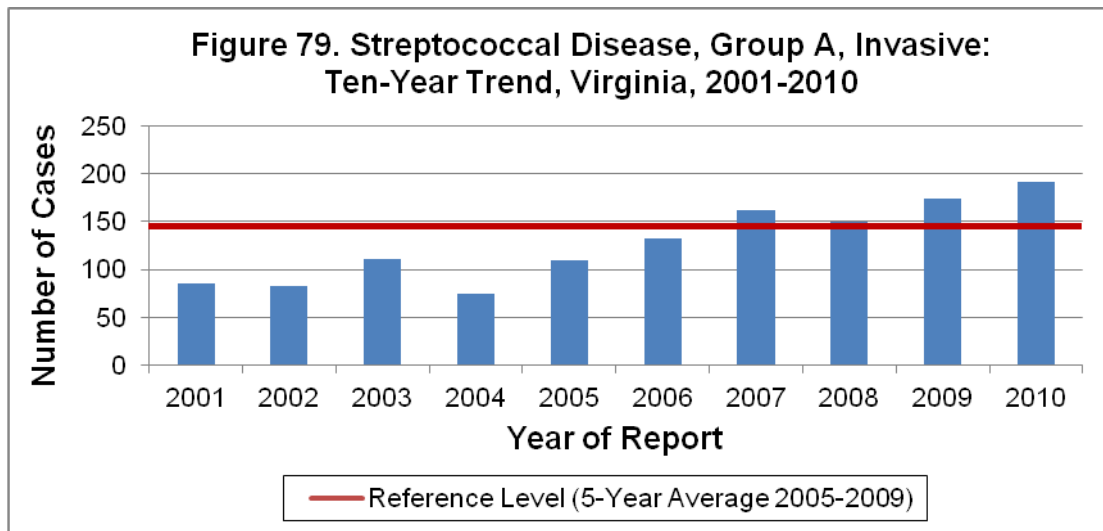
Mode of Transmission: Person-to-person transmission through direct contact with mucus from the nose, throat or other body fluids of persons who are infected with GAS, or through contact with infected wounds or sores.

Signs/Symptoms: These bacteria can cause common infections, such as strep throat and skin infections. Rarely, they can lead to severe invasive infections of the blood or other internal body fluids. These infections often require hospitalization.

Prevention: Preventive measures include prompt identification and treatment of non-invasive cases and temporary exclusion of infected healthcare employees from work for the first 24 hours of antibiotic therapy. Wounds should be kept clean and medical care should be sought at signs of infection.

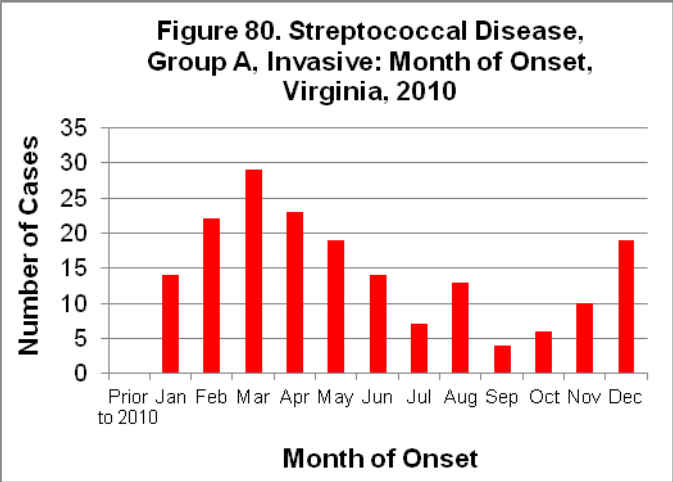
Other Important Information: Persons at higher risk for developing invasive GAS infections are older persons, immunocompromised persons, and those with chronic, underlying illnesses. The two most severe, but least common, forms of invasive GAS infections are necrotizing fasciitis (NF) and streptococcal toxic shock syndrome (STSS). NF infections present with severe pain and rapid destruction of tissue. STSS infections are characterized by shock and rapid organ failure.

During 2010, 191 cases of invasive GAS infections were reported in Virginia. This is a 10% increase from the 174 cases reported in 2009, and a 31% increase from the five-year average of 145.6 cases per year (Figure 79).



The highest incidence of invasive GAS infections occurred in the 60 year and older age group (91 cases, 6.6 per 100,000). This was followed by the 50-59 year age group (33 cases, 3.1 per 100,000). The other age groups had rates between 0.5 and 1.8 per 100,000. Race information was missing for 30% of reported cases. Among cases for which race was reported, the rate in the black and white population was the same (1.8 per 100,000). Incidence was slightly higher in males than in females (2.7 and 2.1 per 100,000, respectively). Geographically, rates were similar in the central, northwest and southwest regions (3.1 to 3.3 per 100,000), and lower in the northern and eastern regions (1.4 to 2.0 per 100,000). While cases occurred throughout the year, a seasonal trend was observed with 37% of cases occurring during the first quarter. The

number of cases began to climb in early winter, peaking in March and declined in early summer (Figure 80). This general pattern is also typically seen with “strep throat”, a non-invasive GAS infection. Among cases reported in 2010, 22 deaths were attributed to invasive GAS infection. Fifteen (68%) of the deaths occurred in those aged 60 years and older, and thirteen (59%) were in males. One outbreak attributed to invasive GAS infection occurred in 2010. The outbreak involved two elderly residents of an assisted living facility located in the eastern region. Both cases resulted in death. In 2010, ten cases of invasive GAS infection developed into STSS, two of which resulted in fatalities.



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