

## STREPTOCOCCAL DISEASE INVASIVE GROUP A (GAS)

Invasive group A streptococcal infections may manifest as any of several clinical syndromes:

- **Pneumonia**
- **Bacteremia** in association with cutaneous infection (e.g., cellulitis, erysipelas, or infection of a surgical or nonsurgical wound)
- **Deep soft-tissue infection** (e.g., myositis or necrotizing fasciitis)
- **Meningitis, peritonitis, osteomyelitis, septic arthritis, postpartum sepsis, neonatal sepsis, and nonfocal bacteremia**

### Laboratory criteria for confirmation:

- Isolation of group A *Streptococcus* (*Streptococcus pyogenes*) by culture from a normally sterile site (e.g., blood or cerebrospinal fluid, or less commonly, joint, pleural, or pericardial fluid)

### Case Classification

*Confirmed:* A case that is laboratory confirmed.

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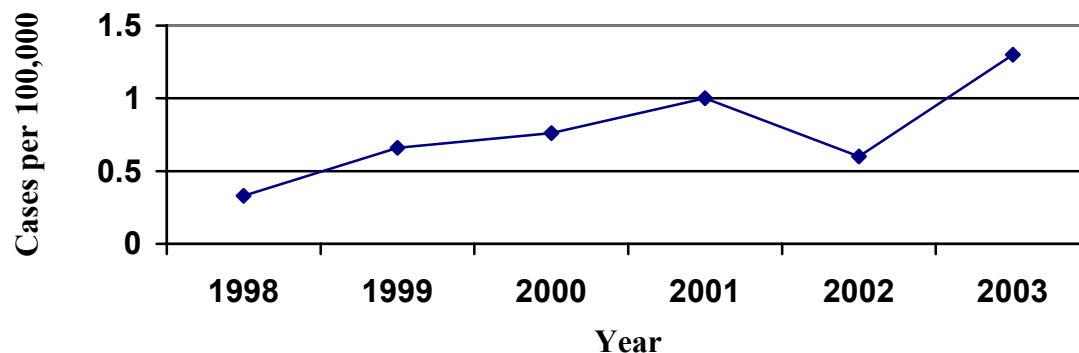
### Epidemiology

| Kentucky 2003 | Rate per 100,000 | U.S. Rate (2002) per 100,000 |
|---------------|------------------|------------------------------|
| Cases 52      | 1.3              | 1.69                         |

### Cases by Gender

|        |    |     |
|--------|----|-----|
| Female | 25 | 1.2 |
| Male   | 27 | 1.4 |

**Invasive Group A Streptococcus Incidence,  
Kentucky 1998-2003**



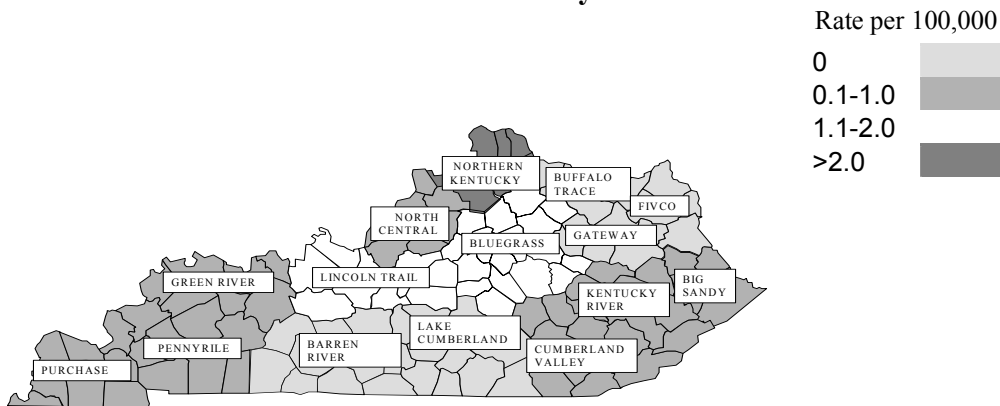
### Group A Streptococcus, Age Specific Incidence Kentucky 2003

|                  |     |       |       |       |       |       |       |     |
|------------------|-----|-------|-------|-------|-------|-------|-------|-----|
| Age in years     | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70+ |
| # Cases          | 6   | 7     | 8     | 3     | 5     | 5     | 4     | 15  |
| Rate per 100,000 | 1.1 | 1.2   | 1.5   | 0.5   | 0.8   | 1.0   | 1.2   | 4.1 |
|                  |     |       |       |       |       |       |       |     |

The 70+ year age group experienced the highest incidence rate of 4.1 cases per 100,000 and the 20-29 year age group followed with an incidence of 1.5 cases per 100,000.

There were six deaths, which translates into a case fatality rate associated with GAS of 11.5%. There was one reported outbreak involving four individuals.

### Invasive Streptococcal Group A Disease by District Kentucky 2003



Cases were reported from twenty-three counties in ten districts. The highest incidence rate at 4.7 cases per 100,000 occurred in the Northern Kentucky District where a total of nineteen cases were reported throughout the year.

| <u>District</u>   | <u>Rate/100,000</u> |
|-------------------|---------------------|
| Purchase          | 0.5                 |
| Pennyrile         | 0.9                 |
| Green River       | 1.0                 |
| Lincoln Trail     | 2.0                 |
| North Central     | 0.6                 |
| Northern Kentucky | 4.7                 |
| Big Sandy         | 0.6                 |
| Kentucky River    | 0.8                 |
| Cumberland Valley | 0.8                 |
| Bluegrass         | 2.0                 |