Costs of GAS Pharyngitis Pegged at $205 per Case

BY JEFF EVANS
Senior Writer

The medical and nonmedical costs of group A streptococcal pharyngitis in American children and adolescents add up to an estimated $205 per case, or between $224 million and $539 million annually across the country, according to results of the first study to collect empiric data of this type for the illness.

The results of the study suggest that not only might routine vaccination of school-aged children with a group A streptococcal (GAS) vaccine prevent pharyngitis, but it also could reduce unnecessary antibiotic use and the transmission of GAS infection within the community, reported Elizabeth Pfoh of Harvard Medical School, Boston, and her associates (Pediatrics 2008;121:229-34).

Ms. Pfoh and her colleagues conducted a survey over the telephone with one parent from 135 (57%) of the 236 eligible families with at least one episode of GAS pharyngitis who presented to two pediatric practice sites in the Boston metropolitan area during 2005-2006.

Children who presented to the practices were ill with symptoms associated with GAS pharyngitis for a mean of 4.5 days. In 29% of the cases, at least one other family member developed GAS pharyngitis after the index case. These transmissions led to a mean of 2.6 sick family members other than the index case in households where transmission occurred. Within families, the overall mean secondary attack rate was 20%.

The children who had GAS pharyngitis missed an average of 1.9 days of school or day care, whereas 57 of the 135 parents who were surveyed missed an average of 1.8 workdays to care for their child. A second parent or caregiver missed a mean of 1.5 workdays in 14% of the families. A little more than half of the survey respondents also said that they missed an average of 0.3 days of personal time during their child's illness.

Most of the children with GAS pharyngitis required only one outpatient visit (87%). None of the children required hospitalization for complications associated with the condition.

The investigators extrapolated from their findings to the U.S. population with various national estimates for health service utilization data, costs of services, and values of work and personal time lost to calculate the total costs in 2006 dollars.

Although the combined mean medical ($118) and nonmedical ($87) costs for each case of GAS pharyngitis were less than what has been reported for otitis media in children ($262) or pertussis in adolescents ($397), the fact that GAS pharyngitis occurs more frequently than these other infections means that there potentially could be significant economic benefits in preventing GAS pharyngitis, according to Ms. Pfoh and her coinvestigators.

The medical costs associated with GAS pharyngitis were attributable to outpatient visits (52%), followed by antibiotic treatment (24%), diagnostic testing (17%), and emergency department visits (7%). Nonmedical costs comprised time costs (46%), child care expenses (16%), transportation (15%), deductibles or copayments (15%), and over-the-counter medications (8%).

The investigators suggested that their study was limited in its generalizability because of its small sample size and its largely middle-class, English-speaking participants. They tried to limit recall bias by surveying parents between 2 and 6 weeks after the illness episode.

Any inclusion of GAS carriers who did not have true acute infections may have been balanced by the fact that the investigators did not include costs incurred by sick family members, costs of missed school days, and costs of complications. ■