Client: HEALTH BENCHMARKS, INC. STANDARD ALGORITHM

Measure Title: APPROPRIATE TESTING FOR CHILDREN WITH PHARYNGITIS

Disease State: Pharyngitis

Indicator Classification: Diagnosis

Strength of Recommendation: B

Organizations Providing Recommendation:
- American Academy of Family Physicians
- American College of Physicians
- American Society of Internal Medicine
- Infectious Disease Society of America
- The Institute for Clinical Systems Improvement

Clinical Intent: To ensure that members diagnosed with pharyngitis and treated with antibiotics receive appropriate testing for streptococcus within a clinically appropriate timeframe.

Background:
- Disease Burden:
  - In 2002, pharyngitis accounted for approximately 10 million office visits in the United States.[1]

Reason for Indicated Intervention or Treatment:
- A recent large national study of 52,135 upper respiratory tract infections found that antibiotics were prescribed 65% of the time for acute pharyngitis episodes in spite of the fact that they provide little or no benefit to patients. Moreover, broad spectrum antibiotics were prescribed for 40% of pharyngitis episodes.[2]
- Widespread inappropriate antibiotic utilization has led to increasing levels of antibiotic resistance in bacteria that were once highly susceptible to antimicrobials.[3-5]
- Group A streptococcus is a highly treatable infection with antibiotics, but is the cause of pharyngitis in only about 10% of patients who present with acute pharyngitis. A vast majority of patients continue to receive antibiotic therapy for pharyngitis in the absence of a confirmatory test.[6]
- In light of increasing antibiotic resistance, it is important for providers to use antibiotics judiciously.[7-9] Yet, it is difficult to distinguish between viral and bacterial sore throats and physicians may overestimate the probability of bacterial infection.[10, 11]

Evidence Supporting Intervention or Treatment:
- One large survey of members of the American Academy of Pediatrics suggests that there is much room for improvement in the management
of acute pharyngitis in children and adolescents. For example, many physicians use empirical therapy without diagnostic testing.[12]

- Combining a clinical approach with use of the rapid streptococcal antigen test efficiently reduces inappropriate antibiotic prescriptions, whereas empirical therapy in patients with 3 or 4 clinical symptoms or signs results in antibiotic overuse.[13]

- Furthermore, in one randomized trial of children given either penicillin or placebo for sore throat, the antibiotic had no significant beneficial effect on duration of symptoms, and served only to reduce streptococcal sequelae.[14]

**Clinical Recommendations**

- The Infectious Disease Society of America’s Practice Guidelines for the Diagnosis and Management of Group A Streptococcal Pharyngitis conclude that “unless the physician is able with confidence to exclude the diagnosis of streptococcal pharyngitis on epidemiological and clinical grounds, a laboratory test should be done to determine whether Group A streptococci are present in the pharynx.”[15]

- The Institute for Clinical Systems Improvement guideline for treatment of acute pharyngitis in children and adults states that antibiotics should be reserved for bacterial illnesses and that diagnosis of streptococcal pharyngitis should be made via laboratory testing rather than clinically.[16]

**Source**

Healthcare Effectiveness Data and Information Set (HEDIS®) 2009 Technical Specification for Physician Measurement

**Denominator**

**Denominator Definition**

Continuously enrolled members ages 2-18 years old who were diagnosed with only pharyngitis in an outpatient or emergency room setting during the 1 year period starting 6 months prior to the measurement year and who filled a prescription or received an injection for an antibiotic during the 0-3 days following the index date.

**Denominator Encounters/Claims Criteria**

- ICD-9 diagnosis code(s): 034.0x, 462.xx, 463.xx
- CPT-4 code(s): 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99281-99285, 99382-99385, 99392-99395, 99401-99404, 99411, 99412, 99420, 99429
- UB revenue code(s): 045x, 0981, 051x, 0520-0523, 0526-0529, 077x, 0982, 0983

**Drug List:** amoxicillin, ampicillin, amoxicillin-clavulanate, cefadroxil, cefazolin, cephalaxin, cephradine, trimethoprim, clindamycin, azithromycin, clarithromycin, erythromycin, erythromycin ethylsuccinate, erythromycin lactobionate, erythromycin estolate, erythromycin stearate, erythromycin-sulfisoxazole, penicillin G potassium, penicillin G sodium, penicillin V potassium, dicloxacillin, ciprofloxacin, gatifloxacin, levofloxacin, lomefloxacin, moxifloxacin, ofloxacin, sparfloxacin, cefaclor, cefprozil, cefuroxime, loracarbef,
sulfamethoxazole-trimetrombin, sulfisoxazole, doxycycline, minocycline, tetracycline, cefdinir, cefixime, cefpodoxime, ceftibuten, ceftriaxone

**Denominator Exclusion**

**Denominator Exclusion Definition**
Members who filled a prescription for an antibiotic in the 1-30 days prior to the index date.

**Denominator Exclusion Claims Criteria**
Drug List: amoxicillin, ampicillin, amoxicillin-clavulanate, cefadroxil, cefazolin, cephalaxin, cephradine, trimethoprim, clindamycin, azithromycin, clarithromycin, erythromycin, erythromycin ethylsuccinate, erythromycin lactobionate, erythromycin estolate, erythromycin stearate, erythromycin-sulfisoxazole, penicillin G potassium, penicillin G sodium, penicillin V potassium, dicloxacillin, ciprofloxacin, gatifloxacin, levofloxacin, lomefloxacin, moxifloxacin, ofloxacin, sparfloxacin, cefaclor, cefprozil, cefuroxime, loracarbef, sulfamethoxazole-trimetrombin, sulfisoxazole, doxycycline, minocycline, tetracycline, cefdinir, cefixime, cefpodoxime, ceftibuten, ceftriaxone

**Numerator**

**Numerator Definition**
Members who were given a strep test in the 7 day period starting 3 days prior to the index date and ending 3 days after the index date (inclusive of index date).

**Numerator Claims Criteria**
CPT-4 code(s): 87070, 87071, 87081, 87430, 87650-87652, 87880
LOINC code(s): 626-2, 5036-9, 6556-5, 6557-3, 6558-1, 6559-9, 11268-0, 17656-0, 18481-2, 31971-5, 49610-9 (if available)

**Physician Attribution**

**Physician Attribution Description**
Score all physicians the member saw during the 7 day period starting 3 days prior to the index date and ending 3 days after the index date (inclusive of the index date).

**References**


2 Strength of Recommendation

Strength of Recommendation Based on a Body of Evidence
FIGURE 2. Algorithm for determining the strength of a recommendation based on a body of evidence (applies to clinical recommendations regarding diagnosis, treatment, prevention, or screening). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation based on the benefits, harms, and costs of the intervention being recommended. (USPSTF = U.S. Preventive Services Task Force)