

Health Benchmarks[®] Program

Clinical Quality Indicator Specification 2011

Measure Title	APPROPRIATE TESTING FOR CHILDREN WITH PHARYNGITIS		
Disease State	Pharyngitis	Indicator Classification¹	Diagnosis
Strength of Recommendation²	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 2-18 years old diagnosed with pharyngitis and treated with antibiotics receive appropriate testing for streptococcus pharyngitis.		
Background	<p>Disease Burden</p> <ul style="list-style-type: none"> In 2002, pharyngitis accounted for approximately 10 million office visits in the United States.[1] <p>Reason for Indicated Intervention or Treatment</p> <ul style="list-style-type: none"> 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] <p>Evidence Supporting Intervention or Treatment</p> <ul style="list-style-type: none"> 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]

- A 2008 study found that pediatricians without lab tests were significantly more likely to prescribe antibiotics than physicians with tests (72.2% v. 28.2%; p<0.001).[14]
- A 2009 retrospective study found that rapid strep testing was associated with lower antibiotic prescription rates for children with pharyngitis (41.38% v. 22.45%; p<0.001).[15]
- 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.[16]
- 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.”[17]
- 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.[18]

Clinical Recommendations

Source Healthcare Effectiveness Data and Information Set (HEDIS®) 2011 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 for an antibiotic during the 0-3 days following the index date.

Denominator Index Date First instance of members 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.

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, 051x, 0520-0523, 0526-0529, 0981, 0982, 0983

Drug List: amoxicillin, ampicillin, amoxicillin-clavulanate, cefadroxil, cefazolin,

cephalexin, trimethoprim, clindamycin, azithromycin, clarithromycin, erythromycin, erythromycin ethylsuccinate, erythromycin lactobionate, , 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-trimethrombin, sulfisoxazole, doxycycline, minocycline, tetracycline, cefdinir, cefixime, cefpodoxime, ceftibuten, cefditoren, 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, cephalexin, trimethoprim, clindamycin, azithromycin, clarithromycin, erythromycin, erythromycin ethylsuccinate, erythromycin lactobionate, , 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-trimethrombin, sulfisoxazole, doxycycline, minocycline, tetracycline, cefdinir, cefixime, cefpodoxime, ceftibuten, cefditoren, 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 who diagnosed the patient with pharyngitis on the index date.

- References**
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14. Maltezou, et al., *Evaluation of a rapid antigen detection test in the diagnosis of streptococcal pharyngitis in children and its impact on antibiotic prescription*. J Antimicrob Chemother, 2008. **62**(6): p. 1407-12.
15. Ayanruoh, et al., *Impact of rapid streptococcal test on antibiotic use in a pediatric emergency department*. Pediatr Emerg Care, 2009. **25**(11): p. 748-50.
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17. Bisno, A.L., et al., *Practice guidelines for the diagnosis and management of group A streptococcal pharyngitis*. Infectious Diseases Society of America. Clin Infect Dis, 2002. **35**(2): p. 113-25.
18. (ICSI), I.f.C.S.I., *Diagnosis and treatment of respiratory illness in children and adults*. 2008, Institute for Clinical Systems Improvement (ICSI): Bloomington, MN. p. 71.

¹ **Indicator Classification** (Adapted from HEDIS® technical specifications)

Diagnosis	Measures applicable to patients receiving diagnostic workups for a symptom or condition that delineate appropriate laboratory or radiological testing to be performed (e.g., evaluation of thyroid nodule; pregnancy test in patients with vaginal bleeding or abdominal pain).
Effectiveness of Care	
Prevention	Measures applicable to asymptomatic individuals that are designed to prevent the onset of the targeted condition (e.g., immunizations).
Screening	Measures applicable to asymptomatic patients who have risk factors or pre-clinical disease, but in whom the condition has not become clinically apparent (e.g., pap smears; screening for elevated blood pressure).
Disease Management	Measures applicable to individuals diagnosed with a condition that are part of the treatment or management of the condition (e.g., cholesterol reduction in patients with diabetes; radiation therapy following breast conserving surgery; appropriate follow-up after acute event).
Medication Monitoring	Measures applicable to patients taking medications with narrow therapeutic windows and / or potential preventable significant side effects or adverse reactions (e.g., thyroid stimulating hormone (TSH) testing after levothyroxine dose change; hepatic enzyme monitoring for patients using antimycotic pharmacotherapy).
Medication Adherence	Measures applicable to patients taking medications for chronic conditions that are designed to assess patient adherence to medication (e.g., adherence to lipid lowering medication).
Utilization	Measures applicable to patients receiving treatment for a symptom or condition that advocate appropriate utilization of laboratory and pharmaceutical resources (e.g., conservative use of imaging for low back pain; inappropriate use of antibiotics for viral upper respiratory infection).

² Strength of Recommendation

Strength of Recommendation Based on a Body of Evidence

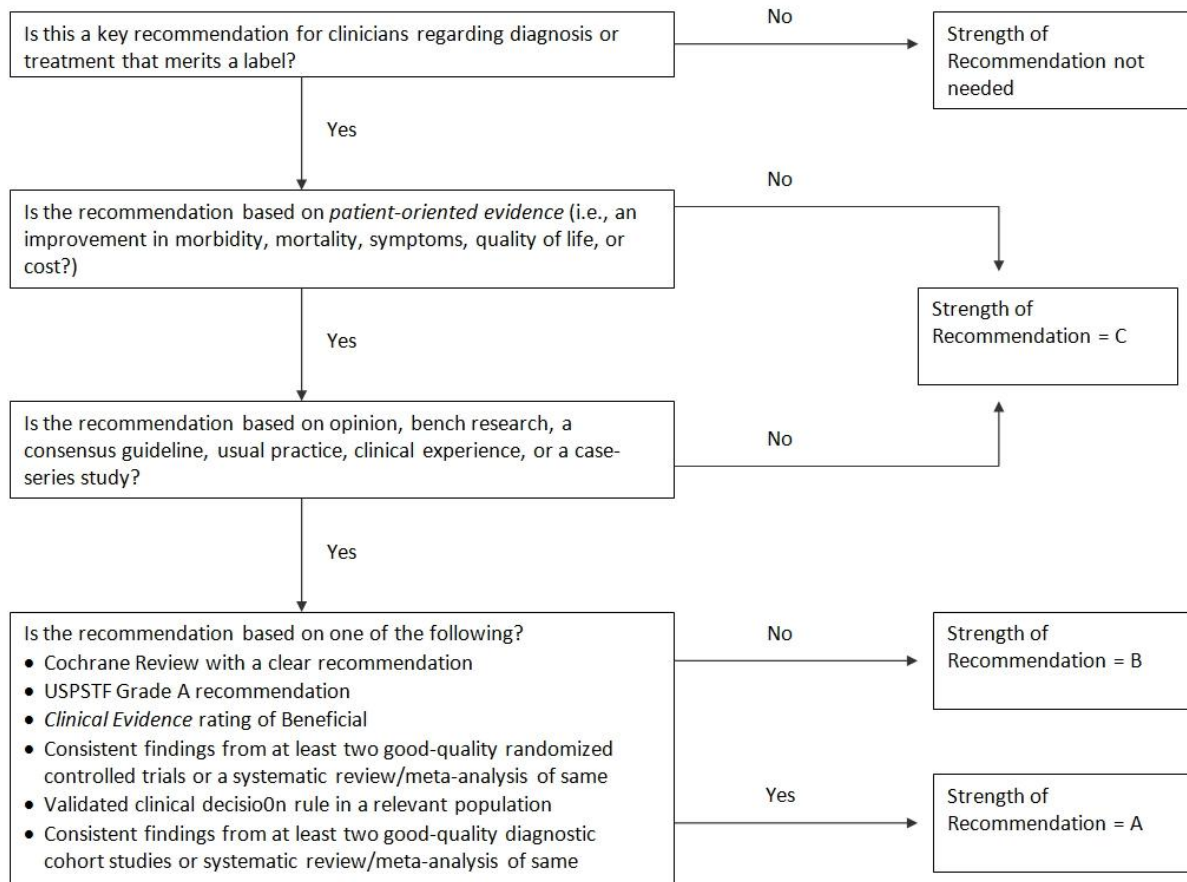


FIGURE 2. Algorithm for determining the strength of a recommendation based on a body of evidence (applies to clinical recommendations regarding diagnosis, treatment, prevention, or screening). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation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