



## Complete Summary

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### GUIDELINE TITLE

Acute pharyngitis in children.

### BIBLIOGRAPHIC SOURCE(S)

Michigan Quality Improvement Consortium. Acute pharyngitis in children. Southfield (MI): Michigan Quality Improvement Consortium; 2009 Jan. 1 p.

### GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Michigan Quality Improvement Consortium. Acute pharyngitis in children. Southfield (MI): Michigan Quality Improvement Consortium; 2007 Jan. 1 p.

## COMPLETE SUMMARY CONTENT

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## SCOPE

### DISEASE/CONDITION(S)

Acute pharyngitis, including group A beta hemolytic Streptococcus (GABHS) infection

### GUIDELINE CATEGORY

Diagnosis  
Evaluation  
Management  
Risk Assessment  
Treatment

## **CLINICAL SPECIALTY**

Family Practice  
Internal Medicine  
Otolaryngology  
Pediatrics

## **INTENDED USERS**

Advanced Practice Nurses  
Health Plans  
Physician Assistants  
Physicians

## **GUIDELINE OBJECTIVE(S)**

- To achieve significant, measurable improvements in the assessment, diagnosis, and treatment of acute pharyngitis through the development and implementation of common evidence-based clinical practice guidelines
- To design concise guidelines that are focused on key management components of acute pharyngitis to improve outcomes

## **TARGET POPULATION**

Children and adolescents 2 to 18 years of age at high risk or not high risk for rheumatic fever with suspected group A beta hemolytic Streptococcus (GABHS) pharyngitis

## **INTERVENTIONS AND PRACTICES CONSIDERED**

### **Assessment/Diagnosis**

1. Assessment of past history of rheumatic fever or household contact with a history of rheumatic fever
2. Assessment of the likelihood of strep pharyngitis
3. Throat culture or rapid screen test

### **Management/Treatment**

1. Throat culture or rapid screen negative: symptomatic treatment, avoid antibiotics
2. Strep pharyngitis
  - Penicillin VK
  - Amoxicillin
  - Benzathine penicillin G
  - Erythromycin ethyl succinate or azithromycin if penicillin allergic
  - Alternative treatment: cephalexin
3. Re-evaluation and referral to otolaryngologist, if necessary

## **MAJOR OUTCOMES CONSIDERED**

Not stated

## METHODOLOGY

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Searches of Electronic Databases

### **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

The Michigan Quality Improvement Consortium (MQIC) project leader conducts a search of current literature in support of the guideline topic. Computer database searches are used to identify published studies, existing protocols, and/or national guidelines on the selected topic developed by organizations such as the American Diabetes Association, American Heart Association, American Academy of Pediatrics, etc. If available, clinical practice guidelines from participating MQIC health plans and Michigan health systems are also used to develop a framework for the new guideline.

### **NUMBER OF SOURCE DOCUMENTS**

Not stated

### **METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE**

Weighting According to a Rating Scheme (Scheme Given)

### **RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE**

#### **Levels of Evidence for the Most Significant Recommendations**

- A. Randomized controlled trials
- B. Controlled trials, no randomization
- C. Observational studies
- D. Opinion of expert panel

### **METHODS USED TO ANALYZE THE EVIDENCE**

Review

### **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

Not stated

### **METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Expert Consensus

## **DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Using information obtained from literature searches and available health plan guidelines on the designated topic, the Michigan Quality Improvement Consortium (MQIC) project leader prepares a draft guideline to be reviewed by the medical directors' committee at one of their scheduled meetings. Priority is given to recommendations with [A] and [B] levels of evidence (see "Rating Scheme for the Strength of the Evidence" field).

The initial draft guideline is reviewed, evaluated, and revised by the committee resulting in draft two of the guideline. Additionally, the Michigan Academy of Family Physicians participates in guideline development at the onset of the process and throughout the guideline development procedure. The MQIC guideline feedback form and draft two of the guideline are distributed to the medical directors, as well as the MQIC measurement and implementation group members, for review and comments. Feedback from members is collected by the MQIC project leader and prepared for review by the medical directors' committee at their next scheduled meeting. The review, evaluation, and revision process with several iterations of the guideline may be repeated over several meetings before consensus is reached on a final draft guideline.

## **RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

Not applicable

## **COST ANALYSIS**

A formal cost analysis was not performed and published cost analyses were not reviewed.

## **METHOD OF GUIDELINE VALIDATION**

External Peer Review  
Internal Peer Review

## **DESCRIPTION OF METHOD OF GUIDELINE VALIDATION**

When consensus is reached on the final draft guideline, the medical directors approve the guideline for external distribution to practitioners with review and comments requested via the Michigan Quality Improvement Consortium (MQIC) health plans (project leader distributes final draft to medical directors' committee, measurement and implementation groups to solicit feedback).

The MQIC project leader also forwards the approved guideline draft to appropriate state medical specialty societies for their input. After all feedback is received from external reviews, it is presented for discussion at the next scheduled committee meeting. Based on feedback, subsequent guideline review, evaluation, and revision may be required prior to final guideline approval.

The MQIC Medical Directors approved this updated guideline in January 2009.

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

The level of evidence grades (A-D) are provided for the most significant recommendations and are defined at the end of the "Major Recommendations" field.

#### Assessment

Assess past history of rheumatic fever (especially carditis or valvular disease) or household contact with a history of rheumatic fever to identify high-risk patients.

Assess the likelihood of strep pharyngitis by looking for the following:

- Sudden onset
- Sore throat
- Fever
- Patchy discrete exudate
- Headache
- Nausea, vomiting, and abdominal pain
- Inflammation of pharynx and tonsils
- Tender, enlarged anterior cervical nodes
- Patient aged 5–15 years
- Presentation in winter or early spring
- History of exposure
- No cough

#### Diagnosis

##### Not High-Risk for Rheumatic Fever

*Testing (intermediate or high probability of group A beta hemolytic streptococci [GABHS]) and Treatment*

##### Throat Culture

- If throat culture is positive, use antibiotics.
- If throat culture is negative, use symptomatic treatment only. **Avoid antibiotics.**

#### OR

##### Rapid Screen

- If Rapid Screen is positive, use antibiotics.
- If Rapid Screen is negative, culture<sup>1</sup> and only use antibiotics if throat culture is positive.

<sup>1</sup>Culture optional for age 16 and older

## High Risk for Rheumatic Fever or Household Contact with History of Rheumatic Fever or Confirmed Strep

Start antibiotics immediately. Obtain throat culture. If negative, stop antibiotics.

### Treatment

(See [www.med.umich.edu/1info/FHP/practiceguides/pharyngitis/pharyn.pdf](http://www.med.umich.edu/1info/FHP/practiceguides/pharyngitis/pharyn.pdf) for detailed drug and dosing recommendations)

### Preferred Treatment for Strep Pharyngitis

1. Penicillin VK: 250–500 mg twice or three times daily (bid-tid) x 10 days
2. Amoxicillin: 40 mg/kg/day divided bid-tid x 10 days [**A**] or 750 mg daily x 10 days if compliance is a concern
3. Benzathine penicillin G intramuscularly (IM) x 1
4. If allergic to penicillin: erythromycin ethyl succinate: 40 mg/kg/day two-four times daily (bid-qid) (max 1 g/day) x 10 days or azithromycin
5. With oral antibiotics, a full 10 day course is required (exception: azithromycin)

### Alternative Treatment for Strep Pharyngitis

6. Cephalexin

### Re-Evaluation/Referral

1. If failure to respond clinically after 48 hours of treatment, rule out peritonsillar or retropharyngeal abscess. If present, prompt otolaryngology (ENT) evaluation is recommended.
2. Assess the potential for a compliance problem.

### Definitions:

### Levels of Evidence for the Most Significant Recommendations

- A. Randomized controlled trials
- B. Controlled trials, no randomization
- C. Observational studies
- D. Opinion of expert panel

### CLINICAL ALGORITHM(S)

None provided

## EVIDENCE SUPPORTING THE RECOMMENDATIONS

### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence is provided for the most significant recommendations (see "Major Recommendations" field).

This guideline is based on several sources including, the *ICSI Diagnosis and Treatment of Respiratory Illness in Children and Adults Guideline*, Institute for Clinical Systems Improvement, 2008 ([www.icsi.org](http://www.icsi.org)).

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

Through a collaborative approach to developing and implementing common clinical practice guidelines and performance measures for assessment, diagnosis, and treatment of acute pharyngitis in children, Michigan health plans will achieve consistent delivery of evidence-based services and better health outcomes. This approach also will augment the practice environment for physicians by reducing the administrative burdens imposed by compliance with diverse health plan guidelines and associated requirements.

### POTENTIAL HARMS

Not stated

## QUALIFYING STATEMENTS

### QUALIFYING STATEMENTS

This guideline lists core management steps. Individual patient considerations and advances in medical science may supersede or modify these recommendations.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

Approved Michigan Quality Improvement Consortium (MQIC) guidelines are disseminated through email, U.S. mail, and websites.

The MQIC project leader prepares approved guidelines for distribution. Portable Document Format (PDF) versions of the guidelines are used for distribution.

The MQIC project leader distributes approved guidelines to MQIC membership via email.

The MQIC project leader submits request to website vendor to post approved guidelines to MQIC website ([www.mqic.org/](http://www.mqic.org/)).

The MQIC project leader completes a statewide mailing of the comprehensive set of approved guidelines and educational tools annually. The guidelines and tools

are distributed in February of each year to physicians in the following medical specialties:

- Family practice
- General practice
- Internal medicine
- Other specialists for which the guideline is applicable (e.g., endocrinologists, allergists, pediatricians, cardiologists, etc.)

The statewide mailing list is derived from the Blue Cross Blue Shield of Michigan (BCBSM) provider database. Approximately 95% of the state's M.D.s and 96% of the state's D.O.s are included in the database.

The MQIC project leader submits request to the National Guidelines Clearinghouse (NGC) to post approved guidelines to NGC website ([www.guideline.gov](http://www.guideline.gov)).

## **INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES**

### **IOM CARE NEED**

Getting Better

### **IOM DOMAIN**

Effectiveness

## **IDENTIFYING INFORMATION AND AVAILABILITY**

### **BIBLIOGRAPHIC SOURCE(S)**

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### **ADAPTATION**

This guideline is based on several sources including, the ICSI *Diagnosis and Treatment of Respiratory Illness in Children and Adults* Guideline, Institute for Clinical Systems Improvement, 2008 ([www.icsi.org](http://www.icsi.org)).

### **DATE RELEASED**

2004 Apr (revised 2009 Jan)

### **GUIDELINE DEVELOPER(S)**

Michigan Quality Improvement Consortium - Professional Association

### **SOURCE(S) OF FUNDING**

Michigan Quality Improvement Consortium

## **GUIDELINE COMMITTEE**

Michigan Quality Improvement Consortium Medical Director's Committee

## **COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

Physician representatives from participating Michigan Quality Improvement Consortium health plans, Michigan State Medical Society, Michigan Osteopathic Association, Michigan Association of Health Plans, Michigan Department of Community Health, and Michigan Peer Review Organization

## **FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

Standard disclosure is requested from all individuals participating in the Michigan Quality Improvement Consortium (MQIC) guideline development process, including those parties who are solicited for guideline feedback (e.g., health plans, medical specialty societies). Additionally, members of the MQIC Medical Directors' Committee are asked to disclose all commercial relationships as well.

## **GUIDELINE STATUS**

This is the current release of the guideline.

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## **GUIDELINE AVAILABILITY**

Electronic copies: Available in Portable Document Format (PDF) from the [Michigan Quality Improvement Consortium Web site](#).

## **AVAILABILITY OF COMPANION DOCUMENTS**

None available

## **PATIENT RESOURCES**

None available

## **NGC STATUS**

This NGC summary was completed by ECRI on November 28, 2005. The updated information was verified by the guideline developer on December 19, 2005. This NGC summary was updated by ECRI on October 16, 2006. The updated information was verified by the guideline developer on November 3, 2006. This NGC summary was updated by ECRI Institute on July 11, 2007. The updated information was verified by the guideline developer on July 16, 2007. This NGC

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