

Guideline Summary NGC-8372

Guideline Title

Acute pharyngitis in children 2-18 years old.

Bibliographic Source(s)

Michigan Quality Improvement Consortium. Acute pharyngitis in children 2-18 years old. Southfield (MI): Michigan Quality Improvement Consortium; 2011 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; 2009 Jan. 1 p.

Scope

Disease/Condition(s)

- Acute pharyngitis, including group A β -hemolytic Streptococcus (GABHS) infection
- Tonsillitis

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 with acute pharyngitis and/or tonsillitis, including suspected group A β -hemolytic Streptococcus (GABHS) pharyngitis

Interventions and Practices Considered

Assessment/Diagnosis

1. Assessment of the likelihood of strep pharyngitis
2. Strep culture or rapid strep antigen testing

Management/Treatment

1. Patient counseling regarding contagion, handwashing, hygiene, and need to complete full 10-day antibiotic regimen
2. Symptomatic treatment including rest, fluids, popsicles, soft foods, and analgesics (**Note:** aspirin is not recommended for patients less than 21 years old.)
3. Antibiotics
 - Penicillin V
 - Amoxicillin
 - Benzathine penicillin G or benzathine penicillin G/procaine penicillin G (Bicillin C-R)
 - Erythromycin ethylsuccinate or azithromycin if penicillin allergic
4. Re-evaluation and referral to otolaryngologist, if clinical failure

5. Rheumatic fever considerations

Major Outcomes Considered

Not stated

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

The Michigan Quality Improvement Consortium (MQIC) health care analyst 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) health care analyst 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 health care analyst 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 (health care analyst distributes final draft to Medical Directors' Committee, measurement and implementation groups to solicit feedback).

The MQIC health care analyst also forwards the approved guideline draft to appropriate state medical specialty societies and physicians with expertise in the related field 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 2011.

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.

Possible Etiologies

- Viruses account for 70% to 80% of pharyngitis in children. Group A β -hemolytic Streptococcus (GABHS) accounts for 15% to 30%.
- Less common etiologies: Groups C and G Strep, Epstein-Barr virus, *Neisseria gonorrhoeae*, *Corynebacterium diphtheriae*.

Diagnosis

- Factors favoring GABHS: 5 to 15 years old, winter or early spring, Strep exposure, fever, sudden onset sore throat, severe pain on swallowing, absence of cough, tonsillitis, tonsillar exudate, beefy red swollen uvula, palatal petechiae, tender enlarged anterior cervical nodes, scarlatiniform rash.
- Signs and symptoms of Strep vs. non-Strep overlap broadly. Suspected Strep must be confirmed by testing.
- Can obtain either Strep culture or Rapid Strep Antigen testing, swabbing both tonsils and posterior pharynx. (**Note:** In most cases, "Strep culture" is all that is needed [GABHS vs. No Strep], rather than complete "Throat culture".)
- Negative Rapid Strep testing should be validated by Strep culture.

Treatment of GABHS

- Counsel regarding: contagion, handwashing, hygiene, and need to complete full 10-day antibiotic regimen.
- Provide symptomatic treatment: rest, fluids, popsicles, soft foods, and analgesics (no aspirin <21 years old).
- Decision to treat with antibiotics should be based on test results. If clinical judgment is to initiate treatment prior to culture results, treatment should be discontinued if

culture is negative.

- If asymptomatic after 10-day treatment, there is no need to re-culture or re-treat (except in patients with history of rheumatic fever).

Preferred Treatment for Strep Pharyngitis (all require 10 days to reduce rheumatic fever risk [D], except azithromycin):

- Penicillin V: Children: 250 mg twice or three times daily (BID-TID) x 10 days; Adolescents: 250 mg TID or four times daily (QID) or 500 mg BID x 10 days.
- Amoxicillin: 40 mg/kg/day divided BID-TID x 10 days [A] or 750 mg once daily x 10 days (if compliance is a concern)
- Benzathine penicillin G intramuscularly (IM) x 1: ≤27 kg: 600,000 Units (U); >27 kg: 1.2 million U; or can use benzathine penicillin G 900,000 U/procaine penicillin G 300,000 U (Bicillin C-R 900/300, which may be less painful).
- If allergic to penicillin: erythromycin ethylsuccinate: 40 mg/kg/day BID-QID (max 1 g/day) x 10 days or azithromycin 12 mg/kg/day x 5 days (higher than standard dose, with maximum 500 mg/24 hours).

Clinical Failure

- Child should be seen if failure to respond clinically after 24 to 48 hours of treatment, or symptoms worsen.
- Consider: poor compliance, viral etiology in Strep carrier (would explain positive culture), antibiotic resistance, infectious mononucleosis (can co-exist with GABHS), peritonsillar or retropharyngeal abscess (requires prompt ear nose throat [ENT] evaluation).

Rheumatic Fever Considerations

- Risk of rheumatic fever is greatly reduced if antibiotics started within 9 days after symptoms began (allowing time to check culture results prior to initiating antibiotics).
- There is no need to test or treat asymptomatic household contacts unless the index case has rheumatic fever.

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 Infectious Diseases Society of America: Practice Guidelines for the Diagnosis and Management of GABHS (Clin Inf Dis 2002;

35:113-125; www.idsociety.org ) and the American Heart Association: Prevention of Rheumatic Fever and Diagnosis and Treatment of Acute Strep Pharyngitis (Circulation 2009;

119:1541-1551; www.ahajournals.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

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 health care analyst prepares approved guidelines for distribution. Portable Document Format (PDF) versions of the guidelines are used for distribution.

The MQIC health care analyst distributes approved guidelines to MQIC membership via email.

The MQIC health care analyst submits request to website vendor to post approved guidelines

to MQIC website (www.mqic.org ).

The MQIC health care analyst completes an annual statewide postcard mailing to physicians in all areas of medicine including primary care and specialties. The postcard provides the complete list of MQIC guidelines and includes which guidelines have been recently revised, which are coming up for revision, and any new published guidelines.

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 health care analyst submits request to the National Guideline Clearinghouse (NGC)

to post approved guidelines to NGC website (www.guideline.gov .

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Identifying Information and Availability


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Adaptation

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119:1541-1551; www.ahajournals.org ).

Date Released

2004 Apr (revised 2011 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 Directors' Committee

Composition of Group That Authored the Guideline

Physician representatives from the 13 participating Michigan Quality Improvement Consortium health plans, Michigan State Medical Society, Michigan Osteopathic Association, Michigan Association of Health Plans, Michigan Department of Community Health, Michigan Peer Review Organization, and the University of Michigan Health System

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

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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 summary was updated by ECRI Institute on June 8, 2009. The updated information was verified by the guideline developer on June 30, 2009. This NGC summary was completed by ECRI on May 13, 2011. The updated information was verified by the guideline developer on June 2, 2011.

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