Molina Healthcare of Washington, Inc.

Guideline for the Judicious use of Antibiotics

_The Washington State Clinical Practice Guidelines for the Judicious Use of Antibiotics in URI_ (Sinusitis, Otitis Media, Pharyngitis and Bronchitis) were reviewed and approved for use at the [March 27, 2002](#) Clinical Quality Improvement Committee.

The guideline was updated in 2004, reviewed, and approved by the [Clinical Quality Improvement Committee on March 24, 2004](#).

Guideline was reviewed and approved for use at the [March 22, 2006](#) Clinical Quality Improvement Committee.

Guideline was reviewed and approved for use at the [March 27, 2008](#) Clinical Quality Improvement Committee.

Guideline was reviewed and approved for use at the [March 26, 2009](#) Clinical Quality Improvement Committee.

The Guideline was updated, reviewed and approved for use at the [March 25, 2010](#) Clinical Quality Improvement Committee.

The Guideline was updated, reviewed and approved for use at the [March 24, 2011](#) Clinical Quality Improvement Committee.

The Guideline was updated, reviewed and approved for use at the [June 28, 2012](#) Clinical Quality Improvement Committee.

The Guideline was updated, reviewed and approved for use at the [June 27, 2013](#) Clinical Quality Improvement Committee.
Repeated studies and meta-analyses have demonstrated no significant benefit from antibiotics in otherwise healthy persons. Antibiotic administration is associated with allergic reactions, C. difficile infection and future antibiotic resistance in the treated patient and the community.

Educate and Advise Patients
Most patients want a diagnosis, not necessarily antibiotics. Explain to the patient that most bronchitis is a viral illness, and coughs are either viral or reactive airway disease. It is important to emphasize that antibiotics may have serious side effects and may create resistance to antibiotics in the patient or their family. This strategy is associated with equal or superior patient satisfaction. Set appropriate expectations for the duration of symptoms, i.e., cough may last for up to four weeks.

Give symptomatic relief such as codeine-based cough suppressants, NSAIDS, multi-symptom OTC medications, and possibly bronchodilators if there is any bronchospasm.

Caution patients regarding symptoms (such as high fevers and shortness of breath) that indicate more severe disease.

Recommend Vaccination
Prevent respiratory infections by vaccination:

- Influenza vaccination for all persons > 6 months of age, particularly older and younger patients and those with concomitant significant illnesses.
- Pneumococcal vaccination for those with concomitant significant illnesses and all persons > 65 years old who have not had a prior vaccination within 5 years.
- Pertussis immunization is recommended for nonpregnant adults of any age who have not had prior Tdap vaccination: promptly, if they have or anticipate having close contact with an infant less than 12 months of age (e.g., parents, grandparents, childcare providers, and healthcare practitioners); and for all others, once, in the place of one of their routine every-10-year tetanus boosters. Considerations for pregnant and post-partum patients are more complicated. See http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5704a1.htm.

For more information or additional materials, visit www.aware.md.

Supporting Organizations
Alameda Alliance for Health
Anthem Blue Cross
Blue Shield of California
CalOptima
Care1st Health Plan
CenCal Health
Health Net of California
Health Plan of San Joaquin
Inland Empire Health Plan
Kaiser Permanente
Kern Family Health Care
L.A. Care Health Plan
Molina Healthcare of California

Endorsing Organizations
American Academy of Pediatrics, California District
Association of California Nurse Leaders
California Academy of Family Physicians
California Academy of Physician Assistants
California Association of Nurse Practitioners
California Pharmacists Association
California Society of Health System Pharmacists
Urgent Care Association of America
Urgent Care College of Physicians

Reference Articles

Acute Respiratory Tract Infection Guideline Summary 2012

Acute Bacterial Sinusitis:


Pharyngitis:


Nonspecific Cough Illnesses/Acute Bronchitis/Pertussis:


Nonspecific URI:


Community Acquired Pneumonia:


For more information visit our website: www.aware.md

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3835 North Freeway Boulevard, Suite 100
Sacramento, CA 95834

For more information or additional materials, visit www.aware.md
<table>
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<th>Illness</th>
<th>Indications for Antibiotic Treatment</th>
<th>Pathogen</th>
<th>Antimicrobial Therapy</th>
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<tbody>
<tr>
<td>Acute Bacterial Sinusitis</td>
<td>When To Treat with an Antibiotic: Diagnosis of acute bacterial sinusitis may be made in adults with symptoms of a viral URI that have not improved after 10 days or that worsen after 5–7 days. Diagnosis may include some or all of the following symptoms or signs: Nasal drainage, nasal congestion, facial pressure/pain (especially when unilateral and focused in the region of a particular sinus), postnasal discharge, anorexia, fever, cough, maxillary dental pain, ear pressure/fullness. Less frequent signs and symptoms include hypoxia and fatigue, in conjunction with some or all of the above. When NOT To Treat with an Antibiotic: Nearly all cases of acute sinusitis resolve without antibiotics. Antibiotic use should be reserved for moderate symptoms that are not improving after 10 days, or that are worsening after 5–7 days, and severe symptoms.</td>
<td>Streptococcus pneumonia Nontypeable Haemophilus influenzae Moraxella catarrhalis</td>
<td>Antibiotic Duration: 7 to 10 days Failure to respond after 72 hours of antibiotics: Reevaluate patient and switch to alternate antibiotic.</td>
<td>1st Line: Amoxicillin Alternatives: Amoxicillin-clavulanate Oral cephalosporins: not first generation and notceftriaxone (i.e. cefpodoxime, cefuroxime, cefdinir, etc.) Respiratory quinolone (levofloxacin, moxifloxacin) For 8-Lactam Allergy: Trimethoprim-sulfamethoxazole, doxycycline, azithromycin, clarithromycin</td>
<td>American Academy of Allergy, Asthma &amp; Immunology (AAAAI) American Academy of Family Physicians (AAFP) American College of Physicians (ACP) Centers for Disease Control and Prevention (CDC) Sinus and Allergy Health Partnership (SAHP)</td>
</tr>
<tr>
<td>Pharyngitis</td>
<td>When To Treat with an Antibiotic: Streptococcus pyogenes (Group A Strep) Symptoms of sore throat, fever, headache. Physical findings include: Fever, tonsillopharyngeal erythema and exudates, palatal petechiae, tender and enlarged anterior cervical lymph nodes, and absence of cough. Confirm diagnosis with throat culture or rapid antigen detection before using antibiotics. When NOT To Treat with an Antibiotic: Most pharyngitis cases are viral in origin. The presence of the following is uncommon with Group A Strep, and point away from using antibiotics: conjunctivitis, cough, rhinorrhea, diabetes, and absence of fever.</td>
<td>Streptococcus pyogenes</td>
<td>Group A Strep: Treatment reserved for patients with positive rapid antigen detection or throat culture. Antibiotic Duration: Generally 10 days</td>
<td>1st Line: Penicillin V Benzathine penicillin G Amoxicillin Alternatives: Oral cephalosporins For 8-Lactam Allergy: Azithromycin Clindamycin Clarithromycin</td>
<td>APD, CDC Infectious Diseases Society of America (IDSA) American Academy of Family Physicians (AAFP) American Academy of Allergy, Asthma &amp; Immunology (AAAAI) American Thoracic Society (ATS) ACP, CDC, IDSA</td>
</tr>
<tr>
<td>Nonspecific URI</td>
<td>When NOT To Treat with an Antibiotic: 90% of cases are nonbacterial. Literature fails to use support of antibiotics in adults without history of chronic bronchitis or other co-morbid conditions. When NOT To Treat with an Antibiotic: Most pharyngitis cases are viral in origin. The presence of the following is uncommon with Group A Strep, and point away from using antibiotics: conjunctivitis, cough, rhinorrhea, diabetes, and absence of fever. When NOT To Treat with an Antibiotic: When to Treat with an Antibiotic: Mainly viral pathogens Uncomplicated: Not Indicated Uncomplicated: Not indicated Chronic COPD: Amoxicillin, trimethoprim-sulfamethoxazole, tetracyclines Other: Chloramphenicol, ciprofloxacin, azithromycin, clarithromycin</td>
<td>Viral</td>
<td>Not indicated.</td>
<td>Not indicated.</td>
<td>AAFP, ACP, CDC, IDSA</td>
</tr>
<tr>
<td>Non Specific URI</td>
<td>When NOT To Treat with an Antibiotic: Antibiotics not indicated; however, nonspecific URI is a major cause of acute respiratory illnesses presenting to primary care practitioners. Patients often present expecting some treatment. Attempt to discourage antibiotic use and explain appropriate non-pharmacologic treatment. When NOT To Treat with an Antibiotic: When to Treat with an Antibiotic: Mainly viral pathogens Empirc Therapy*: Healthy with no DRSP*** risk factors: Macrolide**: consider doxycycline Presence of co-morbidity, antibiotic use within 3 months**** or risk of 8-Lactam: Respiratory quinolone or combination of a 8-lactam plus a macrolide (or doxycycline as an alternative to the macrolide). Antibiotic duration: Minimum of 5 days; discontinue once afebrile for 48 - 72 hours. ** Consider alternative agents for macrolide-resistant S. pneumoniae in any patient including those without co-morbidities *** DRSP: Drug-resistant S. pneumoniae **** Choose a class of antibiotic that differs from the prior antibiotic.</td>
<td>Streptococcus pneumoniae Mycoplasma pneumoniae Haemophilus influenzae Chlamydia pneumoniae</td>
<td>Empiric Therapy*: Healthy with no DRSP*** risk factors: Macrolide**: consider doxycycline Presence of co-morbidity, antibiotic use within 3 months**** or risk of 8-Lactam: Respiratory quinolone or combination of a 8-lactam plus a macrolide (or doxycycline as an alternative to the macrolide). Antibiotic duration: Minimum of 5 days; discontinue once afebrile for 48 - 72 hours. ** Consider alternative agents for macrolide-resistant S. pneumoniae in any patient including those without co-morbidities *** DRSP: Drug-resistant S. pneumoniae **** Choose a class of antibiotic that differs from the prior antibiotic.</td>
<td>1st Line: Macrolide (azithromycin or clarithromycin) Doxycycline (alternative to macrolide) 8-Lactam Alternatives: (to be given with a macrolide) High dose amoxicillin or amoxicillin-clavulinate Cephalosporins (cefuroxime, cefixime) Other Alternative: Respiratory quinolone (moxifloxacin, levofloxacin 750mg QD)</td>
<td>Infectious Diseases Society of America (IDSA) American Thoracic Society (ATS) ACP, CDC, IDSA</td>
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</table>

This guideline summary is intended for physicians and healthcare professionals to consider in managing the care of their patients for acute respiratory tract infections. While the summary describes recommended courses of intervention, it is not intended as a substitute for the advice of a physician or other knowledgeable healthcare professional. These guidelines represent best clinical practice at the time of publication, but practice standards may change as more knowledge is gained.
Best Practices in the Management of Patients with Pharyngitis

Clinician efforts to prescribe appropriately and to educate young patients and their parents/caregivers about antibiotics continue to play a vital role in decreasing resistance levels. Parents/caregivers want their children to feel better soon but often do not understand that sore throat is usually caused by a virus, will not resolve with antibiotics, and that these medications have the potential to do more harm than good.

Confirm a Streptococcal Cause of Pharyngitis BEFORE Prescribing Antibiotics.

Typical symptoms and signs (pharyngitis or tonsillar swelling, erythema and exudate, fever, and lymphadenopathy) increase the probability of Strep pharyngitis but cannot confirm it. The signs and symptoms of streptococcal and non-streptococcal pharyngitis overlap too broadly for diagnosis to be made on clinical grounds alone. Laboratory confirmation of the diagnosis is necessary.

If rapid testing is negative, strongly consider throat culture for children, but wait to prescribe antibiotics until the culture is positive. (For situations where testing is not available or follow-up is difficult, clinical evidence-based strategies exist but do result in over-prescription.)

Prescribe a Narrow-Spectrum Antibiotic for Strep Pharyngitis.

- Penicillin PO or IM is still the drug of choice for strep pharyngitis.
- If the PO route is chosen, amoxicillin may be substituted for improved palatability.
- A child with Strep pharyngitis is allergic to penicillin, use a cephalosporin, clindamycin, azithromycin or clarithromycin.

Educate, Advise and Assist Patients and Parents/Caregivers.

Viral cause: If rapid step testing is positive, educate parents and patients/caregivers that the cause (pending possible cultures) is not strep but one of many different viruses, and antibiotics are not necessary. Even with typical symptoms, fewer than 30% of children have strep pharyngitis. Inform parents of patients/caregivers that prior, repeated, or recent strep infection or exposure to someone with strep may increase the chance, but does not adequately confirm a current strep infection.

Symptom management: Whether caused by a virus or strep, pharyngitis is painful, and pain control is important for maintaining patient comfort and hydration. Assist parents/caregivers in identifying safe home remedies and appropriate over-the-counter (OTC) medications (e.g., analgesics and/or antipyretics) that may offer symptom relief. Consider prescribing stronger medications if current use of adequate amounts of OTC medications is not helping.

Value of testing/potential harm of antibiotics: Advise patients and parents/caregivers that rapid tests are highly reliable and allow providers to avoid using unnecessary antibiotics and the associated possible harm (medication side effects and increasing personal and societal antimicrobial resistance).

Signs of worsening: Educate patients and parents/caregivers that rapid tests are highly reliable and allow providers to avoid using unnecessary antibiotics and the associated possible harm (medication side effects and increasing personal and societal antimicrobial resistance).

Illness prevention: Review illness prevention, including good hand and respiratory hygiene. Offer influenza vaccination to children 6 months to 18 years of age.

Educate patients and parents/caregivers that, occasionally, whatever the cause of a sore throat and whether antibiotics are prescribed or not, symptoms can worsen. If this is the case, re-evaluation is necessary. If symptoms do not begin to subside in 72 hours, schedule a re-visit for further evaluation.

CPT Codes for Group A Streptococcal Tests

Appropriate coding of Group A Streptococcal tests directly affects measures of appropriate therapy for pediatric pharyngitis, including the HEDIS measure. Appropriate coding for Group A-Streptococcal tests are provided below for office coders’ use.

<table>
<thead>
<tr>
<th>Procedure Description</th>
<th>CPT Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throat Culture</td>
<td>87070, 87071, 87081</td>
</tr>
<tr>
<td>Throat Culture, Group A</td>
<td>87650, 87651, 87652, 87430</td>
</tr>
<tr>
<td>Rapid Group A Strep Test</td>
<td>87880</td>
</tr>
</tbody>
</table>

For more information or additional materials, visit www.aware.md

Supporting Organizations

- Alameda Alliance for Health
- Anthem Blue Cross
- Blue Shield of California
- California
- Care1st Health Plan
- CenCal Health
- HealthNet of California
- Health Plan of San Joaquin
- Inland Empire Health Plan
- Kaiser Permanente
- Kern Family Health Care
- L.A. Care Health Plan
- Molina Healthcare of California

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- California Society of Health System Pharmacists
- Urgent Care Association of America
- Urgent Care College of Physicians

Otolis Media


Acute Bacterial Sinusitis


Pharyngitis


Non-specific Cough Illness/Bronchitis/Pertussis


Bronchiolitis/Non-specific URI

### Pediatric Clinical Practice Guideline Summary

**Otitis Media**

**When to Treat with an Antibiotic: Acute Otitis Media**
1. Recent, usually abrupt, onset of symptoms and middle-ear inflammation and effusion and
2. Presence of middle-ear effusion that is indicated by any of the following:
   a. Bulging of the tympanic membrane
   b. Limited or absent mobility of tympanic membrane
   c. Air fluid level behind the tympanic membrane
   d. Otoscopy and
3. Signs or symptoms of middle-ear inflammation as indicated by either:
   a. Distinct erythema of the tympanic membrane or
   b. Distinct otalgia (discomfort clearly referable to the ear(s) that interferes with or precludes normal activity or sleep)

**Antimicrobial Therapy**

<table>
<thead>
<tr>
<th>Pathogen</th>
<th>Antibiotic Duration</th>
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<tbody>
<tr>
<td>Streptococcus pneumoniae</td>
<td>7-10 days</td>
<td>Amoxicillin</td>
</tr>
<tr>
<td>Nontypeable Haemophilus influenza</td>
<td></td>
<td>Cefuroxime</td>
</tr>
<tr>
<td>Moraxella catarrhalis</td>
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</tbody>
</table>

**Guidelines Reviewed**

- American Academy of Pediatrics (AAP)
- Centers for Disease Control and Prevention (CDC)
- American Academy of Family Physicians (AAFP)

**Acute Bacterial Sinusitis**

**When to Treat with an Antibiotic: Diagnosis of acute bacterial sinusitis may be made with symptoms of viral URI (nasal discharge or daytime cough not improved after 10 days, severe illness with fever, purulent nasal discharge, facial pain) not improving after 10 days or worse after 5-7 days. Diagnosis may include some or all of the following symptoms or signs:**

- Nasal drainage, nasal congestion, facial pressure/pain (especially when unilateral and focused in the region of a particular sinus), postnasal discharge, anosmia, fever, cough, maxillary dental pain, ear pressure/fullness. Less frequent signs and symptoms include hyposmia and fatigue, in conjunction with some or all of the above.

**When NOT to Treat with an Antibiotic: Otitis Media with Effusion**

- Mainly viral pathogens

**Pharyngitis**

**When to Treat with an Antibiotic: Streptococcus pyogenes (Group A Strep)**

<table>
<thead>
<tr>
<th>Symptom and signs: sore throat, fever, headache, tonsillopharyngeal erythema, exudates, palatal petechiae, tender enlarged anterior cervical lymph nodes. Confirm diagnosis with throat culture or rapid antigen detection.</th>
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<tbody>
<tr>
<td>Streptococcus pyogenes</td>
<td></td>
<td>Amoxicillin</td>
</tr>
</tbody>
</table>

**Guidelines Reviewed**

- AAP, AAFP, CDC

**Non-specific Cough Illness / Bronchiolitis / Pertussis**

**When to Treat with an Antibiotic: Presents with prolonged, unimproving cough (14 days). Clinically different from pneumonia. If pertussis is suspected, appropriate laboratory diagnosis encouraged (culture, PCR). Pertussis should be reported to public health authorities. Chlamydia pneumoniae and Mycoplasma pneumoniae may occur in older children (unusual < 5 years of age).**

<table>
<thead>
<tr>
<th>Antibiotics not indicated.</th>
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</table>

**Length of Therapy:**

- 7-14 days (5 days for azithromycin)

**Guidelines Reviewed**

- AAP, AAFP, CDC

**Bronchiolitis / Non-specific URI**

**When to Treat with an Antibiotic: Sore throat, sneezing, mild cough, fever (generally < 102°F / 38.3°C, < 3 days), rhinorhea, nasal congestion; self-limited (typically 5-14 days).**

| > 200 viruses, including rhinoviruses, coronaviruses, adenoviruses, respiratory syncytial virus, enteroviruses (coxsackieviruses and echoviruses), influenza viruses and parainfluenza viruses. |

<table>
<thead>
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</table>

**Guidelines Reviewed**

- AAP, AAFP, CDC, IC3