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**.

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.

Acute Bacterial Sinusitis:

1. The Sinus and Allergy Health Partnership. Antimicrobial Treatment Guidelines for Acute Bacterial Rhinosinusitis. *Otolaryngol Head Neck Surg.* January, Supplement 2004;130:1-45.

2. Piccirillo JF. Clinical Practice. Acute Bacterial Sinusitis. *NEJM.* August 2004; 351:902-910.

3. Snow V, et al. Principles of Appropriate Antibiotic Use for Acute Sinusitis in Adults: Background. *Ann Intern Med.* 2001;134:498-505.

4. Slavin RG, et al. The Diagnosis and Management of Sinusitis: A Practice Parameter Update. *J Allergy Clin Immunol.* 2005;116:S13-47.

Pharyngitis:

1. Wessels MR. Clinical Practice. Streptococcal Pharyngitis. *NEJM.* 2011; 364:648-55.

2. Gerber GA, et al. Prevention of Rheumatic Fever and Diagnosis and Treatment of Acute Streptococcal Pharyngitis. Circulation. 2009;119:1541-1551.

Nonspecific Cough Illnesses/Acute Bronchitis/Pertussis:

1. Gonzalez R, et al. Principles of Appropriate Antibiotic Use for Treatment of Acute Respiratory Tract Infections in Adults: Background, Specific Aims and Methods. *Ann Intern Med.* 2001;134:479-86.

2. Gonzalez R, et al. Principles of Appropriate Antibiotic Use for Treatment of Uncomplicated Acute Bronchitis: Background. *Ann Intern Med.* 2001;134:521-29.

3. Hooton T. Antimicrobial Resistance: A Plan of Action for Community Practice. *AFP.* 2001;63:1034-39.

4. Wenzel RP, et al. Acute Bronchitis. *NEJM.* 2006;355:2125-30.

5. Centers for Disease Control and Prevention. Recommended antimicrobial agents for the treatment and postexposure prophylaxis of pertussis: 2005 CDC guidelines. *MMWR* 2005;54(No. RR-14):1-16.

Nonspecific URI:

1. Gonzalez R, et al. Principles of Appropriate Antibiotic Use for Treatment of Acute Respiratory Tract Infections in Adults: Background, Specific Aims and Methods. *Ann Intern Med.* 2001;134:479-86.

2. Gonzalez R, et al. Principles of Appropriate Antibiotic Use for Treatment of Acute Respiratory Tract Infections in Adults: Background. *Ann Intern Med.* 2001;134:490-94.

3. Institute for Clinical Systems Improvement. Health Care Guideline: Diagnosis and Treatment of Respiratory Illness in Children and Adults. Available at: www.icsi.org. Accessed May 2011.

Community Acquired Pneumonia:

1. Mandell LA, et al. Infectious Diseases Society of America/American Thoracic Society Consensus Guidelines on Management of Community-Acquired Pneumonia in Adults. *CID.* 2007;44:S27-72.

2. Drugs for Community-Acquired Bacterial Pneumonia. Med Lett Drugs Ther. 2007;49(1266):62-64.

ADULT

Acute Respiratory Tract Infection Guideline Summary

2012

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

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

CMA FOUNDATION AWARE
Alliance Working for Antibiotic Resistance Education

Adult Clinical Practice Guideline Summary

Illness	Indications for Antibiotic Treatment	Pathogen	Antimicrobial Therapy	Antibiotic	Guidelines Reviewed
Acute Bacterial Sinusitis	***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, 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.	*Streptococcus pneumoniae* Nontypeable *Haemophilus influenzae* *Moraxella catarrhalis*	**Antibiotic Duration:** 7 to 10 days Failure to respond after 72 hours of antibiotics: Reevaluate patient and switch to alternate antibiotic.	**1st Line:** • Amoxicillin **Alternatives:** • Amoxicillin-clavulanate • Oral cephalosporins: not first generation and not cefixime (i.e. cefpodoxime, cefuroxime, cefdinir, etc.) • Respiratory quinolone (levofloxacin, moxifloxacin) **For ß-Lactam Allergy:** Trimethoprim-sulfamethoxazole, doxycycline, azithromycin, clarithromycin	American Academy of Allergy, Asthma & 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)
	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.	Mainly viral pathogens			
Pharyngitis	***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.	*Streptococcus pyogenes*	**Group A Strep:** Treatment reserved for patients with positive rapid antigen detection or throat culture. **Antibiotic Duration:** Generally 10 days	**1st Line:** • Penicillin V • Benzathine penicillin G • Amoxicillin **Alternatives:** • Oral cephalosporins **For ß-Lactam Allergy:** • Azithromycin • Clindamycin • Clarithromycin	ACP, CDC Infectious Diseases Society of America (IDSA) Institute for Clinical Systems Improvement (ICSI)
	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, diarrhea, and absence of fever.	Routine respiratory viruses			
Nonspecific Cough Illness / Acute Bronchitis / Pertussis	***When NOT to Treat with an Antibiotic:*** 90% of cases are nonbacterial. Literature fails to support use of antibiotics in adults without history of chronic bronchitis or other co-morbid conditions.	Mainly viral pathogens	**Uncomplicated:** Not Indicated	**Uncomplicated:** Not indicated **Chronic COPD:** • Amoxicillin, trimethoprim-sulfamethoxazole, tetracyclines **Other:** • *Bordetella pertussis, Chlamydophila pneumoniae, Mycoplasma pneumoniae* - macrolide (azithromycin or clarithromycin) or doxycycline	AAFP, ACP, CDC, IDSA
	When to Treat with an Antibiotic: Antibiotics not indicated in patients with uncomplicated acute bacterial bronchitis. Sputum characteristics not helpful in determining need for antibiotics. Treatment is reserved for patients with acute bacterial exacerbation of chronic bronchitis and COPD, usually smokers. In patients with severe symptoms, rule out other more severe conditions, e.g. pneumonia. Testing is recommended either prior to or in conjunction with treatment for pertussis. Testing for pertussis is recommended particularly during outbreaks and according to public health recommendations.	*Chlamydophila pneumoniae* *Mycoplasma pneumoniae* *Bordetella pertussis*			
Nonspecific URI	***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.	Viral	Not indicated.	Not indicated.	AAFP, ACP, CDC, ICSI, IDSA
Outpatient Community Acquired Pneumonia	***When to Treat with an Antibiotic as an Outpatient:*** Perform CXR to confirm the diagnosis of pneumonia. Evaluate for outpatient management. Consider pre-existing conditions, calculate Pneumonia Severity Index (PSI ≤ 90 for outpatient management) or CURB-65 (0 or 1 for outpatient management). Visit www.idsociety.org for more information. Sputum gram stain and culture are recommended if active alcohol abuse, severe obstructive/structural lung disease, or pleural effusion.	*Streptococcus pneumoniae* *Mycoplasma pneumoniae* *Haemophilus influenzae* *Chlamydophila pneumoniae*	**Empiric Therapy*:** ***Healthy with no DRSP** risk factors:*** Macrolide***; consider doxycycline ***Presence of co-morbidity, antibiotic use within 3 months**** or risk of DRSP:*** Respiratory quinolone or combination of a ß-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* *** Azithromycin or Clarithromycin **** Choose a class of antibiotic that differs from the prior antibiotic	**1st Line:** • Macrolide (azithromycin or clarithromycin) • Doxycycline (alternative to macrolide) **ß-Lactam Alternatives:** (to be given with a macrolide) • High dose amoxicillin or amoxicillin-clavulanate • Cephalosporins (cefpodoxime, cefuroxime) **Other Alternative:** • Respiratory quinolone (moxifloxacin, levofloxacin 750mg QD)	Infectious Diseases Society of America / American Thoracic Society (IDSA/ATS) ICSI
	When NOT to Treat with an Antibiotic as an Outpatient: Consider inpatient admission if PSI score > 90, CURB-65 ≥ 2, unable to tolerate orals, unstable social situation, or if clinical judgment so indicates.				

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 (pharyngeal 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 nonstreptococcal 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.
- If 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 strep testing is negative, educate patients and parents/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/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.

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).

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.

Signs of worsening: 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.

Illness prevention: Review illness prevention, including good hand and respiratory hygiene. Offer influenza vaccination to children 6 months to 18 years of age. Encourage parents/caregivers and household contacts of children to get vaccinated.

CPT Codes for Group A Streptococcus Tests

Appropriate coding of Group A Streptococcus tests directly affects measures of appropriate therapy for pediatric pharyngitis, including the HEDIS measure *Appropriate Testing for Children with Pharyngitis.* To aid efforts to code accurately, CPT codes for Group A Streptococcus tests are provided below for office coders' use.

Throat culture	culture with isolation and identification of isolates (screening)	87070, 87071, 87081
Throat culture, Streptococcus Group A	direct probe technique amplified probe technique quantification antigen detection	87650 87651 87652 87430
Rapid Group A Strep Test		87880

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

Otitis Media:

1. American Academy of Pediatrics, Subcommittee on Management of Acute Otitis Media. Diagnosis and Management of Acute Otitis Media. *Pediatrics.* 2004;113:1451-65.

Acute Bacterial Sinusitis:

1. The Sinus and Allergy Health Partnership. Antimicrobial Treatment Guidelines for Acute Bacterial Rhinosinusitis. *Otolaryngol Head Neck Surg.* 2004;130:1-45.

2. Piccirillo JF. Acute Bacterial Siunsitis. *NEJM.* 2004;351:902-910.

3. Subcommittee on Management of Sinusitis and Committee on Quality Improvement. Clinical Practice Guideline: Management of Sinusitis. *Pediatrics.* 2001;108:798-808.

4. O'Brien K, et al. Acute Sinusitis – Principles of Judicious Use of Antimicrobial Agents. *Pediatrics.* 1998;101:174-77.

Pharyngitis:

1. Wessels MR. Clinical Practice. Streptococcal Pharyngitis. *NEJM.* 2011;364:648-55.

2. Gerber GA, et al. Prevention of Rheumatic Fever and Diagnosis and Treatment of Acute Streptococcal Pharyngitis. *Circulation.* 2009;119:1541-1551.

Nonspecific Cough Illness/Bronchitis/Pertussis:

1. O'Brien K, et al. Cough Illness/Bronchitis Principles of Judicious Use of Antimicrobial Agents. *Pediatrics.* 1998;101:178-81.

2. Centers for Disease Control and Prevention. Recommended antimicrobial agents for the treatment and postexposure prophylaxis of pertussis: 2005 CDC guidelines. MMWR 2005;54(No. RR-14):1-16.

Bronchiolitis/Nonspecific URI:

1. Colgan R, et al. Appropriate Antimicrobial Prescribing: Approaches that Limit Antibiotic Resistance. *AFP.* 2001;64:999-1004.

2. Dowell S, et al. Appropriate Use of Antibiotics for URIs in Children: Part II. Cough, Pharyngitis and the Common Cold. *AFP.* 1998;58:1335-42.

3. Dowell S, et al. Principles of Judicious Use of Antimicrobial Agents for Pediatric Upper Respiratory Tract Infections. *Pediatrics.* 1998;101:163-65.

4. Institute for Clinical Systems Improvement. Heath Care Guideline: Diagnosis and Treatment of Respiratory Illness in Children and Adults. Available at: www.icsi.org. Accessed May 2011.

PEDIATRIC

Acute Respiratory Tract Infection Guideline Summary

2012

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

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Alliance **W**orking for **A**ntibiotic **R**esistance **E**ducation

Pediatric Clinical Practice Guideline Summary

Illness	Indications for Antibiotic Treatment	Pathogen	Antimicrobial Therapy	Antibiotic	Guidelines Reviewed
Otitis Media	***When to Treat with an Antibiotic: Acute Otitis Media*** 1. Recent, usually abrupt, onset of signs and symptoms of 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. Otorrhea ***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] ***When NOT to Treat with an Antibiotic:*** Otitis Media with Effusion	*Streptococcus pneumoniae* Nontypeable *Haemophilus influenzae* *Moraxella catarrhalis*	**Antibiotic Duration:** 7-10 days (5 days for azithromycin) **Age Group:** • < 6 mo: antibiotics • 6 mo - 2 yrs: antibiotics if diagnosis certain; antibiotics if diagnosis uncertain and severe illness • > 2 yrs: antibiotics if diagnosis certain and severe illness **Analgesics and Antipyretics:** Always assess pain. If pain is present, add treatment to reduce pain. **Oral:** ibuprofen/acetaminophen (may use acetaminophen with codeine for moderate-severe pain). **Topical:** benzocaine (> 5 years of age).	**1st Line:** • High dose amoxicillin (80-90 mg/kg/day) • High dose amoxicillin/clavulanate (80-90 mg/kg/day of amoxicillin component) if severe illness or additional coverage desired **Alternatives:** Non-anaphylactic penicillin allergy • Cefdinir, cefpodoxime, or cefuroxime **Severe penicillin allergy** • Azithromycin or clarithromycin **Unable to tolerate oral antibiotic** • Ceftriaxone	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:*** Nearly all cases of acute sinusitis resolve without antibiotics. Antibiotic use should be reserved for moderate symptoms not improving after 10 days, or that are worsening after 5-7 days, and severe symptoms.	*Streptococcus pneumoniae* Nontypeable *Haemophilus influenzae* *Moraxella catarrhalis* Mainly viral pathogens	**Antibiotic Duration:** 7 to 10 days Failure to respond after 72 hours of antibiotics: Reevaluate patient and switch to alternate antibiotic. Fiberoptic rhinoscopy or sinus aspiration for culture may be necessary for workup of patients with severe or refractory sinusitis. Consider anti-inflammatory or decongestive therapy.	**1st Line:** • Amoxicillin (80-90 mg/kg/day) **Alternatives:** • Amoxicillin-clavulanate (80-90 mg/kg/day of amoxicillin component) • Cefpodoxime • Cefuroxime • Cefdinir • Ceftriaxone **For ß-Lactam Allergy:** • Trimethoprim-sulfamethoxazole • Azithromycin, clarithromycin • Clindamycin	AAP, AAFP, CDC Sinus and Allergy Health Partnership (SAHP)
Pharyngitis	***When to Treat with an Antibiotic: Streptococcus pyogenes (Group A Strep)*** Symptoms 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. ***When NOT to Treat with an Antibiotic: Respiratory Viral Causes*** Conjunctivitis, cough, rhinorrhea, diarrhea uncommon with Group A Strep.	*Streptococcus pyogenes* Routine respiratory viruses	**Group A Strep:** Treatment reserved for patients with positive rapid antigen detection or throat culture. **Antibiotic Duration:** Generally 10 days	**1st Line:** • Penicillin V • Benzathine penicillin G • Amoxicillin **For ß-Lactam Allergy:** • Cephalosporin, clindamycin, azithromycin and clarithromycin	AAP, AAFP, CDC Infectious Diseases Society of America (IDSA) Institute for Clinical Systems Improvement (ICSI)
Nonspecific Cough Illness / Bronchitis / Pertussis	***When to Treat with an Antibiotic:*** Presents with prolonged, unimproving cough (14 days). Clinically differentiate from pneumonia. If pertussis is suspected, appropriate laboratory diagnosis encouraged (culture, PCR). Pertussis should be reported to public health authorities. *Chlamydophila pneumoniae* and *Mycoplasma pneumoniae* may occur in older children (unusual < 5 years of age). ***When NOT to Treat with an Antibiotic:*** Nonspecific cough illness.	< 10% of cases caused by *Bordetella pertussis*, *Chlamydophila pneumoniae*, or *Mycoplasma pneumoniae*. > 90% of cases caused by routine respiratory viruses.	Antibiotics are generally not indicated. Treatment reserved for *Bordetella pertussis*, *Chlamydophila pneumoniae*, *Mycoplasma pneumoniae*. Length of Therapy: 7-14 days (5 days for azithromycin)	• Azithromycin, clarithromycin • Tetracyclines for children > 8 years of age	AAP, AAFP, CDC
Bronchiolitis / Nonspecific URI	***When NOT to Treat with an Antibiotic:*** Sore throat, sneezing, mild cough, fever (generally < 102^0 F / 38.9^0 C, < 3 days), rhinorrhea, 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.	Antibiotics not indicated. Ensure hydration. May advise rest, antipyretics, analgesics, humidifier.	• None	AAP, AAFP, CDC, ICSI

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.