Guidelines for the Use of Antibiotics in Acute Upper Respiratory Tract Infections

TABLE 1
Clinical Practice Guidelines Compendium: Children with URI

ILLNESS/PATHOGEN	*INDICATIONS FOR ANTIBIOTIC TREATMENT*	*TREATMENT*	*ANTIBIOTIC*
Otitis media *Streptococcus pneumoniae*, nontypeable *Haemophilus influenzae*, *Moraxella catarrhalis*	**When to treat with an antibiotic:** Recent, usually abrupt onset of signs and symptoms of middle ear inflammation and effusion and Presence of middle ear effusion that is indicated by any of the following: bulging of the tympanic membrane, limited or absent mobility of tympanic membrane, air fluid level behind the tympanic membrane, otorrhea and Signs or symptoms of middle ear inflammation as	**Age group** Younger than six months: antibiotics Six months to two years: antibiotics if diagnosis certain; antibiotics if diagnosis uncertain and severe illness Older than two years: antibiotics if diagnosis certain and severe illness **Analgesics and antipyretics** Always assess pain. If pain is present, treatment to reduce pain Oral: ibuprofen or acetaminophen (may use acetaminophen	**First-line therapy** High-dosage amoxicillin (80 to 90 mg per kg per day) If severe illness or additional coverage desired:high-dosage amoxicillin/clavulanate (Augmentin; 80 to 90 mg per kg per day of amoxicillin component) **Alternative therapy** Nonanaphylactic penicillin-allergic: cefdinir (Omnicef), cefpodoxime (Vantin), or cefuroxime (Ceftin) Severe penicillin allergy: azithromycin (Zithromax) or clarithromycin (Biaxin) Unable to tolerate oral antibiotic: ceftriaxone (Rocephin)

ILLNESS/PATHOGEN	INDICATIONS FOR ANTIBIOTIC TREATMENT	TREATMENT	ANTIBIOTIC
	indicated by distinct erythema of the tympanic membrane or 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	with codeine for moderate-severe pain) Topical: benzocaine	

ILLNESS/PATHOGEN	*INDICATIONS FOR ANTIBIOTIC TREATMENT*	*TREATMENT*	*ANTIBIOTIC*
Acute bacterial sinusitis *S. pneumoniae*, nontypeable *H. influenzae*, *M. catarrhalis*	**When to treat with an antibiotic:** Diagnosis may include some or all of the following symptoms or signs: nasal drainage, nasal congestion, facial pressure or pain (especially when unilateral and focused in the region of a particular sinus), postnasal discharge, hyposmia, anosmia, fever, cough, fatigue, maxillary dental pain, ear pressure or fullness. **When not to treat with an antibiotic:** Nearly all cases of acute bacterial sinusitis resolve without antibiotics. Antibiotic use should be reserved for moderate symptoms not improving after 10 days or that worsen after five	Usual antibiotic duration: 10 days Failure to respond after 72 hours of antibiotics: reevaluate patient and switch to alternate antibiotic. Fiberoptic endoscopy or sinus aspiration for culture may be necessary.	**First-line therapy** Amoxicillin (80 to 90 mg per kg per day) **Alternative therapy** Amoxicillin/clavulanate (80 to 90 mg per kg per day of amoxicillin component), cefpodoxime, cefuroxime, cefdinir, ceftriaxone For beta-lactam allergy: TMP-SMX (Bactrim, Septra), macrolides, clindamycin (Cleocin)

ILLNESS/PATHOGEN	INDICATIONS FOR ANTIBIOTIC TREATMENT	TREATMENT	ANTIBIOTIC
Pharyngitis *Streptococcus pyogenes*, routine respiratory viruses	**When to treat with an antibiotic:** *S. pyogenes* (group A streptococcal infection). Symptoms and signs: sore throat, fever, headache, nausea, vomiting, abdominal pain, tonsillopharyngeal erythema, exudates, palatal petechiae, tender enlarged anterior cervical lymph nodes. Confirm diagnosis with throat culture or rapid antigen testing; negative rapid antigen test results should be confirmed with throat culture. **When not to treat with an antibiotic:** Respiratory viral causes, conjunctivitis, cough, rhinorrhea, diarrhea uncommon with group A streptococcal infection	Group A streptococcal infection: Treatment reserved for patients with positive rapid antigen test or throat culture	**First-line therapy** Penicillin V (Veetids), penicillin G benzathine (Bicillin LA) **Alternative therapy** Amoxicillin, oral cephalosporins, clindamycin, macrolides

ILLNESS/PATHOGEN	*INDICATIONS FOR ANTIBIOTIC TREATMENT*	*TREATMENT*	*ANTIBIOTIC*
Nonspecific cough illness/bronchitis > 90 percent of cases caused by routine respiratory viruses < 10 percent of cases caused by Bordetella pertussis, *Chlamydia pneumoniae*, or *Mycoplasma pneumoniae*	**When to treat with an antibiotic:** Presents with prolonged unimproving cough (14 days); should clinically differentiate from pneumonia. Pertussis should be reported to public health authorities. C. pneumoniae and M. pneumoniae may occur in older children (unusual in those younger than five years). **When not to treat with an antibiotic:** Nonspecific cough illness	Treatment reserved for B. pertussis, *C. pneumoniae*, *M. pneumoniae*	Macrolides (tetracyclines for children older than eight years)

ILLNESS/PATHOGEN	*INDICATIONS FOR ANTIBIOTIC TREATMENT*	*TREATMENT*	*ANTIBIOTIC*
Bronchiolitis/nonspecific URI > 200 viruses, including rhinoviruses, coronaviruses, adenoviruses, respiratory syncytial virus, enteroviruses (coxsackieviruses and echoviruses), influenza viruses, and parainfluenza virus	**When not to treat with an antibiotic:** Sore throat, sneezing, mild cough, fever (generally less than 102ºF [39ºC], for less than three days), rhinorrhea, nasal congestion; self-limited (typically five to 14 days)	Adequate fluid intake; may advise rest, over-the-counter medications, humidifier	None

NOTE: *This guideline summary is intended for physicians and health care professionals to consider in managing the care of their patients for acute respiratory tract infections. Although the summary describes recommended courses of intervention, it is not intended as a substitute for the advice of a physician or other knowledgeable health care professionals. These guidelines represent best clinical practice at the time of publication, but practice standards may change as more knowledge is gained.*

URI = upper respiratory infection; TMP-SMX = trimethoprim/sulfamethoxazole.

Adapted with permission from California Medical Association Foundation. Alliance Working for Antibiotic Resistance Education (AWARE) clinical practiceguidelines. Accessed August 3, 2006, at: http://www.aware.md/clinical/clinical_guide.asp.