Northwestern Medicine-West Region
Pediatric Otitis Media Treatment Guideline Summary

Background:

- AAP published updated acute otitis media (AOM) guidelines in 2013
- The guidelines include recommendations for when to treat and for when to consider holding antibiotics in patients with AOM (ages 6 months through 12 years of age)

Diagnosis of Acute Otitis Media:

- Moderate to severe bulging of the tympanic membrane (TM) OR new onset of otorrhea not due to acute otitis externa
- Mild bulging of the TM plus recent (<48hr) onset of ear pain (or holding, tugging, rubbing of the ear if child is nonverbal) or intense erythema of TM
- If absence of middle ear effusion based on pneumatic otoscopy or tympanometry, a diagnosis of AOM should NOT be made
- It is important to be able to distinguish between AOM and otitis media with effusion (OME) because antibiotic therapy is not always recommended in patients with OME without signs of acute infection.
    - OME definition: inflammation of the middle ear with liquid collected in the middle ear; the signs and symptoms of acute infection are absent
    - MEE definition: liquid in middle ear without inflammation

Initiation of Antibiotics Recommended if:	**Consider Holding Antibiotics and Observing* if:**
-Age 6 months to 23 months -unilateral or bilateral documented AOM -Severe signs or symptoms of AOM (moderate to severe otalgia, otalgia for at least 48 hr, or temperature > 39°C [102.2°F])	-Age 6 months-23 months with -Non-severe unilateral AOM -Without severe signs or symptoms (mild otalgia < 48 hr and temp < 39°C)
-Age 6 months to 2 years -Bilateral AOM -Without severe signs or symptoms (mild otalgia < 48 hr and temp < 39°C)	-Age 24 months or older with -Bilateral or unilateral AOM -Without severe signs or symptoms (mild otalgia < 48hr and temp < 39°C) -Strongly consider treatment for bilateral AOM
-Age ≥ 2years -Unilateral or bilateral AOM -Severe signs or symptoms of AOM (moderate to severe otalgia, otalgia for at least 48 hr, or temperature > 39°C [102.2°F])	**If no antibiotics ordered, must discuss with parents the need for monitoring and follow-up if the child worsens or fails to improve within 48-72 hours (for all ages)**

***Observation Definition:** May observe 48-72 hours within onset, only if follow-up is ensured, and provide analgesia. Antibiotic prescription can be provided at discharge with instructions to start if symptoms worsen/persist over the next 48-72 hours

Treatment Recommendations (in order of preference):

- **Pain:** Treat pain in all patients as necessary
    - Acetaminophen 10-15mg/kg po q4-6hr prn pain
    - Ibuprofen 5-10mg/kg po q6hr prn pain (ages > 6 months)
- **Antibiotics:**

Criteria	**First Line Antibiotic**	**PCN Allergy Antibiotic (pick one) or Second Line Alternative**
-No amoxicillin in past 30 days -No concurrent purulent conjunctivitis	Amoxicillin 45mg/kg/dose po bid	-Cefprozil 15mg/kg po bid (2nd gen cephalosporin) -Cefdinir 7 mg/kg po bid (max 600mg daily; 3rd gen cephalosporin)
-Amoxicillin in past 30 days -Concurrent purulent conjunctivitis -History of AOM resistant to amoxicillin (suggest B-lactamase +)	Augmentin 45mg/kg/dose (amoxicillin component) and 3.2mg/kg (clavulanate component) po bid	
-Failure of amoxicillin regimen after 48-72 hours	Augmentin 45mg/kg/dose (amoxicillin component) and 3.2mg/kg (clavulanate component) po bid	-Cefdinir 7mg/kg po bid (max 600mg daily; 3rd gen cephalosporin) -Clindamycin 13mg/kg/dose po tid
-Failure of Augmentin or cephalosporin regimen after 48-72 hours or failure of second antibiotic	Ceftriaxone 50mg/kg IM or IV daily x 3 days	Clindamycin 13mg/kg/dose po tid PLUS cefdinir 7mg/kg po bid (max 600mg daily; 3rd gen cephalosporin)

- **Duration of antibiotics:**
    - < 2 years old OR any age with severe symptoms: 10 days
    - ≥2 years old with mild-moderate AOM: 7 days
- **Vaccines:** Ensure patient is up-to-date on pneumococcal and influenza vaccines as necessary per guidelines

Reference: Lieberthal AS, et al. Clinical Practice Guideline: The diagnosis and management of acute otitis media. *Pediatrics* 2013; 131(3):e964-e999.