CAREFUL ANTIBIOTIC USE

Otitis media with effusion does not require antibiotic treatment
Acute otitis media does not always require antibiotic treatment

OTITIS MEDIA

Differentiating Acute Otitis Media (AOM) from Otitis Media with Effusion (OME):
A tool for promoting appropriate antibiotic use.[1, 2]

Always use pneumatic otoscopy or tympanometry to confirm middle ear effusion

→ **No effusion**
Not OME or AOM

↓ **Yes effusion present**

Signs or symptoms of AOM-including ear pain, fever, and bulging yellow or red TM

Yes

AOM

- History of acute onset of signs and symptoms
  WITH
- The presence of middle ear effusion (indicated by bulging of the TM *or* limited/absent TM mobility *or* otorrhea *or* air-fluid level)
  WITH
- Signs or symptoms of middle-ear inflammation (indicated by distinct erythema of the TM *or* distinct otalgia)

↓

TREATMENT

Management should include assessment of pain → if pain is present, clinician should recommend treatment to reduce pain.

Age	Certain Diagnosis	Uncertain Diagnosis
< 6 mo	Antibacterial therapy	Antibacterial therapy
6 mo to 2 y	Antibacterial therapy	Antibacterial therapy if severe illness; observation option* if nonsevere illness
≥ 2 y	Antibacterial therapy if severe illness; observation option* if nonsevere illness	Observation option*

*Observation is an appropriate option only when follow-up can be ensured and antibacterial agents started if symptoms persist or worsen. Nonsevere illness is mild otalgia and fever <39°C in the past 24 hours. Severe illness is moderate to severe otalgia or fever ≥ 39°C. A certain diagnosis of AOM meets all 3 criteria: 1) rapid onset, 2) signs of middle ear effusion, and 3) signs and symptoms of middle-ear inflammation.

If the patient fails to respond to the initial management option within 48-72 hours, clinician must reassess to confirm AOM and exclude other causes of illness. If AOM is confirmed in:

- Patient initially managed with observation, begin antibacterial therapy.
- Patient initially managed with antibacterial agent, change the agent.

No

OME

Presence of effusion (including immobility of the tympanic membrane)

WITHOUT

Signs or symptoms of acute infection. Nonspecific signs and symptoms (rhinitis, cough, diarrhea) are often present.

↓

TREATMENT

Antibiotic treatment has not been demonstrated to be effective in long-term resolution of OME. A single course of treatment for 10-14 days may be used when a parent or caregiver expresses a strong aversion to impending surgery.[4]

Share this algorithm with parents. Explain when the risks of using antibiotics outweigh the benefits.

Avoiding unnecessary treatment of OME would save up to 6-8 million courses of antibiotics each year.[3]

References:

1. American Academy of Pediatrics and American Academy of Family Physicians, Subcommittee on Management of Acute Otitis Media. Diagnosis and management of acute otitis media. Pediatrics 2004;113(5):1451-65.
2. Dowell SF, Marcy SM, Phillips WR, Gerber MA, Schwartz B. Otitis media-Principles of judicious use of antimicrobial agents. Pediatrics 1998;101(1 Suppl Pt 2):165-71.
3. Stool SE, Berg AO, Berman S, et al. Otitis media with effusion in young children. Clinical practice guideline. AHCPR Publication no 94-0622 1994.
4. American Academy of Family Physicians, American Academy of Otolaryngology-Head and Neck Surgery, American Academy of Pediatrics Subcommittee on Otitis Media with Effusion. Otitis media with effusion. Pediatrics 2004;113(5):1412-29.