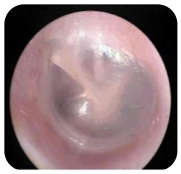
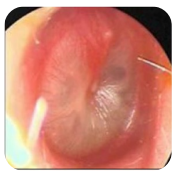
Acute Otitis Media Algorithm

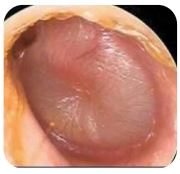
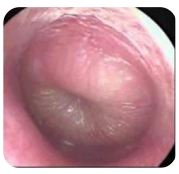
Emergency Department / Urgent Care / Primary care
Age 2 months and older

Child with ear pain, tugging, fever, or another symptom concerning for AOM presents to ED/UC/Primary Care

Diagnose AOM **only if** middle ear effusion is present (redness without effusion is **not** AOM)


No bulging


Mild bulging



Moderate / severe bulging

Not AOM

- No antibiotics indicated
- Evaluate other causes of ear pain
- Provide follow-up instructions
- Recommend analgesics

Diagnose AOM if:
Mild bulging with <48h ear pain or intense erythema

Diagnose AOM if:
Moderate to severe bulging, or new otorrhea not due to otitis externa

Assess for **severe** signs and symptoms

Severe AOM if ANY:
- Fever ≥ 39
- Moderate to severe otalgia
- Otalgia >48 hours
- Otorrhea from perforation

Are symptoms **severe**?

No

Non-severe symptoms

≥ 2 years

- Shared decision-making with family: prescribe antibiotics **OR** Offer rescue script **OR** Offer observation with PCP follow-up in 48-72 hours.
- Provide follow-up instructions
- Recommend analgesics

6-23 mos

Unilateral

- Shared decision-making with family: prescribe antibiotics **OR** Offer rescue script **OR** Offer observation with PCP follow-up in 48-72 hours.
- Provide follow-up instructions
- Recommend analgesics

Bilateral

<6mos

- Prescribe antibiotics
- Provide follow-up instructions
- Recommend analgesics

Yes

- Prescribe antibiotics
- Provide follow-up instructions
- Recommend analgesics

Definitions

Severe - moderate to severe otalgia or fever ≥ 39

Non-severe - mild otalgia & temp < 39

Recurrent - ≥3 well documented separate episodes in the past 6 months (≥ 4 in 12 months including 1 in previous 6 months)

COME – chronic otitis media w/ effusion; effusion lasting ≥3 mos and no acute symptoms

Preferred treatment - Amoxicillin

90 mg/kg/day divided BID w/ max 4000 mg/day
- <2y or any age severe symptoms: 10 days
- 2-5y + non-severe symptoms: 7 days
- ≥ 6y + non-severe symptoms: 5 days

Other treatment considerations

PCN allergy (Non-anaphylaxis) - cefdinir (or cefpodoxime). Refer to Pediatric Antibiotic Allergy Testing Service (PATS)

With purulent conjunctivitis OR Amox in last 30 days – high-dose (ES) Augmentin

Child cannot take po (rare) - Single dose **ceftriaxone** is adequate therapy for untreated AOM

COME is not typically treated with antibiotics (underlying problem is eustachian tube dysfunction)

Treatment failure

No clinical improvement in 48-72 hours, evaluate whether ongoing symptoms are from treatment failure or concomitant viral infection. Effusions can take weeks to resolve on exam.

Failed high dose amoxicillin - 10 days Augmentin (high dose)

Failed high dose Augmentin or oral Cephalosporin - Ceftriaxone IV/IM q24 hours **X 3 doses**

Can **consider** clindamycin +/- oral cephalosporin (last line)

Azithromycin, TMP/SMX, and PO cephalosporins alone **are not adequate** therapy for AOM that has failed other antibiotics

When to involve Otolaryngology

Consult ENT immediately for associated mastoiditis or facial nerve paralysis

ENT referral criteria
usually done by PCP not ED/UC
- ≥3 well documented separate episodes in the past 6 months (or ≥4 in 12 months including 1 in previous 6 months)

References (and photos)

The Diagnosis and Management of Acute Otitis Media. *Pediatrics*. 2013;131(3):e964-e999. doi:10.1542/peds.2012-3488

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Cincinnati Children's