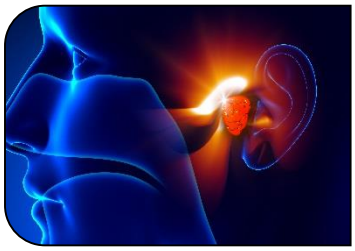
EXCELLENCE IN EMERGENCY MEDICINE

**EPPA Clinical Guidelines** ISSUED: MARCH 2016 ~ REVISED 2016



# MANAGEMENT OF
# Acute Otitis Media (AOM)

*This EPPA Clinical Guideline is intended to guide most, but not all, encounters involving acute otitis media and should not replace clinical judgment; deviate from or adapt this guideline to meet the individual patient's needs.*

## Clinical Criteria AOM (Ref. 1)

- Acute onset of symptoms (such as otalgia, fever).
- Presence of middle ear effusion.
  - Bulging of the TM.
  - New onset of otorrhea not due to otitis externa.
  - Decreased mobility on pneumatic otoscopy.
- Inflammation of the middle ear.
  - Distinct erythema.
  - Distinct otalgia.

| Age | Certain Diagnosis *(a)* | Uncertain Diagnosis *(b)* |
|---|---|---|
| < 6 Months | Treat | Treat |
| 6 Months - 2 Years | Treat | Observe unless severe<br>Treat if severe |
| ≥ 2 Years | Observe unless severe<br>Treat if severe *(c)* | Observe |

*(a)* At least 3 criteria present

*(b)* Less than 3 criteria present

*(c)* Severe defined as: severe otalgia, otorrhea, bilateral otitis, or temperature > 39° C

## Antibiotic Treatment (Ref. 1)

| | |
|---|---|
| No Penicillin Allergy | Amoxicillin<br>See special situations on next page † |
| Penicillin Allergy | Cefdinir<br>Cefuroxime<br>Cefpodoxime<br>Ceftriaxone *(a)* |

*(a)* If anaphylaxis to penicillin, consider Macrolide

## Observation

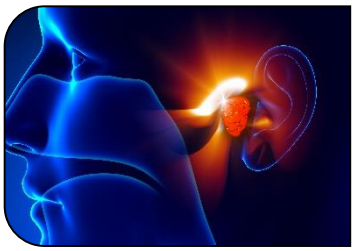
- Exclusions: immune compromise, presence of craniofacial abnormalities.
- Only if follow-up can be insured within 48-72 hours.
- Initiate antibiotics if no improvement after 48-72 hours.
- Adequate follow-up includes scheduled follow-up, phone contact with PMD, or antibiotic prescription to be filled in 48-72 hours if symptoms do not improve.

## Symptomatic at 48-72 Hours (Ref. 1)

| | |
|---|---|
| No Penicillin Allergy | Amoxicillin-Clavulanate<br>Ceftriaxone |
| Penicillin Allergy | Clindamycin +/-<br>3rd Generation<br>Cephalosporin |

## Failure of Second Antibiotic (Ref. 1)

| |
|---|
| Clindamycin + 3rd Generation Cephalosporin |
| Tympanocentesis With Specialist |



# MANAGEMENT OF
# Acute Otitis Media (AOM)

## Key Points:

**Acute Otitis Media (AOM):** An acute bacterial infection of the middle ear of less than 6 weeks duration.
**Otitis Media with Effusion (OME):** Fluid in the middle ear without signs or symptoms of inflammation that can occur just prior to or persist after infection for a few days or up to many weeks. Antibiotics are not indicated.

- Children with persistent effusion are at risk for speech and language delays and should be evaluated by an otolaryngologist.

### *Pain Management*

- Acetaminophen or Ibuprofen.
- Benzocaine and antipyrine (Auralgan) is no longer available.
- Alternative: 2% Lidocaine – 3 drops

### *Special Situations*

- **Amoxicillin Is The First-Line Antibiotic But Amoxicillin/Clavulanate Should Be Substituted If:**
  - Antibiotics for AOM within prior 30 days.
  - AOM with concurrent purulent conjunctivitis.
  - History of recurrent AOM unresponsive to amoxicillin.
- **Tympanostomy Tubes With Otorrhea**
  - Topical antimicrobial (ciprofloxacin and dexamethasone otic suspension, 4 drops in affected ear twice daily for 5 days).
  - If systemic infection, immunocompromised, or occlusion of auditory canal, oral therapy is recommended.
  - Refractory TTO: refer to ENT for evaluation and culture of fluid.
- **AOM With Perforation**
  - First line is oral amoxicillin.
  - Topical treatment including antibiotics, benzocaine, and olive oil are NOT recommended.

### *Suggested Doses for Antibiotics*

- **Amoxicillin | 2 divided doses**
  - 80-90mg/kg/day (no more than 3g/d)
- **Amoxicillin-clavulanate | 2 divided doses**
  - 90mg/kg/day of amoxicillin
  - 6.4mg/kg/day of clavulanate (14:1 amox:clav)
  - Consider augmentin ES-600 (600/42.9/5ml)
- **Cefdinir | 1 dose or 2 divided doses**
  - 14mg/kg/day (no more than 600mg/day)
- **Cefpodoxime | 2 divided doses**
  - 10mg/kg/day (no more than 400mg/day)
- **Ceftriaxone**
  - 50mg/kg/day IM or IV (no more than 1g/day)
  - Duration: 1-3 days
- **Azithromycin**
  - 10mg/kg once on day 1, then 5mg/kg once per day on days 2-5 (no more than 500mg/day on day 1, 250mg/day on days 2-5)
- **Clindamycin | 3 divided doses**
  - 10-25mg/kg/day for mild-mod infection
  - 30-40mg/kg/day for severe infection (no more than 1.8g/d)

### *Duration of Treatment*

- < 2 years of severe symptoms: 10-day course recommended.
- 2-5 years and mild-mod symptoms: 7-day course recommended.
- > 6 years and mild-mod symptoms: 5 to 7-day course recommended.

### *Follow-Up Timeline Following Resolution of AOM*

- < 2 years: 8-12 weeks (90% of middle ear effusions have resolved).
- ≥ 2 years with history of language or learning problems: 8-12 weeks.
- ≥ 2 years and no language or learning problems: next health maintenance visit or sooner if concerns for hearing loss.

## Follow-Up Resources:

- **Primary Care**
- **Otolaryngology**
- **In all cases, follow-up must occur within 48-72 hours if there is no clinical improvement.**


### References:

- Lieberthal AS, et al. Clinical Practice Guideline: The Diagnosis and Management of Acute Otitis Media. *Pediatrics.* 2013: 131(3): e965-999.

### Additional References:

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- Goldblatt EL, et al. Topical Ofloxacin Versus Systemic Amoxicillin/Clavulanate in Purulent Otorrhea in Children with Tympanostomy Tubes. *Int J Pediatr Otorhinolaryngol.* 1998; 46(1-2): 91