



Clinical Practice Guideline Diagnosis and Management of Acute Otitis Media

This evidence-based clinical practice guideline provides recommendations to primary care clinicians for the management of children from 2 months through 12 years of age with uncomplicated acute Otitis media (AOM).

Scope of the Problem

Acute otitis media (AOM) is the most common infection for which antibacterial agents are prescribed for children in the United States. As such, the diagnosis and management of AOM has a significant impact on the health of children, cost of providing care, and overall use of antibacterial agents. The illness also generates a significant social burden and indirect cost due to time lost from school and work.

There has been much discussion recently as to the necessity for the use of antibacterial agents at the time of diagnosis in children with uncomplicated AOM. Although in the United States the use of antibacterial agents in the management of AOM has been routine, in some countries in Europe it is common practice to treat the symptoms of AOM initially and only institute antibacterial therapy if clinical improvement does not occur.

For the clinician, the choice of a specific antibacterial agent has become a key aspect of management. Concerns about the rising rates of antibacterial resistance and the growing costs of antibacterial prescriptions have focused the attention of the medical community and the general public on the need for judicious use of antibacterial agents. Greater resistance among many of the pathogens that cause AOM has fueled an increase in the use of broader-spectrum and generally more expensive antibacterial agents.

RECOMMENDATION 1

To diagnose AOM the clinician should confirm a history of acute onset, identify signs of middle-ear effusion (MEE), and evaluate for the presence of signs and symptoms of middle-ear inflammation. (This recommendation is based on observational studies and a preponderance of benefit over risk; see Table 2.)

TABLE 2. Definition of AOM

A diagnosis of AOM requires

- 1) a history of acute onset of signs and symptoms,
- 2) the presence of MEE, and
- 3) signs and symptoms of middle-ear inflammation.

Elements of the definition of AOM are all of the following:

1. Recent, usually abrupt, onset of signs and symptoms of middle-ear inflammation and MEE
2. The presence of MEE that is indicated by any of the following:
 - a. Bulging of the tympanic membrane
 - b. Limited or absent mobility of the tympanic membrane
 - c. Air-fluid level behind the tympanic membrane
 - d. Otorrhea
3. Signs or symptoms of middle-ear inflammation as indicated by either
 - a. Distinct erythema of the tympanic membrane or
 - b. Distinct otalgia (discomfort clearly referable to the ear[s] that results in interference with or precludes normal activity or sleep)

Recommendation 2: The management of AOM should include an assessment of pain. If pain is present, the clinician should recommend treatment to reduce pain. **(Strong Recommendation)**

Recommendation 3A: Observation without use of antibacterial agents in a child with uncomplicated AOM is an option for selected children based on diagnostic certainty, age, illness severity, and assurance of follow-up. **(Option)**

Recommendation 3B: If a decision is made to treat with an antibacterial agent, the clinician should prescribe amoxicillin for most children. **(Recommendation)** When amoxicillin is used, the dose should be 80 to 90 mg/kg/day. **(Option)**

Recommendation 4: If the patient fails to respond to the initial management option within 48 to 72 hours, the clinician must reassess the patient to confirm AOM and exclude other causes of illness. If AOM is confirmed in the patient initially managed with observation, the clinician should begin antibacterial therapy. If the patient was initially managed with an antibacterial agent(s), the clinician should change the antibacterial agent(s). **(Recommendation)**

Recommendation 5: Clinicians should encourage the prevention of AOM through reduction of risk factors. **(Recommendation)**

Recommendation 6: There is insufficient evidence to make a recommendation regarding the use of complementary and alternative medicine (CAM) for AOM. **(No Recommendation)**

A major challenge for the practitioner is to discriminate between OME and AOM.^{17, 18} OME is more common than AOM. OME may accompany viral upper respiratory infections, be a prelude to AOM, or be a sequela of AOM.¹⁹ When OME is identified mistakenly as AOM, antibacterial agents may be prescribed unnecessarily.^{20, 21} Clinicians should strive to avoid a false-positive diagnosis in children with middle-ear discomfort caused by eustachian tube dysfunction and retraction of the tympanic membrane or when acute viral respiratory infection is superimposed on chronic preexisting MEE.

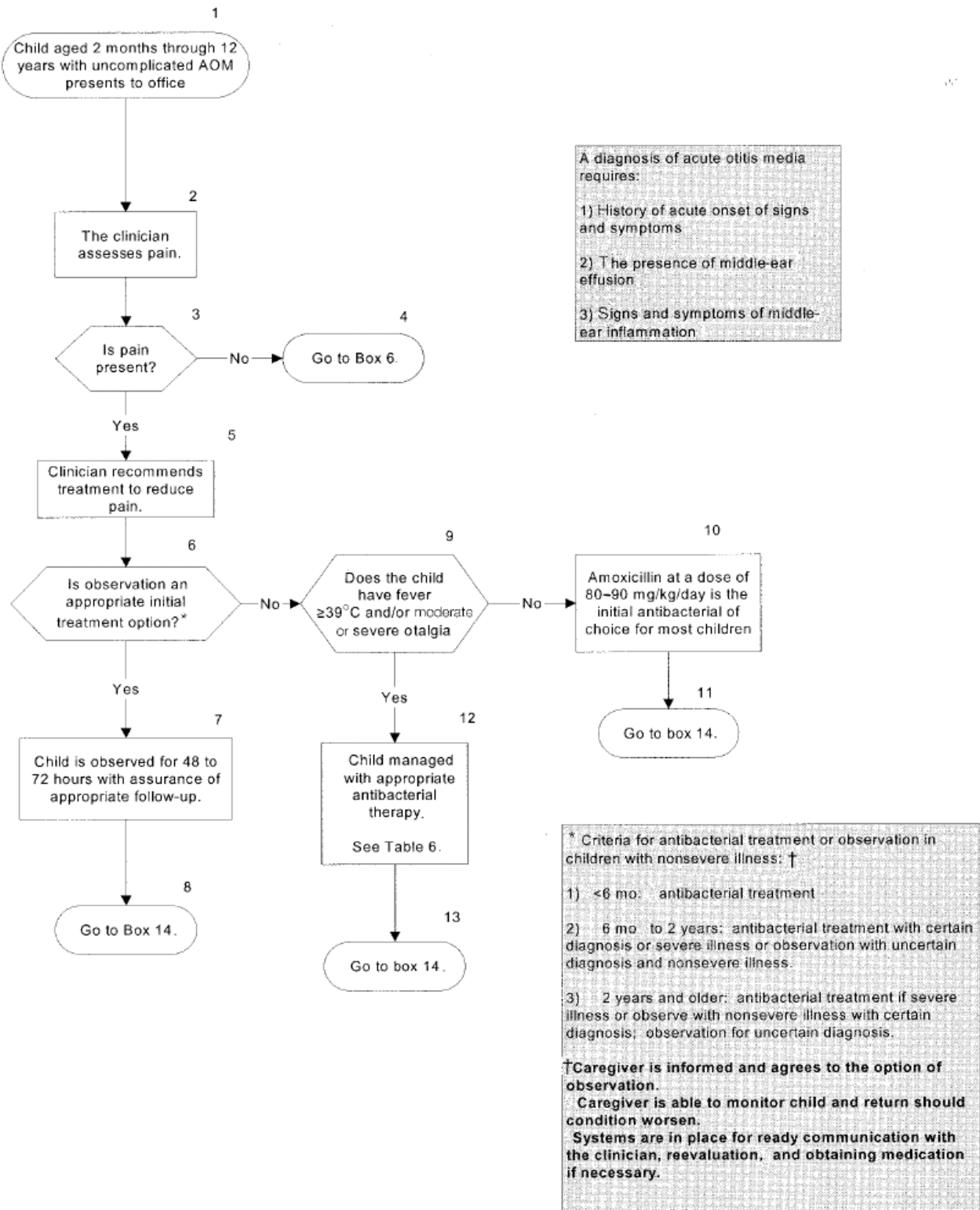


Fig 1. Management of AOM.

Adapted from American Academy of Pediatrics, American Academy of Family Physicians Subcommittee on Management of Acute Otitis Media March 2004. Quality and Peer Review Advisory Committee (QPRAC) Adopted: 5/04 Clinical Quality Improvement Committee (CQIC) Review /Approval Date: 6/05, 4/06, 10/07, 11/08. Quality Improvement Committee (QIC) Review Approval Date: 4/09
 All CPG's are routinely reviewed at least every two years. Reviews will occur more frequently when new scientific evidence or national standards are published before the two-year review date.
 Refer to the Molina Healthcare Website at www.molinahealthcare.com for the most up to date information on this CPG

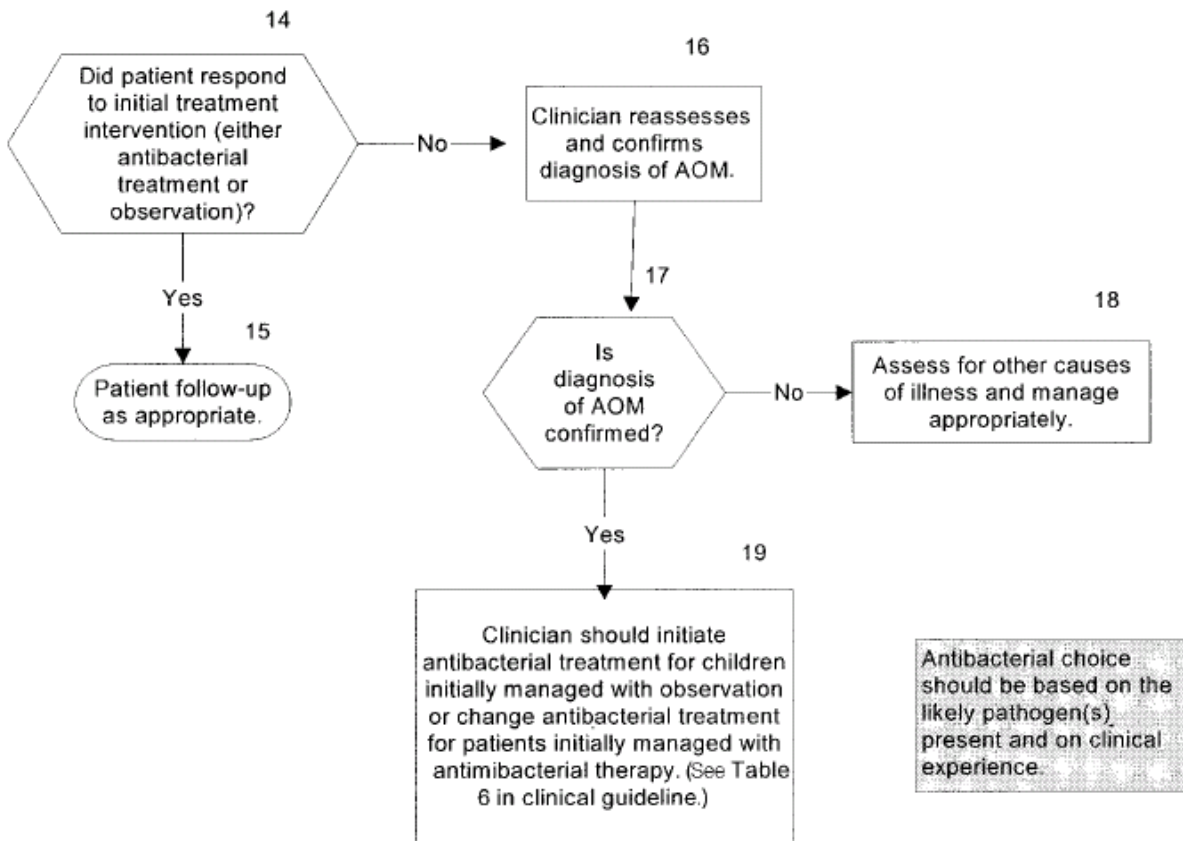


Fig 1. Continued.

TABLE 6. Recommended Antibacterial Agents for Patients Who Are Being Treated Initially With Antibacterial Agents or Have Failed 48 to 72 Hours of Observation or Initial Management With Antibacterial Agents

Temp = 39° and/or Severe Otagia	At Diagnosis for Patients Being Treated Initially With Antibacterial Agents		Clinically Defined Treatment Failure at 48-72 Hours After Initial Management With Observation Option		Clinically Defined Treatment Failure at 48-72 Hours After Initial Management With Antibacterial Agents	
	Recommended	Alternative for Penicillin Allergy	Recommended	Alternative for Penicillin Allergy	Recommended	Alternative for Penicillin Allergy
No	Amoxicillin 80-90 mg/kg/day	Non-Type 1: cefdinir, cefuroxime, cefpodoxime Type 1: azithromycin, clarithromycin	Amoxicillin 80-90 mg/kg/day	Non-Type 1: cefdinir, cefuroxime, cefpodoxime Type 1: azithromycin, clarithromycin	Amoxicillin-Clavulanate (90 mg/kg/day of amoxicillin component with 6.4 mg/kg/day of clavulanate)	Non-Type 1: Ceftriaxone-3 days Type 1: clindamycin

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Yes	Amoxicillin-clavulanate (90 mg/kg/day of amoxicillin with 6.4 mg/kg/day of clavulanate)	Ceftriaxone-1 or 3 days	Amoxicillin-clavulanate (90 mg/kg/day of amoxicillin with 6.4 mg/kg/day of clavulanate)	Ceftriaxone-1 or 3 days	Ceftriaxone-3 days	Tympanocentesis, clindamycin
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The practice guideline is not intended to replace clinical judgment or establish a protocol for all children with this condition. These recommendations may not provide the only appropriate approach to the management of this problem.

Measurement of Efficacy of the Clinical Practice Guideline

Two elements are measured to gauge the efficacy of the practitioner's compliance with the Clinical Practice Guideline.

These two measures are:

1) Measure:

Clinical Practice Guideline (CPG)	HEDIS® Measure	Measure
CPG Diagnosis and Management of Acute Otitis Media	Not a HEDIS Measure	Children 2 mo to 12 years. AOM without antibiotics for the initial AOM visit AND for three days after the initial visit with the PCP.

2) Measure:

Clinical Practice Guideline (CPG)	HEDIS® Measure	Measure
CPG Diagnosis and Management of Acute Otitis Media	Not a HEDIS Measure	Children 2 mo to 12 years. AOM without antibiotics for the initial AOM visit. BUT is prescribed antibiotics within three days after the initial visit with the PCP