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
    - 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 surgery¹.

- 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.

<table>
<thead>
<tr>
<th>Age</th>
<th>Certain Diagnosis</th>
<th>Uncertain Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 6 mo</td>
<td>Antibacterial therapy</td>
<td>Antibacterial therapy</td>
</tr>
<tr>
<td>6 mo to 2 y</td>
<td>Antibacterial therapy</td>
<td>Antibacterial therapy if severe illness; observation option* if nonsevere illness</td>
</tr>
<tr>
<td>&gt; 2 y</td>
<td>Antibacterial therapy if severe illness; observation option* if nonsevere illness</td>
<td>Observation option*</td>
</tr>
</tbody>
</table>

*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.
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.²

Reference
