

Antibiotic Decision Making

Measures

Track 2: Acute Otitis Media

Directions:

Pull 10 or more charts of patients diagnosed with Acute Otitis Media (AOM);

1) Over 6 months of age

2) Exclude patients with the following:

- tympanostomy (myringotomy) tubes;
- major congenital conditions;
- immunocompromised status

Answer the questions based on actual chart documentation.

Aim	Data Collection Question	Measure	Goal
100% of patients with otalgia will have pain treatment recommended	1. If otalgia was present, was pain treatment recommended? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A, otalgia not present, or only mild pain	Name: Pain treatment recommended for otalgia Definition: Percentage of patients for whom pain treatment was recommended for otalgia Source: Question #1 Numerator: Yes selected in Question #1 Denominator: Total Number of Charts Minus N/A, otalgia not present, or only mild pain selected in Question #1 KCA: Diagnose Infection Accurately	100%
100% of patients diagnosed with AOM will have two or more of the following AOM criteria present upon examination: <ul style="list-style-type: none"> • bulging of the tympanic membrane • erythema • recent (<48 hrs) onset of ear pain (otalgia) • intense erythema • new onset of otorrhea not due to acute otitis externa 	2. Were <u>at least two</u> of the following criteria for diagnosing AOM present upon the examination? <ul style="list-style-type: none"> • bulging of the tympanic membrane • erythema • recent (<48 hrs) onset of ear pain (otalgia) • intense erythema • new onset of otorrhea, not due to acute otitis externa <input type="radio"/> Yes <input type="radio"/> No	Name: Appropriate diagnosis based on AOM criteria Definition: Percentage of patients appropriately diagnosed with AOM that had two or more AOM criteria present upon exam Source: Question #2 Numerator: Yes selected in Question #2 Denominator: Total Number of Charts KCA: Diagnose Infection Accurately	100%


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Aim	Data Collection Question	Measure	Goal
100% of patients will be assessed for the option of additional observation (ie, watchful waiting) criteria based on Table 4: Recommendations for Initial Management for Uncomplicated AOM	3. Did the clinician assess the patient for, additional observation (ie, watchful waiting) criteria based on Table 4: Recommendations for Initial Management for Uncomplicated AOM ? O Yes O No	Name: Additional observation (ie, watchful waiting) criteria assessed Definition: Percentage of patients who were assessed for additional observation (ie, watchful waiting) criteria based on Table 4: Recommendations for Initial Management for Uncomplicated AOM Source: Question #3 Numerator: Yes, selected in Question #3 Denominator: Total Number of Charts KCA: Diagnose Infection Accurately	100%
100% of patient's medical records will have documentation that the patient/family was instructed to call if patient worsens or has not improved within 48-72 hours	4. Did the provider discuss and document instructions for the patient/family to call the practice if the patient has worsened or has not improved within 48-72 hours? O Yes, verbal discussion, and/or printed material provided and documented in the medical record O No documentation	Name: 48-72 hours follow-up plan documented Definition: Percent of patients with documentation that the patient/family was instructed to call if patient worsens or has not improved in 48-72 hours Source: Question #4 Numerator: Yes, Selected in Question #4 Denominator: Total Number of Charts KCA: Treat Infection Effectively	100%

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Aim	Data Collection Question	Measure	Goal				
100% of patients will have documentation that the risks of antibiotic therapy were discussed with the patient/family	<div>5. Did any provider discuss and document the following risks of antibiotic therapy with the patient/family?</div> <div><div><div><div></div><div>Yes</div></div><div><div></div><div>No</div></div></div><table><tr><th>Should always be discussed</th><th>Should be discussed if patient/family has concerns</th></tr><tr><td><div><div>• Side effects</div><div>• Allergic reaction</div><div>• Reasons an antibiotic is or is not prescribed</div></div></td><td><div><div>• Antibiotic resistance</div></div></td></tr></table></div>	Should always be discussed	Should be discussed if patient/family has concerns	<div><div>• Side effects</div><div>• Allergic reaction</div><div>• Reasons an antibiotic is or is not prescribed</div></div>	<div><div>• Antibiotic resistance</div></div>	<div>Name: Risks of antibiotic therapy discussed with patient/family</div> <div>Definition: Percentage of patients with documentation that risks of antibiotic therapy were discussed with the patient/family</div> <div>Source: Question #5</div> <div>Numerator: Yes selected in Question #5</div> <div>Denominator: Total Number of Charts</div> <div>KCA: Provide Guidance and Education</div>	100%
Should always be discussed	Should be discussed if patient/family has concerns						
<div><div>• Side effects</div><div>• Allergic reaction</div><div>• Reasons an antibiotic is or is not prescribed</div></div>	<div><div>• Antibiotic resistance</div></div>						

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Aim	Data Collection Question	Measure	Goal
90% of patients treated for AOM will have the appropriate antibiotic prescribed judiciously	<p>6. What antibiotic was prescribed?</p> <p>a) <input type="radio"/> amoxicillin</p> <p>b) <input type="radio"/> amoxicillin-clavulanate</p> <p>c) <input type="radio"/> cefdinir, cefuroxime, cefpodoxime, or ceftriaxone</p> <p>d) <input type="radio"/> Other antibiotic prescribed</p> <p>e) <input type="radio"/> None, additional observation (watchful waiting) chosen</p> <p>If option a) amoxicillin is selected, Skip to Question # 8;</p> <p>If option b, c or d is selected, CONTINUE</p> <p> If option e) None, additional observation is selected STOP, you have completed your review of this patient.</p>	<p>Name: Judicious use of antibiotics</p> <p>Definition: Percentage of patients prescribed antibiotics for AOM judiciously</p> <p>Source: Questions #6 & 7</p> <p>Numerator: (a) amoxicillin selected in Question #6; OR b) amoxicillin-clavulanate selected in Question #6 AND reasons a-e selected in Question #7 OR c) cefdinir, cefuroxime, cefpodoxime, or ceftriaxone selected in Question #6 AND reasons a, b, d or e selected in Question #7</p> <p>Denominator: Total number of charts MINUS (e) None, additional observation (watchful waiting) selected in Question #6</p> <p>KCA: Treat Infection Effectively</p>	90%

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Aim	Data Collection Question	Measure	Goal
N/A	<p>7. If amoxicillin was not prescribed, what was the reason the patient was not treated with amoxicillin? (Select <u>all</u> that apply)</p> <p>a) <input type="radio"/> Patient experienced previous severe allergic reaction</p> <p>b) <input type="radio"/> Patient experienced previous non-severe allergic reaction</p> <p>c) <input type="radio"/> Patient has taken amoxicillin in the past 30 days, or has purulent conjunctivitis</p> <p>d) <input type="radio"/> Patient had previous adverse drug reaction with amoxicillin-clavulanate</p> <p>e) <input type="radio"/> Patient had known or suspected multi-drug resistant organism</p> <p>f) <input type="radio"/> None of the above</p>	<p>Not Measured</p> <p>NOTE: This question is only asked if option a) amoxicillin is <u>not</u> selected in Question #6</p>	N/A
N/A	<p>8. Did the patient meet the criteria for a short course (≤ 7 days) of antibiotics for AOM? Criteria includes patient ≥ 2 years of age with mild or moderate AOM, ear pain < 48 hours, and fever $< 39^{\circ}\text{C}$ (102.2°F).</p> <p><input type="radio"/> Yes <input type="radio"/> No</p>	Not Measured	N/A

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Aim	Data Collection Question	Measure	Goal
100% of patients with appropriate duration of antibiotic treatment prescribed, based on criteria	8a. How many days of antibiotics were prescribed? a) <input type="radio"/> ≤ 7 days b) <input type="radio"/> ≥ 8 days	Name: Appropriate duration of antibiotic treatment Definition: Percentage of patients prescribed the appropriate duration of antibiotic therapy, based on criteria met Source: Question #8 & 8a Numerator: Yes , selected in Question #8 AND a) selected in Question #8a OR No , selected in Question #8 AND b) , selected in Question #8a Denominator: Total Number of Charts KCA: Treat Infection Effectively	100%

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Appendix

Otaglia

In a non-verbal child, otalgia may present as holding, tugging, rubbing of the ear.

TABLE 4¹

Recommendations for Initial Management for Uncomplicated AOM^a

Age	Otorrhea With AOM ^a	Unilateral or Bilateral AOM ^a With Severe Symptoms ^b	Bilateral AOM ^a Without Otorrhea	Unilateral AOM ^a Without Otorrhea
6 mo to 2 y	Antibiotic therapy	Antibiotic therapy	Antibiotic therapy	Antibiotic therapy or additional observation
≥2 y	Antibiotic therapy	Antibiotic therapy	Antibiotic therapy or additional observation	Antibiotic therapy or additional observation ^c

Note: Criteria for a short course (≤7 days) of antibiotics for AOM includes patients ≥2 years of age with mild or moderate AOM, ear pain <48 hours, and fever <39C (102.2F).

¹Lieberthal AS, Carroll AE, Chonmaitree T, et al. [AAP Clinical Practice Guideline: the diagnosis and management of acute otitis media](#). *Pediatrics*. 2013;131(3):e964-e999

Antibiotic Resistance

Antibiotic resistance refers to bacteria that have become resistance to the antibiotics designed to kill them. The overuse and/or inappropriate use of antibiotics can result in the drugs' ability to treat the infection.

Non-severe and Severe Allergic Reactions

- **Non-severe** symptoms include hives or pruritic (itchy) rashes.
- **Severe** symptoms include anaphylaxis, angioedema, throat tightening, wheezing plus shock, airway compromise, or cardiovascular collapse. Cardiac collapse requires intervention (eg epinephrine, corticosteroids, vasopressors).

Note: Side effects such as vomiting, abdominal pain, and diarrhea are *non-allergic*.

Other Antibiotic Prescribed¹

Antibiotic	Remarks
levofloxacin, linezolid, or clindamycin ²	May be recommended if: <ul style="list-style-type: none"> • Patient experienced previous severe allergic reaction

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	<ul style="list-style-type: none"> • Patient had previous adverse drug reaction with amoxicillin-clavulanate • Patient had known or suspected multi-drug resistant organism
azithromycin, trimethoprim-sulfamethoxazole, cephalexin, cefixime, tetracycline, ciprofloxacin, or moxifloxacin	NOT recommended. These medications do not provide appropriate coverage for typical bacterial AOM pathogens.

¹[AAP Clinical Practice Guideline: The Diagnosis and Management of Acute Otitis Media](#) *Pediatrics*; 2013; 131(3); 1451 -1465. March 2013