

Judicious Use of Antibiotics

Measures

Track 4: Acute Bacterial Sinusitis

Directions:

Pull 10 or more charts of patients diagnosed with acute bacterial sinusitis and;

- 1) Over 12 months of age;
- 2) Exclude patients that were hospitalized

Aim	Data Collection Question	Measure	Goal
<p>100% of patients diagnosed with acute bacterial sinusitis will present with one or more of the acute bacterial sinusitis criteria and be 12 months of age or older</p>	<p>1. During the patient history/examination did this patient meet <u>one or more</u> of the following criteria for diagnosing acute bacterial sinusitis?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <div data-bbox="498 861 925 1237" style="border: 1px solid black; padding: 5px;"> <p>Criteria for diagnosing acute bacterial sinusitis:</p> <p>Concurrent fever, temperature $\geq 39^{\circ}\text{C}$ (102.2°F) and purulent nasal discharge for 3 or more days.</p> <p>Persistent illness, ie, nasal discharge (of any quality) <u>or</u> daytime cough <u>or</u> both lasting more than 10 to 14 days without improvement.</p> <p>Worsening course, ie, worsening or new onset of nasal discharge, daytime cough, or fever after initial improvement.</p> </div>	<p>Name: Appropriate diagnosis of acute bacterial sinusitis based on acute bacterial sinusitis criteria present upon exam</p> <p>Definition: Percentage of patients who are appropriately diagnosed with acute bacterial sinusitis that present with one or more of the criteria for acute bacterial sinusitis and is 12 months of age or older</p> <p>Source: Question #1</p> <p>Numerator: Yes selected in Question #1</p> <p>Denominator: Total Number of Charts of patients with Yes selected in Question #1</p>	<p>100%</p>

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0% of patients will have radiographic imaging performed if patient met criteria for acute bacterial sinusitis	<p>2. Was radiographic imaging performed (eg, sinus radiograph, CT scan, MRI)?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p>	<p>Name: Inappropriate use of radiographic imaging</p> <p>Definition: Percentage of patients for whom radiographic imaging was performed</p> <p>Source: Question #2</p> <p>Numerator: Yes selected in Question #2</p> <p>Denominator: Total Number of Charts</p> <p>Note: <i>Clinicians should not obtain imaging studies (plain films, contrastenhanced computed tomography [CT], MRI, or ultrasonography) to distinguish acute bacterial sinusitis from viral URI (Evidence Quality: B; Strong Recommendation).</i></p>	0%
100% of patients will be assessed for the option of additional observation (ie, watchful waiting) for 3 days if criteria for additional outpatient observation is met	<p>3. Did the provider seeing the patient assess the patient for additional observation (ie, watchful waiting) for 3 days if the patient met criteria for additional outpatient observation?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p>	<p>Name: Additional observation (ie, watchful waiting) criteria assessed</p> <p>Definition: Percentage of patients who were assessed for 3 days of additional observation (ie, watchful waiting) if the patient met criteria for additional outpatient observation</p> <p>Source: Question #3</p> <p>Numerator: Yes, selected in Question #3</p> <p>Denominator: Total Number of Charts</p> <p>Note: <i>The clinician should either prescribe antibiotic therapy OR offer additional outpatient observation for 3 days to children with persistent illness (nasal discharge of any quality or cough or both for at least 10 days without evidence of improvement) (Evidence Quality: B; Recommendation)</i></p>	100%

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Aim	Data Collection Question	Measure	Goal						
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	<p>4. Did the provider seeing the patient document in the medical record that this patient/family was instructed to call if patient worsens or has not improved within 48-72 hours?</p> <p><input type="radio"/> Yes, verbal discussion, and/or printed material provided and documented in the medical record</p> <p><input type="radio"/> No documentation</p>	<p>Name: 48- 72 hours follow-up plan documented</p> <p>Definition: Percent of patients who were instructed to call if patient worsens or has not improved in 48-72 hours</p> <p>Source: Question #4</p> <p>Numerator: Yes, Selected in Question #4</p> <p>Denominator: Total Number of Charts</p>	100%						
100% of patients prescribed antibiotics will have documentation that the risks of antibiotic therapy were discussed with the patient/family	<p>5. Did the provider seeing the patient <u>discuss</u> and document the following risks of antibiotic therapy with the patient/family?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input type="radio"/> NA, no antibiotic prescribed</p> <table border="1" data-bbox="477 964 910 1209"> <tr> <td data-bbox="477 964 656 1086">Should always be discussed:</td><td data-bbox="656 964 910 1086">Should be discussed if patient/family has concerns:</td></tr> <tr> <td data-bbox="477 1086 656 1144"> <ul style="list-style-type: none"> <li data-bbox="477 1086 656 1127">• Side effects </td><td data-bbox="656 1086 910 1144"> <ul style="list-style-type: none"> <li data-bbox="656 1086 910 1127">• Antibiotic resistance </td></tr> <tr> <td data-bbox="477 1144 656 1209"> <ul style="list-style-type: none"> <li data-bbox="477 1144 656 1209">• Allergic reaction </td><td data-bbox="656 1144 910 1209"></td></tr> </table> <p>If Yes, or No selected, CONTINUE</p> <p>STOP</p> <p>If NA, no antibiotic prescribed STOP, you have completed your review of this patient.</p>	Should always be discussed:	Should be discussed if patient/family has concerns:	<ul style="list-style-type: none"> <li data-bbox="477 1086 656 1127">• Side effects 	<ul style="list-style-type: none"> <li data-bbox="656 1086 910 1127">• Antibiotic resistance 	<ul style="list-style-type: none"> <li data-bbox="477 1144 656 1209">• Allergic reaction 		<p>Name: Risks of antibiotic therapy discussed with patient/family</p> <p>Definition: Percentage of patients prescribed antibiotics with documentation that of risks of antibiotic therapy were discussed with the patient/family</p> <p>Source: Question #5</p> <p>Numerator: Yes selected in Question #5</p> <p>Denominator: Total Number of Charts MINUS N/A, no antibiotic prescribed selected in Question #5</p> <p>NOTE: Physicians may want to discuss risks of antibiotic therapy with patient/family, however, it is not required unless an antibiotic is prescribed.</p>	100%
Should always be discussed:	Should be discussed if patient/family has concerns:								
<ul style="list-style-type: none"> <li data-bbox="477 1086 656 1127">• Side effects 	<ul style="list-style-type: none"> <li data-bbox="656 1086 910 1127">• Antibiotic resistance 								
<ul style="list-style-type: none"> <li data-bbox="477 1144 656 1209">• Allergic reaction 									



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Aim	Data Collection Question	Measure	Goal
80% of patients with acute bacterial sinusitis will be prescribed antibiotics judiciously	<p>6. What antibiotic was prescribed?</p> <ul style="list-style-type: none"> a) <input type="radio"/> amoxicillin b) <input type="radio"/> amoxicillin-clavulanate c) <input type="radio"/> cefdinir, cefuroxime, cefpodoxime, or ceftriaxone d) <input type="radio"/> <u>Other antibiotic chosen</u> e) None, additional observation (watchful waiting) chosen <p>If option b, c, or d is selected, CONTINUE</p> <p> If option a) amoxicillin; or e) None, additional observation (watchful waiting) 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 acute bacterial sinusitis 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, b or c 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>	80%

NOTE: The following questions apply **only** if the patient was given a prescription for antibiotics at the initial visit for this illness

Aim	Data Collection Question	Measure	Goal
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Aim	Data Collection Question	Measure	Goal
	<p>7. If amoxicillin was not prescribed, what was the reason the patient was <u>not</u> treated with amoxicillin? (Select <u>all</u> that apply).</p> <p>a) <input type="checkbox"/> Patient experienced previous severe allergic reaction b) <input type="checkbox"/> Patient experienced previous non-severe allergic reaction c) <input type="checkbox"/> Patient has taken amoxicillin in the past 30 days, or has purulent conjunctivitis, moderate to severe illness, younger than 2 years, attends child care d) <input type="checkbox"/> Patient had previous adverse drug reaction with amoxicillin-clavulanate e) <input type="checkbox"/> Known or suspected multi-drug resistant organism f) <input type="checkbox"/> 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>	

*Definitions and references available in the Appendix

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Appendix

Criteria for additional outpatient observation: “Persistent illness: The clinician should either prescribe antibiotic therapy OR offer additional outpatient observation for 3 days to children with persistent illness (nasal discharge of any quality or cough or both for at least 10 days without evidence of improvement) (Evidence Quality: B; Recommendation).”

Additional outpatient observation, defined as initial management of acute bacterial sinusitis limited to continued observation for 3 days, with commencement of antibiotic therapy if either the child does not improve clinically within several days of diagnosis or if there is clinical worsening of the child’s condition at any time.

Reference: [AAP Clinical Practice Guideline for the Diagnosis and Management of Acute Bacterial Sinusitis in Children Aged 1 to 18 years](#). *Pediatrics*, 2013.

Discuss: Physicians may want to discuss risks of antibiotic therapy with patient/family, however, it is not required unless an antibiotic is prescribed.

* 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 chosen:

Alternative Antibiotic:	Acceptable Reasons For Alternative Antibiotic:
levofloxacin, linezolid, or clindamycin ²	Patient experienced previous <u>severe</u> allergic reaction 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	These medications are considered broad-spectrum antibiotics and should not be prescribed