

## Clinical Practice Guidelines

### Outpatient Acute Bacterial Sinusitis

Bacterial sinusitis can be difficult to distinguish from an upper respiratory tract infection (URI). Bacterial sinusitis often starts with a viral URI. Viruses are the most common cause of acute rhinosinusitis, causing 90-98% of infections. Accurate diagnosis and treatment is necessary to provide the patient with the best possible care. The inclusion criteria is children over 1 year old. The following Clinical Practice Guideline (CPG) was developed by the Rainbow Care Connection (RCC) committee, reviewed by RBC antimicrobial stewardship program and approved by the Quality Care Network Board. The goal of this guideline is to provide a care path to improve quality patient care outcomes.

#### What to know about the management of Outpatient Acute Bacterial Sinusitis

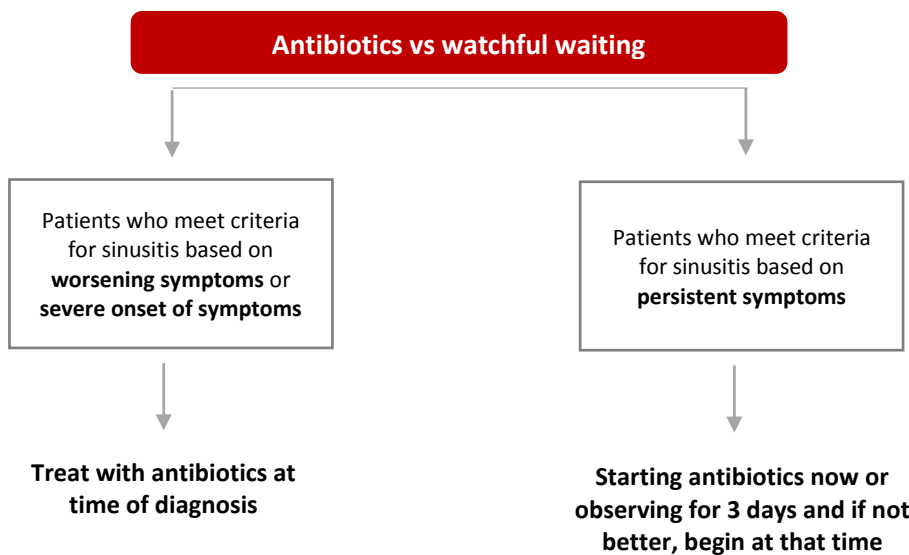
- **Common infectious pathogens:** *S. pneumoniae*, *H. influenzae*, *M. catarrhalis*
- **A patient should meet one of the following criteria** to be diagnosed with bacterial sinusitis:
  - **Persistent symptoms:** Rhinorrhea and/or cough for  $\geq 10$  days without evidence of clinical improvement
  - **Worsening symptoms:** URI symptoms that initially improve (typically after 5-6 days) then worsen with fever, cough, headache and/or increased nasal discharge
  - **Severe onset of symptoms:** Fever  $\geq 39^{\circ}\text{C}$  AND purulent nasal discharge for at least 3 days
- Facial pain/tenderness is not a reliable indicator of bacterial sinusitis in children.
- Sinus imaging is not recommended for diagnosis of uncomplicated sinusitis. Sinus CT or MRI should be reserved for a patient when there is a concern for sinusitis complications such as orbital cellulitis or intracranial infection.

#### Adjunctive treatments:

- Saline nasal irrigation - can be beneficial but may not be well tolerated in young children
- Intranasal corticosteroids- may be most helpful in patients with a history of allergic rhinitis
- Decongestants, cough medicines, and antihistamines are **not** recommended as adjunctive therapies

#### Follow-up:

- Patient should return for re-evaluation if symptoms persist or worsen within 72 hours after starting treatment. If persistence or worsening of symptoms, re-evaluate diagnosis and consider switching to another class of antibiotics
- If patient fails 2 different antibiotics courses, has recurrent acute bacterial sinusitis ( $>3-4$  episodes per year), or chronic sinusitis (symptoms  $>12$  weeks) consider referral to ENT
- Consider referral to ENT for children under 8 with sinusitis as the child may have adenoiditis and warrant further evaluation of sinuses/adenoids



## Treatment

<b>Outpatient Antibiotics for Acute Bacterial Sinusitis</b> <i>Duration 10-14 days</i>	
<b>Duration of therapy is a minimum of 10 days, with treatment recommended for at least 7 days after resolution of symptoms.</b>	
<p><b>First line</b> therapy for patient diagnosed with sinusitis based on <b>worsening symptoms</b> or <b>severe onset of symptoms</b></p>	<p><b>Amoxicillin-clavulanate</b> 90 mg/kg/day divided BID (max 2000 mg/dose)</p> <p><i>Use ES preparation for high dose Amoxicillin and regular dose clavulanate (max 2000 mg/dose) x 10 days</i></p>
<p><b>Alternative therapy</b> for patient diagnosed with sinusitis based on <b>persistent symptoms</b></p>	<p><b>Amoxicillin</b> 90 mg/kg/day divided BID (max 2000 mg/dose)</p>
<p><b>Amoxicillin-clavulanate failure</b></p>	<p><b>Clindamycin</b> 40 mg/kg/day divided TID (max 600 mg/dose)</p> <p style="text-align: center;"><b>PLUS</b></p> <p style="text-align: center;"><b>EITHER</b></p> <p><b>Cefpodoxime</b> 10 mg/kg/day divided BID (max 200 mg/dose)</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Cefixime</b> 8 mg/kg/day once a day or divided BID (max daily dose 400 mg)</p>
<p><b>Non-type 1 <math>\beta</math>-lactam allergy</b> (No hives or signs of anaphylaxis)</p>	<p><b>Clindamycin</b> 40 mg/kg/day divided TID (max 600 mg/dose)</p> <p style="text-align: center;"><b>PLUS</b></p> <p style="text-align: center;"><b>EITHER</b></p> <p><b>Cefpodoxime</b> 10 mg/kg/day divided BID (max 200 mg/dose)</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Cefixime</b> 8 mg/kg/day once a day or divided BID (max daily dose 400 mg)</p>
<p><b>Type 1 <math>\beta</math>-lactam allergy</b> (hives or anaphylaxis)</p>	<p><b>Levofloxacin</b></p> <p>&lt;5 years old: 20 mg/kg/day divided BID (max 375 mg/dose)</p> <p>&gt;5 years old: 10 mg/kg daily (max 750 mg/dose)</p>
<b>Azithromycin has poor coverage of the typical sinusitis pathogens and is <u>not</u> recommended for the treatment of sinusitis</b>	

Neither Clindamycin nor a third generation cephalosporin is adequate by itself to cover the common bacterial pathogens causing sinusitis

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