

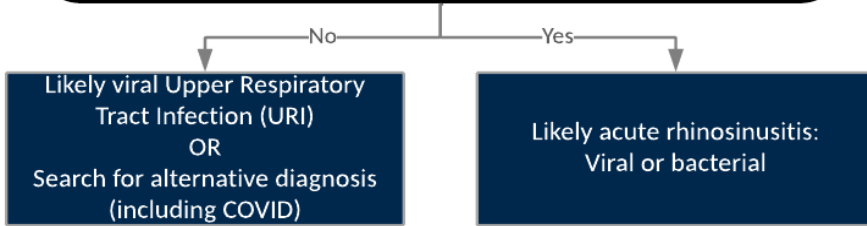


# ACUTE RHINOSINUSITIS

## Diagnosis of Acute Rhinosinusitis

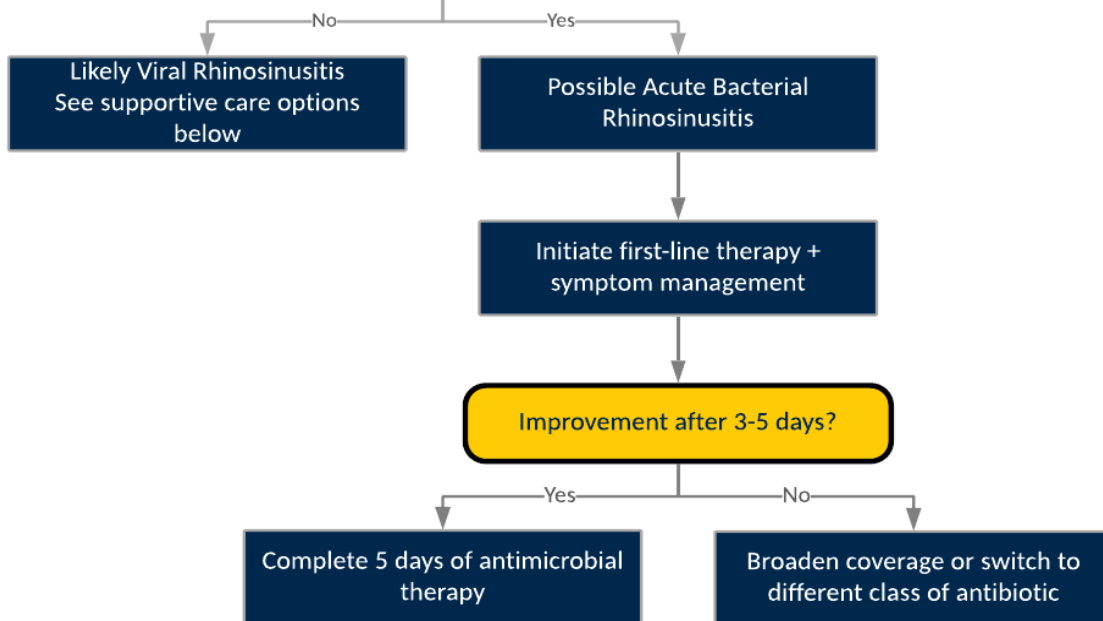
Purulent\* nasal discharge ± fever accompanied by either:

- Nasal obstruction
- Facial pain, pressure, or fullness

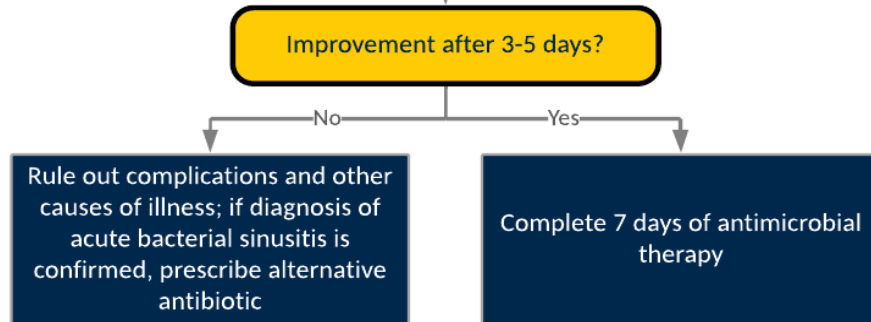


## Clinical course of signs & symptoms (if any of the following):

- Severe symptoms for ≥ 3-4 days, characterized by high fever (> 39°C) with purulent nasal discharge
- Persistent symptoms & not improving for >10 days
- Initial improvement over 5-6 days, followed by worsening or "double-sickening"



\*Purulent secretions should be thick and copious. The changing color of the secretions does not distinguish between viral and bacterial infections.



Indications	Common Pathogens	Empiric Therapy	Duration of Therapy	Comments
<p><b>Acute Bacterial Rhinosinusitis</b></p> <p><i>Diagnosis of rhinosinusitis, with clinical course consistent with possible bacterial infection:</i></p> <ol style="list-style-type: none"> <li>Severe symptoms for &gt; 3-4 days, characterized by high fever (&gt; 39°C) with purulent nasal discharge</li> <li>Persistent symptoms &amp; not improving for &gt; 10 days</li> <li>Initial improvement over 5-6 days, followed by worsening or “double-sickening”</li> </ol>	<p><i>Streptococcus pneumoniae</i></p> <p><i>Haemophilus influenzae</i></p> <p><i>Moraxella catarrhalis</i></p> <p><i>Streptococcus pyogenes</i></p> <p><i>Staphylococcus aureus</i></p> <p><i>Gram-negative bacilli</i></p> <p><i>Anaerobes</i></p> <p><i>Respiratory viruses</i></p>	<p><u>1st line:</u> <b>Amoxicillin-clavulanate</b> 875 mg-125 mg PO BID</p> <p><u>Low/Medium/high-risk PCN allergy*:</u> <b>Doxycycline</b> 100 mg PO BID</p> <p>If odontogenic source leading to sinusitis ADD <b>metronidazole</b> 500 mg PO TID if odontogenic source leading to sinusitis</p> <p><u>2nd line (after initial treatment failure):</u> <b>Levofloxacin</b> 500 mg PO Daily</p> <p>If odontogenic source leading to sinusitis ADD <b>metronidazole</b> 500 mg PO TID if odontogenic source leading to sinusitis</p>	<p><u>Uncomplicated Acute Bacterial Rhinosinusitis:</u> <b>5 days</b> for patients who have improvement in symptoms within 3-5 days</p> <p><u>Acute Bacterial Rhinosinusitis after failing initial therapy, transitioned to second line therapy:</u> <b>7 days</b> for patients who have improvement in symptoms within 3-5 days</p>	<ul style="list-style-type: none"> <li>Potential adjunctive therapies to offer include: <ul style="list-style-type: none"> <li>Hydration</li> <li>Analgesics</li> <li>Antipyretics</li> <li>Nasal corticosteroids</li> <li>Nasal saline irrigation</li> </ul> </li> <li>Patients who have been exposed to amoxicillin-clavulanate in the last 30 days may be considered for doxycycline as initial therapy.</li> <li><i>Streptococcus pneumoniae</i> has local resistance rates to azithromycin of ~50%, and azithromycin therefore is not recommended for treatment of acute bacterial rhinosinusitis.</li> <li>Doxycycline is contraindicated in pregnant patients.</li> <li>Adjust levofloxacin and amoxicillin-clavulanate for renal dysfunction.</li> <li>In a patient without severe disease, who is non-pregnant, without CHF, DM, pulmonary disease, immunodeficiency, or prior sinus surgery, a watchful waiting approach is reasonable after discussion and shared decision-making with the patient. Follow-up should be arranged, and if no improvement after 7 days, starting antibiotics should be considered.</li> <li>This guideline does not address patients with severe immunocompromise (i.e., on prednisone &gt; 20 mg po daily, ≥ 2 immunosuppressants, active hematologic malignancy, active malignancy on chemotherapy, neutropenia, HIV with CD4 &lt; 200). Those patients require an individualized approach for evaluation and management and are outside of the scope of this guideline.</li> </ul>

\*See Beta-lactam Allergy Evaluation and Empiric Therapy Guidance document for further allergy information. High-risk allergies are defined as: respiratory symptoms (chest tightness, bronchospasm, wheezing, cough), angioedema (swelling, throat tightness), cardiovascular symptoms (hypotension, dizzy/lightheadedness, syncope/passing out, arrhythmia), anaphylaxis. If a patient has a high-risk allergy to penicillins, cephalosporins, or carbapenems, the only beta-lactam antibiotic that can be safely used without Allergy consult is aztreonam (if the allergy is to ceftazidime or aztreonam, aztreonam should be avoided as well).

**References**

Chow AW et al. IDSA Clinical Practice Guideline for acute Bacterial Rhinosinusitis in Children and Adults. [CID. 2012 Apr;54\(8\):e72-e112.](#)  
Rosenfeld RM et al. Acute Sinusitis in Adults. [NEJM. 2016 Sep 8;375\(10\):962-70.](#)

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Revision History: 10/23: Updated allergy wording	

*The recommendations in this guide are meant to serve as treatment guidelines for use at Michigan Medicine facilities. If you are an individual experiencing a medical emergency, call 911 immediately. These guidelines should not replace a provider’s professional medical advice based on clinical judgment, or be used in lieu of an Infectious Diseases consultation when necessary. As a result of ongoing research, practice guidelines may from time to time change. The authors of these guidelines have made all attempts to ensure the accuracy based on current information, however, due to ongoing research, users of these guidelines are strongly encouraged to confirm the information contained within them through an independent source.*

*If obtained from a source other than med.umich.edu/asp, please visit the webpage for the most up-to-date document.*