NM Northwestern Medicine
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OUTPATIENT STEWARDSHIP TIP SHEET

Acute Sinusitis

Most cases of acute sinusitis (>90%) are due to a virus and present as part of an upper respiratory tract infection
Secondary bacterial infection of the sinuses following a viral infection is uncommon (0.5 to 2% in adults; 5% in children)
Differentiating viral from bacterial sinusitis depends on symptom severity & duration and clinical course

	Acute Viral Sinusitis	Acute Bacterial Sinusitis
Symptoms & Clinical Findings	Typical: Symptom list is the same with viral and bacterial sinusitis: purulent (cloudy) nasal drainage with nasal congestion or obstruction and/or facial pain, pressure or fullness Other features: fever, headache, otalgia, ear pressure, ear fullness, halitosis, dental pain, cough, fatigue, hyposmia or anosmia On exam: tenderness to percussion over sinuses	
Characteristics	1. Symptom duration typically 7 to 10 days with improvement towards end of the course 2. Fever, if present, is likely to subside after the first 24-48 hours 3. Typical course of nasal discharge: • initially clear & watery • then purulent (thick/colored/opaque) at about 4-5 days into illness • resolves with clear discharge	**SEVERE SINUSITIS includes these 3 presentations:** 1. ***Persistent*** symptoms **≥10 days** without clinical improvement 2. ***Severe*** symptoms (fever ≥39°C/102.2°F) with purulent nasal discharge lasting at least 3 to 4 days at onset of illness 3. "Double sickening" – ***worsening*** symptoms (new fevers, headache, or increase in nasal discharge) following typical viral URI course consisting of 5 to 6 days of illness that had initially been improving.
Diagnosis	Verify symptoms and exam are consistent with acute sinusitis then focus on symptom duration and improvement/worsening **The diagnosis of viral vs. bacterial sinusitis should be made based on disease severity, duration & progression** **If there is symptomatic improvement at some point in the illness course, antibiotic therapy is NOT indicated** Radiographic confirmation and/or culture is not recommended	
Treatment	Antibiotic therapy for acute nonsevere sinusitis is NOT recommended	**Adult & Adolescent** **Standard Antibiotics** **Amoxicillin-clavulanate** **Without** certain conditions*: 875 mg-125 mg BID for **5 days** **With** certain conditions*: 2000 mg-125 mg BID for **5 days** **Penicillin Allergy History (see NM O/P Allergy Risk Assessment first):** **Low or Moderate Risk Beta-lactam Allergy Hx** **Cefuroxime^** 250 mg BID for **5 days** OR **Cepodoxime^** 200 mg BID for **5 days** **High Risk Beta-lactam Allergy Hx** **Doxycycline** 100 mg BID for **5 days** OR **Levofloxacin** 500 mg QD for **5 days** ***Certain conditions:** Age >65 years, antibiotic use over prior month, hospitalization over prior 5 days, immune system compromise & presence of comorbidities ^dissimilar drug structure from penicillins	**Pediatric** **Standard Antibiotics** **Amoxicillin-clavulanate** <40 kg: 90 mg/kg/day divided BID for **10 days** *Use ES suspension 600 mg-42.9 mg/5 mL* (maximum dose (amox): 4 g/day) (dose based on amox component) **Penicillin Allergy History- (see NM O/P Allergy Risk Assessment first):** **Low or Moderate Risk Beta-lactam Allergy Hx** **Combination Therapy** <40 kg: **Clindamycin** 30 mg/kg/day divided TID for **10 days** (maximum dose: 900 mg/day) PLUS **Cefixime^** 8 mg/kg/day divided BID for **10 days** (maximum dose: 400 mg/day) **High Risk Beta-lactam Allergy Hx** **Levofloxacin** <40 kg & <5 years: 20 mg/kg/day divided BID for **10 days** <40 kg & ≥5 years: 10 mg/kg/day QD for **10 days** (maximum dose: 750 mg/day) OR **Doxycycline** >8 years old: 4.4 mg/kg/day divided BID for **5 days** (maximum dose: 200 mg/day)
Adjunctive Measures	Acetaminophen or NSAIDs for fever and discomfort Saline nasal irrigation (use sterile or boiled water ONLY Cough suppressants (benzonatate, dextromethorphan, etc.) Antihistamines, e.g., diphenhydramine (age <65 years), cetirizine, fexofenadine, loratadine Nasal steroids Humidified/steamed air	

Key Points for Counseling Patients

1. A virus won't respond to antibiotics & will improve on its own, and cloudy nasal secretions are seen in both viral and bacterial infections.
2. Seek medical care if severe headache, neck stiffness, photophobia, vision changes or mental status changes arise.
3. **Consider Transfer to ED** if severe immunocompromise and/or ill-appearing poorly-controlled diabetic.

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ADSP Northwestern Medicine Antimicrobial and Diagnostic Stewardship Program