**Acute Bacterial Rhinosinusitis**

Principles of appropriate antibiotic use for acute rhinosinusitis apply to the diagnosis and treatment of acute maxillary and ethmoid rhinosinusitis in otherwise healthy adults.

**Sinus inflammation is often viral and usually resolves without antibiotics.**

**Background**
- Respiratory viruses typically cause inflammation of the nasal mucosa and maxillary sinuses.
- Most cases of acute rhinosinusitis are due to uncomplicated viral infections.

**Diagnosis**
- Most rhinovirus colds last 7 to 11 days (J Clin Microbiol 1997;35:2864; JAMA 1967;202:158).
- Bacterial rhinosinusitis may be present if symptoms have been present >7 days and there is localization to the maxillary sinus.

**Signs/Symptoms of Acute Maxillary Sinusitis** *(BMJ 1995;311:233)*

<table>
<thead>
<tr>
<th>Maxillary Sinusitis</th>
<th>Present (N=92)</th>
<th>Absent (N=82)</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>89%</td>
<td>79%</td>
<td>2.1</td>
</tr>
<tr>
<td>Unilateral maxillary pain</td>
<td>51%</td>
<td>38%</td>
<td>1.9</td>
</tr>
<tr>
<td>Maxillary toothache</td>
<td>66%</td>
<td>51%</td>
<td>1.9</td>
</tr>
<tr>
<td>Unilateral maxillary sinus tenderness</td>
<td>49%</td>
<td>32%</td>
<td>2.5</td>
</tr>
</tbody>
</table>

**TIPS TO REDUCE ANTIBiotic USE**
- Tell patients that antibiotic use increases the risk of an antibiotic-resistant infection.
- Identify and validate patient concerns.
- Recommend specific symptomatic therapy.
- Spend time answering questions and offer a contingency plan if symptoms worsen.
- Provide patient education materials on antibiotic resistance.
- REMEMBER: Effective communication is more important than an antibiotic for patient satisfaction.
- See [www.cdc.gov/getsmart/community](http://www.cdc.gov/getsmart/community) or contact your local health department for more information and patient education materials.

**Treatment**
- Most patients with acute bacterial rhinosinusitis improve without antibiotic treatment.
  - About 81% of antibiotic-treated patients and 66% of controls are improved at 10-14 days (absolute benefit of 15%).
- Patients with mild symptoms should not receive antibiotics, but symptomatic treatment may be helpful.
  - Topical and oral decongestants may reduce nasal symptoms.
  - Most randomized trials of symptomatic therapies have been inconclusive.
- Patients with moderate or severe symptoms may benefit from antibiotics.
- Use a narrow spectrum agent that covers *S. pneumoniae* and *H. influenzae*.
  - Amoxicillin remains an appropriate choice for uncomplicated infections.
  - Consider second line agent if no improvement or worsening after 72 hours.

**Key Reference**