

# AHRQ Safety Program for Telemedicine: Improving Antibiotic Use

## Acute Sinusitis – Clinician Guide

### Diagnosis

- The diagnosis of acute sinusitis is based on the clinical presentation which can include these symptoms: nasal discharge or congestion, facial pain or pressure, reduced or absent sense of taste or smell, headache, ear pain or pressure, dental pain, bad breath, fatigue, and low-grade fevers.<sup>1</sup>
- Most cases of acute sinusitis (approximately 98%) are caused by a virus and do not require antibiotics.<sup>1-3</sup>
- The presence of low-grade fever, facial or dental pain, or colored nasal discharge are not accurate predictors of a bacterial etiology.<sup>4</sup>

### Symptomatic Therapy

- Analgesic/antipyretic for facial pain and fever.
- Decongestants (limited to  $\geq 12$  years of age):<sup>2,7</sup>
  - Oxymetazoline nasal spray or pseudoephedrine orally (may be less effective than topical).
    - Topical decongestants should not be used more than 3 to 5 consecutive days due to risk of rebound congestion.
    - Phenylephrine is no longer considered effective.<sup>11</sup>
- Intranasal corticosteroids can decrease time to symptom relief.<sup>2,8,9</sup>
- Nasal saline irrigation.<sup>10</sup>

### Antibiotic Therapy

- Antibiotics should be considered for sinusitis if any of the following criteria are met:
  - Persistent symptoms: at least 10 days of symptoms without improvement.
  - Worsening symptoms: typical viral upper respiratory tract infection symptoms that appear to improve followed by the onset of worsening sinus symptoms after 5–6 days.
  - Severe symptoms: at least 3-4 days of temperatures  $\geq 102^{\circ}\text{F}$  and purulent nasal discharge or facial pain.
- First-line therapy for adults and children: amoxicillin/clavulanate<sup>1,5</sup>
  - Options for non-severe penicillin allergy for adults and children: doxycycline or an oral third-generation cephalosporin  $\pm$  clindamycin.
    - Consider adding clindamycin to an oral third-generation cephalosporin if there is high risk of *Streptococcus pneumoniae* resistance, such as extensive prior antibiotic exposure, multiple comorbidities, or high community rates of *S. pneumoniae* resistance.
    - Newer data indicate that permanent teeth staining with doxycycline is unlikely in children (even  $< 8$  years of age) when using durations of therapy of  $\leq 10$  days.<sup>6</sup>
  - Options for severe penicillin allergy and unable to tolerate doxycycline:<sup>1</sup>
    - Levofloxacin or moxifloxacin.
- Because *S. pneumoniae* is frequently resistant to trimethoprim/sulfamethoxazole, azithromycin, and clarithromycin, these agents are not recommended for bacterial sinusitis.

### Duration

- 5–7 days for adults.<sup>1</sup>
- 10 days traditionally used in children.<sup>1</sup>

### Followup

- Patients should expect to have sinusitis symptoms improve over a week to 10 days.
- Patients should return to medical care if they have no improvement after 10 days, develop fever of at least  $102^{\circ}$  Fahrenheit with purulent nasal discharge, or if symptoms start to improve then worsen.
- Patients should present to the emergency department if they develop severe headaches, emesis, weakness on one side of the body, visual changes, or confusion.



## References

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