VA
U.S. Department of Veterans Affairs
Veterans Health Administration
PBM Academic Detailing Service

A QUICK REFERENCE GUIDE (2017)

Acute Upper Respiratory Infections

Identification and Management of Acute Respiratory Tract Infections (ARI) Without Overusing Antibiotics

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Attention Healthcare Provider:

These recommendations are intended for treatment of immunocompetent patients with uncomplicated acute respiratory tract infections (ARI), and do not pertain to patients with Acute Exacerbation of Chronic Bronchitis (AECB), pneumonia, or other severe illnesses.

Individual patient-specific characteristics should be considered when determining appropriate therapy.

Key Messages for Managing ARI Without Overusing Antibiotics

1. Use antibiotics sparingly in the treatment of ARIs to prevent adverse effects.
2. Make a specific clinical ARI diagnosis to drive appropriate care.
3. Prescribe antibiotics only for patients who meet clinical diagnostic criteria for pharyngitis or bacterial sinusitis.
4. Provide symptomatic therapies that help patients feel better.
5. Use penicillin or penicillin-based antibiotics as the cornerstone of therapy when prescribing antibiotics for pharyngitis and bacterial sinusitis.
6. SHARE treatment decisions for ARI management with patients to improve satisfaction

Table 1. Make a Specific Clinical ARI Diagnosis to Drive Appropriate Care*

Diagnosis	Key Symptoms	Key Clinical Findings	Antibiotic Treatment Recommendations
Pharyngitis	Sore throat with or without other upper respiratory tract symptoms	Test for group A *Streptococcus* if three of the following are present: • Fever • Swollen cervical lymphadenopathy • Tonsillar exudate • Absence of cough	Antibiotics recommended only if group A *Streptococcus* test or culture is positive
Sinusitis	Nasal obstruction, anterior or posterior purulent nasal discharge, facial pain, cough, decreased sense of smell	Criteria for Bacterial Sinusitis: **Persistent** and not improving (>10 days) **Worsening** (new onset fever, nasal discharge or cough after initial improvement or "double-sickening" **Severe** symptoms or febrile (>102°F) with purulent nasal discharge or pain lasting ≥3 days	Antibiotics may be indicated if clinical criteria are met for bacterial sinusitis

*A diagnosis of influenza should be considered in all patients during influenza season.

Continued from Table 1. Make a Specific Clinical ARI Diagnosis to Drive Appropriate Care*

Diagnosis	Key Symptoms	Key Clinical Findings	Antibiotic Treatment Recommendations
Uncomplicated bronchitis	Cough, possible phlegm production	Differentiate from severe illness: pneumonia (abnormal vital signs, focal lung consolidation), pertussis (confirmed exposure or positive test), influenza (high fever, myalgias)	Antibiotics not recommended; cough duration or change in sputum color is not indicative of bacterial infection
Common Cold	Runny nose, cough, sore throat, sneezing, nasal congestion	Differentiate from acute bacterial sinusitis	Antibiotics not recommended for any patient

*A diagnosis of influenza should be considered in all patients during influenza season.

Table 2. Provide Symptomatic Therapies That Help Patients Feel Better*

Symptom	Therapeutic Option
Headache, Ear Pain, Muscle/Joint Pain	• Ibuprofen 200-400mg PO Q4-6h • Naproxen 500mg PO Q12h • Acetaminophen 650-1000mg PO Q4-6h (max: 4000mg/day)
Cough	• Dextromethorphan 30mg PO Q4-6h • Guaifenesin IR 200-400mg PO Q4h • Codeine 10-20mg PO Q4h • Benzonatate 100-200mg PO Q8-12h • Albuterol Inhaler (if wheezing present) 2 Inhalations Q4-6h
Nasal Congestion	• Saline Nasal Spray or Nasal Irrigation • Pseudoephedrine 60mg PO Q4-6h or phenylephrine 10-20mg PO Q4h • Oxymetazoline Nasal Spray 2-3 sprays in each nostril BID (duration $\leq$3 days) • Clean Humidifier or cool mist vaporizer • Fluticasone Nasal Spray 2 sprays in each nostril daily

*Non-antibiotic therapy may provide relief of symptoms but will not shorten the duration of ARI illness

**Caution may cause increased adverse effects in the elderly

Continued from Table 2. Provide Symptomatic Therapies That Help Patients Feel Better*

Symptom	Therapeutic Option
Rhinorrhea and/or Sneezing	• Chlorpheniramine 4mg PO Q4-6h • Diphenhydramine** 25-50mg PO Q4-6h • Cromolyn Nasal Solution 1 spray per in each nostril 3-6 times/day • Ipratropium Nasal Solution 2 sprays in each nostril 3 times per day
Throat Discomfort	• Menthol Throat Lozenge • Phenol Throat Spray

*Non-antibiotic therapy may provide relief of symptoms but will not shorten the duration of ARI illness
**Caution may cause increased adverse effects in the elderly

Table 3. Use Penicillins as the Cornerstone of Therapy When Prescribing Antibiotics for Pharyngitis and Bacterial Sinusitis

Diagnosis	Usual Cause		Antibiotic Treatment Recommendations
	Viruses	Bacteria	
Common Cold	✔✔✔✔✔		Routine antibiotic therapy is NOT indicated. Antibiotics do NOT enhance illness resolution or prevent complications.
Uncomplicated Bronchitis	✔✔✔✔✔		Routine antibiotic therapy is NOT recommended for cases of uncomplicated acute bronchitis.
Pharyngitis	✔✔✔✔	✔	Antibiotics only recommended for patients with POSITIVE Group A Strep rapid antigen detection test or throat culture Preferred: Amoxicillin 500mg PO BID x 10 days or penicillin VK 500 mg PO BID x 10 d Alternative (penicillin allergy): Cephalexin 500mg PO Q12h x 10 days OR clindamycin 300mg PO Q8h x 10 days

Continued from Table 3. Use Penicillins as the Cornerstone of Therapy When Prescribing Antibiotics for Pharyngitis and Bacterial Sinusitis

Diagnosis	Usual Cause		Antibiotic Treatment Recommendations
	Viruses	Bacteria	
Sinusitis	✔✔✔	✔✔	Antibiotics only recommended when the patient meets clinical criteria for bacterial rhinosinusitis (see diagnosis). Preferred: Amoxicillin/ clavulanate 875mg PO BID OR amoxicillin 500 PO TID x 5-7 days* Alternative (penicillin allergy): Doxycycline 100 mg BID PO x 7 days, Levofloxacin 750 mg daily PO x 5 days, Moxifloxacin 400 mg daily PO x 7 days

*High dose amoxicillin (1000 mg PO TID) or amoxicillin/clavulanate (2000 mg XR BID), or amoxicillin/clavulanate 875 mg PLUS 1000 mg amoxicillin PO BID, may be appropriate for patients at risk for bacterial sinusitis due to amoxicillin-resistant bacteria such as recent β-lactam exposure, treatment failure, acute severe presentation, or immunocompromised state.

Clinical Decision Support Tools Aid in Selecting the Correct Treatment, Dose, Duration

Computerized Patient Record System (CPRS) templates

- CPRS menus and templates are being used to provide guidance on optimal therapies
- Optimal therapies based on patient's symptoms as recommended by IDSA, Clinical Excellence and the Centers for Disease Control and Prevention guidelines
- If CPRS menus are available in your facility, use them for selecting correct treatment, dose, and therapy duration

How to Find ARI Templates?

- Not mandatory to use order templates, but if available, consider using menus to facilitate optimal therapy
- Ask a local pharmacist if menus are in place or where to locate
- Common locations for menus include under Outpatient Menu Quick Menus or under Antibiotic Headers
    - For example, a common location of the CPRS menus follows: Orders -> Outpatient Medications -> ARI Best Practices

SHARE Treatment Decisions for ARI Management with Patients to Improve

Patients presenting with ARIs, are generally seeking a diagnosis, reassurance, and relief of symptoms; not necessarily antibiotics. A **SHARED** decision-making approach for management of ARIs is beneficial to both the provider and patient.

SEEK ● HELP ● ASSESS ● REACH ● EVALUATE ● DO

SEEK your patient's participation. Explain that it is difficult to determine the absolute best course of treatment without their input.

HELP your patient compare treatment options. Discuss the limited benefits and risks of antibiotics as well as approaches like symptomatic therapy.

ASSESS your patient's values and preferences. Ask the patient to explain preferences for treatment, and present options that align evidence-based practice with patient preferences

REACH a decision with your patient on a treatment plan including therapy details.

EVALUATE your patient's decision. Ask the patient to explain the plan to you, convey what follow-up steps, and ask them to commit to the treatment plan.

DO provide supplemental written materials to enhance their understanding of the therapeutic options, treatment and follow-up plan.

References

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3. Harris AM, Hicks LA, Qaseem A, et al. Appropriate Antibiotic Use for Acute Respiratory Tract Infection in Adults: Advice for High-Value Care From the American College of Physicians and the Centers for Disease Control and Prevention. Ann Intern Med. 2016 Mar 15;164(6):425-34. PMID: 26785402.
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This reference guide was created to be used as a tool for VA providers and is available to use from the Academic Detailing SharePoint. These are general recommendations only; specific clinical decisions should be made by the treating provider based on an individual patient's clinical condition.

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