

Management of Bronchitis in Adults
Clinical Practice Guideline
MedStar Health
Antibiotic Stewardship

“These guidelines are provided to assist physicians and other clinicians in making decisions regarding the care of their patients. They are not a substitute for individual judgment brought to each clinical situation by the patient’s primary care provider-in collaboration with the patient. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication but should be used with the clear understanding that continued research may result in new knowledge and recommendations.”

INTRODUCTION:

1. Acute bronchitis is one of the most common conditions encountered in clinical practice. Accounts for 10% of ambulatory care visits in the United State or 100 million visits per year.
2. Typically self-limited, resolving in one to three weeks. Most frequently caused by viruses. Bacteria causes <10%.
3. Apart from testing for COVID-19 during the pandemic, testing is generally reserved for cases in which pneumonia suspected, when the clinical diagnosis is uncertain, or when results would change management (e.g., treatment of pertussis or influenza in a high-risk patient early in the course of illness).
4. Treatment should be focused on supportive care and patient education. Antibiotics are not indicated for most patients but are often overused for this condition.
5. Reducing antibiotic use for acute bronchitis is a national and international health care priority.

Diagnostic Evaluation and Treatment for Acute Bronchitis:

1. The evaluation of adults with acute cough or with presumptive diagnosis of uncomplicated acute bronchitis should focus on ruling out pneumonia with chest radiography.
2. Consider for chest radiography:
 - a. Fever (temperature greater than 100.3 F or 38.0 C)
 - b. Tachycardia (heart rate > 100 bpm)
 - c. Tachypnea (respiratory rate > 24 breaths per minute)
 - d. Hypoxemia (pulse oxygenation < 95%)
 - e. Asymmetrical lung sounds (rales, egophony, fremitus). Pleuritic chest pain. New onset wheezing.
 - f. Cough lasting 3 weeks or longer.
 - g. Moderate to severe dyspnea or hemoptysis.
 - h. Known or suspected viral illness (covid or influenza) with worsening symptoms.
 - i. Mental status or behavioral changes in patients >75 years old, who may not mount a fever.

The decision to obtain a chest radiograph or other imaging should always take the full clinical picture into consideration.

3. Empiric antibiotic therapy:
 - a. Acute Uncomplicated Bronchitis: Routine antibiotic treatment of uncomplicated bronchitis is not recommended, regardless of duration of cough. The presence of purulent sputum is NOT predictive of bacterial infection or response to antibiotics.
 - b. COPD: appropriate antibiotics and adjunct therapies should be prescribed as outlined in the COPD management guideline.
 - c. Complicated Presentations: Consider empiric treatment for pneumonia in high-risk clinical scenarios, including geriatric patients, immunocompromised patients, patients with abnormal vital signs and an abnormal pulmonary examination.

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4. Consider/Manage Alternatives Diagnoses:
 - a. Influenza – when influenza is suspected, appropriate diagnostic testing and treatment should be utilized as clinically indicated.
 - b. Pertussis – when pertussis infection is suspected (paroxysms of cough with inspiratory whoop or post tussive emesis particularly during know outbreaks, or unvaccinated patients), empiric antimicrobial therapy should be initiated with a macrolide (azithromycin 500 mg on day 1 followed by 250 mg on days 2-5 or clarithromycin 500 mg bid for 7 days). For patients unable to tolerate a macrolide, trimethoprim-sulfamethoxazole one DS tablet bid for 14 days is acceptable.
 - c. COVID 19—During the pandemic, appropriate testing for COVID-19 should be performed in all patients presenting with possible respiratory tract infections. The patient should self-isolate, treat symptomatically, monitor for clinical worsening, and follow treatment recommendations as per current CDC guidelines.
 - d. Bacteria are uncommon causes of acute bronchitis accounting for <10% of cases. The bacteria most associated with acute bronchitis are Bordetella pertussis, Mycoplasma pneumonia and Chlamydia pneumonia. Antibiotics that treat these bacteria include doxycycline, macrolides, and fluoroquinolones.
 - e. Other diagnoses: consider postnasal drip, GERD, Asthma, ACE inhibitor use, Pulmonary embolism, or CHF. Lung cancer is an uncommon cause of acute cough but should be considered in any current or prior smoker.

5. Symptomatic therapy:
 - a. Non-pharmacologic therapy such as throat lozenges, tea, honey
 - b. OTC medications such as dextromethorphan (cough suppressant) and guaifenesin (mucolytic).
 - c. Increase fluid intake and breathing humidified air (steam baths, humidifiers, saline nebulizer).
 - d. Avoid codeine due to addictive potential and side effect profile. Consider prescribing benzonatate.
 - e. Limit use of inhaled beta-agonist except for patients wheezing or underlying pulmonary conditions.
 - f. Avoid oral corticosteroids due to lack of efficacy and safety concerns unless acute exacerbation of asthma.
 - g. Consider inhaled corticosteroids especially if patient with bronchospasm.

6. Smoking cessation: All smokers should receive smoking cessation counseling and interventions.

7. Avoiding antibiotic overuse:
 - a. Recommend having explicit discussion on risks and benefits of antibiotics with patients.
 - b. Multiple high-quality trials and meta-analyses have shown that antibiotics do NOT provide substantial benefit and use can result in adverse effects (nausea, vomiting, diarrhea, rash, headache, vaginitis, rash, and anaphylaxis).
 - c. Antibiotics can alter the patient’s microbiome and may induce resistance in both individuals and the community.
 - d. Antibiotic use comes at an increased financial cost.
 - e. Consider delayed prescribing where prescription provided but patient agrees not to fill for defined period unless symptoms worsening or not improving.
 - f. Recommend reevaluation if not improving.

MEDCONNECT RESOURCES

A bronchitis specific power plan is present in MedConnect to facilitate appropriate treatment orders:



PATIENT EDUCATION

Choosing wisely: <http://www.choosingwisely.org/patient-resources/treating-sinus-problems-aaaai/>

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DEFINITIONS

Antimicrobial stewardship refers to coordinated interventions designed to improve and measure the appropriate use of antimicrobials by promoting the selection of the optimal antimicrobial drug regimen, dose, duration of therapy, and route of administration. Antimicrobial stewards seek to achieve optimal clinical outcomes related to antimicrobial use, minimize toxicity and other adverse events, reduce the costs of health care for infections, and limit the selection for antimicrobial resistant strains. - See more at: http://www.idsociety.org/stewardship_policy/#sthash.SM1baBaC.dpuf

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