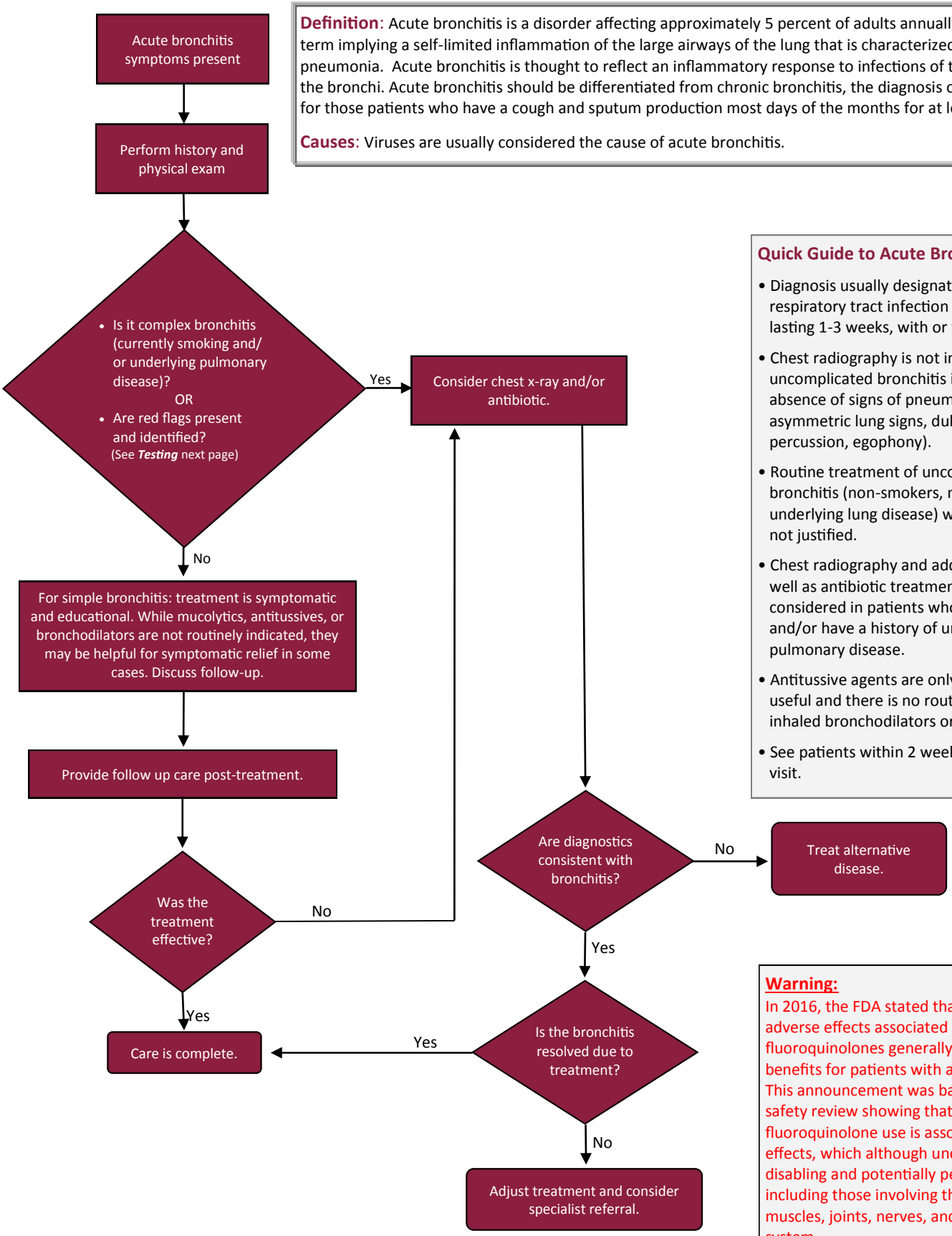
MOUNT CARMEL Health Partners

Acute Bronchitis Clinical Guideline

Definition: Acute bronchitis is a disorder affecting approximately 5 percent of adults annually. It is a clinical term implying a self-limited inflammation of the large airways of the lung that is characterized by cough without pneumonia. Acute bronchitis is thought to reflect an inflammatory response to infections of the epithelium of the bronchi. Acute bronchitis should be differentiated from chronic bronchitis, the diagnosis of which is reserved for those patients who have a cough and sputum production most days of the months for at least two years.

Causes: Viruses are usually considered the cause of acute bronchitis.



Quick Guide to Acute Bronchitis Care

- Diagnosis usually designates an acute respiratory tract infection with a cough lasting 1-3 weeks, with or without phlegm.
- Chest radiography is not indicated in uncomplicated bronchitis if there is an absence of signs of pneumonia (fever, asymmetric lung signs, dullness to percussion, egophony).
- Routine treatment of uncomplicated bronchitis (non-smokers, no history of underlying lung disease) with antibiotics is not justified.
- Chest radiography and additional testing as well as antibiotic treatment may be considered in patients who are smokers and/or have a history of underlying pulmonary disease.
- Antitussive agents are only occasionally useful and there is no routine role for inhaled bronchodilators or mucolytic agents.
- See patients within 2 weeks following an ER visit.

Warning:

In 2016, the FDA stated that the serious adverse effects associated with fluoroquinolones generally outweigh the benefits for patients with acute bronchitis. This announcement was based on an FDA safety review showing that systemic fluoroquinolone use is associated with side effects, which although uncommon, can be disabling and potentially permanent, including those involving the tendons, muscles, joints, nerves, and central nervous system.

Acute bronchitis can be classified as uncomplicated or complicated, based on current smoking status and/or underlying pulmonary disease. Testing and treatment differ for these subsets.

Uncomplicated Acute Bronchitis

Diagnosis

History

- Acute-onset cough lasting more than five days, with or without phlegm.
- Cough generally lasts two to three weeks.

Physical

- Signs and symptoms may include sputum production, dyspnea, wheezing, chest pain, hoarseness, malaise, rhonchi, and rales.
- Fever is relatively unusual and suggests either influenza or pneumonia.
- Sputum may be clear, white, yellow, green, or blood-tinged. Sputum production should **not** be deemed to indicate bacterial infection.

Testing

- Chest radiography is not indicated in uncomplicated bronchitis.

Red Flag Indicators*:*

- tachycardia (pulse greater than 100/minute)
- tachypnea (respiratory rate greater than 24)
- fever (temperature greater than 38˚ C /100.4˚ F)
- rales or signs of consolidation on chest examination
- hypoxemia
- mental confusion
- signs of systemic illness.

- Indications for chest radiography and/or antibiotics, antitussives, anti-inflammatory therapies:
  - unexplained cough lasting three week or longer
  - fever and hemoptysis

Causes

Viruses are usually considered the cause.

Treatment

According to guidelines by the American College of Chest Physicians, routine treatment of uncomplicated (non-smokers, no history of underlying pulmonary disease) bronchitis with antibiotics is **not** justified. Antitussive agents are only occasionally useful and there is no routine role for inhaled bronchodilators or mucolytic agents.

Patient Education

Counsel patients on the role of antibiotics in the treatment of viruses.

Follow-up and Referrals

- Schedule a follow-up appointment with the patient in two weeks to ensure resolution of symptoms.
- If the patient was seen at the emergency room, have a follow up appointment two weeks after the visit.
- Consider referral to a pulmonary specialist if treatment is ineffective or complications arise.

Complicated Acute Bronchitis

Diagnosis

Acute bronchitis in patients who currently smoke and/or have a history of underlying pulmonary disease.

Testing

Expand to include consideration of chest x-ray, PFTs, peak flow measurement, and sputum culture.

Treatment

Expand to include consideration of chest x-ray, peak flow measurement, and sputum culture. Pulmonary function studies can establish the patient's baseline.

Patient Education

Smoking cessation if the patient is a smoker.

Follow-up and Referrals

- Schedule a follow up appointment with the patient in two weeks to ensure resolution of symptoms.
- If patient was seen at the emergency room, have a follow up appointment two weeks after the visit.

References

1. Up To Date: Acute bronchitis in adults, 2016. Retrieved from www. uptodate.com.
2. U.S. Food & Drug Administration (2016). FDA Drug Safety Communication: FDA advises restricting fluoroquinolone antibiotic use for certain uncomplicated infections: warns about disabling side effects that can occur together. https://www.fda.gov/drugs/drugsafety/ucm500143.html.
3. Center for Disease Control and Prevention (2017). Bronchitis. https://www.cdc.gov/getsmart/community/for-patients/common-illnesses/bronchitis.html.
4. American College of Chest Physicians

Original Issue Date: November 2011

Revision Date: January 2013, March 2015, May 2017