

# COMMUNITY-ACQUIRED PNEUMONIA

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## Week 18

### Educational Objectives:

1. Describe the clinical presentation of pneumonia and define clinical characteristics which may differentiate bronchitis from pneumonia
2. List the pathogens which cause community-acquired pneumonia
3. Outline the appropriate treatment for community-acquired pneumonia
4. Define clinical characteristics which would suggest the need for hospitalization in a patient with community-acquired pneumonia

### **CASE ONE:**

**A 67 year-old-man presents in mid-January with a two-day history of cough productive of yellow sputum. He has had myalgias and headache. At home, he measured his oral temperature at 101.8°F. He denies dyspnea, wheezing, chest pain, arthralgias or exposure to exogenous allergens. He has a past medical history of COPD for which he takes albuterol PRN and tiotropium (Spiriva). He denies having received either the influenza or the pneumococcal vaccinations. He smokes half a pack of cigarettes per day. On examination he has a temperature of 101.2°F. His BP is 110/65, HR of 90, RR of 14 and O<sub>2</sub> saturation 98% on room air at rest and with exercise. His ears, nose, and oropharynx are normal. His lung examination shows crackles and egophony at the left lung base. His cardiac and abdominal examinations are normal.**

### Questions:

1. Does this patient have pneumonia? Does he need a chest x-ray?
2. How does pneumonia develop?
3. Does this patient need to be admitted to the hospital for treatment?

**4. Do you need to perform a sputum Gram's stain on this patient?**

**5. Would you do any further diagnostic testing?**

**CASE ONE CONTINUED:**

**Influenza DFA is negative.**

**6. What antimicrobials should be used for empiric treatment of this patient?  
Describe the possible pathogens you are considering in your decision.**

**7. Is any additional therapy warranted?**

**8. When would you expect the patient to have clinical improvement?**

**9. How might you prevent future episodes of pneumonia in this patient?**

### **Primary Reference:**

1. Ramsdell, J. et al. Management of community acquired pneumonia in the home. *Chest*. 2005; 127: 1752-1763.

### **Additional References:**

2. Metlay, J, et.al. Does this patient have community acquired pneumonia? Diagnosing pneumonia by history and physical examination. *Journal of the American Medical Association*. 1997; 278: 1440-1445.
3. Mandell, LA, et al. Update of practice guidelines for the management of community-acquired pneumonia in immunocompetent adults. *Clinical Infectious Diseases*. 2003; 37: 1405-1433.
4. Lim, WS, et.al. Defining community acquired pneumonia severity on presentation to hospital: an international derivation and validation study. *Thorax*. 2003; 58: 377.
5. American Thoracic Society. Guidelines for the management of adults with community-acquired pneumonia. Diagnosis, assessment of severity, antimicrobial therapy, and prevention. *American Journal of Respiratory Critical Care Medicine*. 2001; 163: 1730-1754.
6. File, TM, et al. Guidelines for empiric antimicrobial prescribing in community-acquired pneumonia. *Chest*. 2004; 125: 1888-1901.
7. Hirschmann, JV. Antibiotics for common respiratory tract infections in adults. *Archives of Internal Medicine*. 2002; 162: 256-264.