

I 4 Bronchitis/Pneumonia**Medicine****S Does the pt present with symptoms of acute bronchitis or pneumonia?**

Pts with bronchitis usually have no or low-grade fever and a normal respiratory rate with diffuse rales.

Pts with pneumonia usually present with fever, dyspnea, tachypnea, and rales over the infected area of lung.

Symptoms are usually gradual in nonbacterial pneumonia and abrupt in bacterial pneumonia.

How long has the pt had the symptoms?

This will help differentiate acute versus chronic bronchitis.

Does the pt have a productive or nonproductive cough?

Bronchitis usually has nonproductive cough early and then progresses into a mucopurulent or productive cough.

Has the pt been exposed to any ill contacts?

Most contagious respiratory infections are caused by viruses.

Is the pt tolerating oral intake?

This will determine if the pt will need IV antibiotics or hydration for infection.

Does the pt have any history of medical problems or comorbidities?

Important comorbidities such as diabetes, asthma, COPD, immune deficiencies, or a history of tobacco, alcohol, or drug abuse may complicate the treatment.

Ascertain if pt has had positive purified protein derivative (PPD) skin test or exposure to tuberculosis.

Review vaccine history for pneumovax and influenza.

Inquire about place of acquisition

Obtaining a history of the pt's recent travels, living, or working environment may be of some assistance in the workup.

○ Check vital signs

Look for signs of sepsis or respiratory distress.

Perform physical exam

General: May be ill appearing or unable to speak in full sentences secondary to respiratory distress.

HEENT:

- Perform exam to rule out upper respiratory infection.
- Look for grunting or nasal flaring in children.

Lungs: Decreased breath sounds, rales, egophony, tubular breath sounds may be heard, but remember that breath sounds can be normal.

Heart: Perform a complete heart exam.

Skin: Check skin turgor and capillary refill for hydration status.

Consider the following labs and studies:

- CBC
- Pulse oximetry for O₂ level
- Blood culture if pt appears ill
- Sputum culture
- (PA/LAT CXR)
- ABG, PaO₂ < 60 warrants admission
- Place PPD if suspect TB
- Respiratory syncytial virus (RSV) titer if suspected

Medicine**Bronchitis/Pneumonia 15****A Bronchitis and Pneumonia**

Common bacterial species:

- | | | |
|-----------------------------------|---------------------------------|--------------------------------|
| - <i>Streptococcus pneumoniae</i> | - <i>Haemophilus influenzae</i> | - <i>Moraxella catarrhalis</i> |
|-----------------------------------|---------------------------------|--------------------------------|

Atypical species:

- | | | |
|--------------------------------|-------------------------------|---------------------------------|
| - <i>Mycoplasma pneumoniae</i> | - <i>Chlamydia pneumoniae</i> | - <i>Legionella pneumophila</i> |
|--------------------------------|-------------------------------|---------------------------------|

Viral infections:

- | | |
|--------------|-------------------|
| - Rhinovirus | - Influenza virus |
| - Adenovirus | - RSV |

P Determine severity of illness according to risk factors and clinical presentation

Risk for mortality should be assessed to determine if pt can be treated as an outpatient or an inpatient.

Risk factors include:

- *If appears ill clinically*
- WBC < 5000
- Suspected *S. aureus*, gram-negative rod, or anaerobic pneumonia
- Metastatic infection such as empyema, meningitis, endocarditis, or arthritis
- Inability to take oral medications
- Comorbid conditions:
 - ◆ Renal, cardiac, or pulmonary disease
 - ◆ Diabetes, cancer, or immunosuppression
- Signs of severely abnormal physiology:
 - ◆ Tachypnea
 - ◆ Tachycardia
 - ◆ PaO₂ < 60
 - ◆ Systemic BP < 90 mm Hg

Initiate pharmacotherapy

If it is determined that the pt can be treated as an outpatient, monotherapy with a macrolide is usually first-line treatment. (Fluoroquinolone can also be used.)

Symptomatic relief can be obtained using a cough medication with or without a decongestant.

Antipyretics such as acetaminophen or ibuprofen can be administered for fever or pain. Consider inhaled bronchodilators if wheezing is present.

Implement prevention

Pneumococcal vaccine

Flu vaccine

Avoidance of tobacco