# Diagnosis

Community-Acquired Pneumonia

* Most patients have fever, cough, and increased sputum production; many will also have chills (50%), tachypnea (45%), or pleuritic chest pain (30%)
* If symptoms are present, a chest x ray (CXR) should be obtained; the absence of an infitrate makes the diagnosis of community-acquired pneumonia (CAP) highly unlikely
* Infiltrate on CXR or chest computed tomography scan without signs and symptoms of CAP is unlikely to represent CAP
* Microbiology: *Streptococcus pneumoniae*, *Haemophilus* *influenzae*, *Legionella pneumophilia*, respiratory viruses (e.g., influenza)
* Obtain sputum Gram stain and culture and *S. pneumoniae* urinary antigen, if available
* Obtain *Legionella* urinary antigen in patients with moderate to severe illness, smoking, age older than 50 years, significant immunocompromise, or other risk factors
* Obtain blood cultures for patients with severe illness, abscess, or parapneumonic effusion
* Obtain viral respiratory testing during respiratory virus season

# Treatment

* **Empiric therapy**
* Provide coverage for *S. pneumoniae, H. influenzae, L. pneumophila*
* Avoid routine fluoroquinolone use given strong association with *Clostridioides difficile*
* Consider coverage for *Staphylococcus aureus*, including methicillin-resistant *S. aureus* (MRSA), in addition to standard CAP antibiotics in patients with a recent respiratory viral infection presenting with new pneumonia
* Consider coverage for *Pseudomonas aeruginosa* in patients from skilled nursing facilities, history of colonization/infection with *P. aeruginosa*, or significant immunocompromise
* [Place local treatment recommendations here]
* [Place local treatment recommendations here]
* **Narrowing and oral therapy**
* After clinical improvement is observed, convert from intravenous to oral therapy
* Use sputum culture results to narrow therapy; if organism is susceptible to ampicillin or if the *S. pneumoniae* urinary antigen is positive, switch to ampicillin (intravenous) or amoxicillin (oral)
* If cultures are negative or not obtained, use amoxicillin/clavulanate or oral second-/third-generation cephalosporins; reserve fluoroquinolones for severe penicillin allergy
* Stop azithromycin after 3 days unless treating *Legionella*
* In most cases, stop antibiotics if viral respiratory testing is positive
* [Place local treatment recommendations here]
* [Place local treatment recommendations here]

# Duration

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* Five days if clinical response by day 3 for most patients
* Seven days if patient is immunocompromised, has underlying structural lung disease, or did not have clinical response by day 3
* If the patient has *Legionella*, *P. aeruginosa*, or *S. aureus*, longer durations of therapy are usually required, particularly if there is associated bacteremia or a parapneumonic effusion

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