

Week 2: Discussion - Sara Acosta

Application of Course Knowledge:

Client's Situation:

A 37-year-old woman named Sara Acosta arrives at the clinic with a three-day history of fever, chills, exhaustion, and a productive cough (yellow mucus). She reports taking acetaminophen to treat her fever. The NP examines her and finds crackles in her right lower lobe and diminished lung sounds in her left, but no retractions or increased work of breathing. The NP diagnoses her with bacterial pneumonia after a chest X-ray reveals

consolidation in the right lower lobe and a rapid test for influenza, COVID-19, and RSV comes back negative.

Current Medications:

As a contraceptive method, Sara currently takes 150 mg of medroxyprogesterone (Depo- Provera) intramuscularly every three months; she does not take any other medications and has no known allergies or significant medical history.

Assessment of Applicable Clinical Practice Guideline (CPG):

The American Thoracic Society (ATS) guidelines for the management of community-acquired pneumonia (CAP) recommend antibiotic therapy for the diagnosis of bacterial pneumonia (Armstrong (2020)). Since Sara's case of CAP is straightforward and free of major comorbidities, the guidelines recommend an antibiotic regimen that targets the most common bacterial pathogens, which are usually *Moraxella catarrhalis*, *Haemophilus influenzae*, and *Streptococcus pneumoniae*. Pure *M. catarrhalis* was isolated by

transtracheal needle aspiration in patients with clinical evidence of lower respiratory tract infections and chronic bronchitis, and treatment with the right antibiotics produced clinical improvement in patients with suspected *M. catarrhalis* infection (Karalus C Campagnari, 2000).

The first-line treatment typically for healthy adults is usually a macrolide (like azithromycin) or a doxycycline. If atypical pathogens like *Mycoplasma pneumoniae* or *Chlamydia*

pneumoniae are a concern, doxycycline may also be considered. The choice of antibiotic will be determined by the patterns of local resistance, and broad-spectrum antibiotics may be used initially in cases of a more severe infection or risk factors.

Since pneumonia can worsen and reevaluation may be required to make sure the selected treatment is working, the NP should also keep an eye on Sara's symptoms,