CPGS RELATED TO BACTERIAL INFECTIONS

Application of Course Knowledge: Answer all questions/criteria with explanations and detail.

Describe your assigned client's situation. Why are they presenting to the clinic? What medications are they currently taking?

Ademir Ribeiro is a 76-year-old male with a past medical history of COPD and Lyme disease. The patient presented to the clinic with a chief complaint of productive cough (with green mucus), fatigue, chills, and fever for four days, which has worsened. He takes olodaterol 2.5 mcg/tiotropium 2.5 mcg (Stiolto Respimat) Respimat to manage COPD, and he is allergic to Doxycycline. The NP performed a physical assessment, and upon auscultation, crackles were revealed in the right lower lobe. Lung sounds showed diminished on the left with no retraction or increased work of breathing. A rapid point-of-care test indicates that the patient tested negative for COVID-19 and RSV, and the chest X-ray reveals consolidation in the right lower lobe. The NP diagnosed the patient with bacterial pneumonia. Ademir has a respiratory rate of 25 and an oral temperature of 101.1, which indicates his diagnosis.

Assess the applicable clinical practice guideline (CPG) for your assigned client. What treatment is recommended by the CPG for your client's situation?

Based on the American Thoracic Society and Infectious Disease Society of America (2019), clinical practice guidelines (CPGs) for the diagnosis and treatment of community-acquired pneumonia highlight the evidence-based recommendations for outpatients with comorbidities such as chronic obstructive pulmonary disease (COPD) may be more vulnerable to infections by Haemophilus influenza (gram-negative) and are at risk for antibiotics-resistant organisms. Therefore, the CPGs suggest that antibiotic therapy must be effectively tailored to specific pathogens in treating community-acquired pneumonia. Combination therapy of beta-lactams like amoxicillin/clavulanate or cephalosporin with the addition of macrolides like azithromycin or doxycycline or monotherapy with a respiratory fluoroquinolone like levofloxacin or moxifloxacin (Metlay et al., 2019). As in Ademir's situation, this guideline is crucial for patients with chronic obstructive pulmonary disease (COPD) history. Those diagnosed with community-acquired pneumonia must take amoxicillin/clavulanate, and a combination therapy is appropriate. Admir meets the criteria, and the CPG recommendations highlight that patients with comorbidities should receive broader-spectrum treatment for various reasons. To begin with, COPD patients are more susceptible to poor health outcomes if empiric antibiotic therapy is not started immediately, and this can result in inadequate treatment. Next, COPD patients are at high risk for antibiotic resistance due to past exposure to antibiotics, and it is suggested that these patients receive broader-spectrum therapy to provide appropriate coverage (Metlay et al., 2019).

Discuss your personal professional assessment of the client's situation provided in the scenario. What pharmacological treatment is necessary and why?

Ademir's case evaluation indicates that pharmacological treatment is necessary to treat community-acquired pneumonia successfully. The combination of his chest X-ray reveals