Patient History:

Patient: Mr. John Smith

Age: 45

Sex: Male

Chief Complaint: Persistent cough and shortness of breath for the past 3 weeks.

Past Medical History: Hypertension controlled with medication, no known allergies.

Family History: Father had COPD, mother has asthma.

Social History: Smokes half a pack of cigarettes per day for the past 20 years, occasional alcohol consumption.

Medications: Amlodipine 5mg daily.

Physical Examination: BP: 140/90 mmHg, HR: 85 bpm, RR: 20/min, Temp: 98.6°F, O2 Sat: 95% on room air. Chest examination reveals wheezing bilaterally.

PICO (Patient, Intervention, Comparison, Outcome) Framework:

P (Patient/Problem): 45-year-old male with persistent cough and shortness of breath.

I (Intervention): Smoking cessation, bronchodilator therapy, and/or inhaled corticosteroids.

C (Comparison): Standard care without bronchodilator therapy or inhaled corticosteroids.

O (Outcome): Improvement in respiratory symptoms, lung function, and quality of life.

Differential Diagnosis: Chronic Obstructive Pulmonary Disease (COPD), Asthma, Bronchitis, Pneumonia, Heart Failure

PubMed Query for articles:

Query: ("Chronic Obstructive Pulmonary Disease" OR COPD OR Asthma OR Bronchitis OR Pneumonia OR "Heart Failure") AND (smoking cessation OR bronchodilator therapy OR "inhaled corticosteroids") AND (persistent cough OR "shortness of breath")