

1. Chronic obstructive pulmonary disease (COPD) is a progressive respiratory condition, it is characterized by persistent inflammation and narrowing of the airways, which leads to difficulty breathing and reduced airflow (Cadham et al., 2024). Chronic obstructive pulmonary disorder is primarily caused by smoking, but other risk factors include genetic factors, air pollution, occupational exposures and symptoms include shortness of breath, persistent coughing, wheezing, chest tightness, fatigue, etc (Cadham et al., 2024). Common signs and symptoms found in COPD include chronic cough, shortness of breath, wheezing, frequent respiratory infections and heart issues (Sebastiao et al., 2024). Irritants like cigarette smoke and air pollution, as well as genetic factors are main factors that cause COPD. Complications such as respiratory infections, and heart issues can happen often requiring hospitalization during an acute exacerbation (Sebastiao et al., 2024).
2. COPD is diagnosed based on multiple factors, clinical symptoms, medical history, and pulmonary function tests. Spirometry measures the airflow in and out of the lungs, and with COPD you will see a reduced forced expiratory volume in 1 second (FEV1), and a reduced forced vital capacity (FVC) which measures the total amount of air exhaled after a maximal breath (Cadham et al., 2024). Based on the clinical symptoms, medical history and spirometry results, COPD diagnoses are met. Persistent airflow obstruction on two or more spirometry tests performed on separate days at least 3 months apart and symptoms that cannot be fully explained by other lung conditions (asthma, bronchiectasis) can require a diagnosis (Sebastiao et al., 2024).
3. For individuals with COPD, it is a life-long process, not just for adults, but shaped by early events, genetics and environmental exposures. It manifests in adulthood but can affect pediatric and pregnant populations with specific symptoms and complications (Cadham et al., 2024). Children with early life results may present with increased wheezing and other respiratory symptoms, which can make them at an increased risk for COPD. The focus for children is on the potential for future disease rather than chronic airway obstruction (Cadham et al., 2024). Compared to pregnant women, the severity of COPD is linked to an increased risk of obstetric and perinatal complications (Cadham et al., 2024). All these scenarios include an increased risk of COPD and the need for management strategies. It can be different person to person and can worsen symptoms depending on condition and acute exacerbation of disease process.