Short Communication

iMedPub Journals
http://www.imedpub.com

Clinical Immunology and Infectious Diseases

2022
Vol 6. No. 4

How clinical pharmacists can interpret spirometry results

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Abstract

Pulmonary function tests are confusing to many patients. Unfortunately, the importance of knowing your numbers as they apply to pulmonary function tests (PFTs) and Chronic Obstructive Pulmonary Disease (COPD) is commonly overlooked. In the diagnosis of COPD, pulmonary function tests are performed to assess lung function and determine the degree of damage to the lungs. Along with patient history, lung imaging studies and open lung biopsy, PFTs have become important for clinical pharmacists in the evaluation of respiratory health. Pulmonary function tests are used for the following reasons: Screening for the existence of lung diseases, determining the patient's condition prior to surgery to assess the risk of respiratory complications after surgery, assessing the progression of lung disease and the effectiveness of treatment, and clinical trials. We will demonstrate spirometry and will interpret clinical spirometry using pulmonary function tests which are used in the diagnosis of COPD. We will focus on: VC- Vital Capacity - The amount of air that can be forcibly exhaled from the lungs after a full inhalation, FVC-Forced Vital Capacity - The amount of air which can be forcibly exhaled from the lungs after taking the deepest breath possible, FEV1-Forced Expiratory Volume in One Second - The amount of air which can be forcibly exhaled from the lungs in the first second of a forced exhalation, FEV1/FVC-FEV1-Percent (FEV1%) - The ratio of FEV1 to FVC and tells the clinician what percentage of the total amount of air is exhaled from the lungs during the first second of forced exhalation, PEFR Peak Expiratory Flow Rate- measures if treatment is effective in improving airway diseases such as COPD, FEF-Forced Expiratory Flow - A measure of how much air can be exhaled from the lungs, it is an indicator of large airway obstruction, MVV-Maximal Voluntary Ventilation - A value determined by having the patient inhale and exhale as rapidly and fully as possible, and other sensitive tests.

Received: August 16, 2022; **Accepted:** August 22, 2022; **Published:** August 29, 2022

Biography

Mohammed Shamssain has completed his Ph.D. at Loughborough University in the United Kingdom and he has been teaching and doing research at many universities around the globe. He is the founder and the principle investigator of ISAAC Centre (the international Study of Asthma and Allergies in Childhood) for the north east of England. He has more than 100 publications and international presentations.

