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What is the Significance of Early Detection of Chronic Obstructive Pulmonary Disease (COPD) by Spirometry in High Risk Population in Primary Care?

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Introduction
COPD is a major cause of morbidity and mortality in Hong Kong. However, it is commonly underdiagnosed in primary care since symptoms of COPD are usually mild in the early stages of the disease. Early detection of COPD is important to allow timely intervention and prevent disease deterioration. As a result, a multidisciplinary programme was set up in KEC General Out-patient Clinics (GOPC) to assess at risk patients for COPD since 2009.

Objectives
To evaluate the spirometry results and outcomes of at risk patients assessed for COPD in a GOPC.

Methodology
Chronic smokers or ex-smokers aged 40 or above, with or without respiratory symptoms, and who have not been diagnosed COPD were referred to a multidisciplinary programme for spirometry assessment in the clinic. Brief counselling on smoking cessation, referral to smoking cessation services and advice on influenza vaccination were given to patients. The spirometry results and outcomes of patients attended the programmed from 1 Jan 2014 to 31 Dec 2015 were retrieved and reviewed.

Result
During the above period, 419 patients with spirometry performed were included in the study. 27.2% (n=114) was found to have COPD in which 108 (94.7%) were male patients. The mean age was 67 years and 22% of patients were younger than 60 years old. Among these newly diagnosed COPD patients, 70.2% of them were smokers and 29.8% were ex-smokers. Most patients were classified as GOLD grade

1 (Mild, 34.2%) and grade 2 (Moderate, 44.7%) while 21.1% were classified as GOLD grade 3 (Severe) or 4 (Very severe) in severity. Among those newly diagnosed COPD smokers, 20% of them quitted smoking after received counseling and COPD rehabilitation in the programme. 45.6% of newly diagnosed COPD patients were prescribed with medications for COPD control and 50% of those aged 65 or above received influenza vaccine in GOPC.   Conclusion: This study showed a high COPD detection rate by spirometry in high-risk patients in primary care. With early detection of COPD in these patients, timely intervention including counseling for smoking cessation, vaccination and pharmacotherapy can be provided.