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Can nurses successfully diagnose and manage patients with COPD?

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Can nurses successfully diagnose and manage patients with COPD?

Abstract

COPD is a highly prevalent chronic disease which can cost a country hundreds of millions of dollars per year. So it seems appropriate for as much of the diagnosis and care of patients with COPD to be managed by the most cost-effective health care providers as possible whilst maintaining quality outcomes.

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Can nurses successfully diagnose and manage patients with COPD?

An editorial invited by the PCRJ

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COPD is a highly prevalent chronic disease which can cost a country hundreds of millions (Euros, pounds, or dollars) per year. So it seems appropriate for as much of the diagnosis and care of patients with COPD to be managed by the most cost-effective health care providers as possible whilst maintaining quality outcomes [Fletcher 2003, Nici 2011]. The important study of Strong and colleagues in this month's issue of the PCRJ [Strong 2014] examines a step forward in this process. In addition to the usual care system for patients with COPD, the city of Rotherham, England also has a specialist nurse-led respiratory care centre called "BreathingSpace". This service is led by a respiratory nurse consultant and has a team of nursing, physiotherapy and occupational therapy staff providing outpatient assessment, diagnosis, and treatment of COPD. The authors evaluated the accuracy of a diagnosis of COPD from over 1200 consecutive patients referred to Breathing Space from the 36 general practices in the city. Around half of these patients were referred for pulmonary rehabilitation. About one in five patients did not have airway obstruction on pre-bronchodilator spirometry testing, indicating that the primary care provider's diagnosis of COPD was incorrect. There was poor agreement between the airflow obstruction grade recorded on the referral and that based on spirometry. Patients referred by a practice nurse were more likely to have been correctly classified when compared to patients referred from a general practitioner (GP).

A similar study of the ability of practice nurses to correctly perform spirometry and diagnose COPD was recently completed in 36 GP offices in Sydney, Australia [Bunker 2012]. Of 287 patients given a diagnosis of COPD by the practice nurse, about one-third did not have COPD according to a review and repeat spirometry done by the project officer (a pulmonary subspecialist). Fewer than 15% of 1342 patients determined *not* to have COPD by a project nurse had airway obstruction upon review.

Besides the applicability of nurses' standardized knowledge in terms of COPD diagnosis, multidisciplinary group participation within the practice is crucial. Although they are unable to cure the disease, current COPD treatments can reduce shortness of breath, improve exercise capacity and quality of life, and reduce the frequency of acute exacerbations for some patients. Since smoking cessation is the only action that will slow the rate of disease progression, more enthusiastic and prolonged efforts should always be provided for current smokers with COPD.

The high rate of misclassification of grade of airflow obstruction observed by Strong and coworkers in primary care is important because the pharmacological treatment of COPD is based on the degree of airway obstruction. It follows that a standardized process to perform and interpret spirometry is needed. The PLATINO study, a population-based survey conducted in five large Latin American cities, showed that more than half of smokers with severe airway obstruction (FEV1 <50% predicted) had not been previously diagnosed [Talamo 2007]. On the other hand, about two-thirds of the adults with a prior COPD diagnosis had normal spirometry (which is incompatible with COPD). In our opinion, accurate diagnostic labeling of COPD now represents an important health problem worldwide, not only in Latin America.

Improved use of spirometry by primary care personnel, such as trained nurses, should be part of a strategy to improve COPD diagnosis and management [Fletcher 2013]. However, it will be a challenge to transfer the assessment of patients at risk for COPD from third level centers to primary care facilities. This “transfer” should be performed while ensuring quality control of spirometry performance and interpretation as well as symptoms assessment using clinical practice guidelines [Bellamy 2006]. We can learn from the progress made during the past two decades for another common chronic disease: type 2 diabetes mellitus. Nowadays, most patients with diabetes are successfully evaluated in primary care centers instead of expensive and sophisticated third level centers.

Details were not given regarding the training, certification, and duration of experience of the respiratory nurses working at Breathing Space, but these factors are important and differ widely from place to place. The majority of older patients with COPD have comorbid conditions (such as heart failure, obesity, anxiety, and depression), so the detection and treatment of these comorbid diseases is very important, but not described by this paper.

The appropriateness and the efficacy of the treatments provided by Breathing Space for patients whose COPD was confirmed were not reported by this study. The most important clinical outcome measures: quality of life, morbidity (especially expensive respiratory-related hospitalizations), as measured by other studies [Ingadottir 2003, Wood-Baker 2012, Lenferlink 2013], were not reported by this cross-sectional study, so we urge the investigators to consider these patients as a cohort and follow these important outcomes over several years.

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