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Letter to the Editor Open Access

COPD Assessment Test: A Leap Forward For Third World Healthcare Systems?

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Abstract

Chronic Obstructive Pulmonary Disease is a major health burden worldwide, especially more so in the developing parts of the world where the morbidity and mortality rates are particularly high. A lot of this could be preventable with an improved clinical approach towards the diagnosis and management of COPD in these countries. The COPD Assessment Test (CAT) is a clinical tool which presents a reliable quantitative measure of a patient's symptoms. In addition to being cost-effective, it is easy to fill out for the patient and helps bridge the deficiencies in clinical history that may be left by any communication gap between the patient and the physician. It makes the task of explaining their symptoms much simpler and straightforward for the patient, and could significantly influence long-term COPD outcomes in a positive way in the near future.

According to the 2015 GOLD guidelines, Chronic Obstructive Pulmonary Disease (COPD) is defined as a disease characterized by persistent and progressively worsening airflow obstruction that can be prevented and treated [1]. The worldwide prevalence of 65 million according to the WHO is an underestimation of the burden of this disease due to the fact that most of the epidemiological studies have been conducted in the developed part of the world, which overlooks the extremely large contingent of COPD affected individuals from developing nations [2]. Contrary to the declining prevalence of other chronic diseases, the number of COPD cases is expected to further escalate in the near future, with main identifiable causes being a rise in the number of people smoking and an increase in life expectancy(COPD being more prevalent in older people) [3]. COPD was the fifth leading cause of death globally in 2002; WHO estimates indicate that, unless decisive measures are taken, it will become the third leading cause of mortality all over the world by the year 2030, 90 percent of these COPD deaths occur in low and middle-income countries [2]. In these developing countries, the high rate of mortality can partly be explained by the fact that a large number of COPD patients remain undiagnosed, or are diagnosed when their disease has progressed significantly.

It can therefore be clearly established that COPD forms a huge burden with a profound economic impact on both the individual patient and a developing nations' already fragile and underfunded healthcare systems. COPD contributes to the healthcare burdens more than the various other prevalent conditions in these countries, such as TB, Dengue etc., since it is a chronic disease without a cure and only supportive management.

Various factors can explain the inadequate quality of healthcare for COPD patients in third world countries. These include a lack of awareness of the dangerous complications of COPD, even among physicians; lack of availability and/or utilization of basic assessment tests (e.g. spirometry), time constraints, and very importantly the inability of the patient to properly and accurately communicate his/her symptoms to the doctor, which leads to the patient being misdiagnosed and subsequently managed inappropriately [4]. This point towards the need for some kind of clinical tool that enables the clinician to accurately quantify the patient's claimed symptoms and their severity [5].

The CAT questionnaire is a short, precise and specific clinical tool that can be used for this purpose. The questionnaire comprises of 8 short questions, with a score ranging from 0 to 5 for each question. Each question focuses on a particular symptom of COPD and the scale determines the severity of that symptom, with the sum of scores indicating the overall severity of COPD symptoms at that particular visit according to the patient. The overall score is an added sum of all the individual scores for various questions, ranging from 0-40 [5].

This provides the patient a way to accurately convey the severity of symptoms and bridges the gap of communication that so often exists between the patient and the physician. As discussed above, this gap is one of the key causes of the misdiagnosis of COPD. This questionnaire is easy to understand and relatively less time consuming for the patient to fill out, compared to other clinic questionnaires e.g. The St. George's Respiratory Questionnaire) used to asses severity of COPD symptoms in patients [5]. Moreover, the questionnaire filled out by the patient can be assessed easily by someone less qualified than a doctor, who can simply report the individual symptom scores and the overall added score to the physician. This removes the need for the physician to personally go through every individual patient's questionnaire, which is very important in public hospitals in these third world countries since these hospitals are often extremely understaffed and each doctor has to go through hundreds of patient's every day. Another highly significant factor that makes it ideal for use in developing world healthcare settings is that it incurs no cost for the patient and the hospital. This is ideal for healthcare systems that are financially handicapped and cannot offer other costlier diagnostic aids such as spirometry. CAT questionnaire as a screening tool can also be extremely useful in remote areas, where there are no large-scale hospitals. Most of these areas do not have access to basic health facilities; hence there is often very late identification of exacerbation of COPD. The CAT questionnaire can be used to assess the severity of symptoms and refer the patients with high scores of clinical severity to an advanced health care facility. Ultimately, the goal of this questionnaire is not to replace a good clinical history obtained from the patient, but to fill out any possible gaps left in that history because of the patient's inability to completely and accurately convey their symptoms to the clinician.

Several studies have proven CAT questionnaire to be a disease specific instrument that is a sensitive, simple and easy-to-administer

tool for physicians' assessment of COPD [5-7]. Many of these studies have validated the CAT questionnaire as an international cross-cultural tool for COPD assessment, which lays down the basis for its use in underdeveloped countries where such studies have not been conducted [5]. Although there is paucity of data in developing countries, surrogate evidence can be drawn from studies done in other more developed nations for the use of CAT questionnaire as an assessment tool by physicians.

To conclude, the CAT questionnaire is a promising tool that can form a part of a multi-pronged approach towards the care of COPD patients in developing nations, where it can contribute to earlier diagnoses, better doctor-patient communications and better health outcomes.

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