Reviewer's report

Title: Why is spirometry underused in the diagnosis of the breathless patient: a qualitative study

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Reviewer: Julia Walters

Reviewer's report:

This paper reports a qualitative study whose aim was to investigate the role of physician education as a potential barrier to the appropriate use of spirometry in the diagnosis of the breathless patient. This is an important topic for understanding how to improve accurate diagnosis in chronic respiratory disease and the study is novel in its approach.

The background of the paper refers to studies showing that spirometry is under-utilised in the diagnosis of chronic respiratory disease in primary and secondary care settings in a variety of countries, even in conditions where diagnosis is based on spirometric criteria as in COPD.

In the qualitative study design, the method of data collection used was focus groups with medical professionals (at various stages of training, specialist physicians and primary care physicians) guided by a facilitator using the five topics listed. The results are presented under headings; General approach to the breathless patient, Classification of breathlessness, Use of spirometry, Methods for teaching about respiratory medicine. The relevance of the findings for training are highlighted in the conclusions.

Minor Essential Revisions

1. In Background section the statement “A study of Australian GPs found that whilst almost 75% reported having a spirometer in their practice, less than 12% had used it to review the majority of their patients with asthma within the year prior to the study.” No reference is given. Johns et al quote ownership of 64.2% (Johns DP, Burton D, Walters JAE, Wood-Baker R. National survey of spirometer ownership and usage in general practice in Australia. Respirology.1. 2006;11(3):292-8.)

2. The concluding sentence of the Background section summarizing the findings should be removed and belong to the discussion/conclusions.

3. The methods section describes qualitative data analysis as “Sessions were recorded and transcribed, then themed by all three authors independently using published methods [18].” Further details on the type of thematic analysis performed should be included.

4. Limitations:

a. Participants in study were not alerted to the interest of the study authors’ in spirometry. Their findings, on the need to improve training on the importance of
spirometry and on the interpretation of spirometry, are useful and important. However the lack of in depth findings on the best model for obtaining spirometry are a limitation.

b. The relatively small sample size should be included as a limitation.

Discretionary revisions

1. Background section states “Any professional intending to use spirometry should be trained in both performance of the test and in interpreting the findings”. This is can be supported by a study comparing trained spirometry nurses and physiologist interpretation with providing general practices with a spirometer in Walters et al. (Walters JA, Hansen E, Johns D, Blizzard L, Walters E, Wood-Baker R. A mixed methods study to compare models of spirometry delivery in primary care for patients at risk of Chronic Obstructive Pulmonary Disease. Thorax. 2008;63:408-14.)

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests