

Using Tools as Designed [Letter]

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Dear editor

We read with interest the article by Zhou et al¹ comparing six COPD screening tools in a Chinese population that presented to the Department of Respiratory and Critical Care Medicine of the China Medical University. We applaud this study and its recognition of the importance of assessing COPD screening tools in populations with varying cultural, ethnic, language and health backgrounds. The patients in this study clearly represent a special population of those with sufficient concern to bring them to specialty respiratory care and with high rates of prior and current smoking, low BMIs and average age of >55 years.

As noted by the authors in the description of the questionnaires, CAPTURE is not just five questions.^{2,3} The CAPTURE tool is five questions *and peak flow values* for patients with question scores of 2, 3 and 4. As done in the comparative analyses using only the five questions, it is likely that the sensitivity of CAPTURE is overestimated and the specificity is underestimated when peak flows are not included in scoring. It would have been very informative to have CAPTURE “rescored” using the complete tool (questionnaire and peak flow from spirometry that was performed in the study). We recognize that it is possible that in Zhou’s special population both the score and the recommended peak flow values might be different than those recommended in a US primary care population.

The CAPTURE tool was designed to identify people with *clinically significant COPD* with FEV1/FVC <0.7 and FEV1 <60% predicted or with history of exacerbation like events in prior 12 months—those that would most likely benefit immediately from currently available therapies.³ It would be interesting to assess the performance of the CAPTURE tool in Zhou et al’s population to diagnose the patient group that was the focus for the development of CAPTURE.

We agree with the authors that different screening tools for COPD will have differing sensitivity, specificity and AUC in different populations. In this study’s population, it is not surprising that the LFQ performed particularly well since two of its five questions are based on age, and smoking duration.⁴ We look forward to a more complete assessment of the full CAPTURE tool in this and other populations.

Disclosure

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References

1. Zhou J, Yu N, Li X, Wang W. Accuracy of six chronic obstructive pulmonary disease screening questionnaires in the Chinese population. *Int J Chron Obstruct Pulmon Dis.* 2022;17:317–327. doi:10.2147/COPD.S341648
2. Martinez FJ, Mannino D, Leidy NK, et al. A new approach for identifying patients with undiagnosed chronic obstructive pulmonary disease. *Am J Respir Crit Care Med.* 2017;195(6):748–756. doi:10.1164/rccm.201603-0622OC
3. Yawn BP, Han M, Make BM, et al. Protocol summary of the COPD assessment in primary care to identify undiagnosed respiratory disease and exacerbation risk (CAPTURE) validation in primary care study. *Chronic Obstr Pulm Dis.* 2021;8(1):60–75. doi:10.15326/jcopdf.2020.0155
4. Yawn BP, Mapel DW, Mannino DM, et al. Development of the Lung Function Questionnaire (LFQ) to identify airflow obstruction.. *Int J Chron Obstruct Pulmon Dis.* 2010;5:1–10.

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