

Prevalence and Associated Factors of Chronic Obstructive Pulmonary Disease among Adults in Neno District, Malawi: A Cross-Sectional Analytical Study [Response To Letter]

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Dear editor

On behalf of all the authors, I would like to express our gratitude in response to the Letter to the Editor by Dr. Elanda Fikri.¹ We are grateful for the time and response to our study and we find the review informative for present and future work on Chronic obstructive pulmonary disease (COPD) in rural Malawi.

As noted in the response, our study indeed provides an important contribution to the epidemiology of COPD in a low-income, rural population without decentralized access to complex non-communicable disease care. Further strengths of the study were the use of spirometry as well as large sample size since it was a community-based cross-sectional study.

The review also provided a list of limitations, many of which were already noted in our manuscript² and will need to be considered in the future. One limitation was the inability to concretely diagnose tuberculosis in this study. We noted that there may have been an underdiagnosis of tuberculosis in the cohort causing or exacerbating COPD or misdiagnosis of COPD, which has been a noted limitation in other studies in a similar context.^{3,4} However, most over-diagnosis of COPD in low resource settings is due to diagnosis without spirometry⁵ which we used in this study. Granted, tuberculosis may be still underlying and in future studies additional screening and diagnosis of possible tuberculosis will be included. However, most resource limited settings like Neno, Malawi do not have the diagnostic capacity of bronchoscopy or computed tomography (CT) of the lungs to rule out tuberculosis. So in real-time diagnosis of COPD it will not be available and will continue to be a limitation. Further advocacy for improved diagnostics in rural settings is warranted.⁶

Another limitation that was pointed out which was also noted in our paper was potential selection bias in the sample due to high stigma associated with COVID-19 and vaccinations which was and continues to be a limitation in studying

and diagnosing respiratory disease. Continued community engagement and education on acute and chronic respiratory disease is vital for improving diagnosis and treatment. Other studies also found high stigma associated with COVID-19 and vaccinations.^{7,8} Lastly, the other highlighted limitations including of use of a fixed ratio of FEV1:FVC to define COPD, low smoking prevalence and inability to distinguishing between COPD phenotypes due to not being able to report TLC and RV, although it is believed that there would be more biomass phenotypes with high biomass exposure are acknowledged in our paper. We look forward to additional opportunities to illuminate further data on COPD with more specific diagnostics and larger cohorts.

We are grateful for the recommendations as suggested in the letter. As we indicated in our paper, a longitudinal study to understand the progression of the disease as well as other risk factors is highly recommended. Indeed, conducting comparative studies to better understand the prevalence of COPD across Malawi, and further contextual in-depth studies to understand the diagnostic dilemmas between tuberculosis and COPD, social and economic factors that may affect the prevalence and management of COPD in rural Malawian communities is vital.

Disclosure

The authors report no conflicts of interest in this communication.

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