

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

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## Dear editor

We have read a research article entitled “Prevalence and Associated Factors of Chronic Obstructive Pulmonary Disease Among Adults in Neno District, Malawi: A Cross-Sectional Analytical Study” by Zaniku et al,<sup>1</sup> recently published International Journal of Chronic Obstructive Pulmonary Disease. We congratulate the authors on this successful article and make some contributions. There are five strengths of this study: 1) This study makes an important contribution to the understanding of the epidemiology of COPD in Malawi, especially in rural areas, which previously had limited data, 2) The use of spirometry method in this study provides more accurate and reliable COPD prevalence data, which may be one of the first studies involving the use of this method in rural Malawi, 3) The study highlighted specific risk factors associated with the prevalence of COPD in Malawi, such as biomass exposure, smoking history, and TB history, which provide valuable insights for the development of COPD prevention and management strategies in the country, 4) The focus of the study on the adult population over the age of 40 in rural areas provides a more in-depth understanding of the burden of COPD disease in previously under-documented communities, 5) The study provides a strong basis for public health policy recommendations, including the promotion of tobacco control, smoking cessation initiatives, and post-TB patient follow-up to detect and improve COPD management in Malawi.

However, we have also discovered several limitations that need to be corrected in the future, namely: 1) Potential selection bias in the sample due to high stigma associated with respiratory diseases and vaccinations during the COVID-19 pandemic, which may have caused some potential participants to conceal themselves from the study team, 2) The use of a fixed ratio of FEV1: FVC to define COPD may result in over-diagnosis in the elderly and under-diagnosis in young adults, 3) Possible underdiagnosis of tuberculosis in Malawi, which may lead to underlying TB exacerbating COPD or misdiagnosed as COPD in this study, 4) Non-recognition of study participants with severe COPD, which may be due to low smoking prevalence or bias in sampling, 5) Limitations in 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 due to biomass exposure in almost all participants.

To obtain better results, we recommend that further research be carried out by 1) Conduct more extensive and comprehensive longitudinal studies to understand COPD disease progression and other risk factors, such as biomass exposure, by expanding geographic coverage and sample populations, 2) Conduct comparative studies between different populations in Malawi to understand differences in the prevalence and risk factors of COPD among different populations, 3) Conduct more in-depth studies to understand the relationship between TB and COPD, as well as how undiagnosed TB may affect the diagnosis and management of COPD,<sup>2</sup> 4) Conduct studies that look at social and

economic factors that may affect the prevalence and management of COPD in rural Malawian communities,<sup>3</sup> 5) Conduct intervention research to evaluate the effectiveness of tobacco control programs, smoking cessation initiatives, and post-TB patient follow-up in detecting and improving COPD management in Malawi, 6) Conduct research to understand the impact of the COVID-19 pandemic on COPD prevalence and management in Malawi, as well as efforts to reduce stigma related to respiratory diseases.

In conclusion, this study makes a significant contribution by identifying the high prevalence of COPD in rural areas of Malawi and highlighting specific risk factors associated with the disease, providing a solid foundation for the development of COPD prevention and management strategies in the country.

## Disclosure

The author reports no conflicts of interest in this communication.

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