

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

This paper was submitted to another journal from BMJ but declined for publication following peer review. The authors addressed the reviewers' comments and submitted the revised paper to BMJ Open. The paper was subsequently accepted for publication at BMJ Open.

ARTICLE DETAILS

Title (Provisional)

Prevalence of microspirometry-detected chronic obstructive pulmonary disease in two European cohorts of patients hospitalised for acute myocardial infarction

Authors

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VERSION 1 - REVIEW

Reviewer	1
Name	El-Awaisi, Juma
Affiliation	University of Birmingham
Date	19-Oct-2024
COI	None

The manuscript investigates the prevalence of COPD using microspirometry in patients hospitalised for acute MI with a smoking history. This focus is both timely and relevant given the increasing recognition of the interplay between respiratory and cardiovascular conditions. The study employs a cross-sectional design with data from two European cohorts (UK and Sweden), using microspirometry, an emerging tool for screening COPD. The conclusion that COPD is underdiagnosed in this population has significant implications for prognosis and treatment. The manuscript contributes valuable data on the prevalence of COPD in a high-risk group, supporting the need for broader screening initiatives.

- The authors acknowledge that microspirometry, while validated for screening, may not fully replace standard spirometry. This is a key limitation of the study, as only 56% of patients with a positive microspirometry result had confirmed COPD on spirometry. This suggests the possibility of overestimating the true prevalence of COPD in the cohort. It would be helpful if the manuscript elaborated on the potential effects of this misclassification on the generalisability of the findings and the estimated number of patients affected.

- While the authors report on baseline demographics, they do not fully explore the potential confounding effect of comorbidities such as heart failure, which was more common in patients with COPD. A more detailed analysis, controlling for these variables, could be helpful in interpreting the findings.
- Although the manuscript touches on inflammation as a shared mechanism between COPD and MI, it could benefit from a deeper exploration of how COPD might exacerbate cardiovascular outcomes post-MI. For instance, correlating inflammatory markers like white blood cell counts (neutrophils) with cardiac troponin levels and COPD severity could offer stronger mechanistic insights. This would provide a better understanding of the biological interplay between COPD and MI.
- The impact of confounders like medication uses and other comorbidities such as diabetes or heart failure should be addressed. Multivariate models adjusting for these factors would clarify the independent relationship between COPD and MI.
- The low use of ICS (15%) in COPD patients indicates undertreatment, but the rationale behind this is not fully explored. Further discussion on the clinical decision-making process, particularly concerning eosinophil thresholds, would enhance understanding of this treatment gap.

Reviewer	2
Name	Reviewer 2
Affiliation	
Date	19-Oct-2024
COI	No competing interest

Comments not published pending reviewer's consent

VERSION 2 - REVIEW

Reviewer	1
Name	El-Awaisi, Juma
Affiliation	University of Birmingham
Date	26-Mar-2025
COI	

Thank you for the revised submission. The comments from the first submission have been addressed.