Author’s response to reviews

Title: CHRONIC AIRFLOW OBSTRUCTION IN TANZANIA - A CROSS-SECTIONAL STUDY

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Reviewer reports:

Helena Backman (Reviewer 1): I find that most of my concerns have been properly addressed.
However, I am curious on the choice of definition of restrictive spirometry. Why was the "FVC < 5th percentile of FVC predicted and FEV1/FVC >0.85" definition chosen? When CAO is defined as either FEV1/FVC<0.7 or <LLN, I would have expected the authors to choose one of these definitions also for restrictive spirometry. This should be explained.

Response: the definition was chosen according to ATS/ERS definition (Pellegrino Eur Respir J 2005; 26: 948–968), and now explained in the methods section text. We would like to point out that this part of the analysis is independent from the previous part analyzing prevalences of obstruction according to ATS/ERS or GOLD criteria. It makes no reference to the two obstruction definitions, but uses continuous independent outcomes only. We therefore chose to use a common and universally accepted definition of restriction, excluding those patients in whom this analysis may be influenced by confounding factors.

Jens Bräunlich (Reviewer 2): Table 4: Please use FEV1% predicted NOT FEV1/predicted. What happens with your data if you use FEF%pred.?

table 4 legend: FEV1 (l)?

Page 5 Line 140 and table 1: Are the two centres in a region with mining industry or something else that could influence the results? There are no informations at the beginning of the methods section.

Response:FEV1 vs. predicted was replaced by FEV1% predicted throughout the manuscript. Table 4 legend was corrected. We did not perform an analysis using FEF25-75% predicted as most major publications examining lung function changes after inhalation of particulate matter (e.g. Downs et al., N Engl J Med 2007;357:2338-47) report absolute values. In addition, this analysis is more intended to demonstrate the potential of analysis of FEF25-75 in this study context as such, and FEF25-75 analysis was not reported in all studies known to us from Africa before. We agree however that a comparative analysis may be helpful in future and larger studies. The location of the study centres was explained and stated that they are not in a region with mining industry or other sources which might pose a region-specific lung hazard.