**Reviewer’s report**

**Title:** Usefulness of Occupation and Industry information in Mortality Data in South Africa from 2006 to 2015

**Version:** 0 **Date:** 22 Jan 2019

**Reviewer:** Steven Sadhra

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Usefulness of Occupation and Industry information in Mortality Data in South Africa from 2006 to 2015

Overall comments

The analysis of population based occupational health surveillance mortality data in South Africa is important, particularly in the absence of employer occupational morbidity surveillance schemes for the early identification of effects of exposure to hazardous substances in workplace. Primary aim of the study is to assess the usefulness and completeness of the data for deaths due to pneumoconiosis. It is important to first assess the quality and reliability of the data before the stated benefits of this data can be realised and used to inform policies and strategies on risk reduction in occupational setting.

The authors have correctly identified a number of limitations of the available data which includes its completeness particularly with reference to information on usual job (main job held over working years) and industry type. The authors have correctly identified that important of this information when assigning code to specific jobs.

The study is useful in identifying gaps in data and the need for additional data when using mortality data to identify specific job types and industries for further investigation. Their absence limits the findings to confirming high risk of pneumoconiosis amongst miners. The study does identify other higher risk jobs but the number of cases are few.

Overall the paper would be a useful short report or editorial with recommendations on the following; collection of relevant occupational information; diagnosis of pneumoconiosis; completeness of data and quality assurance. The question on 'usual occupation' which is open to interpretation can be replace by one or combination of the following; longest held job and last held job for those who are retired. It must also be borne is mind that the longest held job may not associated with highest accumulative dust exposure i.e. risk of pneumoconiosis.
Specific points which require further information /clarification /amendments

1. How were the 10 occupational groups chosen and why these 10 groups. For instance do they represent the common occupations or are they related to risk of exposure to dusts or grouped by job skill requirements. The logic used in constructing these 10 groups’ needs to be explained.

2. More information need to be provided on how the information on jobs was coded and reliability of the coding procedure.

3. Are authors able to estimate the extent of under reporting of mortality data for pneumoconiosis?

4. What was the accepted definition used for the reported diagnosis of pneumoconiosis. In addition the authors state that 'the largest number of pneumoconiosis cases were classified as unspecified type and included much higher proportion of women than the specified pneumoconiosis'. This require further clarification /explanation.

5. Too many tables and figures a number of which are not essential i.e. can be moved to supplementary tables.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review
Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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