Reviewer’s report

Title: Tuberculosis and HIV are the leading causes of adult death in northwest Ethiopia: evidence from verbal autopsy data of Dabat Health and Demographic Surveillance System, 2007-2013

Version: 0 Date: 19 Aug 2016

Reviewer: Rakhi Dandona

Reviewer's report:

Verbal autopsy data are an important data source on mortality causes in countries with poor vital registration. This study documents important data for an Ethiopian population but more specifics are needed to better understand/utilise these data. Specific comments follow.

Methods

1. Page 4, lines 51-52 - Please clarify what is meant by 'causes of registered deaths'.

2. Page 4 continuing on page 5 - Please provide appropriate reference(s) for verbal autopsy technique.

3. It is not clear when the VA data were collected. Please clarify if the data presented have been collected since 2007. If these data were collected recently and given that symptoms are documented in VA interviews, please describe how recall bias was accounted for deaths that occurred much prior.

4. Page 5, lines 9-12 and lines 24-42 - Please mention the number of VA interviewers who collected these data, and the number of physicians who were involved in assigning the cause of death.
5. Page 5, lines 24-42 - Please explain why INTERVA was not used to assign cause of death in place of physicians.

6. Page 5, lines 56-58 - Please specify what is meant by regular supervision. Were any interview data re-checked by the supervisors?

7. Page 6, lines 15-18 - Please provide details of the logistic regression model.

Results

8. Please give some description about the total population, proportion of migration, and calculate death rate (overall or for each year as appropriate, by sex and place of residence).

9. Table 1 - Is it possible to provide a column for total population, and then the number of deaths?

10. Table 1 - Please provide explanation of categories as relevant in the footnote.

11. Page 6, lines 41-58 - Please keep the details here only at the broad cause of death level and delete specific causes. Figure 2 shows variation in the broad distribution in years 2009, 2012 and 2013. Please report 95% confidence limits around the proportions for each year, and indicate if any are significantly different.
12. Table 4 and related description is more suited under the section on broad causes of death. It is not very clear what the odds ratio indicate.

13. Figure 2 - Why is pregnancy kept separately here?

14. Figure 3 and the related text does not add anything additional to the data presented. These can be deleted.

15. Table 2 - The current format of this table does not allow comparative understanding of cause of death by place of residence. Please change the format to show for each cause of death (row) - total deaths, deaths in rural area, and deaths in urban area - for the years considered. Also please report chi-square test values where appropriate.

16. Page 7, lines 24-36 - Interpretation of these findings need to better. For example, though meningitis is listed on position 4 for urban areas, its proportion is similar to that in the rural areas where it is listed on position 3.

17. Page 9, lines 4-19 and Table 3 - Please see point 14 above for Table 2. Similar changes can be made and appropriate interpretation written.

18. Tables 5 and 6 - The denominator considered is all those who have died and not all the population >15 years of age. If inferences have to be made at population level, then it would be better to consider all the population (dead and alive) for the outcomes of interest.
Discussion

19. Currently, this section is only repetition of the study findings and comparison with other countries. If the purpose of these data were to guide possible actions, then none is discussed.

20. No attempt is made to interpret the findings for the population.

21. Limitations of VA interviews should also be discussed. As it is indicated that health utilisation is poor in the study population, it would be useful to note how many and what type of disease conditions history were documented in the interviews.

Level of interest

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An article whose findings are important to those with closely related research interests

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