Reviewer’s report

Title: Verbal autopsy of 48,000 adult deaths attributable to medical causes in Chennai (formerly Madras), India

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Reviewer: Dr Abla Sibai

Level of interest: A paper whose findings are important to those with closely related research interests

Advice on publication: Unable to decide on acceptance or rejection until I see revised version

Summary comments:

This is a study of causes of death derived from verbal autopsy (VA) on around 48,000 adult deaths attributable to medical causes in Chennai, India, 1995-97. The fact that the majority of deaths in India, like most other developing countries, occur at home and, consequently, death certificates remain deficient in data on causes of death, renders the study a significant one. However, there are major shortcomings in the report itself that yet need to be thoroughly addressed before it is acceptable for publication.

The authors failed to specify, clearly, the objectives underlying the study. This is essential in providing the reader with the context in which the analysis and conclusions are to be evaluated. Parts of the information in the report were redundant to the extent that the discussion and conclusions appeared to be a repetition of the results. Also, the discussion failed to justify/comment on some of the pertinent findings, like differentials in ‘sensitivity’ of the VA between males and females.

These comments are detailed below:

A. Objectives of the study:

The objectives need to be clearly specified towards the end of the introduction. In a country like India, the fact that VAs should capture a more complete picture on causes of death than those assigned on the death certificates by the Vital Statistics Department (VSD) is intuitive, and one should not expect something different. The analysis in the paper attempted at evaluating the validity of VAs against death certificates for those who died in a hospital setting as reference and ended with an overall presentation of age- and sex-specific death rates in Chennai. The authors focused on the importance of VA to assign broad cause-of-death structure, while the latter two attempts are, in my opinion, more pertinent than the first and should be clearly specified in the manuscript.
B. Analysis and presentation of the results:

Table 1: The first two columns in Table 1 are redundant and need to be replaced with data on those lost to follow-up (n = 18,520) for comparison with those successfully traced for an interview. Deaths based on VA should be presented separately for those who died in a hospital vs. those who died in the community, and this renders tables 3B and 4B rather not necessary. A test of significance to assess the different comparisons may be conducted for this table.

Table 2: In order to justify its set objective, rather than calculated as percentages out of totals in each column, the proportion of deaths attributed to ill-defined causes should be calculated as percentages out of total deaths in each age and sex group.

Overall, the authors need to be clear about the rationale for their plan of analysis. Such a rationale should be guided by and tied to the objectives. I would suggest the following:

Table 1: to establish comparability between those lost to follow-up and those successfully traced and to highlight the relative advantage of VAs in improving on our knowledge of disease distribution among deaths (much lower proportions attributed to ill-defined conditions) in Chennai, in particular for those who died in (or outside) a hospital setting.

Table 2 is, in fact, not necessary, although the authors may briefly state the results (amended as suggested above) in the manuscript without presenting the table itself.

Tables 3 and 4 should focus on the validity of the results (sensitivity as well as specificity), and hence tables 3B and 4B would not be necessary, particularly, because some of these data would be presented in the suggested table 1.

Table 5 to give an overall picture on the death structure in Chennai.

C. Discussion:

A major concern is that the discussion in this paper appeared to be a summary of the results. A presentation of the strengths (large sample size, representativeness .. etc) and biases (open-format VA, sensitivity and specificity of VA) of the study should strengthen the material in this Section. Several questions remain unanswered: why the VA improved on our understanding of the proportion of known causes of death for those who died elsewhere more so than for those who died in a hospital setting? Why were there differentials in the validity (sensitivity) findings by sex? How do the results on mortality rates (table 5) compare with other countries similar in transition to India? These are all important to provide the reader and those interested with the results on death structure in Chennai with the context in which the findings can be evaluated.

D. Editing of the manuscript:

The manuscript would clearly benefit from editing by a native English-speaking researcher. The authors should use the 'past' tense in their Methodology and Analysis Sections.
Other minor comments:

The results should tie closely with the tables, that is, a reference to the table in question should be made while presenting the results. Percentages should appear in the tables while avoiding the use of numbers (xx/xxxx) in the text. It was somehow confusing to follow the author’s presentations of the results in tables 3 and 4. Overall, the manuscript should adhere to relevant standards for reporting and data presentation.

Inconsistency in the information provided:
Male non-medical graduates (p.5) vs. medically trained personnel (p. 13) for the interviews.

Avoid personal judgments (In addition - although this is less easily quantifiable - it can help make the information on causes of death somewhat more trustworthy, even if the actual cause is not altered..p. 10)

If the policy of the BMC allows, other researchers may benefit if a copy of the VA interview schedule is posted in the English Language on the Internet as well.

Competing interests:

None declared.