Reviewer's report

Title: How much do the physician review and InterVA model agree in assigning probable causes of death? A Comparative analysis from rural Ethiopia

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Reviewer: Daniel Chandramohan

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Although this study is not novel it adds to the existing knowledge of the performance of physician review (PR) and InterVA to assign causes of death from verbal autopsy. This study highlights the uncertainty in the use of PR and InterVA to assign specific causes of death. The study methods are acceptable and the interpretation of results is reasonable.

Minor Essential Revisions

1. Although there is reasonable agreement at the broad causes of death categories the agreement between the two methods for several specific causes of death is poor. The authors suggest that one of the reasons for this discrepancy between the two methods is the difference in the number of causes of death used by the two methods. The effect of the difference in the number of cause of death used is unlikely to explain the large disagreement between the two methods for assigning causes of death such as neoplasm and respiratory infections. The key factor that explains this inconsistency between the two methods is the main source of information – InterVA uses the data from the closed questions only while the PR uses mostly the open ended narrative part of the VA questionnaire. Furthermore the probability matrix of InterVA is not consistent with the probability applied by the local physicians. The authors have mentioned these issues but they need to be well discussed.

2. The authors should discuss the limitations of comparing the performance of two methods with unknown validity without a gold standard to compare. Although there is plenty of data on the validity of PR compared to hospital diagnosis as gold standard there is very little data on the validity of InterVA. The uncertain in the validity of InterVA needs to highlighted in the discussion.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
none