Determining Causes of Death with ChatGPT: A Case Study of Deaths from Verbal Autopsy in Sierra Leone from 2019-2022

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Abstract

The abstract serves both as a general introduction to the topic and as a brief, non-technical summary of the main results and their implications. Authors are advised to check the author instructions for the journal they are submitting to for word limits and if structural elements like subheadings, citations, or equations are permitted.

Keywords: keyword1, Keyword2, Keyword3, Keyword4

1 Background

Reliable counts and diagnosis of deaths are crucial for public health planning and policy making — guiding scalable interventions that save lives and reduce premature deaths worldwide [1–4]. However, most low-income countries have reported to have either no data on deaths or have registered less than 50% of deaths in their country, where an even fewer 8% of these registered deaths have a Cause of Death (COD) recorded [5]. To fill in this gap, an alternative method known as Verbal Autopsy (VA) is used to collect data on deaths and determine their likely causes at scale, outside of traditional healthcare facilities [6–8].

VA involves two major components: survey and COD assignment [9]. In the survey component, trained lay surveyors interview those familiar with the deceased (e.g. living spouse, family, relatives, friends) to gather information using standardized questionnaires and open narratives. The gathered information consists of a standardized questionnaire, and an open narrative. In the COD assignment component, physicians evaluate information gathered from lay surveyors to assign probable CODs. Although the survey component has been an effective alternative to collect mortality data at scale, the COD assignment component has been criticized to be expensive and difficult to reproduce due to reliance on physician assigned CODs [10, 11]. Recently, computer algorithms have been studied to automatically assign CODs as an alternative to physicians, with performances close to physicians at the population level, but poor performances at the individual level ((CITE)). Many of these computer algorithms have utilized the questionnaire portion of the surveyed data, but often omit data from the open narrative.

2 Methods

x.

3 Results

x.

4 Discussion

Discussions should be brief and focused. In some disciplines use of Discussion or ‘Conclusion’ is interchangeable. It is not mandatory to use both. Some journals prefer a section ‘Results and Discussion’ followed by a section ‘Conclusion’. Please refer to Journal-level guidance for any specific requirements.

5 Conclusion

Conclusions may be used to restate your hypothesis or research question, restate your major findings, explain the relevance and the added value of your work, highlight any limitations of your study, describe future directions for research and recommendations.

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Acknowledgments. Acknowledgments are not compulsory. Where included they should be brief. Grant or contribution numbers may be acknowledged.

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Declarations

Some journals require declarations to be submitted in a standardised format. Please check the Instructions for Authors of the journal to which you are submitting to see if you need to complete this section. If yes, your manuscript must contain the following sections under the heading 'Declarations':

- Funding
- Conflict of interest/Competing interests (check journal-specific guidelines for which heading to use)
- Ethics approval
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- Availability of data and materials
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- Authors' contributions

If any of the sections are not relevant to your manuscript, please include the heading and write 'Not applicable' for that section.

Appendix A Section title of first appendix

An appendix contains supplementary information that is not an essential part of the text itself but which may be helpful in providing a more comprehensive understanding of the research problem or it is information that is too cumbersome to be included in the body of the paper.

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