Reviewer's report

Title: The Second Study of Infectious Intestinal Disease (IID2): Increased rates of recurrent diarrhoea in individuals aged 65 years and above

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Reviewer: Mohammad Khan

Reviewer's report:

The paper highlights an area of public health significance from the developed country perspective. I have following comments on the manuscript.

Introduction: Please provide supporting literature that the IID in older population is a problem elsewhere too. The literature quoted is from developing countries and for children. Since the focus of the paper is elderly population. Please support with literature for the same population. If there is no literature please justify the absence.

Methods:
- Please describe if the analysis was designed at the time of study planning. It looks like a secondary data analysis to me. There is nothing wrong with such analysis, but it should be clearly mentioned in the study design section.
- Please clearly mention the primary exposure of the study and the design. In case the study is cohort design (which it is), please clearly mention what exposure variable was considered. The first para of the analysis section in methods does not correspond to a cohort design. This is also evident from the tables, as the groups are not based on the exposure but on outcome.
- Please describe censoring clearly and how person time contribution was calculated.
- Please consult a statistician for the analysis section.
- It will be helpful to have the total number of individuals followed up that provided the person time (not necessary but since this article will be read by people in different regions with a variety of educational background, therefore will help them understand the paper more).
- It is also unclear that if each episode was considered independent, then why would the authors think that the previous episode will have an effect on the incidence of the next episode. If that is the case then, the data need to be analysis as correlated and the hierarchical nature adjusted.
- I personally think there are few design issues with the study. Therefore unless these issues with design and analysis are addressed, the interpretation and implication of results cannot be reviewed.
**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:**

I declare that I have no competing interests.