Reviewer's report

Title: Burden of community-acquired and nosocomial rotavirus gastroenteritis in the pediatric population of Western Europe: a scoping review

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Reviewer: G Kang

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This paper reviews the literature published over two decades from countries in Western and Southern Europe for a range of data related to burden of rotavirus gastroenteritis. Given the large amount of data that has been published, including some comprehensive reviews on burden of disease, serotype distribution and social and economic costs in the past few years, it is not clear what additional value this paper brings to the literature in the field.

Major Compulsory Revisions

For the epidemiology of rotavirus gastroenteritis (RVGE), the authors present data on incidence of disease initially and later as prevalence. This can be confusing if incorrectly structured. The authors have prevalence in the same section as seasonality with too many kinds of data, prevalence, type of setting, duration of episodes, risk factors etc. They may be better served by presenting the data in separate subsections.

While incidence of RVGE in children in day care centres and those admitted to hospital can be captured, the data on 'community-acquired' RVGE is based on children presenting to primary care facilities. Since not all children with acute gastroenteritis are brought to any healthcare facility, the incidence for 'community-acquired' RVGE is necessarily an under-estimate as stated by the authors, the data should be discussed in comparison with true community based incidence, as from prospective cohort studies. Otherwise, at least an attempt should be made to calculate more accurate incidence based on the proportion of children who do not seek care and the proportion of RVGE among all cases in primary care and day care.

For seasonality, obviously the temperature and precipitation are different between Greece and Finland. The authors should examine the data to assess whether there is a gradation of extent of seasonality with latitude, temperature, proximity to coastal regions, precipitation, etc.

The clinical features of RVGE also appear the prevalence and seasonality section and should be either presented separately or eliminated, depending on the final structure of this review.

The authors state that RVGE prevalence varied over time in some countries, but cite no references.
In the discussion, prevalence as presented is actually the proportion of gastroenteritis attributable to rotavirus in different settings, and the authors seem to use incidence, prevalence and proportion quite loosely. It would be useful if the authors presented data on disease and burden as pyramids showing different levels of care, with a call-out to account for nosocomial gastroenteritis in hospitalized patients.

This paper has a summary of useful data from several studies, but as presented in the text, it is somewhat confusing, requiring going back and forth between sections. The tables are better presented, but in Table 2, if data for particular columns is not available, that should be stated. The data from Table 2, should also be analysed on a cost per child per year and presented as a comparison between different countries, either in the text or the table.

In Figure 2, the number of GE cases based on which proportions are calculated should be included. Figure 3 can be summarized in the text and is unnecessary (the data could also be combined with Figure 4 to reflect proportion and genotypes in each year).

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.