Reviewer's report

Title: Evaluation of Seasonal Patterns of Kawasaki Syndrome- and Rotavirus-associated Hospitalizations in California and New York, 2000-2005

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Reviewer: Kare Molbak

Reviewer's report:

I have two major concerns with this paper. First of all, because the topic is previously rather unexplored and its importance is yet to be established, the readers should have a broader introduction to the subject. Why is this important? Although it is mentioned that it could be of relevance for rotavirus-vaccine safety reasons, the authors should provide more background. Explanations tend to be too brief and leave essential information out.

The other main concern is the complete lack of statistical analyses. The authors present their data on different curves which they eye-ball. There are well-established methods for time-series analyses which they could explore.

Detailed comments

Abstract

This section is much too unspecific. Particularly the background and methods parts are too brief and hold too little information on the rationale for the study and the actual methods used. Some measures or numerical results would be desirable in the results part. The conclusion is not at all in line with the findings of the study and the conclusion in the text itself.

Introduction

More information about the suggestion of a potential link between the Rota-virus vaccine and Kawasaki’s syndrome would further clarify the rationale for the study.

Methods

The data collection method is well described, whereas the selection process is not clear. We can read that discharge records from all eligible patients at the community hospitals in the New York and California areas were used: Though, nothing is mentioned about the proportion of the population in these areas that are covered by the community hospitals and if these groups are representative of the population in the two areas.

The explanation to the statistical methods used also needs to be more specific and clear. There is no explanation to what is meant by graphical analysis. The method for examining the cumulative monthly proportion of hospitalizations is not further elucidated and the reason for carrying out this examination is not stated.
either.
The methods section also lacks details on which method that will be used for investigating the study objective; “…to evaluate whether the two diseases temporally coincided”.

Results
The results of the descriptive analysis are clearly described both in text and graphs without being repetitious. However, a quantitative analysis is not included.

Discussion
The discussion of the results is valid and clear. Though, the only way it addresses the previously mentioned objective of temporal coincidence of the two diseases is by eye-ball ing the graphs. In this case, it appears to be enough, but an a priori strategy for this analysis would have been preferable.

The problem with use of discharge records are brought to light as well as the limitations when interpreting ecological studies like this one. However, the other limitations of the study are not mentioned.

Conclusions
This paragraph is valid and corresponds well with the findings in the study, as it is much more modest than the conclusion in the abstract (which should be changed).

Illustrations
Each graph needs its own heading and explanation. The axes also need better labelling. The lay-out of the graphs is generally poor.

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests