Reviewer’s report

Title: Rotavirus vaccine impact and socioeconomic deprivation: an interrupted time-series analysis of gastrointestinal disease outcomes across primary and secondary care in the UK.

Version: 0 Date: 03 Nov 2017

Reviewer: Khitam Muhsen

Reviewer's report:

General comment

This well-designed study provides important and timely information regarding the impact of rotavirus immunization in the UK. The authors assessed vaccine impact in relation to socioeconomic status.

Specific comments

Abstract

Since the manuscript assessed the impact of rotavirus immunization in relation to socioeconomic deprivation, it is important to add some details in the abstract, on the cost of the vaccine to parents (or whether it is free of charge). Also, please add information on the type of the vaccine (monovalent) and recommended ages for immunization.

Background

Paragraph 1, lines 63-66, please note that currently various estimates exist on the number of global deaths attributed to rotavirus.


Paragraph 2. Please add information on the health care system in the UK with emphasis on administration of early childhood vaccines (e.g., cost to parents, access to care).
Methods

Page 6, lines 106-111. Since socioeconomic deprivation is a main variable in this study, please elaborate on how socioeconomic index was calculated, and which components were included in the calculation.

The detection of rotavirus among hospitalized children at the Alder Hey Children's NHS Foundation Trust was performed using immunochromatography test or enzyme immunoassay. Please add information on the validity of the two methods, the period in which each method was employed, and whether this might have affected the results.

Discussion

Please see the following citation on the impact of rotavirus immunization on clinic visits:

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics
Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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