Reviewer’s report

Title: Rubella seroprevalence among primary and pre-primary school pupils at Moi’s Bridge location, Uasin Gishu District, Kenya.

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Reviewer: angela dominguez

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RUBELLA SEROPREVALENCE AMONG PRIMARY AND PRE-PRIMARY SCHOOL PUPILS A MOI’S..

COMMENTS TO THE AUTHORS

This is a manuscript dealing with the seroprevalence of rubella antibodies in a sample of children in a district of Kenya.

The topic is interesting from the point of view of public health because congenital rubella syndrome (CRS) is a serious problem. However, there are some major limitations.

Major compulsory revisions:

1. It is not explained why, if the problem is CRS, the authors don’t try to investigate directly the magnitude of this problem. Probably the diagnoses and the registers are not complete and the study of seroprevalence is an approach, but, this is not stated.

2. Boys and girls are distributed in different age groups. There is no reason for this, and then it is impossible to know if there are differences between both sexes.

3. There is no explanation of why the authors have selected the variables family with television, child leisure or number of siblings to investigate “potential risk factors associated with rubella seropositivity”.

4. All variables included in univariate analyses are also included in multivariate analyses, when in the methods section is stated “each potential determinant that showed association were fitted into a final logistic regression model.”

5. How did the authors estimate the sample size necessary to obtain valid results? Why have they not studied all the children? These aspects must be explained before the sentence “using multistage cluster sampling”.

6. How many children (or their parents) refusal to participate? This data must be included in the results section, and if there is an important proportion of refusal, authors must explain if characteristics of participant and non-participants are similar.

7. There are 2 figures 1 that shows the same (prevalence of IgG Rubella antibodies) in all children and in females. The age groups for boys, girls and all children should be the same.
Minor essential revision:

Abstract

Background is too long. The sentence “to address this gap ….” In fact contain the objective. So it would be better “The objective ….” , because only with the results of a seroprevalence study the gap can not be avoided.
The results should be more concise. The sentence …” which controlled for confounding factors…” should be deleted. See comments on Results section.

Introduction

Before CRS should be written Congenital Rubella Syndrome this first time.
There is no relation between lack of information about CRS and the aim of this study.

Methods

The extra time of 15 minutes to conjugate incubation time is not justified (improve comparability of what?). The sentence that contain Mantel-Haenszel and Fisher exact test are not finished (were used, were carried out … to …)

Results

The content of Table 1 not relevant. It should be changed to a summary of the demographic and socioeconomic characteristics of participants

All results on boys/girls prevalence should be included in a table that include the number of each category, the point prevalences and their 95% CI.

The authors should explain why they have included child leisure, number of sibling or working adults residing with family as potential risk factors associated with rubella seropositivity. If only variables that had shown significance in the univariate analyses were included in the logistic regression analysis the variables child leisure, number of siblings and working adults should not be included.

Discussion

Results of seroprevalence obtained in the study should be compared with other studies in countries of similar socioeconomic and health level and comment the possible reason for the differences (if any). In conclusion there are some data (mean and median of age) that are not included in the results. These data should be deleted. The importance of these results for preventing CRS cases should be explained.

References

More studies on rubella seroprevalence should be included.

References should be set as in guidelines for the publication. The name of the journals sometimes is abbreviated and others it is written out.

Reference 4 : “n pregnant” should be changed to “in pregnant”

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Needs some language corrections before being published

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'