Reviewer's report

Title: Emergency room (ER) visits of children under age one: effects of immigrant status and maternal education level. A cohort study in the province of Reggio Emilia (Italy)

Version: 3 Date: 1 July 2013

Reviewer: Evelina Pappa

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The aim of the study was to assess the factors that determine the utilization of E.R. of children under age one focusing on immigrant status and maternal educational level. The background for E.R. utilization is well-documented, but there are many issues which should be taken into consideration. Discussion and Conclusion are not adequately supported by the data.

Major Compulsory Revisions

1. One basic issue concerns the theory of health care utilization which is the theoretical background of the present study. In my opinion, the theoretical background and the method are not sound. According to the theory of health services utilization research, it is considerably different whether the initial contact is studied during a giving period and whether the frequency of visits is studied. Therefore, two different things should be studied: first, the utilization of E.R. by assessing the characteristics of those using E.R. compared to those not used (zero visits) and second the frequency of use by assessing those having used E.R. once, compared to those having used it more frequently.

2. Following the above, another comment concerns the statistical analysis that used to assess the utilization of E.R. If I understand well, you treat the utilization of E.R. as a count variable, which is an inappropriate method. The scope of your analysis was to assess the probability of use and the frequency of use investigating their predictors. Logistic regression analysis is the proper method

3. It would be more interesting to investigate the urgency of visits by addressing a multinomial logistic regression analysis by categorizing the dependent variable “urgency of visits” to three categories such as: white, red/yellow, hospitalization. This will allow to compare multiple groups through a combination of binary logistic regressions

4. Concerning table 5, it is not clear to me why geographical area is studied separately. Why the geographical area i.e. the country of origin of mother is not included as an explanatory variable in the statistical models?

5. On p. 11, Discussion section, 1sr par. at the end, it is mentioned the age of children in months. Where is the variable in the statistical analysis? How did you come to this conclusion? Why is the age of children not included in the statistical
analysis as a covariate?

6. On p. 13, Discussion section, 3rd par, it is mentioned that “for women on the same educational level, immigrants have higher risk compared to Italians”. How did you come to this conclusion? Statistical analysis did not show something like that. Can you be more specific?

7. On p. 13, Conclusion section, 1st par., at the end, rewrite the two vulnerable population subgroups. For example, “immigrants regardless of their education level” is very wide and does not consist the target group of your study.

8. On p. 14, Limits section, I think that the first limit does not apply to your study, because you have already used the classification of the educational level according to schooling years.

9. On p.15, Conclusion section, 2nd par. at the beginning, it is mentioned the first month of age. The conclusion is not in accordance with the results. See also above the comment 5.

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