Reviewer’s report

Title: Prevalence of asthma, rhinitis and eczema symptoms in rural and urban school-aged children from Oropeza Province - Bolivia: a cross-sectional study

Version: 2 Date: 25 July 2013

Reviewer: Leila D Amorim

Reviewer’s report:

I consider that the majority of my concerns was appropriately addressed. However, statistical methods used for data analysis still require review.

Major Compulsory Revision:

1. Statistical methods and study design

(i) Even though the authors included information about limitation of study for having computing sample size based on a random sampling scheme while having used a cluster sampling scheme, this is not sufficient reason for not having used the appropriate methods for data analysis. The methods for analysis of correlated data are available in almost all statistical software, being already routinely applied in data analysis. It has been proven that even very small values of the intraclass correlation coefficient (ICC) are capable of having a large impact on analysis results. The authors have to estimate and present the ICC for their study as well as apply the appropriate extensions of chi-square test and logistic regression model to analyze their data.

The limitation of not having used such methodology is not lack of power, but the possibility of reporting significant effects when they do not exist, which is caused by the inflation of type I error.

(ii) The authors categorized type of school (private versus urban). However, as already pointed out in the text there are no private schools in rural areas. In Table 2, results comparing rural and urban schools are presented adjusted by type of school. What is the justification for adjusting by this variable when all schools are of the same type in rural areas?

Level of interest: An article of importance in its field

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 interest.