Reviewer’s report

Title: Prevalence of asthma and other allergic conditions in Colombia 2009-2010: a cross-sectional study

Version: 3 Date: 11 January 2012

Reviewer: Manuela De Sario

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Major compulsory revision

My major point of concern is still low response rates and the non random sampling and for 1-4 and 18-59 yrs old population. Authors have answered through post-stratification weight adjustments. However, they do not provide the rationale to understand if this method is able to correct for possible selection bias. I recommend authors to provide such a rationale and a bibliographic reference of this method and to discuss among limitations its ability to reduce selection bias especially in the case of non-random sampling. Please also clarify the wording "weighted percentages" in the footnote of tables.

Minor essential revisions

1) Regarding the allergens considered in the IgE analysis, authors have added some other allergens to the discussion but I advise to specify whether or whether not all of them were potentially of interest in the study population.

2) Regarding missing data, I advise authors to specify in the Methods section as they answered to me that missing answers were included in the prevalence computations as "no" answers as well as to explicitate the proportion of missing answers in the Results.

3) Regarding the difference between asthma symptoms and diagnosis, authors have added a short comment to the discussion. I suggest to search for possible explanations of asthma underdiagnosis in the local context, i.e. health service organization, and discussing this point more in detail, i.e. in which age group the difference seems to be greater.

4) Regarding the analysis of the burden of disease (now Table 8) authors have left the percentages only. It could be useful if authors clarify in the footnote which are the denominators of the percentages, i.e. whether they are referring to the lifetime or last year conditions. Furthermore, it could be of interest whether they discuss more about days away from school/work and the other indicators of burden of disease, discussing also about the application of the international guidelines for treatment of asthma, rhinitis and eczema in Colombia (see for example Fischer GB, Paediatric Respiratory Reviews 2005;6(1):8-13 for Latin America). I wonder if, specifically for asthma, there are data in Colombia regarding another important indicator of quality of care, the prevalence of admission rates for asthma especially in children. If yes, authors can add also
this point to the discussion.

5) Regarding the international comparisons, authors have addressed this point but reminded for details to other studies (Cooper et al.). However, I recommend authors to cite relevant risk factors for prevalence of asthma and allergies in the local context (i.e. poor housing conditions, overcrowding, malnutrition, early exposure to infections and parasites) (see for example Fischer GB, Paediatric Respiratory Reviews 2005;6(1):8-13 for Latin America).

6) Even in absence of data about the proportion of kids not attending school, anyway I advise authors to discuss this point among possible limitations.

7) As in my first review, I advise authors to provide, if possible, in the rationale some demographic, socioeconomic and health data for Colombia and to compare them with other Latin America countries.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

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