Reviewer's report

Title: Prevalence of anemia and deficiency of iron, folic acid, and zinc in children under 2 years of age and beneficiaries of the Mexican Social Security Institute.

Version: 1 Date: 7 July 2007

Reviewer: Masahiro Hashizume

Reviewer's report:

General

This paper reported prevalence of anemia and of iron, folic acid, and zinc deficiencies in Mexican children under 2 years of age by region, age groups and care regimens. The topic of these micronutrient deficiencies is relevant and important. The data from a national level survey is a particular advantage of this study, given that there are few large scale studies of these micronutrient deficiencies. I have some reservations about presentation of methods and results as described in specific comments.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. Abstract: The order of subdivisions should be Background, Methods, Results and Conclusion.
2. Abstract, results: would clarify what you mean by “in direct relationship”.
3. Abstract, results: not clear “Children with anemia have higher percentages of folic acid deficiency” than which population?
4. Methods: The characteristics of out-patient clinic, vaccination clinic, and well-baby clinic are not clear. Although the characteristic of study subjects is described as “clinically healthy children” in abstract, I wonder if it is applicable to children who visited out-patient clinic.
5. Results: The authors may need to comment only on the important points in the text when results are presented in tables or figures. It is not necessary to repeat details in the text what is shown in the tables.
6. Results: The authors performed numerous statistical tests to compare the prevalences between regions, age groups and care regimens, which is not appropriately defined in the objective of the study. Authors could consider omitting statistical tests which is not necessary according to the objective of the study.
7. Discussion: The authors mentioned the possible selection bias because of low response rate from the larger survey but not described the possible selection bias in relation that the subjects were chosen from children who visited health care facilities. It would be informative to know how much children who visited
health care facilities were likely to be different from general population in the study area.

8. Tables, overall: I feel difficult to follow what was compared by statistical tests, because numerous statistical tests were performed.

9. Tables 4 and 7 and Figures: The definition of iron deficiency is different from that in Table 3 and in the methods, which would confuse the reader. Could be changed to, for example, iron deficiency without anemia.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

10. Tables, overall: not clear what “N” means. The tables should be self-explanatory.

11. Table 1: Media = Median?, IC 95% = 95% CI?

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Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

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.