Reviewer’s report

Title: Expatriates ill after travel: Results from the GeoSentinel surveillance network

Version: 2 Date: 11 August 2012

Reviewer: Miguel M Cabada

Reviewer’s report:

The authors report on a matter of significant relevance. Their study is based on GeoSentinel Network data and is strong in data quality and sample size. It is important to note that the proportionate morbidities reported are on illnesses at presentation to post-travel consultation and that the study misses most mild to moderate illnesses, illnesses with a short duration, and illnesses that are not taken care of by travel medicine or infectious diseases specialists (like trauma). Therefore, the authors must be very cautious in discussing and comparing their results with other studies on expatriate or long term travelers morbidity.

The authors selected from the GeoSentinel Network database an important number of ill business and volunteer returned travelers. While the definition of "expatriates" is clear, the definition of "non-expatriates" is somewhat less clear and makes difficult to evaluate the importance of the differences found. More so, taking into account the significant differences in the characteristics between and within the groups. Which make the report and discussion of the bivariate analysis less relevant. Perhaps a more useful analysis would be to compare business expatriates vs. business non-expatriates and volunteer expatriates vs. volunteer non-expatriates.

- Major Compulsory Revisions

1. The definition of the "non-expatriates" group is not clear. Business and volunteer travelers are lump together in the comparison groups which may account for the significant differences found in the groups characteristics. Please provide a clarification of the definition of "non-expatriates" and information on the characteristics of each of the 4 possible groups (as mentioned above).

2. There are very important differences between expatriates and non-expatriates like duration of travel and reason to travel. If the authors do not consider necessary re-analyzing the data comparing business expatriates vs. business non-expatriates and volunteer expatriates vs. volunteer non-expatriates, they should at least consider reporting the results adjusting for duration and reason to travel (e.g. adjusted analysis of the proportionate morbidity by region).

3. There is very little discussion on the adjusted Odds ratio results. I would recommend focusing the discussion on this part of the analysis and give less weight to the unadjusted part of the results.
- Minor Essential Revisions

1. Page 7, 1st paragraph of the results section: "... 14,793 business and volunteer travelers visited GeoSentinel sites ...." Instead of "... 14,793 individuals visited GeoSentinel sites ...". The number of individuals that visited GeoSentinel sites after travel with a confirmed or probable travel-related diagnosis during the study period was significantly higher than the number mentioned.

2. The editor suggested removing table 4 and the authors agreed but forgot to remove the reference to table 4 in the body of the manuscript. Please remove the text referring to table 4 from the results section.

3. Page 10, 1st paragraph: reference 9 is cited twice, please delete one.

4. Page 10, paragraph 2: the discussion in this paragraph does not focus on the results of the study. It discusses malaria prophylaxis for which no information was collected or provided in the present manuscript. I will suggest deleting this paragraph.

5. Please delete reference number 18 or modify the text to avoid a direct comparison between studies. The study in reference 18 is a systematic review that included mostly studies in military personnel, with a median stay abroad of 1.5 months, and acute diarrhea episodes while abroad. In addition, the incidence of diarrhea discussed (29 episodes/100 person-months) is on active surveillance and is not comparable to the relative lower proportionate morbidity on expatriates vs. non-expatriates reported by the authors. In addition, the authors' study captured events passively and probably missed most acute diarrhea episodes.

6. Please delete reference number 1 from the discussion section or modify the discussion about it. This is a cohort study that evaluated events while they occurred abroad on a very closed population of embassy employees. In addition, this study provided absolute numbers of events that are not comparable to the relative higher proportionate morbidity among expatriates in the authors' study. In addition, the numbers on trauma and musculoskeletal illnesses in reference 1 are higher than in the present study probably because these events are not likely to be seen in travel or infectious disease clinics.

7. Page 12 paragraph 3. The authors comment on the lack of difference in the proportion of expatriates with enteric fever compared to non-expatriates. They hypothesized that this is due to the protective effect of pre-travel consultation, which was sought by a higher proportion of expatriates. In this case, the lack of a difference in enteric fever proportions suggests no effect of pre-travel consultation. Alternatively, this might be due to the significant differences in duration and reason to travel between groups. I suggest deleting or modifying this part of the discussion.

**Level of interest:** An article of importance in its field
Quality of written English: Acceptable

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