Reviewer's report

Title: Tuberculosis screening of travelers to higher-incidence countries: A cost-effectiveness analysis

Version: 1 Date: 12 April 2008

Reviewer: Jean-Pierre Zellweger

Reviewer's report:

This paper tries to answer a frequent question related to the risk of acquiring tuberculosis infection for travelers from low-incidence countries to high-incidence countries. Several policies have been proposed, but none was assessed in term of cost-effectiveness. This report clearly demonstrates that screening for latent infection (or disease) after the travel only is the most cost-effective policy. In this respect, it can help decision makers responsible for the surveillance of travelers, in particular professionnal travelers like health-care workers, members of technical cooperation agencies, Red Cross delegates, and others, who may have frequent contacts with potential TB index cases.

The only major limitation of this paper is the fact that the model is applicable mainly for travelers from countries where adults were not vaccinated with BCG, as it considers only the use of the tuberculin skin test (TST). The authors have mentioned in the discussion that, at least for travelers from countries where most adults were vaccinated with BCG, the use of Interferon-Gamma Release Assays (IGRA) would avoid the false positive test responses observed with the TST. This should also be stated in the abstract. Therefore, the model cannot be generalized and used, for instance, for travelers from European Countries, where most adults have been vaccinated at least once with BCG (even if the policies have changed during the last 20 years). The authors should clearly state that their model is not generally applicable without adaptations.

Minor comments:

1. Method: Screening by Chest X-ray is only useful for the detection of active disease. Why are clinical symptoms not integrated in this procedure (maybe asking the travelers for symptoms after return could also detect active disease).
2. It seems clear from the discussion that all travelers with a positive TST will be offered a course of preventive therapy. This should be mentioned in the Method section.
3. Do the authors consider offering a preventive therapy to travelers discovered with a positive TST BEFORE travel?
4. Results: The cost for older travelers increases also because the available time for a potential reactivation is shorter in elderly people compared with 21-year old travelers, as in the model.
5. The authors consider that the completion rate for preventive treatment does
not change the results of their model. What about the cost-effectiveness if the completion is zero?

6. Table2: In many countries, 9 months of isoniazid cost much more than $25.- (this is a prize for generic drugs, which is not applicable in all 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