May 18, 2007

Re: Manuscript revision
MS: 2684690031272984

Dear Dr. Kouremenou,

Please find attached the revised version of the article entitled “U.S. medical resident familiarity with national tuberculosis guidelines”, which we wish to submit for publication in *BMC Infectious Diseases*.

We have addressed each of the referees’ comments in the attached point-by-point responses.

This manuscript represents original research that has not been published and is not under consideration elsewhere. All of the authors participated in the preparation of the manuscript and have agreed to its publication in the *BMC Infectious Diseases*.

Thank you very much for your consideration.

Sincerely yours,

Petros C. Karakousis, M.D.
Assistant Professor
Responses to Referee 1 comments:

1. *I believe it would be useful (though not necessary) to extend the discussion to how the lack of resident education might be addressed. I noticed that one of the institutions is participating in the National Tuberculosis Curriculum Consortium (NTCC). I would have been interested to know if that was the program that scored a little higher than the others.*

In fact, 2 of the 3 medical centers surveyed in this report are also participating in the NTCC (University of Maryland and Johns Hopkins). Interestingly, on average, residents from the third medical center performed better on the TB knowledge survey. However, our Institutional Review Board, which approved the study, insisted on the anonymity of participating institutions, to which we refer simply by number.

2. *It might also be useful to mention the resources available for tuberculosis education including those on the NTCC website.*

We appreciate the referee’s comment. At the end of the discussion (p. 13), we have included a reference to the NTCC website, where more information may be obtained regarding gradual medical TB education.

Responses to Referee 2 comments:

1. *The only point of the discussion I could object is that bad score on latent infection questions may reflect the confusion of experts on latent tuberculosis infection and the real lack of solid data concerning the meaning of a positive tuberculin skin test. Moreover, the poor validity of the tuberculin skin test in the diagnosis of infection could be emphasized. The authors should have presented the new tests based on interferon gamma assays as a part of the solution to this problem.*

We appreciate the referee’s comment regarding the controversy surrounding the accuracy of the tuberculin skin test (TST). However, the superiority of the interferon gamma release assays (IGRAs) in diagnosing latent TB infection has not been shown conclusively, primarily because results of these assays are compared to the “gold standard” TST, which itself lacks sensitivity and specificity. Ultimately, a direct comparison of the two types of tests will require a prospective study of patients who go on to develop active TB, which
would be extremely time-consuming and costly. The IGRAs are not routinely used yet in the United States, and the vast majority of people are still screened with the TST. According to U.S. national TB guidelines, history of BCG vaccination should be ignored in the interpretation of a positive TST (Question 1). However, we have added text in the Discussion (p. 11) acknowledging the limitations of the TST and the potential utility of the IGRAs in the diagnosis of latent TB infection.

2. **Another point concerns the classification of questions according to the types of knowledge = knowledge of guidelines and knowledge of scientific data. It could be possible to divide into 2 categories of knowledge. And it is not equivalent for a resident to be poor in guidelines awareness and weak in scientifically proven data on transmission or drug toxicity.**

All questions in the survey were carefully prepared by the study authors and screened by a group of Infectious Diseases and tuberculosis experts in order to test specific knowledge of U.S. national tuberculosis guidelines. Therefore, even questions related to transmission and anti-TB drug toxicity test knowledge of information contained within these guidelines.

3. **Finally, I don’t understand why there is no question on treatment of active tuberculosis except toxicity.**

The study authors had significant discussion about the inclusion of questions concerning specific anti-TB drug regimens (e.g., drug name, dose, etc.). However, since care of the vast majority of TB patients in the U.S. is coordinated through local public health agencies, it was deemed unreasonable to expect medical residents to know each drug by name and dose. On the other hand, knowledge of toxicity related to anti-TB drugs was considered important, since these patients may present during the course of therapy with drug-related complications in emergency rooms and medical resident clinics.