Reviewer's report

Title: Tuberculosis suspicion and knowledge among private and public general practitioners in Oman

Version: 1 Date: 21 January 2008

Reviewer: Jason Stout

Reviewer's report:

This manuscript describes a cross-sectional survey of tuberculosis knowledge among general practitioners in one district of Oman. Strengths of the work include a very good response rate and well-defined sampling frame. Weaknesses include a lack of clear validation for the questionnaires and scoring systems. Specific comments are listed below:

Major compulsory revisions:

1) Please provide information on any procedures used to validate the clinical vignettes and TB suspicion score. For example, were the vignettes administered to some number of physicians with subspecialty training, and did these subspecialists provide feedback? Is there any published data that supports the TB suspicion scoring system, specifically, if a physician put TB as first on the list, is this significantly different than if the physician listed TB third?

2) Similarly, provide validation data for the 20-question survey. Did the authors use some test (e.g. Crohnbach's alpha) to determine whether the responses to items clustered in the same domain (diagnosis, treatment, follow-up, contact screening) correlated with each other better than items in other domains?

3) The questionnaire should be included as a supplement to the article.

4) The authors state that they used nonparametric tests to compare TB suspicion and knowledge scores between groups, but table 3 lists means and standard deviations. If nonparametric tests were used, medians and interquartile ranges should be listed here.

5) If possible, the characteristics of physicians who responded to the questionnaire vs. those who did not should be described.

6) Include the results of univariate analysis for all variables included in the multivariate analysis in table 3.

Minor Essential Revisions:

1) Please include a reference for the statistical methods used, and specify how the regression model was constructed (it looks like all variables in Table 3 were included simultaneously with no selection process, but this is not 100% clear and the rationale for these particular variables is not given).

2) Would recommend consistent usage of percentage signs throughout the results section.
3) Specify the alpha used to determine statistical significance.

4) Please highlight results that were statistically significant in Table 3 to make it easier for the reader to determine the significant associations.

5) Please justify the use of gender as a covariate in the multivariable model--unless male and female physicians are trained differently in Oman, it does not seem to be a relevant covariate in assessing TB suspicion and knowledge, and reduces the statistical power to find significant differences among the other covariates.

6) Table 3 implies that TB suspicion score was included as an independent covariate in the model used to predict TB knowledge score. Please clarify if this was the case (doing this does not make much sense given the described goal of the manuscript) and justify analysis of the relationship between TB suspicion score and TB knowledge score as a binary-->continuous relationship vs. the more powerful continuous-->continuous variable relationship that actually exists. A simple analysis using a test like the Spearman rank correlation would seem more appropriate here.

Discretionary revisions:

1) The vignettes that represented diagnoses other than tuberculosis did not factor into the TB suspicion score. From Table 2 it would appear that public GPs were generally more likely to name TB as a diagnostic possibility for any of the vignettes (ie more sensitive, less specific for diagnosis). It may be useful to either factor the non-TB vignette responses into the TB suspicion score or construct a separate score to assess how many "TB" responses were given to "non-TB" cases.

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 limited interest

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.