Title: Health care workers' knowledge, attitudes and practices on tuberculosis infection control, Nepal

Version: 0 Date: 22 May 2017

Reviewer: Michelle Engelbrecht

Reviewer's report:

Introduction
Background statistics regarding TB, MDR-TB and HIV in Nepal would improve the contextual information. In addition, mention should be made of any guidelines/policies for TB infection control in the country (or lack thereof). The dated references in the background (e.g. from 1992, 1995, 1996, 2006) should be replaced with more up-to-date references, especially given that much work has been published recently in the area of TB infection control. Lines 66-67 refer to "infection control remains a key challenge in Nepal", more explanation and a reference for this statement would better contextualise the problem.

Methods
More detail regarding the sampling methods is required: 1) 28 of how many health facilities were selected? 2) How many were hospitals, primary health care facilities, etc. 3) How was the random sampling undertaken? 4) How were the staff selected at each facility? 5) Was any attempt made to sample staff proportionately according to the different categories. 6) Why the decision to include all levels of staff. 7) There are great differences in the number of staff in each category - justify why. Define "paramedics", as this team is often used in relation to emergency medicine. Consider using "allied" instead.

Questionnaire - was it self-administered or researcher administered. Was it based on existing KAP TB infection control questionnaires? How was data collection undertaken? What was the role of the fieldworkers (to drop off and collect questionnaires, to administer questionnaire in an interview?)

Data analysis - why was ≥60% used as the cut-off point for a good level of knowledge? Was this based on similar studies? Similarly, why was ≥70% used as the cut-off for having positive attitudes?
Results

It is not necessary to repeat everything that it already in the tables. Just highlight the most interesting findings in the text. Avoid stating direction when testing for associations, for example lines 150-151 "Analysis shows that HCWs with a higher level of knowledge were likely to have more positive attitudes towards TB infection control". Some of the TB infection control practices may not be applicable to all staff. For example, wearing respirators. Admin staff are not likely to wear this, however they are included in the 38% reported to not wear respirators. Consider only reporting the practices of staff directly involved in patient care.

Discussion

There are a number of studies on KAP regarding TB infection control. What value does this study add? What is new and interesting? This needs to be highlighted in the discussion. When comparing knowledge levels in the current study to other studies, keep in mind the cut-off point you used in your study for good levels of knowledge and compare it to what the other studies used. "Unavailability of respirators" (lines 219-220)- was this observed? Lines 224-225, did the South African study also include administrative staff? The reason for this is that administrative staff would be less likely to provide health education. Reference is made to the lack of infection control policies (Line 232) - this is important for this study and should be discussed in the introduction so that the reader is aware that there are no policies guiding TB infection control implementation in health facilities in Nepal.

Conclusion

Training is recommended, the authors should consider similar infection control studies that have found that training alone is often not sufficient to change behaviour.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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