Reviewer's report

Title: Accuracy of the Xpert MTB/RIF assay for diagnosis of extrapulmonary and pulmonary tuberculosis when testing non-respiratory samples: a systematic review

Version: 2 Date: 25 October 2014

Reviewer: Jotam Pasipanodya

Reviewer's report:

Minor essential

TB diagnosis is difficult in children, especially in resource limited setting where the MTB/RIF technology is being rolled-out. According to the authors, three selected studies enrolled only children but the results of these studies are not adequately shown in the results section (there are no plots or tables) and the results are not fully discussed. Were the authors able to pool the results from these three studies? The opinion of this reviewer is that some of the results on gastric aspirates in children given in the discussion section should be moved to the results section. A separate section with plots of the results from children in the results will help the reader understand the data.

Discretionary revisions

Were the authors able to assess the effect of testing multiple samples from the same patient across studies? Or multiple non-respiratory samples from different sites? Specifically, what was the effect unconcentrated versus concentrated samples for pleural/peritoneal specimens? If the selected studies did not distinguish or did not fully describe the specimen processing, then authors should highlight that. Similarly the distinction between use of solid versus liquid cultures for gold standards should be made explicit, particularly for pooled estimates.

Line 91 Not all readers are familiar with the abbreviations used

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.