Reviewer's report

Title: Cost-effectiveness analysis of PCR for the rapid diagnosis of pulmonary tuberculosis

Version: 6 Date: 17 November 2009

Reviewer: Suzanne Marks

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I believe the authors addressed all my concerns including adding a limitations section that Steve Weis (reviewer 1) also wanted. However, I have discovered some arithmetic errors that will need to be corrected in the tables and text before publishing. The entire article will also need some good editing for language and to ensure that all data are consistently reported in all sections. Some errors that I have found are:

* abstract line 50: the amount $1,513,760 does not match Table 3.

* line 252: PCR dot-blot not “bolt”

* the discussion section could really be improved. There is a reference (lines 314-318) to cost-effectiveness findings of the AFB smear/dot-blot compared with automated PCR, which was not presented in the current study.

* table 2 has been improved, but 2C would be better with the addition of 2 columns, one for total (inpatient and outpatient) costs of AFB/S&C and another for AFB/PCR blot-dot. Please delete the last statement of the footnote: “Opportunity costs were not applicable.” Several cost categories were collected that represent the valuation of opportunity costs.

* Table 3. Under the title of Laboratory costs, I believe the first item should be “labor” and not laboratory costs. There might have been some confusion when I had the authors replace labor costs with Lab costs in Table 2, but labor costs might be appropriate in table 3.

Also on Table 3, the Total cost categories do not add from the above categories. I get 191,000 for total patient costs of AFB/S&C, 5,448,239 for total health services, and 5,651,960 for total screening costs. Likewise, the categories don’t add for AFB/S PCR dot blot.

*Table 4. The new totals from Table 3 need to be displayed under item 4A in this table. Even using the incorrect totals listed in the current Table 4, I could not justify the $13,888 for cost per accurately diagnosed AFB Smear/PCR dot-blot; I get $14,642 (1,595,960/109). For the next number in that column, I get 14,191. I get some more numbers that are different from those in the remaining table cells. Some of these might be due to rounding errors, but others seem way too large for rounding errors. There should be a footnote on the cost of treating false
negatives, to show the calculation for number of cases. On the last row, it appears that the numbers presented are 1000 times more than they should be (a decimal error?).

*Table 5: I could not match the base case first row estimates with those in the preceding tables. And, the last set of columns again appear to have a decimal error (are 1000 times what they should be).