Reviewer's report

Title: Evaluation of the Performance of Routine Information System Management (PRISM) Framework: Evidence from Uganda

Version: 1 Date: 12 October 2009

Reviewer: Ping Yu

Reviewer's report:

This is an interesting research project that is conducted in a developing country. The authors have strived to address an important, yet unknown issue: the determinants of routine health information system performance and the effectiveness of routine health information system strengthening interventions. The question posed by the authors is a big and well defined.

Are the methods appropriate and well described? The data collection methods are relevant, implementable and can lead to answers to the research questions. Cronbach’s alpha is normally above 0.7, suggesting good internal consistency of the measurement statements for each variable; however, as the loading value for each indicator is not known (in fact, if they are presented as the ‘factor score’ presented in Appendix I, they may be too low to suggest that each group of indicators are measuring the same variable. This may threat the validity of the PRISM data collection tools. Therefore, clarification has to be made to ensure the validity of the measurement instrument.

Major compulsory revisions

The authors have difficulty to reach the adequate sample size for principle component analysis and structural equation modelling to quantitatively validate the construct validity of the PRISM framework. As such, the construct validity of the framework is not adequately validated. A much bigger size of sample may be required to fully validate the complex evaluation framework PRISM. As most likely the participants in the 2007 survey were different from those in 2004, possibly the survey responses from these two years can be amalgamated for statistical data analysis.

The big number of statements in the questionnaire survey instrument suggests that the measurement instrument is not well developed and still needs several rounds of iteration to reach its maturity.

P18. Appendix 1. The results of PCA are not properly presented, which makes it difficult to judge the validity of the measurement instrument. It is not clear whether ‘factor score’ is ‘loading factor’ of each indicator. If so, it suggests that the measurement statements for one variable are not only measure this variable, but several variables. For example, there are eight statements measuring use of information. As none of them has loading factor that is bigger than the conventional cut-off value of 0.6. This suggests that these eight statements are
not just measure one variable, but several variables. The author needs to conduct more detailed analysis and present the correct information if the results of PCA are shown to the reader.

Inconsistency in use of terms. In the ‘Abstract’, ‘RHIS task self-efficacy’ is mentioned. This is presented as ‘Confidence levels for HIS Tasks’ in Figure 1. To keep consistency, ‘Tasks’ should be ‘tasks’.

Poor grammar: ‘a promotion of culture of information’ should be ‘promotion of culture of information’

Table 1. Unclear. You should separate the presentation of the number of facilities and the number of staff members in each facility that participated in the study.

The last sentence in the first paragraph on Page 5 should be put into ‘Methods’ section.

Page 6. First dot point. ‘Data demand’ may be better placed under ‘diagnostic tool’ category. ‘the merit system’ is poorly structured and not understandable. The last sentence ‘RHIS performance as a criterion for annual appraisal, and supportive management’ is not clear.

Page 6. Para.3, ‘The decision of which districts to include’, should be ‘The decision of which districts to be included’

Page 6. Last para. The last sentence is not supported by Table 1.

Page 7. Para 2. The first sentence is not understandable.

Page 8. Para. 2. Have the authors used valid scale to measure motivation in this research? There is no reference to the validation issue.

Page 9 Para 3. For the first time, ‘Job satisfaction’ is mentioned as a construct here. Where has it been placed in the PRISM Evaluation Framework?

Page 9 last sentence is not readable.

Page 10. The last sentence in the first paragraph is not understandable.

Page 10. The comparison of number of male and female participants is not important as the statistical difference is not calculated for this variable.

Page 11. Para1. The median data is discussed. Whereas the data presented in Table 3 is mean.

Page 11. Heading ‘Internal consistency…’ need to be re-written.

Table 4. Eight items do not have scores of Cronbach’s alpha.

Page 12. Para. 2. The description is not clear.

The statistical analysis is dubious.

Page 13. The method for testing test-retest reliability is not specific. The results are not mentioned in the paper.

P15, para. 2. The first sentence, ‘the mean level of the promotion of a culture of information was significantly higher’, is poorly written.
How do you measure that the changes are internally consistent?

P16. The last sentence in Para. 2 is poorly written.

P17. Para 2. The second sentence the use of word ‘allocated’ does not make sense here.

It is helpful if a detailed proof read and editorial services could be conducted on the paper.

Minor essential revisions:

**Level of interest:** An article of importance in its field

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.