Author's response to reviews

Title: Evaluation of the Rapid Scale-up of Collaborative TB/HIV Activities in TB Facilities in Rwanda, 2005-2009

Authors:

Eric S Pevzner (ecp9@cdc.gov)
Vandebriel Greet (gv2124@columbia.edu)
Lowrance David (LowranceD@rw.cdc.gov)
Gasana Michel (michelgasana@yahoo.fr)
Finlay Alyssa (avf0@cdc.gov)

Version: 3 Date: 13 May 2011

Author's response to reviews: see over
May 13, 2011

BMC Editorial Staff,

We wish to thank the authors for their thorough reviews and constructive comments that we believe has strengthened the paper to help tell the import story of the scale-up of TB/HIV activities in Rwanda. Below we have included a point by point response to the reviewers' comments. Per the instructions of the editorial assistant we have also uploaded the “track changes” version of our paper so that you and the reviewers may readily see the changes made.

On behalf of myself and my co-authors we would like to thank you for the opportunity to revise-and-resubmit. We hope our revisions our sufficient to warrant publication in your journal.

Respectfully,

Eric Pevzner

U.S. Centers for Disease Control and Prevention

Email: ecp9@cdc

Phone: 404-639-6094
Reviewer's report
Title: Impact of the Rapid Scale-up of Collaborative TB/HIV Activities in Rwanda, 2005-2009
Version: 2 Date: 2 March 2011
Reviewer: William Coggin

Reviewer's report:

Nice manuscript that adds further evidence to the data on successes in scale up of TB/HIV activities via TB programs.

Minor essential revisions: The content of the manuscript describes the scale up of collaborative TB/HIV activities from the NTP entry point. The title refers to TB/HIV activities writ large. The authors should clarify in the title and text that this article excludes consideration of the HIV entry level activities, namely the Three Is.

Authors response: We have modified the title to incorporate your recommendation.

The authors should make clearer that they are measuring scale-up vis-a-vis their 2005 evaluation compared to nationally reported scale-up program data. It would be useful for them to comment on the quality and completeness of those data as the basis for comparison.

Authors response: We revised several paragraphs to clarify that our evaluation served as a baseline for comparing national surveillance data to evaluate the scale-up. We also added the following text in page 9 of the paper describing the quality and completeness of the surveillance data.

Please clarify how TB services are organized in Rwanda. Mention is made of ‘TB clinics’ and ‘PHC’ clinics. Are TB services standalone or integrated and how does this impact on referral and the rate of successful linkages to HIV care, prior to the adoption of the one-stop model?

Authors response: Describing and evaluating the impact of going from vertical programs to integrated “one-stop” shops is an important research question also raised by the other reviewer. We have mentioned the need to describe and assess the implementation of the “one-stop” approach on page 19 of the Discussion section.

Similar to above, how are HIV assessment and treatment services organized, eg how does the the decentralized TB network map to HIV services and what impact does that have on follow-up?

Authors response: Excellent question but was beyond the scope of this study as we focused on HIV services provided at facilities providing TB treatment.

The Rwanda experience offers good lessons to other countries for scale-up yet these are not explored in this paper. Could the authors include some background
on the Rwanda policies and how they were operationalized?
Authors response: We had added additional text to address the reviewers question on page 18 of the paper.

Abstract discussion first sentence: change "access... were" to "was."
Authors response: Reviewers revision was incorporated.

Discussion, third paragraph. Reference is made to the dilemma of poor recording and reporting versus real changes in service delivery. An examination of these aspects would inform the selected measures to implement according to cause. It is stated that it is not possible to determine the amount of change attributable to these which is correct. However, is such an examination part of the NTP’s programmatic evaluation?
Authors response: Text was added on page 17 of the paper to address the reviewers comment.

Discussion, last paragraph: use of term 'contradicted' seems semantically awkward. Rather..."refuted" or "proved unjustified"?
Authors response: Reviewers revision was incorporated.
Reviewer's report
Title: Impact of the Rapid Scale-up of Collaborative TB/HIV Activities in Rwanda, 2005-2009

Version: 2 Date: 3 March 2011

Reviewer: Alasdair Reid

Reviewer's report:
Review BMC Rwanda TBHIV
• Major Compulsory Revisions
1. The paper attempts to demonstrate an important point ie the impact of implementing collaborative TB/HIV activities but ultimately it is extremely confusing in terms of what is being done and what is being compared with what and I doubt that it convincingly shows meaningful impact…
Authors response: The reviewer is a well recognized expert in the field and if he had problems following our paper than it is likely that others would be lost as well. We made multiple revisions throughout the paper to try and clarify and improve the flow of what was done.

2. Essentially there appear to be two main studies here a detailed pre-evaluation of uptake of TB/HIV activities prior to release of the national policy (which misses a critical post-evaluation) and a rather tenuously linked assessment of the potential impact of implementation of the policy.
Authors response: From the outset of the study our plan was to conduct the baseline evaluation and then monitor the scale-up using surveillance data and conduct a follow-up evaluation of necessary. Evidence of successful scale-up was so overwhelming that we could not justify spending additional resources to repeat our baseline evaluation (no other country in central or southern Africa has a documented HIV status for 97% of patients with TB). We revised our text to try and more present the baseline evaluation and follow-up as a seamless effort.

3. The bulk of the paper – the evaluation data – is interesting but rather old 2004 and would only merit publication if the data were compared with a more recent similar set of post evaluation data.
Authors response: Similar to above, all along we have viewed the baseline as part of an effort to monitor the impact and that is why we present the data together rather than as separate papers.

4. The data on impact are interesting but compare two different samples, one of which is a non-random sample, and thus leave drawing significant conclusions rather difficult! I am not a statistician but I think Pearson's chi-squared assumes random sampling, which is not the case here. Similarly the data sets should not be related ie any individuals from 2004 with recurrent TB in the national data set
from 2007 should be excluded – was this done? I think that the data rather tantalisingly suggest what we would hope, that implementation of the one-stop shop model of TB/HIV integration has an impact on mortality but with a lot of provisos! Please clarify and discuss this in more detail. A more circumspect conclusion with the recommendation for further research to explore this in greater depth would be more appropriate.

Authors response: 1) Pearson’s chi-square is commonly used with both observational data and non-probability samples as a test of the extent to which an observed frequency distribution differs from an expected frequency distribution. 2) I assume you are referring to the statistical assumption of independence between the distributions? We were not able to exclude people with recurrent TB as we were comparing our baseline data with unique identifiers and aggregate surveillance data. However, between 2005 and 2009 the percentage of patients with recurrent TB was only 3-5% of all people with TB so it is extremely unlikely that it would impact our results, 3) Thank you for your comment about addressing the need for further research – we added text to the bottom of page 19 to address your recommendation.

5. TB/HIV integration in Rwanda is a model to the rest of Africa and has extremely good programmatic data, I am not sure that the paper in its current form does the programme justice. It does not read as a very coherent purposeful paper and seems to cobble together several smaller studies in an attempt to squeeze out one publication. I think a radical rewrite or simplification of the paper is needed.

Authors response: As we mentioned above we did our best to improve the coherence of the paper with multiple revisions throughout.

6. Please restate the title and purpose of the study more clearly/explicitly – i.e Baseline evaluation of VCT and ART uptake in the tuberculosis programme prior to implementation of the national TB/HIV policy and assessment of potential impact of rapid scale up… I think it is inaccurate to state that the core of this study is evaluating the impact of scale up, the vast majority of the study is presenting the baseline evaluation and the demonstration of impact is a rather weak component of the study……

Authors response: We have modified the title to reflect the reviewers concern.

7. Similarly the methodology for the study is not clear, I had to read it several times to work out what was being compared with what and to be clear about timelines, and which group of patients were evaluated when and how. The last paragraph on page 5 is a good start but then neglects to explain the next steps i.e how the initial evaluation data were compared with post policy implementation data.

Authors response: We modified the background and methods in an attempt to better frame and describe what was done.
8. The data collection section on page 6 should be improved by stating the time periods for each element ie - 1) structured interviews with patients arriving at the sampled clinics to receive their anti-TB medications in 2005, 2) structured interview with staff working at the TB clinics during 2005, and 3) review of the TB registers and patient treatment cards for patients registered for anti-TB treatment during a specified three month period, comparing our sample from 23 clinics from the cohort registered in quarter 4 2004 with national data from the same time period in 2007?? – if I have understood correctly? Please explain why you are comparing this sample from Q4 2004 with national data from 2007 and not using national data from both time periods.

Authors response: We revised our text in the methods to better explain why we were using data from 2004 to compare with 2007. When we did the evaluation we wanted to know about the treatment outcomes for the most recent cohort of patients that could have completed treatment at the time of our evaluation. That required that we look at the outcomes for patients that had been registered and started treatment at least 6 months prior to our evaluation (as this was a cross-sectional and not prospective evaluation). Unfortunately, TB and HIV data could not be linked except for the year 2007 when a special study was done. So, our only option for examining the association between HIV and anti-TB treatment outcomes was for our baseline data and data from 2007.

9. There is inadequate description/discussion of the selection of clinics/patients, all that is said is that it is a non-probability sampling chosen by the NTP to represent all districts and a mix of urban and rural - but it would help to know what this means and what possible systematic biases may have been introduced (ie the first clinics chosen in each district for a new intervention are often the best performers or the best staffed etc, this is critical to the readers understanding of the robustness/generalisability of the findings. May be helpful to compare the distribution of the sampled clinics with the national distribution of sampled clinics in Table .

Authors response: We added text to describe how the sample may have been biased and how it may have influenced our interpretation of the scale-up on page 20.

10. Please discuss how much of the observed reduction could be (or not) due to a change in the threshold for ART over the same time period otherwise should clearly indicate that ART policy did not change over the study period.

Authors response: The change in CD4 threshold for initiating CD4 is included on page 20. Describing how the change in CD4 impacted and therefore increased eligibility for ART was beyond the scope of this paper is and currently being undertaken as a separate analysis by staff of the Ministry of Health.

11. The first para of the discussion states – ‘Multiple data sources were used in order to compare and contrast what patients reported, what staff reported, and what was documented about HIV testing for patients with TB and care and treatment for patients with TB/HIV. – I am not convinced that this has been done
or is appropriate - there is a wide discrepancy in the recorded HIV testing in the registers and patient reported data – but there is also about 1 year between the 2 events and they are different populations so cant really be used to meaningfully compare. Would it not have been more sensible to compare patient interviews with their own records/registers rather than a different cohort? This would also give an interesting insight into patient recall.

**Authors response:** The discrepancy between documented HIV testing in the registers and patient treatment cards is only 4% and other indicators are similar (proportion reporting being HIV positive via interviews was 49% and proportion with documented HIV positive via reviewing registers was 44%). The reviewer makes an excellent suggestion – why didn’t we review the records for the same patients we interviewed? We could not look at the records of the patients we interviewed because we promised them that we would not collect any identifying information in exchange for their participation in the interviews.

12. Page 14 second para first line states ‘The proportion of patients with TB having documented HIV test results in the TB register increased from 69% in 2005 to 97% in 2009 based on national data reported by the Ministry of Health (Figure 2)’. This is different from the figure quoted from your own evaluation – (48% in TB register – 52% in TB register or treatment card)….why do you not use your own data?

**Author response:** We agree with the reviewer and have revised the results to include the baseline evaluation data.

13. I cannot find FIGURE 2 either in the additional files document or at the end of the paper.

**Author response:** The Figure 2 did not upload initially and was subsequently added. Our apologies for the omission.

14. There needs to be a much more critical discussion of the limitations of the methodology.

**Author response:** We have added to the limitations section.

Minor Essential Revisions

The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.

1. Please state the date of release of the Rwanda TB/HIV policy and reference it – para 2 page 5.

**Author response:** Date has been added.

Page 11 para 2 line 4 should read – that it was recommended…

• Discretionary Revisions

These are recommendations for improvement which the author can choose to ignore. For example clarifications, data that would be useful but not essential.

1. Would recommend removing the term syndemic para 2 page 5, this term is
promoted by a small group of people and has not achieved traction globally. Such neologisms only serve to obfuscate rather than clarify.

**Author response:** I agree that neologisms are not helpful but I believe this term is increasingly becoming more common in the epidemiological literature (as evidenced by the April 2011 publication by Kwan and Ernst entitled, “HIV and Tuberculosis: A Deadly Human Syndemic.”) I think this term uniquely describes the interactive nature of the TB and HIV epidemics and I encourage use of the term for unique situations like this when the convergence of two or more epidemics result in a synergistic effect.

2. Could discuss in more detail the programmatic/operational benefits of this type of study and also any potential negative impact of the integrated approach.

**Author response:** Because we did not measure the negative impact we are reluctant to speculate.