Author's response to reviews

Title: Strengthening health workforce capacity through modular work-based training

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Author's response to reviews:

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The Editor
BMC International Health and Human Rights

Dear Editor,

Re: Response to Reviewers' Comments with regard to MS: 6263321387580946

We thank you for reviewing the above-mentioned manuscript and for providing us with an opportunity to revise it for your further consideration.

We have revised the Manuscript as advised and provided further explanation to help the reader under the context of the study.

Please find below our point-by-point response to the comments raised.

Sincerely,

Joseph KB Matovu
Corresponding Author
POINT-BY-POINT RESPONSE TO COMMENTS ABOUT MS:
6263321387580946

Reviewer #1

I hope that the authors will revise and resubmit this for publication as I believe that this article makes a very important contribution and I would very much like to see it published.

We thank the reviewer for this important and exciting recommendation

Major compulsory revisions

There are two weaknesses in this article as it stands

1. The authors neglect to give any information about the methods used to do the evaluation. This is critical to the readers’ ability to know how the research aspect was done and if the claims are in fact valid. Without this information it is not possible to assess if the article is worthy of publication.

We thank the reviewer for pointing out this aspect. This paper is based on our experiences with regard to implementing the modular, work-based training program in Uganda. We admit that our inclusion of a section on ‘program evaluation’ might have created the impression that the paper was reporting findings from the program evaluation. We have since dropped this section since we found it confusing and distracting the reader from the primary objective of the paper which is to share our experiences with regard to the implementation of the said program. Nevertheless, a comprehensive evaluation of the program, taking into consideration the experiences shared in this paper, is underway.

2. The authors must address the cost of the programme and its sustainability over time.

This is an important observation. We admit that inclusion of the cost of the program and a full description on its sustainability would provide additional information on how the program can be replicated elsewhere. At the moment, we have not yet done a cost-effective analysis of the program (this is planned to be part of the comprehensive evaluation referred to in (1) above) to inform us about the cost of the program. We have acknowledged this as a limitation (see page 15). On the other hand, we also agree with the reviewer that the sustainability of
the program is something worth emphasizing in the paper. At the moment, the program receives funding from CDC as the sole funder and this is precarious given that we would not have any funding if CDC pulled out. We are currently exploring several strategies to improve sustainability including charging fees to the trainees as well as seeking full accreditation from Makerere University. We expect that these strategies will improve the prospects for sustainability although these initiatives are still in infancy (see page 14-15 for these initiatives).

3. I would also advise that the author emphasise the way in which this training programme had addressed a critical area of interest internationally and certainly central to African health systems and that is that it provides a practical example of how to strengthen health systems.

We thank the reviewer for this important observation. We have improved our discussion and conclusion sections to reflect the fact that this program provides a practical example of how to strengthen health systems through work-based training. See page 11 & page 15 for details.

Minor Essential Revisions

1. Abstract:

Not clear what “developing models that incorporate work-related conditions and attitudes” – do the authors means developing “models of training that address work-related conditions and attitudes” or “interventions that address ....” – whatever it is they mean they need to clarify this sentence. In addition it appears that this article is itself NOT about “work-related conditions and attitudes” – Work related conditions usually refer to things such as conditions of service, pay, etc. Attitudes is something distinct from skills and it seems that this article addresses skills and activities (that may well affect attitudes) but is not about attitudes per se. Thus it seems that this sentence should be deleted and something more appropriate be found.

We have improved the opening sentence on the abstract and dropped reference to work-related conditions and attitudes. The new sentence now reads, “Although much attention has been given to increasing the number of health workers, less focus has been directed at developing models of training that address real-life workplace needs”. See page 2 for details.

2. Introduction – the section “However, conventional training programs have not paid much attention on the role of skills building in health systems strengthening, or where this has happened; training programs have tended to focus on the theoretical rather than practical aspects of taught courses. In addition, the tendency to bring health workers to centralized locations for training often causes serious disruptions in service delivery at facilities serving the most vulnerable populations [4]. Moreover, failure to reinforce skills and knowledge transfer by addressing other performance factors (such as work environment, organizational
support, clear expectations and feedback, and motivation to reinforce proper attitudes and habits) have continued to hamper the effective application of newly-acquired learning in the workplace [4]. In addition, most training programs involve training of 1-2 individuals from an institution yet effective implementation of what is taught requires a multidisciplinary team working together as part of the health system.” This makes many assertions and it perhaps is all covered in reference 4 but I suspect that this may not be the case. So this needs to be properly referenced. Further there are published articles on this issue and it seems that the authors need to do a larger literature search and locate their research within that literature. In particular there has been a RCT on the impact of training on improved health care in maternal health that would support much of what is being asserted. Also this program looks very much like the Field Epidemiology training and approach that CDC has initiated in many places. This seems to be a very clever and useful adaptation of that approach to health systems strengthening – it seems unusual and incorrect to not describe that experience.

We thank the reviewer for the elaborate comment. We agree with the reviewer that the entire section needed to be better referenced, and that we needed to review additional articles to back up the claims made in that section. We also thank the reviewer for suggesting 2 other references which have been helpful as additional references. We have improved referencing for the above-mentioned section with 3 additional references cited in addition to the citation in the initial section. This brings the number of citations to 4. See page 3 for details. In additional, we have made reference to the Field Epidemiology Training approach that CDC initiated in several countries, and have indicated how our program is a clear example of how the FETP can be adapted to health systems strengthening in resource-limited settings. See page 4 for details.

3. Results

“These projects resulted in improved access to health care services; reduced waiting time for patients to receive services; strengthened M&E systems; improved data collection and reporting; and reduced the proportion of clients with missing or mislabelled charts at the institutions supported (Table 2).” While it is clear to this reviewer how many of the above could be achieved during a review of the programme, it is not clear how it was assessed that there was improved access to health care services – access has a particular meaning and can be varied – non users now accessing services (unclear how this could be measured in an evaluation of the programme). However it may be that there was integration of service so that TB patients now got HIV tests and perhaps this could have been assessed in the programme evaluation – perhaps the authors can be more specific about what they mean so that the claim has more veracity. Otherwise delete the reference to improved access.

Again, as noted in our response to the first item among the major compulsory revisions, this paper is based on our experiences in implementing a work-based
training program, and does not report findings of any program evaluation whatsoever. We admit that our reference to a ‘program evaluation’ in our earlier version might have created the impression that the paper reported findings of a formal evaluation. Instead, the experiences shared in the paper are based on our day-to-day interactions with the trainees, routine program data obtained through the on-site visits to the trainees’ place of work, the trainees’ reports and the exit survey administered at the end of the training. Thus, the project outputs/outcomes reported in the paper are derived from routine program data, reports from the trainees and exit interviews at the end of the program rather than from a formal evaluation. In addition, we have improved the presentation of the project outputs/outcomes as they pertain to the projects implemented by the trainees (see page 10-11 for details).

4. Discussion

The authors say “Our training program builds trainees’ capacity to be able to critically analyze work and management processes as well as systems through the didactic courses initially and think of possible solutions.” While I am sure this is the case there is little in the results that talks to this issue – do they have any data from the evaluation to back up this claim? This needs to be included.

The paper is based on our experiences in implementing a modular, work-based training program rather than findings from a program evaluation. This aspect has been made clear in the revised version and any reference to the program evaluation has been dropped.

5. In the discussion the authors say “Our work-based training program was modeled along the same principles as the CDC’s Data for Decision Making (DDM) program [13], the Master of Hospital & Healthcare Administration program in Ethiopia [14] and the in-serve capacity building program for family health in Brazil and Chile [15]. In tandem with these programs, our training program emphasizes implementation of an in-service project – between training modules – that necessitates the application of acquired skills to address significant health problems in the trainees’ place of work and mentoring of participants by experienced mentors. Mentors, including institutional supervisors at the place of work, serve not only as role models, but provide professional advice, feedback, and general support during the implementation of selected projects…” This really belongs in the introduction.

We have moved this paragraph to the introduction section. See page 4 for details.
Reviewer#2

Strengthening health systems is an aspirational goal to improve health outcomes. Workforce training and the development and implementation of systems to strengthen M&E and CQI are important elements of this goal. Matovu and colleagues address this need by describing their relevant experiences in Uganda. The authors present an interesting modular in-service training program developed through a partnership between the School of Public Health in Uganda and the governmental as well as the non-governmental sectors. Staffs from multiple disciplines were trained over a total of 33 weeks (8 months) with 5 weeks in the classroom that was linked with field-based projects conducted over a 28 weeks period. While the authors make reference to “an evaluation of all program activities” in 2010, the purpose of this paper was “….to share our experiences in implementing a work-based, in-service training model”. The paper does not incorporate critical elements implicit in an evaluation report (see reference to Stufflebeam below), and probably draw on selected aspects of the evaluation report to share their experiences. In particular, the paper details the context of the training program, presents information on some key inputs into the program, summarizes the aims and the outputs/outcomes of 6 of the 66 projects addressed by the trainees, as well as the responses of some of the fellows through interviews. The process of the training is detailed in a way that could be replicated in other settings. However, the paper could have included (a) perspectives of the managers and co-workers at the workplace, and how the projects impacted on the functioning of the workplace, (b) a summary of the outcomes of the remaining 60 projects not included in table 2, and (c) facilitators to completion of projects with important impacts.

Response: We thank the reviewer for highlighting these important aspects. We admit that the inclusion of the section on ‘program evaluation’ in our earlier version of the paper created the impression that the paper was based on the findings from a formal program evaluation. We have since dropped this section as it diverts the reader away from the primary objective which is to share our experiences in implementing a modular, work-based training program in Uganda. The experiences shared in this paper were obtained through regular interaction with the trainees, from routine program data about the trainees, their projects and reports, from trainees’ presentations of their projects, and from the exit interviews administered at the end of the training. As the reviewer rightly points out, we admit that we should have included the perspectives of managers and co-workers at the workplace, how the projects impacted on the functioning of the workplace as well as the facilitators and barriers to trainees’ completion of projects initiated at the work-place. At the moment, these aspects are not yet formally evaluated. A comprehensive formal evaluation of the program that
includes all aspects mentioned by the reviewer is underway. We expect that this evaluation will provide us with data on the efficiency and effectiveness of the program to inform replication of the program in other settings in Uganda and elsewhere. We have acknowledged this as a limitation (see page 14-15 for details). We have included a summary of all the 66 projects in Appendix 1 as suggested by the reviewer, while maintaining Table 2 (as it was in our earlier version of the paper) to provide a summative overview of what the projects implemented by the trainees looked like and what kind of outputs/outcomes accrued from them. Expect guidance from the Editor as to whether or not Appendix 1 can suffice, in which case we will have to drop Table 2 from the paper.

The purpose of publishing the paper is probably to encourage uptake of this model in other settings and to share the lessons learned, including challenges that could be anticipated and how these could be addressed. It is interesting that the authors conclude with a rather tentative statement: “Our experiences seem to suggest that hands-on, work-based training can be a useful model”. I am unclear why the authors express this element of uncertainty when a comprehensive evaluation could have yielded a more confident cause-effect relationship between the training and outcomes. However, from the perspective of an evaluator, this cautious conclusion may be appropriate because the paper does not meet recommendations for reporting evaluations of educational and human service programs using the ‘CIPP’ model of evaluation, the model implicit in this study (‘CIPP’: context, inputs, processes and products. Stufflebeam DL. The CIPP model for evaluation. In Eds. Stufflebeam DL, Madaus GF, Kellaghan T. Evaluation Models: viewpoints on educational and human services evaluation. Kluwer Academic Publishers, Massachusetts, USA. 2000. Pp279-317. A detailed checklist for designing, conducting and reporting on an evaluation based on the CIPP model by Stufflebeam can be found at http://www.wmich.edu/evalctr/archive_checklists/cippchecklist.htm (accessed 28 August 2012). Stufflebeam suggests that a CIPP-based evaluation can illuminate the ‘value’ of a program which is defined in terms of the program’s merits, worth and significance. Merit, in turn, is defined as excellence of the program’s intrinsic qualities (e.g. curriculum content and delivery), worth in terms of the extent to which the program meets the needs of the intended beneficiaries (e.g. impact of the M&E and CQI tools developed/implemented through the projects), and significance in terms of the program’s importance beyond the setting or time frame of the program (e.g. in other sectors in Uganda and in settings globally).

Response: We thank the reviewer for sharing with us useful links and reference papers that would have improved the presentation of findings in this paper. However, as stated in our response to the first comment above, the paper is based on our experiences in implementing a work-based training model, and not on the findings of a formal evaluation. Nevertheless, we expect that the references provided will greatly inform the forthcoming comprehensive evaluation of the program, especially with particular reference to the CIPP model of evaluation. We have improved our conclusion to enhance the level of confidence
that the reader will get from reading the paper; and have dropped the use of the word ‘seem’ in the statement referred to by the reviewer above.

Appropriate work-based training models can strengthen multiple aspects of health systems, and of policy development and health service delivery. While the authors focus on the impact of training on developing workforce skills (as implicit in the title of the paper), they could highlight, for example development of knowledge, skills and competencies of co-workers and managers of the trainees, elements of health service delivery, mobilisation of multiple players and active networking within and beyond the local health services. Importantly, this model of training provide opportunities for constructive engagement of academic/training institutions with governments and NGOs for ongoing policy development and capacity strengthening initiatives, as well as for possible co-deployment in times of public health emergencies such as with natural and other disasters (Patel M, Phillips C. Strengthening field-based training in low and middle-income countries to build public health capacity: Lessons from Australia’s Master of Applied Epidemiology Program. ANZ Health Policy Journal 2009, 6:5 doi:10.1186/1743-8462-6-5). It is surprising the authors have not referred to the successful models of work-based training addressed in the latter publication and the cross references cited in that paper relating to the Field Epidemiology Training Programs (FETP). Of particular interest is the paper on the application of this model in over 50 countries (White ME, et al. Partnerships in international applied epidemiology training and service, 1975–2001. Am J Epidemiol 2001, 154(11):993-999. (The MPH Program at Makerere is a member of the global network of these programs known as TEPHINET (www.tephinet.org)). While training in these models typically lasts about 2 years (with a total of about 6 to 12 weeks of classroom training), programs in several countries (including Australia) implement selected modules from the FETPS model to provide in-service training requested by governments and NGOs, e.g. conducting outbreak investigations, analysing a health information database, evaluating a surveillance system. In many of these programs, specific funding is not allocated for trainees to conduct projects; the expectation is that funding is from the workplace because the projects are essential functions and responsibilities of the workplace.

Response: We thank the reviewer for the references shared with us, some of which have been helpful during the process of revising this paper. We anticipate that the other aspects raised by the reviewer will be covered in the forthcoming evaluation. At the moment, we have acknowledged the absence of these aspects in the paper as a limitation (see page 14-15). Nevertheless, we have made reference to the Field Epidemiology Training Program approach and emphasize that this is a clear adaption of the FETP approach to health system strengthening, particularly with regard to its emphasis on ‘learning by doing’. See page 4 for details.

The usefulness of this paper for people and institutions considering models of in-service training, and in particular, for encouraging adoption of the modular approach could be strengthened by:
• providing further details as an appendix to the paper on (a) perspectives of the managers and co-workers at the workplace, and in particular, how the projects impacted on workplace responsibilities; (b) a summary of the outcomes of the remaining 60 projects not included in table 2; and (c) perspectives of the academic trainers on their direct engagement in health service activities. These elements could be included;

• comparing strengths and weaknesses of this model with other models of in-service training;

• providing an estimate of the costs for implementing the training;

• reflecting on the sustainability of the model particularly when funding from external sources ceases;

• modifying or adapting the section on ‘Challenges experienced during implementation’ and using a systematic approach to outline (a) a list of factors that facilitate completion of successful projects and (b) a list of barriers to participation/completion and how these could be addressed.

Response: We thank the reviewer for these important suggestions. As noted, perspectives of managers and co-workers, perspectives of academic mentors and facilitators; facilitators and barriers to the trainees' completion of the projects initiated, as well as the impact of the projects on workplace functioning will be covered in the forthcoming evaluation. This evaluation will provide us with necessary information to make critical comparisons of our training models with other models of in-service training, and provide us with an estimate of the cost of the program. At the moment, no cost-effective analysis has been done, and we acknowledge this as a limitation, see page 14-15 for details. However, we have included a summary of all the 66 projects in Appendix 1 while maintaining a brief summary of some of the projects in Table 2 (similar to the one we had in the earlier version of the paper). The issue of sustainability is one other thing that we have taken note of with the seriousness it deserves. At the moment, the program is solely funded by CDC, something that puts it in a precarious situation in the event that CDC pulled out. There are several strategies that are being proposed to improve its sustainability, including charging trainees with tuition fees and seeking full accreditation of the program from Makerere University. While these initiatives are still in infancy, we anticipate that they can go a long way in improving the sustainability prospects of the program. See page 14-15 for details.

I note the term ‘didactic’ is used on several occasions in the paper. ‘Didactic’ is defined in the Oxford Dictionary as “meant to instruct; having the manner of an authoritarian teacher”. I would be surprised if the authors used this method of teaching instead of the other approaches such as those that encourage reflective and interactive learning.

Response: We thank the reviewer for this observation. We have now replaced the word ‘didactic’ with “interactive face-to-face sessions” because that is what
exactly happened during the course of the training.