Reviewer's report

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

Version: 2 Date: 30 August 2012

Reviewer: Mahomed Patel

Reviewer's report:

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. Staff 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.

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

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).

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.

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.

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 to the journal’s questions to reviewers:

1. Is the question posed by the authors well defined?

The purpose of the paper stated as “to share our experiences in implementing a work-based, in-service training model” not well defined and should be crafted into one with specific objectives.

2. Are the methods appropriate and well described?

The methods of collecting the data, particularly those for assessing whether outcomes were considered successes or failures are not detailed. The model used for designing the evaluation of the training program paper and its potential limitations should be specified. The authors should state whether the evaluation was conducted by an internal, an independent or combined evaluation team.

3. Are the data sound?
Refer to 2. above.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
If the objective of the paper was to cite selected aspects of the program, in particular the successes, then the reporting may be acceptable. However, if it was intended to report on the evaluation (the purpose of which is usually ‘to improve’ rather than ‘to prove’), then the standards recommended by Stufflebeam are appropriate.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
This is hard to judge as the specific objectives of the paper are not clear. Refer to comments above and to 6. below.

6. Are limitations of the work clearly stated?
The limitations of an evaluation should include the reference to the particular evaluation model used, and potential biases in collecting and analysing data.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Yes

8. Do the title and abstract accurately convey what has been found?
The title highlights only the ‘workforce capacity’ without reference to other impacts of the training as suggested in my general comments. The title should be expanded to incorporate elements beyond only ‘workforce strengthening’.

9. Is the writing acceptable?
Yes

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

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I am on the faculty of the Master of Applied Epidemiology Program at the Australian National University. Our Program is a member of TEPHINET referred to in my comments, and I am a co-author of the paper cited in my comments. I completed a 4 month sabbatical with the MPH Program at Makerere University in 2000 and worked with one of the co-authors (WB) well before the training model
referred to in the paper was developed.