Reviewer's report

Title: Rapidly expanding human resources for health in Zambia to meet staffing goals by 2018: a quantitative analysis of policy options

Version: 1 Date: 24 March 2010

Reviewer: Lisa Hirschhorn

Reviewer's report:

The authors present a model to inform approaches to meeting projected human resources for health needs. The work builds on efforts in Zambia to quantify the gap in HRH and develop a strategy to meet these needs. The authors propose that by looking at the impacts of different approaches to meet the HRH needs: increasing training, increasing graduation rates and entry into the public sectors and decreasing what they call voluntary and involuntary attrition. The conclusion is that regardless of the efforts to reduce attrition and increase entry into the public sector, that training of most cadres will still be needed. The approach is relatively straightforward and uses a combination of estimates from interviews and from reports including Zambia specific and attrition rates (NEED REPORT). If costing can be added (see below), this has the potential to be a valuable tool for countries as they plan to address the HRH gap.

- Major Compulsory Revisions

Major revision

The largest limitation is the absence of any costing of the different strategies. For example, increasing physician graduation by 13 fold would take a large investment in the infrastructure of a medical school (faculty, physical structure, training spots). While it is clear that some increase in production of new HRH is required, understanding the relative costs would be important. A discussion and any estimates (if they exist) should be included. If none are available that would be important to add into the next steps which would be required for utilization of this type of model.

The attrition rates are taken from a report in 2006 and are the authors should explain the components which make up the attrition rates as these are a main driver of some of the HRH gaps. For example, mortality due to HIV has been decreased as access to HIV treatment becomes more available.

This level of detail would be important to understand the information which would be required for the model to be replicated by other countries.

It would also be helpful for the authors to discuss the potential impact of changes in attrition over time and anticipated duration for a graduate or existing staff to stay. For example, if the rates of attrition decrease (or increase) over time.

One important additional component which is discussed briefly but deserves
more in depth consideration is the potential for task shifting to change the overall strategy for the 4 cadres included. For example, if you decrease 50% of the duties of a physician to nurses and clinical officers, how does that change the calculations and potential decisions.

- Minor Essential Revisions
None

- Discretionary Revisions
A discussion about the potential for recruiting HRH who have left the field but not the country might be of interest given statistics from some other countries which estimate significant numbers of nurses who are in the country but not working in health care facilities.

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

**Quality of written English:** Acceptable

**Declaration of competing interests:**
I declare that I have no competing interests'