Reviewer's report

**Title:** Are global health initiatives enabling countries put sufficient health workers in place to deliver services?

**Version:** 1  **Date:** 20 August 2009

**Reviewer:** David McCoy

**Reviewer's report:**

This is an example of useful and important research. I have made lots of comments and suggestions, although I have struggled to distinguish between what I would call compulsory or minor revisions, especially as I have had to do this relatively quickly.

Many of my comments relate to improving clarity on the meaning of the data presented. So my comments are mainly about improving clarity. I hope they help!

**Major compulsory revisions / Minor essential revisions**

1. The description of the sample of facilities was inadequately detailed. I think it would be useful to have a table describing the sample of facilities actually used for the data analysis, and an indication of the number that were government, mission and non-government. It should also include what is known about the facilities within the districts that were excluded from the data analysis (e.g. the central hospitals in the urban areas).

2. The paper states that a random sample of facilities not providing ART were selected. But I didn't see any separate analysis of the HRH and workload statistics of these facilities, compared to those that were providing ART. This would help show a possible impact of HIV funding on the rest of the health system.

3. In results section, it would be useful to make the point at the outset that 'OPD visits' as per Figure 1 means non-HIV attendances. At the same time, it would be useful to describe what is known about the composition of these 'OPD visits'. Do they include ANC visits, and routine immunisation visits, for example, and do these visits make a big proportion of the total?

4. In Figure 1, there are mixed data – some is of number of clients, others are of number of visits. Comparing ART clients against OPD visits is confusing – can this be addressed? If it shows the number of clients, is this a reasonable proxy for number of visits, and adequately comparable to OPD visits? Same with PMTCT clients. Do these figures reflect workload related to PMTCT only, or does it also include ANC care for HIV positive pregnant women?

5. There is a major difference between Zambia and Malawi that is not really
explained in the paper. In Malawi, OPD visits are consistently higher than ART clients. In Zambia, ART clients outstrip OPD visits massively. What is going on here? My first reaction was to think that the Zambia data in Figure 1 is incorrect - unless the facilities selected in Zambia were primarily HIV clinics. Which goes back to the point 3 made earlier. Either way the differences between the countries reflected in Figure 1 should be discussed and explained.

6. Table 3 is very useful and obviously key. In addition to also looking at the differences between ART and non-ART facilities (as mentioned in point 3 above), it would be useful to have some comment on the extent to which health workers are HIV-specific versus non-specific. When it comes to HIV counsellors, this is clear. But to what extent were HSAs in Malawi used specifically to work on HIV, and similarly for the rise in urban doctors, nurses and technicians – is there any sense of the proportion of the increase in numbers that were HIV-dedicated, versus being more generalised HWs? A second point about the data in Table 3 is to describe the extent to which HSAs and HIV counsellors are full time or not. In some countries counsellors may be employed on a full time basis; in others, they may be employed to work two days a week.

7. In figure 3, it was not clear what the workload indicator was. Was it for non-HIV OPD visits, or for all visits? I presume it’s a measure of all workload, in which case the figure needs to be re-labelled.

8. Page 7, second last para: it states that increase in HIV workload has been superimposed on ‘increases in routine outpatient workload’- but Figure 1 suggests this not the case in Zambia; and it would be useful to have disaggregated data on routine OPD workload trends (e.g. rural versus urban).

9. I am concerned about the limitations to the data, particularly the exclusion of the central hospitals and NGOs / private sector. This could have a huge effect on the calculation of staff: population ratios to the extent that the data in Figure 2 are meaningless. Can you give more detail of how the catchment populations for each facility were calculated, and whether it adjusted for other providers / facilities in the locality?

10. Page 8 – caveats and limitations: Overall, there are very significant data limitations, and it’s hard to judge how bad these limitations are and to what extent the data are ultimately good enough. I felt concerned that the data may not be good enough! I also wonder if some of the limitations could be explained more in the methods section, as it helps the reader better interpret the data earlier in the paper.

11. The doubling of clinical: population ratios in urban Zambia is striking. But it wasn’t clear to me how this was achieved. The paper mentions a rural-urban drift of health workers, but this seems an inadequate explanation. Was it simply that there was an expansion in the number of posts and positions, created by HIV funding? Or is it that a higher proportion of urban Zambian facilities are non-government, compared to in Malawi, and that they are able to make better use of external funding to hire and recruit short-term contract workers? Perhaps
more discussion on this?

12. Conclusions and discussion. Page 10, second para: Zambia appears to have been more effective in recruiting and retaining health workers. Is this really the case? Is it short-term? And what about in rural areas? Comes back to point 17 made earlier.

13. The section on interviews I found to be a little unclearly organised. I wonder if the structure should be country by country, but that within each country sub-section, there is a clear framework for presenting the data?

Discretionary Revisions

14. When discussing the data or presenting data, it would help to always maintain the same sequence. i.e. always discuss and present Zambia first and then Malawi, or vice versa. But it helps the reader to keep consistent (in text, in figures and in tables).

15. In Table 3, I would present the data in such a way that the numbers of technicians doesn’t appear to be clumped together with the number of HSAs and HIV counsellors.

16. The urban-rural differences are quite stark within Table 3, and I wonder if these data should also be presented diagrammatically as done in Figure 3.

17. The quote from the hospital lab technician struck me. Were there any comments about the impact of HIV lab work on other lab work?

18. On page 7, at the bottom of page, the paper talks about the differences between the three Zambian districts in terms of which received global fund support and which got pepfar support. This was unclear. Was GF funding targeted at specific districts?

19. Page 8, para 1: HSAs are supposed to be in community-based. But isn’t it true that HIV/AIDS has caused many HSAs to become increasingly facility-based?

20. Page 8, para 2: I couldn’t understand how the rural-urban inequity relates to caveats about the data?

21. Some of the description of the different uses of funding from GF and pepfar which are in discussion on page 9, last para – could be usefully combined into Table 1. When you first come to Table 1 earlier in the paper, you want to immediately know a little about the HR and HIV components of each of these proposals, but it isn’t till page 90 that you get a sense.

22. Conclusions and discussion. I think the different approach of the GF in Malawi vis-à-vis the EHRP and its approach in Zambia is worth drawing out. In other words, it’s not just a case of differences between countries, or between funders, but also differences within the Global Fund?
23. The failure of pepfar-funded organisations to make data available should be highlighted much more. This is really unacceptable! By contrast, the paragraph on mixed methods could be removed. I’m not sure if there is any argument against the need for more mixed methods?

**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 have no competing interests.