Author's response to reviews

Title: Human Resources for Primary Health Care in Africa: Progress or Stagnation?

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Human Resources for Primary Health Care in Africa
Response to Reviewers

Reviewer 1:
The aim of the paper is to quantify the number of health workers in five African countries (in the abstract). Later in the body of the paper they aim is to "provide a quantified estimate of HRH in the sub-Saharan African". These two aims are different as one cannot generalize from a five country study in which data is not even readily available as the paper admits.

We have edited the introduction so that its wording is consistent with that of the abstract, without aiming to generalise.

Literature review was the main method used to gather data. However, the paper indicates that "personal communication were an important source of information". What tool was used to gather such information. This is not clear.

We have now deleted that sentence because in fact the previous sentence describes the type of personal communication to which we are referring: "We made a particular effort to find “grey” literature and unpublished statistics by contacting key stakeholders in Ministries of Health, Universities and Non-Governmental Organisations (NGOs) in all participating countries."

The focus of the study is not clear, is it primary health care or primary health care settings?

By this we assume the reviewer is implying that primary health care is sometimes provided in secondary health care settings.

To make this clearer, we have edited the wording to say “Specific figures on staffing of Primary Health Care centres were found for four of the five countries.” It is not possible to get statistics on staffing of any primary health care services within other settings, and the boundary between primary and secondary health care services in these settings is not always clear.

Reviewer 2
The data collected seems to be superficial and not well researched.
The study team went to considerable lengths to collect this data. We have re-consulted the WHO global health observatory data repository and World Health Statistics reports in August 2014 and this is the latest available data.

The results was superficially discussed and not well supported by data. A conclusion was drawn that more focus should be placed on the recruitment and retaining of staff. This could be valid but no data or statistics about the
number of medical doctors trained and migration (except for Botswana) was provided.

Data on numbers of doctors and other health workers trained is provided for all countries in figure 3. The third paragraph of the “results” section also presents some qualitative data on recruitment and retention within the government sector in all of the countries, and we have added information for Sudan and Mali. There is also some data on migration of doctors from Uganda.

The researchers described the key words they used to collect data. It is not clear how many data sources they explored. If the literature review was only carried out in English or also included other languages. It is unclear with who is the personal communications done and how was the data analysis done. We list all the databases we searched. We have added “No language restrictions were applied.”

Regarding personal communications, the previous sentence makes it clear that “We made a particular effort to find “grey” literature and unpublished statistics by contacting key stakeholders in Ministries of Health, Universities and Non-Governmental Organisations (NGOs) in all participating countries”.

Regarding analysis, we have added “Health worker densities were calculated using the numbers of health workers from the sources above, and official statistics on the country’s population.”

5 What are the strengths and weaknesses of the methods?
The weakness of this method is that it does not provide reliable statistics or data. The authors agree that the data are the best which are currently available. Some of the sources are more reliable than others, and these are discussed in the article. Of course no statistics are perfect, but having attempted every possible avenue to obtain this data, we can vouch for the fact that this is the best data currently available on the numbers of health workers in the included countries.

6 Can the writing, organization, tables and figures be improved?
Table 1. Unclear to which year the population, population growth and population fertility rate refer.
We have added this to the table.

The labels of figures should be below the figure.
OK we have put the labels below the figures – but have also included them at the end of the article so that the references can be numbered according to the order in the main article, by the reference management software. As the figures need to be uploaded separately from the main article, the references for each figure now also appear below that figure, and the numbering is different from the numbering in the main article.
Reviewer 3

The paper, which is a review of an important and topical global issue, of particular importance in sub-Saharan African countries, is well reasoned and well researched. Undertaking a review of health systems (human resources for health) in such a diversity of countries (socio-economically, politically and linguistically diverse) is a challenge, and the risk of noncomparability of health systems is great. However, the authors made use of the data that were available to the best of their ability, and have made some pertinent remarks about, and proposals on the issue. Although the review is relatively well balanced, as broad a conclusion such as <The “inverse primary health care law” is a reality in Africa> cannot be made on a purposive sample of 5 out of 54 countries in Africa! That conclusion needs to be revised.

OK, we have changed the conclusion to “The “inverse primary health care law” is a reality in the five African countries included in this study.”

1. Major Compulsory Revisions

- Title: “……….Progress or Regress?” It is unclear what the authors are asking. Is it “to progress or to regress”? This would be an illogical question because no country would be opting to regress. Do they mean “Progress or Regression”? This sub-title would indeed be insinuating the findings of the review. If the latter is what is intended, then the title needs to be modified, and the appropriate word used.

OK we have changed the title.

- Page 4, Results, para 3. The fig 3 which is inserted after para 3 seems to show only data that represent health workers (HW) trained by government locally (in-country). If this is the case, then the title of the figure must state so. However, the data on all those HW trained abroad and who do return home to work should be included in the total number of HW in the country. If the data are available, then they need to be included in the review. If not, then the review misses out on a proportion of HW (of unknown magnitude) that is trained abroad, either by government or self-sponsored, and that returns to work in the country.

We have changed the title of figure 3 to include the words “(within each country)”. The data relates to all training institutions within each country (where available), not only government institutions. Only Botswana had figures on numbers of doctors who trained abroad and returned (most did not return). The numbers of health workers practicing in the country (figures 1 and 2) do include all health workers currently working in the country (according to the different sources) regardless of where they trained. However it is not possible to know how many health workers are trained abroad every year from each country. These data are not available.
- Page 6, Principal findings, para 1, line 1. “Inverse primary care law”. Is this a known law? Then it should have a reference. If it is just a term coined by the authors, then it should not be called a “law”, but be termed “inverse primary care relationship or equation”.

OK we have added references to the terms “inverse care law” and “inverse primary care law”.

- Page 6, Principal findings, para 2, line 1. The categorical statement “Training alone does not result in an improved health worker density” is unsubstantiated, given that the review does not show that it controlled for all the possible confounding factors related to the relationship between training and health worker density. The statement should be a more measured “training alone does not seem to result in……”

OK we have changed this

- Page 8, Conclusions, 1st sentence. The categorical statement, <the “inverse primary health care law” is a reality in Africa>, cannot and should not be made after the review of data from only 5 out of 54 countries in Africa. The purposive sample of 5 countries is not representative of all African countries and as such, is insufficient to permit such a generalized statement. The entire first paragraph of the conclusion should be limited to the countries studied.

OK we have done this.

2. Minor Essential Revisions
- Page 6, Discussions, Principle Findings. Change principle to principal – OK done
- Page 7, para 1, line 5. “Health worker density has decreased rather than increasing” : change “increasing” to increased. – OK done
- Page 7, para 2, line 2. “….such reducing maternal and ….”. Change to “….such as reducing……” – OK done
- Page 7, Policy implications, last para, 1st sentence. A six-line sentence is too long, and should be split in two or three. OK done

3. Discretionary Revisions
- Page 7, para 2, 2nd and 3rd sentences. “…..both experienced increased maternal mortality from 1990 to 2003, probably because of the HIV/AIDS epidemic. Maternal mortality reduced again from 2003 to 2013, but still has not returned to 1990 levels [15]. It would be factual to add, after 2013, “probably due to increased number of HIV positive pregnant women receiving adequate and early treatment”, but still ………… 1990 levels.

OK we have added this.

Reviewer 4:
Thank you for the opportunity to review the manuscript ‘Human Resources for Primary Health Care in Africa: Progress or Regress’. The authors should be
congratulated on this interesting and well written paper.

Major Compulsory Revisions - None.

I have some minor comments, which the authors may wish to consider for revision:

Methods:
The methods are clear. Which online databases were searched for the health worker data?

We searched the WHO global health observatory and world health statistics.

Results:
Paragraph 3 states ‘Mali trains more doctors per capita than South Africa or Uganda but every year there are posts in government health services for only about one quarter of the newly qualified doctors’. Is there any information about where the remaining three quarters of newly qualified doctors go? Do they migrate or do they stay in Mali and work outside the health service?

We have added: “There has been no quantitative survey of new doctors in Mali to track the numbers of doctors who leave, but qualitative interviews with key-stakeholders report that most work in private clinics within Mali, some are employed as representatives for the pharmaceutical industry, and some migrate abroad.”

Paragraph 4 states that Mali is the one country of the four included which has detailed staffing figures for community health centres. This is really interesting and I was wondering whose role it was to ensure that this data was available? Is it ASACO? Are their lessons that can be learned regarding how this data is collected and made available?

Yes this data is collected by the National Federation of Community Health Associations (FENASCOM). This is unique to the system in Mali but it is possible that a similar system for collecting data on human resources for health could be adapted to situations elsewhere.

Discussion:
The authors discuss the lack of and inconsistently of the data as a limitation. Whilst I think that this should indeed be reflected in the limitations, I was wondering whether mention of the lack of data could be highlighted as one of the principle findings. The Joint Learning Initiative was published in 2004 and WHO report in 2006 both highlighted the lack of data and this is still evident 10 years on and it needs to be urgently addressed.

OK. We have added the following to the principal results section:

“In spite of calls for better data on human resources for health since the World Health Report in 2006, data on the health workforce is still imprecise and insufficient especially as regards primary health care settings and lower-level health workers.”

Policy implications, paragraph 4 the authors discuss improving the quality and quantity of low level health workers e.g. TBAs. What are the authors’ views of mid-level cadres especially as there has been a big drive in SA to train clinical associates in order to assist with primary care provision?

We have added “middle level” to the list.

Tables and Figures:
Table 1 has years for all the rows except for: Population, population growth (over the last decade?), fertility rate and % of births attended by skilled personnel. Is it possible to have years for this data or do the years vary by country according to the latest data that is available? We have added the years for these and tried to find the most recent figures. For % of births attended by skilled personnel the dates are different for every country so we have given a range.

Is it possible to make Figure 1 a bit clearer? Maybe a space between each country? Or could it be depicted as four graphs (for each country) grouped together in one box? The discrepancies between the data within each country is really interesting.

OK we have done this and updated the figure with the latest available data.