

ESTIMATES OF HEALTH CARE PROFESSIONAL SHORTAGES IN SUB-SAHARAN AFRICA BY 2015: A CRITICAL REVIEW

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ABSTRACT

The article by Richard M Scheffler; et all titled; *Estimates Of Health Care Professional Shortages In Sub-Saharan Africa By 2015* published in the Health Affairs Journal volume 28, issue 5 of 5 2009 is reviewed. The review considers how the article is written in terms of structure, content and its effectiveness on addressing the issue of shortage of human resources in public. The issue of human resource shortage and brain drain especially in the developing world has been widely discussed, therefore, the relevancy, accuracy, objectivity, clarity of this article with respect to this subject area will be reviewed.

KEYWORDS:- Health, Forecasting Model, Health Workers, Laboratory Scientists, Medicine

INTRODUCTION

The article include a short abstract that summarizes mostly the methodology used for estimating the need, shortage and cost implications in terms of human resource requirements in healthcare for 39 countries in Africa. Although the article does not have a clearly marked introduction subheading, it is has the study data and methods, results and discussion subheadings.

The authors uses a forecasting model to estimate the need for health professionals and from there deduce the magnitude of the shortage. The target year used was 2015, the rational being that it is the target of the United Nations Millennium Development Goals. It is reasonable to use the MDG as reference in discussing this topic as three of the eight MDG goals concern health directly i.e. reduction of child mortality, improvement of maternal health and reducing the public health impact of HIV/AIDS, malaria, and other diseases. Thirty nine countries were samples. Based on the forecasting model, the authors estimate a total need of 800,000 at an estimated cost of \$2.6 billion which is 2.5 times more than the total current budget for the 39 countries samples.

In its estimates the authors used some reputable sources e.g. Data on the number of doctors, nurses, and midwives by country was extracted from WHO Global Atlas of the Health Workforce March 2007 and the wages data from the “Occupational Wages around the World” database, published by the National Bureau of Economic Research. The other estimates of anticipated wage bill if all need is met were extrapolated using data from these sources as well as the WHO recommended 2.28 health care professionals (0.55 doctors and 1.73 nurses and midwives) per 1,000 population.

The results are presented descriptively as well as with tables (4) and one graph with summaries of results and used for discussion. During discussion, the authors review their result and findings and link these to policy implications going forward.

LITERATURE REVIEW

The shortage of health workers has been linked to poor health indicators¹. As much as a 140% increase is required in some of these countries to get closer to achieving the MDG targets¹. There are many factors that have contributed to these shortages, including poor investments in in-service training, brain drain, career changes and premature mortality.

Africa has the worst healthcare shortage with estimated 2.3 healthcare workers per 1000 population compared to the Americas that have 24.8 per 1000 population². The healthcare workers make up 1.3% of world healthcare workers, yet they cater for 25% of the diseases burden². Of the 57 countries with critical shortage of healthcare workers, 36 are in Africa³. Worse still, this shortage in Africa is skewed towards the poor in rural areas. This will greatly affect attainment of the MDG for example it is indicated that there is a direct relationship between healthcare shortage and survival of women during child birth⁴

There are many strategies that have been suggested to alleviate the problem. These include increased direct investment into training and establishment of human resource policies that will guide recruitment and retention studies.

ARTICLE CRITIQUE

AUTHOR

The journal describes the author, Richard Scheffler as a distinguished professor of Health Economics and Public Policy who at the time of writing and publication of the article was based at the School of Public Health and Goldman School of Public Policy, University of California, Berkeley. His credentials are credible in the area of health economics as he was at that time also the director of the Global Center for Health Economics and Policy Research. This institution should be of high standing as it is collaboration between PAHO and WHO Collaborating Center on Health Workforce Economics Research.

ACCURACY

The article uses credible sources for its data that include WHO for its estimates. The rationales used for some of its assumptions are valid and are supported by literature e.g. when estimating the budgetary needs using the WHO Global Atlas of the Health Workforce 2007 database and the WHO mapping of health professionals. The sample size of 39 out of a total of 54 African countries is representative enough to be able to generalize across the region.

However, there were some limitations that could have affected the accuracy and representativeness of the results and conclusions. The paper only considered doctors, nurses, and midwives and did not consider other important health professionals who are involved in the delivery of healthcare. These include laboratory scientists, pharmacists, physiotherapists, occupational therapists and others. In some countries, remuneration of general nurses and midwives are not the same and this could have affected the estimates for the wage bill. However, the authors cite lack of credible sources for this information.

After considering the published 2.28 health care professionals per 1,000, the authors deduced that 0.55 of these will be doctors using a study done by the same author. After 0.55 for doctors it leaves 1.73 for nurses and midwives. However, the authors could also not find credible sources to be able to determine the nurse-midwife mix within the 1.73. To estimate the supply for the professionals by country for 2015 the authors used a combination of previous estimates and data and specifically for doctors they used the supply estimates done by the same author of the paper.

The authors cite this as the only available source for such estimate. For the above mentioned two, the authors could have included a limitations sub-heading to discuss these further include potential impact on results and how other authors could further explore these areas to provide more evidence to increase credibility.

RELEVANCE

The issue of healthcare worker shortage in Africa is widely known and discussed (ref). Post colonialism, many African country economies went into decline (Zim reference) at a time where demand for such skills was increasing in the developed world. This article, therefore is very relevant as the issue of healthcare shortage and brain drain has not been fully addressed. Data and empirical evidence is still required in terms of cost implications for addressing this shortage. The authors provide valid discussions that the results they provide can influence decisions on training in terms of facilities and numbers required for different professionals. The paper provides practical solutions to addressing the need using cost effective approaches e.g. increasing the nurse: doctor ratio.

Doctor salaries are higher than nurses and a significant portion of the doctor's work can be shifted to nurses without compromising quality of service. Some of the policy implications suggested have actually been successful in some countries e.g. use of incentives to retain staff has been successful in Botswana where healthcare workers, among others receive a scarce skill allowance, offered accommodation etc. Task shifting where some workload is shifted to nurses e.g. consulting general cases and only refer complications to doctors allows for increasing the nurse: doctor ration, cutting down on the budget as nurses come at a lower cost for the same number of doctors.

OBJECTIVITY

The article was objective enough by using hard evidence gathered from several countries without manipulations by the authors. The authors were clear that not all 39 countries analyzed would experience shortage, an assumption that could be made for all African countries. The authors briefly discussed limitations of their study, which mostly was availability of quality data.

However, the other limitations that could potentially affect the results, conclusions and discussions were not fully discussed e.g. the issue of assuming nurses and midwives have same remuneration, not being able to segregate nurses and midwives in the 1.73 health care professionals per 1,000 assumption. One of the key tool used for forecasting healthcare worker shortages across the 39 countries was adopted from the “Forecasting the Global Shortage of Physicians: An Economic- and Needs-the Authors’ analysis which was developed by one of the authors of this paper. If this could have been supported by other methods it could increase the credibility of the forecasting. This however, does not necessarily take away the validity of the estimates used.

STABILITY

Article is published in the Health Affairs peer reviewed journal and uses renowned references like the WHO.

ANALYSIS OF GRAPHS AND TABLES

The authors used tables and 1 graph to summarize some of their results. Table 1 summarizes the need, supply and the shortage of doctors and nurses across the 31 countries. However, there was no summary table or figure illustrating surplus in the other 8 countries. Exhibit 5 gives an easy to read summary line graph for the 3 different scenarios when addressing staff shortage by using different healthcare mix e.g. the nurse and midwives: doctor ratio. It summarizes the impact of increasing the nurses: doctor ratio which is shown by an increase in percentage servings.

RECENT ADVANCES RELATED TO THE TOPIC

The article was received in April 2012 and published in August 2013. Before that, there had been laboratories in the ASLM2012 Call to Action ¹².

CONCLUSION

The article by Richard Scheffler is relevant and provides useful empirical evidence that will be useful for governments in Africa and other developing countries for use in policy development and implementation. It also provides an opportunity for additional studies that could include the full range of healthcare workers that are involved in the provision of health services and testing of other forecasting models for healthcare worker shortages.

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