

Full Length Research Paper

HIV/AIDS control programmes in developing countries: The role of human resource

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Accepted 18 October, 2011

The health sector is one of the most challenged sectors in the developing countries given to the shortage of trained manpower particularly in Africa and Asia. Human resource is a very important aspect of any functioning health systems. However this aspect is often neglected in the long term plans and strategies development for the sector. We observe that often in the disease control programmes due importance is not given to this aspect. Generally human resource planning is ignored and just seen as an administrative function in disease control programmes. This affects the overall effectiveness of the programmes in terms of its impact on disease control. We observe an acute shortage of trained manpower in many countries. There are several reasons of such a crisis like situation in human resources in health. Among them some are like HIV/AIDS epidemic, training capacity, brain drain, poor working conditions and remuneration. Especially, the human immunodeficiency virus/AIDS control programmes have suffered a lot due to the shortage of trained manpower particularly in countries where HIV is among the main health problems. However there are ways in which such problems can be addressed to ensure the sustainability of HIV control and other disease control initiatives in developing world to reach near to the Millennium Development Goals (MDG –particularly goal-6) in health. In this paper, authors discussed the evidence based solutions to the problem of human resource in health sector to combat HIV/AIDS and other diseases in developing countries. Some of the ways to address the problem are improving the training capacity, improving use of available skills, staff retention and support, recognizing the health workers rights and understanding their work related issues along with taking care of administrative processes involved in the management of the human resources.

Key words: Health, health and human resource, human resource crisis, disease control, human immunodeficiency virus/ acquired immune deficiency syndrome.

INTRODUCTION

The health sector is one of the most challenged sectors in developing countries given to the shortage of trained manpower. For instance, the density of total health workforce in South – East Asia is 4.3 per 1000 population. In Africa, the situation is even worst where there are 2.3 total health workforce available for every

1000 population. On the other hand, it is 24.8 for America and 18.9 for Europe. In Asia and Africa the majority of these health workers are lowly skilled workers. The disproportionate burden of disease, disability and death in poor countries is caused by, and aggravated by numerous complex factors. There is a consensus that the inadequate number of health workers is the most important factor in the crisis of health care delivery in poor countries (Samb et al., 2007). Weak health systems, rapid population growth, corruption, poverty and poor

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health financing by central governments only worsen the situation over the years (Commission for Africa Report, 2005). Moreover, due to the interaction of widespread poverty, breakdown of health services and the human immunodeficiency virus/acquired immune deficiency syndrome epidemic, and several other factors, there has been sharp increase in communicable diseases. At the same time, there has been another rise in cases of lifestyle-related diseases like heart disease and diabetes especially in the urban areas of these countries. HIV/AIDS, the resurgence of TB and malaria have dramatically increased the number of patients in need of health services. These 3 diseases alone have increased demand for hospital admissions, and increased the length of stay in hospitals, thus creating more demand for labour-force in health facilities. In addition, health staff themselves have also been seriously afflicted especially by HIV/AIDS, leading to more staff absence from work or death, hence poor service delivery especially in sub Saharan Africa (Kober and Van Damme, 2006). As an illustration, in 1997, Malawi lost 44 nurses to HIV/AIDS representing 44% of all nurses trained. By comparison, Zambia lost 185 nurses in 1999, representing 38% of all nurses trained in government institutions that year (Hongoro and McPake, 2004). All these add to the strain felt by the overburdened health workers in these countries and contribute to the human resource crisis.

The human resource is the first and foremost important aspect of any disease control programme and thus for HIV/AIDS and other disease control initiatives. Many disease control programmes in the developing countries suffer negligence of human resource aspect. HIV/AIDS programme and scaling up of the antiretroviral therapy is particularly such a case in Sub-Saharan Africa and in Asia in this respect. In the context of Asia, countries such as India, Nepal, Bangladesh, Pakistan and Sri Lanka also suffer the shortage of the trained human resources in health (Table 1). There is worldwide shortage of the trained manpower in health sector. This shortage is highest in the countries where health problems are more. The health sector is not the priority in many developing countries and the public spending in health is very low. These low income countries have to depend upon the donor agencies for supporting the health programmes. The donors have not shown interest in investing in the human resource problems in these developing countries. The concern of the donors is that they do not want to increase the dependency on the external donations (Palmer, 2006). The estimation of the global shortage of the health workers is more than 4 million. A recent study reveals that the Sub-Saharan African countries must nearly triple their current number of workers by adding the equivalent of 1 million workers through retention, recruitment and training if they are to come close to approaching the Millennium Development Goals (MDGs) for health particularly the HIV/AIDS related MDG (Goal-6) (Kanchanachitra et al., 2011). The scenario of Southeast

Asia is further more dramatic where there is a shortage of trained health human resource coupled by the maldistribution of the health workforce. In this part of the world particularly in rural areas, the shortage is more than in urban and semi-urban areas (Kanchanachitra et al., 2011). For instance, maternal health is a major public health problem in India and the role of emergency obstetric care is critically important for reducing maternal mortality ratio. Lack of trained professionals to deal with the issues of emergency obstetric care is a major bottleneck in bringing women to health institutions for delivery and thereby curtailing the mother to child transmission of HIV in India. India faces acute shortage of obstetricians. The shortage is further more in rural areas (Mavalankar et al., 2008).

In the recent years India has suffered shortage of all most all cadre of trained human resource due to fiscal difficulties and civil service reform (The Health Sector Human Resource Crisis in Africa, 2003). According to Charles Hongoro, human resources in health is like the heart of the health system in any country; the most important aspect of health care systems and a critical component in health policies (Zachariah et al., 2009). The country specific sustainable solutions to human resource problems have to be found in order to achieve targets of disease control. The health systems in different countries are different and the context in which the health system functions is also unique. The health human resource problems should be seen in the context of a specific health system and local solution should be aimed keeping in mind the future health demand of the population and it should be made responsive to the needs of the people in general and to control various endemic diseases and HIV/AIDS in particular where HIV forms a major health problem. In this manuscript, the authors have attempted to identify the specific reasons of the crisis like situation in health human resources and suggested some means and ways to address these problems in the context of developing countries.

METHODOLOGY

The published research work was reviewed on the topic using Science Direct data base. The key words used for searching the research papers on the topic were – 'health human resource', 'HIV/AIDS and human resource' and 'human resource crisis in developing countries'. The first search resulted in 216595 journal articles, 21184 book articles and 3832 reference work. The research with second key word resulted in 14569 journal articles, 1967 book articles and 425 reference works. The search with the third key word resulted in 19854 journal articles, 2895 book articles and 691 reference works. This search resulted in several papers which were addressing similar issues under various contexts. Only those papers selected finally for review which were considered more close to the topic. For screening the papers further, the following criteria were used – inclusion of both qualitative and quantitative research papers, articles of last 10 years, relevant to Africa and Asia and having the words such as health, human resource, crisis, skill etc. This was done manually. As a result of

Table 1. Physicians and nurses per 100,000 population in some of the developing countries in Asia and Africa.

Country	Physicians per 100,000 population	Nurses per 100,000 population
Bangladesh	23	24
India	51	61
Pakistan	66	47
Sri Lanka	43	79
Niger	3	27
Bolivia	73	32
Papua New Guinea	5	53
Ethiopia (2006)	2.7	22
Global average	170	399

Source: <http://www.who.int/GlobalAtlas/home.asp>.

this, the number of articles reduced significantly to the tune of 57. The abstracts of these 57 papers were printed and read thoroughly. During this process those papers were marked and selected that discuss about the problems of disease control programmes, HIV/AIDS, human resources crisis and solution to the shortage of trained health human resources in the context of developing countries in Asia and Africa. This further reduced the number of selected articles to the tune of 11. These 11 full articles were downloaded and printed and thoroughly read. Apart from this database search, some reports relevant to the topic in the context of Africa and Asia were also searched using Google Search.

The authors studied the papers, internalized the findings and commented and interpreted the results based on their field and academic experiences.

RESULTS AND DISCUSSION

Human resource situation in developing world

Our search shows that there is an acute shortage of all cadres of trained health human resources. The shortage is further acute in the rural areas. WHO (2006) estimated that there are 57 countries facing critical shortage of health workers. Over half of them are in Africa and rest in Asia and Latin America. The situation of health workforce in Asia is also similar but relatively better. In Africa, the non-availability of trained medical staff is one of the main problems in scaling up of antiretroviral therapy. In India the shortage of trained workforce in antiretroviral therapy is also a major constraint in scaling up treatment and as a result of this HIV treatment is available only at the tertiary level of the care. This limits the geographic access of antiretroviral therapy. This also increases the cost of the therapy in terms of loss of wages, transport to the health facility and expenses of patient's companion in seeking treatment. A current situation of the physicians and nurses is shown in some of the developing countries in Asia and Africa in the Table 1. The table reflects huge disparity in distribution of the human resources in the health across various regions in the developing world.

There are some countries like Niger and Papua New Guinea where the number of physicians and nurses are far below the global average as mentioned in Table 1.

In many countries such as Ethiopia, the availability of trained physicians and nurses are far below its peers in the table. In Asia, Bangladesh face an acute shortage of the physicians and nurses.

Human resource in wider health system

There is a need to see the human resource in the context of wider health systems in a specific context. Health human resource forms the basis of a strong health system and makes the health system respond to health problems of the communities. Figure 1 represents a conceptual framework of the human resource as part of a wider health system and its effects on the health of the people. It reflects how certain actions with respect to improving functioning of health workforce can bring better quality in terms of service delivery, increase efficacy and efficiency and lead to equitable access. This also summarizes that actions aiming to improve human resources improve health of the people in general.

Some of the causes of the present situation

HIV/AIDS epidemic

The HIV/AIDS epidemic is killing the work force. The problem is acute in many developing countries. In 1997, Malawi lost 44 nurses as a result of AIDS which is 44% of the annual number of nurses trained; in 1999 in Zambia, 185 nurses died which is 38% of the annual number of nurses trained in government institutions. Problems of absence from work and reduced productivity associated with the epidemic are also common (Zachariah et al., 2009).

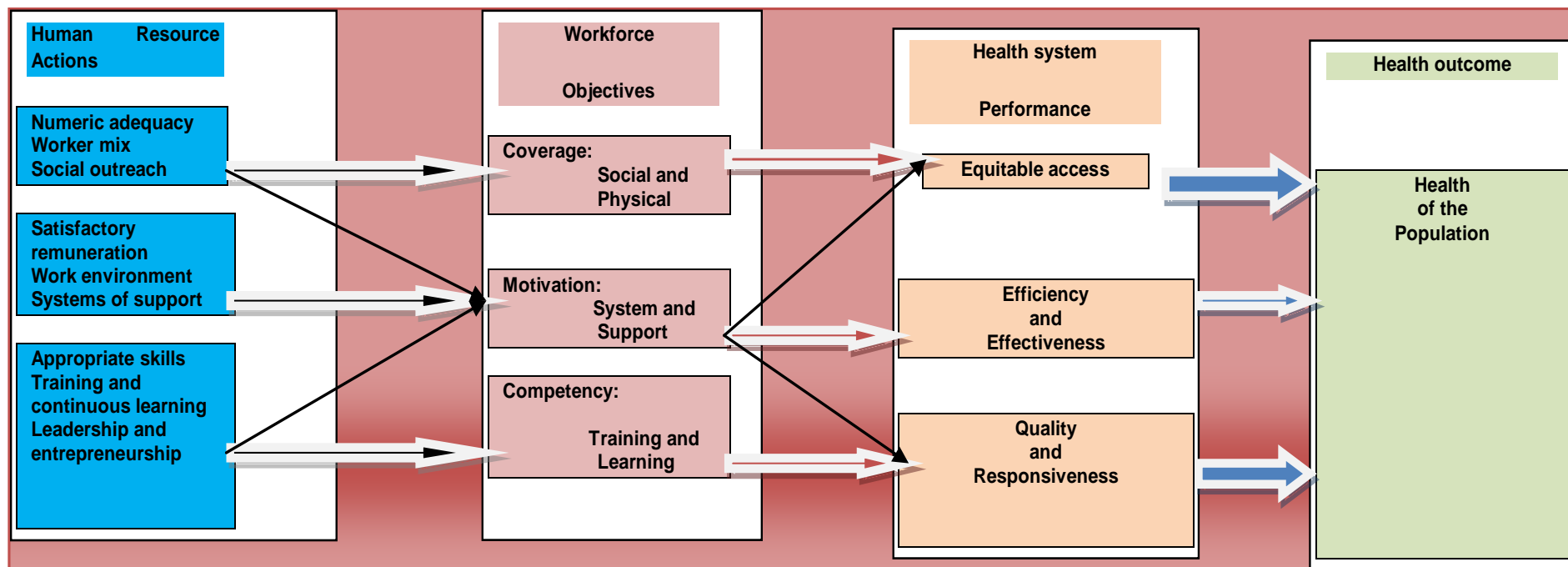


Figure 1. Human resource in wider health system. Source: Adopted from Prehospital and Disaster Medicines – Special Report 2007.

Training capacity

We observed that the training capacity is low in general across Africa. Two thirds of sub-Saharan African countries have only one medical school. Some have none. Investment in educational infrastructure and educators is declining. In Indian states like Bihar and other Northern states, the number of medical colleges is far below the number required as per the population norms (Human Resources and Management of Health Systems, 2008).

Brain drain

Brain drain is an important factor that affects the

availability of the human resource. In many developing countries, this is a major problem. In Africa alone where the health problems are greatest; more than 23000 professional migrate to the developed countries annually. In Asia, from Philippines alone there are more than 150000 nurses who are registered out of the country. In Kenya, out of 5000 registered medical practitioners, only 600 works in the public sector and the rest do private practice. The brain drain is both internal and external. Professional bodies that protect the interests of their members have played a part in defending training that promotes a level of specialization inappropriate to the health needs of low and middle income countries. One of

the main reasons of the brain drain (internal and external) is poor HR policies in the health sector of these countries (Pang, 2002).

Poor working conditions and remuneration

A survey of African health workers intending to migrate or already migrated showed that issues of salary and living conditions dominated with 80% of health workers surveyed in Cameroon citing living conditions, and 72% in Uganda and 89% in Senegal citing salary as reasons for intending to leave their country. The living and working conditions in African settings are very poor and that is one of the reasons why professionals do

not work in the public sector (The Health Sector Resource Human Resource Crisis in Africa, 2003).

Skill imbalance

Skill imbalance is a major issue particularly in the context of the developing countries. The effect of the colonial governments' medical education is prominent. The medical education should be according to the health needs of the people in specific country. Skill imbalance in the workforce created lot of inefficiencies in many developing countries and these countries should change their plan to develop their workforce that is closer to the public health needs in these countries (Zachariah et al., 2009).

Mal-distribution and poor knowledge base

Across various regions in the developing world, the concentration of the health service providers is around the cities and urban areas. In the rural areas in India, the doctors and nurses are very few. The retention of the health workforce in the rural areas is a huge challenge (Kanchanachitra et al., 2011). The knowledge base of the workforce is poor. It means that the data is lacking with respect to the knowledge and skills level of the workforce. It is a main constraint in planning of the programmes and policy for training and further development of the workforce (Zachariah et al., 2009).

Solution to the problem of human resource crisis

Improving the training capacity

HIV/AIDS and TB have not only affected the general population but these diseases have also affected the health workforce. Malawi has suffered in terms of loss of human resource due the HIV/AIDS (Palmer, 2006; Kanchanachitra et al., 2011). Increasing the training capacity seems to be promising in terms of improving the supply of the trained manpower. Two important factors that need to be considered are sustainability of the financial resources for increasing the training capacity and ways and means to ensure that the increased flow of trained manpower is retained and absorbed in the health system of the country.

Improving use of available skills

Auxiliary cadres are often less employable abroad, especially if the qualifications involved do not easily translate into those used in the developed world such as medical assistant or clinical officer. The skills enhancement of this cadre can be useful. In Africa, for

example, nurse aids, medical assistants (with more basic training than a nurse), and clinical officers (the equivalent of medical assistants in Tanzania and Uganda) are doing essential medical tasks, especially in rural areas, despite the existence of professional restrictions and regulations (Chen et al., 2004). A good example is Malawi where clinical officers are a major resource in surgical procedures and medical care. Task shifting is a major debate in many developing countries especially in Sub-Saharan Africa. Many believe that it is not a panacea and undermine the health system development and would weaken the health system in long run. Task shifting and scale up of ART in Malawi through non-physicians clinicians resulted providing lifesaving drugs to 130488 patients (Harries et al., 2006). Health services such as condom distribution, food and hygiene counseling, distribution of insecticide impregnated bed nets and nutrition education can safely be provided by trained community workers.

Staff retention and support

The way the health system is funded, organized, managed, and regulated affects health workers' supply, retention and performance. It is difficult to emphasize if a particular strategy works better than the other in retaining and supporting the staff. However, it is important to mention the context where such strategies perform well (Kanchanachitra et al., 2011). In some countries incentive has worked and in some other countries it did not. The idea of giving incentives to the workers who work in difficult settings is being proposed in many settings. This has shown some good results in terms of retaining the staff. However, the legal bonding of the workers to stay in their job has not shown good results in many parts of the world and professional bodies have opposed it. Interestingly, these strategies have worked in Thailand to retain the health workers where bonding of the doctors along with incentives was used (Zachariah et al., 2009).

Recognizing the health workers rights and putting them first

The workers are very important for any diseases control program. Strong leadership, sustained finances and political will are needed to ensure that workers get what they need to deliver at the workplace.

Development of national workforce strategic plans

All countries should develop national workforce strategic plans to guide human resource development and should examine and increase their investments in appropriate education, deployment and retention of human resources. National level initiatives need to be taken in

this direction and country specific policy on health human resources is necessary.

Combating health emergencies

Certain health conditions have not only affected masses but also affected a huge number of the health workers. HIV/AIDS and TB are among those health conditions. These two health conditions particularly resulted in increase in the absenteeism and deaths. Safety of the staff against HIV/AIDS and TB is crucial. It is very important that the use of universal precaution is encouraged among the health workers and appropriate environment should be developed for the same (Zachariah et al., 2009).

Building knowledge base and simultaneous learning

It is important that knowledge and continuous learning of the health workers is encouraged and promoted. One such example of building knowledge base at district level health planning and management is there in India. The Public Health Resource Network which is a networking and capacity building programme running in four state of India is a good example. However, its impact on retention on the health workers is yet to be evaluated (Kalita et al., 2009).

Non-financial incentives

The experiences from the field show that across various countries under different circumstances, non-financial incentives in the form of acknowledgement, recognition, career development have helped in increasing the motivation of the staff and retention (Chen et al., 2004). This is very important in realizing the objectives of the project.

Conclusion

In most of the developing countries in Asia and in Africa, we observe that there is acute shortage of health human resource which is affecting the disease control efforts in these countries. We found that there are a number of factors which contribute to this situation. Among them, some important factors are the diseases itself and particularly HIV/AIDS. The training capacity in these countries is also contributing to the shortage coupled with low retention of the staff within the system due to brain drain. Apart from this, some other factors such as working conditions, mal-distribution of the staff and skill imbalance also affect the disease control programmes. We identified some of the solutions to respond to the problem of human resources. Evidences from the field

have shown some level of success in addressing the problem. We found that increasing the training capacity is absolutely necessary to address the problem and looking at the long term sustainability along with bringing in the right skill balance. Recognizing the rights of the works, provisioning of financial and non-financial incentives have shown good results in retaining the staff. However, we realize that the development of the health system is very critical to address the health human resource crisis. All the developing countries should evolve an appropriate action plan to strengthen their health system. Country specific strategic investment should be made in developing human resources. There is a need of a national policy on the human resources that clearly defines the strategy to recruit, deploy, retain and develop human resources.

It can be concluded that in the developing countries the acute shortage of the human resource is an important issue with respect to sustainability of the disease control and making health services responsive to people's need. Country specific strategies need to be developed and understood as a strategic function rather than administrative routine.

ACKNOWLEDGEMENTS

The technical inputs received from Dr. Belaynew Wassie, Head School of Public Health, University of Gondar and Mr. Alessandro Greblo who shared his field experience of Africa that helped in writing this manuscript are thankfully acknowledged. The support of University of Heidelberg that allowed the use of its subscription of Science Direct Data base is acknowledged.

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