The Health Workforce Crisis in Pakistan: A Critical Review and the Way Forward

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Abstract

Today, the developing world suffers due to the health "workforce crisis." The World Health Report 2006 uses this term to study the current scenario in the developing countries. Human resource planning is a critical activity within the broader sectoral planning, especially when it comes to the health sector. Pakistan faces an acute shortage of different cadres of healthcare workers, which is bound to escalate further because of the high population growth rate, inequitable distribution and out-migration of the healthcare workforce. In the wake of ongoing reforms in the health sector of Pakistan, it is suggested that for the strengthening of health systems, there ought to be a serious thought process involved for developing a human resource plan for the health sector that responds to the needs of the population and the disease burden. A national strategy is imperative to retain, train and incentivize the health workforce.

Introduction

A robust workforce is a *sine qua non* for any organization to operate in a productive manner to achieve its goals. More than two-thirds of the expenditure of an organization is consumed by human resources, besides the huge amount of time and other resources spent in terms of management (Hernandez et al. 2006). Successful and productive organizations are synonymous with effectively and efficiently managed human resources. Human resources have always remained the most important asset of any system or organization. Out of man, money and material, man has always stood his ground as the strongest contender for making things happen. The objective of human resource planning is to ensure that the right number of personnel with the appropriate skills and competencies are available in the right place at the right time. Human resource planning is a critical activity within the broader sectoral planning activities. Health services rely heavily on personnel, whereby 60–75% of the health sector budget is spent on sustaining this particular resource (Green 2007).

Human resources for health (HRH) are identified as one of the core building blocks of a health system (WHO 2007). They include physicians, nurses, midwives, dentists, allied health professionals, community health workers, social health workers and other healthcare providers, as well as health management and support personnel – those who may not deliver services directly but are essential to effective health system functioning, including health services managers, medical records and health information technicians, health economists, health supply chain managers, medical secretaries and others (WHO 2013).

The World Health Organization (WHO) estimates that there are around 59.2 million health providers working around the globe, and a shortage of almost 4.3 million physicians, midwives, nurses and support workers worldwide. The shortage is most severe in 57 of the poorest countries, especially in sub-Saharan Africa. The situation was declared on World Health Day 2006 as a "health workforce crisis" – the result of decades of underinvestment in health worker education, training, wages, working environment and management (WHO 2006). Shortages of skilled health workers are also reported in many specific care areas. For example, there is an estimated shortage of 1.18 million mental health professionals, including 55,000 psychiatrists, 628,000 nurses in mental health settings and 493,000 psychosocial care providers needed to treat mental disorders in 144 low- and middle-income countries (Scheffler et al. 2011).

The developing world suffers greatly at the hands of the health workforce crisis. The global distribution of the health workforce is

inequitable in very obvious terms, with a global health workforce per 1,000 population ratio of 9.3; the regional values vary from 24.8 in the Americas to 4.3 and 2.3 in Southeast Asia and Africa, respectively (WHO 2013). The current ratio (0.473) of physicians to 1,000 people is inadequate to maintain the nation's health in Pakistan. By 2020, physician workforce shortages for Pakistan might range between 57,900 and 451,102 physicians, depending on the future needs (Talati and Pappas 2006). The shortfall of health workers hits developing countries like Pakistan the most, and is envisaged to hinder Pakistan's achievement of the Millennium Development Goals (MDGs) by the year 2015. The WHO has defined a threshold level of health workforce required to deliver essential health interventions to achieve the MDGs by 2015, and Pakistan is one of the 57 countries found to be below that threshold level (WHO 2011).

This paper purports to look into the health workforce crisis in Pakistan. Review of literature was carried out to attain a better understanding of this problem with a general focus on developing countries and a special focus on Pakistan. Core recommendations were developed keeping in mind the case study of Pakistan in the light of the World Health Report 2006: Working Together for Health.

Methods

The main source of information used for this paper was gleaned from the Pakistan Medical and Dental Council's website, Economic Survey of Pakistan 2011–2012 and Population Association of Pakistan. A literature search was conducted through MEDLINE®, using the keywords "human resources for health, health workforce crisis, Pakistan and developing countries." Moreover, using Google Scholar™, a few key publications were consulted. The bibliographies retrieved through PubMed and the reports were then searched for further references. Some articles, though non-specific to Pakistan, were consulted to understand the context of the HRH in other parts of the region and in developing countries. The World Health Report 2006: Working Together for Health was utilized for studying key factors relating to HRH in Pakistan. The chapters of the document have been studied and discussed in detail one-by-one with the perspective of HRH in Pakistan as a case study.

Health Workforce Profile – Pakistan

At the Beginning

Pakistan has come a long way since her birth in 1947; in 1950, there were only 2,298 physicians, 418 nurses and no dentists. By 2005, approximately 74,000 physicians were practicing in Pakistan. Annually, local medical schools and international medical graduate certification courses provide 5,400 physicians (soon to reach 6,800). Each year 1,150 physicians emigrate and an estimated 570 physicians stop practicing for various reasons. There are 292 hospitals, 722 dispensaries and 91 maternal neonatal and child health program centres throughout the country (Population Association of Pakistan 2014). According to the Pakistan Medical and Dental Council, 142,017 physicians and 14,479 dentists have been registered as of June 2014 (Pakistan Medical and Dental Council 2014a). Over the years, Pakistan has struggled to counter this scarcity of resources, and with under-productivity, maldistribution, migration and social threats to health workers, human resources continues to be a pertinent issue for the public health scenario in Pakistan (Bhatt et al. 2010).

Important Historical Milestones in HRH Capacity Building

Pakistan has given much attention to increasing the number of doctors and medical schools over the past 65 years (Talati and Pappas 2006; Nishtar 2010). There were only

two medical colleges (King Edwards Medical College in Lahore and Dow Medical College in Karachi) at Pakistan's inception. It was in 1962 that a formal postgraduate training institute was established by the name of the College of Physicians and Surgeons (Rathore 2013). The first medical college established after independence in Pakistan was Fatima Jinnah Medical College (Lahore 1948), the second was Nishtar Medical College (Multan 1951) and the third was Khyber Medical College (Peshawar 1954). During the 1970s, Punjab Medical College (Faisalabad 1973), Rawalpindi Medical College (Rawalpindi 1974) and Allama Iqbal Medical College (Lahore 1975) were established. Since then, many public-sector medical colleges have been established, reaching 38 by 2012 (Pakistan Medical and Dental Council 2014b). In the late 1990s, private medical colleges started functioning, and by 2012 approximately 50 of such institutes have been established.

The Current Scenario of the Health Workforce in Pakistan

Pakistan has 160,289 doctors, 12,544 dentists, 82,119 nurses, 29,000 midwives, 13,678 lady health visitors (LHVs), and 32,511 pharmacists, as reported by the Economic Survey of Pakistan 2013–2014 (Ministry of Finance 2014). However, according to international standards, there should be two physicians per 1,000 population, one dentist per 1,000 population, four nurses to one doctor and one pharmacist to six doctors (WHO 2011), as shown in Table 1. Although Pakistan has shown an improvement in the number of health workers produced in the past years, it still lags behind international standards. The sex distribution of doctors shows that the majority are male, whereas in the case of nurses, a female dominance is seen in the provinces of Punjab and Sindh (PM&DC). With approximately 6,800 medical students graduating annually, the number of younger physicians is expected to rise in the coming years. Nevertheless, this age group has a greater chance of migrating to a developed country or from rural to urban areas. There is no central database that could provide statistical figures about the health workforce. Figures are available from professional regulatory bodies such as the Pakistan Medical and Dental Council, Pakistan Nursing Council etc. These figures cannot tell us who is where. More so, it is not possible to locate whether the personnel are in the country or outside – alive or dead.

Table 1. Human resource for health in Pakistan – standards and shortfall

Health Human Resource	Registered	International Standard	Required for a Population of 170 Million	Shortfall	Shortfall (%)
Doctors	160,289	2 per 1,000 population	340,000	179,711	52.85
Dentists	12,544	1 per 1,000 population	170,000	157,456	92.62
Nurses	82,119	4 per 1 doctor	1,360,000	1,304,835	95.94
Pharmacists	32,511	1 per 6 doctors	62,085	29,574	47.63
Lady health visitors	13,678	1 per 10,000 population	17,000	3,322	19.54
Registered midwives	29,000	1 per 5,000 population	34,000	5,000	14.70
Lady health workers	100,000	1 per 1,000 population	170,000	74,000	43.52

Sources: WHO Global Code of Practice on International Recruitment of Health Personnel Implementation Strategy Report 2011 – Pakistan; Pakistan Nursing Council, Islamabad; Economic Survey of Pakistan 2013-2014.

Table 1 depicts data profiles of health workers who are registered compared to the requirements as per international standards. Cadres who make up the majority of the health workforce are critically small in number, except LHVs. It is a proven fact that better health-related indicators are correlated with the number and density of such health workers in a country (El Jardali et al. 2007). The report (the source of data) falls short of mentioning how many of them are actually working. The figures show that Pakistan is doing fairly well as far as doctors are concerned, but in terms of other cadres, like dentists, the shortage is 92.62%, and nurses are short by 95.94%.

In a large survey assessment conducted in 2009, it was observed that the median number of doctors per 1,000 population working in the public sector is 0.27 and the median number of nurses is 0.24. This survey also depicted the inter-provincial variation in the availability of doctors and nurses in the health system (Hafeez et al. 2010), as shown in Table 2.

Responding to Urgent Health Needs

With regard to the MDGs, there are certain indicators in which progress has been made; in some, the situation is static, whereas others have shown a downward trend. This all has to be viewed amidst the economic and political challenges the country has faced in the past years. The natural and manmade disasters have also affected the HRH directly and indirectly, and hence the attainment of the MDGs (Ministry of Planning, Development and Reform 2013). However, Pakistan has taken the following steps to achieve the MDGs with respect to the health workforce:

1. The National Program for Family Planning and Primary Healthcare has trained more than 100,000 LHVs, and their coverage has increased to 83% to meet one of the MDG targets by 2015. There is a proposal to train male community health workers to access difficult areas for the healthcare provision.
2. The national maternal neonatal and child health program is in place, which aims to train 10,000 community midwives.
3. The Basic Development Needs Program, which involves the communities, has been adopted and needs to be implemented in other areas.
4. The National Disaster Management Authority, Islamabad, has conducted training programs under the Program for Enhancing Emergency Response. Three urban search and rescue teams are being developed in Lahore, Karachi and Islamabad, and these are coordinating with the education department to include disaster management in the curricula of various educational institutions.

Preparing the Health Workforce

There are 88 medical and dental colleges, 26 public health schools for the training of LHVs, 109 nursing schools, seven nursing colleges, 28 pharmacy institutes and 141 midwifery schools in the country. There are

Table 2. HR variations across the provinces

Provinces	Doctors/1,000 Population	Nurses/1,000 Population
Sindh	0.58	0.21
Punjab	0.13	0.19
Khyber Pakhtunkhwa	0.33	0.39
Balochistan	0.17	0.23
Islamabad – capital	0.28	0.23

22 universities in the country that offer medical and dental degrees (Pakistan Medical and Dental Council 2014b). The distribution of medical colleges in the country is highly skewed, with 12 of the 30 public medical colleges in the province of Punjab and only one in Baluchistan, whereas AJ&K has recently started one private and three public medical colleges. The College of Physicians and Surgeons, Pakistan, provides Fellow of College of Physicians and Surgeons training in 64 specialties and sub-specialties, Member of College of Physicians and Surgeons training in 18 specialties and Diploma of College of Physicians and Surgeons training in two specialties. The PNC governs the rules and regulations of promoting the nursing profession and has a nursing examination board in each province (Pakistan Nursing Council 2014).

A recent study showed that the performance of LHVs in regards to knowledge of MNCH was good, with 30% of them achieving a more than 70% grade. The medical officers, in comparison, performed poorly with regards to their knowledge of maternal neonatal and child, with only 6% scoring more than 70%. All three cadres of healthcare providers performed poorly in the resuscitation skill, and only 50% were able to demonstrate steps of immediate newborn care. Only 50% of LHVs could secure a good position on the competency scale in this critical component of skills (Arif et al. 2010). Medical education and training is rapidly evolving in Pakistan, bringing radical innovations. There is a shift from the traditional didactic approach to a more student-centred interactive approach. The curriculum is also being adapted to competency-based and integrated curriculum. Faculty development activities are being undertaken in medical institutes of the country through their medical education departments. However, these initiatives are faced with challenges of a dearth of trained facilitators, lack of incentives and lack of faculty interest.

Making the Most of Existing Health Workers

The three important issues that need to be addressed to ensure good performance of the health workforce are their appropriate recruitment, preventing their attrition and providing the right incentives to them. The performance of the health workforce is assessed in terms of their availability, productivity, responsiveness and competence. Therefore, the motivation can be achieved through financial benefits, continuous professional development, regular feedback and other incentives (Willis-Shattuck 2008).

One study conducted to assess the level of job satisfaction of the public health professionals reported that regular government employees were less satisfied with regards to salary, motivation/recognition and professional facilitation as compared to the contractual employees. Health workers from Punjab (both public and private) reflect the highest job satisfaction scores as compared to other provinces and the capital Islamabad. The performance of health workers in Pakistan seems to be directly affected by the poor working conditions, the unavailability of resources, poor supervision, fewer educational opportunities and less personal safety especially for the female workforce. In addition, corruption in worker recruitment, deployment and promotion further deteriorates the situation (Kumar et al. 2013). Such de-motivating factors lead to a weak health system and service delivery, hence impinging on the health of the people.

Managing Exits from the Workforce

The major reasons health workers leave the health sector include overseas migration, change of occupation or work status and, of course, retirement. This creates a shortfall of workers that, if not appropriately and timely replaced, can lead to dire consequences for the health sector (WHO 2006). In Pakistan, the migration of the health workers to developed countries is one big reason for the

health workforce attrition. Migration of the health workforce is primarily in the search for a better life and livelihood. According to another government source, about 1,000–1,500 physicians leave the country annually, of which 10%–15% return, so the annual net migration is 900–1,275 physicians (Bureau of Emigration & Oversees Employment). Estimates show that around 1,700 Pakistani physicians are lost from the practicing physician pool each year; 1,150 per annum immigrate to more developed countries. Around 12,813 are working in Western countries and another 25,000 in Arabic-speaking countries (Pakistan Medical and Dental Council 2014a). To retain these workers, employment opportunities need to be provided to them through filling the already sanctioned posts and creating new ones based on population health needs.

To decrease the negative effect of this migration, at least, the source country can train the health workforce according to the demands of their place of employment and encourage their return back home. Competitive salaries, fringe benefits, housing facility and career development opportunities help in the repatriation of the health workforce.

Formulating National Health Workforce Strategies

There are no prêt-à-porter health workforce strategies, and therefore every country needs to develop its own strategy through consensus and participation of all stakeholders, notwithstanding principles of universal healthcare and social protection to all the individuals of a country. A good HR strategy will help build trust within the communities and sustain it through good governance, regulation, leadership and strategic intelligence (WHO 2006). National health policies in Pakistan have reflected human resource planning in the past but rarely have they translated into practice. Recently, there have been incentive packages for doctors to encourage them to work in rural areas. Such packages usually benefit doctors and ignore other cadres. But enhancing remunerations only and ignoring all other issues related to human resource development, management and planning reflects poorly on the leadership of health departments. For the strengthening of health systems, there ought to be a serious thought process involved for HR planning, management, deployment and development, particularly for improving the health status of the vulnerable segments of the population (Mazhar and Shaikh 2012). Two provinces of Pakistan, namely, Punjab and Sindh, are in the process of making their own HRH strategies, which expectedly will lay out a concrete human resource development plan according to the needs of the public sector and the private market. A wider consultation in this regard, however, will yield more realistic and feasible plans.

Working Together Within and Across Countries

The lack of information available on the health workforce is a hindrance to addressing challenges related to them. Standards ought to be set regarding the workforce assessment. A universally agreed-upon definition of the health workforce is required and indicators need to be developed for their performance assessment. The indicators may pertain to sufficient numbers, equitable distribution, good competencies, appropriate socio-cultural and linguistic background, responsiveness to clients and productivity.

Pakistan has adopted the WHO Global Code of Practice on recruitment of HR, which will help the country in addressing its problems related to the international migration of its health workforce (WHO 2011).

Way Forward and Conclusion

HRH has been a neglected component of health planning in Pakistan. There is a need to develop a reliable information system to collect data on the health workforce for

strategic planning and decision-making. Such an approach may resolve the issues of inequitable distribution and deployment across the provinces. Moreover, this system can establish a database of training and refresher courses for various cadres, so as to provide an equal opportunity to everyone and to signal towards the need for further training vis-à-vis disease burden. Besides, a review of monetary benefits, improved working conditions and career development opportunities would have the scope of retaining health personnel in their jobs. Finally, a result-based management culture could bring about a change in the status quo, and would ensure greater accountability. Only a motivated health workforce can guarantee the improvement of the health of the population.

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