

Part 6. Strengthening the health workforce in crisis countries

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Summary

- Health workforce levels and quality are associated with improvements in health outcomes. Fifty-seven countries, 36 of which are in sub-Saharan Africa, have a health workforce crisis. The human resources for health crisis is a threat to the delivery of health services and the attainment of the Millennium Development Goals.
- Many countries lack adequate capacity to train health workers and have poor working conditions, unattractive wages, limited professional development opportunities and inadequate infrastructure for effective performance.
- Healthcare facilities cannot operate without medicines. The availability of both medicines and a pharmacy workforce in adequate numbers with appropriate competencies is crucial to ensuring a well functioning pharmaceutical system.
- Half of all medicines globally are inappropriately prescribed, dispensed or sold to patients. Pharmacy workforce shortages translate into gaps in the management of the pharmaceutical system and the supply chain and pose serious risks to patients.
- Domestic training of the pharmacy workforce, together with appropriate management of recruitment, retention and attrition is required to redress shortages, imbalances and improve performance.
- Countries should develop comprehensive human resource for health plans and strategies based on sound evidence to sustainably address the global health workforce crisis.

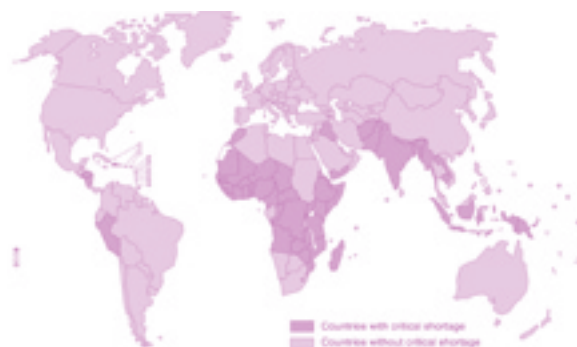
6.1 The human resources for health crisis

Human resources for health are essential for health systems. They are the cornerstone and drivers of health systems.

[1] Moreover, there is ample evidence that health worker numbers and quality are positively associated with immunization coverage, outreach of primary care, as well as infant, child and maternal survival.[2-4] However, health workers are inequitably distributed throughout the world, with many lower income countries facing a severe health workforce crisis. This crisis in human resources for health is an important impediment to delivering quality health services and reaching all health goals, including the Millennium Development Goals. [5]

The World Health Report 2006 estimated the global health worker shortage to be 4.2 million, including more than 1 million in Sub-Saharan Africa.[6] Overall, 57 countries have been identified with critical shortage, including more than 36 in Sub-Saharan Africa, as depicted in Figure 1.

Figure 1: Countries with critical shortage of health workers



Source: WHO, 2006 [6]

Sub-Saharan Africa is facing the greatest challenges. It has 11 percent of the world's population, yet 24 percent of the global burden of disease and only 3 percent of the world's health workers.[6]

Several factors have contributed to the marked health workforce shortages.[6,7] They include some broad elements like the lack of attention on this issue, economic conditions, and changing disease patterns. More specific factors are also playing a central role, such as the lack of health workers being trained and educated. In addition, poor working conditions, unattractive wages, lack of infrastructure and medical equipment, mediocre management, and absence of

professional development are all factors contributing to the health workforce crisis. These factors can also exacerbate the negative impact of internal or international migration.

6.2 Pharmacy workforce challenges: impact on medicines access and use

The pharmaceutical system forms the back bone of the entire health system as patients do not visit health facilities where there are no medicines. The availability of pharmaceuticals as well as pharmaceutical personnel both in numbers and skills are vital in maintaining a well functional pharmaceutical system. These personnel are responsible for improving access to essential medicines that are safe, effective and used rationally.[8]

Pharmaceutical human resources are utilised at various levels in developing countries:

- Government Ministries of Health for planning and policy;
- Regional/provincial levels for policy implementation;
- Central medical stores for medicines procurement and distribution;
- Health facilities, both public and private for medicines acquisition and dispensing;
- Private pharmacy establishments (industry, wholesale and retail);
- Pharmacy councils and professional associations to develop pharmacy practice;
- Training and research institutions to train a pharmacy workforce and conduct research.

Evidence from countries indicates that there is a shortage of pharmaceutical human resources at each of the above levels where pharmacists are needed. This situation could have undesirable impacts on the roles to be played by pharmacists at each level, thus on the medicines supply system and subsequently on access to medicines and their use.

Medicines worth the equivalent of almost US\$1 billion were expired at the national medical stores in Uganda and an additional half a million dollars was sought for destruction in May 2008.[9] This could be linked to shortages in pharmaceutical human resource at one or more of the levels mentioned above to undertake adequate quantification of needs and appropriately manage pharmaceuticals.

In Cameroon, the rural areas with a poor economic situation are in short supply of retail pharmacies, leaving some populations without pharmaceutical services, giving room to the proliferation of street vendors of pharmaceuticals from doubtful sources in these areas. The extent of damage caused by this situation has not been evaluated.

WHO supports countries technically and financially to develop, implement and monitor their National Medicines Policies. Working experiences with countries reveal that progress is slow in the implementation of these medicines policies, one of the contributing factors being inadequate supply of pharmaceutical workforce in the Ministries of Health and across the whole pharmaceutical system.

To attain the maximum benefits from the use for medicines, patients must receive the right medicines for their clinical needs in the right doses and for an adequate period of time, and at the lowest cost – this requires the intervention of pharmaceutical personnel along the various levels of the medicines supply system.[10] Unfortunately, it is estimated that half of all pharmaceuticals globally are inappropriately prescribed, dispensed or sold.[11]

In a study carried out in Tanzania in 2002, an average of 76% of drugs dispensed at health facility levels were not adequately labelled.[12] Most of these health facilities do not have pharmacists and this may explain the danger posed by the 24% of drugs inadequately labelled and dispensed. The proportion that was inadequately labelled could be a major concern for patients achieving maximum benefits from their medications.

WHO is currently developing and piloting tools to analyse the pharmacy workforce situation in Nigeria, Ghana, Tanzania, Rwanda and Sudan. It is anticipated that this study will provide insights into the extent of the pharmacy workforce shortages and identify key issues which need to be addressed to strengthen the pharmacy workforce.

6.3 Strategies

Various strategic areas of focus are to be considered when addressing the global health workforce crisis.

Domestic training is an important area to focus on as one of the central objectives of workforce development is to produce sufficient numbers of health workers with the appropriate competencies. Increasing domestic training is one of the most direct means to expand the health workforce. For that purpose, active planning and management of the health workforce production pipeline is required, and in order to be successful, such a strategy has to account for the long education cycles to ensure that health worker training is matched with the population health needs, and that health workers go where they are needed. The case for scaling up the health workforce has been made on numerous occasions.[13]

Another important area of focus consists of making a better use and mobilization of existing workforce skills through a portfolio of policies, such as improving retention of health workers particularly in remote and rural areas, attracting health workers to shortage specialties, developing more efficient skill mix, recruiting health workers who left the profession and improving productivity. [14]

Moreover, limiting health worker attrition is also a key area as unplanned or excessive exits may cause significant losses of health workers.[15] In some regions, worker illness, deaths and migration together constitute an overwhelming exit flow. [6] Strategies to counteract workforce attrition include managing migration, promoting health as a career of choice, and stemming premature retirement, and improving health care access for health workers themselves.

6.4 Remote and rural workforce development

Approximately half of the global population live in rural areas, but these areas are served by only 38% of the total nursing workforce and by less than a quarter of the total physicians' workforce. At the country level, imbalances in the distribution of health workers are even more prominent.[16,17] Availability of well trained and motivated health workers closer to where people live will improve access to needed health services to achieve the health MDGs, and will also contribute to addressing health inequalities and social determinants of health within the framework of renewed primary health care.[6,18,19]

From the current evidence, several approaches have shown some good results in improving the recruitment and retention of health workers in remote and rural areas. These strategies can be grouped into three major categories: education and regulatory interventions, financial interventions, and management, environment and social support interventions.[20]

Studies from developed countries have consistently shown that health professionals from rural backgrounds are more likely to practice in rural areas; clinical rotations in a rural setting may influence medical students' subsequent decision to work in an underserved area; and adapting curricula to include rural health issues improves competencies to work in rural areas and creates more interest to work in these areas.[21]

Some countries have instituted compulsory service requirements in rural areas as a strategy to improve retention, but the effectiveness of this approach has shown to be inconclusive, because the strategy may address imbalances in the short-term, but it may also encounter difficulties in administration and enforcement. [22-25]

Direct financial incentives to practice in rural areas are one of the most frequent strategies that countries have used to address this problem. Experiences from developed countries have shown that rural allowances and other types of financial incentives may encourage rural practice.[26,27] But in developing countries, the issue of long-term sustainability for this type of incentives is of critical importance, because these schemes are usually dependent on external financial support. [28,29]

Very few countries have put in place strategies to comprehensively address the issue of good management, supportive supervision, professional networking, and improving living conditions and local infrastructure. Thailand has a long history of a comprehensive approach to rural retention of doctors, which combines regulatory interventions (compulsory contract of three years of public work after graduation), financial incentives within the context of a rural development programme, educational approaches (rural recruitment and training in rural health facilities, including the development of community medicine), and improving of personnel management.[23] In Mali a programme run by a non-governmental organization placed young doctors in remote and rural areas

through a comprehensive approach that included community medicine education and training, financial incentives, an installation kit, and the establishment of a professional network for rural doctors.[30]

There are however a number of challenges in implementing these strategies. Often times the various schemes are proposed without a baseline study to understand the factors that influence health workers' decisions to come to, stay in or leave remote and rural areas. Sustainability is also a critical element that needs to be considered, both from financial and mid-long perspectives. Many interventions start as pilot experiments in a region or district, often driven by specific donor initiatives, with little capacity for scaling up or for sustaining the interventions for a longer term. Also, the various interventions do not work in isolation, hence the need for a combined or "bundled" approach, that addresses the multiple aspects of education, recruitment, and management. And finally, evaluations of the impact and effectiveness of different strategies are still lacking.

WHO has recently launched a programme of work to increase access to health workers in remote and rural areas through improved retention (http://www.who.int/hrh/migration/expert_meeting/en/index.html). The programme has three strategic pillars: building the evidence base, supporting countries to implement and evaluate effective strategies, and producing evidence-based recommendations to improve health workers retention in remote and rural areas. The consultative process for developing the recommendations is inclusive of academics, policy makers and professional associations' representatives, and it is expected that the recommendations will be launched in 2010.

6.5 Conclusion

Overall, strong national strategies based on both solid technical content and a credible political process, as well as global solidarity, are essential to successfully address the global health workforce crisis.

References

- 1 World Health Organization. *World Health Report 2000: Health systems – improving performance*. 2000. Geneva, WHO.
- 2 Robinson J, Wharrad H. *Invisible nursing: Exploring health outcomes at a global level. Relationships between infant and under-5 mortality rates and the distribution of health professionals, GNP per capita and female literacy*. *Journal of Advanced Nursing* 2000, 32(1): 28-40.
- 3 Anand S, Bärnighausen T. *Human resources and health outcomes: Cross-country econometric study*. *Lancet* 2004, 364(9445): 1558-60.
- 4 Zurn P, Vujcic M, Diallo K, et al. *Planning for human resources for health: human resources for health and the production of health outcomes/outputs*. *Cahiers de sociologie et de démographie médicales* 2005, 45(1): 107-33.
- 5 Dreesch N, Dolea C, Dal Poz M, et al. *An approach to estimating human resource requirements to achieve the Millennium Development Goals*. *Health Policy Plan* 2005, 20(5): 267-76.
- 6 World Health Organization. *The world health report 2006: working together for health*. 2006.
- 7 Joint Learning Initiative. *Human resources for health: Overcoming the crisis*. 2004. Cambridge, MA, Harvard University Press.
- 8 Anderson S. *The state of the world's pharmacy: a portrait of the pharmacy profession*. *Journal of Interprofessional Care* 2002, 16(4): 391-404.
- 9 Kirunda K, Natabaalo G. *NMS seeks Sh800million to destroy expired ARVs*. *Daily Monitor, Uganda*. 23-5-2008. Kampala.
- 10 World Health Organization. *Promoting rational use of medicines: Core components*. *Policy Perspectives on Medicines No.5*. 2002. Geneva.
- 11 WHO. *The World Medicines Situation Report*. 2004. Geneva.
- 12 Tanzania Ministry of Health. *Baseline survey of the pharmaceutical sector in Tanzania*. 2002.
- 13 Taskforce for scaling up education and training for health workers. *Scaling up: Saving lives*. 2008. Geneva, World Health Organization.
- 14 OECD. *The looming crisis in the health workforce: how can OECD countries respond?* 2008. Paris, OECD.
- 15 Dovlo D. *Wastage in the health workforce: some perspectives from African countries*. *Human Resources for Health* 2005, 3(1):6.
- 16 Zurn P, Dal Poz M, Stilwell B, Adams O. *Imbalance in the health workforce*. *Human Resources for Health* 2004, 2(13).
- 17 Dussault G, Franceschini M. *Not enough there, too many here: Understanding geographical imbalances in the distribution of the health workforce*. *Human Resources for Health* 2006, 4(12): 1-6.

- 18 Travis P, Bennet S, Haines A, et al. Overcoming health-systems constraints to achieve the Millennium Development Goals. *Lancet* 2004, 364(900): 906.
- 19 World Health Organization. *World health report 2008: Primary health care now more than ever*. 2008. Geneva, WHO.
- 20 Dolea C, Stormont L, Shaw D, Zurn P, Braichet J. *Increasing access to health workers in remote and rural areas through improved retention. Background paper for the first expert consultations on developing global recommendations on increasing access to health workers in remote and rural areas through improved retention*. 2009. Geneva, WHO.
- 21 Grobler L, Marais B, Mabunda S, Marindi P, Reuter H, Volmink J. *Interventions for increasing the proportion of health professionals practicing in underserved communities. Issue 1. Art. No: CD005314. DOI: 10.1002/14651858.CD005314.pub2*. 2009. *Cochrane Database of Systematic Reviews*.
- 22 Cavender A, Alban M. *Compulsory medical service in Ecuador: The physician's perspective*. *Social Science and Medicine* 1998, 47(12): 1937-46.
- 23 Wilbulpolprasert S, Pengpaibon P. *Integrated strategies to tackle the inequitable distribution of doctors in Thailand: four decades of experience*. *Human Resources for Health* 2003, 1(12): 1-17.
- 24 Matsumoto M, Inoue K, Kajii E. *Long-term effect of the home preference recruiting scheme of Jichi Medical University Japan*. *Rural and Remote Health* 2008, 8(920): 1-15.
- 25 Lehmann U, Dielemann M, Martineau T. *Staffing remote rural areas in middle- and low-income countries: A literature review of attraction and retention*. *BMC Health Services Research* 2008, 8(19): 1-10.
- 26 Pong R. *Strategies to overcome physician shortages in northern Ontario: A study of policy implementation over 35 years*. *Human Resources for Health* 2008, 6(24).
- 27 Gibbon P, Hales J. *Review of the rural retention program – final report*. 2006. Australian Government Department of Health and Ageing.
- 28 Koot J, Martineau T. *Mid-term review: Zambian health workers retention scheme (ZHWRS) 2003-2004*. 2005.
- 29 Henderson LN, Tulloch J. *Incentives for retaining and motivating health workers in Pacific and Asian countries*. *Human Resources for Health* 2008, 6(18).
- 30 Coulibaly S, Desplat D, Kone Y, Minaga K, Dugas S, Famarier G et al. *Une médecine rurale de proximité: l'expérience des médecins de campagne au Mali*. *Education for Health* 2007, 20(2): 1-9.