# Rural Retention of Human Resources for Heath

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**ABSTRACT**

**BACKGROUND**: Health workers are the heart of the health system in any country and are made up of health service providers and the health support workers. The global health workforce is over 59 million and 67% of them are the service providers.

**AIM**: The goal of this paper is to review the most relevant papers on the retention of health workers in the underserved areas and also on how to attract and retain health workers in the rural areas.

**METHODOLOGY:** A systematic search of literature was conducted. Grey literature (conference papers, technical reports), journal articles, abstracts, relevant books and internet articles were reviewed.

**RESULTS:** Shortage of health workers are among the constraints in achieving the three health related Millenium Development Goals and this is more pronounced in the resource poor countries. These same resource poor countries are faced with international migration of health workers to the developed countries.

**CONCLUSION**: The numbers of health workers across the globe are few relative to need and this is more pronounced in the rural areas of the world who unfortunately bear the greater burden of disease and there is need for policies and actions that will help to attract and retain rural health workers.

**KEY WORDS**: Rural, Retention, Human Resource for Health.

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## INTRODUCTION

*Human Resources for Health* (HRH) relates to the development, management, coordination, financing and remuneration of the human capital in a national health workforce with the aim of realizing increased access, coverage and quality of health services.[1] It primarily refers to the health workforce or health workers. The World Health Organization (WHO) defines health workers to be people in the formal and informal sector who are engaged in the promotion, protection or improvement in population health.[2] This is an extension of WHO's definition of the health system as comprising of activities with the primary goal of improving health. The WHO recognizes HRH as one of the six main building blocks of the health system which also includes finance, services, technologies, information and governance.[1] Thus health workers by definition include all paid workers employed in organizations or institutions whose primary intent is to improve health and also those whose personal actions are primarily intended to improve health but who work for other types of organizations.[2] The WHO recognizes two types of health workers, the first are people who deliver services whether personal or non personal and are called "health service providers" and the second group are people not engaged in the direct provision of services and are called "health management and support workers."[2]

## DISTRIBUTION OF HEALTH WORKERS

Human resource is reputed to be the "heart of the health system in any country" and can be said to be the most important aspect of the healthcare system and also very relevant in the formulation of health policies.[3] The global health workforce is over 59 million with the health service providers contributing 67% of the workers.[2] Health workers are however distributed unevenly across the globe.[4] Countries with the greatest burden of disease are at the receiving end by having a small health workforce while the ones with little need have the highest numbers of health workers. This observation is in consonance with the inverse care law which states that the availability of medical care is often not determined by medical need but by other considerations including socio economic status.[5] For example, the region of the Americans (and this includes Canada and the United States) have only 10% of the global burden of disease but have 37% of world's health workers and same time spend more than 50% of the world's financial resources for health. This is at variance with the African region which hosts more than 24% of the global burden of disease but has 3% of health workers and has less than 1% of the world's financial resources even when grants and loans from foreign countries are included.[2]

Apart from the regional imbalances, there is also an urban rural disparity in the distribution of the health workers. Globally there is an attraction of 75% of the doctors, 60% of the nurses and 58% of the other health workers to the urban areas where 55% of the people live[2] while the rural health system attract few health workers with no exeption even in the developed world. In the United

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States only 7% of the registered physicians in the country practice in the rural areas where 20% of the population live[6] and in Canada 9.3% of the physicians work in remote and rural areas which houses 24% of the inhabitants.[7]

In Bangladesh, only 17% of the doctors and 25% of the nurses practice in the rural areas[8] while 30% of the nurses are in four metropolitan districts which accommodates only 15% of the population[9] and in South Africa 46% of the population reside in the rural areas and they have access to 12% of the doctors and 19% of the nurses.[10] In some Francophone sub-Saharan African countries like Coted'Ivore and Mali, overproduction of health workers relative to the capacity for absorption led to a situation of medical unemployment in the urban areas and shortages in the rural areas.[11]

In Nigeria, there is a scarcity of data on the availability, distribution and trends in human resource for health and this has been a limitation to effective human resource planning. However from the public sector in Nigeria, it is estimated that there are 13 doctors , 92 nurses/midwives and 64 community health workers per 100,000 population.[12] A resident in an urban area of Nigeria has a three fold greater access to doctors and there are twice as many nurses/midwives when compared to the rural area.[13]

In Nigeria, women in urban areas are most likely to be assisted by a skilled birth attendant in 40% of cases while women in rural areas have a 25% chance of being assisted by a traditional birth attendant.[14] The result is that the maternal mortality ratio is high, approximately 545 deaths per 100,000 live births with an estimated range of 475-615 deaths per 100,000 live births.[14] There are marked variations in the maternal mortality ratios between the geo-political zones and among the states. Maternal mortality ratio is however more in rural areas than the urban in all the states[15] and 64% of Nigerians reside in the rural areas.[16] Also there are fewer health facilities and fewer health workers including skilled birth attendants in the rural when compared to the urban areas.[2, 14]

**The Global Shortfall**

To estimate the global assessment for shortfall, the Joint Learning Initiative, a network of global leaders which was launched by the Rockfeller foundation suggested that on the average, countries with fewer than 2.5 healthcare providers (counting only doctors, nurses and midwives) per 1000 population will fail to achieve an 80% coverage rate for deliveries by skilled birth attendants or for measles immunization.[17] 57 countries fall below this threshold by failing to reach the 80% coverage rate and are described as having critical workforce shortages and 36 of these countries are in sub-Saharan Africa.[2] In all, there is a global shortage of 4.3 million health workers with the estimate that about one billion people in the world have no access to assential health care service. The largest relative need is in sub-Saharan Africa where an increase of 140 million is required to meet the threshold.[2]

**Emigration of Health Workers**

Emigration generally results from a combination of push factors (in source countries) and pull factors (in recipient countries) and same is applicable to the health workers. Pull factors tend to attract an individual to a new destination while the push factors do act to repel an individual from a location and both factors often mirror each other.[18] The major factors driving out health workers include weak health systems, insecurity including violence in the workplace, poor living conditions, low remunerations, lack of opportunities for professional development and lack of clear career development paths.[19] There is also the problem of risk of HIV infection due to inappropriate protection methods, nepotism in recruitment and promotion, political unrest and civil wars, widespread poverty, lack of good governace and case overload.[20]

Professionals in the developing countries are pulled to the developed world because of the availability of information, easy access to communication and technology, aggressive targeted recruitment to fill vacancies in richer countries, availability of employment opportunities, better conditions of service and working conditions.[21] Good living conditions and opportunities for intellectual growth have also been identified as factors that encourage the health workers to seek for greener pastures.[20] These factors though to a lesser extent is responsible for the movement of the health workers from the rural to the urban centers. Aside the push and pull factors, there are also a number of individual factors which exert an effect on the decision to leave or stay in a given area and such factors include origin, age, gender and marital status. It is also worth noting that the increase in the globalization of the service sector and the growing demand for health workers in the high income countries due to an ageing population have also helped the cause of migration of health workers from the low income countries.

**The Challenges**

Shortage of health workers are among the constraints in achieving the three health related Millenium Development Goals. (MDGs)[17, 22-24] It has become obvious that inorder to meet the MDGs that there should be strengthening of the health systems of the developing couuntries. For example, African countries need at least one million additional health workers inorder to offer basic services consistent with the MDGs and same region suffers the loss of health workers annually leading to a

more fragile health care system.[25]

36 of the 57 countries that have critical shortage in the health manpower are in sub-saharan Africa which are also classified as resource poor countries.[2] These same resource poor countries are faced with international migration of health workers to the developed countries.[26] An estimated 20, 000 health professionals emigrate from Africa ever year[27] with the result that about USD500 million spent annually for their training goes without the desired results.[25] In Kenya USD65,997 dollars is spent to train a medical doctor from primary school to graduation and for every doctor that eventually leaves, the country loses USD517,931 as return in investment.[20]

The WHO has estimated that about 700,000 midwives are needed worldwide to ensure universal coverage with maternity care and that currently there is a shortfall of 50%.[2] These shortfalls are felt more in the rural areas as it has been recorded that for every region of the world, the presence of skilled birth attendant is lower in the rural than the urban areas.[2]

Nigeria is also noted as a major health staff exporting nation accounting for 22% of nurses who emigrated out of Africa between April 2000 and March 2001.[28,29] and even with these figures, the true extent of the emigration in the case of Nigeria remains unknown. Migration of the health workers is not only to the resource rich countries, there is also movement from rural to the urban and from the public to the private sector. The rural areas are mostly affected with the result that health facilities are understaffed and most of the workers are not with the requisite qualification.[30] However some countries intentionally export health workers for financial purposes[25] and a good example is Philipines whose nurses are actively exported and the country earns over USD800 million annually[31, 32] even though there is no guarantee that this money is invested back into healthcare.

**The Global Response**

The World Health Assembly has 2 resolutions in favour of retention, the first was the resolution on migration in 2004 and another on rapid scaling up of health workers in 2006 and both urged member states to put in place mechanisms to address the retention of health workers.[33] Perhaps the greatest global response to the issue of retention of health workers was the Kampala declaration which came out of the First Global forum of Human Resources for Health in March 2008. It requested governments to provide adequate incentives and also create an enabling and safe working environment to ensure retention of health workers and also a good distribution of the workforce.[34]

The Kampala declaration created an international attention for the retention of health workers, for example the communique that emanated from the summit of the leaders of the 8 Industralized nations otherwise called the G8, in July 2008 pledged the support of the body for the effective retention of health workers.[33] Also the Commission on Social Determinants of Health in its report in November 2008 sought the assistance of governments and International partners in ensuring a fair distribution of health workers in the rural areas and in June 2009, a call was made that all peoples of the world including rural and remote populations should have access to safe, high quality and essential health care services courtesy of the Taskforce on Innovative International Financing for Health.[33]

**Principles that should guide policies on Retention.**

1). Health equity. All citizens should have equal opportunity to be healthy, for example in deciding on the number of health workers that will be needed in a given community or population, there is strong evidence to support the fact that the health needs of rural populations are greater and so should attract a higher number of health workers.[2,35]

2). Rural retention policies should be part of a national health plan. This is due to the relevance of the national health plan as it is at the heart of health development. Moreover
each country's national health plan is unique for its purpose[33] and so aligning it with the national health plan makes it more realizable.

3). Understanding the workforce. This will require a good analysis of the factors that influence the decisions of health workers to relocate, stay or leave the rural and remote areas. It helps in understanding the extent of the problem and the possible solutions.

4). Understanding the wider context. The improvement in the retention of health workers in the rural and remote areas will also bring about policy challenges that cannot be tackled by the health sector alone, for example government and civil service reforms can have positive and negative effects on retention strategies and these factors should be considered when initiating any retention strategy.

5). Human resource management systems. The basic requirement of any retention strategy to be effective is management capacity and this should involve key areas like work force planning, recruitment, work conditions and performance management. Also competent human resource managers will be required to perform these functions.

6). Engage with all relevant stakeholders from beginning of the process. In formulating any type of rural retention policy just like any type of health system or health workforce policy, it is always right to engage all the stakeholders. This will help select the most appropriate

strategies.

7). Incorporate evaluation and learning. Valuable lessons are learnt through monitoring and evaluation of any form of retention policy and such lesons contribute to building the evidence base and will remain useful at country level for countries with similar backgrounds.

**Evidence based recommendations to improve attraction, recruitment and retention of health workers in remote and rural areas.**

The interventions are categorized into four: education, regulation, financial incentives and personal and professional support and based on global policy recommendations as endorsed by the WHO.[33]

**Category of intervention Examples**

**A. Education**

A1 Students from rural backgrounds

A2 Health professional schools outside of major cities

A3 Clinical rotations in rural areas during studies

A4 Curricula that reflect rural health issues

A5 Continuous professional development for rural health workers

**B. Regulatory**

B1 Enhanced scope of practice

B2 Different types of health workers

B3 Compulsory service

B4 Subsidized education for return of service

**C. Financial incentives** C1 Appropriate financial incentives

**D. Professional and personal support**

D1 Better living conditions

D2 Safe and supportive working environment

D3 Outreach support

D4 Career development programmes

D5 Professional networks

D6 Public recognition measures

**Education.**

**A1; Students from rural background.** All health workers require training to achieve competence but the focus of education here is for people who will be willing to serve in the remote and rural areas. It is universally acclaimed that a rural background increases the chance of a health professional graduate practising in a rural area[36,37] A Cochrane systematic review concludes that it is the single most important factor associated with rural practice.[38] In South Africa, students from rural backgrounds are three times more likely to practice in rural area than those from the urban areas.[37]

**A2 Health professional schools outside of major cities.** A study in China revealed that more rural physicians are produced from rural medical shools than the schools in the metropolitan cities[39] and same was observed in the Democratic Republic of Congo.[40] It becomes a problem in countries like Nigeria where most of the medical schools are located in the urban areas.

**A3 Clinical rotations in rural areas during studies.** In situations where the tertiary care/training institutions are sited mainly in the urban area, it has been shown that exposure to rural community practise during the undergraduate study period influences the choice of practice in rural areas even for students with urban backgrounds.[41]

**A4 Curricula that reflect rural health issues.** It has also been found that education with emphasis on primary health care or creating a generalist perspective for the students is essential in producing practitioners that will be willing and able to work in the rural areas.[42]

**A5 Continuous professional development for rural health workers.** Continuing medical education and professional development is necessary to maintain competence and improve the performance of all health workers.[2] However when these activities are delivered to the rural health workers in the rural setting and with emphasis on their unique needs, it will help improve their competence, give them a sense of belonging and increase their desire to remain and pracise in the rural areas.[43]

**REGULATORY**

**B1 Enhanced scope of practice.** An enhanced scope of service for the rural health workers has been found to increase the job satisfaction of the workers. This is most times necessitated by the lack of qualified health workers in the rural areas and could in the long run influence retention. An example is in Australia where nurses who were endorsed to prescribe had a higher job satisfaction that those who do not.[44]

**B2 Different types of health workers.** In many low income countries, different types of health workers like the clinical officers and health assistants are specifically trained and used to provide health care in remote and rural areas.[45] Such category of workers have been trained for work in the rural areas and this helps to achieve retention.

**B3 Compulsory service.** Compulsory service has been used or is currently employed in about seventy countries.[46] The duration of service varies among the countries and also among the cadre of health workers concerned. In the Midwives Service Scheme, the one year mandatory service in the rural area is a condition for obtaining a midwifery practicing licence in Nigeria.[47]

**B4 Subsidized education for return of service.** Under this scheme, students in the health professions are sometimes offered scholarships, bursaries, grants or other forms of subsidies to cover the cost of their education and training and in return they are required to work in a remote or rural area for a number of years after qualification.

**Financial incentives.**

**C1 Appropriate financial incentives.** Financial

incentives in this regard include monetary bonuses, in-kind bonuses and many other benefits that reduce the opportunity costs that is associated with working in the rural areas.[33] Financial incentives have the advantage of being quickly implemented. In Australia, varied financial incentives to long serving physicians in remote and rural areas helped to achieve a 65% retention after five years[48] and two years after the implementation of the Zambian Health Workers Retention scheme about 50 doctors were attracted and retained in rural areas even in areas where there were no doctors previously.[30]

**Professional and personal support. This is regarded as part of a larger retention package and is also called non financial incentives.**

**D1 Better living conditions.** In South Africa, accommodation was found to be one of the three most important factors that influence doctors in their decision to remain in the rural area or not.[49]

**D2 Safe and supportive working environment.** A Cochrane systematic review found professional development, on going training and style of health service management as useful factors that influence the retention of health professionals in underserved areas.[38] Supportive supervision was also seen as a major factor in job satisfaction , performance and in the decision to remain and practise in the rural areas.[2,50]

**D3 Outreach support.** This can be in the form of regular visits by individual or group specialists to the health workers in the rural areas or by the distant based technology of telehealth. Its direct effect on retention is not known but results from observational studies suggest of improved competencies and job satisfaction of rural health workers.[51,52]

**D4 Career development programmes.** In the public sector and civil service, hierrarchy is the rule so having a clear cut career ladder will help to define advancements in the service. Evidence reveal that clear career prospects is of relevance in the choice of health workers to practise in the rural areas.[53]

**D5 Professional networks.** Professional isolation as experienced in the rural areas can affect performance negatively hence the need for professional networking and academic activities like specialized journals on rural medicine for the health workers in the rural areas. This has been proven to be of benefit to rural health workers.[54] Also in rural areas of Mali, newly graduated doctors who had the support of the professional association “Association des Medecins de Campagne” were able to stay in rural areas for an average of four years in constract to doctors who were not supported by the association.[11]

**D6 Public recognition measures.** Public recognition for rural health workers like titles, medals and awards can be of effect in raising the status and morale of the health workers in the rural areas and will be of assistance in their retention in these areas.

**Country Examples of Retention of Health Workers**

**Malawi.**

A very good example of a retention programme is the Malawian Emergency Human Resource programme which was commened in April 2004. It had a six year plan, and was supported by the Global fund to fight AIDS, TB and Malaria, DF, Malawian Government and other donor agencies and was estimated to cost about USD 278 million. Its top priority was to retain current staff and prevent brain drain. The programme also focused on the need to address the non financial factors affecting retention including policies for postings and promotion, performance management regarding opportunities for training and upgrading of skills, gender issues and quality of housing. By the end of 2005, about 5, 400 doctors, nurses and other key staff were receiving top up and the result was that few staff left the public sector.[55]

**Pakistan's Lady Health Workers**

Pakistan's national programme for family planning and primary health care was created in 1994 to help improve health care access in rural communities and urban slums. It made use of the lady health workers and about 80,000 of such workers provided basic health care to about 70% of the country's population. In Pakistan, there is a strong association between the presence of these health workers and improved community health[56,57] Criteria for the selection of the lady health workers included being 18 years or above, must come from the community she will serve and must be recommended by the residents of that community. The candidate must have successfully completed middle school education with preference given to married candidates. The training period for the selected candidates was 15 months, 3 months full time and 12 months part time and once commissioned they report to supervisors on weekly basis.[2]

**Thailand**

In the 1990s, Thailand instituted a payment reforms to help improve the retention of health workers in rural areas. This included supplements to doctors in eight priority specialties and services who work in the rural areas, non private practice compensation for health workers in district hospitals and health centers, overtime and night shift payments. The package also included non financial incentives.[58] The programme was a success as many health workers remained and worked in the rural areas.

**Mali**

In Mali, newly graduated doctors were encouraged to

work in the rural areas either as part of a public health center which has no doctor or as a private practitioner. The two options have different payment mechanism but similiar non financial benefits. Those recruited are expected to join the medical association and also be part of a peer learning network. By 2004, 80 out of the 529 registered doctors in Mali were in the scheme.[59]

**Midwives Service Scheme Nigeria**.

The Midwives service scheme is the brain child of the National Primary Healthcare Development Agency in Nigeria. It was instituted with the aim of accelerating the reduction in maternal, newborn and child mortality by improving access to skilled attendant at birth and was conceptualized in 2009. The programme is akin to the one year mandatory National Youths Service Corps scheme of the Federal Government of Nigeria in which fresh higher institution graduates of Nigerian origin are posted for national service in states other than their states of origin.

In this scheme, midwives, including those newly qualified from Nigerian Schools of Midwifery; unemployed midwives and retired but able midwives are deployed to health facilities in rural communities to undertake a one year community service. For the newly graduated basic midwives, the one year service would be mandatory preparatory to their being fully licensed to practice midwifery in Nigeria.[47]

**Task shifting**

Task shifting refers to the rational distribution of tasks among health workforce teams, with specific tasks moved from highly qualified health workers to health workers with shorter training and fewer qualifications in order to make efficient use of the available human resources.[60] Through task shifting, the impact of health worker shortfalls may be minimized and countries have the opportunity to build equitable and sustainable health systems.[60] Shifting tasks between health care workers invariably expands the clinical team and relieves short term human resource limitation especially in areas with low resources.

Rapid scaling up in task shifting involves, shifting tasks to the lowest relevant cadre, expanding the clinical team by including people living with AIDS and it also places emphasis on patient self management and community involvement. The most important task shift is to patients themselves (ie. self management). Task shifting involves the use of training guidelines and focus is on skill acquisition and care practice rather than knowledge. It also considers people living with HIV/AIDS to be experts in their own illness and as a valuable educational resource to support the training of health workers.[61]

Task shifting aim to expand the human resource poll, strengthen linkages between health facility and the community and create local jobs and also new opprtunities for people living with HIV/AIDS.[62] Presently four levels of task shifting are recognized.[63] They are:

- **Task shifting I:** The extension of the scope of practice of non-physician clinical officers to enable them to assume some tasks previously undertaken by more senior cadres (e.g., medical doctors or specialists).
- ?**Task shifting II:** The extension of the scope of practice of nurses and midwives to enable them to assume some tasks previously undertaken by senior cadres (e.g., non-physician clinical officers and medical doctors).
- ?**Task shifting III:** The extension of the scope of practice of community health workers (CHWs), including People Living with HIV/AIDS (PLHIV), to enable them to assume some tasks previously undertaken by senior cadres (e.g., nurses and midwives, non-physician clinical officers, and medical doctors).
- ?**Task shifting IV:** Patients, including People Living With HIV, trained in self-management, to assume some tasks related to their own care that would previously have been undertaken by health workers.

## CONCLUSION

Health workers are the heart of the health care system. Globally the number of health workers are few relative to need and this is more pronounced in the resource poor countries who unfortunately bear the greater burden of disease. These areas also loose a lot of their health workers to the resource rich countries on an annual basis. Also the rural areas of the world hosts fewer health workers when compared to the urban areas and this also is more critical in the developing countries making it imperative for policies and actions that will help health workers to work and remain in the rural areas.

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