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Strengthening information and research on the health workforce: strategies for action

Background

Effective action, both urgent and sustained, to address the growing health workforce crisis requires solid information, reliable research and a firm knowledge base. Research can help policy-makers identify and find answers to crucial policy issues regarding the status of their workforce, its level of performance and the problems health workers face.

All countries are now part of a marketplace characterized in part by increased internal and international mobility of health workers. In addition, health sector reforms, demographic and epidemiological changes and the introduction of new technologies and new models of care all contribute to the growing need for health workers worldwide. Governments thus require accurate and timely information and state-of-the-art research to assess the impact of these changes on their workforce, develop responsive strategies and take timely and effective action.

However, the fragmentation of information on the health workforce, the dispersion of responsibilities across ministries and agencies, and the shortages in human resources as well as lack of infrastructure have thus far limited the capacity of countries to collect, compile and analyse workforce data. Moreover, even when the quantity and quality of data are adequate, there are further limitations to the effective use of these data for policy-making, due largely to the absence of core health workforce indicators and to definitional problems associated with classifications of occupations.

The research in human resources for health is weak, uneven and mostly descriptive. There are few systematic reviews and collections of best practices on effective solutions. The potential role of health workforce information and research for policy formulation and action is also further affected by the lack of collaboration between relevant agencies, which on the one hand leads to duplication of efforts and on the other to underuse of know-how and databases.

This policy brief presents strategies that can help build effective information systems and develop a solid knowledge base on the health workforce in order to guide, accelerate and improve country action.

Strategies for action

The knowledge base on the health workforce must rapidly be improved so that policy decisions at local, national and international levels can be evidence-based and responsive to the increasing need for health workers and the challenges of meeting this need. For health workforce information systems and research to be effective:

- they should be country-owned and country-led;
- they must involve the coordinated efforts of relevant ministries, academic institutions and other relevant partners;
- they need the financial and technical support of international institutions.

The strategies outlined below should be seen as complementary to each other but must be implemented concurrently for maximum impact.

Ensure the collection, access to and use of health workforce information

Although no single data point can reveal the entire complexity of HRH issues, a range of readily available sources may be consulted to acquire key information on the size, characteristics and dynamics of the health workforce. These sources include:

- administrative records (such as those of ministries of health, education and immigration and registers of professional associations and regulatory bodies);
- health facilities surveys;
- labour force surveys or other household surveys;
- national population and housing censuses.

Optimal use should be made of the data from these sources, but users should be aware of the limitations of each source and seek alternative strategies when necessary. Most data sources provide an incomplete picture of the health workforce and data often are collected at irregular or long intervals, which limits their utility for policy formulation. In the end the long-term strategy of countries might be to build a dedicated system that ensures the regular collection, compilation and processing of information on health workers and health training institutions.

Invest in information technology

To make the best use of data available now or in the future, it is important for countries to equip relevant agencies with adequate technological facilities. For instance, a 2004 study by the WHO Regional Office for Africa showed that 22% of the health workforce departments in ministries of health in the region did not have computer facilities, 45% had no electronic mail access, and fax machines were available in only 32% of the surveyed departments. Under these circumstances, even a modest investment could yield significant returns.

Build local expertise and know-how

Because often countries with the greatest need to strengthen their health workforce also have the most limited monitoring capacity, technical cooperation and training are particularly vital for them. Capacity development should be extended to relevant ministries, professional associations and licensing bodies. In terms of content, the training should be multifaceted and impart skills in such key areas of expertise as identification and collection of health workforce data, database management, analysis and report writing. The advantages of capacity-building include the continued collection and analysis of relevant data at local and national levels and their availability for planning and decision-making on a timely basis.

Harmonize health workforce classification

Collection, compilation and analysis of health workforce data require a consistent and coherent classification system. Local and international efforts are needed to improve definitions and classification of the health professions; this may include establishing an internationally agreed system of health workforce classification to bolster the existing International Standard Classification of Occupations (ISCO), prepared by the International Labour Organization. Apart from ensuring optimal use of existing data, increased harmonization will help improve future data collection and simplify the task of comparison across sources, countries and time.

Use standard indicators

Databases on health workforce are worth maintaining only if they are used to generate information and evidence that support policy decisions. The use of core indicators may facilitate the conversion of data into information and evidence. While the appropriate indicator to be used in any given context

depends on the specific policy questions and the nature and type of available data, it is important for countries to use a standard set of indicators that facilitate comparability.

Although core indicators that are simple to implement but comprehensive enough to allow comparability and capture issues of interest to a wide range of stakeholders are yet to be developed and agreed upon, the following indicators are useful:

- total number and density of health workers (per 10 000 population);
- ratios of doctors to nurses or other health workers;
- geographical and sociodemographic composition of health workers;
- institutional distribution (public, private and nongovernmental) of health workers;
- unemployment rate and incidence of dual employment of health professionals;
- relative differences in earnings between health and non-health professionals, between doctors and nurses, or between male and female health professionals.

Additional indicators of interest, particularly those pertaining to inflows, workforce generation and health training institutions, include: number of entrants/graduates from health institutions; international and interregional migration flows; retirements and deaths among health workers; and number of educational facilities by type of training programmes.

The above list is only indicative; countries must explore other indicators and relationships that might be relevant to their specific needs and circumstances.

Promote innovative action research

Effective information systems can provide reliable and timely data on the characteristics of the health workforce and allow assessment of trends and comparability over time. Currently there are very limited operational research and impact assessment studies on the health workforce, due in part to limited funding. Increased investment is essential, as acknowledged by delegates at the Ministerial Summit on Health Research in October 2004 in Mexico City. Country-based studies should be encouraged by policy-makers, under the umbrella of a national strategy of health systems research that accommodates the priorities of health workforce research.

Countries should encourage research that:

- develops and evolves from purely descriptive studies to conceptual research, policy analysis and impact assessment;
- promotes international and comparative research by considering multi-site, multi-level and multi-country research projects to improve comparability and transferability of findings, such as the African migration study or the European nursing exit study;
- integrates research into ongoing or planned interventions and processes such as health sector reforms so that lessons can be drawn, compared and shared from the experiences of different countries;
- evaluates health workforce issues in the context of disease-specific programmes funded by global health initiatives, and documents the impact of these initiatives on the health workforce and other programmes, such as those on child and maternal health. Similarly, it is useful for countries to investigate the links between health outcome (or health output) and human resource density.

Build, strengthen and sustain networks

Building the knowledge and data base on the health workforce should involve coordinated efforts across many sectors – health, education, labour, civil service and the private sector – and the regulatory system, the national statistical office, academic institutions and other stakeholders. It is

therefore important to set up and strengthen mechanisms that bring together producers and users of health workforce information and research at national, regional and international level.

Potential benefits include enhanced data quality, increased data harmonization and improved capacity to collect, analyse and disseminate health workforce information and research. Examples of successful networks include the health workforce observatories in the Americas and the European Observatory of Health Systems and Policies. The African observatory proposed to be implemented by the WHO Regional Office for Africa and partners is another desirable initiative that needs full international support.

Similar networks should also be initiated, strengthened and maintained to bridge the gap between producers and users of research. The Evidence Informed Policy Network (EVIPNet), a WHO-led initiative to support the interaction of policy-makers, researchers and representatives of civil society in transforming scientific information into health policies, is one such initiative. EVIPNet includes the identification of major policy problems and priorities and the translation of research findings into user-friendly policy proposal formats.

Policy-makers must also reach out to researchers in their own countries in order to develop a critical mass of specialists in health workforce research and increase the production of and access to locally-developed research. Promoting access to external research through research networks and the creation of libraries of best practices is also vital.

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Investing in education for expanded capacity and lifelong learning

Why focus on education and training?

No health system can afford the risk of giving health workers a poor education. Nor can a health system function well if the training of its workers does not match the health needs of the population. Yet education in many countries is neglected and slow to change, even as people's health needs are changing rapidly.

There are three pressing reasons to pay new attention to the training of health sector workers.

- First, the world needs more health workers. The *World health report 2006* has identified a global shortage of 4.3 million health workers. To produce these workers, training institutions will need to expand their capacity.
- Second, many health sectors need more types of worker – not just more doctors and nurses, but more managers and public health professionals and community workers. Worldwide, the number of educational institutions is heavily tipped towards the production of doctors (over 1600 institutions) and nurses (about 6000 institutions), compared to public health specialists (about 375 schools). To produce a workforce with a broader array of skills, health education sectors will need to increase the type and range of training provided.
- Third, health sector workers operate in a world that is constantly changing. Disease risks evolve and treatment protocols are revised. Management structures are revamped. Individuals, families and communities become increasingly knowledgeable about their own health and about the treatment they want. To produce health workers who can respond well to their changing environment, training institutions need to generate workers with the appropriate competences and with the ability to be lifelong learners.

What needs to be done?

Assess and evaluate programmes for health workers

To know what changes are needed, policy-makers will need to assess the training available to their health workers and compare that to the requirements of their health sector. This will mean gathering the information to answer some key questions, such as the following.

- What pre-service and in-service training institutions are available to train our workforce? In what subject areas can these institutions provide training? What is the number of graduates per year that their current capacity allows? Where are they located? In what language do they provide training?
- What are the current and likely future needs of the health sector? What skills and competences are needed and will be needed in the health workforce. (Look not just at technical medical skills, but also other professional skills, such as management and public health, and personal attributes, such as language ability.) Are new cadres needed, such as nurse practitioners, medical assistants or community workers?
- Where are the gaps? To what extent can the country rely variously on domestic, regional or international schools? How much money needs to be spent, and how, to improve the training of the health workforce?

Ensure that the right institutions and training programmes exist, and manage the quality of their work

There are various solutions available to policy-makers seeking to enhance the pre-service and in-service training available to health workers. The appropriate option will vary from place to place. Some countries will invest in a full range of training schools domestically. Others will decide to rely on a combination of domestic training and international training. In some regions with shared working languages, countries may decide to coordinate their approach so that one country has a medical school and its neighbour a school of public health.

Crucially, whatever the option chosen, policy-makers must ensure that quality control mechanisms are in place. Accreditation of educational institutions (and also, in some places, certification of their trainers) is a means of assessing performance and identifying needed improvements. Conducted by government bodies or organizations established by groups of schools, accreditation requires institutions to show how well they are meeting their training objectives. A recent survey of medical schools shows that accreditation programmes are unevenly spread around the globe. Efforts are also needed to extend accreditation beyond schools of medicine and nursing to other health training institutions .

Pay attention to the infrastructure

Dedicated buildings, specialized laboratories, appropriate field sites and high-quality learning materials are some of the infrastructure requirements of health training institutions. Lack of appropriate infrastructure can limit the numbers of students who can be taught and constrain the ability of the institution to expand.

Access to high-quality textbooks and other teaching materials represents an important challenge for many low-income and medium-income countries. Some solutions to this problem have been developed. The PALTEX programme in Latin America and Caribbean countries screens for quality and offers volume discounts for a wide range of textbooks and basic diagnostic tools to over 600 institutions. The HINARI programme, set up by WHO with major publishers, enables academic and research institutions, government offices and teaching hospitals in developing countries to gain access to one of the world's largest collections of biomedical and health literature. Over 3200 full-text journals and other resources are now available free of charge to health institutions in 69 countries, and at very low cost in a further 44 countries.

Make sure that funding is available to a diverse range of students

Entrance to most training programmes for the health professions requires a secondary education. Many countries suffer from inadequate financing at this level, however, and this factor severely limits the pool of people who can enter education programmes for health careers. In addition, the profiles of students entering health professions rarely reflect national profiles of social, linguistic and ethnic diversity, as students are disproportionately admitted from the higher social classes and dominant ethnic groups in society. There is growing awareness of the importance of sociocultural and linguistic issues in providing care, and this has brought new attention to diversity imbalances in the admissions processes. In order to ensure, for example, that health care providers speak the language of the population groups they are serving, it may be necessary to establish targeted scholarships.

Manage curriculum changes and move to patient-focused, practice-based teaching

The teaching curriculum reflects the knowledge and skills to be provided to different types of health workers. Including a new course in a curriculum provides legitimacy to a subject and can spawn changes leading to new disciplines, departments, schools and types of health workers with massive impact on the practice of health care. For example, over the last 40 years clinical epidemiology has

moved from the margins of medicine to lead the evidence-based transformation of health and health care.

Managing curriculum changes can be challenging. The existing curriculum needs to be assessed for its appropriateness, and any recommended changes may appear to threaten existing professional boundaries and hierarchies. Major changes may require new faculty skills, learning materials or training sites, and this in turn can have implications for resource allocation.

There is strong evidence that practice-based teaching (in which students must apply their book learning in real situations) is highly effective. Evaluations have consistently shown that this approach to education results in better skills, attitudes and behaviours among health professionals than training programmes that do not use practice-based teaching. Increasing the focus on practice-based teaching would be a useful improvement to health training curricula. Similarly, incorporating public health training into clinical disciplines could help develop integrated approaches to the health of individuals and communities.

Whatever changes are envisaged in curriculum design or teaching methods, faculty will require ongoing support to implement changes and keep their skills up to date. Furthermore, a continuing programme of faculty support linked to career development will not only improve performance but may also act to motivate and retain staff. Particular attention may be needed to ensure that women have equal opportunities.

Emphasize self-directed and problem-based approaches to create lifelong learners

The pace of change in the health sector and the constant production of new knowledge mean that training programmes cannot expect to teach people everything they will need to know throughout their careers. Instead, training schools should help students "learn to learn". The ability to acquire new skills and knowledge throughout life is itself a core competence that curricula must nurture. Recognizing this, educators, in both pre-service and continuing education, are moving away from "didactic teaching" towards student-centred and problem-based learning, with greater emphasis on "know how" rather than "know all". There is evidence that students are highly satisfied with this shift and that faculty enjoy teaching for problem-based learning. However, further research is needed to understand better the effectiveness and costs of problem-based learning in various settings around the world.

Conclusion

The education of the health workforce is of crucial importance if the world is to meet its major health challenges, such as achieving the Millennium Development Goals, preventing and treating chronic diseases and responding to emergencies. Policy-makers worldwide must focus on expanding the capacity to train and educate the future workforce. The world needs an adaptable and appropriately skilled health workforce of "lifelong learners" who know how to find and implement new information and skills. The costs of creating this workforce of the future will be significant.

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Making the most of the existing health workforce

Why focus on improving worker performance?

A well-performing workforce is responsive, fair and efficient, and achieves the best health outcomes possible, given available resources and circumstances. The world cannot meet the health challenges it faces without making good use of health workers, yet there is evidence that policy-makers could help workers achieve much more by setting the conditions for managers to improve jobs and working conditions.

There are three reasons for policy-makers and managers to take action now to boost health worker performance. First, improving health worker performance is likely to have an effect sooner than investments to expand the size of the health workforce. Second, even with an increase in the number of health workers, the supply of workers will always be limited and policy-makers will need to make the best use of those limited resources. Third, actions to improve worker performance are also associated with better motivation, and a well-motivated workforce is likely to mean better retention of existing workers and increased recruitment of new workers. The dimensions of workforce performance are given in Box 1.

Box 1. Dimensions of workforce performance

Availability	Availability in terms of space and time: encompasses distribution and attendance of existing workers, adequate numbers that match needs.
Competence	Encompasses the combination of technical knowledge, skills and attitudes and work behaviours.
Responsiveness	People are treated decently, regardless of social, economic or health status, who they are or whether or not their health improves.
Productivity	Producing the maximum effective health services and health outcomes possible given the existing staff; reducing waste of staff time or skills and other complementary resources.

What can be done?

Health sector management contexts differ widely across the world, for example between more and less developed countries, between the public and private sector, between urban and rural or remote areas and between primary and acute care. In all settings, the main managerial levers available to support performance include a group of *job-related* levers; levers related to the *support systems* that all workers need to do their jobs; and levers that shape and create an *enabling work environment*. It is rare to find a direct relationship between one specific lever and a desired change. Not all these levers apply to every setting, but collectively they make up a checklist of options for policy-makers.

Job-related levers

Job descriptions. Job descriptions that clearly set out objectives, responsibilities, authority and lines of accountability are consistently associated with improved achievement of work goals, for all sorts of worker. Moreover, developing clear job descriptions can produce quite rapid effects. Health workers in many countries still lack proper job descriptions, so this strategy has widespread potential.

Norms and codes of conduct. Many employers are now introducing explicit written codes of conduct for all their employees – stating, for example, that they should come to work on time, treat patients with dignity and respect and provide full information to patients. The effectiveness of such codes is

likely to depend on the extent to which they are communicated and enforced by health professionals and managers. Professional codes of conduct, such as the Hippocratic Oath sworn by medical graduates, can become a significant source of internal motivation to perform well.

Skills matched with needs. Rearranging shift patterns and increasing time flexibility could provide another way to increase worker productivity. This strategy could potentially achieve a better match between staffing levels and workload at limited cost. In addition, skill delegation or task shifting is another way to increase overall workforce productivity, by transferring responsibility for some activities from nurses to community workers, or from doctors to nurses.

Supervision. Supervision, especially coupled with audit and feedback to staff, has been consistently found to improve the performance of many types of health workers, from providers to managers. The nature of the supervision is important. If supervisory visits become sterile administrative events, or are seen as fault-finding and punitive, they have little positive effect. In contrast, supervision that is supportive, educational and consistent and helps to solve specific problems can improve performance, job satisfaction and motivation.

Support-related levers

Remuneration. Three aspects of remuneration influence the behaviour of health workers: the level and regularity of pay, the way people are paid and other incentives. Health workers must be paid reasonably for the work they do. They need to receive a living wage; they also need to believe that the wage is commensurate with their responsibilities and that it is fair when compared with others in the same or equivalent jobs. External agencies could help to improve worker performance in low-income countries by providing salary support for the medium term. In addition, a mix of payment systems and other incentives should be used where possible.

Information and communication. A well-known adage states that you manage what you measure. Any specific efforts to improve overall workforce productivity must be based on reliable data about workforce level, distribution and skill mix, coupled with information on the factors thought to be constraining better health worker performance and intelligence on potential policy options. A well-functioning information system is a key ingredient to improving workforce performance.

Infrastructure and supplies. No matter how motivated and skilled health workers are, they cannot do their jobs properly in facilities that lack clean water, adequate lighting, heating, vehicles, drugs, working equipment and other supplies. Hard evidence for the performance benefits of improving basic infrastructure and supplies is very thin, but it seems highly likely that such improvements – once in place – could create significant, almost immediate gains. A simple and obvious, but sometimes overlooked, way to determine the actions that will create the largest and most immediate improvements is to ask the health workers themselves. In addition, addressing the risks of violence and bullying in the health workplace could enhance motivation and commitment.

Workplace-related levers

Lifelong learning. Health workers require up-to-date knowledge to perform well. Rapid increases in knowledge and changing health systems reinforce the need for continuous professional development throughout health workers' careers. Continuous professional development can be simply defined as a "systematic, ongoing, cyclical process of self-directed learning" for individuals. Such an approach goes beyond training to include, for example, career paths, feedback from others, mentoring and secondment. Distance education in its various forms also deserves further exploration, given the geographical distribution of the many health professionals in need of continuous professional development.

Teamwork. Teamwork and processes such as joint development of guidelines and peer review can be moderately successful in improving health worker performance. The observed benefits of teamwork include improved staff well-being and better quality of care. Evidence of the effectiveness of

organization-wide approaches continually to improve services is limited. However, people respond positively to a host of non-financial incentives that can be collectively captured under the rubric of good team management or leadership. These include providing a clear sense of vision, recognizing people and valuing their work, listening to staff and increasing their participation in decisions, encouraging innovation, creating a culture of benchmarking and comparison, providing career structures and opportunities for promotion, giving feedback on good performance, and using rewards and sanctions in ways that are fair and consistent.

Responsibility with accountability. Services can be organized in many different ways, but managers cannot manage them properly if they are not given at least some control over money and staff. Three consistent findings have been identified across different health systems. First, despite a widespread intent to decentralize, local managers are often given new responsibility to deliver services without being given any control over the money and staff needed for this purpose. Second, there are often few functioning mechanisms to assure accountability in the use of money, recruitment of staff or quality of services provided. Third, confused lines of reporting are common, especially during periods of reorganization. This not only reduces accountability and blunts its use as a lever for improving staff performance, but can also reduce staff motivation. Giving local managers at least some freedom in the allocation of funds can make a big difference to staff and facility performance, as these managers can then quickly deal with local problems. Mechanisms to hold health workers accountable for their actions are another way to improve productivity and performance.

Conclusion

Improving worker performance is not just a matter of using the managerial approaches described here. Worker performance is also influenced by characteristics of the population being served and characteristics of the health workers themselves (such as their background, experience and personal motivation). However, job-related, support-related and workplace-related conditions play an important role in performance. The *World health report 2006* demonstrates that research evidence for the relative effectiveness of the methods described here is mixed. Further research on the management of health workers is clearly needed. Nevertheless, policy-makers could make better use of their existing health workforce by creating an environment of improved managerial capacity to use HRH levers and by investing in management training and development.

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Addressing the complex challenges of health worker migration

The migration of skilled health workers has in the past decade become more complex, more global and of growing concern to countries that lose much-needed health workers. People have a right to move and seek the best employment they can get, but in preserving the right to move, some countries suffer disproportionately from the negative effects of migration. When significant numbers of doctors and nurses leave, the countries that financed their education end up unwillingly providing a kind of "perverse subsidy" ¹ to the wealthier countries that receive them. Financial loss is not the most damaging outcome, however. If a country has a fragile health system, the loss of part of its workforce adds further strain and the impacts are most severe in rural and underserved areas where emigration is often greatest.

The migration of skilled professionals generates billions of dollars each year in remittances (the money sent to home countries by migrants) to low-income countries and has therefore been associated with a decline in poverty. However, the migration of health workers can affect the right of all people to have access to health care and should be considered as a special case, justifying a different policy response than is appropriate for other skilled workers.

Ironically, every survey undertaken, even at a time of accelerated migration, has stressed that most health workers would prefer to work in their home countries, as long as they had a living wage and some degree of economic and political stability.

Policies to manage migration

Both source and receiving countries can develop policies and bilateral agreements that will affect the movement of skilled health workers. A basic requirement for policy formation is adequate data on stocks and flows, including recruitment and attrition.

Source countries

Invest to produce more health workers. Recognizing the potential for loss, some countries are considering producing more health workers than are normally required, and may also be contemplating health worker export strategies. Although there is as yet no systematic evaluation of the consequences of pursuing an export strategy, it is one option for popular source countries.

One reason that health workers migrate is the apparent paradox, in some countries, of staff shortages coexisting with high unemployment among health workers. Job opportunities for graduates must also grow, either through the public sector (fiscal constraints permitting) or through the private sector. Investing in local staff trained with a locally focused curriculum has been shown, in some places, to encourage retention in rural areas and a fall in migration.

A contractual arrangement whereby graduates agree to work for an employer for a specific period is referred to as bonding. Though this practice is widespread, its effectiveness is poorly understood, and it is not feasible when education is private. Experience with bonding is mixed: it ensures coverage but is strongly associated with low performance among workers and high turnover rates.

Improve working conditions. Improved wages alone in sending countries will not fundamentally change the structure of migration, because the difference in wages between source and receiving

¹ Mensah K, Mackintosh M, Henry L. *The 'skills drain' of health professionals from the developing world: a framework for policy formulation*. London, MEDACT, February 2005 [http://www.medact.org/article_health.php?articleID=337].

countries is so great. But paying salaries regularly and on time is vital. A comprehensive package of workplace reforms is needed, too, addressing issues of conditions of work, transport, housing and education for health workers and family members. Opportunities for professional development and career enhancement are motivating factors that will encourage retention. Management and supervision have much potential to promote job satisfaction, or, if not done well, to demotivate staff and contribute to their loss.

Encourage migrant workers to return. Active institutional management of migrants can promote their welfare not only abroad but also upon their return. Special migration services for health workers may also help to retain productive links with local health institutions while workers are away.

Receiving countries

Invest to produce more workers. Better aligned workforce planning in receiving countries, ensuring that entry to the workforce is keeping pace with attrition, will change the nature of the labour market and reduce the demand for health workers moving from poorer to richer countries.

Introduce responsible recruitment practices. Many receiving countries have tried to use more responsible ways of recruiting health workers from vulnerable health systems, such as through codes of practice or bilateral agreements. Negotiating with training institutions and ministries of health/workforce planning units will help avoid claims of "poaching" and other disreputable recruitment behaviour.

Responsible behaviour also includes ensuring the fair treatment of migrant workers: they should be recruited with terms and conditions equal to those of locally recruited staff, and given opportunities for cultural orientation.

Support HRH development in source countries. Many recipient countries are also providers of overseas development assistance in health. Support could be more directly targeted to expanding the health workforce, not only to stem the impact of emigration but also to overcome the magnitude of the HRH constraint to achieving the health-related MDGs.

Provide direct HRH support to source countries. Direct support can be offered through a volunteer health workforce or the work of international NGOs. Direct twinning of health institutions between rich and poor countries, a popular form of development assistance, also involves substantial flows of health workers in both directions. More systematic efforts to understand the collective experience of these programmes could enhance the short-term and longer-term benefits for both source and receiving countries.

International initiatives

Achieve international coherence. The need to balance the rights of migrant health workers with equity concerns related to an adequate health workforce in source countries has led to the development of ethical international recruitment guidelines and codes of practice. In the past five years many instruments have emerged from national authorities, professional associations and international bodies. Although not legally binding, these set important norms for behaviour among the key actors involved in the international recruitment of health workers. Whether these norms have sufficient teeth remains to be seen.

Bilateral agreements. Bilateral agreements on health service providers can provide an explicit and negotiated framework to manage migration. Given the complexities of migration patterns – countries may receive health workers from many countries as well as send health workers to many countries – there are important questions about the feasibility of managing multiple bilateral agreements for any given country.

Conclusion

Skilled health workers are lacking in most countries in the world. Those shortages have been remedied mainly by migration rather than by strategies for improved retention and recruitment, hence in the foreseeable future as shortages increase, so migration will also increase. The costs of global mobility are currently unevenly borne by the poorer source countries and the benefits are concentrated in the recipient countries.

While comparable wages may be out of reach of developing countries, establishing an effective health care system depends quite simply on "improved economic performance, a stable political situation and a peaceful working environment" , yet all too often these are not only elusive targets but, in a climate where "good governance" has become almost a global mantra, they are actually receding.

Since migration cannot be ended, and source countries will need time for substantial policy change that will improve the number and status of health workers in the home countries, the onus has increasingly shifted towards the role of recipient countries to become responsible producers and recruiters. It is time for the notion of "managed migration", another new mantra, to be given some practical basis.

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Bridging between health workers in separate public health programmes

Introduction

The challenges facing the health sector are many and varied, yet there is only one health workforce to meet them all. Harmonizing the training, tasks, workplans, incentives and supervision of health workers across the many priorities could reduce wasted time and duplication of effort. To achieve this will require collaboration across priority health programmes and a unified approach by the international donor community at country level. Crucially, it will also require strong, centralized leadership. Collaboration among agencies and actors worldwide will be needed to assist government health ministries or departments in this stewardship role.

This policy briefs aims at addressing the challenges faced by programme managers at all levels to make the best use of their workforce. Specifically, it deals with the situations that arise when competing priority programmes try to achieve their goals by using their financial power to attract human resources away from each other.

Why the need to harmonize?

The health workforce must respond to the broad spectrum of promotion, prevention and care needs. Health workers therefore must confront the increasing burden of chronic diseases, respond to emergencies – such as natural disasters, civil strife, war and their aftermath – and make special efforts to help reach the health targets of the Millennium Development Goals (MDGs). Yet in many places the health workforce is fragmented, pulled from working for one health objective to the next, resulting in duplicated effort and wasteful use of resources.

The MDGs alone have led to a number of global resolutions and initiatives – such as the creation of the Global Fund for AIDS, Tuberculosis and Malaria – that have in turn resulted in strengthening of priority programmes in countries. Within each country, programmes and projects set their own targets and goals, with demands on service delivery and human resources. But there is only a limited pool of health workers. Health interventions compete for scarce resources, often using higher pay or other incentives as a draw. Staff move between different providers of health care and initiatives in response. In addition, in many countries, health districts and facilities, there is little or no integrated human resources planning. As a result, staff are overburdened with demands to fulfil each programme's requirements.

The problem extends through training and supervision as well. Thousands of training courses are held to provide better care for specific health problems every year. Each course takes staff away from their duty stations, resulting in hundreds of thousands of workdays lost to patient care and prevention activities. Often the courses contain overlapping content; precious time is wasted on teaching the same skills. Similarly, supervision is fragmented. Supervision visits for each specific programme follow each other when they could occur simultaneously in an integrated manner and as a result of coordinated planning.

The creation of national programmes that aim to improve specific health problems, each with its own goals, results from good intentions. However, it has led to these unintended inefficiencies and unproductive competition between health programmes for health workers' time. In the end, these problems may well undermine the achievement of the very health goals the programmes seek.

Meanwhile, preparedness for the deployment of health staff in an emergency is limited, or in some places nonexistent. The *World health report 2006* has identified human resources strategies to help achieve the MDGs, address chronic diseases and respond to emergencies. To avoid the problems of

fragmentation and duplication of effort, it will be necessary to coordinate and harmonize human resources across specific programmes, as well as to plan for emergency needs.

What needs to be done, and how?

Better coordinate in-service training and decentralize training whenever possible

Members of the health training community, along with governments, international agencies and NGOs, must review teaching modules focused on specific health needs in order to harmonize their contents. Training curricula could be put together to reflect all tasks of different programme priorities that health workers actually work on each day. Emulating the approach of moving from diarrhoeal disease control to integrated management of childhood illness, for example, could greatly reduce time lost from duty stations for training. More decentralized training, on-site training and distance learning, including e-health courses, must also be explored to reduce the absence of staff from duty stations.

Integrate supervision

National health departments must be organized to bring priority health programmes closely together in order to achieve less-fragmented supervision. Health authorities at district level need the capacity to act as a funnel for the integrated supervision of various priority health programmes. Authorizing *one* supervisor to combine tasks performed during field visits could lead to efficiencies.

For example, village rounds for maternal and child health activities could be combined with other priority health interventions at field level (such as distribution and insecticide treating of bednets), but planning for these activities often lies in the hands of individual programme managers who may not be authorized to collaborate. As another example, vehicles provided for specific tasks could well be used for combined activities, but local managers may lack permission to authorize such use. Support from all levels, including the international donor community, will be needed to accomplish the objective of unified supervision.

Harmonize remuneration and incentives

In order to achieve their programme targets, priority health programme managers often receive funds to offer special incentives – such as additional pay – to staff. The intention is usually good – to enhance motivation by helping to secure an adequate income for health workers – but payments of this kind can be demotivating to other staff, who may work side-by-side with those receiving extra income. Harmonization of incentives policies across all priority health programmes and inclusion of all staff at facility and other levels of the system can help reduce the perceived unfairness and thus increase motivation.

Rethink service activities and responsibilities

Two rules could usefully be applied to help the health workforce achieve the many demands placed on them: simplify tasks and delegate responsibility. Simplifying all basic tasks is the first element of the Polio Eradication Initiative, for example. All available human resources, from unskilled volunteers to highly skilled workers, both inside and outside the health sector, are considered to be potential “vaccinators” and surveillance officers.

In addition, some services can be provided by less-senior staff. The delegation of malaria diagnosis to volunteer health workers using village-based microscopy, for example, has been shown to be reliable and to improve the treatment of malaria. In many settings, several service tasks should be shifted from hospitals to primary care.

Collaborate with patients

Extensive evidence shows that interventions designed to promote patients' roles in the prevention and management of chronic diseases can lead to improved outcomes and result in time savings for staff. What patients and their families do for themselves on a daily basis – engaging in physical activity, eating properly, avoiding tobacco use, sleeping regularly and adhering to treatment plans – significantly influences their health. For example, the WHO 3 by 5 initiative has shown that people living with HIV/AIDS can make important contributions to HIV/AIDS prevention, treatment and care services.

Plan for emergencies

Illness and loss of life caused by disease outbreaks and natural disasters can be reduced if preparedness plans are in place and easily and quickly activated. Emergency preparedness requires an up-to-date database of the actual competences of available health workers as well as a deployment plan that will avoid duplication in the use of the health workforce. To be prepared to take a "command and control" approach to the management of an emergency, countries may also need to develop specific capacity in management across several sectors (such as health, communication and transport).

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Financing health workforce development

Why is it important to find extra resources?

The world is facing a health workforce crisis. Most countries – rich or poor, big or small – are affected by a shortage, an inappropriate skill mix or a poor distribution of their health workers. A long period of underinvestment in the health sector in many countries is now being exposed by urgent new demands, such as disease pandemics and ageing or expanding populations. In developing countries, the situation is particularly acute. Without the needed human resources, health sector plans linked to the Poverty Reduction Strategy Papers (PRSPs) and to the Millennium Development Goals (MDGs) may well come to nothing. The health workforce crisis is thus a limiting factor to the achievement of key development indicators.

The *World health report 2006* estimates that some 4.3 million additional health workers are needed in 57 countries with critical shortages, many of them in sub-Saharan Africa and Asia. Overcoming this workforce shortage will require substantial financial commitments to train and pay the additional health workers. The cost of very rapid scaling up of training aimed at eliminating the shortfall in doctors, nurses and midwives alone by 2015 – the target date for achieving the goals of the Millennium Declaration – is shown in the *WHR 2006* to be about USD 136 million per year in 2004 prices for the average country.

The additional cost of paying those health workers once the shortage has been met is just over USD 311 million per country at current salary levels. Assuming that scaling up instead takes place over a 20-year period, the required annual investment in training is USD 88 million per country. Additional salary costs when the workforce is fully staffed would be higher under this scenario (because the population will increase substantially between 2015 and 2025 and so will the need for health workers), reaching in excess of USD 400 million per country. To meet the investment costs for training over a 20-year period, the average country would need to increase its overall level of health expenditure per capita by about USD 1.60 each year. By 2025, a minimum increase of USD 8.30 per capita would be required to pay the salaries of the workforce.

This costing, averaged across the globe, is only indicative. There are substantial differences between countries and regions. It is clear, however, that scaling up the health workforce on either a 10-year or 20-year trajectory will require very significant dedicated funding. And this is only one of the costs associated with developing the future health workforce. Additional costs will be associated with other needed initiatives, such as improving incentives in order to address the maldistribution of workers, creating new cadres where needed for an appropriate skill mix and increasing salaries and benefits to retain workers.

Where will the funds come from?

Additional funding for the health workforce will have to come both from national-level initiatives and, for developing countries, from international aid. At the national level, countries have three broad options: allocating a greater share of expenditure to health, improving the efficiency of health expenditure and identifying additional revenue sources for health.

Country level

Increase the share of total expenditure allocated to health workers

Both moral and political rationales support the special nature of the health workforce. Without a healthy population, a country's economic growth is itself undermined. Without the needed health workforce, key development goals related to health cannot be attained. Recurrent expenditures, such as salaries, for the health workforce should not be seen as only a consumption expenditure in the budget, but also as a genuine investment to improve overall productivity in the national economy.

There appears to be scope for governments in many countries to devote an increased share of domestic resources to the health sector. However, the politics associated with transferring government resources out of other sectors will be an important factor in determining whether countries go through with their commitment to prioritize the health sector. Health sector leaders must engage in dialogue and negotiation to get support for the needed investments. For example, to increase financing of education may require negotiation between different sources of investment, both public and private. The challenge is making the case based on evidence that the increased expenditure brings increased benefits, including economic growth.

Improve efficiency

The argument for increased funding for health sector human resources will be enhanced in the political arena if efficiency improves. More efficient use of resources will also allow funds to be spread further. However, there is evidence in many countries of significant leakages. For example, a public expenditure tracking survey to evaluate civil servant behaviour in the health and education sectors in some countries found that 2.4% of staff on the government payroll in the health sector were ghost workers. Absenteeism was also discovered to be a major concern, with 39% of staff absent without justifiable cause. This amounted to a productivity loss of 10% of total staff time. Eliminating ghost workers and absenteeism, as well as lowering costs by outsourcing, could improve efficiency.

Identify new sources of funding

- **Targeted taxes:** For public sector financing of health care, general taxation revenue should not be considered the only source of resources. Special taxes – such as those targeting tobacco or alcohol consumption – could be earmarked for health expenditure. Special lotteries devoted to health are also a potential source of revenue.
- **Insurance schemes:** Social health insurance, private health insurance, community-based health insurance and medical savings accounts are all potential means of financing the health sector.
- **Private sector:** Private sector employers may have the potential to contribute more to health costs, especially those associated with health and safety requirements.

International level

In developing countries, mobilizing the sizeable funds required for financing the health workforce expansion must be carried out through a combination of improved government budgets along with international development assistance. There are some promising signs of international support for health sector human resources. For example, the Global Alliance for Vaccines and Immunization (GAVI) recently budgeted USD 500 million over five years for health systems strengthening; some bilateral donors are financing emergency health workforce initiatives.

While bottom-up budgeting around emergency plans is the optimal way to proceed, there is nonetheless a need for financing guidelines that can ensure that the response is commensurate with need and around which the international community can mobilize. With respect to the total flows of international development assistance for health (approximately USD 12 billion per annum in 2004), the *WHR 2006* recommends the 50:50 principle – that 50% of this financing be directed to health systems strengthening, of which at least half is dedicated to supporting emergency health workforce plans. The rationale for this proportional investment relates to the reliance of health workers on functioning health systems and the need for dedicated financing of workforce strategies.

What about public finance limits?

In an effort to preserve macroeconomic stability and fiscal sustainability, international finance institutions and ministers of finance use criteria such as the public expenditure: GDP ratio to set ceilings.

The most visible consequences for the health sector are the ceilings on recruitment and the stagnant salaries of health workers in public employment. Hiring moratoriums are limiting the expansion of health services and creating unemployment of health workers in some regions. Poverty reduction strategies, for example, often refer explicitly to such restrictions. Authorities in many countries are thus refraining from hiring health workers because they cannot find a way around these stipulations.

Recognition of the need to expand the fiscal space for health (i.e. make more budget room for health expenditure) calls for a status of exception to be accorded to public financing of health and its workforce. Negotiating fiscal space safeguards for the health workforce will require the health development world to engage productively with ministries of finance, international finance institutions and major international stakeholders.

Part of the concern in public financing of workforce expansion relates to the ability of governments to pay for staff throughout the length of their careers. Because countries are reluctant to expose themselves to a potentially unsustainable public debt, they need predictability of donor back-up over the long term. Donor funds, however, are expressions of current government priorities, and mechanisms for long-term reassurance or guarantees of support are generally not forthcoming.

The challenges of funding the scaling up of the health workforce in the longer term, therefore, cannot be separated from the broader dilemma of resource mobilization for health. Bold commitments and new mechanisms may help to provide greater predictability of global aid flows. These must be complemented by national strategies that build towards sustainable financing of the health sector.

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Intended to complement *Working together for health: The World Health Report 2006*, these policy briefs are intended to assist those who make and carry out health policy worldwide. The briefs address the following:

- Strengthening information and research on the health workforce: strategies for action
- Investing in education for expanded capacity and lifelong learning
- Making the most of the existing health workforce
- Addressing the complex challenges of health worker migration
- Bridging between health workers in separate public health programmes
- Financing health workforce development.

After describing an issue, the briefs propose ways to address it, many of which have been drawn from experience in countries. The briefs were designed to encourage adaptation to local needs and local languages.

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The World Health Report 2006 - Working together for health contains an expert assessment of the current crisis in the global health workforce and ambitious proposals to tackle it over the next ten years, starting immediately. The report reveals an estimated shortage of almost 4.3 million doctors, midwives, nurses and support workers worldwide. The shortage is most severe in the poorest countries, especially in sub-Saharan Africa, where health workers are most needed. Focusing on all stages of the health workers' career lifespan from entry to health training, to job recruitment through to The 2006 World Health Report contains both an expert assessment of the current crisis in the global health workforce and an ambitious set of proposals to tackle it over the next ten years starting immediately. Today's crisis is a binding constraint to health improvement in almost 60 countries globally. A shortage estimated at almost 4.3 million doctors, midwives, nurses and support workers worldwide is most severe in the poorest countries, especially in sub-Saharan Africa, where they are most needed. Poor working conditions, high rates of attrition due to illness and migration, and education s The Secretary of Health's Report on Adolescents' Dermatologic Health in Outlandia (2010) is a call to action for policymakers and health professionals to improve the health and wellbeing of Outlandia's youth by increasing access to dermatologic care (see A Better Policy Brief, Reproduced with permission of the Johns Hopkins Bloomberg School of Public Health, Baltimore, MD.) The Women's and Children's Health Policy Center, "Writing Policy Briefs: A Guide to Translating Science and Engaging Stakeholders," Young, Eoin, and Lisa Quinn, "The Policy Brief," <http://blog.lrei.org/tmurphy/files/2009/11/PolicyBrief-described.pdf>. This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 4.0 License.