Opportunities for Overcoming the Health Workforce Crisis

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Why Now?

The health workforce—the people who actually deliver clinical and public health services—is a fundamental element of any functioning health system. All countries have to deal with the challenges of ensuring an appropriate supply and distribution of health workers, maintaining adequate levels of training, retaining health professionals, and managing their motivation and performance. However, policymakers in low- and middle-income countries face particular challenges, and there is a dearth of evidence to help guide and support their decisions.[1] For decades, human resources for health (HRH) was neglected by donor agencies and global health initiatives in favor of easier, more targeted areas, such as provision of vaccines and other medical products. Increasing awareness of these many challenges, such as migration, HIV/AIDS, and constraints on scaling up interventions, has underlined the importance of investing in health workforces and helped to move HRH onto the global agenda.

Two major documents successfully defined and helped elevate the role of the health workforce on the global health agenda. First, in 2004, the Joint Learning

Initiative (JLI) published a monumental work, *Human Resources for Health: Overcoming the Crisis*. The JLI identified three major forces assailing the health workforce: the devastation caused by HIV/AIDS, the acceleration of labor migration, and the legacy of chronic underinvestment in human resources.[2] Second, the World Health Organization (WHO) published its 2006 *World Health Report*, in which it estimates that more than 4 million health workers will be needed to meet the shortfall, including 2.4 million physicians, nurses, and midwives. It also identifies 57 countries as having a critical shortage, and of these, 36 are in sub-Saharan Africa. By calling it a "crisis," the JLI and 2006 *World Health Report* were successful in gaining more attention for the health workforce at the global level. These developments helped to bring about the establishment of the Global Health Workforce Alliance (GHWA) in May 2006, which is directed by the belief that, as the late WHO Director-General J. W. Lee stated, "every person, in every village, everywhere should have access to a skilled, motivated and supported health worker."[3]

However, labeling something a crisis can only accomplish so much. What has done more to put the health workforce on the global agenda is clear evidence that donors are having trouble achieving their program objectives without increasing the number of qualified health workers. This is especially true of HIV/AIDS projects. Not only the disease itself but also its treatment can have detrimental impacts on HRH, where vertical HIV/AIDS programs drain human resources from the rest of the health system, presenting problems both for the existing health system and for scaling up of new initiatives.[4] Additionally, focusing on the numbers alone neglects the more complex issues of distribution of workers within countries, performance of workers, and the poor working conditions that can impact that performance.[5]

To cope with the health workforce crisis, the First Global Forum on Human Resources for Health issued the Kampala Declaration and Agenda for Global Action in 2008, which identified 12 immediate and urgent actions to be taken.[6] Four months later, the world leaders taking part in the Toyako G8 Summit voiced their support for the declaration, making more specific financial and technical commitments for the health workforce than they did for any of the other five building blocks of the WHO health system framework: health services; health information; medical products, vaccines, and technologies; health financing; and leadership and governance.

In the Toyako Framework for Action on Global Health, the following recommendations were proposed as actions to be taken for the health workforce: act as a whole to narrow the gap between existing workforces and what is needed; increase the use of skilled health workers; encourage treat, train, retain

strategies and task shifting; encourage the WHO's work on developing the code of practice; and encourage further development of the GHWA.[7]

As the 2006 *World Health Report* states, "the moment is ripe for political support as problem awareness is expanding, effective solutions are emerging, and various countries are already pioneering interventions."[8] The health workforce is now receiving unprecedented inputs such as funding, technical assistance, and new policy initiatives from various stakeholders. The challenge is making the best use of the inputs to improve outputs and outcomes. Whether this momentum lasts depends on what actions are taken to overcome this challenge.

In this report, we seek to identify the most important and immediate recommendations and actions to be taken by the G8 countries to strengthen the ability of the health workforce to improve the performance of the health system and health outcomes. In order to do this, we first analyze the role of health workforces in strengthening health systems and improving health outcomes. Then we explore the major challenges and opportunities that can be leveraged to strengthen health workforces. Finally, we provide policy recommendations as to what the G8 should do to improve HRH.

Health Workforce and Health Systems: Major Issues

Of the six health system building blocks in the WHO health system framework, there are three input-related blocks: medical products, vaccines, and technologies; health financing; and the health workforce. Of these three, the health workforce is one of the key inputs to drive the health system as a whole; however, we have little knowledge about how health workforce improvement can result in an improved health system. The relationship between the health workforce and health outcomes is just as complex. In this section, we analyze these relations so that we can make better recommendations for action with the objective of creating better outcomes through the use of existing inputs and future increased inputs to the health workforce.

Human resources and health systems

The WHO has emphasized the need to have sufficient numbers of health workers to achieve the basic objectives of the Millennium Development Goals (MDGs). It has suggested that a minimum of 2.3 doctors, nurses, and midwives

per 1,000 people should be a basic numerical target.[9] This target may be useful for advocating greater attention to human resource issues in low-density countries; however, in many countries it is not a realizable objective in the short term given the finances available in the national budgets. For example, in 2006 Ondo State, Nigeria, had 0.71 health workers per 1,000 people with annual wage implications of US$14.3 million out of a total health budget of US$22.6 million.[10] If Ondo State were to reach the WHO's 2.3 target, the annual wage implications would be a staggering US$50.1 million.[11] The target also does not address the issue of developing a workforce with the appropriate mix of skills, especially the use of paraprofessionals and nurses. In addition, it does not address the problem in several countries (for example, Egypt, some states in India, and many former Soviet bloc countries) of over-supply of doctors.[12] It also ignores the other system factors that are necessary for health workforces to be effective.

Human resources are only effective if the system in which they function is able to do the following:

+ educate sufficient numbers of adequately trained and appropriate health workers;
+ provide sufficient financing for their salaries, supplies, and transportation;
+ effectively motivate them and manage their administrative, information, logistics, and supply needs;
+ establish appropriate physical infrastructure and delivery models; and
+ provide safe working conditions.[13]

In other words, human resource improvements require more than just appropriate numbers of the right types of health workers; improvements are required in how the health system creates and supports health workers and in the political context that is needed to achieve and implement reforms so that they can achieve improvements in health objectives.[14]

In many countries, interventions focus on one aspect of human resources or another, with some degree of success; however, very few take the comprehensive, integrated approach seen in Malawi's Emergency Human Resources Program (EHRP), which can multiply single-issue benefits.[15] An effort to mitigate one of the severest human resources shortages in sub-Saharan Africa, the six-year program focuses on retention, deployment, recruitment, training, and tutor incentives for 11 priority cadres of health workers. The EHRP includes attracting unemployed or retired staff back into service, using expatriate staff to fill gaps temporarily, expanding domestic training capacity, and initiating salary top-ups and in-service incentives (particularly for rural services).[16] The plan

includes strengthening information and monitoring systems, and preliminary results demonstrate that the program is having a positive impact. There is some evidence to suggest a reduction in nurse migration and an increase in medical school applications, potentially due to improved future salaries.[17] This can be seen as a groundbreaking model to link the health workforce to health system strengthening as a whole. The government of Mozambique is similarly trying to undertake a comprehensive approach with its Health Workforce Development Plan for 2008–2015; however, it still needs partners to support and collaborate with the project for it to be successfully implemented.

To improve health workforce management at the country level, the WHO has recently published a guide to strategic planning for human resources. This tool focuses on the health system approach, suggesting indicators for assessing the financing, education, and management components of a health system that are needed to provide for an effective health workforce.[18] It also offers political strategies for gaining sufficient support for reforms designed to improve health workforce effectiveness. In particular, it recommends a careful analysis of the levels of financing available within the country resource envelope, appropriate levels of salary relative to other labor markets, an education system with the ability to provide sufficient qualified graduates in different categories, appropriate management, and system supports for health management information systems and logistics. To provide safe working conditions, the Joint Programme on Workplace Violence in the Health Sector—developed by the International Labour Organization (ILO), the International Council of Nurses (ICN), the WHO, and Population Services International—and the ICN itself have also issued practical guidelines.[19] Such efforts are critical to retaining health workers, particularly in developing countries.

Health workforce and outcomes

As the Toyako Framework for Action on Global Health acknowledges, there is a need for greater evidence to support recommended changes in health systems and the numbers and types of health workers who are needed to achieve improvements in health outcomes. Recent studies suggest an association between higher densities of health workers and both lower maternal and infant mortality rates and higher immunization rates.[20] These aggregate studies are not sufficient for causal analysis and do not account for different health systems and different skill mixes. These cross-country studies also do not take into consideration the distribution of health workers within a country and therefore do not account for

disparities in types of existing health workers, particularly between urban and rural areas. Indicative of the problem is the relative success of some countries with low densities of health workers in successfully moving forward toward achieving the MDGs. For example, data for the 2008 countdown cycle showed that 16 of 68 priority countries (24 percent) were on track to meet MDG 4.[21] Out of those 16 countries, 8 (Bangladesh, Eritrea, Haiti, Indonesia, Lao PDR, Morocco, Nepal, and Peru) are identified as experiencing health workforce crises in the 2006 *World Health Report*. This suggests that a health workforce crisis does not always create a crisis for achievement of the MDG 4 targets. Another example serves to illustrate that it takes more than numbers to improve health outcomes. Nigeria has 1.45 health workers per 1,000 people and Ghana has 0.93, two of the highest numbers in West Africa; however, while Ghana has some of the region's best health indicators, with a maternal mortality ratio (MMR) of 590 and under-five mortality rate (U5MR) of 100, Nigeria's are lagging with an MMR of 1,100 and U5MR of 183.[22]

Clearly, additional studies are necessary to understand the relationship between health outcomes on the one hand and health workforces and health system characteristics on the other. However, it is likely that in countries with low health status, low density of health workers, inadequate supply of low-level health workers, and low levels of financing, we need initiatives to increase an appropriately skilled health workforce and improve the financing, management, and education systems. By understanding these relationships, we can take better action to use health workforce inputs to gain better health outcomes.

Challenges for Health Workforces

While the WHO and the JLI have advocated increasing the numbers of doctors, nurses, and midwives, the challenge involves more than just increasing the number of health workers. Only increasing the number of health workers will not always improve health system performance or health outcomes, and there are broader systemic challenges to improving both the quantity and quality of HRH.

Inappropriate quantity and quality of the existing health workforce

Overcoming shortages: The target of 2.3 health workers for every 1,000 people is unrealistic in many countries while other countries face high

unemployment among certain cadres within the healthcare sector. Nonetheless, there is still clearly a need for increases in specific types of health workers in many low-income countries. Shortages can be caused by a variety of factors, including insufficient pools of high school graduates, lack of medical schools or other training facilities, HIV/AIDS, labor markets, and migration.

The first challenge is in the education system. Some countries do not have a sufficiently large pool of high school graduates to provide applicants to nursing and medical schools, and in many countries there is a deficiency in educational infrastructure to train health workers of the appropriate type and with adequate skills.[23] This is an area where the link between the health and education sectors must be strengthened.

Second, HIV/AIDS presents HRH challenges on multiple levels. HIV treatment **increases workloads for health workers, and of the workers them**selves are impacted by the disease, which increases sick leave and decreases their numbers.[24] The lack of qualified health workers is increasingly being recognized as a major constraint in scaling up of antiretroviral therapy in many low-income countries with high burdens of HIV/AIDS.[25] In addition, there is growing fear that the demand for increases in health workers for HIV/AIDS programs is shifting staff from other priority programs, suggesting a need for a comprehensive approach to addressing human resource needs.

Third, the market for human resources is often influenced by a range of political, economic, and social factors. Supply and demand of HRH is shaped not just by health needs and the number of workers trained but also by current wages and working conditions relative to other occupations. Shortages can result when governments lack the budgetary resources to hire workers at a competitive salary and provide them with the supplies and working conditions necessary for them to perform their jobs. To ensure that health workers actually work in the health field may require an increase in incentives to retain them and to improve equity of distribution, especially in rural areas.[26]

Finally, global market demand for HRH can lead to migration from countries that already have severe worker shortages to wealthier countries with higher wages and better working conditions. This issue of migration is discussed below, as it is one of major focuses of this chapter.

Improving skills of appropriate health workers: In addition to a deficiency in the number of health workers, the quality of key service providers is still lacking, especially in areas needed to address the MDGs. Continuing professional education is crucial to providing quality care, but recent studies have indicated that health workers in developing countries may

be particularly vulnerable to unequal distribution of continuing professional education opportunities due to small budgets, rural location, and biased selection processes. This unequal distribution can contribute to unequal quality of care and lower morale.[27]

In order to achieve health outcomes, such as the MDGs—particularly MDG 5—health workers require additional skills and supplies that are often not available, especially in rural areas. Higher-level health professionals, such as doctors, take longer and are more costly to train, and many resist rural postings. Lack of emergency obstetric care and blood banks in remote areas contributes to high levels of maternal and infant mortality. General physicians and paraprofessionals often do not have the obstetric skills necessary and, therefore, apparent access to services is not effective. One solution for this has been to train health workers who would otherwise be considered auxiliary to perform other tasks, from primary care to major surgery.

Task shifting from doctors, nurses, and pharmacists to assistants has met with some resistance from professional groups and with concerns about quality and safety.[28] However, several trials with community health workers have shown substantial reductions in child mortality.[29] In a more extreme example, clinical officers in Malawi and técnicos de cirurgia in Mozambique are able to perform caesarian sections. Studies in these two cases found no substantial difference in outcome between surgeries performed by doctors and those carried out by surgically trained non-doctors.[30] This kind of task shifting may be a short-term solution, but what is less clear is if it will prove to be an effective long-term solution. It may be necessary to reevaluate the skills and tasks assigned for each level of health worker to best fit the needs of each country and context.

More examples of effective use of community health workers are given in the 2008 *World Health Report*, in which the primary healthcare approach is reappraised. Examples include Malaysia's scaling up of 11 priority cadres of workers, Ethiopia's training of 30,000 health extension workers (HEW), Zambia's incentives to health workers to serve in rural areas, and the 80,000 Lady Health Workers in Pakistan. Of them, Ethiopia's innovative actions are unique in transferring responsibilities to community health workers. The Ministry of Health in Ethiopia launched the Health Extension Program (HEP) in 2003. The HEP is an innovative community-based program that aims to make essential health services available at the grassroots level. Its target is to train 30,000 HEW by 2009. The HEP is designed to provide services at the community level covering 16 health extension packages categorized under three major areas: disease prevention and control (i.e., HIV/AIDS, sexually transmitted infections, tuberculosis, and malaria); family health services; and

hygiene and environmental sanitation.[31] As of January 2008, a total of 24,000 HEW had been trained and deployed to communities.[32]

Using an example from Uganda, where HIV/AIDS requires a large amount of human resources, community health workers have taken on the responsibility of nurses in delivering HIV/AIDS services, while nurses have taken on that of doctors. This is said to have relieved the country's burden due to the health worker shortage to some extent.[33] In Tanzania, the lowest level skilled workers have taken on roles in achieving the MDGs. A case study of expanding priority interventions in Tanzania claims that a considerable number of tasks could be delivered by occupational categories with lower skill levels or other individuals at the community level.[34] For instance, drugstore staff might be authorized to dispense drugs for common conditions such as malaria.[35]

Overcoming macroeconomic policy constraints

Many of the above challenges are the result of the broader need for strategic planning for human resources and increased health system strengthening. Low salary levels, as well as inadequate management skills and key management systems (e.g., logistics, management information systems), are common systemic issues that need strengthening. As described above, low salaries can make it a challenge to hire and retain qualified health workers. In some countries, government spending on health workers' pay has been constrained by macroeconomic factors, such as the recruitment freezes and limits on the public sector wage bill that were often part of structural adjustment programs imposed as a condition of loans from the World Bank. In many countries, the macroeconomic policies do not allow governments to pay the salary levels that would retain health workers.[36] The Kampala Declaration and Agenda for Global Action takes up this issue and suggests that financial institutions take actions such as "country-specific analysis of macroeconomic conditions that impact wage ceilings, health spending, and constrain civil service hiring arrangements necessary for meeting established priority needs in the health sector."[37] It is important that dialogue between governments and institutions such as the World Bank and the International Monetary Fund (IMF) take into consideration the need to scale up the health workforce while ensuring that prospects for overall economic growth and long-term fiscal sustainability are maintained. The main problem, at this stage, is the total lack of transparency. The IMF and the World Bank talk about "fiscal space constraints," but nobody knows how they are estimated or applied.

Improving country capacity

As the JLI report states, country-led strategies constitute the primary engine for driving workforce development.[38] Country strategies have five key dimensions: 1) engaging leaders and stakeholders, 2) planning human investments, 3) managing for performance, 4) developing enabling policies, and 5) learning for improvement. Developing countries, alone or in collaboration, must strengthen their capacity for strategic planning, management, and policy development, but most low-density-high-mortality countries lack the capacity to do it alone.

As countries' roles are so crucial, the Kampala Declaration identified seven actions for them to take. However, the actions suggested in the declaration are for what each country *should* do, which is not the same as what each country *can* do. In most low-density-high-mortality countries, lack of capacity to carry out these seven actions will mean that little progress will take place. Each country should be better able to cary out these actions if they are supported by local or international consultants.

For example, in one low-income country in Southeast Asia, the Department of Personnel and Organization in the Ministry of Health made a draft strategic framework and implementation plan for the development of HRH in October 2007, assisted by the local WHO office. However, one year later, the draft remained a draft. The Japan International Cooperation Agency has tried to launch a skilled birth attendant program in the country, but because the implementation plan has not been finalized, the program is stuck in the planning stage. This case shows that, due to a lack of capacity in making decisions and in implementation, a "strategic framework and implementation plan" made little progress for more than a year. The same may happen in many low-income-high-mortality countries in Africa as well.

This example also suggests that only making a declaration or giving recommendations is not enough. There needs to be much more attention given to building capacity and converting good program design or good planning into actual programs. Even sending short-term experts in health systems may have limited utility. What is needed is a facilitator to move the actions forward for a sufficient period of time. This facilitation work is not the role of the G8. However, the G8 can contribute by proposing the formation of a framework to make it happen. As we saw in the Kampala Declaration, it is easy to understand what each country *should* do, but the understanding of what each country *can* do is more difficult. Each action needs midwifery support. Each country's ability to undertake these actions will emerge step by step as a

result of supporting efforts by locally available consultants, whether they are local or international.

To strengthen country capacity for health workforce management, the ILO's "social dialogue" approach may be useful. This approach includes negotiation and consultation, starting with the exchange of information between and among representatives of governments, employers, and workers on issues of common interest relating to economic and social policy.[39] This is one of the existing midwifery methods that facilitators may consider adopting, as its role is now widely recognized in advancing and sustaining reform processes in many areas of the health sector, **thus improving health**care and mitigating any negative impact on public health. An example of its implementation can be seen in Ghana, where social dialogue was initiated in 2002. For instance, to address retention and brain drain issues in the country, representatives of the government, employers, regulatory bodies, the private sector, training institutes, hospitals, and labor groups were brought together. The social dialogue involved bargaining and negotiations for incentives to retain healthcare workers, such as offering better working conditions and creating a committee for distribution of cars. As a result, tangible incentives were offered, including allowances for additional duty hours and cars for health workers.[40]

Tackling migration of human resources

Health workforce issues should be looked at not only within a single country's health system but also through the broader global lens of the international labor market. In an ideal world, the level of HRH would be determined by what is needed to maintain or improve the health status of the population. In reality, the market for human resources is often influenced by a range of political, economic, and social factors. Supply and demand of HRH is shaped not just by health needs and the number of workers trained but also by current wages and working conditions relative to other occupations.[41] A major concern in African and Asian countries is the migration of health workers to higher wage countries. Migration produces significant strains on the health system of many countries, often by taking away the more skilled workers in any category, producing shortages in specific categories and specialties and requiring increased production of health workers.[42] There are financial strains as well, as countries invest in training new health workers only to have these workers migrate. It has been estimated that Ghana alone has lost at least £35 million of

its training investment, while the UK has saved £65 million in training since 1998 by recruiting from Ghana.[43]

Health worker mobility is influenced by a range of "push" and "pull" factors. Deficiencies in the human resources components of a health system, such as training, appropriate staffing, competitive salaries, effective management, and safe working conditions, all serve to push health workers toward migration. Pulling workers toward the destination countries are opportunities for professional development, better wages, improved working conditions, and higher standards of living.[44] Ultimately, migration is driven by a shortage of workers in middle-income and wealthy countries and is likely to continue until destination countries address their own underlying causes of health worker shortages. Some of these causes include aging populations, feminization of the workforce, caps on enrollment in training programs (physicians), and periods of pay depression leading to a decline in enrollment in training programs (nurses).[45] While in the UK efforts to expand medical school output and change immigration policy have resulted in a surplus of applicants over available post-graduate training opportunities, in the United States inaccurate predictions of physician surplus have led to policies that will result in even greater shortages.[46] Both developed and developing countries need to establish policies to manage migration by improving data collection to facilitate good workforce planning, providing financial and non-financial incentives to encourage worker retention, and making agreements between countries to encourage professional development and exchange while limiting the possible detrimental effects of losing workers.[47] These efforts should be made to "anchor" health workers to resist the push and pull factors, particularly in low-income countries.

There is some evidence that migration may have a positive economic effect by providing remittances back to the supply countries.[48] Recent studies assessing the impacts of migration on availability of health workers and health status indicators have not found a negative association, suggesting that there is insufficient understanding of the impact of human resources supply on health systems and health outcomes.[49] This positive aspect of migration makes the migration issue more complex and urges us to deal with the health workforce issue not only as part of the health system but also as part of the lives of people in the low- and middle-income countries.

However, while there are significant gaps in knowledge about the causes and effects of migration, health system reforms designed to increase retention and reduce incentives to migrate—especially of the more skilled workers—should be promoted.

Facilitating donor coordination

Lack of coordination among donors and "bandwagoning" of donors all ganging up on one problem presents a more complex challenge to HRH. In 2008, the Global Economic Governance Program at Oxford University brought together a group of current and former health ministers and senior health officials from developing countries to discuss gaps and challenges they face in dealing with current global health financing and governance arrangements. According to their report, "a constant deluge of new initiatives, focusing on specific diseases or **issues, makes it extremely difficult for governments to develop and imple-**ment sound national health plans for their countries."[50] In other words, donors frequently shift their attention from one "fashion" to the next without regard to continuity or sustainability. The report also detailed widespread views that the inclination of donors to repeatedly create new initiatives, such as the parallel priorities and delivery of care by donors, weakens national strategies.[51] This difficulty was exacerbated by the absence of transparency among donors and restricted awareness by health ministries about where donors were directing funds. As one minister said about donors, "they like to monitor activities, but they do not like to be monitored and evaluated."[52]

Sridhar and Batniji argue that "the global health community should now move toward incorporating the concept of ownership into health assistance and realizing the principles of the Paris Declaration. Without systematic attention to the articulated needs of developing countries through consultation and real partnership, donors for global health will not achieve informed and inclusive decision making."[53] It is true that such incorporation of country leadership is inevitable, but not all countries have the capacity to perform the task.

The G8 has claimed that "acting as a whole" is important. Acting as a whole means acting together between donor agencies and recipient countries, but it also means the UN agencies, NGOs, and other civil society organizations acting together. However, in this context, it is crucial that the G8 countries first act as a whole. In a sense, this has been achieved by their funding for UN agencies; the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund); and other global health initiatives. In addition to the WHO and other UN agencies, each bilateral agency has a project office in most countries. Documents show that it is only the UK and the United States that are currently working together to achieve a common goal of health workforce strengthening. The UK and the United States are working together to strengthen the health workforce in Ethiopia, Kenya, Mozambique, and Zambia, but they are not coordinating with other countries in the same way. Bilateral and multilateral support do not

orchestrate common action even if they might have a common goal. Although each country has committed to overcoming the health workforce crisis together, no strong mechanism exists to allow all of them to work together at both the global and country level. Changes are needed to increase complementarity, avoid duplicated efforts, and ensure communications and transparency among donor agencies.

Opportunities for Improving the Health Workforce

Although there is not yet a cooperative force that works together toward a certain goal, **and each country has its own agenda, there are currently many re**sources that can be utilized for health workforce strengthening. These resources include recommendations and guidelines from different health organizations; country commitments, particularly those from G8 countries; several global health initiatives; the GHWA; and the human security approach. This section intends to provide an overview of these resources and their overlapping, yet independent, inputs that can be synthesized into a valuable driving force to propel us toward better solutions to the current health workforce crisis.

Recommendations and guidelines (see Annex 3)

Several organizations have published documents and codes that provide guidelines and recommendations targeting different topics and challenges for the health workforce crisis. In addressing potential negative impacts of health worker migration from developing countries to developed countries with higher salaries, the WHO is in the process of publishing a *Code of Practice on International Recruitment of Health Personnel*. The first draft was reviewed throughout September 2008. It provides ethical guidelines and principles for international recruitment by developed countries, while also acknowledging the basic rights of health workers. The code is said to be the first of its kind on a global scale for migration. Although it is not legally binding, the recommendations in the code can serve as powerful suggested "rules of the game" for countries' policy development on international recruitment of health workers.

The WHO published the report *Task Shifting—Global Recommendations and Guidelines* to propose an option for relieving the shortage of health professionals

in regions that have low health professional densities and high mortality rates by using trained paraprofessionals. It is an alternative consideration for some applicable countries that do not have sufficient human resource capacity yet wish to seek short-term relief for their health workforce crisis. Additionally, the GHWA and the WHO published *Scaling Up, Saving Lives* to address the shortage of health workers by drawing up proposals for scaling up education and training of health workers. Finally, the Kampala Declaration and Agenda for Global Action called on governments to commit to its proposed strategies to work as a whole in solving the health workforce crisis.

It is impossible for governments, donors, and facilitators to act as a whole without a set of "common denominators." These guidelines and policies from authoritative organizations, such as the WHO, provide an opportunity to improve policies for strengthening health systems, particularly human resources.

G8 political commitments (see Annex 1)

During the Fourth Tokyo International Conference on African Development in May 2008 and the Toyako G8 Summit in July 2008, Japan committed to helping increase and enhance the quality and quantity of HRH for 26 countries in Africa in order to increase health workforce coverage and fulfill the pledge of training 100,000 health workers. Later in July 2008, the United States added a human resources component to the reauthorization of the President's Emergency Plan for AIDS Relief (PEPFAR II), committing to a target of training and retention of at least 140,000 healthcare professionals and paraprofessionals. In September 2008, during the UN High Level Meeting on MDGs, the prime minister of the UK pledged to spend an estimated £450 million over the next three years to support national health plans for eight International Health Partnership countries, which would include the increased training of health workers. Although these commitments do not fill the gap in health workforce needs at the global level, they offer great opportunities to show how increasing inputs can produce output and outcomes. Success in these efforts could be leveraged to trigger more inputs in the coming years.

Global health initiatives

Global health initiatives such as the Global Fund, PEPFAR, and the Clinton Foundation provide assessment, financial, and technical assistance to tackle

various health challenges in developing countries. Although most of the funds are used to control specific diseases such as HIV/AIDS, malaria, and tuberculosis, the funds have also begun to be used for strengthening health systems. The global initiatives may have their own targets, but they all have a common understanding of the importance of strengthening health systems with respect to HRH. The detailed actions and commitments from these organizations are outlined in Annex 2.

In addition to financial assistance, by expanding the health workforce, these global initiatives are helping target countries build their capacity to strengthen health systems as one of the side effects of their activities. For example, the Clinton Foundation, whose objectives vary from fighting HIV/AIDS to supporting HRH programs, focused in its annual meeting in September 2008 on efforts to train and manage the largest expansion of health workers in history to improve global health. In addition, PEPFAR committed to funding and training a considerable number of healthcare professionals and paraprofessionals in 15 developing countries as part of its HIV/AIDS initiative. Furthermore, the Clinton Foundation and the US Agency for International Development (USAID) even provide all-around assistance in some areas that include not only financial and technical assistance but also assessments and analytical support.

Global Health Workforce Alliance

G8 countries themselves can act as a whole much better if an innovative mechanism is created. The GHWA has the potential to take on such a task at the global level, but it needs more powerful mechanisms to work at the country level. At the global level, all of the G8 countries except Japan support the GHWA, although Japan is also becoming a member. The GHWA operates in two strategic directions: accelerating action in individual countries and addressing global constraints that impede country-level action. In its two-year lifespan, the GHWA has developed programs and guidelines that enable countries to plan and manage health workforce issues. Task forces have been set up to advise on advocacy, workforce education, training, management, migration and retention of staff, universal access to HIV prevention and treatment, and the role of the private sector.[54] Although the GHWA is trying to accelerate actions at the country level, it may face implementation difficulties as it does not have country offices. The WHO's country offices might support its work, but health workforce or health systems experts are not always available in all

of the WHO offices. The opportunities that the GHWA can offer should be used more practically.

Taking a human security approach to overcoming the health system crisis

The health workforce crisis is not only a crisis of health workers but also of health systems, particularly among low-density-high-mortality countries. In these countries, more than one building block is not functioning appropriately, and these blocks are synergistically worsening the health system as a whole. As a result, most of these countries have shown little progress in achieving the health-related MDGs.

According to data compiled by the MDG monitor, 52 low- and middle-income countries are off track on MDGs 4 and 5. Most of these countries are low-density-high-mortality countries, which have shown little improvement in health outcomes over the years. Under such conditions, just increasing the density of health workers will improve neither health system performance nor health outcomes. We may need a health system repair package program, similar to a comprehensive humanitarian support package, that includes a basic package of systems interventions. Malawi's EHRP is one such example.[55] The Capacity Project by USAID is also similar to this approach, and it may be a better option in some countries. Another potential strategy is what has come to be known as the human security approach.

Over the past 15 years, the concept of security has moved beyond a focus solely on the security of nations to include a focus on the security of individuals and communities. To support them, the human security approach covers economic, food, health, environmental, personal, community, and political security. The human security approach has the potential to contribute to improved health for several reasons. First, as a human-centered approach, human security focuses on the actual needs of a community, as identified by the community. Second, human security highlights people's vulnerability and aims to help them to build resilience to current and future threats and to help them to create an environment in which they can protect their own and their family's health even in the face of other challenges. Third, human security aims to strengthen the interface between protection and empowerment. In the context of public health, a protection approach aims to strengthen institutions in a society to prevent, monitor, and anticipate health threats. On the other hand, an empowerment approach aims to enhance the capacity of individuals and communities to assume responsibility for their own health. Human security also looks at the

interface between these two approaches and encourages those with political and economic power to create an enabling environment for individuals and communities to have more control over their own health.[56]

The last aspect of the human security approach is similar to one of primary healthcare reform, namely "public policy reforms to promote and protect the health of communities."[57] The other three sets of primary healthcare reforms— "universal coverage reforms to improve health equity," "service delivery reforms to make health systems people-centered," and "leadership reforms to make health authorities more reliable"—are also closely related to the human security approach, as they all put focus on individuals and communities.

Although the momentum of global health is still strong, such momentum has not sufficiently benefited people living in most low-density-high-mortality countries. Now is the time to achieve a breakthrough for these countries. The human security approach has the potential to overcome this challenge.

Policy recommendations

To take advantage of the opportunities, the G8 should take the following actions:

1) Strengthen the capacity of countries to plan, implement, and evaluate health workforce programs so that they can more effectively use the existing health workforce and G8 commitments
   a) Develop evaluation mechanisms for health workforce progress at the country level
   b) Identify ways to change macroeconomic policies to reduce constraints on expanding the health workforce
   c) Strengthen international networks of higher education institutions to provide access to health and medical education in areas with limited resources
2) Address the demand-side causes of international health worker migration
   a) Clean their own houses and increase the number of health workers in their own countries using their own resources
   b) Support the WHO code of practice to address migration issues
   c) Seek practical solutions that protect both the right of individuals to seek employment through migration and the right to health for all people

3) Conduct an annual review of actions by G8 countries to improve the health workforce

   a) Assess what the G8 countries are doing, what has worked, and evidence to support this, using a standard set of common measures

   b) Use this review to evaluate how health systems are performing, identify gaps in financing and information, develop evidence-based best practices, and increase knowledge on how to improve health system performance through strengthening of human resources, as well as on how well G8 countries are following through on what they have pledged to do

Annex 1: G8 Commitments

Country	Target	Type of Assistance	Details	Other health system support
Japan	26 African countries	Training of 100,000 health workers	• Supports increasing/enhancing the quality and quantity of HRH	
Italy	African countries	Human resource development and financial assistance	• Supports health system and human resource development in collaboration with NGOs • Major investments often in the form of sector budget support in 6 African countries	
Canada	Mozambique, Mali, Tanzania, Zambia, Nigeria, Ethiopia, Malawi, Niger, and Ghana	Financial assistance	• Supports the implementation of national health sector strategic plans, which enables it to recruit, train, and retain additional health workers at all levels of their health systems and to expand coverage of front-line health services for their populations	
France	20 African and 3 Asian countries	Human capacity development and financial support	• Trains people in developing countries in health • Makes annual contribution of €300 million to the Global Fund (See Global Fund in Annex 2)	
US	Ethiopia, Kenya, Mozambique, and Zambia	Assessment	• Identifies best way to maximize support to strengthen human resources and health systems	USAID works with governments to expand the reach and improve the quality of care of community-based health insurance and supports development of pharmaceutical management systems in more than 20 countries

UK	Ethiopia, Kenya, Mozambique, and Zambia	Financial assistance	• Plans to spend at least US$420 million on health, including health workforce, over the next three years	
Russia	4 African countries	Training and education	• Trains and provides education to support strategies to control malaria and a framework for a debt-relief initiative	
Germany	7 African countries	Human capacity development	• Health worker–related programs: assists with reintegration upon return to home country after training in Germany	Spends €500 million annually to fight HIV, malaria, and tuberculosis and to strengthen health systems

Reference:
G8 Health Experts Group, *Toyako Framework for Action on Global Health—Report of the G8 Health Experts Group*, http://www.g8summit.go.jp/doc/pdf/0708_09_en.pdf.

Annex 2: Existing Health Workforce Strengthening Resources from Global Health Initiative

Organization	Target	Type of Assistance	Details	Other
Global Fund	Fight HIV/AIDS, tuberculosis, and malaria	Financial assistance: international health financing	• Committed US$11.3 billion in 126 countries to date, 23 percent for human resources and 9 percent on infrastructure and equipment	57 percent of the approved funding was contributed to Africa
World Bank	Developing countries	Financial and technical assistance	• Provides low-interest loans, interest-free credit, and grants • Invests in education, health, public administration, infrastructure, financial and private sector development, agriculture, and environmental and natural resource management in developing countries	
PEPFAR	15 countries: Botswana, Ethiopia, Haiti, Mozambique, Nigeria, South Africa, Uganda, Zambia, Côte d'Ivoire, Guyana, Kenya, Namibia, Rwanda, Tanzania, and Vietnam	Financial assistance	• Estimate investment of US$309 million for training health workers in 2008 • Plans to support 2.7 million trainings to target training and retaining of 140,000	Heaviest focus is on HIV/AIDS-related actions; however the sideways approaches also benefit health workforce strengthening
Clinton Foundation, Clinton Global Initiatives (CGI)	In partnership with 10 African countries for HRH programs	Health system assessments and financial assistance through fund raising	• Interventions include training, clinical mentoring, recruiting, capacity building, and curriculum development	Clinton HIV/AIDS Initiative works with markets and governments to make treatments more accessible in the developing world

| DFID | 6 African countries, Cambodia, and Nepal | Financial assistance | • Invests £450 million over the next three years to support national health plans, incorporating training of more nurses, midwives, and doctors | |
| USAID Capacity Project | Developing countries; build and sustain the health workforce (Latin America, Africa, Eastern Europe, and Asia) | Assessment, financial, and technical support

Global leadership; generating, organizing, and communicating knowledge about HRH

Provides country-level support to implement effective and sustainable HRH programs | • Supports improved workforce planning and leadership
• Assists in developing better education and training programs
• Assists in strengthening systems to support workforce performance
• Encourages health workers to remain at their posts | Participated in the development of the HRH Action Framework, published in the 2006 *World Health Report* |

References:

Global Fund, "Distribution of Funding after 7 Rounds," http://www.theglobalfund.org/en/funds_raised/distribution/.

World Bank, http://www.worldbank.org/ (accessed October 16, 2008).

PEPFAR, "Report to Congress by the US. Global AIDS Coordinator on Health Care Worker Training 2008," http://www.pepfar.gov/documents/organization/105844.pdf.

Clinton Foundation, http://www.clintonfoundation.org/what-we-do/clinton-hiv-aids-initiative/what-we-ve-accomplished.

The Capacity Project, http://www.capacityproject.org/index.php?option=com_content&task=view&id=32&Itemid=66.

Annex 3: Existing recommendations

Code of Practice on International Recruitment of Health Personnel

Upon recognizing the significance of migration of health workers for health systems, the World Health Assembly adopted resolution WHA57.19, which called for the development of a Code of Practice on the International Recruitment of Health Personnel. Web-based public hearings on the first draft code of practice were held by the WHO on September 1–30, 2008. Those who were invited to contribute to the hearing included member states, health workers, recruiters, employers, academic and research institutions, health professional organizations, and relevant sub-regional, regional, and international organizations. The initiative provided all members concerned with international recruitment of health personnel an opportunity to comment on the draft. Input has been received and published on the WHO website.

Objectives of the code

The code of practice has four main objectives:

1. Establish and promote voluntary principles, standards, and practices for the international recruitment of health personnel
2. Serve as an instrument of reference to help member states establish or improve the legal and institutional framework required for the international recruitment of health personnel and in the formulation and implementation of appropriate measures
3. Provide guidance that may be used where appropriate in the formulation and implementation of bilateral agreements and other international legal instruments, both binding and voluntary
4. Facilitate and promote international discussion and advance cooperation on matters related to the international recruitment of health personnel

Key elements of the code

The key elements of the first draft of the Code of Practice on International Recruitment of Health Personnel can be summarized into five categories: ethical and fair recruitment, partnership and mutuality of benefits, safeguarding the health workforce, monitoring of international health worker migration flows, and accession to and withdrawal from the code.

Although it is not legally binding, the framework is anticipated to promote ethical recruitment, the protection of migrant health workers' rights, and remedies for addressing the economic and social impact of health worker migration in developing countries. While several other codes of practice for the international recruitment of healthcare professionals already exist on a regional level, the WHO Code of Practice is expected be the first of its kind on a global scale for migration (WHO 2007, WHO 2008).

Source:

Resolution WHA 57.19

> http://www.who.int/gb/ebwha/pdf_files/WHA57/A57_R19-en.pdf

WHO Code of Practice on International Recruitment of Health Personnel

> http://www.who.int/bulletin/volumes/86/10/08-058578.pdf

Summary of comments on the code of practice

> http://www.who.int/hrh/public_hearing/comments/en/print.html

Kampala Declaration and Agenda for Global Action

Endorsed by the participants of the first Global Forum on Human Resources for Health, held in Kampala, Uganda, on March 6, 2008, the Kampala Declaration and Agenda for Global Action serves to bring global attention to the worsening health worker crisis.

The contents of the Kampala Declaration consist of 12 elements calling upon:

1. government leaders to provide the stewardship to resolve the health worker crisis, involving all relevant stakeholders and providing political momentum to the process;
2. leaders of bilateral and multilateral development partners to provide coordinated and coherent support to formulate and implement comprehensive country health workforce strategies and plans;
3. governments to determine the appropriate health workforce skill mix and to institute coordinated policies, including through public-private partnerships, for an immediate, massive scale-up of community and mid-level health workers, while also addressing the need for more highly trained and specialized staff;
4. governments to devise rigorous accreditation systems for health worker education and training, complemented by stringent regulatory frameworks developed in close cooperation with health workers and their professional organizations;

5. governments, civil society, the private sector, and professional organizations to strengthen leadership and management capacity at all levels;

6. governments to assure adequate incentives and an enabling and safe working environment for effective retention and equitable distribution of the health workers;

7. while acknowledging that migration of health workers is a reality and has both positive and negative impacts, countries to put appropriate mechanisms in place to shape the health workforce market in favor of retention. The WHO will accelerate negotiations for a code of practice on the international recruitment of health personnel;

8. all countries to work collectively to address current and anticipated global health workforce shortages. Richer countries will give high priority and adequate funding to train and recruit sufficient health personnel from within their own countries;

9. governments to increase their own financing of the health workforce, with international institutions relaxing the macro-economic constraints on their doing so;

10. multilateral and bilateral development partners to provide dependable, sustained, and adequate financial support and immediately to fulfill existing pledges concerning health and development;

11. countries to create health workforce information systems, to improve research, and to develop capacity for data management in order to institutionalize evidence-based decision making and enhance shared learning; and

12. the GHWA to monitor the implementation of this Kampala Declaration and Agenda for Global Action and to re-convene this forum in two years' time to report and evaluate progress.

Besides the Kampala Declaration, the Kampala Agenda for Global Action proposed six fundamental and interconnected strategies that intend to translate political will, commitments, leadership, and partnership into effective actions in addressing the health workforce crisis:

1. Building coherent national and global leadership for health workforce solutions;

2. Ensuring capacity for an informed response based on evidence and joint learning;

3. Scaling up health worker education and training;

4. Retaining an effective, responsive, and equitably distributed health workforce;

5. Managing the pressures of the international health workforce market and its impact on migration; and
6. Securing additional and more productive investment in the health workforce.

Source:

Kampala Declaration and Agenda for Global Action:

http://www.who.int/workforcealliance/Kampala%20Declaration%20and%20Agenda%20web%20file.%20FINAL.pdf

Task shifting to tackle health worker shortage: global recommendation and guidelines

The WHO, together with PEPFAR and UNAIDS, has developed global guidelines for task shifting. These guidelines were formally launched during the first ever Global Conference on Task Shifting held in Addis Ababa on January 8–10, 2008. The conference convened health ministers and other senior government officials, opinion leaders, United Nations agencies, and NGOs from both industrialized and resource-constrained countries, and, concluded with an endorsement of the Addis Ababa Declaration on Task Shifting.

Task shifting is the name given to a process of delegation whereby tasks are moved, where appropriate, to less specialized health workers. By reorganizing the workforce in this way, task shifting presents a viable solution for improving healthcare coverage by making more efficient use of the human resources already available and by quickly increasing capacity while training and retention programs are expanded.

Example: task shifting in Uganda

In Uganda, task shifting is already the basis for providing antiretroviral therapy. With only one doctor for every 22,000 patients and an overall health worker deficit of up to 80 percent, Uganda is making a virtue of necessity. Uganda's nurses are now undertaking a range of tasks that were formerly the responsibility of doctors. In turn, tasks that were formerly the responsibility of nurses have been shifted to community health workers, who have training but not professional qualifications. As part of the approach, Uganda has expanded its human resources for delivering HIV and AIDS services by creating a range of non-professional types of healthcare

workers. These people receive specific training for the tasks they are asked to perform.

Source:
Addis Ababa Declaration on Task Shifting
  http://www.who.int/entity/healthsystems/task_shifting/Addis_Declaration_EN.pdf

Notes

1. A. Haines and D. Sanders, "Building Capacity to Attain the Millennium Development Goals," *Transactions of the Royal Society of Tropical Medicine & Hygiene* 99, no. 10 (2005):721–726; M. Chopra, S. Munro, J. N. Lavis, G. Vist and S. Bennett, "Effects of Policy Options for Human Resources for Health: An Analysis of Systematic Reviews," *Lancet* 371, no. 9613 (2008): 668–674.

2. Joint Learning Initiative, *Human Resources for Health: Overcoming the Crisis* (Cambridge: Harvard University Press, 2004).

3. World Health Organization (WHO), *World Health Report 2006: Working Together for Health* (Geneva: WHO, 2006).

4. H. Schneider, D. Blaauw, L. Gilson, N. Chabikuli and J. Goudge, "Health Systems and Access to Antiretroviral Drugs for HIV in Southern Africa: Service Delivery and Human Resources Challenges," *Reproductive Health Matters* 14, no. 27 (2006):12–23.

5. WHO, *World Health Report 2006*.

6. WHO, "The Kampala Declaration and Agenda for Global Action," http://www.who.int/workforcealliance/Kampala%20Declaration%20and%20Agenda%20web%20file.%20FINAL.pdf (accessed October 2008).

7. G8 Health Experts Group, Toyako Framework for Action on Global Health—Report of the G8 Health Experts Group, http://www.g8summit.go.jp/doc/pdf/0708_09_en.pdf (accessed October 1, 2008).

8. WHO, *World Health Report 2006*.

9. Ibid.

10. African Council for Sustainable Health Development (ACOSHED), *For as Much and With as Much: Sustaining Commitment to Africa's Human Resources and Health Systems Crisis*, forthcoming 2008.

11. Ibid.

12. M. R. Reich, K. Takemi, M. J. Roberts and W. C. Hsiao, "Global Action on Health Systems: A Proposal for the Toyako G8 Summit," *Lancet* 371, no. 9615 (2008):865–9.

13. Joint Learning Initiative, *Human Resources for Health*; WHO, *World Health Report 2006*; A. K. Rowe, D. de Savigny, C. F. Lanata and C. G. Victora, "How Can We Achieve and Maintain High-Quality Performance of Health Workers in Low-Resource Settings?" *Lancet* 366, no. 9490 (2005): 1026-1035; N. Crisp, B. Gawanas and I. Sharp (Task Force for Scaling Up Education and Training for Health Workers), "Training the Health Workforce: Scaling Up, Saving Lives," *Lancet* 371, no. 9613 (2008): 689–91.

14. T. Bossert, T. Barnighausen, A. Mitchell, D. Bowser and G. Gedick, *Assessing Financing, Education, Management and Policy Context: Strategic Planning for Human Resources for Health* (Geneva: WHO, 2007).

15. J. Connell, P. Zurn, B. Stilwell, M. Awases and J. Braichet, "Sub-Saharan Africa: Beyond the Health Worker Migration Crisis?" *Social Science & Medicine* 64, no. 9 (2007):1876–91; D. Palmer, "Tackling Malawi's Health Crisis," *Reproductive Health Matters* 14, no. 27 (2006):27–39.

16. Palmer, "Tackling Malawi's Health Crisis."

17. Global Health Workforce Alliance, *Scaling Up, Saving Lives* (Geneva: WHO, 2008).

18. Bossert, Barnighausen, Mitchell, Bowser and Gedick, *Assessing Financing, Education, Management and Policy Context*.

19. Joint Programme on Workplace Violence in the Health Sector (by ILO, ICN, WHO, PSI), *Framework Guidelines for Addressing Workplace Violence in the Health Sector* (Geneva: International Labour Organization [ILO], 2002); International Council of Nurses, *Safe Staffing Save Lives: Information and Action Tool Kit*, http://www.icn.ch/indkit2006.htm (accessed October 2008).

20. S. Anand and T. Barnighausen, "Human Resources and Health Outcomes: Cross-Country Econometric Study," *Lancet* 364, no. 9449 (2004):1603–09; S. Anand and T. Barnighausen, "Health Workers and Vaccination Coverage in Developing Countries: An Econometric Analysis," *Lancet* 369, no. 9569 (2007):1277–85.

21. Countdown Coverage Writing Group, on behalf of the Countdown to 2015 Core Group, "Countdown to 2015 for Maternal, Newborn, and Child Survival: The 2008 Report on Tracking Coverage of Interventions," *Lancet* 371, no. 9620 (2008):1247–58.

22. ACOSHED, *For as Much and With as Much.*

23. Bossert, Barnighausen, Mitchell, Bowser and Gedick, *Assessing Financing, Education, Management and Policy Context.*

24. B. Marchal, V. De Brouwere and G. Kegels, "HIV/AIDS and the Health Workforce Crisis: What Are the Next Steps?" *Tropical Medicine & International Health* 10, no. 4 (2005): 300–4.

25. K. Kober and W. Van Damme, "Public Sector Nurses in Swaziland: Can the Downturn Be Reversed?" *Human Resources for Health* 4 (2006): 13.

26. M. Vujicic and P. Zurn, "The Dynamics of the Health Labour Market," *International Journal of Health Planning and Management* 21, no. 2 (2006): 101–15.

27. H. Aiga and C. Kuroiwa, "Quantity and Distribution of Continuing Professional Education Opportunities among Healthcare Workers in Ghana," *Journal of Continuing Education in Nursing* 37, no. 6 (2006):270–9.

28. C. Hongoro and B. McPake, "How to Bridge the Gap in Human Resources for Health," *Lancet* 364, no. 9443 (2004):1451–56.

29. A. Haines, D. Sanders, U. Lehmann, et al., "Achieving Child Survival Goals: Potential Contribution of Community Health Workers," *Lancet* 369, no. 9579: 2121–31; L. Huicho, R. W. Scherpbler, A. M. Nkowane, C. G. Victora, and the Multi-Country Evaluation of IMCI Study Group, "How Much Does Quality of Child Care Vary between Health Workers with Differing Durations of Training? An Observational Multicountry Study," *Lancet* 372, no. 9642 (2008): 910–16.

30. P. M. Fenton, C. J. M. Whitty and F. Reynolds, "Caesarean Section in Malawi: Prospective Study of Early Maternal and Perinatal Mortality," *BMJ* 327, no. 7415 (2003):587; S. Bergström, "Who Will Do the Caesareans When There Is No Doctor? Finding Creative Solutions to the Human Resource Crisis," *BJOG: An International Journal of Obstetrics & Gynaecology* 112, no. 9 (2005):1168–9.

31. H. Argaw, *The Health Extension Program (HEP) of Ethiopia: Summary of Concepts, Progress, Achievements and Challenges*, WHO Ethiopia country office, 2007, http://www.aaahrh.org/2nd_Conf_2007/Cases/Ethiopia-Argaw%20Health%20Extension%20Program.doc (accessed October 23, 2008).

32. Tedros Adhanom, Minister of Health, Ethiopia, Speech given at the International Conference on Task Shifting, Addis Ababa, Ethiopia, January 10, 2008. http://www.moh.gov.et/index.php?option=com_content&task=view&id=77.

33. WHO, *Task Shifting Global Recommendations and Guidelines* (Geneva: WHO, 2008).

34. C. Kurowski, K. Wyss, S. Abdulla and A. Mills, "Scaling up Priority Health Interventions in Tanzania: The Human Resources Challenge," *Health Policy and Planning* 22, no. 3 (2007):113–27.

35. C. Goodman et al., "Retail Supply of Malaria-Related Drugs in Rural Tanzania: Risks and Opportunities," *Tropical Medical & International Health* 9, no. 6 (2004): 655–63.

36. K. McColl, "Fighting the Brain Drain," *BMJ* 337 (2008):a1496.

37. WHO, "The Kampala Declaration."

38. Joint Learning Initiative, *Human Resources for Health.*

39. ILO, *Social Dialogue in the Health Services: A Tool for Practical Guidance* (Geneva: ILO, 2005).

40. D. Y. Dovlo, "Social Dialogue in the Health Sector: Case Study Ghana," *International Labour Organization Working Paper* 234, 2005.

41. Vujicic and Zurn, "Dynamics of the Health Labour Market."

42. WHO, *World Health Report 2006.*

43. T. Martineau, K. Decker and P. Bundred, "'Brain Drain' of Health Professionals: From Rhetoric to Responsible Action," *Health Policy* 70, no. 1 (2004): 1–10; Save the Children and Medact, "Whose Charity? Africa's Aid to the NHS," http://medact.org/content/Skills%20 drain/Whose%20charity%204%20page.pdf (accessed November 24, 2008).

44. D. Kline, "Push and Pull Factors in International Nurse Migration," *Journal of Nursing Scholarship* 35, no. 2 (2003): 107–11.

45. R. Cooper, T. E. Getzen, H. McKee and P. Laud, "Economic and Demographic Trends Signal an Impending Physician Shortage," *Health Affairs* 21, no. 1 (2002):140–54; J. Buchan and J. Sochalski, "The Migration of Nurses: Trends and Policies," *Bulletin of the World Health Organization* 82, no. 8 (2004):587–94; B. Pond and B. McPake, "The Health Migration Crisis: The Role of Four Organisation for Economic Cooperation and Development Countries," *Lancet* 367, no. 9520 (2006):1448–55.

46. G. Winyard, "Medical Immigration: The Elephant in the Room," *BMJ* 335, no. 7620 (2007):593–5; R. A. Cooper, "It's Time to Address the Problem of Physician Shortages: Graduate Medical Education is the Key," *Annals of Surgery* 246, no. 4 (2007):527–34.

47. B. Stilwell, K. Diallo, P. Zurn, et al., "Migration of Health-Care Workers from Developing Countries: Strategic Approaches to Its Management," *Bulletin of the World Health Organization* 82, no. 8 (2004):595–600.

48. International Organization for Migration (IOM), "IOM and Remittance: Definition, Scale and Importance of Remittance for Development and Poverty Alleviation," http://www.iom.int/unitedstates/Fact%20Sheets/PDFs/IOM%20and%20Remittances.pdf#search=%27remittance%20 for%20development%20IOM%27 (accessed on October 1, 2008).

49. M. Clemens, "Do Visas Kill? Health Effects of African Health Professional Emigration," *Center for Global Development Working Paper* no. 114 (2007).

50. Global Economic Governance Program, "Setting a Developing Country Agenda for Global Health—A Preliminary Report of a High-Level Working Group" (May 2008), http://www. globaleconomicgovernance.org/docs/Working%20Group%20Report%20May%202008.pdf (accessed October 24, 2008).

51. Ibid.

52. Ibid.

53. D. Sridhar and R. Batniji, "Misfinancing Global Health: A Case for Transparency in Disbursements and Decision Making," *Lancet* 372, no. 9644 (2008): 1185–91.

54. F. Omaswa, "Human Resources for Global Health: The Time for Action is Now," *Lancet* 371, no. 9613 (2008): 625–6.

55. Connell, Zurn, Stilwell, Awases and Braichet, "Sub-Saharan Africa"; Palmer, "Tackling Malawi's Health Crisis."

56. K. Takemi, M. Jimba, S. Ishii, Y. Katsuma and Y. Nakamura (Working Group on Challenges in Global Health and Japan's Contribution), "Human Security Approach for Global Health," *Lancet* 372, no. 9632 (2008):13–4.

57. WHO, *The World Health Report 2008—Primary Health Care: Now More than Ever* (Geneva: WHO, 2008)

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