

## Taking stock:

# Health worker shortages and the response to AIDS

In August 2006, the World Health Organization (WHO) launched a coordinated global effort to address a major and often overlooked barrier to preventing and treating HIV: the severe shortage of health workers, particularly in low- and middle-income countries.

Called 'Treat, Train, Retain' (TTR), the plan is an important component of WHO's overall efforts to strengthen human resources for health and to promote comprehensive national strategies for human resource development across different disease programmes. It is also part of WHO's effort to promote universal access to HIV/AIDS services. TTR will strengthen and expand the health workforce by addressing both the causes and the effects of HIV and AIDS for health workers. Meeting this global commitment will depend on strong and effective health care systems that are capable of delivering services on a scale much larger than today's.

### TREAT

a package of HIV treatment, prevention, care and support services for health workers who may be infected or affected by HIV and AIDS.

### TRAIN

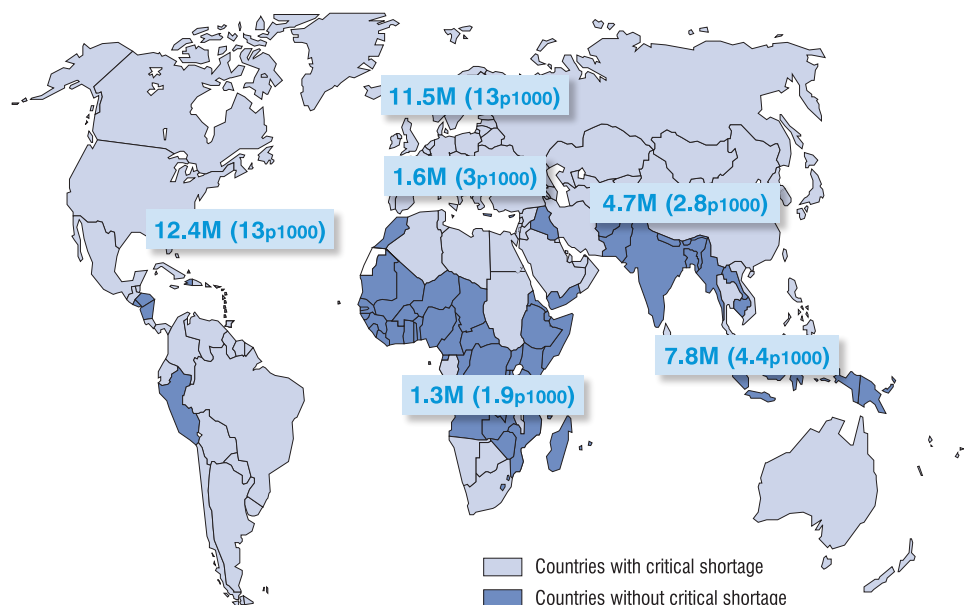
measures to empower health workers to deliver universal access to HIV services, including pre-service and in-service training for a 'public health' approach.

### RETAIN

strategies to enable public-health systems to retain workers, including financial and other incentives, occupational health and safety and other measures to improve the workplace as well as initiatives to reduce the migration of health care workers.

Health services depend on having the right people, with the right skills, in the right place. Yet, the world is experiencing a chronic shortage of well-trained health workers, a crisis felt most acutely in those countries that are experiencing the greatest public health threats. There are 57 countries, mostly in sub-Saharan Africa but also including Bangladesh, India and Indonesia that face crippling health workforce shortages. WHO estimates that over 4 million health workers are needed to fill the gap and the global deficit of doctors, nurses and midwives in particular is no less than 2.4 million. Sub-Saharan Africa faces the greatest challenges. With 11% of the world's population and 24% of the global burden of disease, the region has only 3% of the world's health workers commanding less than 1% of world health expenditure. By contrast, the WHO Region of

**Figure 1**  
Number of health care workers (density/p 1000 people) in the WHO regions



Data source: World Health Report 2006

the Americas, with 10% of the global burden of disease, has 37% of the world's health workers and spends more than 50% of the world's health financing.

Skill mix and distributional imbalances compound today's problems. In many countries, the skills of limited yet expensive professionals are not well matched to the local profile of health needs and almost all countries suffer from urban concentration and rural deficits. Although, on average, around half of the population lives in rural areas, more than 75% of doctors and over 60% of nurses are to be found in urban areas.

The reasons for the health workforce shortage include poor pay and conditions, lack of training and migration. But the problem is particularly complex in those countries most affected by HIV. For where HIV is prevalent, it also contributes to the shortage by rendering the health workers themselves vulnerable to death and disease. Estimates show that Botswana lost 17% of its health workforce to AIDS between 1999 and 2005. If no action is taken, it is projected that a full 40% of the health workforce there will die between 1999 and 2010. In Lesotho and Malawi, death from AIDS is the largest cause of health workforce attrition.

In summary, the response to AIDS depends largely on people who are themselves getting sick and dying. This is why there is now a need for more targeted interventions to support these health workers, enable them to deliver good care and keep them in their positions.

## The face of the crisis

Figure 2

**Fear of HIV infection as well as stress and burnout have been shown to cause health workers to leave active service in HIV-affected communities.**

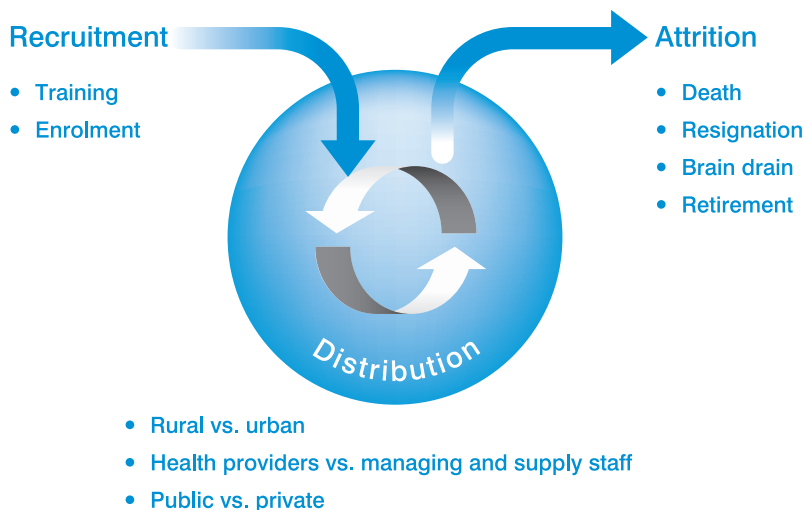


Figure 2 illustrates the cause of the health workforce problem as a work-life cycle of three phases: recruitment, distribution and attrition. There are too few people being trained and enrolled in public-health systems. Then there is uneven distribution of the pool of skilled workers with high concentrations in urban areas and many working in the private sector rather than in the public-health service. Many resign due to the pressure of poor working conditions and low pay. Others migrate to better jobs abroad or with the private sector and nongovernmental organizations (NGOs). But the leading cause of attrition is HIV itself. In the countries where HIV is prevalent, huge numbers of skilled health workers simply fall sick and die.

The disease also causes ailing staff to miss work and others to take time out to care for sick relatives. The average worker living with HIV can be absent from work for up to 50% of the expected time in their final year of life. Moreover, fear of HIV infection as well as stress and burnout have been shown to cause health workers to leave active service in HIV-affected communities.

# Cause and effect

**There are not enough health workers to deliver on the target of universal access to HIV treatment.**

Antiretroviral therapy and other HIV services save lives. In affluent nations, where treatment has been available since the mid-1990s, there has been a 70% decline in AIDS-related deaths since the introduction of antiretroviral therapy and comprehensive HIV management.

Equally compelling are the data that suggest a direct correlation between higher numbers of health-service providers and higher rates of access to antiretroviral therapy among those who need it. Table 1 compares antiretroviral therapy coverage rates of 14% in Lesotho, where there are only 20.9 health workers per 1000 people in need of treatment, to a rate of 51% in Uganda, which has a much higher density of 145.5 health workers per 1000 people in need of the drugs.

**Table 1**  
**Density of health care workers and ART coverage**

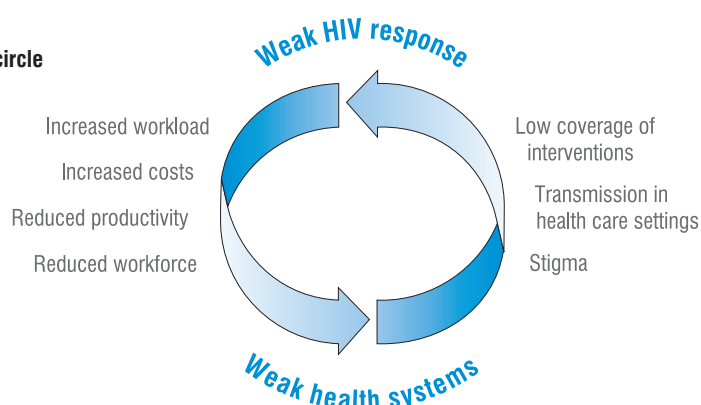
Country	Number of health service providers	Number of people in need of ART	Density (per 1000 people in need of ART)	ART coverage
Lesotho	1 212	58 000	20.9	14%
Malawi	7 530	169 000	44.6	20%
Uganda	21 534	148 000	145.5	51%

Data source: World Health Report 2006

The conclusion seems simple: improvements in the numbers and skills of the health workforce could transform the response to HIV and save millions of lives.

But the health workforce crisis is an inextricable part of a vicious circle of weak health systems and weak HIV response. Weak health systems mean low coverage of HIV services. Prevalence rises, which, in turn, places an increased burden on the health services. An ailing health workforce further undermines already weak health systems and weak health systems result in an inadequate response to the HIV epidemic (Figure 3).

**Figure 3**  
**The vicious circle**



Against this background, the need for a plan to strengthen the health workforce in the context of AIDS – and one that is aligned with broader health systems strengthening – has become clear. Indeed, without action on this front, the global commitments to the Millennium Development Goals (MDGs), and to providing universal access to HIV services, will almost certainly not be met.

The plan must address all three elements of the work-life cycle. This can be achieved by preventing HIV among health workers and treating those who are infected; expanding the

workforce through training new people and increasing the skills of the existing health staff; and by retaining skilled staff in the public-health service where they can be most effective in delivering services to the largest numbers of people in need.

## A comprehensive plan to strengthen human resources for AIDS

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In May 2006, an international consultation took place in Geneva to consider the way forward. It was attended by 134 delegates representing a wide range of governments, international agencies, development agencies, academic institutions and civil society organizations as well as people living with HIV, all of whom are active in the fields of HIV and AIDS as well as human resources for health.

### **Treat**

It could be assumed that health workers would be well enough informed to protect themselves from becoming infected with HIV. But this does not seem to be the case. In Swaziland, women make up 80% of the health workforce and it is estimated that they have the same HIV risk as the general population, where adult prevalence has peaked at 33.6%. From this example it can be seen that health workers are not immune to the social and environmental factors that assist the sexual transmission of HIV – whether this is gender inequality, economic pressures or cultural influences and expectations.

While the majority of infections in health workers are the result of unprotected sex, health workers also face risk in the workplace, where they may have contact with infected blood and other body fluids. Each year, 170 000 health workers worldwide are exposed to HIV, resulting in 1000 infections mostly in low- and middle-income countries. Furthermore, WHO estimates that 2.5% of HIV cases in health workers around the world are a result of needle-stick injuries. In general, lack of safety equipment such as gloves and safe means to dispose of sharps, as well as a lack of procedures to observe universal precautions, place health workers at risk of occupational transmission.

It could also be assumed that health workers would have easy access to health services should they find themselves in need. Conversely, many health workers are actually deterred from seeking treatment and support because they fear the attitudes and reactions of colleagues and patients. Many in the field believe that internal stigma is the single most important obstacle to health workers accessing HIV services. One study suggested that nurses fear disclosure more than they fear infection itself.

More often than not there is a lack of privacy in consultation and examination situations and health workers may even find themselves standing in line with their own patients. As a result, health workers are often the least able to take advantage of services that may be available.

Therefore, it is clear that the issues of confidentiality related to care and treatment for HIV-infected health workers, and stigma within the health care setting, need to be specifically addressed if these individuals are to get the help they need and then help others.

The essence of 'Treat' is the assertion that health workers need to be targeted for special prevention and special treatment measures that are sensitive to the particular difficulties they may face. Any ethical objections around the issue of prioritizing the treatment of health workers over others whom they serve have been set aside in the face of widespread recognition that protecting the health of the workforce is an essential prerequisite to providing health services for all. But removing the obstacles to health workers accessing treatment, prevention, care and support services is no easy task.

**The TTR plan sees AIDS as a driver for health systems strengthening.**

**In Botswana, between 1999 and 2005, a staggering 17% of the health workforce died from HIV. If no action is taken, it is projected the figures in that country for health workforce deaths between 1999 and 2010 will total 40%.**

First, prevention education should be provided for health care workers as part of pre-service and in-service training. Education and training for occupational health and safety to prevent workplace transmission of HIV should likewise be provided. Such training should be supported by adequate commodities, like protective gloves, and improved occupational health and safety procedures as well as HIV post-exposure prophylaxis.

Secondly, there must be targeted efforts to reach health workers with testing and counselling.

Thirdly, strategies to give priority access to treatment for health care workers are essential and extending this priority access to the informal workforce and to the families of health workers may also be necessary. Strategies to ensure confidentiality might include special sites for health workers, site swapping and special arrangements with the private sector.

Fourthly, care and support programmes are needed to enable health workers to work effectively and to reduce stress and burn-out.

Lastly, there should be targeted campaigns to address stigma and specific interventions to tackle discrimination in the workplace.

To date, action on all these fronts has been limited and piecemeal but there are a number of existing elements that could now be used to achieve a 'Treat' plan for health workers. For example, the International Labour Organization (ILO) and WHO have drawn up comprehensive guidelines that cover a wide range of practical policies for managing HIV in the workplace. Professional organizations representing large numbers of health workers have taken initiatives to protect their members at risk of HIV. One such example is the International Council of Nurses, which advocates establishing separate sites where health workers can access HIV services without fear of disclosure. The Council is working with the Government of Swaziland and the Zambian Council of Nurses, and a special programme is underway in Swaziland.

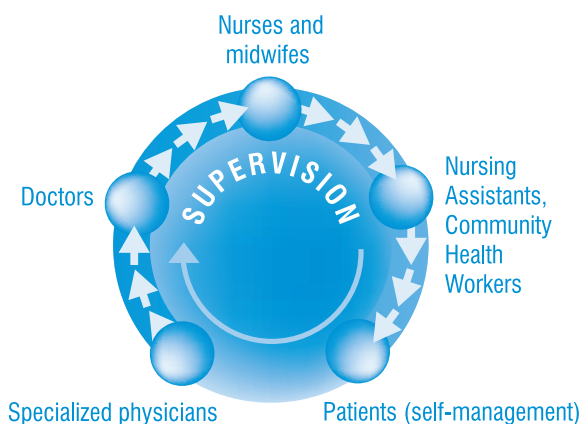
The challenge is to bring focus and momentum to such initiatives and to explore, through ongoing research, the evidence of what works and what does not.

**Train**

In the face of the HIV epidemic it is clear that there needs to be more health workers and that they require more HIV-specific skills. The 'Train' element of the plan understands that there are two courses of action that must be undertaken in parallel.

Efforts must be made to increase the numbers of doctors, nurses, midwives, pharmacists and technicians who are entering the workforce. But recruitment and training takes time. It can take six years to train a new doctor and, for an effective response to AIDS, this is too long to wait. Therefore, it is essential to find alternative and simplified models that can quickly expand the current health workforce.

**Figure 4**  
**Task shifting**



The answer lies in so-called 'Task shifting' (Figure 4). Task shifting can make better use of the human resources that are currently available by moving appropriate tasks to less specialized workers. For example, when doctors are in short supply there is no need for a trained doctor to handle the prescribing and dispensing of antiretroviral therapy when this could be done equally well by a nurse. And community workers can potentially deliver a wide range of HIV services, thus freeing the time of nurses. People living with HIV can themselves also undertake much of the responsibility for their own care, if adequately advised in self-management. This process expands the human resource pool and has the added advantage of building bridges between the health facility and the community. It also creates job opportunities in the community and new opportunities for people living with HIV.

**Task shifting can make better use of the available human resources by moving appropriate tasks to less-specialized workers.**

Many countries have already recognized the value of task shifting in the health sector. WHO is promoting one such approach through the Integrated Management of Adolescent and Adult Illness (IMAI). In Malawi and Uganda, the 'basic care package' for people living with HIV has been designed to be delivered by non-specialist doctors or nurses supported by nursing assistants, community health workers and people living with HIV. Similarly, Ethiopia is about to implement a plan to hire non-professional lay providers to expand the current workforce delivering HIV services.

Task shifting represents a radical departure from traditional delivery models that depend on specialist workers and it could make a major contribution to expanding access to HIV services, especially among poor and marginalized populations. But significant challenges will need to be overcome by countries that wish to implement task shifting on a large scale.

One of the most significant hurdles is to expand human resources in this way without compromising quality of service. A standardized programme for training and certification will therefore be necessary to guarantee essential standards of care. In some cases an enabling regulatory framework including, among other things, health legislation changes will be required (e.g. to enable nurses to prescribe antiretroviral therapy). Protection will be needed for lower cadres undertaking new responsibilities. For example, care must be taken to avoid an adverse impact on nurses whose tasks may become more burdensome without any commensurate increase in wages or improvement in working conditions. In some countries, professional associations have resisted task shifting for these reasons but establishing feasible and equitable pay scales will help.

Task shifting is seen as a major focus by those concerned with training health workers to deliver HIV services. But there can be no escaping the fact that the absolute numbers of skilled health workers must grow. This challenge must be addressed by each country according to need and will have to be integrated into overall education and health planning as well as budgeting and national poverty-reduction strategies.

**Training must be revised to include adequate and up-to-date teaching on HIV so that all categories of health care workers are better equipped with the skills needed to deliver HIV services.**

Many countries need to expand facilities for training new health-service professionals. Increasing the numbers of graduates could begin by simply increasing class sizes and fast-tracking training. However, in the countries where there are widespread shortages, a more comprehensive approach involving the development of new institutions and regional cooperation is needed. The WHO African Region, for example, needs a 139% increase in its overall number of health care professionals but currently has only 354 institutions for training them.

Other action, such as emergency measures to recruit from abroad and efforts to eliminate corruption and ghost and absentee workers, may also be required in the urgent effort to expand the health workforce.

Finally, the curriculum of pre-service and in-service training must be revised to include adequate and up-to-date teaching on HIV so that all categories of health care workers are better equipped with the skills needed to deliver HIV services.

## Retain

The large-scale drop-out of skilled health workers from the public-health service is not a new problem. Nor is it a problem that is confined to places that are particularly affected by HIV. There are already many actors focusing on general strategies to retain health workers in places where they are needed, such as low-income countries and rural areas. But there has been relatively little attention paid to the role that HIV and AIDS now play in both the problem and the solution of retention. There is a need for further conceptual work to identify ways in which AIDS issues and actors could, and should, relate to more general retention issues. Nevertheless, it is clear that at every level the HIV epidemic itself is making the problem of worker retention more acute in HIV-affected countries and communities.

Health workers are leaving the public-health service to take up better paid jobs in the private sector or leaving rural areas to work in the cities and towns. One of the major push factors here seems to be fear of infection and the huge stress involved in working in communities that are very badly affected by HIV. Indeed, a survey of health workers' reasons to migrate in four African countries (Cameroon, South Africa, Uganda and Zimbabwe) found that 6 out of the full list of 13 reasons were attributable to HIV. These reasons included 'safer environment', 'lack of facilities' and 'heavy workload'. An emerging issue is the growing awareness of health workers leaving jobs in the public sector to work instead for NGO-funded HIV programmes that can offer better salaries.

There is also very significant international migration – or a 'brain drain' – as health services all over the world seek to solve their own shortages by recruiting trained health workers from abroad. Ironically, donor countries that have been most proactive in HIV and AIDS funding are also those that receive large numbers of health workers from HIV-affected countries. (Table 2)

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**Table 2**  
**Brain drain in selected African countries**

Country	% (N) of doctors away from home country	% (N) of nurses away from home country
Angola	19 (168)	0.1 (105)
Ethiopia	17 (1936)	0.1 (195)
Ghana	29 (3240)	13.0 (2267)
South Africa	37 (32973)	7.0 (13496)
Uganda	16 (1918)	0.1 (21)
Zimbabwe	11 (2086)	34.0 (3183)

Data source: World Health Report 2006

Worst of all, there is the scourge of the illness itself. Health workers are getting ill and dying or are leaving the profession for fear of disease.

The 'Retain' element of TTR must reduce the push factors so that health workers stay in rural areas and within the public-health sector. This can be done in general terms by improving their lives and working conditions through financial and non-financial incentives. Salary increases are needed. But direct financial rewards can be complemented by other sorts of allowances that are valued by health workers, such as housing, travel subsidies, loan schemes, child care allowances and school fees. For example, the Governments of Malawi and Zambia have devised bold national strategies that include supplementing the salaries of health professionals and educational and other incentives to retain health workers.

Alongside these broad approaches, there is also a need to address the AIDS-specific push factors such as fear of occupational transmission of HIV and sickness and death. The types of interventions that come under the 'Treat' and 'Train' parts of the TTR plan, such as protection from

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risk of infection through improved safety in the workplace, the provision of treatment, the offer of training, and measures to reduce stress and burnout, should also prove to be effective retention strategies in HIV-affected areas.

The pull factor of international migration must also be mitigated. But the complex combination of individual worker, workplace and market forces and the need to balance the rights of individual workers to migrate against rights to health care in the home country, defy any simple or single action. Codes of practice and policies remain high on the global agenda and there are many calling for stronger action and enforcement in both sending and receiving countries. Various codes of practice for ethical recruiting exist and these set important norms. But they are not legally binding and therefore lack teeth. Codes of practice adopted by individual receiving countries may be easier to enforce. In the United Kingdom, which is one of the largest employers of migrant health professionals, the Government has led the way by stipulating that 150 developing countries will not be targeted for recruitment unless explicit bilateral agreements have been reached. However, this seems not to have stemmed the flow of African health workers to the country.

Another angle is to find new ways for home countries to utilize the skills of those who have migrated. These are called Diaspora programmes and can involve exchange programmes and e-learning. The urgency of the AIDS crisis could also be harnessed to encourage professionals back to their country of origin with a range of incentives.

Much of the discussion and policy work has focused on migration from low-income to high-income countries. However, in the AIDS sector, migration from the public-health system to better-resourced private sector jobs and to HIV projects run by NGOs in the same country is also contributing to the public-health service crisis. For example, within one year, the Masaka region of Uganda lost 10 of its 21 doctors, newly trained in HIV skills, to programmes run by NGOs in the region. Clearly, discussion and cooperation is needed between the public-health sector and the private and nongovernmental sectors.

## Health systems and HIV

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**By capturing global energy and commitment towards Universal Access to HIV services, the TTR plan has the potential to galvanize global action around health systems strengthening.**

In the past few years, parallel initiatives to strengthen health services in poor countries and to scale up the AIDS response have intensified. Despite this, the movement to strengthen health systems and the movement to expand access to AIDS services have proceeded largely along independent lines. The health systems approach and the vertical disease-specific approach have even been seen as being at odds. This situation has been to the detriment of both approaches. To succeed, the two should be integrated and mutually reinforcing.

WHO has made it clear that it supports a public-health model of service delivery for HIV services. A public-health model does not simply mean public funding. In essence, a public-health approach to health care envisages services for everyone, including the poor. Achieving this, especially in resource-limited settings, demands a departure from traditional health care models that depend upon highly specialized professionals and are therefore highly concentrated and very costly. Instead, public health utilizes standardized, simplified and decentralized systems that can maximize the role of primary health care and community-led care.

In the context of the HIV epidemic, a public-health approach is the only approach that offers any realistic possibility of universal access to prevention, care, support and treatment services. Moreover, if the effort to expand HIV services is to prove sustainable, it is essential that they are integrated within existing health services. It follows, therefore, that TTR interventions to protect and strengthen the health workforce within the HIV framework will also present opportunities for strengthening the health services as a whole. Although the urgency for action has been born out of the AIDS crisis, TTR is not a new, vertical initiative. Rather, it is a catalyst that aims to inject urgency and bring coordination to the large amount of already existing work in the area of human

**The key to the success of TTR as a broad, multi-faceted AIDS health workforce plan will be partnership, cooperation and coordination at the global, national, regional and community levels.**

### **The call for Universal Access and the Millennium Development Goals**

The Millennium Development Goals (MDGs) have provided the vision and impetus for a growing global movement around the issue of health services strengthening in low-income countries. A series of high level forums on progress towards the Health MDGs focused increasingly on the issue of human resources for health, and in particular on the human resources for health crisis in Africa, where there is an estimated shortfall of 1 million health workers, and which was seen as requiring exceptional action.

The outcome has been a new global architecture and action plan for strengthening human resources for health. In April 2006, a Global Health Workforce Alliance was launched to provide a global platform involving key stakeholders in human resources for health.

Alongside the commitments enshrined in the MDGs has been a growing global commitment to expand HIV services. This was embraced by the G8 at Gleneagles in 2005 and subsequent meetings led to the formation of a Global Steering Committee on Scaling up towards Universal Access. By December 2005, the commitment to 'scaling up HIV prevention, treatment, care and support with the aim of coming as close as possible to the goal of universal access to treatment by 2010 for all who need it' had been endorsed by all United Nations Member States and embedded in a United Nations General Assembly Resolution (A/60/L.43).

Underpinning this resolution is the understanding that reversing the spread and impact of AIDS is not only a MDG in itself but the route – or even the prerequisite – to reaching five other MDGs. This means that not only must health systems be strengthened to reach the Goals but they must be able to deliver quality HIV services on a large scale.

resources and AIDS and so to rekindle interest in human resources for health development. As such, the plan can only be successful if it is integrated into broader development and poverty reduction and planning processes.

## The importance of partnerships

The TTR plan has now been agreed and has found support among a wide range of actors. The time has come to bring it to life.

TTR is intended as a strategic approach for mobilization rather than a programme. As such, there is no intention to establish a new and different organizational structure for the purpose. TTR will need country leadership and ownership if it is to thrive. Most important of all, taking TTR forward will depend on partnership building.

The proposal for TTR was born out of a partnership between WHO, the International Organization for Migration (IOM) and the ILO. At the global level TTR is part of the new Global Health Workforce Alliance and it will be aligned with the 10-year plan proposed by WHO for action on strengthening human resources for health. A TTR steering group is being constituted, composed of key stakeholders from national governments, international agencies and financial institutions, academic institutions and civil society organizations (including NGOs and organizations representing people living with HIV).

Technical task forces around the specific elements of 'Treat', 'Train' and 'Retain' are also being established and mechanisms for partnerships between TTR actors and global health partners are being explored.

Detailed plans for TTR must be designed at the country level according to national priorities. There is a spectrum of need that is related both to the extent of the epidemic and the state of the human resources for health crisis so the separate elements of TTR will not be equally important everywhere. The needs of countries with high HIV prevalence and a massive human resource deficit will differ from those with concentrated epidemics or just a small shortage of health workers. For example, India has relatively few health workers who require antiretroviral therapy but a great need for trained health workers and would thus emphasize the 'Train' element over 'Treat'. And the needs in Brazil, which has two HIV-positive people per doctor, are different from the needs in Malawi with 4000.

TTR aims to strengthen the health workforce in the context of AIDS but it straddles a number of disciplines, sectors and areas. As such, some elements of TTR may be the domain of AIDS actors while others may be the domain of actors in fields such as human resources, education, managing migration or occupational health and safety.

For all these reasons, TTR's success will depend on coordination between several ministries such as health, education, finance, and labour and TTR plans must be part of overall human resources for health plans, which, in turn, must be embedded within national poverty and development strategies.

## Costing and financing

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TTR will also need money. The urgency of the AIDS crisis has catalyzed commitment to HIV services and global funding has increased significantly. But a comprehensive plan to strengthen human resources for AIDS will inevitably create additional resource needs.

WHO has determined the first estimates of the resources needed to implement TTR. This analysis shows that it will cost at least US\$ 7.2 billion over the next 5 years to implement the plan in the 60 countries with the highest HIV burden – and it could cost up to US\$ 14 billion. The significant leap between the two estimates is the result of two alternative analyses: one that anticipates a 2-fold increase in health worker salaries and a second that anticipates a 5-fold increase. There are also some budgeting differences that arise depending on the mode of delivering services. The lower figure corresponds to an annual per capita cost of approximately US\$ 0.60 in the countries concerned, or between 3% and 5% of the levels of health expenditure typically found in low-income countries.

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Financing for most elements of TTR will be included in health-sector financing policy, and management must be geared towards country-specific priorities. The sources for financing can be grouped into domestic sources (including taxation and improving current spending) and external sources (including borrowing and grant funding).

The major concerns and constraints in health-sector financing are competition from other sectors, absorptive capacity, poor governance and issues around sustainability and donor dependency.

However, financing for an AIDS health workforce plan raises many of the broader issues and challenges around financing and development that have been discussed in recent years. The most important of these is the need for financing to be predictable and stable. Other constraints on public-health spending also exist. In order to preserve macroeconomic stability, some countries impose ceilings on public expenditure. These have resulted in moratoriums on recruitment and salary increases in the health sector and have been a brake on health-system expansion, particularly in sub-Saharan Africa. In some countries this has led to an anomalous situation where unemployment of skilled health workers exists alongside a shortage of human resources in the health system. In many countries, however, the AIDS emergency has brought governments to a political commitment to expanding fiscal space for public spending on health, HIV and AIDS. *The World Health Report 2006* argues that negotiating fiscal space for the health

workforce will require the international health development world to engage productively with ministries of finance, international finance institutions and major international stakeholders. In countries where public expenditure ceilings exist, a case may be made for the financing of TTR and general health workforce plans to be accorded exceptional status. This case is strengthened by gathering evidence that the consequences of not taking special action will be long-term damage to the economy as a whole.

## WHO's role

WHO is the lead agency for TTR and will help countries to implement the plan. The Organization has already undertaken a rigorous analysis of the costs that will be involved in implementing TTR. This will prove an important first step in mobilizing the necessary funds. Next, WHO will assist countries in refining the budgets for their individual country requirements.

Within the 'Treat' element of the plan, targeting health workers with HIV prevention, care, support and treatment will require the creation of an enabling institutional environment. WHO, in partnership with ILO, will assist countries by developing a package of tools and recommendations that recognizes health workers as a vulnerable group in need of tailored interventions. WHO will also launch targeted campaigns on issues such as combating the stigma that exists around HIV and AIDS and reducing the chances of workplace transmission and will work on defining standards that can guide action in these areas.

In the context of 'Train', WHO will work to help countries overcome the significant challenges that exist in implementing task shifting on a large scale. One of the most significant hurdles will be to expand human resources without compromising quality of service. Therefore, WHO will continue to work with partners on a standardized and systematized programme for training and certifying professional and non-professional cadres in order to guarantee essential standards of care. WHO will also help define the health legislation needed to regulate task shifting, for example, to allow the prescription of antiretroviral therapy by nurses and the delivery of HIV testing and counselling tests by lay providers. It will develop recruitment criteria for non-professionals, including people living with HIV. It will also explore mechanisms to generate and finance new posts.

These are some of the important issues that must be addressed if the simplified and standardized approaches involved in task shifting are to succeed. These are also areas where WHO can make a valuable and significant contribution.

In support of 'Retain', WHO, in partnership with IOM and ILO, intends to play a leading role in advocating for financial incentives to retain health workers and, as part of this, will help develop sustainable and equitable pay scales. It will also be researching the potential role that can be played by non-financial incentives. WHO will undertake analysis of the 'push factors' that exist in the health work place and assist in making improvements in the workplace by offering advice on best practice.

More generally, WHO will work in close cooperation with those countries that take a lead in implementing TTR in order to evaluate and monitor progress and to gather experience and examples of best practice that can be shared with others.

At the global level, WHO will play a coordinating role and, together with ILO and IOM, will advocate for TTR in an effort to generate international solidarity that can, in turn, facilitate technical frameworks and cooperative agreements.

WHO will also perform an essential function in monitoring the progress of TTR around the world.

**The AIDS emergency has brought governments to a political commitment to expanding fiscal space for public spending on health, HIV and AIDS.**

**The TTR plan will combine the coherence of a systems approach with the speed required to respond to the AIDS emergency.**

In conclusion, TTR is a broad, multi-faceted AIDS health workforce plan that understands the special needs of the health workforce; will involve country ownership and be integrated into national planning; will depend on alternative models of health care, such as task shifting and the involvement of people living with HIV; will combine the coherence of a systems approach with the speed required to respond to the AIDS emergency; will depend on cooperation and partnership and will be evidence-based.

WHO's 'Treat, Train, Retain' plan provides a much-needed boost to national health systems that will have an impact far beyond HIV and AIDS. By increasing the number of well-trained, healthy and motivated health workers, the plan will provide significant benefit to health systems in general.

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