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Viewpoint: **HIV/AIDS and the health workforce crisis: What are the next steps?**

Bruno Marchal, Vincent De Brouwere and Guy Kegels

Department of Public Health, Institute of Tropical Medicine, Antwerp, Belgium

Summary In scaling up antiretroviral treatment (ART), financing is fast becoming less of a constraint than the human resources to ensure the implementation of the programmes. In the countries hardest affected by the acquired immunodeficiency syndrome (AIDS) pandemic, AIDS increases workloads, professional frustration and burn-out. It affects health workers also directly, contributing to rising sick leave and attrition rates. This burden is shouldered by a health workforce weakened already by chronic deficiencies in training, distribution and retention. In these countries, health workforce issues can no longer be analysed from the traditional perspective of human resource development, but should start from the position that entire societies are in a process of social involution of a scale unprecedented in human history. Strategies that proved to be effective and correct in past conditions need be reviewed, particularly in the domains of human resource management and policy-making, education and international aid. True paradigm shifts are thus required, without which the fundamental changes required to effectively strengthen the health workforce are unlikely to be initiated.

keywords AIDS, human resources, health workforce, policy, international agencies

Introduction

With the cost of antiretroviral drugs falling, the burning question in the scaling-up debate is no longer how to finance access to drugs or indeed the scaling up of antiretroviral treatment (ART) schemes, but rather how to ensure the implementation of the programmes. Health system performance is increasingly acknowledged as a condition for success of programmes such as the '3×5 Initiative' and the notion that the human resources will be one of the decisive determinants is gaining ground (Tawfiq & Kinoti 2003; Narabsimhan *et al.* 2004). However, in most south-eastern African countries, the health workforce is teetering. Chronic deficiencies in training capacity, distribution and skill mix, and retention in the medical and caring professions have left the health services with narrow margins to cope with new challenges (Aitken & Kemp 2003; Huddart *et al.* 2003). Furthermore, under current conditions in many developing countries, performance and accountability of health providers are difficult to ensure. In other words, countries in south-eastern Africa are not only facing huge problems of implementation capacity to scale up ART schemes, but also to ensure the adequate performance of the health system as a whole.

While the human resources crisis is being acknowledged (Narabsimhan *et al.* 2004; WHO 2004), little has been said about how to deal with it. This paper first briefly summarizes the specific impact of the human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) pandemic on the health services in order to show how it is related to the larger perspective of health workforce imbalances. It then argues that in the high-burden countries of southern and eastern Africa, the direct and indirect impact on the health services, combined with the societal impact of the HIV/AIDS pandemic requires true paradigm shifts in the domains of human resource management and policy making, education and international aid.

The impact of HIV/AIDS on the demand and need for health care

The HIV/AIDS-related burden of disease increases the demand for medical care dramatically and in doing so, the pandemic indirectly affects the health workforce in terms of increasing emotional, physical and mental stress. Tuberculosis (TB), pneumonia and other opportunistic infections, and malnutrition are all on the rise in AIDS-stricken countries. Public hospitals carry the heaviest burden, as witnessed by data on HIV-related admissions and length of stay in South Africa. While both the number of total admissions in medical wards and the bed capacity remained stable between 1995 and 2000, the HIV/AIDS-related admissions in all categories of hospitals increased

by a factor of 7 (Shisana *et al.* 2003). As a result, currently, 46% of patients admitted to South African hospitals are HIV positive. AIDS patients were also shown to stay longer (mean length of 13.7 days) than non-AIDS patients (mean length of stay 8.2 days) for all categories of hospitals combined. Trends regarding bed occupancy rates are difficult to ascertain. The Shisana report did not find a significant change in bed occupancy rates despite the increase in admissions of both HIV/AIDS and TB patients.

Evidently, this increased burden on the hospitals exerts an impact on morale and job satisfaction of health workers. HIV/AIDS patients are often brought to the hospital at an advanced stage of illness. The resulting high inpatient death rates combined with the limited possibilities of effective care contribute to professional frustration, higher absenteeism and burnout and to low staff morale. In many settings in AIDS-stricken countries, working conditions for health workers are difficult, salaries low and supplies inadequate. In these unfavourable environments, providing quality care is not self-evident and responsiveness of staff towards AIDS patients may suffer (Unger *et al.* 2002; Shisana *et al.* 2003). Unger *et al.* (2002) report that South African health workers 'experience stress, fear, frustration and depression due to their contact with patients living with AIDS and the limitations of their work environments'. It should be noted that the roll-out of ART on a large scale will improve the effectiveness of care and may be expected to reduce the levels of professional frustration.

The direct effects of the HIV/AIDS pandemic on the health workforce

HIV/AIDS directly affects the attrition rates, level of motivation and professional practice, and absenteeism rates of health workers. Strikingly, accurate data on HIV prevalence among health workers are relatively scarce, but health workers are at least as likely to be affected by HIV as any other group of the population (Buvé *et al.* 1994). In public and private health facilities in Free State, Mpumalanga, KwaZulu Natal and North West (South Africa), 15.7% of health workers are estimated to be HIV positive. In the age group 18–35 years, 20% were found to be HIV positive (Shisana *et al.* 2003). A death certificate analysis in this study also showed that HIV/AIDS-related illnesses, including TB, accounted for 13% of health workers' deaths between 1997 and 2001. In Botswana, HIV prevalence is expected to rise from the current 17–32% to 28–41% by 2005. Two to three per cent of health workers had AIDS in 2001 and projections show this figure to rise to 6–9% by 2011, if current trends continue (Abt Associates South Africa Inc. 2000).

HIV/AIDS also affects the health workers' attitude and practice. The occupational risk may be correlated with the HIV seroprevalence rates among patients, but it has been shown to vary in function with occupation, place of work and adherence to procedures for prevention (Consten *et al.* 1995; Tawfiq & Kinoti 2003). Lack of adequate supplies of protective means (gloves, gowns, goggles and disinfectants) is another important determinant. In developed countries, the average risk of occupational HIV transmission after a percutaneous exposure is estimated to be 0.3% and below 0.1% after mucous membrane exposure (Anonymous 2001). Comprehensive data from developing countries are lacking, but de Graaf *et al.* (1998) estimated a mean occupational risk of 0.11% per person per year taking into account the same 0.3% chance of transmission by accident and 1.9% percutaneous exposures per person per year among 99 Dutch medical professionals who had been working in AIDS-endemic areas. Even if there is some uncertainty about the actual risk, the perceived risk is high (Aitken & Kemp 2003) and this can affect the quality of care of HIV-positive patients. Indeed, negative staff attitudes combined with inadequate knowledge of procedures cause reluctance to care for HIV-positive patients (Masini & Mwampeta 1993), as well as making the medical professions less attractive.

Health workers need to take care of relatives living with AIDS. Together with funeral attendance, this leads to increased absenteeism (Aitken & Kemp 2003). In Hlabisa district hospital (KwaZulu Natal, South Africa), the average number of days off work increased from an already high 41.8 days in 1998 to 57.5 days in 2001 largely because of this phenomenon (Unger *et al.* 2002).

From a health service manager's point of view, the above problems of attrition, demotivation and absenteeism are compounded by the loss of institutional memory. Often AIDS takes out experienced staff and with them informal and tacit knowledge that may be difficult to restore. It also reduces the on-site training capacity (Cohen 2002), which is not only required to fills gaps left by AIDS, but also to prepare health workers for new tasks in the diagnosis and treatment of HIV/AIDS.

AIDS further aggravates the human resource crisis in south-eastern Africa

With some sense of exaggeration, one could say that the pandemic is just the latest plague falling upon the health workers. The classic health workforce issues of maintaining adequate levels of training and inflow in the professions, ensuring adequate distribution and skill mix and retaining health professionals are in fact continuing to

undermine health services in many countries (Huddart *et al.* 2003; Narabsimhan *et al.* 2004).

AIDS affects each of these elements. Not only geographical distribution, but also the existing skill mix imbalances are likely to worsen. Health workers who have HIV-positive relatives to care for or who themselves are infected are unlikely to accept work in remote areas where possibilities of adequate care are limited or non-existent. On the contrary, the educated and experienced are not safe from AIDS, which takes out a core layer in the professional health workforce. A workforce that is already demotivated because of inadequate remuneration and working conditions may get the fatal blow from the daily confrontation with hospital wards full of terminal patients. Both the actual and the perceived risk of occupational contamination contribute to the conditions that push staff to consider leaving for abroad.

The HIV/AIDS pandemic is thus emerging as a pervasive factor in the general human resource crisis in south-eastern Africa and entwined with the internal and external brain drain (Marchal & Kegels 2003). The South African Medical Association estimates that in South Africa during the last 4 years, 4000 doctors left the public sector for private practice or for other countries, equalling roughly the number of doctors trained in that period (Kapp 2004), while 78% of its rural doctors are of non-South African origin (Martineau *et al.* 2002). At the same time, the 23 400 South African health workers working in Canada, the US, the UK and Australia correspond to 9.8% of all health professionals registered in South Africa (OECD 2004). However, just to compensate the losses to HIV over the next decade, South Africa will need to train 25–40% more doctors and nurses (Haacker 2002). Needless to say, the current situation has direct consequences for scaling-up HIV/AIDS programmes. In Botswana, the acute shortage of health professionals impaired the medical check-ups at the intake phase of an ART programme and thus reduced the enrollment of candidates and the treatment rates (Cohen 2002).

A comprehensive approach to enhance the health workforce requires paradigm shifts

As discussed above, the health workforce in eastern and southern Africa finds itself in the double trap of the HIV/AIDS pandemic, being affected both directly and indirectly. However not only the scaling up of ART or even the health sector as a whole is threatened. Indeed, entire societies are now in a process of what de Waal (in press) calls 'social involution of a scale probably unprecedented in human history'. Not only health care but also food security, education and economic development are under increasing pressure. In this perspective, strategies that proved to be effective and correct in past conditions may no longer be adequate now, and may even hamper an effective response. In our opinion, the current conditions governing south-eastern Africa call for true paradigm shifts, not only in the domain of human resource policies, but also in international aid.

Protecting the current health workforce from HIV

The first short-term priority is to reduce the impact of the pandemic on the health workers. Universal introduction of safer nursing and surgical techniques, safe waste disposal, adequate barrier techniques and post-exposure prophylaxis can contribute to prevent health workers from being infected in the work place. Care and support to HIV-positive health workers with HAART, prophylactic isoniazide and cotrimoxazole schemes and counselling are a second set of required measures. These have been described elsewhere (IOE 2002; Aitken & Kemp 2003; Huddart *et al.* 2003). In many places, they are being introduced, but often in a fragmented manner. Health workers are still often left exposed because of the lack of knowledge or supplies and fear of stigmatization (Shisana *et al.* 2003). Complicated as these measures are, they might well be the easiest part.

Reviewing the organization of health care provision to modify the medical education

Scaling-up ART in countries facing large deficits in the health workforce will require a review of the current production and the configuration of health services. Regarding the latter, whichever model is chosen (to integrate AIDS care in existing general health services or in TB directly observed therapy programmes (Abdool Karim *et al.* 2004) or to run mobile clinics), it is likely that the cornerstone will be delegation of tasks to lesser-qualified health workers and lay persons, supervised by the increasingly scarce professionals. This goes against the current trend to improve the quality of medical and nursing education through raising the course entry requirements, the duration of training and the level of qualification. Indeed, this is likely to lead to lower outputs and higher costs of training (Huddart *et al.* 2003) and it will not resolve current imbalances and deficits in the short and medium term. An appropriate balance between training outputs of different cadres needs therefore to be struck, whereby professionals will have to be assigned a role of supportive supervision of large cadres of semi-professional health workers and caretakers. Koenig *et al.* (2004) showed that lay health workers can play an effective role if integrated in a comprehensive approach to home-based

care. At the same time, the internationally less marketable cadres may answer the brain drain issue in these countries. But not only the future skill mix has to be taken into account, also the required numbers of staff. The current production capacity of health care workers needs urgent attention (Aitken & Kemp 2003).

Health workforce policies

The long-term priority is to institute effective human resource policies to train and retain the required health workers. Unfortunately, the track record of international agencies and countries alike is not impressive. On the one hand, Poverty Reduction Strategy Papers (PRSP) offer quite some opportunities to this end, but a review of the PRSP–Heavily Indebted Poor Countries (HIPC) initiative in six African countries shows that neither AIDS nor the human resource crisis figure high on the agenda and an in-depth analysis of the HR crisis is mostly absent (HSRC 2003). On the other hand, public sector expenditure and recruitment ceilings imposed by structural adjustment programmes and similar donor-imposed conditions stifle recruitment and simply need to be lifted. Indeed, in these times of AIDS, it can no longer be justified to freeze the health workforce both in number and skill mix.

Obviously, increased recruitment and improving the attraction of working in healthcare needs money. Only middle-income countries like South Africa, Botswana and Thailand may be able to finance significant improvements both of the number and wages of health workers on the strength of their own resources. Besides PRSP–HIPC, the global initiatives through which increasing financial flows are injected into AIDS programmes in the south are obvious potential funders. Only, they need to allow allocation of their funds to recurrent expenditure in order to finance expanding and stabilizing the health workforce. By themselves they may, however, be insufficient and other sources of funding will need to be found.

Rethinking international aid policies

Some of the other principles of international aid should be reconsidered, too. Approaches to technical assistance that used to be politically correct and 'developmentally' sound in past conditions are no longer suitable and reduce the effectiveness of international co-operation seriously. In high-prevalence countries, the principle of sustainability of interventions can no longer be maintained. Sending out health professionals in both clinical and managerial roles to high-prevalence countries now responds to huge needs and cannot be excluded on the pretext that this would amount to unsustainable and undesirable substitution. If nothing changes, the funding flow will continue to exceed the absorption capacity in most countries.

Tackling the brain drain

Finally, health workforce issues do not respect national boundaries. Brain drain is a prime example of the complexity of the causes of the human resource crisis and it indicates that health sector decisions in industrialized countries profoundly affect human resource balances in the south (Marchal & Kegels 2003). The active pull exerted by the industrialized countries on medical professionals from the south is contributing to debilitating the health services in these countries. Unless the issues of low attraction, inadequate training output and low retention of health workers are effectively tackled in the south – but perhaps even more importantly, in the industrialized countries – the African health workers will continue to seek greener pastures elsewhere.

Conclusion

Across eastern and southern Africa, the regions hardest hit by HIV/AIDS, the pandemic's onslaught on the health workforce undermines the performance of the health system and institutes a vicious circle that puts the capacity of the health services under ever-greater pressure. Human resource issues being entangled and interrelated, all actors should realize that the HR challenge is multidimensional and that it requires concerted action. Indeed, it is now time to stop reciting the mantra of the importance of human resources for the scaling up of interventions. Instead, realistic, open-minded analyses and assessments need to be undertaken. Unless the current paradigms are revisited, the fundamental changes to effectively strengthen the health workforce are unlikely to be initiated.

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Authors

Bruno Marchal (corresponding author), **Vincent De Brouwere** and **Guy Kegels**, Department of Public Health, Institute of Tropical Medicine, Nationalestraat 155, 2000 Antwerp, Belgium. Tel.: +32-3-247.63.84; E-mail: bmarchal@itg.be; udbrouw@itg.be; gkegels@itg.be