Be-Cause Health
Seminar on Human Resources for Health in Developing Countries
Brussels, November 10th 2005

M. Van Dormael, G. Kegels & B. Marchal
Institute of Tropical Medicine, Antwerp

Human Resources for Health: Confronting complexity and diversity

Background issues to the HRH seminar

In this introductory note to the seminar, we will briefly discuss a number of background issues that seem essential for tackling the topic of human resources (HR) problems in developing countries. We essentially aim at clarifying the language and the concepts used in discussions on HR. It will become clear that the way these problems present in different settings is highly variable and that a comprehensive (and comprehending) analysis needs to take into account the full complexity of systems populated by human actors. In a second part, we will briefly sketch out the sub-themes proposed for discussion during this seminar.

General framework

What do we understand by 'Human Resources'?

'Resources' are means to an end. The classical resources triad formulation (financial, material, human) implies that all these resources are *used* by someone, a person or more often an organisation, in order to reach more or less defined objectives, and that decisions on their use are made outside their own sphere of volition. Although this terminology may be considered an improvement as compared with the workers' exploitation discourse of long ago (after all, *resources* are rare and precious), it also appears to exclude the possibility that organisations themselves are made up of humans, and that humans *are* the organisation, not just one of its resources. Although this may seem, at first sight, an unnecessary point of philosophical semantics, it is essential to realise that HR are in the first place human beings rather than malleable and disposable resources, the ifs, wheres, whens and how muches of which are entirely decided by some external Planner, Engineer or Manager. Humans have a certain degree of autonomy and make choices of their own. They are therefore never entirely

predictable in their behaviour. Acting as if they were inevitably leads to myopic management theories and practices.

A second point regards the inclusion criteria for the category of 'HR' for health. Mobilisation of the human potential in health and health care issues is not necessarily limited to the people who earn a living with health care provision (and whom we might call the *health workforce*) but is arguably to be extended to the other responsible human beings in society. The full human potential for health in society is indeed made up of the addition of these two, and is highly dependent on the way they interact. If this interaction is entirely conceived as a *benefactor-beneficiary* relationship, a lot of potential is likely to be lost. If, on the other side of the spectrum, it is conceived as a cooperative partnership, where inputs and decisions are bidirectional, agreed upon and shared, a lot more can be expected. The latter point is extremely important when seemingly impossible social objectives and targets need to be reached. Rolling out lifelong antiretroviral treatment to the required scale in southern Africa is simply inconceivable within a *programme-beneficiary* set-up and paradigm.

The workforce: composing factors

If we limit our focus to the group of people whose job it is to provide care (the health care workforce), it is useful to keep in mind that the achievements (output, performance, …) of this body, at a macro level, are essentially dependent on three factors: (1) *availability* (being where they are needed), (2) *competence* (capable of doing what is needed) and (3) *motivated* (willing to do what is needed). It is reasonable to say that these factors interact like a product rather than a sum. In other words, if one of the terms equals zero, then the resulting product in terms of achievement also equals zero. Although this metaphor, like most metaphors, is not totally valid, the point here is that in human resources development, the problem is not only the *numbers* (and distribution) of doctors, nurses, lab technicians, etc., but also their intrinsic *competencies* and their *willingness* to make the necessary effort to put these competencies into practice. In terms of workforce quantification, the number of 'Adequate Full-Time Equivalents' (A-FTE) would then roughly correspond to the following equation:

> N (A-FTE) = FTE (available x competent x motivated)
>
> (availability, competence and motivation being valued on a scale from zero to one)

where it should be kept in mind that motivation (defined as alignment of the individual's personal objectives with those of the organisation for which (s)he works) is fundamentally conditioned by the presence of the resources necessary to do the job. Optimising workforce performance thus implies paying attention to all the factors in the equation.

The workforce: different levels

A comprehensive analysis of health workforce problems requires making the distinction between the individual, the organisational and the system level.

What health care organisations (e.g. a hospital or a local health system) can produce in terms of net (positive) result is not only dependent on the individuals who work in it. The organisational format and culture are clearly very important. Most public health care delivery systems in developing countries have been conceived along the lines of Weberian pyramidal bureaucracies, with strong hierarchical structures, centralised top-down decision-making systems, and based on written regulations and direct supervision. In practice, two problem areas often appear. First, although this organisational type may be well adapted to certain health sector activities, more specifically the highly standardised ones (as in many disease control programmes), its adequacy for the more professional types of activities that require much more judgement and individual client tailoring may have to be questioned. Second, pyramidal, hierarchical bureaucracies only work well if the required discipline for adhering to the rules is maintained. There are numerous examples of countries and systems where these conditions do not seem to apply anymore and where the rules of conduct are transgressed with impunity.

HR management and development policies need to account for these multiple interacting levels. They are crucial for the performance of organisations embedded in the system and for that of the individuals embedded in these organisations. We need adapted models to assess the determinants of human potential in their contexts, realising that these contexts go from the individual to the global level.

Assessment and management: a complex matter

From the above (autonomous human actors, different composing elements and organisational levels within a system) it can be reasonably concluded that we are dealing with a complex matter.

A complex system is one in which we cannot control all the multiple cause-and-effect and feed-back relations at work. Such a system is composed of independent actors (autonomous to a certain degree) who are at the same time interdependent because they relate to each other. Therefore, these interactions are themselves not wholly predictable and the effects of these interactions neither. Moreover, they are context dependent – including the effects of previous events, or history. This helps to explain why interventions that appear to work in one context may be totally ineffective in another one.

Our understanding of such complex systems depends on our ability to reduce their unpredictability through modelling and the formulation of theories that can be tested in context. The degree of ‘fuzziness’ of such theories is variable. Theories on ‘motivation’, for example, are notoriously numerous and often contradictory. There is, however, one hard starting point that applies in almost all cases: if motivation is about aligning the individuals’ objectives to those of the organisation for which they work, the organisation will have to pay a price. If the individuals’ survival is endangered by what the organisation expects of them, they are not likely to do it. As this is a quite robust theory, organisational action to ensure (decent) survival can be said to be of the *make happen* class; it needs to be brought about. It is also clear that motivation is enhanced by ‘job satisfaction’, but how this is to be brought about is a lot more fuzzy; if we have a somewhat

plausibly effective way to encourage this, and if the individuals are themselves involved in this approach, it may be something of the *help happen* class: create a conducive environment or introduce specific incentives, and see how it works out. Finally, we may formulate theories stating that some things are not likely to be of any importance; as a consequence they would be categorised in the *let happen* class. Whether they happen or not is not a cause for concern.

The main point of such a rough classification is to avoid simplistic, un-hierarchical, mechanistic and overly general theorising that leads to blueprint solutions. Developing human potential is necessarily a learning process, and in complex systems, learning is most likely to happen if it is based on explicit testing in specific contexts. In situations of complexity, one size never fits all.

Variety is the rule

Even if we limit our attention to one single continent, we must conclude that there is not, for example, one single 'African HR problem'. It is certainly true that there are HR problems in all of Africa, but there is wide variety and diversity in scope as well as in nature. Narrowing the focus to sub-Saharan Africa is not necessarily simplifying things either and even within countries, diversity and variation are observable facts.

Thus the use of the term 'HR crisis', while potentially useful in rallying attention and resources by putting the problem on the international agenda, should not let us lose sight of the need to assess and understand *local variation*. Even if we take nations as the unit of analysis, it may be preferable to reserve the power of the word 'crisis' to those situations where urgent 'out-of-the-box' thinking and action is required in combination with a long term view, typically because there is a combination of sharply increased need and demand combined with a reduction or stagnation of the really functional workforce. The typical example of such a 'real' HR crisis would be a resource poor nation with a very high AIDS burden, threatened with ultimately unpredictable but very plausible social and economic implosion.

Four issues for discussion

During this seminar, we will address four specific issues of the HR debate: (1) the brain drain phenomenon, (2) the present challenge of HIV/AIDS comprehensive care, (3) the problem of basic and continuing training and education of health professionals and (4) the balance between financial and non-financial incentives. This selection of issues does not claim to cover the entire field of human resources for health, but rather represents a sample of problems and questions that are presently very much alive and for which development organisations in the health sector wish to clarify their assessment, formulate their positions and develop their future policies. Issues of brain drain and HIV/AIDS are challenges affecting availability of health workforce, while basic and continuous training determine competence and incentives are meant to affect motivation. However, beyond their specificity, each of these issues also represents an entry point to view health workforce problems in a comprehensive way. As these problems are complex by nature and may even have become

more so after years of neglect, addressing them effectively implies that we get out of conventional thinking patterns.

ISSUE 1 - Brain drain and health workforce imbalances

In broad terms, health workforce imbalances can be defined as the inadequate matching of needs for healthcare providers and their supply. Imbalances are described in terms of absolute numbers (deficits or oversupply), of distribution (mismatch in geographical, public-private, gender, occupational or specialty mix) and skill mix (between type/level of capacities and the skills required in a particular setting).

The brain drain of health professionals provides an interesting entry point to the analysis of the complex issue of health workforce imbalances. The model developed by (Zurn et al., 2002) places the brain drain issue in a broader perspective. It presents the factors that influence the balance between the quantity of skills that is supplied by the workforce and the required quantity as determined by healthcare needs and demand. Economic conditions, the specific health system configuration and the demand for and utilisation of healthcare services determine the demand for health care skills. The supply side is influenced by the balance between inflow (education & training and immigration) and exit from the profession through retirement, illness, death, emigration and functional loss.

Complex determinants

On the supply side, it is not only a matter of adequate planning and organisation of training of health workers in the right numbers and to the right competencies. The inflow into (para)medical training depends also on the attraction the professions hold for prospective workers. In many countries, societal appreciation for health workers is dynamic, and not always improving. Deteriorating working conditions, remuneration that is perceived not to be up to the responsibilities and lack of career perspectives all influence the attraction of working in the health sector. Health services also have a specific absorption capacity, that is influenced by numerous factors and externally imposed recruitment ceilings are still hampering recruitment of staff in many countries.

On the exit side, attrition of the health workforce is not only caused by disease and death (HIV being a major cause in some countries), but also due to brain drain and natural loss due to retirement. Retrenchment under structural adjustment programmes also falls into this category; in addition, better alternative employment opportunities elsewhere in the health sector, in other sectors or abroad can lead to losses.

Diverse situations

It is clear that the condition of a given country's health workforce can change fast and that there are huge variations among countries (and even within one country). In general, however, if expressed in terms of prevalence of adequate full-time equivalents or A-FTEs at the aggregate (country) level, it is certain that virtually all over sub-Saharan Africa there is a chronic shortage of effective health workers. We distinguish ***stable*** chronic problems (that are encountered in

countries like Mauritania, Senegal, Ivory Coast,…) from ***worsening*** chronic health workforce conditions (found in districts and provinces of countries like Kenya, Uganda, RDC, Burkina Faso, ...).

Worsening chronic conditions

In countries with worsening HR conditions, the health sector typically shows increasing imbalances in absolute and relative terms, geographical imbalances and skill mix imbalances. (Para)medical basic training may show weaknesses, either in production capacity, educational quality and relevance of the curriculum. There may be an important brain drain of teaching staff, while in other countries inadequate regulation of (private) training facilities is leading to problems of quality and qualification and sometimes of oversupply. Finally, health workforce planning is typically dominated by a mechanistic and quantitative attitude that is insufficiently counterbalanced by a qualitative approach that gives more attention to the soft aspects of the health workforce. The result is problems with attitude and performance of health workers. Chronic negligence has created strong push conditions and contributed to the brain drain seen in these countries, pushing them from *stable* to *worsening*.

Health Workforce Crisis

Highly problematic health workforce conditions lead eventually to health workforce *crisis*, characterised by severely understaffed health facilities, important attrition due to brain drain and/or AIDS, reduced health service/system performance and limited scaling up possibilities of any programme, if at all routine services can still be guaranteed[1]. Cities, districts and regions in countries like Botswana, Malawi, Zimbabwe, South Africa and Lesotho could presumably be put in this group. They are arguably facing a worst case scenario.

Patterns in structural problems

Despite the huge diversity, some patterns can be discerned in the structural problems affecting the health workforce.

(1) *Internal* brain drain occurs in most countries and flows from rural areas to urban centres, from poor to rich areas, from healthcare to management functions, from public to private sectors and from all these to international agencies and NGOs.

(2) Especially the Anglophone countries are affected by the external brain drain partly due to minimal language barriers and their perceived quality of (para)medical education that is structured along UK curricula.

(3) In a number of countries, absorption of newly trained staff into the public service is still hampered by recruitment freezes imposed by international financial institutions. This is problematic where deficits exist, but it can also be an issue if an oversupply of personnel floods the private sector, formal and informal. Where both the professional self-regulation and the state regulation capacity are low, problems are bound to arise. Usually, for the poor groups of the population, access to effective healthcare is threatened due to lack of alternatives and this contributes to predatory

[1] Note that this is a definition more restrictive than the one used in most papers on AIDS and the health workforce.

health care markets and catastrophic health expenditure. Furthermore, quality of care in the private-for-profit sector is often difficult to assure.

Possible questions for debate

Brain drain

- How should countries in the North deal with the 'pull' they exert on developing country workforces? (Structural measures to increase their own production and retention of health professionals, …)
- What codes of conduct are needed from Northern countries / from international agencies and NGO's?
- What means need to be developed in the South to deal with the 'push' factors? (Measures increasing attractiveness of health professions, motivating working environments, …)
- How can clinical work (versus administrative work) be made more attractive?
- More specifically, should the international cooperation contribute to increase salaries in developing countries?

Loss of attraction of the public sector

- How can the necessary conditions be developed for a public service ethos to exist and to be maintained? (Material conditions, organisational configuration and culture, professional ethics and values, …)
- Should recruitment ceilings in public service be maintained?
- Can the private heath care sector be regulated in such a way that it is socially productive, or at least not disruptive, and under what conditions?

Rural-urban disparities

- What can make work in rural areas acceptable or even rewarding for health workers? (Creating training institutions closer to the rural areas and recruiting trainees from these areas? Valuing a varied professional experience in the career structure? Including meaningful learning experiences in rural areas while in training? Turning mandatory rural service into a professionally enriching experience through effective support systems? Making life in rural areas more acceptable through financial and material incentives? Alleviating the isolation of rural life? Providing extra schooling opportunities for children of rural health workers?)

ISSUE 2 - HIV/Aids: a new challenge

In the countries hardest-hit by the HIV/AIDS epidemic, the chronic deficiencies regarding training capacity, distribution and skill mix, and retention in the medical and caring professions described above have left the health services with little respite. In these countries, analysis of health workforce issues probably best starts from the position that entire societies are in a process of social involution of a scale unprecedented in human history (de Waal 2005). As a consequence,

strategies that proved to be effective and correct in past conditions need to be reviewed (Aitken and Kemp, 2003, Huddart et al., 2003). Among the solutions, far-reaching delegation of tasks is argued for, either to community health workers or to lay providers.

Fundamental issues

Two fundamental issues are emerging. The *short-term* priority is to adapt the health service delivery and organisation to make the best use of current resources, for example by considering integration of ART care in existing well-functioning TB programmes (Abdool Karim et al., 2004). Basically, new delivery models should allow for delegation of tasks to lesser-qualified health workers and lay persons, supervised by the increasingly scarce professionals. This raises several questions regarding the minimal competencies of these providers, the support mechanisms and the control mechanisms avoiding that low qualified providers end up, in the long run, to operate as care providers in the informal private sector (Green, 2000).

The *long-term* priority remains to institute effective human resource policies to train and retain the required health workers. In Malawi, for example, where the vacancy rate in public health services is estimated to be around 60%, simply topping up the public servants' salaries and hiring some expatriate professionals won't do to fill in chronic and structural deficits.

Diverse situations

It should not be forgotten that in most (less affected) countries, the workload imposed by the epidemic does not exceed the coping capacity of the health system. One could easily be carried away by the discourse of the supranational disease control initiatives and enter into a logic of all-absorbing verticalisation. New cadres of lay volunteers or of expatriates to work in aids prevention and care are being put in place. While this may be warranted in places where social involution threatens, in other settings it may create inefficient parallel health workforce systems each catering for different health problems.

Mainstreaming AIDS

In all settings, mainstreaming of AIDS requires more attention. Organisations should strive at a very explicit AIDS awareness among both their operational and management cadres. This needs well communicated AIDS policies at organisational level that should allow coping with AIDS in the short and long-term perspectives. Essential elements include workforce protection and prevention measures (including post-exposure prophylaxis), mechanisms for psychological and financial support and a strict and explicit non-discrimination policy (internally and externally).

Possible questions for debate

- Under what conditions can lay involvement in ARV treatment provision be framed in a true spirit of participation, in which a social group takes up the responsibility to initiate and organise an answer to the challenge of HIV, avoiding a merely instrumental approach that asks the population to commit itself to the fight against AIDS without giving it a real voice?

- ♣ What minimal technical conditions need to be met to entrust ARV treatment provision to low qualified staff (minimal competences and skills, support mechanisms…)?
- ♣ If lay cadres are in charge of ARV treatment delivery, how to ensure complementarity between the community level and the health system, and obtain support rather than resistance from the part of health professionals?
- ♣ What (long term) mechanisms may avoid that on the spot trained community workers turn themselves into general care providers operating on the informal private market?
- ♣ To what extent and under what conditions will financial resources allocated for HIV/AIDS by international agencies strengthen or weaken the health care system, including in their health workforce component?

ISSUE 3 - Medical education and continued professional development

Perhaps even more than for the other issues, contexts regarding medical education and continued professional development are very diverse. However, the major problems are quite similar in most situations.

(Para)-medical education

First, the quality of medical education has degraded in many countries due to mismatches between academic capacity and financial and logistic means on one hand and the workload on the other hand. Linkages with the other issues are plenty: brain drain among academic staff, reduced attraction of medical education and chronic underinvestment.

Second, private schools are mushrooming in many countries with little regulation and subsequent quality issues. Unregulated training output skews numerical and skill mix balances.

Third, few curricula have remained in touch with the needs of the changing realities of provision of care. Many focus mainly on transfer of knowledge and technical skills rather than developing practical problem solving skills, which include the ability to act in an autonomous fashion in situations of uncertainty and ethical and social problems. This leads all too often to a divergence between formal norms taught in (para-)medical school and the actual practice. Few courses manage to instill professional attitudes and the reflexivity needed for good professional practice. The actual medical socialisation process during the basic (para)medical education that should allow professional values, attitudes and practices to be taken up by trainees is often shallow. Many professionals who could act as role models have left the universities, if not the country.

Furthermore, medical education organised by universities and schools located in urban settings and rooted in hospital practice do not favour a good comprehension of rural communities and community medicine.

Continued professional development and in-service training

In many systems, especially in Francophone West Africa, non-qualified personnel has been widely employed and their competences are 'updated' through on-the-spot training. However, due to lack of qualified personnel, these non-qualified cadres are taking or given responsibilities beyond their initial training, without the commensurate additional training.

For all cadres, the principle of flowing through to higher levels of competency needs to be ensured. (Para-)medical education based on models like the one proposed by Hargadon and PIsek (2004) could offer more flexibility for further development of the workforce by building on a broad base of shared skills rather than on separate development of professional cadres.

Wherever delegation of tasks and responsibilities to less qualified workers is needed, the district supervision policy remains the cornerstone of professional development, on condition that the largely prevailing bureaucratic logic can be circumvented and 'humanised'. However, in practice this is rarely achieved.

Possible questions for debate

- What are major obstacles to make basic training for health professionals more effective in building practical competences?
- Under what conditions is it desirable to support the development of private schools for health professionals?
- What is needed to strengthen professional values and professional ethos during basic training?
- Why does supervision, a cornerstone of delegating treatment responsibilities to less qualified staff, remain widely ineffective? Are there alternatives?

ISSUE 4 - Motivation: more than the sum of financial and non-financial incentives

Motivation can be defined as the drivers of actual behaviour derived from personal intrinsic factors (personal values and motives) and from the environment (external motivators). This implies that health workers as any other human beings are essentially autonomous persons, whose choices are neither totally pre-determined nor controllable. In other words, motivation cannot be instilled, but only facilitated by creating the right environment. Incentives are expected to affect the commitment to realising the tasks that need to be carried out. But indirectly, they also influence attraction to and retention in the health professions, thus affecting availability of providers. A common distinction is made between financial and non-financial incentives.

Financial incentives

Financial incentives are regarded by some as the key to improving performance of health workers. This is based on the assumption that healthcare workers can be better motivated through monetary incentives. To avoid complex negotiations across sectors, topping up premiums are used in many health systems to increase the purchasing power of the official wages and salaries. However, it is

often forgotten that in many situations, the basic salary has been devalued in terms of purchasing power to extremely low levels, making staff appreciate any financial incentive. Problems may arise when these are attributed to individual staff and not with the objective of improving quality of services. Neither do all cadres of health staff benefit in equal measure of these systems. Financial incentives have also other effects. Pervasive in vertical programmes, per diems are leading to perverse effects as they guide the activities to specific programme activities, thereby inhibiting integration of activities, leading to top-down priority setting and reducing reflexivity and autonomy of health staff on the ground.

Promotion is inherently linked to better salaries and higher social standing and power. These benefits interfere with promotion on the basis of real merit, favouring either automatic promotion or promotion by favouritism through social connections.

Non-financial incentives

Many motivation theories stress the importance of the working environment as a potentially potent dissatisfier. It is therefore surprising how little attention is given to improving availability of drugs and equipment, appropriate infrastructure, etc. The supportive environment also includes the social relationships on the work floor and with the patients and community, respect and team work. Other elements include professional development, further learning and career perspectives. In practice, healthcare managers often lack the competencies and vision to adequately deal with these 'soft' aspects of health workforce management.

Managing motivation

Given the complexity of the motivators acting upon a person (and their huge inter-person variety), interventions aiming to increase motivation need to be comprehensive and adapted to context and person. We may need to think beyond the financial/non-financial incentives and rather think in terms of commitment eliciting management approaches (Pfeffer and Veiga, 1999). Important questions include how to ensure that staff can be motivated by the work they do as much as by the power positions they can attain, how their training really can confer confidence and self-efficacy, and how it can transmit and interiorise the value systems needed for the pursuit of excellence.

A bureaucratic organisational culture is supposed to foster behaviours in conformity with rules rather than reflective thinking; a corollary is that staff is supposed to be rewarded or sanctioned for achievements in line with institutional objectives. However, the actual functioning of health bureaucracies often does not keep up with fair sanctions and rewards. Feelings of unfairness in promotion mechanisms as well as in sanctions and rewards are known to affect motivation (Gilson et al., 2005). Impunity may be a major factor of demotivation for those who enter professional life with intrinsic commitment, as is the lack of fair career chances or promotion.

Finally, if organisational cultures and management styles are the key to better performance, what are then the best practices and how do they work in different settings?

Possible questions for debate

- ♣ What are the obstacles to channel the (huge) funds made available for health by international agencies into decent basic salaries rather than in scattered topping up premiums?
- ♣ How can remuneration systems be tailored to foster commitment to health of the population to be served?
- ♣ How can social and professional recognition of health care providers be enhanced?
- ♣ How can professional values and ethos be strengthened?
- ♣ To what extent are international bureaucracies responsible for strengthening health bureaucracies in developing countries?

Generic guidelines?

Based on our present understanding of the HR issues in developing countries, several general guidelines emerge that can constitute principles in the search for solutions.

(1) Rather than looking for magic bullets, it is clear that the way forward lies in the search for tailored solutions based on a comprehensive analysis of problems in their context. This requires 'system thinking', acceptance of complexity and awareness of different levels and constituting elements of the HR issues.

(2) In line with the above principle, intervention packages will necessarily have to be comprehensive. This usually means that evaluation of their effectiveness will pose a difficult methodological problem. Attributing cause and effect relationships in complexity will need to be rigorously theory-based and embedded in a continuous learning process that will have no end. It seems clear furthermore that comprehensive packages require *scale*: small sized organisations cannot offer them on their own, mainly because decisions need to be made and implemented about boundary conditions *outside* their scope of decision making. Hence the importance of federations, associations, more or less formal networking and the like, and the need to create platforms where the issues can be debated in their full comprehensiveness and with all relevant stakeholders.

(3) A third principle that emerges is to take the specificity of the health workforce into account in deciding on the best-adapted organisational environment. 'Simple' things like safe water supplies, environmental hygiene, immunisation programmes and the like go a long way in improving the health of individuals and populations and for implementation of such programmes, a classical command-and-control organisation is likely to be the most adapted one. However, where health care is about solving complex problems in uncertainty, where judgement needs to be applied on the particular situation of individuals, where commitment is the first requirement, the organisational environment will need to be commitment-eliciting, rather than focusing on internal discipline and obedience to rules. This will require both structural insight in various organisational formats and their relative merits, and the managerial capacities and strategies to make the most of them.

(4) Finally, the HIV/AIDS issue is never to be lost out of sight. Rising prevalences are a danger sign, especially where HR problems are already worsening. In the presence of AIDS the landscape of ‘stable chronic’, ‘worsening’ chronic and critical HR problem situations may conceivably turn into a very slippery slope.

References

ABDOOL KARIM, S., ABDOOL KARIM, Q., FRIEDLAND, G., LALLOO, U., EL SADR, W. & PROJECT, O. B. O. T. S. (2004) Implementing antiretroviral therapy in resource-constrained settings: opportunities and challenges in integrating HIV and tuberculosis care. *Aids,* 18**,** 975-979.

AITKEN, J. M. & KEMP, J. (2003) *HIV/AIDS, Equity and Health Sector Personnel in Southern Africa*, Regional Network for Equity in Health in Southern Africa (EQUINET).

GILSON, L., PALMER, N. & SCHNEIDER, H. (2005) Trust and health worker performance: exploring a conceptual framework using South African evidence. *Social Science and Medicine,* 61**,** 1418-1429.

GREEN, M. (2000) Public reform and the privatization of poverty: some institutional determinants of health seeking behaviour in southern Tanzania. *Cult.Med.Psychiatry,* 24**,** 403-430.

HARGADON, J. & PLSEK, P. (2004) Complexity and health workforce issues. Working Paper, Joint Learning Initiative.

HUDDART, J., PICAZO, O. & DUALE, S. (2003) The health sector. Human resource crisis in Africa: an issues paper. Washington, Support for Analysis and Research in Africa (SARA) - Academy for Educational Development.

PFEFFER, J. & VEIGA, J. (1999) Putting people first for organisational success. *The Academy of Management Executive,* 13**,** 37-48.

ZURN, P., DAL POZ, M., STILWEL, B. & ADAMS, O. (2002) Imbalances in the health workforce. Geneva, World Health Organisation.