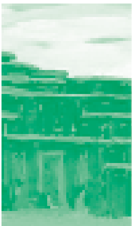
Human Resource Development

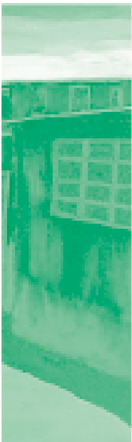
7

Uta Lehmann and David Sanders
School of Public Health, UWC



Human resource development is increasingly being recognised as being key to improved health service delivery and health sector transformation. Policies do acknowledge that health is a human system, and that reforms have to address themselves centrally to the personnel staffing the service, improving planning, capacity and management. Yet, concern continues to be raised about a lack of strategy and implementation, leading to ever increasing strains on the health sector.

This chapter highlights some success stories and traces reasons for and the impact of the unsatisfactory human resource situation in the health sector, based on a number of case studies. It specifically looks at issues affecting quality of care, such as capacity and skills; workloads; management, support and supervision; HIV/AIDS and its impact on human resources; and the reasons for and extent and effect of the brain drain. It furthermore outlines selected components of a human resource strategy, which could address some of the identified issues.



Introduction

It is almost a truism that human resources determine the success or failure of health sector transformation. A growing number of academic authors as well as policy makers throughout the world recognise the fact that health care is a human system, and that reforms have to address themselves centrally to the personnel staffing the service.[1] In South Africa the National Assembly Portfolio Committee on Health expressed concern about the "lack of synergy between national DoH's policy and the implementation thereof in the respective provinces", as well as the "DoH's deficient strategy on human resources".[2] And while there is recognition that successful health sector reform hinges on its human resources (HR), the concern raised by the Portfolio Committee indicates that HR practices continue to lag behind this understanding.

However, there has been progress: the Government recently launched a 'Human Resource Strategy for South Africa' under the heading - A Nation at work for a Better Life for All, which addresses human resources development (HRD) needs throughout the country. Within the strategy "enhancing the skills and capacity of employees in the public sector" has been identified as a crucial component, with specific emphasis on management capacity, monitoring and evaluation, human resource management, and leadership development. The Draft National Health Bill acknowledges the importance of HR by dedicating a whole chapter to it. Also, there is progress, albeit slow, towards the decentralisation of HR functions to districts. And there are numerous examples of innovation, creativity and excellence in approaching HR issues throughout the country. However, progress made threatens to be undone by a host of continuing challenges, problems and set-backs, which impact negatively on the key measure of success, i.e. quality of and accessibility to care. For example, HIV/AIDS is having devastating effects on the health sector, as disease burdens are rising sharply, and dis-proportionately in under-serviced areas, while health workers are feeling the effects of the epidemic in their own ranks. Furthermore, there are continued concerns about the availability of appropriate clinical and management skills to deal with a host of health care delivery issues, including HIV/AIDS. Lastly, staff are leaving the public health service in large numbers, either to work in the private sector or to emigrate to other countries. There has been a fair amount of public debate about the extent of and the reasons for this. Migration has been attributed to better salaries and conditions of service in the private sector and in foreign countries, but also to dissatisfaction with working conditions and the socio-economic climate, particularly crime, in South Africa.

This chapter will highlight some of the success stories and trace some of the reasons for and the impact of the unsatisfactory HR situation in the health sector, based on a number of case studies. It specifically looks at issues affecting quality of care, such as capacity and skills; workloads; management, support and supervision; HIV/AIDS and its impact on human resources; and the

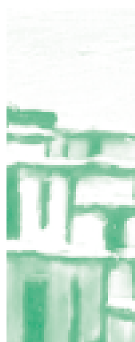
reasons for and extent and effect of the brain drain. It furthermore outlines selected components of a human resource strategy, which would address some of the identified issues. The chapter does not directly address the issues of recruitment and selection, nor does it explore in detail the decentralisation of HR.

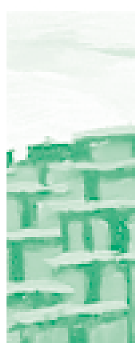
Human Resources in the Draft National Health Bill

The section on HR in the Draft National Health Bill has undergone numerous changes over the years, and the final version is still awaited. In the August 2002 version, the whole of chapter 7 is dedicated to Human Resource Planning and Academic Health Service Complexes, which, after dedicating considerable space to the formation of Statutory Professional Health Councils, sets out a number of regulations governing human resource development within the national health system. It spells out the Minister's responsibilities as follows:

a. Ensure the availability of adequate resources for the education and training of health care providers and health workers to meet the human resource requirements of the national health system
b. Ensure the education and training of health care providers and health workers at all levels in accordance with recognised norms and standards in order to meet the requirements of the national health system
c. Prescribe new categories of health workers and health care providers to be created, educated or trained
d. Identify shortages of key skills, expertise and competencies within the national health system and prescribe strategies for recruitment of health care providers or health workers from other countries or strategies for the education and training of health care providers or health workers in the Republic of South Africa in order to make up the deficit in respect of scarce skills, expertise and competencies: provided that such strategies are not in conflict with the provisions of the Higher Education Act
e. Prescribe strategies for the recruitment and retention of health workers and health care providers within the national health system
f. Prescribe circumstances in which health workers and health care providers may be recruited from other countries to be employed as such, or to deliver health services, within the Republic of South Africa.

In the past, legislation and policies often tended to equate HRD for health with training and the functioning of academic health service complexes. This draft Bill is an important step beyond this. While it continues to give great prominence to academic health service complexes, and is silent on issues of distribution and equity, it does identify the key challenges of planning and training for adequate and appropriate skills and competencies. It furthermore spells out the need to develop management policies and practices, which will ensure recruitment and retention of staff. One component, which would further strengthen the Bill would be a commitment to the establishment of mechanisms to ensure the equitable distribution and support of staff throughout the country.





Capacity and Skills

"With the move towards decentralised health systems, many health workers, particularly at district level, now require, in addition to clinical skills, substantial public health skills in planning, advocacy, programme design, programme implementation and monitoring and evaluation which are fundamental to the successful implementation of the Primary Health Care (PHC) Approach."[3] These are skills for which few of the newly appointed district, sub-district and programme managers received training, resulting in a wide gap between existing and required job competencies.[4]

It will be shown below that many of the skills required for HIV/AIDS clinical treatment and management are still lacking amongst frontline health workers, yet urgently required and needing massive training inputs and continuous support. But HIV/AIDS is not the only area where clinical or management skills are lacking. The National STI Initiative, for example, "set up in 1999 to develop 'model' district-based STI control programmes,"[5] found, that the clinical and management skills in STI care in clinics often fell short of standard, "resulting in many clients being incorrectly treated". It was suggested that "training in STI clinical case management is still essential", and that "efforts to ensure that every primary level clinical provider knows and understands the syndromic case management protocols needs to continue".

In another example, a review of the clinical management of severe malnutrition amongst children in rural hospitals found a lack of resources, as well as poor management and the use of outdated, inappropriate treatment practices, resulting in very high case fatality rates.[6] Using a participative action research approach, the team conducted training and developed case management protocols, concluding that, given the necessary training and support, "hospital staff, even in the most under-resourced areas, have the ability to identify and begin to rectify poor practices". The strong developmental potential of participative research has been highlighted in other projects,[7] and should be strengthened throughout the country as a capacity building tool. Prominent among participative approaches is the Women's Health Project's Health Workers for Change initiative. In an article[8] on the initiative Fonn and Xaba reported on a project which aimed to improve the relationship between health providers and clients through a series of reflective, exploratory workshops. In these workshops health workers interrogated their own perceptions and moved towards developing solutions to solving identified problems. The authors concluded that, "this initiative suggested that this methodology[8] could be useful as a research tool to understand provider-client relations and thus quality of care. The methodology assisted participants in understanding the social, including gender, determinants of health".

The positive effect of health workers' ability to engage with communities and other sectors on quality of care has been highlighted in several projects. An initiative in Khayelitsha, Cape Town, to reduce worm infestation in

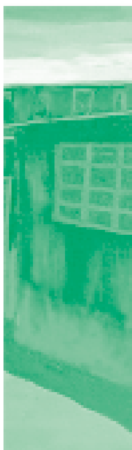
children saw health workers, community members and teachers working together to assess the size of the problem and then plan and implement intervention.[9] As a result, worm infestation among children in 12 schools dropped from 80% to under 20%.

In an initiative in the Uthukela District, KwaZulu-Natal, much progress was made towards improving child health through a combination of community participation, developing community health workers, and a concerted effort to train all primary care nurse practitioners and doctors in Integrated Management of Childhood Illnesses (IMCI).[10]

Skills development in established and emerging clinical areas as well as in aspects of public health and PHC such as management, community participation and multi-sectoral collaboration can clearly lead to substantial improvements of quality of care and has to remain a priority. Systematic and in-depth capacity and skills assessments in all programmes and at all levels will assist the development of skills development strategies.

Workloads

Workloads, particularly at PHC facilities, continue to be a controversial issue. The 2000 National PHC Facilities Survey found that, although uneven, fixed facilities had substantially lower patient loads in 2000 compared to 1997. But views on what constitute appropriate workloads continue to vary. The PHC survey reported views of health managers that considered a range of between 20 and 35 patients per day to be appropriate. Kraus has developed staffing norms for district personnel in various South African provinces. He explains that "a workload variable of 25 patients per eight hour shift has been used in all clinic and PHC models. What proved interesting about applying this ratio is not only the general agreement that the workload variable [of 25] is quite reasonable (if not too generous) but the remarkable variation in workload that PHC nurses are in fact handling in PHC facilities. It is not uncommon to find services where nurses average 6 patients a day or 60 patients a day on a routine basis."[11] While this finding highlights great variation in productivity of nurses, it also points to the fact that health care delivery in South Africa takes place in enormously complex and diverse socio-economic contexts and conditions and that transformation (integration and decentralisation) of services is far from complete. Workload is not only a question of individual nurses' efficiency and productivity, although these are undoubtedly contributing factors, which need to be taken into account. Rather, workload is quite fundamentally determined by dramatic structural differences, such as location, size, staffing levels, infrastructure and resourcing. This is illustrated in examples of two clinics sketched below, one situated in urban Cape Town, the other one in the rural Eastern Cape.



Case Study 1: Clinic in Cape Town

"Despite needing a fresh coat of paint and the weeds growing through its once grand colonial-style veranda removed, the centre is an example of a well functioning clinic which has everything it needs. The centre offers district surgeon services, mental health, dental services, school health, family planning and curative services. It forms part of a strong network with the surrounding hospitals. Whenever a patient is referred to hospital, for example for surgery, there is a reply from the hospital, as well as a letter sent with the patient when s/he returns to the clinic. There is also a taxi service contracted to run between the centre and the hospitals."[12]

Case Study 2: A rural clinic in the Eastern Cape

"It has not rained in Mount Frere in the former Transkei for many months and the rain water tank at the Mntwana clinic has run dry. A truck has brought water to the outlying village of Dangwana and filled up the clinic's tank, but the water comes straight from the river and is too muddy for drinking or for using during procedures such as childbirth. The clinic has also run out of its supply of vaccines, but Sister N comes down the road carrying a cooler box filled with new stock on her head. She has caught a taxi and fetched the stock from the hospital in Mount Frere. Unlike the situation a few years ago, the clinic can now get the medicines it needs, but still has very little else in the way of facilities. There is no electricity, even though that was promised three years ago, and there are not even paraffin stoves. A state-of-the-art satellite phone was installed in February but it only worked for the few days following its installation. There is no other form of communication, not even a radio-phone."[13]

While these may be extreme examples, they illustrate the complexity and diversity of health care delivery and nursing practice at primary level in South Africa. In one setting health workers may be able to concentrate on their core tasks, drawing on administrative and other support (such as cleaners and porters), as well as reliable water, electricity and drug supplies, and having access to ambulance and specialist services where required (even if these may not always be satisfactory). In another setting nurses may be the only staff in a clinic with a vast and dispersed catchment area. Electricity and water supplies may be intermittent, transport irregular, and drugs may be brought by the clinic supervisor or have to be fetched by the clinic sister from the nearest distribution point (see case study 2). Staff have to start their day by cleaning the clinic themselves, and will attend to all aspects of patient care, including all clerical work, dispensing and organising transport to hospitals. Yet, workloads and staff allocations are measured against the same one-dimensional yardstick, i.e., number of patients seen at the clinic per day, regardless of whether the nurses in question have to spend hours travelling to town to collect medicines, organising transport for women in labour and cleaning the clinic, or whether they can concentrate on their core nursing duties in a well functioning facility. Another example is of nurses who assist HIV positive clients to apply for social assistance grants. These will be lengthy consultations, which will look bad in statistics on patient load, yet they constitute a vital service to HIV positive clients (see section on HIV/AIDS).

Research is presently underway at clinics and community health centres in Cape Town to explore qualitative aspects of workloads: quality of interaction

with clients, impact of infrastructure and skills, as well as integration of services on patient loads.[14] The outcomes of this research will hopefully contribute to the development of more sophisticated tools to assess and determine workloads of health workers.

Management and Support

Management and support are crucially important to health personnel performance: good support and able management (including planning and supervision) will vastly improve work satisfaction and ability to function productively, while lack of management and support contribute substantially to low productivity and demotivation and lead to what can be termed 'transformation fatigue' among health personnel. The Voices of Facility and District Managers in the South African Health Review 2001[15] reflected this.

Other research points in a similar direction. A project looking at the roles and functions of clinic supervisors in rural districts in the Eastern Cape Province[16] found that the single most important challenge to clinic supervisors' performance and ability to fulfil their role is the fact that many governance issues remain unresolved in the process of transforming the South African health system. Continued fragmentation of services, unfilled posts and unclear lines of accountability have an immediate and negative impact on working conditions and supervisors' ability to render effective service.

In addition, a mismatch often exists between job description and actual functions performed. While the focus should lie on support and supervision of clinics and their staff, most supervisors find themselves occupied with a range of other activities: lending a helping hand by rendering clinical care in under-staffed clinics; taking full responsibility for provisioning of clinics; attending large numbers of unscheduled meetings and workshops throughout the province. The negative and disruptive impact of a proliferation of unscheduled and unnecessary meetings, pointing to a lack of planning capacity, particularly at provincial level, is highlighted by the following statements made by district, facility managers and supervisors:

"Managers or personnel are sent on unplanned training courses, which mess up planning."

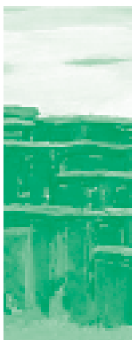
"Short notice is given for meetings."

"Too much planning and too little implementation."

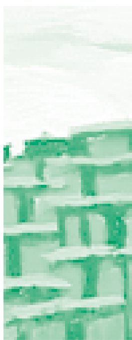
In research presently underway in Cape Town, staff involved in the implementation of the Provincial Integrated Nutrition Policy in Cape Town have complained about management's inability to coordinate communication and activities between different departments and to prepare the ground for

policy implementation.[17] Staff voiced frustration with the fact that they bear the brunt of having to implement the new Nutrition policy, without practical support or acknowledgment. They furthermore feel that policies are often not well thought through or they get abandoned halfway through the implementation process. This eventually leads to general disenchantment with the transformation process, transformation fatigue. This is well articulated in a quote of a facility manager interviewed by Leon et al.[15]

"Because of all the change I am tired of change. Since 1994 these consistent changes. First it was the health policy they changed that, we had to get this primary health care, we are since then still in a changing phase because then it is this programme then it is that programme that's changing."

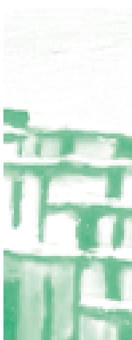


Good management, leadership and support, on the other hand, contribute greatly to well-functioning service delivery, as shown by Couper and Hugo in their study of Management of District Hospitals.[18] Assessing four rural district hospitals in the North West Province and KwaZulu-Natal, they identified four key factors to success: teamwork, the framework for the functioning of the team, i.e. ethos, structures and systems, the position of the hospital in the community and the district, and capacity building. They conclude that to achieve these key factors, "there is a need for leaders – not managers or administrators, but leaders – who believe in what they are doing and have a vision for it". They therefore recommend that leadership development be given priority on the national and provincial capacity development agenda.



Another example of a management initiative at district level, which impacted positively on staff, is the functional integration of services in Brakpan District in Gauteng.[19] Again, the importance of teamwork and goodwill are highlighted, as well as management support and the political will at municipal and provincial level to 'make things happen'.

Careful and regular supervision is increasingly being identified as a factor, which impacts profoundly on quality of service delivery. The crucial role of clinic supervision was highlighted earlier. The study conducted by Lehmann et al. found that supervisors played a vital role in keeping clinic staff in touch with policy developments, treatment protocols, etc. Virtually all staff found supervisory visits productive and beneficial, but complained about irregularity and infrequency of visits.[20] In the report on the improvement of child health in Uthukela District, the importance of ongoing supervision in supporting and enhancing training efforts is stressed.[21] Without supervision staff easily feel unappreciated and insecure, particularly in the implementation of new policies and treatment regimes. This sense of insecurity and lack of appreciation may in turn again lead to disenchantment with and resistance to the transformation process in the health sector.



All evidence therefore points to the fact that management and leadership (or lack thereof) can boost or deflate staff morale, productivity and ultimately

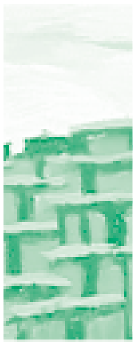
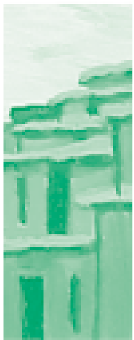
quality of care. A case may therefore be made to visit and revisit the numerous management development initiatives the country has seen since the early 1990s, to assess gaps and to develop or strengthen management and leadership development programmes at all levels of the system. In this assessment attention should particularly be paid to the question which initiatives have proven most successful. Schaay et al. recommended in 1998 that "training across traditional sector boundaries should be encouraged, a competency-based approach to management training should be pursued, and that the training should encourage a 'reflective and self-directed' approach to learning. In addition, the particular skills required by health workers to manage a transforming health system – at every level within the public health service – should serve to guide the development of the content of the evolving health management programme in South Africa".[22] Furthermore, experience in numerous projects indicates that management development is most successful when it happens in the context of practice, e.g. within a programme or service. An assessment of management development initiatives should take account of these findings and recommendations.

HIV/AIDS and Human Resources

HIV/AIDS arguably poses the greatest challenge to human resource development in the health sector. Unlike other sectors, though, health is faced with a double burden, having to cope with increased morbidity and mortality in its own ranks, but also having to shoulder the impact of a rapidly increasing disease burden in the general population.

Although there have been no published studies, it is believed that infection rates among health workers at least mirror those in the general population. As in many other sectors, the health sector is experiencing increased rates of absenteeism, as health workers have to care for sick family members and attend numerous funerals. At the same time health workers bear the brunt of an increased disease burden and are expected to implement emerging initiatives and policies, often without additional staffing. A study conducted by the Centre for Health Policy[23] found that TB patient load, a good indicator of the changing clinical load related to HIV, had increased by 27% over a 7-month period, between July 2000 and January 2001. The Interim Findings of the National PMTCT Pilot Sites recently found that in some sites the additional workload generated by the PMTCT programme "has not been compensated for by any additional staff", while in other sites lay counsellors had been appointed, but "nurse and medical staffing levels have been mostly unchanged".[24]

The same studies point out that training and support for health workers is uneven. The PMTCT study found that, while "training and human capacity development is critical for the development of adequate staff competencies, morale and motivation", "many staff do not have a strong foundation of

knowledge and skills in HIV and PHC". The report highlighted that the Programme engaged in very substantial training efforts, yet did not reach all staff involved in the programme. It stressed that "the sheer volume of training required at the pilot sites points to a major challenge should provinces expand the programme to new sites".

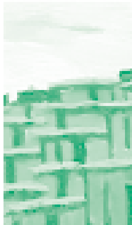
In facilities beyond the PMTCT sites the availability of knowledge and skills, as well as access to information, appears to be even more uneven. Modiba et al. found that of a sample of 215 providers in PHC facilities in Gauteng more than half had received some training in HIV/AIDS, 40% had been trained in counselling, but only 10% had received training in the clinical aspects of HIV/AIDS and management. The study also found that "provider knowledge of the clinical illness associated with various stages of HIV was generally poor". A Rapid Appraisal of Primary Level Health Services for HIV-Positive Children at Public Sector Clinics in South Africa[25] found that only 20% of a sample of 383 clinics had heard of the DoH guidelines for 'Managing HIV in Children', and only 10% reported using them. In the same study, 21% of clinics reported that they were assisting clients with accessing social assistance grants, pointing to further increases in workload not directly linked to clinical load.

While at present the knowledge and skills base for managing different aspects of HIV is clearly uneven and the training needs are enormous, support and supervision of staff are equally important, but sometimes undervalued. Giese and Hussey[25] quote the desperate comment of one clinic manager that: "People are dying like flies". The psychological and emotional trauma reflected in this comment is frequently repeated in conversations with health workers, who state that they were trained to heal people that they cannot cope with the fact that people around them are dying and that there is nothing they can do about it. Yet organised support and supervision to counter stress and burnout are only available to a minority of providers. Modiba et al.[23] reported that only 36% of the providers in their sample from 3 regions in Gauteng recorded that they had participated in formal group meetings for clinical or counselling debriefing. The figures are likely to be considerably lower in other provinces, and particularly in rural areas, although support and supervision of health workers in the context of the HIV pandemic is a topic that requires urgent research and intervention. As McCoy et al. point out: "Support and supervision, as well as organising peer support groups, is required to help prevent staff burn-out. Providing effective and appropriate support and supervision for frontline staff is a highly skilled job that should also be part of a human resource development plan."

The Brain Drain

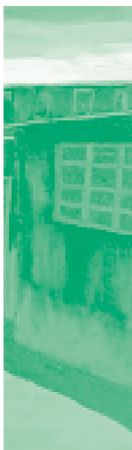
Lack of management and support, work overload, poor working conditions, lack of appropriate skills and emotional burnout make a lethal mix of factors which lower productivity, staff morale and quality of care, and contribute to what has been dubbed the brain drain, both here and in other African countries.

The exodus of health workers from the public sector has become a much discussed issue in the media and is clearly of great concern to government. In 2001, the Minister of Health warned that the rate at which nurses were leaving the country was turning them into an endangered species. Over the past two or three years numerous media reports have spoken about the reasons why health workers are leaving, ranging from high crime rates to poor working conditions, to the lure of better salaries overseas.



The brain drain is not a uniquely South African phenomenon. Countries throughout the developing world have been battling for years (mostly unsuccessfully) to retain their skilled health workers. In Ghana, for example, 50% and 75% of each batch of graduates in medicine emigrate in 4.5 and 9.5 years, respectively.[26] Some 60.9% of doctors produced between 1985 and 1994 had already left the country, mainly to the United Kingdom and USA in 1999. South Africa, in fact, is benefiting from in-migration from other African countries[27] Commonwealth Secretariat, 2001. Some 20% of doctors (approximately 6 000) on the South African Medical Register in 1999 were expatriates. And yet, the situation (lack of doctors) in many provinces, particularly in rural areas of South Africa is reaching crisis proportions. Many posts, particularly in rural facilities, cannot be filled because of a lack of applications. This sets up a vicious cycle, which is accelerated by the impact of HIV/AIDS, as remaining staff become increasingly overburdened, burn out and eventually may also leave.

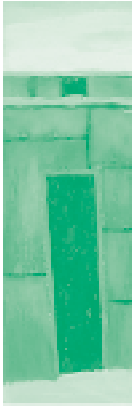
Conclusions



The picture sketched above supports policy makers' concern that a coherent and comprehensive human resource strategy for the health sector is urgently needed. Numerous examples have shown that innovation in and attention to human resource issues can substantially support and improve service delivery and care.

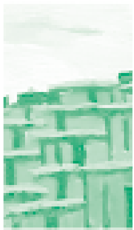
Strategic policy development, planning and implementation is needed at many levels.

The number and distribution of health personnel throughout the sector, although not at the centre of this chapter, requires urgent attention, particularly in the light of the impact of the HIV/AIDS pandemic and the brain drain. It would be encouraging, if the National Health Bill spelt out



guiding principles in this regard.

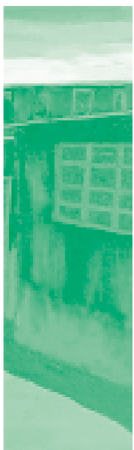
Capacity development will remain a focus area for the foreseeable future. In the light of overwhelming need it would seem advisable, however, that development efforts significantly concentrate on priority programme areas. Within overall health policy priorities these would likely include HIV/AIDS and STI, TB, nutrition, maternal and child health. Within these areas, both clinical and management skills should be continuously developed, based on skills and needs assessments. Furthermore, there is an urgent need for management and leadership development across all levels of service, which should be preceded by a systematic needs and impact assessment.



Of course, the ongoing capacity development of staff in the service is only one leg of human resource production. Issues of training, curricula and community service have not been discussed in this chapter. Developments in community service are dealt with elsewhere in the SAHR 2002. Findings made by Edelstein et al.[4] in 1998 that new graduates lack crucial clinical and public health skills to implement PHC still largely hold true four years later. This is illustrated by a statement made by a community service doctor in the rural Eastern Cape who said about his undergraduate training:

"There wasn't enough emphasis on patient management in a lower level institution, our training was mostly theoretical ... most patients are filtered out at this lower level therefore the students don't see them ... The environment here is very different from both RCH and Pretoria Academic ... some of the antibiotics we were taught to use aren't available so we have to look for alternatives ... The Sister is teaching me a lot, I'm learning more than I ever learnt in my whole training!"[a]

In the area of HIV/AIDS a comprehensive human resource plan is needed which projects staffing, capacity and training needs in the light of morbidity, mortality and attrition rates within the health sector, increased disease burdens and the likely development of treatment strategies such as PMTCT and ARV treatment.



Next to HIV/AIDS, staff retention is the most obvious area of intervention, yet in many ways also the most elusive. While the New Partnership for Africa's Development (NEPAD) may put the brain drain on the international agenda, it is unlikely that countries in the developed world will refrain from recruiting staff from developing countries in the short or medium term. This does not mean however, that staff retention should be given up as a lost cause. Firstly, the Department of Health can work towards the regulation of migration through bilateral and multi-lateral agreements such as the Commonwealth Code of Practice for International Recruitment of Health Workers.[28] Secondly, numerous initiatives can be taken internally to reduce the 'push-factors' encouraging out-migration. Amongst these are many mentioned earlier in this chapter, which cluster around improvement in the conditions of service

a Personal communication.

of staff, resulting in better morale. They include improved supervision and management support, skills development in key areas as well as the resolution of governance and transformation issues. Improved infrastructural support, particularly in rural areas, such as transport, electricity and water supplies and communication, should also be explored for its retention potential.

This is a crucial time for human resources in the health sector. There are signs that 'transformation fatigue' is beginning to spread at a time of overwhelming challenges. It is neither doubtful nor controversial that the sectors' human resources hold the key to tackling these challenges. To do this they need to be better cared for, listened to and looked after. While this has been acknowledged on paper in public pronouncements, it is now time that these pronouncements are translated into concerted action. This chapter has shown many examples of how this can be done on a small scale. The challenge is to build such initiatives into a national strategy for health human resources.

References

1 Kolehmainen-Aitken, Riita-Liisa (1997), Decentralisation of human resources: implications and impact. Human Resource Development Journal Vol 1 No 3.

Martineau T, Martinez J (1996), Human resources and health sector reform – priorities for analysis and research. Proceedings of workshop on human resources and health sector reforms – research and development priorities in developing countries. Liverpool.

Segall M (2000), Human development challenges in health sector reform. In: Ferriho P, Van Lerberghe W, Providing Health Care Under Adverse Conditions: Health Personnel Performance & Individual Coping Strategies. Studies in Health Services Organisation and Policy.

2 Sait L. Health legislation. In: Ntuli A, Suleman F, Barron P, McCoy D (Eds) South African Health Review 2001. Durban: Health Systems Trust; 2001.

3 Sanders D, Chopra M, Lehmann U, Heywood A, Meeting the challenge of health for all through Public Health education; some responses from the University of the Western Cape. S Afr Med J 2001; 91:10.

4 Edelstein G, Sanders D, Groenewald E, van Niekerk R, Reddy S. An assessment of the exit competencies of professional nurses in relation to those required to implement the national system at district level: the implications for nursing education. Centre for Health Human Resources: Public Health Programme. Bellville: University of the Western Cape; 1998.

5 Moys A et al. Training clinic sisters. Lessons learnt based on experience of National STI Initiative. Durban: Health Systems Trust and Reproductive Health Research Unit; 2002.
URL: http://www.hst.org.za

6 Puoane T et al. Evaluating the clinical management of severely malnourished children – a study of two rural district hospitals. S Afr Med J 2001; 91(2): 137-140.

7 Lehmann U et al. Investigating the Roles and Functions of Clinic Supervisors in Three Districts in the Eastern Cape Province. HST Technical Report. Durban: Health Systems Trust 2002. Also: No author. Participatory Action Research: training district research teams in the Eastern Cape. MCH News no 10. 1998.

8 Fonn S, Xaba M. Health workers for change: developing the initiative. Health Policy and Planning 16 (Suppl. 1), 2001: 13-18.

9 The Khayelitsha Task Team – building partnerships that work. Published by KTT; 2001.

10 Kerry T. Child Health in the Uthukela District, KwaZulu-Natal. MCH News no 16, Dec. 2000.

11 Kraus, Rodion, Final Report on Optimal District Personnel and Skills Mix Requirements for Delivery of Primary Health Care Services. HPSA 1998.

12 Strachan, Kathryn, A look at a Cape Town clinic. HST Update. Issue no. 46.

13 Strachan, Kathryn, Working as a nurse in a rural clinic. HST Update. Issue no. 46.

14 A comparative investigation into nurses' workloads in different primary health care settings in the Cape Town Unicity. Project as part of the Cape Town Equity Gauge Project funded by the Rockefeller Foundation.

15 Leon N, Bhunu F, Kenyon C. Voices of facility managers. And Masilela T, Molefakgotla P, Visser R. Voices of district managers. In: Ntuli A, Suleman F, Barron P, McCoy D (Eds). South African Health Review 2001. Durban: Health Systems Trust; 2001.

16 Lehmann U et al. Investigating the Roles and Functions of Clinic Supervisors in Three Districts in the Eastern Cape Province. HST Technical Report. Durban: Health Systems Trust; 2002.

17 A Contextual Analysis of Functions, Roles and Skills of Nutrition Personnel in the Implementation of the Integrated Nutrition Programme at Primary Care Level in the Cape Town Unicity. Project funded by the Health Systems Trust.

18 Couper I, Hugo J. Management of District Hospitals. Exploring Success. Durban: Health Systems Trust; 2002.

19 Zondo M et al. The Story of Integration in the Brakpan District. Kwik-Skwiz #26. Durban: Health Systems Trust; 2000. URL:http://www.hst.org.za.

20 Lehmann U et al. Investigating the Roles and Functions of Clinic Supervisors in Three Districts in the Eastern Cape Province. Technical Report. Durban: Health Systems Trust; 2001.

21 Kerry T. Child Health in the Uthukela District, KwaZulu-Natal. MCH News no.16, Dec. 2000.

22 Schaay N, Heywood A, Lehmann U. A review of health management training in the public health sector in South Africa. Technical Report to chapter 9 of the South African Health Review 1998. Durban: Health Systems Trust; 1998.

23 Modiba P et al. The integration of HIV/AIDS care and support into Primary Health Care in Gauteng Province. Johanneburg: Centre for Health Policy, 2002: iv.

24 McCoy D, Besser M, Visser R, Doherty T. Interim Findings on the National PMTCT Pilot Sites. Durban: Health Systems Trust; 2002: 36.

25 Giese S, Hussey G. Rapid appraisal of primary level health services for HIV-positive children at public sector clinics in South Africa. Cape Town: University of Cape Town; 2002.

26 Delanyo Dovlo, Dr. Frank Nyonator, Migration by Graduates of the University of Ghana Medical School : A Preliminary Rapid Appraisal, HRDJ 1999; Vol 3 No.1.

27 Commonwealth Secretariat. Migration of Health Workers from Commonwealth Countries. Experiences and Recommendations for Action. London: Commonwealth Secretariat; 2001.

28 Commonwealth Secretariat. Commonwealth Code of Practice for International Recruitment of Health Workers. 13th Commonwealth Health Ministers Meeting, Christchurch, New Zealand, 25-29 November 2001.