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Francois Steyn, Dingie van Rensburg & Michelle Engelbrecht

Human resources for ART in the Free State public health sector: recording achievements, identifying challenges

The shortage of human resources for health poses a serious threat to public sector ART in South Africa. In the Free State, recruitment of staff for ART emphasises the challenges of securing the necessary number and categories of health professionals. Amongst others, not all posts were filled, and some appointments left vacancies in other programmes and facilities. Practice indicates that sites should be staffed according to the demand for the service, instead of general staffing norms. It is argued that health workers who currently do not work in the programme should receive training in ART in order to spread workloads more evenly in facilities. The realities of staff frustrations and discontent also call for improved supervision and support. The study suggests that the strengthening of the health system via human resources for ART is still to transpire. To achieve this, improved strategic planning is required.

Menslike hulpbronne vir ART in die Vrystaat se openbare gesondheidsektor: rapportering van prestasies, identifisering van uitdagings

Die tekort aan menslike hulpbronne vir gesondheid hou 'n ernstige bedreiging in vir openbare sektor-ART in Suid Afrika. Die werwing van personeel vir ART in die Vrystaat beklemtoon die uitdagings om die nodige getalle en kategorieë van gesondheidsdeskundiges te verseker. Al die poste is onder andere nie gevul nie, en sommige aanstellings het vakatures in ander programme en fasiliteite gelaat. Die praktyk toon dat personeel volgens die vraag na die diens aangestel behoort te word, in plaas van algemene personeelvoorsieningsnorme. Daar word aangevoer dat gesondheidswerkers wat tans nie in die program werksaam is nie, opleiding in ART moet ontvang ten einde werksladings meer eweredig in fasiliteite te versprei. Die realiteite van personeelfrustrasies en -ontevredenheid vereis ook verbeterde toesig en ondersteuning. Die studie suggereer dat die versterking van die gesondheidsisteem. Om dit te bereik, is verbeterde strategiese beplanning nodig via menslike hulpbronne vir ART nog na vore moet tree.

Mr F Steyn, Prof H C J van Rensburg & Dr M C Engelbrecht, Centre for Health Systems Research & Development, University of the Free State, P O Box 339, Bloemfontein 9300; E-mail: steynf.hum@mail.uovs.ac.za

No health care system can function without skilled human resources. The development of skilled human resources for health is increasingly being recognised as critical in the reform of health care and the introduction of new health policies (Lethbridge 2004).[1] In this regard, the national Department of Health (NDoH 2005) notes that:

> The South African Health Care System faces the ongoing challenge of ensuring provision of adequate human resources to enable it to deliver on the constitutional mandate of providing adequate health services to all citizens.

Although human resources are the backbone of a health system, they are often considered a neglected element in the development of health systems (Chen *et al* 2004: 1984, Hongoro & McPake 2004: 1451). Among other things, the need for increased access to antiretroviral treatment (ART) and the demands of the Millennium Development Goals place pressure on the health systems of many developing countries. Not only are human resources in short supply, but health workers often lack the skill requirements to render priority health services, such as ART (Wyss 2004a). Various authors[2] state that the shortage of human resources is in all likelihood the greatest challenge facing the implementation and scaling up of ART programmes in developing and low resourced countries.[3] Past experiences with programmes such as TB, termination of pregnancy, and prevention of mother-to-child transmission (PMTCT) have shown that scaling up access to ART cannot be accomplished only on existing resources, particularly human resources, and without damaging such resources (Schneider 2003: 24).

1 The concept "human resources for health" encompasses a spectrum of professional (doctors, pharmacists, and nurses) and non-professional (lay, voluntary, support) health workers. In this article, the concept largely refers to professional health staff, although some attention is paid to the situation of community health workers.

2 Cf Barron 2003, Buvé 2005, Kober & Van Damme 2004: 104, Kovsted 2005: 471, McCoy *et al* 2005: 18, Physicians for Human Rights 2004: 121, Wyss 2004b: 3.

3 This situation is evident in the 2004 announcement by the Mozambican Department of Health that the country will not be able to implement a nationwide programme due to serious staff shortages. At that time, PEPFAR was funding a pilot programme to provide ART to 8 000 patients, although an estimated 120 000 HIV-positive people required treatment (Reuters 2004).

In November 2003, the South African government announced the *Operational Plan for Comprehensive HIV and AIDS Care, Management and Treatment for South Africa* (henceforth *Comprehensive Plan*), the central aims of which are to ensure free, universal access to ART through the public sector, and to strengthen the health system at large. In the Free State, since January 2004, the first ART sites (one per district) were selected and prepared for implementation. Delivery of ART services commenced in May 2004 in the Lejweleputswa district, while the remaining four districts in the province followed in a staggered way. However, the implementation of ART poses various challenges and pitfalls to any public health care system (Chopra 2005, McCoy *et al* 2005: 18). The Free State Department of Health (FSDoH), in gearing itself for implementation of the programme, identified skilled staff (recruitment, training and skills) as the core area in need of strengthening and upgrading for the delivery of service (FSDoH 2003a). A central challenge relates to matching the demand and need for treatment with the appropriate provision of care, especially in terms of supplying sufficient staff: "Personnel on the ground are already overstretched … we cannot load the programme on existing staff … we have to get extra personnel, hopefully a sufficient external inflow".[4] It was even added that no additional staff is forthcoming, the programme should rather be postponed (FSDoH official Task Team [TT] meeting 07.04.04).

1. Focus and methodology

This contribution provides an overview of human resources for the establishment phase of the ART programme in the Free State within the broader context of the availability of health care workers in South Africa, and the public health sector in particular.[5] The challenge of human resources for ART is a multi-dimensional one; it comprises far more

4 In terms of WHO-Stage 4 AIDS-defining illness criteria, the demand for ART in the Free State amounted to 31 111 patients in 2002, with an annual increase of 28 290 patients (NDoH 2003, FSDoH 2003b). However, by the end of December 2005, a mere 3 855 patients were on treatment (Free State Pharmaceutical Services 2005).

5 The establishment phase of the ART programme in the Free State followed on the initial planning phase of late 2003 to early 2004, and is limited to the implementation of ART at the first five sites in the province throughout 2004.

than mere numbers of personnel, their recruitment and training/retraining staff for the programme. It also has to do with the issues of accreditation of ART sites, the necessary staff and appropriate combination of skills for delivering the service, staffing norms, the filling of posts and vacancies that ensue. In addition, human resources for ART relate to other emerging issues in this sphere, for instance staff overload, discontent, stress and burnout. It also concerns the role of staff for ART in the integration of the programme into the health system, health facilities and other programmes.

The article is mainly descriptive and based on information collected from various sources and origins. As to primary data: firstly, several semi-structured personal interviews were conducted with decision-makers, stakeholders and service providers at local, district, provincial and national levels. Key interviews were recorded and transcribed. Secondly, the weekly meetings of the provincial ART Task Team were attended to track and record, amongst other things, the achievements, progress and challenges related to staff for ART in the province and the districts. Direct citations from individual interviews and discussions in meetings are often provided to emphasise and substantiate observations and particular staff-related challenges experienced in the delivery of ART in the province.[6] Thirdly, information about filling professional and lay-worker posts, as well as the ramifications of the former, originates from an audit undertaken in November 2004. Fourthly, information regarding the role of staff in the integration of ART with other services was obtained from the first two ART facilities appraisals that were undertaken in the Free State during the period April 2004 to July 2005. The appraisals endeavoured to document and monitor, in a longitudinal way, the implementation of ART at the service delivery level in the five districts. In addition, secondary sources of information used in this contribution include local, regional and international literature, as well as articles, technical and statistical reports, published research, provincial and national ART-related policies, and service directives and programme guidelines.

6 The names and positions of the interviewees are provided in the list of references, although respondents' names are withheld in the text.

2. Staff for ART: framework and guiding principles

According to the *Comprehensive Plan*, the recruitment and training of staff for ART should be based on four principles: firstly, quality of care adhering to international and local norms and standards; secondly, investments that will generally benefit the broader public health system; thirdly, equitable access; and fourthly, the feasibility of delivering the continuum of care and treatment to patients (NDoH 2003: 16-24, 102). The framework and direction for establishing the programme in the Free State were initially set by the *Comprehensive Plan*. The first three service points in the province — Lejweleputswa, Motheo and Thabo Mofutsanyana districts (later also in the fifth district, Fezile Dabi) — consisted of a referral treatment site, either a district or regional hospital or a community health centre (CHC) fed by three referring assessment sites (fixed clinics or CHCs in the same referral chain); the so-called "1x3" model.[7] The assessment sites serve as the primary sites for the initial diagnosis, staging and routine follow-up of ART patients (NDoH 2003: 60-1). Patients who meet the initial criteria for ART are referred to the treatment site, where advanced clinical assessments are conducted and a medical practitioner, in consultation with other staff, decides whether or not the patient will commence treatment (FSDoH 2003b: 5). In Xhariep district, however, the modelling of ART sites was modified to accommodate the special circumstances, resources and needs of the area, amongst others the scarcity of staff, vast distances between towns, sparsely distributed populations, and the anticipated low numbers of patients. As a result, instead of the province's "1x3" model, combined treatment-assessment sites were introduced, which required different staff establishments and staffing norms for the programme in that particular district.[8]

The FSDoH opted for a primary health care (PHC) orientation in delivering the programme: the service is provided in a decentralised manner, situated within PHC facilities and, essentially, rely on the

7 The different organisational and managerial models of providing the ART programme in the Free State are described in more detail in the contribution of Van Rensburg elsewhere in this volume.

8 Several such combined treatment-assessment sites, where the same facility renders both the assessment and the treatment functions under one roof, were later introduced in a number of small towns in the province.

skills of professional nurses, especially at the assessment sites.[9] The main consideration for adopting this approach is to cope with the expected large numbers of clients and patients by spreading the loads more evenly among a bigger number of facilities and more personnel (FSDoH official TT meeting 08.12.03). Furthermore, four directives to guide the recruitment of staff for the programme were provided: additional and dedicated people would be assigned to the programme at service sites; appointed staff would not solely service the ART programme; staff for ART should preferably be recruited from outside the ART rendering facility and not from other PHC programmes in the facility; and the existing pool of staff in the province should be "beefed up" by the programme (FSDoH official TT meetings 05 & 12.01.04).

Before the programme commenced, the NDoH (2003: 104) developed a grid for the number, types, level and mixes of human resources required to render the programme. The core staffing requirements (both professional and non-professional staff) per service site, and the workload per category of health care workers were recommended as follows: for every 500 patients, one medical officer, two professional nurses, one pharmacist, one nutritionist, five lay counsellors, one administration clerk and one data capturer. One social worker was recommended for every 1 000 patients. However, practice soon showed that the national directives could not be generally and strictly applied to the varying circumstances, resources and needs of all the provinces. As a result, the FSDoH used information gained from countries and experts with experience in rendering similar services to develop its own human resource plan. In some respects, the provincial plan therefore differs from the national plan in terms of the number and categories of staff required to run the programme.[10] Although the Free State has developed its own

9 Stewart & Loveday (2005: 233) note that the doctor-based approach to the treatment of AIDS, as noted in the *Comprehensive Plan*, may not be the most appropriate model for South Africa, especially in areas with a high prevalence of HIV/AIDS. Doctors will increasingly be tasked to manage complicated cases of toxicity, resistance and adverse reaction. Therefore, it is logical to skill nurses to undertake more routine treatment activities.

10 At the beginning of 2004, the ideal staff establishment for ART in the Free State was considered at several provincial Task Team meetings. The following norms were set: one medical officer for every 500 ARV patients per year; one professional nurse for every 150 patients per year; and twelve lay cousellors per 150

parameters for staff establishments for ART, these serve as guidelines only, providing the necessary flexibility to comply with local dynamics and resources. Above all, the staffing of ART sites was determined by the availability and scarcity of human resources in most of the professional categories. Table 1 shows the approved staff establishments for the different types of ART sites in the province.

Table 1: Staff establishment at ART sites in the Free State, July 2005

ART posts	Assessment site	Treatment site	Combined treatment-assessment site*
Principal medical officer	-	1	1
Senior medical officer	-	2	1
Professional nurse	3	3	3
Pharmacist	-	1	1
Pharmacist's assistant	-	1	1
Social worker	-	1	1
Dietician	-	1	1
Senior admin clerk/ data capturer	2	2	2

* For the first year exactly the same staffing norms for assessment sites applied to the combined treatment-assessment sites. These staff establishments were changed during 2005 with the planning of new sites.

Source: FSDoH 2005a

Human resources for ART, as the financially most costly component, does not only concern the number of personnel on the staff establishment at a particular site.[11] It is also, and even more so, about foreseeing the

patients. The staffing norms for professional personnel were based on the number of visits by each patient per year to each staff category, at either the treatment or the assessment sites. The norm for a pharmacist was 600 prescriptions per month, assuming that counselling of the patients receiving prescriptions forms part of the pharmacist's duties.

11 The original plan for the implementation of the ART programme in the Free State (FSDoH 2003a) made provision for various costs, amongst others the appointment and training of staff. More than half (R17 039 642) of the province's total budget of R30 759 740 for the programme for the 2004/2005 financial year was set aside for personnel structures and the administrative costs for the provincial office (FSDoH 2004, FSDoH official TT meeting 07.06.04). Staff and

appropriate combination or mix of categories of staff and their skills and abilities to appropriately deal with the complexities of HIV/AIDS treatment and care (Wyss 2004a, 2004b: 3).[12] ART programmes are labour intensive due to the variety of treatment activities, among others pre- and post-test counselling, consultations by medical practitioners, regular individual follow-up consultations by nurses, the taking of various blood tests, nutritional assessments, etc, all of which involve different staff members to ensure a quality service (Kober & Van Damme 2004: 104-5). Part of the *Comprehensive Plan* entails the adjustment of the roles of available health workers and their multi-skilling (NDoH 2003: 102-3). In other words, a team of professionals is to be responsible for the delivery of ART. The core staffing requirements (see Table 1) highlight both the diversity of professionals needed to deliver ART, as well as the key role that professional nurses play in the Free State's programme.

3. Availability of health workers for the public sector

The shortage of health care workers in the province, and in South Africa as a whole, is a multifaceted problem resulting from, among other factors, geographical maldistribution, unequal distributions between the public and private sectors, the insufficient production of nurses, migration, and the impact of HIV/AIDS on the health workforce (Chabikuli *et al* 2005: 104). Questions are rightfully raised as to where the additional number of health workers required to sufficiently staff the ART programme would come from (Barron 2003), as the South African public health sector currently experiences a critical shortage of skilled health workers, particularly doctors and nurses (Shisana *et al* 2002: 82). The issue of shortages in human resources for health care warrants a closer look at the main contributing factors, in order to better contextualise the availability of health professionals for the ART programme in the country and the Free State province.

administrative support expenditure also constitutes the bulk of the 2005/2006 provincial ART budget, with R23 732 000 of the R56 188 000 originally estimated for these functions (FSDoH Workshop 02.03.2005).

12 Chen *et al* (2004: 1986) warn that skills imbalances create tremendous inefficiencies and that in some developing countries appropriate skills mixes continue to depend too much on medical practitioners and specialists.

3.1 Factors affecting the availability of health professionals

3.1.1 Unequal geographical distribution

The geographical maldistribution of health workers relates first and foremost to inter-provincial discrepancies, with some provinces being more generously provided for, while others are seriously deprived of and neglected in terms of much needed human resources for health (Van Rensburg 2004: 352). In the case of the Free State, the average of 130.7 professional nurses for a 100 000 public sector-dependent population was the highest among the nine provinces in 2003, and well above the 107.1 average for South Africa. The Eastern Cape (98.5), Mpumalanga (93.7) and North West (88.9) had far fewer professional nurses per 100 000 public sector-dependent population (Padarath *et al* 2004: 309). Secondly, the absolute shortage of skilled personnel in rural, remote and disadvantaged areas is critical, as these settings usually also carry the highest HIV burden in the country (Barron 2003). The unequal distribution of doctors confirms the severe urban-rural divide regarding the availability of skilled health personnel: while in North West province there was a ratio of 11.5 doctors per 100 000 public sector dependents, this ratio multiplied to 25.4 in Gauteng and 31.9 in the Western Cape (Padarath *et al* 2004: 306). Fears are that the ART programme could fuel the trend of staff moving from rural to urban areas, thereby aggravating staff shortages and undermining broader PHC in already poor-resourced settings (Ijumba *et al* 2004: 334).

3.1.2 Unequal public-private distribution

The scarcity of doctors in under-served rural areas suggests that the role and distribution of professional nurses have become central to the functioning of the public health system, especially at PHC level. However, less than half of the professional nurses registered with the South African Nursing Council (SANC) in 2003 were employed in the public sector (SANC 2003). In the Free State, 42.3% of the 7 216 professional nurses worked in the public sector (Padarath *et al* 2004: 306-307). Nearly three-quarters (73%) of doctors work in the private sector, yet they cater for less than a fifth of the South African population (Buvé 2005). Furthermore, the South African Medical Association estimates that approximately 4 000 doctors left the public health care system

during the past four years, either for private practice, or to work abroad (Kapp 2004: 1203).

3.1.3 Insufficient production of nurses

The production of nurses has not kept up with the needs and growth of the South African population (Subedar 2005: 100). Moreover, of the 34 264 professional nurses that were produced between 1996 and 2004, only 10 707 registered with SANC, which implies that 27 133 professional nurses were lost to the system without any monitoring as to where they find themselves and why they have left. In 1996, 12 163 students were enrolled for training as professional nurses. This figure decreased substantially each year, dropping to 9 527 in 2001. However, a steady increase was noted since 2002: in 2004, there were 12 280 students in training (SANC 2005a). Nevertheless, it is not clear how many of these students will eventually end up in the public health care system. Furthermore, the realities of the public health sphere, among other things, influence the choices of young people when considering a nursing career (Wyss 2004a). Often careers in the legal, business and other economic domains offer better career prospects.

3.1.4 Emigration to other countries

The attrition of skilled health care workers from South Africa to other countries has been substantial (Padarath *et al* 2004: 300, Shisana *et al* 2002: 82).[13] In 2002, the South African Medical Association (in UN Regional Integrated Regional Networks 2002) estimated that a minimum of 5 000 medical practitioners have left the country to work mostly in the US, Canada, the UK and Australia. A significant part of HIV/AIDS prevention, treatment and care programmes is rendered by nurses, yet the system is threatened by the accelerated brain drain of PHC service providers (Jacobs 2005). Between January and April 2005, 639 South African trained nurses requested verifications of their qualifications

13 The reimbursement of home countries for the skills lost has been proposed, although difficulties in calculating the indirect costs of the home country's net loss present major problems and the idea has not proven to be successful (Forcier *et al* 2004). In this regard, the crippling effect of migration on a country's health system is unlikely to be replaced through monetary compensation (Eastwood *et al* 2005: 1893-4).

and/or transcripts of the training that they have completed, to be sent to other countries.[14] More than half (379) of these requests were to the UK, followed by 137 to Australia (SANC 2005b). Working environments, conditions of service, issues of management, career opportunities, and remuneration are among the push-and-pull factors responsible for this emigration of health professionals (Buvé 2005, Eastwood *et al* 2005: 1985, Forcier *et al* 2004, Van Rensburg 2004: 358).

3.1.5 HIV/AIDS infection

In their study Shisana *et al* (2003: 34) found that, at the time of the research, 16.3% of public health workers in the Free State, KwaZulu-Natal, Mpumalanga and North West provinces were infected with HIV. Periods of illness coupled with inflated absenteeism as a result of the disease could reduce the quality of care that health workers provide, due to increased workloads (Marchal *et al* 2005: 301, Wyss 2004a). In addition to fears of infection, HIV/AIDS among health workers could result in increased levels of emotional and physical stress, job dissatisfaction, as well as decreased levels of professional practice and motivation (Chopra 2005, Lehmann 2005, Lehmann & Sanders 2003: 129).

3.1.6 Vacant posts

In 2003, 52 574 public health sector posts were vacant in South Africa (Padarath *et al* 2004: 304), yet the *Comprehensive Plan* envisaged that 6 275 professional posts should be created and filled for the ART programme by 2008 (NDoH 2003: 108). According to PERSAL data, 7 176 of the 12 104 health professional posts in the Free State were filled in 2003. This vacancy rate of 40.7% in the province was notably higher than the national average of 31.1% (Padarath *et al* 2004: 304). More recently, only 3 302 of the 5 210 posts for professional nurses in the public health sector in the province were filled, resulting in a vacancy rate of 37% (Doherty *et al* 2005: 11). Regarding pharmacists, only 62 of the 133 posts in the public health sector in the Free State were filled, while in fact 193 posts were required for the province's public health service (FSDoH Pharmaceutical Services 2005).

14 The fact that a nurse has requested verification does not necessarily imply that she or he has taken up a position in another country; it simply means that requests for verifications and/or transcripts were made (SANC 2005b).

3.2 Strategies for recruiting and retaining staff

The retention of human resources for health is a challenge throughout the public health care system (NDoH 2003: 103). Various strategies are followed to retain health care workers in South Africa, one of them being compulsory community service by newly graduated health professionals. In 2004, about 1 100 medical doctors, 350 pharmacists and 150 dieticians were to perform community service. The *Comprehensive Plan* expects provinces to actively recruit new graduates to fill ART positions. However, it should be borne in mind that community service health workers are newly trained and may not be suitable for senior programme functions and for working without supervision. In this regard, the *Comprehensive Plan* notes that "it may be possible to create additional community service posts for the service points that could use additional support for functions that can be handled by junior staff" (NDoH 2003: 117). In a similar vein, the *Plan* calls for an adjustment of the target date for commencement of community service by professional nurses to staff the ART programme. However, despite the stepwise introduction of community service since 1998, most rural hospitals still experience staff shortages due to the fact that most community service professionals can to a certain degree choose in which areas they would prefer to work (Couper *et al* 2005: 139). Moreover, community service remains a coercive (and thus negative) measure to promote the sustainability of the public health system, which could expedite the exodus of health workers from the country (Hall & Erasmus 2003: 549, Van Rensburg 2004: 362).

Incentives do play an important role — both in the short and long term — to retain professional staff in areas of need (NDoH 2003: 119, Van Rensburg 2004: 360-3). Such incentives feature in the form of rural and scarce skills allowances, a strategy that was introduced in 2003 to address inequities in the distribution of health personnel (NDoH 2004, Couper *et al* 2005: 139, Van Rensburg 2004: 363).[15] Unfortunately, allowances are not uniformly available to nurses working in rural

15 For example, in the case of appointing a senior medical officer in some rural areas of the Free State, both scarce skills and rural allowances apply, and equal 15% and 22% respectively of the annual salary notch (*Rapport* 2005, Van Rensburg 2004: 363-4).

and under-serviced areas (Padarath *et al* 2004: 304). Furthermore, the *Comprehensive Plan* states that existing personnel may be required to perform additional work if they receive overtime remuneration. Retired health professionals, on the other hand, could be recruited to work on flexible bases, for instance sessional, part-time or full-time with flexible working hours (NDoH 2003: 117).

Public-private partnerships have been propagated and promoted in order to address HIV and AIDS as a national priority. The strengthening of the private industry's capacity to render ART could prevent the flooding of public health facilities and overburdening of PHC staff. Moreover, private health practitioners, including specialists, could be approached for sessional work to fill vacant positions that cannot be staffed by existing public sector personnel (NDoH 2003: 120). However, public-private collaboration could also open the door for further losses of professional public health workers, as well as fraud and exploitation of public funds and resources, as was the case in the past (Van Rensburg 2004: 363).

The increased production of health workers through training, a scenario that the FSDoH plans to follow (ARV Stakeholder Workshop 14.09.05), is constrained by several factors, amongst others, infrastructural demands and the availability of specialist lecturers (Hongoro & McPake 2004: 1451), as well as the fact that it takes at least five years to train for a doctor and fours years to produce a professional nurse (Barron 2003, Hongoro & McPake 2004: 1453, Wyss 2004a). Added to this is the inability of many tertiary training institutions to accommodate large (and larger) numbers of trainees (Wyss 2004a). Although increased production and the creation of financial incentives to recruit nurses in the health sector are important mechanisms to address the shortages of PHC nurses, interventions at the work environment level are also needed (Chabikuli *et al* 2005: 104).

Regarding emigration of health professionals, policies and country-to-country agreements are needed to govern international recruitment practices in order to counteract imbalances in the health workforce (Van Rensburg 2004: 356, Zurn *et al* 2004). In May 2003 Commonwealth countries adopted the International Code of Practice for the International Recruitment of Health Workers, which aims to discourage the

migration of health staff from countries that experience human resource shortages.[16] However, the NDoH (2005) recently noted:

> Despite a number of recruitment and retention strategies being put in place, several studies indicate that push factors in addition to the pull factors play a major role in the migration of health professionals out of the public health services and out of the country.

Recruitment and preferential registration of foreign health workers who are willing to serve in under-resourced areas or in designated facilities are ways to address staff shortages. Annually, hundreds of foreign doctors and nurses apply to the NDoH for approval, prior to registration with the relevant professional councils and boards. During the first half of 2003, for example, 561 applications for registration as nurses in South Africa were received, of which only 58 were reviewed and approved (NDoH 2003: 118). The *Comprehensive Plan* suggests the streamlining of the application and approval processes to meet the staff needs of the programme. However, the importation of foreign health workers has its challenges. In the case of Cuban doctors, for example, experience has shown unfamiliarity with certain diseases, for instance malaria. In addition, foreign health workers are not conversant in local languages and the accompanying communication challenges hamper consultation with patients. Moreover, recruitment from outside South Africa's borders could contravene country-to-country agreements, and could fuel staff shortages in those countries. Also, there is little guarantee that foreign health workers will remain in under-serviced, neglected and rural areas and institutions (Van Rensburg 2004: 356-60).

16 Indications are that international recruitment policies have mixed to minimal success. Data from the Nursing and Midwifery Council in the UK show that, despite the implementation of ethical recruitment guidelines, the number of nurse registrants from developing countries, specifically Ghana, India, Nigeria and Zimbabwe, continue to increase. In the case of South Africa, a slight decrease occurred from 1 460 to 1 086 registrants between 1999/2000 and 2000/2001, although recruitment activities may well have been displaced to other developing countries (Stilwell *et al* 2003).

4. Recruitment of staff for ART in the Free State

4.1 Staff shortages

Staff for the ART programme was, from the start, at the centre of the provincial Task Team's agenda and work plan. It was also the item on the agenda that caused most uncertainty and experienced the longest delays. Nevertheless, the staffing of ART sites was assumed as one of the preconditions to implement the programme in the province. Shortages were anticipated in all the professional categories required to deliver ART: doctors, nurses, pharmacists, dieticians and social workers, the majority of whom can be considered as scarce skills. It became clear that the shortage of staff, even in the case of nurses, was worse in more rural and small-town areas. Although these shortages carry taints of secondary shortages, for instance the unequal distribution of professionals throughout the province, the core of the problem rather signified primary shortages, for instance absolute shortages of professionals. As early as January 2004, the pending staffing dilemma was constantly anticipated: "I can foresee already that we might not get all the personnel that we want; that's a reality" (FSDoH official TT meeting 22.01.04). Soon it became evident that the earlier pronouncements of "no additional staff, no ART programme" and "rather postpone than implement" would not hold under the pressure to broaden the programme to other service areas. As time passed and the implementation of the ART programme reached the more rural districts of Thabo Mofutsanyana, Xhariep and Fezile Dabi, the scarcity of staff started to manifest itself. Indeed, implementation commenced at several sites without the recommended additional staff in place.[17]

17 In the case of Bophelong CHC, for example, the facility was at the last minute declared a treatment site, in addition to its originally assigned assessment site status. The ART programme commenced on schedule (13.09.04) without the recommended additional staff in place, neither for an assessment site, nor for a treatment site. On 28.09.04 one data capturer and one data clerk were in place, but no additional doctor. At that time, only one community service doctor served the entire CHC. Furthermore, no additional professional nurses, no nutritionist and no social worker were appointed for the ART programme, while one community service pharmacist served the entire CHC. Thus, a severe deviation of the staffing norms for assessment sites, and even more so for treatment sites, prevailed. Nevertheless, dispensing ARV drugs was set to start amid and irrespective of these shortfalls.

4.2 Staff and the accreditation of sites

The *Comprehensive Plan* stipulates the importance of assessing and, if necessary, strengthening service points in advance to ensure that the goals of the *Plan* can be met in a timely manner. Both the treatment and assessment sites should adhere to general service standards, for which a process of accreditation is to be followed (NDoH 2003: 98-9). Regarding staff matters, accreditation of treatment sites (hospitals and CHCs) requires the necessary professional staff (medical officers, professional nurses, a pharmacist, dietician and social worker) in appropriate ratios to meet the projected patient load (cf Table 1). In the case of assessment sites (clinics and CHCs serving this purpose) the requirements are the availability of a trained team of nurses and counsellors, as well as easy access to trained medical, pharmaceutical and nutritional services. Monitoring and supervision functions should also be in place.

At the time of the first accreditation of facilities, staff-related deficiencies were noted as the recruitment and retention of medical, nursing and pharmacy staff. It is worthwhile to take note of the following observations made during feedback on the accreditation process, specifically with regard to the staffing of the ART programme: "people felt that they are working at full capacity … there is no spare capacity", therefore "additional personnel is required at each service site - all categories of staff"; "people are committed to the rollout of the ARV plan, but they need training, not only orientation". Furthermore, there should not be a "dumping of the guideline on staff, but working through the guideline is imperative". Then the striking observation: "dilapidated buildings are not a problem, as long as you do not have dilapidated staff". However, no such personnel were found on the visits. On the contrary, "staff is positive, very positive, and optimistic". Broadly speaking, then, there was no message of "doom and gloom" regarding the state of personnel at the facilities visited with a view to accreditation (NDoH officials accreditation feedback sessions 04.02.04 & 23.03.04).

4.3 Filling positions for ART

The original plan to recruit human resources for the ART programme at the first service site was to advertise the posts in February 2004 and have them filled by March 2004 in order to train the incumbents during April 2004 (TT meeting 12.01.04). However, in January 2004

already it appeared that this strategy would not hold, as the training schedule would not synchronise with the staff appointment schedule. As one facility manager noted at the time:

> we have not yet employed people. If we start without appointing, I think we will have great pressure on us, because we are actually over-stretched at the present moment in terms of our medical wards that are actually 100% full every day ... At the present moment that is my fear: who are we going to train?

The delay was initially caused by the delayed approval of posts, followed by the delayed advertising of these posts, and still later by the delayed appointment of incumbents. By the beginning of April 2004, posts had not yet been advertised, with the result that the treatment site in the Lejweleputswa forfeited the opportunity to advertise the approved posts. Instead, so-called "headhunting" or active recruiting of staff by managers was opted for. Similarly, there were delays in the appointment of staff for the district's assessment sites. These circumstances resulted in the training of incomplete staff at both the treatment and assessment sites during April 2004. One effect was that existing staff at these facilities were compelled to take on the ART programme in addition to their existing workload. Nevertheless, a week after the programme had been in operation in Lejweleputswa, it appeared that the strategy to recruit and appoint staff through headhunting worked well. However, no reference was made regarding the number of staff that was drawn into the ART programme from other health programmes (TT meeting 12.05.04).

The implementation of the programme in the other four districts of the province generally followed the normal process of advertising posts, except in those cases where scarce skills could not be secured for the programme. However, due to time pressure and tight schedules, recruitment by "headhunting" once again became the proposed strategy and it was common practice to fill most professional posts at new ART sites during Phase II of the rollout which started in the course of 2005.[18]

18 One should bear in mind that the issue of human resources reaches much further and deeper than the filling of posts. It goes beyond the ART programme and what the Free State can do. Fundamentally "it has to do with looking at enrollments at nursing and medical schools, and how these have decreased in the last few years, and how the funding for such schools has decreased. And it has to do with the benefits that are available" (NDoH official interview 14.02.05).

4.4 "Recycling" of staff between and within ART facilities

Since filling a large number of posts for the programme could potentially ignite an unwanted chain reaction amongst existing staff establishments in the public health sector, the managers of the newly established ART sites were repeatedly cautioned that the filling of posts should not drain staff away from other facilities and programmes, thereby exhausting existing services. Priority was to be given to currently vacant posts ("no sense in filling new posts while vacant posts exists"), while the call went out to "recruit people from outside to strengthen the pool of human resources" and to "bring a pool of staff from outside" in order not to weaken current staff establishments (FSDoH Stakeholder Workshop 31.03.04).

Despite these calls, the "recycling" of staff within the provincial health service soon became a common phenomenon. Health workers in existing posts are constantly moving to positions in the ART programme, either at the same or at other facilities, as they are often attracted by higher post levels and higher salaries linked to posts created in the ART programme. However, the crux of the matter remains: there is simply not enough staff to fill all the new posts and the recurring vacancies amid the long-standing primary shortages of staff in most professional categories in the public sector. Of course, there is a positive side to deploying existing staff to service the ART programme: by recycling staff, the programme could be better fitted into an integrated mould, insofar as staff members rendering services in other programmes become obliged to be trained in and service the ART programme alongside other programmes. The downside, however, relates to taking on an additional workload and a service that requires intensive patient care. This was one of the early predictions, namely that the ART programme was due to weaken other existing programmes.

4.5 Filling of professional positions for ART — an audit

A staff audit conducted in November 2004 at all 20 of the ART sites in operation in the Free State at the time revealed the following (Van Rensburg 2005a): on the positive side, a significant number of sites were fully or almost fully staffed in terms of the approved staff establishments. Additionally, all administrative positions in the programme have been filled. On the negative side, however, a notable number of

ART posts for medical officers, pharmacists and professional nurses remained vacant.

Specific findings of the audit include:

- Of the 57 nursing posts allocated to the 20 ART sites in the province, 40 were filled, leaving 17 vacant. Of the 40 nursing posts filled, 27 had been filled from outside the particular facility, the remaining 13 from inside, thus leaving the said number of new vacancies in the facilities concerned.
- Only half (six of the twelve) medical officer posts were filled, three from outside and three from inside the facilities, thus leaving three vacancies elsewhere in the facilities. At Bongani Hospital seven medical officers serviced the ART site on a rotation basis. No medical officer posts were assigned to the combined treatment-assessment sites; hence the entire Xhariep district had no doctor solely allocated to the ART programme.
- Of the five pharmacist posts, two remained vacant, while three posts were filled from inside the facilities concerned, thereby leaving new vacancies in these three facilities.
- Three of the four social worker posts were filled, all of them from the outside. In the case of combined treatment-assessment sites, ART post establishments at the time did not allow for one full-time social worker. As such, social workers were shared.
- Of the four nutritionist posts, three were filled from outside the particular facility. The fourth treatment site shared a nutritionist with the hospital on a limited basis. At the three combined treatment-assessment sites in Xhariep, a nutritionist rendered a shared service in the ART programme by travelling from site to site.

Furthermore:

- A weak or non-existing reserve staff capacity trained for ART presented at several sites.[19]
- The programme relied heavily on community service professionals, which left staff establishments highly temporary, transitory, vulnerable and due for discontinuity.

19 In this regard, non-ART staff may struggle to identify and manage the side-effects of ARV medication, as well as to correctly administer ARV drugs to hospitalised patients (Komoreng & Lekgalanyane 2005).

- A huge information gap also prevailed between staff appointed at sites and the staff for ART on the records of the provincial Human Resource Management Division.
- Constraining bureaucratic red tape also presented in the filling of new posts and vacancies at health facilities housing ART sites.
- At several facilities medical officers, nutritionists, pharmacists and professional nurses were recruited into the programme from existing health programmes (thus recycling staff between facilities or within the same facility) without being replaced, or leaving new vacancies (Van Rensburg 2005a).

A rapid follow-up audit conducted at ten of the 20 ART facilities in February 2005 found that, after three months, previously vacant posts had been filled at many facilities, while notable numbers of additional staff had been trained at an equal number of facilities, thereby creating a significant back-up or reserve staff capacity for the programme (Van Rensburg 2005b).

4.6 Availability and use of community health workers for ART

The HIV epidemic led to a expansion of community health worker (CHW) and volunteer infrastructure and endeavours in South Africa (Schneider *et al* 2004: 19). The ART programme in the public sector relies on the support of communities. CHWs, including lay counsellors and home-based carers, are seen as an indispensable extension of the reach and strength of professional ART services (NDoH 2003: 108). Community-based services for patients on ART include, among others, counselling,[20] community mobilisation to reduce stigma and discrimination, patient transport, home- and community-based care and support for patients to improve compliance. The guideline originally set by the FSDoH (2003a: 3) was that one counsellor could take care of five to six patients per day, while one community health worker should be available for every twelve patients on ART.[21]

20 The proposed plan for the introduction of ART in the Free State states that full-time, dedicated lay counsellors are needed to ensure ongoing individual and group counselling during each of a patient's treatment visits (FSDoH 2003b: 5-6).

21 In a recent inquiry it transpired that the norm at several ART rendering facilities was that one home-based carer takes care of three to five patients only.

However, deficiencies in the service were noted: "Some of the sites did not have dedicated home-based carers for the programme and patients that come from outside the ARV site catchment area are not followed up by the home-based carers". Additionally, constraints can be expected when lay people provide voluntary services, and they include: lack of co-ordination and communication among stakeholders; the reimbursive stipends that home-based carers receive divert attention from the true intent of volunteering; resource distribution is often supply-(based on the number of home-based careers in an area) instead of need-driven (according to the number of patients); inadequate supervision and support of carers; and a lack of equipment (Louwagie & Bachmann 2002: 2, Herbst 2005: 8).

The mentioned staff audit at ART sites in the Free State also explored the situation regarding CHWs at the 20 ART sites. In respect of home-based carers, the audit found that, at the time (November 2004), 141 home-based carers were operative at the 13 assessment and three combined sites. Of this number, 125 were receiving stipends, while a quarter (35) of them followed the five-day training programme for ART staff in the province. The total number of home-based carers per patients on ART at that stage matched the recommended ratio of 1:12, although indications were that the growing number of patients would eventually surpass the availability of this kind of patient support. Moreover, the number of home-based carers varied strikingly from site to site — from a low two at Matjabeng Clinic (Lejweleputswa district) to a high 24 at Tshiame Clinic (Thabo Mofutsanyana district) (Van Rensburg 2005). The staff audit further found that a total of 42 lay counsellors were operative at the 20 ART facilities; 39 of them were receiving stipends as CHWs, while more than half (24) underwent the province's five-day training programme for ART staff. The spread of the lay counsellors was also highly uneven among the sites, varying from none to four (Van Rensburg 2005). In general, the expansion of the CHW system calls for enlargement of the pool, particularly at sites with pronounced needs, and the strengthening of the capacity and skills of the carers and counsellors.

5. Training of staff for ART

As with any new public health programme, the implementation and scaling-up of ART should occur together with the training of health care providers (Bekker *et al* 2003: 461). Studies in settings where patients readily have access to combination ART show that medical practitioners with experience and expertise in the treatment of HIV/AIDS deliver more effective ART services (Martinson *et al* 2003: 244). However, the vast majority of health care workers in South Africa did not benefit from ART in their basic training; this despite increasing evidence for the need for technical and clinical skills among frontline health workers to provide HIV and AIDS prevention, treatment and care (Couper *et al* 2005: 140). Generally, the ability and availability of PHC staff for the provision of HIV/AIDS-related services look bleak. The 2003 Primary Health Care Facilities Survey found that less than 60% of clinics in the Eastern Cape, KwaZulu-Natal and North West offered voluntary confidential counselling and testing (VCCT) for HIV on a daily basis, and only 30% of facilities offered PMTCT and post-exposure prophylaxis (PEP) nationally. In addition, only a quarter of the professional nurses had received training updates on PMTCT and the prevention of opportunistic infections in adults. Only three in ten had received training in HIV/AIDS counselling and testing, while only one in ten had received updates on PEP (Health Systems Trust 2004: 61, 69, 87).

The large number of additional staff required to establish and expand the ART programme places a considerable burden on the health care system. Not only do these staff have to be recruited, but they also have to be trained, inducted, supported and supervised (Couper *et al* 2005: 140). At large, skills training should focus on the clinical, nursing, counselling, pharmaceutical and laboratory abilities of service providers (Wyss 2004b: 4). Training plans should be developed to build the specific skill requirements for each staff category (Tawfik *et al* 2002: 6). Furthermore, skills training should entail in-service and practical training, and be aligned with competencies in the identification and management of STIs and TB (Barron 2003). Refresher courses and training updates are also needed to ensure continued professional development for ART (NDoH 2003: 109-10, Wyss 2004). The expected outcome of ART training is a health workforce that is competent to render a comprehensive service, for instance promotive, preventative, curative

and rehabilitative care to people living with HIV and AIDS (Botma *et al* 2004a: 27).

5.1 The Free State's models for training

Initially, the *Comprehensive Plan* foresaw a standardised, nationally defined consensus framework for ART training — which provinces would elaborate and complete the detail of — for the various categories of staff (NDoH 2003: 109-12). The strategy entailed various programmes to provide for the specific interests and needs of diverse staff groups. It was planned that, after the initial 80-hour start-up training at a facility to create a pool of staff, a detailed training programme for selected staff components would follow, for instance for nurses, pharmacists, lay counsellors, etc (FSDoH *ART Weekly Report* 26.01.04). However, in the Free State there was repeated cautioning against too ambitious curricula and training schedules in references to "overtraining", "overkill by training", and "drawing people too long out of services" (FSDoH clinicians TT meetings 15.12.03 & 12.02.04). Concern was also expressed regarding the inclusive training of all staff categories, irrespective of their professions and current training levels.

Amid rising uncertainty about the national consensus framework for ART training, there were early calls in the provincial Task Team to prepare a back-up training strategy — a Plan B — for the Free State, should the NDoH not deliver its promised training framework (FSDoH clinicians TT meeting 11.02.04). This anticipation indeed came true, and the province embarked on its own model of two-day training for doctors and five-day training for other staff, instead of the originally planned 80-hour training for all staff, as specified in the plans of the NDoH. The shortened training period was deemed sufficient (provided that it would be strengthened by follow-up training), while the proposed 80-hour guideline was perceived as "completely unrealistic" in the light of the work obligations of staff that do not allow for such an extended period of training (FSDoH clinician TT meeting 19.05.04).

In 2004, the first year of the programme implementation, the training of staff for ART followed a staggered approach, similar to the roll-out of the programme itself, for instance a month-by-month and district-by-district sequence. After the completion of the first six training sessions in the province towards the end of that year, the training

task group engaged in a review of the contents and process of training. The review echoed quite negatively, and most important was the message that "we have to re-devise the training schedule", because "we swamp people with materials that they cannot all digest … and leave them unprepared". Training should rather be modelled in an apprenticeship-like manner: "work for two weeks in a functioning ARV assessment site and during this time receive training at the Centre of Excellence … People need to be retrained into system" (FSDoH clinician TT meeting 10.11.04). Additional shortcomings regarding the 2004 training were observed, *inter alia*, deficient drug readiness training, congested programmes, dependency on experts to provide the training, insufficient practical training, inadequate focus on assessment, certification and accreditation, an overall short timeframe, and not providing for the different training needs of the respective professional groups (TT meeting 19.01.05).

By mid-January 2005, a revised training model for staff rendering ART was introduced. The model emphasised the need for nurses to be competent in VCCT,[22] integrated management of childhood illnesses (IMCI), PHC, PMTCT, and the syndromic management of STIs (FSDoH official TT meeting 19.01.05). The Proposed Learning Programme for Comprehensive HIV and AIDS Care, Management and Treatment 2005 spells out the approach, framework and schedule of the new training programme in great detail. From the beginning iCAM was earmarked as the main vehicle for training.[23] A clear distinction was made between implementation and maintenance training.

22 The lack of sufficient VCCT training among nurses appointed in ART posts proves to be problematic. The percentage of registered nurses trained in VCCT recorded during ART training was as follows: Lejweleputswa 48% (of 19); Motheo 32% (of 30); Thabo Mofutsanyana 46% (of 27); Xhariep 77% (of 35) (Botma 2004a, 2004c, 2004d, 2004e). Except for Xhariep, it means that markedly less than half of the nurses trained for the ART service are not trained in VCCT. In this regard Botma (2004e: 11) states: "This implies that they will be unable to manage the client effectively during the first meeting, as they will not be able to do pre- and post-counselling for HIV testing. As they are not trained in VCCT they are also unable to perform the rapid testing for HIV infection". As VCCT training is a rather intensive ten-day course and the skills cannot be acquired easily, a strategy was suggested to train those lacking VCCT skills over a three-day period before commencement of the mainstream ART training.

23 iCAM (Interactive Distance Communication and Management System) is a television broadcasting medium which enables the FSDoH to disseminate information

The implementation training is in content comparable to the 2004 training curriculum and entails theoretical orientation for all professional staff (not yet trained in ART) over a four-day period via iCAM, plus a fifth day of a pre-test for all trainees. However, the new curriculum now provides for substantial practical training. While doctors, pharmacists and dieticians receive practical training at a treatment site for four days, professional nurses spend three days at an assessment site and one day at a treatment site. On the afternoon of the fourth day professional staff complete a post-test. The fifth day is devoted to drug readiness training, attended by professional nurses.

The maintenance training, on the other hand, is provided for both new staff and for those who previously underwent the implementation training. Two components feature in the strategy. Firstly, face-to-face training, which entails a two-day visit (per ART site) by trainers to allow for clarification of problems and support to staff already trained in ART. This training is provided on a needs basis. Secondly, maintenance training via iCAM serves as refresher courses (also on ART-related themes). The training takes place each Wednesday morning during a one-hour slot. As such, the mode of ART training in the Free State changed in 2005 from lecture-type, face-to-face training to satellite, interactive training. Henceforth the training also comprises a strong component of on-site and face-to-face practical training (FSDoH 2005b: 5).

Three advantages of the new model are noteworthy: firstly, health care workers would not be absent from their service area for more than a week; secondly, the training is specifically focused on acquiring practical orientation and skills; and, thirdly, it is for a large part based on distance education. Although it was reported that the new model generally ran smoothly and according to schedule, constraints were nonetheless noted, among which: problems pertaining to broadcasting as a result of system break-downs during transmission; health workers not showing up in terms of the broadcast schedules, or not attending at all; and transporting staff to iCAM reception points (Minutes of TT meeting 01.06.05).

and communicate with health workers from a studio in Bloemfontein, reaching 38 receiving sites in the province (FSDoH 2003a: 2). The system also informs service-rendering staff about latest developments in ART and allow for the sharing of experiences and good practices.

5.2 Categories and numbers of staff trained in ART

In the course of 2004, a total of 321 health care workers were trained during the six training sessions conducted (the two-day training for doctors and five-day training for nurses). In addition, 39 officials from the Department of Correctional Services and two staff members from NetCare benefited from the training. A further 40 medical officers from the Departments of Family Medicine and Internal Medicine at the University of the Free State were trained (Botma *et al* 2004a: 15-6).

Two notable inferences in respect of the 2004 training are the following:

- The significant extra capacity of nurses, medical officers and pharmacists/pharmacist assistants trained — especially in some districts — relative to the number of approved posts for these professions in the ART programme at the end of 2004.
- The significant number of CHWs (in all districts) and traditional practitioners trained in the programme.

In 2005, a total of 438 health care workers received the implementation training via iCAM. In addition, 30 health workers from the Department of Correctional Services and six from Lesotho attended the training. A total of 749 health workers benefited from maintenance training, while face-to-face practical training reached ten health professionals in Xhariep, twelve in Lejweleputswa, 13 in Fezile Dabi and 29 in Thabo Mofutsanyana (FSDoH 2005c).

From 2004 to 2005 it is evident that:

- roughly the same number of medical doctors and pharmacists were trained in ART;
- substantially more professional nurses were trained (from 127 to 172);
- fewer social workers (from ten to one) and CHWs (from 67 to 26) were trained.

Although the introduction of implementation training through iCAM in 2005 seemingly excludes health worker categories that in 2004 benefited from ART training, alternative arrangements were made. For example, 53 traditional healers attended face-to-face training in November 2005.

Table 2: Number of FSDoH staff per category trained, 2004

Category of staff	Lejwele-putswa	Motheo	Thabo Mofutsanyana	Xhariep	Fezile Dabi	Total
Medical officers	13	40[a]	7	10	2	32
Professional nurses[b]	21	36	30	28	12	127
Pharmacists/ pharmacists' assistants	8	10	7	7	4	36
Dieticians/ nutritionists	1	4	3		1	9
Social workers	1	3	3	1	2	10
CHWs	10	18	10	13	16	67
Administrative clerks	1					1
Data capturers			1			1
Traditional healers		1	5	4	7	17
Community developers				2	1	3
Lecturers/ facilitators		5	2			7
Staff nurses			1			1
Assistant managers		1	2			3
Researchers	1	2	1			4
IEC officers		3				3
Total	56	82	72	65	45	321

[a] These medical officers are not included in the total number of personnel trained, as most of them are not appointed in ART posts.

[b] At the time of the first follow-up facility appraisals, five professional nurses working at ART assessment sites did not attend the district-level training workshops; of these, three received training via iCAM and two were noted to have received in-service training.

Source: Botma *et al* 2004: 17

Table 3: Number of FSDoH staff per category trained, 2005

Category of staff	Lejwele-putswa	Motheo	Thabo Mofutsanyana	Xhariep	Fezile Dabi	Total
Medical officers	4	11	6	4	10	35
Professional nurses	25	38	47	26	36	172
Pharmacists/ pharmacists' assistants	9	9	2	3	13	36
Dieticians/ nutritionists	2	84[a]	1	1		88
Social workers		1				1
CHWs	6	11	2	5	2	26
Staff nurses			1			1
Managers		43				43
Total	46	197	59	39	61	402

[a] The 84 nutritionists trained in Motheo were from all districts in the Free State and attended implementation training during a workshop held in Bloemfontein.

Source: FSDoH 2005c

6. Staff overload, discontent and burnout

Since the new dispensation and the ensuing proliferation of transformation, several new health policies had been or are being implemented, often amid the dismay of staff at public health facilities. The introduction of free heath services in 1995 is a prime example (McCoy 1996), followed by the "dumping" of the PHC package on staff without proper orientation on how it should be implemented (NDoH 2001a, 2001b). The move towards and subsequent expansion of PHC physical infrastructure as a means to improve access for the majority of South Africans were not equalled by a suitable number of newly trained nurses. The resulting and growing shortage of nurses has inevitably increased the workload of available staff. Furthermore, the expansion of PHC nurses' scopes of practice due to broadening organisational (integration of PHC services) and epidemiological (TB, STI, HIV and AIDS) priorities strengthens perceptions of high patient and work loads (Chabikuli *et al* 2005: 113).[24]

24 The expansion of nurses' roles, at least in the case of the Free State's ART programme, explains why some professional nurses view their functions in terms

Directly linked to staff shortages and inadequate staffing, are the consequences of staff overload, stress, burnout and impending discontent among staff.[25] Well before the commencement of ART in the Free State public sector, nurses cautioned that

> without additional staff appointments, it would not be feasible to implement the programme ... existing staff are already functionally at maximum capacity and would be easily overwhelmed by any additional workload (Louwagie *et al* 2004).

At that time, and as conveyed during the accreditation process (cf 4.2), health care workers were reportedly positive and optimistic about the introduction of the programme. However, as the programme was being expanded, staff dilemmas were increasingly emerging, such as, among other things, the draining of staff from other programmes at the same facility, unmanageable patient loads, and staff unhappiness, stress and burnout.

The staff overload is a result of the mismatch between demand (patients requiring or reporting for the service) and supply (the capacity of staff to provide the amount of service required) at ART facilities. In other words, saturation was subsequently reached at some of the existing ART sites. Three stages or types of saturation can be distinguished. The first stage of saturation was reached when too many first-time patients reported for the service at the few sites (as reported at several Task Team meetings with reference to National and Bongani hospitals). The mechanism to deal with this form of saturation was the regulation of patient-intake by introducing a booking or appointment system (TT meeting 14.07.04). Later, a system of forced bookings at facilities was suggested to protect staff (TT meeting 09.02.05). The second stage of saturation set in when patient numbers bulged as follow-up patients, in addition to new patients, flocked to the facilities. This was dealt with by drastically reducing the number of new patient-intakes and shifting

of "mini" doctors, pharmacists and social workers (Hlophe 2005). Cf also the contribution of Du Plooy in this volume.

25 The issues of staff overload, discontent, stress and burnout among staff are being researched in a separate and ongoing study by the CHSR&D, entitled An appraisal of occupational stress and career burnout among professional nurses in Free State primary health care facilities with special reference to those working in facilities that render ART services.

concentration to the flood of follow-up patients (TT meeting 05.01.05). The third stage of saturation was reached when facilities could only deal with follow-up patients, thereby at times closing the ART site for new patient-intakes entirely (TT meetings of 30.05.05 and 03.08.05). At the treatment site in Motheo (National District Hospital), for example, it was reported that it takes approximately 23 minutes to see one patient, which translates into the available staff having to deal with roughly 45 patients per day. Given the number of follow-up consultations during the first six months of treatment, for instance at baseline, first treatment, and again at five, ten, 14 and 26 weeks — and thereafter three monthly — only one new patient can be accommodated for every four follow-up patients seen over a six-month period. Moreover, this site had 1 355 patients on treatment at the end of December 2005, despite a huge shortfall of staff in terms of approved staffing norms: 1.5 doctors instead of three; one professional nurse instead of three; and only one data capturer/admin clerk instead of two (cf 2).

Data from both personal and group interviews conducted during the first follow-up facility appraisals suggest that nurses working in public PHC facilities rendering ART services experience considerable emotional and psychological distress, and even more so in the absence of debriefing sessions for staff. The following reflect the situation:

> We need these [counselling] services, we are short staffed, we cannot cope with our workload, and the Department is expecting too much from us, we are emotionally drained because of our patients. These things put a lot of pressure on us, we are stressed up.
>
> Last week I was so depressed, I could not cope with the stress and my job. I nearly suffered from a nervous breakdown … The ARV programme has put more stress on us, we really need help.

Furthermore, staff shortages and increased workloads were exacerbated by absenteeism of programme staff.[26] Evidently, employee satisfaction is vital and requires more attention if patient satisfaction is to be

26 In the case of the four treatment sites, findings from the first follow-up facility appraisals revealed that three of the eight professional nurses, one of the two assistant pharmacists, one of the four nutritionists and two of the four administration clerks were absent on the days of the visits, resulting in an absenteeism rate of 18.4%. Of the seven absent staff members, three were away for training and four were on leave. Six of the absent staff members were exclusively involved in the provision of ART.

engendered and reinforced (Jacobs 2005, Schneider *et al* 2004: 20). It comes as no surprise, therefore, that staff of all professional categories in the ART programme are increasingly resigning. In the Fezile Dabi district, for example, two professional nurses who were appointed in the ART programme in April 2005 resigned a few months later, reportedly as a result of job dissatisfaction and burnout (FSDoH Workshop 14.09.05).

Although members of the provincial Task Team sporadically aired concerns about staff overload and dissatisfaction even before the first ARV prescription was dispensed on 15 June 2004, concern became more frequent and more urgent as the ART programme gained momentum: "The patient load is quite high at some of the sites, and there is not sufficient staff to attend to the patients. Concerns were raised of staff burnout" (FSDoH *ART Weekly Report* 29.09.04), and "The next bottleneck is staff. What is the maximum load staff can take? In six months' time it will hit us when staff resign" (FSDoH clinician TT meeting 05.01.05). Surprisingly, part of the heavy patient load at some ART sites seems to originate not from patients flocking to ART sites, but rather from inappropriate referral of non-ART patients (cases of hypertension and Pap smears) from other divisions in the hospital to the ART site in the hospital, allegedly to get patients "off their own shoulders". A medical officer servicing the programme expressed the crux of the issue as follows: "The idea is to integrate the ARV clinic into the hospital, but now the whole hospital is integrated into the ARV clinic" (FSDoH clinician TT meeting 03.08.05).

Cognisant of the new demands, several mechanisms had been introduced to deal with staff and system overload caused by the introduction of the ART programme. At a very early stage there was a call for cultivating a culture of "care for the caregivers", amongst others, to comprise a 24-hour helpline, specialist assistance, team work and continuous training for caregivers (FSDoH clinician Stakeholder Workshop 31.03.04). As previously mentioned, a patient-booking or appointment system was later suggested, and eventually the call urging for a forced booking system. However, the question kept resurfacing: "How do we actually manage the pressure on frontline people?" At one point the simple conclusion was: "We don't have enough manpower" (FSDoH official TT meeting 05.01.05).

7. Integrating ART to strengthen the health system — the role of staff

The strengthening of the national health care system as a whole through, among other things, investment in the capacities and skills of health care workers, is one of the main aims of the *Comprehensive Plan*. In essence, it is taken that the investment incurred with the ART programme provides a valuable opportunity to strengthen the health system as a whole. Furthermore, improvements in the training and support of health staff have the potential to strengthen the quality of and access to other health conditions and eventually the health system as a whole (Editorial 2003). It is, therefore, explicitly stated that the ART programme should not be offered as a vertical programme. Rather, newly appointed staff are to provide support in filling gaps in other areas of health care and should serve all health clients, not only HIV-positive and AIDS patients (NDoH 2003: 16, 102-3). In this regard, various authors (cf Chopra 2005, McCoy *et al* 2005: 18) warn of the potential collapse of the health system if the ART programme is implemented separately from other health programmes. Among the many pitfalls accompanying the ART programme, McCoy (2005, McCoy *et al* 2005) refers to the danger of increasing inequities that might arise between health programmes as a result of making extra human resources available for the programme. To counteract this, a health systems approach needs to be followed in implementing the ART programme. Among other things, it should entail integration with TB, STI and community health programmes.

Despite such cautioning, the programme in the Free State was from its inception poised to develop into a vertical programme. The initial urgency with which the programme was introduced, along with the high priority assigned to the ART programme compared with other PHC programmes at the selected health care facilities inevitably ignited a tendency toward verticalisation or non-integration of the programme. Unfortunately, the early staff orientation programme as well as the accreditation process forestalled and strengthened this perception. Reportedly, nurses were informed that dedicated staff would be appointed to run the programme, and that the programme would be "verticalised" in its operation within facilities, despite the desire of many that the programme should be rather integrated into existing facilities and services (Louwagie *et al* 2004). The result was that ART was, in the end,

indeed presented and provided as a separate programme, run by separate staff mainly or exclusively assigned to this task, managed by specially appointed managers, and by rendering the programme in a physically separate "clinic" or section of the facility.

About a year after the implementation of the programme, facility managers at assessment and treatment sites anticipated that the programme would become increasingly integrated with other PHC services, the main reasons being that professional nurses not working in the programme are also trained on ART; ART patients were treated for minor ailments and other conditions by staff not rendering ART services; and a referral system for patients was in place. Despite these views, practice showed that, at some sites, ART was only rendered by professional nurses appointed in and trained for the programme, while at other sites, trained nurses rotated among PHC programmes, including ART. Furthermore, the programme was often rendered in the consultation rooms of nurses trained in ART. Nevertheless, integration on a broad spectrum (staff establishments, training and budgets) was increasingly voiced as the policy of the FSDoH, and more so against the backdrop of pending and real human resources shortages, and as a strategy for overcoming these shortages (FSDoH official TT meeting 05.01.05, FSDoH official Stakeholder Workshop 2005b).The role of staff in the integration of the programme within the broader PHC framework requires further scrutiny, especially in light of the importance of staff and staff attitudes for the success of the programme and, overall, the strengthening of the health system.

8. Conclusions

This article highlights the pivotal role of human resources and its many dimensions and issues involved in the development and implementation of large-scale, priority health interventions, in this case ART. Following the announcement of the *Comprehensive Plan*, the FSDoH developed province-specific principles and strategies to recruit and train staff for the ART programme, the experiences of which, thus far, allow for achievements and challenges to be identified. The lessons learnt go beyond the ART programme and may well apply to the issue of staff for PHC and the public health system in general.

Key achievements amount to adaptations to national guidelines regarding staffing norms, mobilising a number of health workers from different categories to staff the programme, and a strong focus on ART training.

Firstly, the FSDoH deviated from national directives not only regarding the structuring of the ART programme (by introducing the combined treatment-assessment site model), but also in adapting the proposed staff establishment at ART sites to accommodate the unique characteristics of some service sites (rural and sparsely populated areas). Evidence shows that standard staff establishments for all sites are not necessarily applicable and needed at those sites where patient numbers are low and slow-growing, while stronger staffing is required at the larger sites with rapid growth in patient numbers, especially in urban areas.

Secondly, despite early concerns regarding the availability of professional health staff at the national and provincial levels, the FSDoH succeeded in filling slightly more than half of the approved professional posts during the implementation phase to commence ART at the selected sites. Furthermore, the demand for professional nurses to staff the programme, investments in their training and the key role they play in core ART functions (the assessment, preparation and maintenance of patients) attest to the PHC orientation followed in the structuring and implementation of the programme in the province. It is taken that a nurse-driven approach to ART provision counteracts the general scarcity of public sector doctors and increases access to the service in the province.

Thirdly, as a national plan for the training of staff for ART was not forthcoming, the FSDoH took the initiative to develop a contingency plan, which deviated from the national recommendations, especially in terms of the duration of training. During the first two years of implementation, a large number and diverse categories of health workers received training on ART. After the first round of training, the province reviewed and adapted the training to ensure minimal disruption of services. In this regard, the iCAM system proves to be valuable for the training of staff. Regular maintenance training, as undertaken in the Free State, is considered vital to ensure that staff remain well informed and abreast of new developments in ART and related conditions. Furthermore, it is noteworthy that strategies are embarked on, such as with

traditional healers, to reach health workers and programme stakeholders who cannot be accommodated through distance training.

Key challenges to staff the ART programme in the province include the general lack of public sector health workers *vis-à-vis* current recruitment practices, occupational stress and the absence of support for staff, and poor acknowledgement of the role of CHWs in ART.

Firstly, considering the broader challenges of implementing ART in the Free State (cf Van Rensburg in this volume), a critical hurdle relates to the appointment of additional staff in the light of the tremendous demand for the service. The practice of commencing with services in the absence of the required number, category and training of staff at some sites is worrisome. Nevertheless, effort should be made to prevent the draining of staff and the crippling of other health programmes and facilities. This proves not to be entirely possible, especially when recruiting staff through headhunting, with the resultant recycling of personnel. In fact, the recruitment of staff during the programme's implementation phase to a large extent contravened the principles initially proclaimed by the FSDoH, especially regarding the recruitment of staff from other PHC programmes at ART-based facilities.

Secondly, although this strategy has potential to integrate ART with other PHC programmes, a higher workload is put on nurses, which in turn could fuel burnout and discontent. Work overload and stress due to the programme featured within a short period of time. At this stage the stresses, frustrations and discontent of professional nurses in the programme are well known, but strategies and resources to intervene are grossly lagging behind.

Thirdly, the key role of community health workers as an extension of professional ART services deserves closer attention, as this huge resource lies fallow in communities. CHWs could become more active in some ART-functions, for instance taking responsibility for drug readiness training, as is indeed the practice at several ART facilities. Capacitating voluntary workers without paying attention to their work environment and work demands could encourage them to leave the health service for better opportunities elsewhere.

Despite the anticipated strengthening of the health system through, among other things, the recruitment and training of staff for ART, the benefits thereof in the broader contexts of health service delivery are

still to transpire. The information clearly indicates that the ART programme emerged as a vertical programme with separate and dedicated resources, including staff and training; a situation that divorces ART from other health programmes. Although it is observed that the *Comprehensive Plan* fuels the shortage of health staff in the province, it should be borne in mind that this situation is not unique or, to a large extent, a new phenomenon. Yet the challenge of providing quality ART that requires highly skilled health care workers cannot be underestimated.

9. Recommendations

The human resource challenges facing the ART programme in the Free State (and certainly also in other provinces) allow for elementary recommendations. First and foremost, one has to accept the reality of absolute or primary shortages of staff, and that solutions to such shortages require long-term strategies. In the shorter term, attention should be paid to the best possible utilisation of existing human resources in the province.

- More staff in almost all professional categories are necessary to fill the new posts and the backlog of vacancies, and this need is bound to escalate as the programme expands. While little can be done to produce more staff in the short term to solve the problem of primary shortages, immediate steps can be taken to address secondary staff shortages by utilising, managing, distributing and deploying the available workforce more efficiently and optimally. Part of such an endeavour would be to speed up staff recruitment, appointment and transfer procedures.
- Training for ART should be scaled up among professional health workers of all categories to broaden the trained staff base, and thus to render the integration of services and programmes within facilities viable and feasible. In itself the closer integration of the ART programme and ART staff into other programmes and vice versa seems to be a logical lever to alleviate pressures of staffing shortfalls, to contribute to service continuity, and to strengthen entire facilities, rather than a single programme.
- Staffing norms and staff establishments for ART sites need to be revisited and adapted with a view to appropriately equipping ART sites according to the demands of a specific facility in terms of pa-

tient loads, and not according to a general staffing grid which is uniformly applied to all facilities irrespective of patient loads. Special attention should be given to restructuring the staff establishments of those facilities which approach saturation levels.

- The task and workloads of existing staff need to be reassessed and adapted per individual ART facility, with a view to shifting and shedding current tasks and workloads according to the available workforce. In similar vein, the current patient walk-through model should be revisited and adapted to bring the demand closer in line with the abilities of the available workforce (cf Van Rensburg in this volume).
- The levels of frustration and discontent among staff — which tend to drive them away rather than retaining them in the public service — should be addressed.
- Staff require effective supervision and support. Where such supervision and support mechanisms are meagre or non-existent they have to be strengthened or put in place. An employee assistance programme of proper size and capacity needs to be erected to match the present demand for such support and services among a workforce which is in many facilities overstretched, also due to the introduction of the ART programme.
- The utilisation of CHWs for ART, and particularly as an extension of the arm of professional care, is a given and as such recognised by the authorities. However, these huge human resource potential needs to be optimally explored, sustained and strengthened, and should certainly not be alienated and exploited. In the face of the tremendous challenges posed by the ART programme (and even more so the challenges posed by the broader HIV and AIDS epidemic) community potential, structures and services should be involved on a larger scale and in a more comprehensive manner to supplement the professional workforce.

Consistent human resource planning, development and support will prove critical for the future success of ART in the province and the country at large.

Bibliography

BARRON P

2003. The challenge of rolling out antiretrovirals. <http://news.hst.org.za/news/20030808>

BEKKER L G, C ORRELL, L READER, K MATOTI, K COHEN, R MARTELL, F ABDULLAH & R WOOD

2003. Antiretroviral therapy in a community clinic — early lessons from a pilot project. *South African Medical Journal* 93(6): 458-62.

BOTMA Y

2004a. *Evaluation of implementation training for comprehensive HIV and AIDS care, management and treatment in the Free State Department of Health*. Bloemfontein: School of Nursing (University of the Free State).

2004b. *Evaluation of antiretroviral training in Lejweleputswa*. Bloemfontein: School of Nursing (University of the Free State).

2004c. *Evaluating of training on comprehensive HIV and AIDS care, management and treatment in Motheo*. Bloemfontein: School of Nursing (University of the Free State).

2004d. *Evaluation of training on comprehensive HIV and AIDS care, management and treatment in Thabo Mofutsanyana*. Bloemfontein: School of Nursing (University of the Free State).

2004e. *Evaluation of training on Comprehensive HIV and AIDS Care, management and treatment in Xhariep*. Bloemfontein: School of Nursing, University of the Free State.

BUVÉ A

2005. Human resources for health and ART rollout: a deepening crisis. Unpubl presentation at the conference on Implementing the Comprehensive Care and Treatment Programme for HIV and AIDS patients in the Free State: sharing experiences. Bloemfontein, 30 March-1 April 2005.

CHABIKULI N, L GIBSON, D BLAAUW & H SCHNEIDER

2005. Human resource policies. Ijumba & Barron (eds) 2005: 104-15.

CHEN L, T EVANS, S ANAND, J BOUFFORD, H BROWN, M CHOWDHURY, M CUETO, L DARE, G DUSSAULT, G ELZINGA, E FEE, D HABTE, P HANVORAVONGCHAI, M JACOBS, C KUROWSKI, S MICHAEL, A PABLOS-MENDEZ, N SEWANKAMBO, G SOLIMANO, B STILWELL, A DE WAAL & S WIBULPOLPRASERT

2004. Human resources for health: overcoming the crisis. *The Lancet* 364: 1984-90.

CHOPRA M

2005. ARV treatment and health systems: avoiding the pitfalls. *AIDS Bulletin* 14(1). <http://www.mrc.ac.za/aids/march2005/arvtreatement.htm>.

COMMONWEALTH CODE OF PRACTICE FOR THE INTERNATIONAL RECRUITMENT OF HEALTH WORKERS
<http://www.thecommonwealth.org/shared_asp_files/uploadedfiles/%7B7BDD970B-53AE-441D-81DB-1B64C37E992A%7D_ CommonwealthCodeofPractice.pdf>.

COUPER I, N SONDZABA & M DE VILLIERS
2005. Human resources: district hospitals. Ijumba & Barron (eds) 2005: 118-33.

DOHERTY J, M LOVEDAY, R STEWART & L THOMAS
2005. *Conference report. Implementing the Comprehensive Care and Treatment Programme for HIV and AIDS patients in the Free State: sharing experiences*. Bloemfontein, South Africa 30 March-1 April 2005.

EASTWOOD J B, R E CONROY, S NAIKER, P A WEST, R C TUTT & J PLANGE-RHULE
2005. Loss of health professionals from sub-Saharan Africa: the pivotal role of the UK. *The Lancet* 365: 1893-900.

EDITORIAL
2003. Strengthening the health system and ensuring equity in the widescale implementation of an antiretroviral therapy programme in South Africa. *South African Medical Journal* 93(10).

FORCIER M B, S SIMOENS & A GIUFFRIDA
2004. Impact, regulation and health policy implications of physician migration in OECD countries. *Human Resources for Health* 2: 12. <http://www.human-resources-healthcom/ content/2/1/12>.

FREE STATE DEPARTMENT OF HEALTH (FSDOH)
2003a. *Proposed plan for the implementation of ARVs in the Free State province*. Bloemfontein: Free State Department of Health.

2003b. *Proposed plan for the Free State Department of Health roll-out of the Antiretroviral Treatment (ARV) programme*. Bloemfontein: Free State Department of Health.

2004. *Status report to MEC for Health*. Bloemfontein: Free State Department of Health.

2004. *ART Weekly Report. 26.01.04; 11.08.04; 29.09.04*. Bloemfontein: Provincial Task Team.

2005a. *Cost implications of ART staff*. Bloemfontein: Free State Department of Health.

2005b. *HIV and AIDS CCMT Regional Training Centre. January to June 2005 Training report on: Comprehensive Care management and treatment of HIV and AIDS*. Bloemfontein: Free State Department of Health.

2005c. *Regional training centre report for January-December 2005*. Bloemfontein: Free State Department of Health.

FREE STATE PHARMACEUTICAL SERVICES
2005. Weekly report of the Free State Pharmaceutical Services: 22.06.05; 06.04.05.

HALL E & J ERASMUS
2003. Medical practitioners and nurses. Human Sciences Research Council. Human Resource Development. <http://hrdreview.hsrc.ac.za/hrd/directory.htm>.

HLOPHE H
2005. Group interviews with professional nurses and community health workers at Free State ART sites. Unpubl presentation at the conference on Time to reflect implementation of the Free State Comprehensive HIV and AIDS Care, Management and Treatment Plan (FSCCMT). Bloemfontein, 14 September 2005.

HONGORO C & B MCPAKE
2004. How to bridge the gap in human resources for health. *The Lancet* 364: 1451-6.

HEALTH SYSTEMS TRUST
2004. *The National Primary Health Care Facilities Survey 2003*. Durban: Health Systems Trust.

HERBST I
2005. *Dimensions, successes and challenges of home-based care in the Free State*. Bloemfontein: Centre for Health Systems Research & Development.

IJUMBA P & P BARRON (eds)
2002. *South African Health Review 2002*. Durban: Health Systems Trust.

IJUMBA P, C DAY & A NTULI (eds)
2004. *South African Health Review 2003/04*. Durban: Health Systems Trust.

IJUMBA P, C POOLE, G GEORGE & A GRAY
2004. Access to antiretroviral therapy. Ijumba *et al* (eds) 2004: 319-38.

JACOBS N
2005. Patients and health care workers' experience of the antiretroviral treatment programme in the Free State. Unpubl presentation at the conference on Implementing the Comprehensive Care and Treatment Programme for HIV and AIDS patients in the Free State: sharing experiences. Bloemfontein, 30 March-1 April 2005.

KAPP C
2004. HIV overshadows South African health advances. *The Lancet* 363: 1202-3.

KOBER K & W VAN DAMME
2004. Scaling up access to antiretroviral treatment in southern Africa: who will do the job? *The Lancet* 364: 103-7.

KOMORENG S & M LEKGALANYANE
2005. Hospitalised patients on ART: experiences at Bongani Hospital. Unpubl presentation at the conference on Implementing the Com-

prehensive Care and Treatment Programme for HIV and AIDS patients in the Free State: sharing experiences. Bloemfontein, 30 March-1 April 2005.

KOVSTED J
2005. Scaling up AIDS treatment in developing countries: a review of current and future arguments. *Development Policy Review* 23(4): 465-82.

LEHMANN U
2005. 'It has changed us, it has brought a feeling of depression among staff' — assessing the impact of HIV/AIDS care on primary care nurses in Cape Town. Unpubl presentation at the conference on Implementing the Comprehensive Care and Treatment Programme for HIV and AIDS patients in the Free State: sharing experiences. Bloemfontein, 30 March-1 April 2005.

LEHMANN U & D SANDERS
2003. Human resources development. Ijumba *et al* 2003: 119-34.

LETHBRIDGE J
2004. Public sector reform and demand for human resources for health. *Human Resources for Health* 2: 15. <http://www.human-resources-healthcom/content/2/1/15>.

LOUWAGIE G & O M BACHMANN
2002. *Home-based care in the Free State: a situational analysis*. Bloemfontein: Department of Community Health (University of the Free State).

LOUWAGIE G, L FAIRALL & Z MATEBESI
2004. *Barriers to the introduction of the public sector antiretroviral treatment programme. A first report of structural barriers identified in focus group discussions with primary care nursing practitioners*. Cape Town: University of Cape Town Lung Institute.

MARCHAL B, V DE BROUWERE & G KEGELS
2005. HIV/AIDS and the health workforce crisis: What are the next steps? *Tropical Medicine and International Health* 10(4): 300-4.

MARTINSON N, B RADEBE, M MNTAMBO & A VIOLARIA
2002. Antiretrovirals. Ijumba *et al* (eds) 2002: 235-56.

MCCOY D
2005. Expanding treatment access and strengthening HIV/AIDS programmes in ways that strengthen the broader health systems agenda: issues for the Global Fund to fight HIV/AIDS, TB and malaria. *AIDS Bulletin* 14(1). <http://www.mrc.ac.za/aids/march 2005/ expanding.htm>.

1996. *Free health care for pregnant women and children under six in South Africa — an impact assessment*. Durban: Health Systems Trust.

McCoy D, M Chopra, R Loewenson, J Aitken, T Ngulube, A Muula, R Sunanda, T Kureyi, P Ijumba & M Rowson
2005. Expanding access to antiretroviral therapy in Sub-Saharan Africa: avoiding the pitfalls and dangers, capitalising on the opportunities. *American Journal of Public Health* 95(1): 18-22.

National Department of Health (NDoH)
2001a. *The primary health care package for South Africa: a set of norms and standards*. Pretoria: Department of Health.

2001b. *A comprehensive primary health care service package for South Africa*. Pretoria: Department of Health.

2003. *Operational Plan for Comprehensive HIV and AIDS Care, Management and Treatment for South Africa*. Pretoria: Department of Health.

2004. *Strategic priorities for the national health system 2004-2009*. Pretoria: Department of Health.

2005. Strategic issues on human resources. <http://www.doh.gov.za/docs/misc/hsummit4/hresources.html>.

Padarath A, C Chamberlain, D McCoy, A Ntuli, M Rowson & R Loewenson
2003. Health personnel in Southern Africa: confronting maldistribution and brain drain. *EQUINET discussion Paper 3*. Harare (Zimbabwe): EQUINET.

Padarath A, A Ntuli & L Berthiaume
2004. Human resources. Ijumba *et al* (eds) 2003: 299-318.

Physicians for Human Rights
2004. *An action plan to prevent brain drain: building equitable health systems in Africa*. Boston, MA: Physicians for Human Rights.

Rapport
2005. Advertisement for the recruitment of health staff in the Free State Department of Health. 11 September 2005, Loopbane: 4.

Reuters
2004. Mozambique unable to launch nationwide antiretroviral drug program due to staff, equipment shortages — Thursday, May 27, 2004. <file://C:\DOCUME~1\uvp\LOCALS~1\ Temp\O2X4F6A3.htm>.

South African Nursing Council (SANC)
2003. Statistics of the South African Nursing Council. Geographical distribution of the population of South Africa versus nursing manpower 2003. <http://www.sanc.co.za/stats/stat2003/Distribution%202003xls.htm>

2005a. Growth in registers and rolls 1996 to 2004. <http://www.sanc.co.za/stats/stats_ts/growth%201996-2004_files/frame.htm>.

2005b. Verification and transcript statistics — calendar year 2005 (provisional). <http://www.sanc.co.za/stats/stats2005/verifications%202005xls.htm>.

SCHNEIDER H
2005. Revisiting ARV policy and policy implementation: a critique. Unpubl presentation at the conference on Implementing the Comprehensive Care and Treatment Programme for HIV and AIDS patients in the Free State: sharing experiences. Bloemfontein, 30 March-1 April 2005.

SCHNEIDER H, D BLAAUW, L GILSON, N CHABIKULI & J GOUDGE
2004. *Health systems strengthening and ART scaling up: challenges and opportunities*. Johannesburg: Centre for Health Policy.

SHISHANA O, E HALL, K R MALULEKE, D J STOKER, C SCHWABE, M COLVIN, J CHAUVEAU, C BOTHA, T GUMEDE, H FOMUNDAM, N SHAIKH, T REHLE, E UDJO & D GISSELQUIST
2003. *The impact of HIV/AIDS on the health sector: national survey of health personnel, ambulatory and hospitalised patients and health facilities 2002*. Pretoria: Human Sciences Research Council.

STEWART R & M LOVEDAY
2005. Operational plan: implementation of the antiretroviral therapy component. Ijumba & Barron (eds) 2005: 224-46.

STILWELL B, K DIALLO, P ZURN, M R DAL POZ, O ADAMS & J BUCHAN
2003. Developing evidence-based ethical policies on the migration of health workers: conceptual and practical challenges. *Human Resources for Health* 1: 8. <http://www.human-resources-health.com/content/1/1/8>.

SUBEDAR H
2005. The nursing profession. Ijumba & Barron (eds) 2005: 88-101.

TAWFIK Y, S KINOTI & G CHAD BLAIN
2002. Introducing antiretroviral therapy (ART) on a large scale: Hope and caution. Washington: AED Global Health, Population and Nutrition Group.

UN INTEGRATED REGIONAL INFORMATION NETWORKS
2002. South Africa: government wakes up to flight of health workers. <http://www.irinnews.org/report.asp?ReportID=27765>.

VAN RENSBURG H C J
2004. The health professions and human resources for health — status, trends and core issues. Van Rensburg (ed) 2004: 316-73.

2005a. *Staff at ARV service sites in the Free State per districts — November 2004*. Bloemfontein: Centre for Health Systems Research & Development.

2005b. ART rollout in the Free State: an outsider's appraisal? Unpubl presentation at the conference on Implementing the Comprehensive Care and Treatment Programme for HIV and AIDS patients in the Free State: sharing experiences. Bloemfontein, 30 March-1 April 2005.

VAN RENSBURG H C J (ed)
2004. *Health and health care in South Africa*. Pretoria: Van Schaik.

WYSS K
2004a. An approach to classifying human resources constraints to attaining health-related millennium development goals. *Human Resources for Health* 2: 11. <http://www.human-resources-health.com/content/2/1/11>.

2004b. Scaling-up anti-retroviral treatment and human resources for health: what are the challenges in Sub-Saharan Africa. A short paper established in the frame of the SDC Backstopping Mandate 2004 of the Social Development Division's Health Desk. Basel: Swiss Tropical Institute.

ZURN P, M R DAL POZ, B STILWELL & O ADAMS
2004. Imbalances in the health workforce. *Human Resources for Health* 2: 13. <http://www.human-resources-health.com/content/2/1/13>.

Meetings and workshops from which information was gathered

Accreditation feedback sessions 23.03.04 and 04.02.04.

Provincial Task Team meetings during period 08.12.03 to 03.08.05.

ARV Stakeholder Workshops:

- Stock taking of implementation of the ART programme and filling of gaps in areas that need to be addressed. Bloemfontein, 31 March 2004.
- Provision of human resources to ensure sustainability of the *Comprehensive Plan*. Bloemfontein, 2 March 2005.
- Time to reflect on implementation of the Free State comprehensive HIV and AIDS care management and treatment plan (FSCCMT). Bloemfontein, 14 September 2005.

Interviews with stakeholders and role players

The questions and content of the interviews were adapted, depending on the interviewee's affiliations and the time of the interview. In the main, the interviews focused on the nature of the programme in the province, the organisation's role in the provincial ART programme, strengths, limitations and weaknesses, progress made with implementation in the province and in the districts, constraints encountered, main positive and negative opinions on the ART programme, and remaining challenges. For the sake of confidentiality the interviewees are cited anonymously.

Statements or remarks during meetings related to the ART programme

Statements or remarks made during meetings of the provincial Task Team — or in other official meetings related to the ART programme — are anonymously referred to as: FSDoH official, FSDoH clinician TT meeting (or other specific meeting), with the date of statement or remark.

Officials of the National Department of Health

All anonymously cited as NDoH official interview, with date of interview: Dr Louis Claassens (Director Quality Assurance); Dr Christoph Hamelmannn (Technical Advisor for the HIV/AIDS Programme); Dr Yogan Pillay (Chief Director Strategic Planning); Dr Celicia Serenata (former Technical Advisor for the HIV/AIDS Programme).

Officials of the Free State Department of Health

All anonymously cited as FSDoH official interview, discussion or statement, with date of interview or date of meeting, discussion or statement: Dr Ronald Chapman (Executive Manager: Heath Support Cluster); Me Ntsiki Jolingana (former Director: HIV/AIDS/TB/STIs and Communicable Disease Control); Prof Marlene Viljoen (Senior Manager: Human Resources and Organisational Development); Me Michelle Linström (Directorate Information and Research).

Medical specialists serving in the provincial Task Team and/or the Centre of Ecellence or managing ART sites

All anonymously cited as FSDoH clinician, with date of interview: Drs Dewald Steyn and Cloete van Vuuren (Internal Medicine and Centre of Excellence); Dr Theuns Kellerman (Manager of treatment site at National Hospital).