# South African Health Review 2000





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Health Systems Trust 401 Maritime House Salmon Grove Victoria Embankment Durban 4001 South Africa 
 Email:
 hst@healthlink.org.za

 Internet:
 http://www.hst.org.za

 Tel:
 +27 - 31 - 3072954

 Fax:
 +27 - 31 - 3040775

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The year 2000 was a significant one in terms of developments affecting the health sector. Local Government elections in December heralded the beginning of the final stage of the transformation of Local Government, paving the way for the full implementation of the District Health System. The National Health Accounts were undertaken, providing an overview of financing and expenditure in both private and public sector care. And, as can be evidenced by the frequent references to HIV/AIDS in many chapters of this Review, the impact of the epidemic began to be felt in almost every aspect of the health system.

This first South African Health Review of the millenium aims to provide a combination of detailed information on health status and health care coupled with in-depth analysis of policies and practices affecting the provision of health services in South Africa. Recent Reviews have been characterised by a particular focus on policy implementation and this is maintained, as is an emphasis on equity, especially in regards to financing and expenditure.

In 1997, again in 1998, and most recently in 2000, the Health Systems Trust commissioned a survey of primary health care facilities. The survey forms part of an ongoing monitoring of progress in implementing Primary Health Care. Key findings from the Survey are provided in the Review, and they provide a unique insight to quality of care in public sector clinics in South Africa.

The HIV/AIDS epidemic does not only affect those with living with HIV, their families and carers, it also places a huge burden on staff in clinics and hospitals who are providing care, often in less than ideal circumstances, and on health service planners and managers faced with competing demands for resources. The successes identified in this Review are testament to the commitment, dedication and hard work of health service staff.

Producing a Review of substance on an annual basis is not an easy task. The Board of Trustees of the Health Systems Trust wishes to thank the many researchers, writers and reviewers, as well as the staff of the Health Systems Trust who have dedicated time and effort to the 2000 South African Health Review.

Dr Patiswa Zola Njongwe Chairperson, Board of Trustees



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## Acknowledgements

### **Editors**

Antoinette Ntuli, Nicholas Crisp, Elizabeth Clarke, Peter Barron

### **Assistant Editor**

Fatima Suleman

### Conceptualisation

Peter Barron, Andrew Boulle, Eric Buch, Gcinile Buthelezi, Elizabeth Clarke, David Coetzee, Nicholas Crisp, David McCoy, David Mametja, Nonhlanhla Makhanya, Zola Njongwe, Antoinette Ntuli, Fatima Suleman

### Health and Related Indicators

Fatima Suleman and Andy Gray

### Research

Clinic Survey commissioned by Gcinile Buthelezi

### Cover

Khulangani Khomo of the Sinikithemba HIV/AIDS Centre at McCord's Hospital, Durban, created the Beadwork Map of South Africa, based on a design by Vedant Nanakchand

### Reviewers

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During the 1980's many South Africans spent the greater part of their weekends at funerals. As we move into the first decade of the 21st Century this pattern is re-emerging, although for entirely different reasons. Every South African is becoming increasingly intimate with the effects of the HIV/AIDS epidemic, and, as with most preventable diseases, it is the most vulnerable and poorest communities whose lives are most adversely affected. The attention given to HIV/AIDS by many chapters in the 2000 South African Health Review reflects the seriousness of the disease and the widespread impact that the epidemic is already having. Previous South African Health Reviews have highlighted that in most areas of our health system excellent policies are now in place, and the challenge is to ensure implementation. In contrast, what is disturbing in relation to HIV, is that in some critical areas including Mother to Child Transmission and HIV and breastfeeding, there are not even clear policy guidelines.

In important areas of health care progress has been achieved, and in particular the development of detailed guidelines for a number of areas of specialty bear testament to improved policy implementation. For example 84% of districts have clinics offering tuberculosis treatment based on the principles of the DOTS strategy. Integrated Management of Childhood Illnesses (IMCI) has been adopted as a national programme to address acute childhood illnesses and a Vitamin A supplementation policy has been developed and approved. The Tobacco Products Control Amendment Act, an example of our model legislation, will serve to reinforce the declining prevalence of smoking, down from 34% in 1992 to 24% in 1998.

Unfortunately the benefits in terms of health status that could be expected to accrue from improved care are already being compromised by both the HIV/AIDS epidemic and by funding. There have been declines in per capita funding of the public health sector, and even declines in per capita funding of primary health care(PHC). This is cause for concern when the availability of various types of laboratory tests performed as part of PHC is unsatisfactory; when HIV testing in clinics is low with only six out of every ten fixed clinics

**Antoinette Ntuli** 

offering this test; when essential PHC equipment is unavailable at some fixed clinics; when one quarter of fixed and satellite clinics have no ambulance available and when one third of mobile clinic workers believe that the vehicles they use are unsuitable for the roads they travel.

Promotion of equity is a cherished ideal of key policy documents relating to health care. It is regrettable that in respect of the most basic prerequisite for equity in the public sector, financing, the trend towards increased equity which took place during the first few years of democratic government appears to have been reversed as a result of changes in mechanisms of funding. Resource distribution between the public and private sectors remains the site of greatest inequity. The introduction of Social Health Insurance as it is presently construed will have only limited impact on this gap, and there is a need for re-examination of the objectives and design of existing policy. The 1998 re-regulation of medical schemes also aims to contribute to promoting equity through encouraging risk pooling and avoiding "dumping" of private patients on the public sector. Attention to the process, and to effectively involving stakeholders is crucial to the future of both Social Health Insurance and to the effective implementation of the Medical Schemes Act.

Transformation is ongoing in a number of critical areas. The transformation of Local Government heralds the opportunity for successful establishment of the District Health System, with the potential to improve the quality of life of many poor South Africans. A number of complex issues have to be addressed as part of this process and without a clearly articulated strategic plan there is the possibility that devolution of PHC will result in increased inequity.

Inherent in a Review of this type is the fact that a number of authors refer to the same issue, and this is especially so in the context of the HIV/AIDS epidemic. An overarching chapter on Health Status and Determinants provides an overview of mortality and morbidity data, and more detail is provided in chapters concentrating on programmatic issues such as Tuberculosis and Child Health. There are a few examples where small differences appear in data that is presented. These result from authors and researchers drawing upon different databases and sources of information.

As always, the Review does not expect to provide an exhaustive analysis of every facet of health services in the country. Rather it aims to examine and report on the general degree to which government is succeeding in achieving its aims in the stated health reform policies and objectives. In doing so attention is focused on critical elements that are being addressed in the system during the year in question. This year marks the beginning of a new millennium and the end of the first five years of new administration in the new South Africa. The report card demonstrates a mixed picture and the comments highlight areas of concern for trends into the future.





Notable moves, either towards or away from equity in Primary Health Care (PHC) provision in South Africa, are observed when comparing the 1997/98 and the 2000 PHC Facility Surveys. Significant strides towards improvement have undoubtedly been accomplished. Sadly there are also areas in which inequity has increased. Given the supposed increased prioritisation of and budgetary allocation to PHC in South Africa in recent years, improvement across the spectrum of indicators measured in this survey could have been expected. Sadly many areas of PHC remain in dire straits. Undoubtedly there have been marked changes for the better in PHC provision; equally true is that such improvements seem to come at the expense of other areas of PHC.

Dingie van Rensburg

**Renier Viljoen** 

**Christo Heunis** 

Ega Janse van Rensburg

**Annalize Fourie** 

Authors

Centre for Health Systems Research & Development, University of the Free State

### **Main Findings**

### On the positive side

- Nationally, an increased availability of the following services suggests notable progress since 1997/98:
  - Substantial improvement antenatal care
  - Moderate improvement immunisation, family planning and postnatal care
  - Very slight improvement STD and TB care.
- Availability of **TB sputum testing** improved somewhat since 1998.
- In general, the turn-around times of various laboratory tests improved notably since the previous surveys.
- Nationally, the DOTS system has been implemented in eight out of ten fixed clinics.
- Home visits are conducted by a relatively high percentage of 80% of satellite clinics.
- The majority of health workers perceive the **referral system** to be efficient.
- Nationally, nurses at fixed clinics now have a substantially lower patient load than in 1997.
- Skills updating in the field of HIV/AIDS has increased somewhat.
- The availability of electricity at fixed clinics increased markedly from 65% in 1997 to 92% in 2000. In five provinces electricity is available in 100% of clinics.
- Little evidence of **expired drugs** in stock was detected.
- Condoms, oxygen, aldomet, ORS, penicillin, and oral contraception are somewhat more readily available than in 1998.

### On the negative side

- The availability of the various types of tests performed as part of PHC is unsatisfactory:
  - The availability of **HIV testing** at fixed clinic remains low. Four in every ten fixed clinics do not offer this extremely important test.
  - Nationally, **HIV tests** are less available than syphilis tests.
  - **Pap smear** test availability nationally at fixed facilities remains relatively low.
  - Less than half of fixed clinics offer **Rhesis tests**.
  - Only half of fixed and mobile clinics offer **pregnancy tests**.
- One quarter of fixed and satellite facilities and half of mobile clinics have no ambulances available for emergencies.
- Skills updating in STD (syndromic approach) and TB receives less priority compared with 1998.

CHAPTER .

- Essential **PHC equipment** is unavailable at some fixed clinics.
- Although the availability of telephones has increased substantially since 1998 at PHC facilities, the general situation is still unsatisfactory: About one fifth of fixed clinics do not have a telephone available, and only about two in ten facilities have an alternative means of communication to a telephone.
- Despite improvements in general availability of electricity, interruption of electricity supply remains a major problem at fixed facilities. In the month preceding the survey, interruptions of electricity occurred at one third of clinics.
- Poor water supply remains a problem affecting PHC facilities:
  - 12.5% of satellite clinics still depend on water delivered by a tanker.
  - 5% of satellite clinics obtain their water from a river or a dam.
  - 12.4% of fixed clinics rely on **rainwater**.
- One third of mobile clinic health workers believe their vehicles are unsuitable for the roads they travel on.
- One fifth of fixed facilities dispose of medical waste by means other than incineration.
- Regarding drug supply, iron tablets, doxycycline and erythromycin are less widely available than in 1998.
- ♦ On the whole, the regularity of nurse supervisor visits to fixed facilities in the month preceding the survey has dropped substantially since 1997, from 79% to 67% in the current year. Also less than half of satellite and mobile clinics had been visited. A third of the sampled facilities report that they are 'never' visited.
- The regularity of feedback on reports submitted by PHC facilities is highly unsatisfactory. Only 51.5%, 26.5% and 46.2% of fixed, satellite and mobile clinics respectively receive regular feedback.
- A preliminary investigation shows that **TB record keeping** is poor especially in satellite clinics.
- Little progress has been made in the establishment of clinic committees since 1998.

### Background

The third PHC Facility Survey was undertaken in 2000. Ten per cent of PHC facilities in South Africa were sampled and the survey provides a comparative follow-up to two earlier surveys in the 1997 and 1998 Health Reviews. For the first time the survey has included *satellite* and *mobile* clinics. Personal interviews were conducted at 334 fixed,<sup>a</sup> 40 satellite,<sup>b</sup> and 92 mobile<sup>c</sup> clinics randomly sampled according to their proportional distribution in each of the nine provinces. The survey findings provide a cross-sectional, 'snapshot' description of equity in the provision of primary health care as well as identifying progress towards equity in the public health sector.

The survey findings have to be contextualised within current health sector transformation. The fact that there are vast inequalities among the nine provinces with regard to Health's share of adjusted provincial expenditure compared to the national average, indicates that the financial basis and ability to strengthen PHC are highly variable among provinces.

In the following sections the collected information is presented according to the main indicators of PHC as provided in the various clinic settings. In the course of reporting, reference is made to trends as emerging from comparisons with the 1997 and 1998 surveys. This chapter addresses main observations and trends only. More detailed information is documented in the full report on the survey published by the Health Systems Trust.

a Fixed facilities = PHC clinics or community health centres with permanent staff and equipment providing an eight to 24 hour service per day for five or more days per week.

b Satellite clinics = PHC clinics drawing staff and/or equipment and/or drugs and supplies from a source facility and provide services on a non-continuos basis, but at regular intervals.

c Mobile clinics = Vehicles equipped for PHC provision transporting health workers from a source facility to stopping points where services are rendered.

### Infrastructure

### Infrastructure – main findings

- Although the availability of telephones at fixed clinics nationally has increased substantially since 1998, it is unsatisfactory that about one fifth of fixed clinics do not have a telephone available in the clinic:
  - National availability: 80.5%
  - North West worst: 59.4%
  - Free State, Gauteng, Western Cape best: 100%
- In the North West, the availability of telephones has decreased from more than 80% in 1998 to less than 60% in 2000.
- Generally, communication constraints persist as a result of a lack of functioning telephones. This is exacerbated by a lack of other means of communication.
  - Only 3% of clinics have access to official cell phones
  - Only 16.2% of clinics have access to radiophones
  - There are two-way radios in only 22.2%, fax machines in only 18.9%, and email in only 5.7% of cases.
- ✤ 35.6% of mobile clinics and 20% of satellites do not have any means of communication at all. Some of the worst situations include:
  - 60% of satellite and mobile clinics in the Northern Province
  - 40% of satellite and mobile clinics in KwaZulu-Natal
  - 33.3% of satellite and mobile clinics in the Eastern Cape have no means of communication at all.
- The availability of electricity at fixed clinics increased from 65% in 1997 to 92% in 2000. Five provinces have 100% availability of electricity. Nevertheless, the following provinces still have a relatively large percentage of fixed clinics without electricity: North West (21.9%), Eastern Cape (14.3%), Northern Province (12.5%).
- Despite improvements in the availability of electricity, interruption of electricity supply remains a major problem at both fixed and satellite clinics. In the month preceding the survey, interruption of electricity occurred at about one third of the sampled facilities nationally.
- Water supply remains a problem for PHC facilities:
  - 12.5% of satellite clinics still depend on water delivered by a tanker
  - 5% of satellites obtain their water from a river or a dam
  - 12.4% of fixed clinics rely on rainwater.
- Water has to be purified on site in 33.3% of satellites in Mpumalanga and 18% of fixed, 14.3% of satellite and 15.4% of mobile clinics in the Northern Province.
- Interruptions in water supply were found to affect mainly the Free State, Northern Cape and North West provinces.
- In fixed clinics 100% have at least one flush toilet in Free State, Gauteng, Mpumalanga, Northern Cape and Western Cape; while 30% of fixed clinics in the Eastern Cape, 18.7% in the North West and 12.9% in the Northern Province are without flush toilets.
- Special sanitary facilities for the disabled are available at only 20.5% of fixed clinics nationally.

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### Communication

Although the availability of telephones at fixed clinics has increased substantially in most provinces since 1998, it remains unsatisfactory that about one fifth of fixed clinics do not have a telephone available. Since 1998 there has also been a slight increase in the availability of fax machines. However about eight in ten fixed facilities remain without a fax. Western Cape is the exception with seven in ten fixed facilities having fax machines. Although not included in Table 1, the 1997 survey showed that nationally 7% of fixed clinics had no means of communication. In the 2000 survey it was found that all fixed clinics have at least some means of communication, although not always in working condition.

	Telephone		Cell	Radio	2-way	Fax		E-mail	
	% 1998	2000	pnone %	%	%	% <b>1998</b>	6 2000	%	
Fixed	71	80.5	3	16.2	22.2	14	18.9	5.7	
Satellites		62.5	2.5	10	2.5		5	0	
Mobiles		38	4.3	4.3	38		21.7	4.3	

Table 1:	Availability of communication equipme	nt – fixed (1998, 2000), satellites and mobiles (20	00)
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Comparing the provinces, the poor availability of telephones at fixed clinics poses a serious problem in North West, Mpumalanga, Eastern Cape and Northern Province. In addition, the survey shows that where they are available, more often than not, they are frequently out of order. The worst case encountered was Northern Province (66.7% available, and of these, 56.3% out of order). This suggests an almost total collapse of communication.

Generally, the problems pertaining to the availability of telephones are exacerbated by a lack of other means of communication available to fixed clinics: official cell phones in only 3%, radiophones in only 16.2%, two-way radios in 22.2%, fax machines in only 18.9%, and e-mail in only 5.7% of fixed clinics. Moreover, radiophones and two-way radios, as well as fax machines are often out of order in most of the provinces. Fax machines were often found to be dysfunctional, especially in Northern Province, where all fax machines were out of order in the month preceding the survey. In fact, the survey shows that the possible availability of other means of communication in no way compensates for problems with the functionality and availability of telephones.

While there were no fixed clinics without any means of communication, a large proportion of mobile (35.6%) and satellite clinics (20%) were without any means of communication whatsoever. The most serious situation occurred in Northern Province where six in ten satellite and mobile clinics had no means of communication available. The same applies to four in ten satellite and mobile clinics in KwaZulu-Natal, and 33% of satellite clinics in Eastern Cape. This raises serious concerns about the safety and support of providers and the arrangement of referrals, especially emergency cases.

The 2000 survey also shows that fixed facilities in urban areas continue to have a much greater availability of functioning telephones than rural areas.



Figure 1: Availability of functioning telephone - fixed - urban/rural (1998, 2000) (percentage with telephone)

Comparing the current situation with 1998 reveals that the difference between urban and rural fixed clinics is now smaller. This is not so much because rural clinics have been equipped with telephones, but rather because the availability of functioning telephones in urban areas has declined, reportedly in some instances due to cut-offs as a result of non-payment.

### Electricity

In 1997, 65% of fixed clinics had electricity. At that stage, only Western Cape and Northern Cape had electricity at all fixed clinics. By 1998, this figure improved to 69%. In 2000, the national availability of electricity at fixed facilities improved substantially to 92%. North West, Eastern Cape and Northern Cape have the largest percentages of fixed facilities without electricity. The availability of electricity remains a major problem in satellite clinics in Mpumalanga and Northern Province.





It cannot be assumed that electricity supply is always uninterrupted. Nationally, about one third of the fixed clinics experienced interruption of electricity supply in the preceding month, particularly in North West, Northern Province and Mpumalanga. Interruption of electricity supply in satellite clinics is equally problematic, especially so in Northern Province and Mpumalanga.

**CHAPTER 1** 





### Water

The majority of clinics (67% fixed clinics and 75% of satellite clinics) have a municipal source of water supply. However water supply remains a problem affecting PHC. For example 12.5% of satellite clinics still depend on water delivered by a tanker, almost 5% of satellites obtain their water from a river or a dam, while 12.4% of fixed clinics rely on rainwater. Water had to be purified in a third of clinics in Mpumalanga and 14.3% of the clinics in Northern Province.





In the month preceding the survey, interruptions in water supply were experienced mainly in three provinces. In the Free State 28% of fixed clinics experienced interruptions of one day or longer (10 days maximum) while in the Northern Cape 16.7% (21 days maximum), and in the North West 21.9% (10 days maximum) of fixed clinics experienced interruptions.

# CHAPTER 1

### Sanitation

The situation regarding sanitary facilities is quite positive, with nine in ten fixed clinics equipped with at least one flush toilet. The remainder of fixed clinics use other types of toilets, with 2% having no sanitary facilities available. North West, Northern Province and especially Eastern Cape, are heavily reliant on sanitary facilities other than flush toilets.

Sanitation at satellite clinics, especially in Northern Province and Mpumalanga, is less satisfactory than at fixed clinics. Practical difficulties hamper the availability of sanitary facilities for staff of mobile clinics. Staff serving on mobile clinics make a variety of arrangements to compensate for the absence of sanitary facilities. Nationally, only two in ten fixed clinics have some kind of special sanitary facility for disabled people. The Northern Cape has made commendable progress in this regard, while North West has no special facilities for disabled people.





### **Services at PHC facilities**

### Services rendered - main findings

- Nationally, important moves towards equity emerge when comparing 1998 and 2000 data. Increased availability of several services is noted in rural areas including immunisation, family planning, postnatal care, antenatal care, and STD and TB care.
- In general, KwaZulu-Natal, Eastern Cape and North West show the best improvements in the availability of services, even though the level of availability sometimes remains low.
- Whether the availability of various PHC laboratory tests has improved is open to question: availability of HIV testing at fixed clinics remains low; syphilis testing is considerably higher than that for HIV. TB sputum testing improved somewhat.
- In general, turn-around times of laboratory tests improved, especially in rural areas.
- The frequency of mobile clinic visits to stopping points varies considerably from once a week to once in seven weeks, with a national average of once per month.
- Regarding emergency medical services: disturbingly, one quarter of fixed and satellite facilities and half of mobiles have no ambulance available; nationally, the response time for emergency vehicles is little changed, with slight improvements in certain provinces.
- The majority of health workers perceive the referral system to be efficient.

### Availability of services

### Immunisation

The national availability of immunisation on a daily basis at fixed clinics has improved somewhat since 1998, especially in Eastern Cape, KwaZulu-Natal and North West. Availability of immunisation has declined in Gauteng, Free State, Mpumalanga and Western Cape. All satellite and mobile facilities offer immunisation.





### Family planning

The availability of family planning on a daily basis has increased moderately, with notable progress in KwaZulu-Natal and to a lesser extent in North West and Eastern Cape. Where family planning is not available on a daily basis, it is almost universally available on some day(s) of the week at fixed facilities. Family planning is offered in all mobile clinics, and with the exception of KwaZulu-Natal, in all satellite clinics.





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### Antenatal care

The availability of antenatal care on a daily basis has improved quite substantially from about five in every ten fixed clinics in 1998 to six in ten facilities in 2000. A very positive increase in availability is observed in KwaZulu-Natal, while Eastern Cape, Northern Cape and North West also show considerable improvement. There is little uniformity across the provinces as far as the availability of antenatal care at satellite and mobile clinics is concerned; some provinces offer the service at all clinics (satellite and mobile), while others to a far lesser extent or not at all.





### TB care

The availability of TB care has changed little since 1998. Around eight in ten fixed facilities offer the service on a daily basis. Eastern Cape and Free State recorded the greatest improvement, while provision in Mpumalanga has declined considerably.





### STD care

All provinces offer STD services almost universally at fixed, satellite and mobile clinics.

Figure 10: Availability of STD care - fixed (1998, 2000) (percentage offering service on a daily basis)



### Other services

Data on the availability of a number of services was not recorded in the previous surveys. For 2000, between eighty and ninety per cent of fixed clinics offer adult and child curative, nutrition and growth monitoring, chronic diseases and HIV counselling services on a daily basis. The fact that the vast majority of clinics (all three types) provide all these services, and mostly on a daily basis, reflects a national tendency towards both expansion of the range of services offered and an integration of the PHC functions in daily clinic activities.

### Availability and turn-around time of laboratory tests

While HIV testing is available in 100% of fixed facilities in Gauteng, Northern Cape and Western Cape, its low level of availability is of great concern in KwaZulu-Natal, Mpumalanga, Eastern Cape and Northern Province in particular. Nationally, satellite clinics have a somewhat higher availability of HIV testing than fixed clinics, with equally low levels in KwaZulu-Natal, Eastern Cape and Northern Province. The situation with regard to mobile clinics is generally worst of all with the exception of Free State and Western Cape, where nine in ten mobile facilities offer HIV testing.

On average, the availability of HIV testing at fixed clinics, has remained at the same low level as in 1998, namely 56%. The fact that about four in every ten fixed clinics still do not have HIV testing available, may be regarded as a serious challenge in combating HIV.





The mean turn-around time for HIV testing at fixed facilities has shrunk meaningfully from eight to six days since 1998. At fixed clinics the mean turn-around-time for HIV testing is shortest in Free State at four days, and longest in KwaZulu-Natal, Northern Cape and Northern Province at nine days. At satellite clinics turn-around time is the longest in KwaZulu-Natal at thirteen days and Northern Cape at eleven days. For mobile clinics, KwaZulu-Natal has a turn-around time of ten days, and the Northern Province, twelve days.

Figure 1	2: Availability of	syphilis testi	ng - fixed (1998	, 2000), sa	atellite and i	mobile (2000	) (percentage v	with
	test available)	)						



The availability of syphilis testing on a national basis at fixed clinics is considerably higher than HIV testing. It nevertheless deteriorated from 80% recorded in 1998 to approximately 75% in 2000.

All fixed facilities in Free State, Gauteng, Mpumalanga, KwaZulu-Natal and Western Cape offer syphilis tests. Much variation is observed in the availability of such testing in satellite and mobile clincs. This is cause for concern.





The availability of TB sputum testing improved somewhat since 1998, with meaningful improvements in Eastern Cape and North West. In fixed clinics, TB sputum testing is fully available (100%) in the Free State, Mpumalanga, Northern Cape and Western Cape, and least available in KwaZulu-Natal and Northern Province. Sputum testing is much less readily available at satellite clinics, for example only four in ten satellite clinics in KwaZulu-Natal and Northern Province offer this test. The situation at mobiles is slightly better. However, both Gauteng and Northern Province have very low availability of TB sputum testing in mobile clinics. The turn-around time for TB sputum results at fixed clinics improved from 7 to 6 days

since 1998. The best improvement was observed in KwaZulu-Natal and Free State with both provinces having halved their turn-around times since the 1998 survey.





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**CHAPTER 1** 

Despite general improvement in the availability of PHC tests in rural fixed clinics since 1998, the urban/rural discrepancies are still worrying.

The difference shown by the 2000 survey between the availability of HIV testing at fixed clinics in urban and rural areas is alarming. Only four in ten rural fixed clinics have HIV testing available, compared to seven in ten in urban areas. Syphilis, TB and Cervical Cancer Screening (Pap smear testing) tests are also less available at rural fixed clinics than in urban areas.





Figure 16: Average turn-around time for PHC tests - fixed-urban/rural (1998, 2000) (mean number of days)


Generally, the 2000 survey does not show significant differences between turn-around times for PHC tests in fixed clinics in urban and rural areas. Indeed, the turn-around time for TB sputum is shorter in rural areas. Since 1998, the turn-around for all PHC tests has improved significantly in both urban and rural fixed clinics.

# Functioning of mobile clinics

The frequency of mobile clinic visits to stopping points varies from once per week in Gauteng to once in almost seven weeks in Northern Cape, with a national average of approximately once per month. An interval of every 6.7 weeks in Northern Cape suggests that the largely rural population of that province may have relatively little access to basic health services.





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Nationally, about four in five mobile clinics find it possible to let patients know if their service will be interrupted. Eastern Cape and KwaZulu-Natal experience the most problems in doing this, and Gauteng and Northern Cape the least. However, on average it is only possible in about three in five cases to make alternative arrangements.

Province	Mobiles which inform patients when service will be interrupted %	Mobiles making alternative arrangements for service continuation %
Eastern Cape	66.7	50
Free State	80	50
Gauteng	100	100
KwaZulu-Natal	71.4	38.5
Mpumalanga	87.5	50
Northern Cape	100	75
Northern Province	84.6	61.5
North West	90	90
Western Cape	92.3	84.6
South Africa	83.5	63.3

Table 2:	Communicating	disruption	of service to	patients –	mobile	(2000)
	Communiculing	usiupuon	UI SCIVICE LU	putterna	mobile	(2000)

# Implementation of DOTS

On average, the DOTS (Directly Observed Treatment, short-course) TB treatment programme has been implemented by eight in ten fixed clinics, seven in ten satellites, and six in ten mobile clinics. As far as the fixed clinics are concerned, North West has made most progress and Northern Cape, the least. With regard to satellite clinics, three provinces, namely Eastern Cape, Northern Cape and North West, report full implementation of DOTS at sampled clinics, compared to half of the clinics in KwaZulu-Natal and slightly more in Northern Province and Western Cape. Mobile facilities in Free State and KwaZulu-Natal have made most progress in this regard, and those in Gauteng, Mpumalanga and Eastern Cape the least. The relatively low figures for mobiles are probably a reflection of the greater difficulty experienced with continuous supervision and support of DOTS supporters by mobile clinic staff. Figure 18: Implementation of the DOTS system - fixed, satellite and mobile (2000) (percentage where DOTS has been implemented)



# Availability of emergency medical services

In those provinces where fixed clinics are more typically located long distances from hospitals, there is a greater availability of 24 hour emergency medical services at clinic level. For example, 56% of fixed clinics in Northern Province have emergency services available, compared to 6.7% in Western Cape. Figure 19 shows the availability of ambulances generally, but does not reflect 24-hour availability.





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It is disturbing to note almost 25% of fixed and satellite clinics, and even more mobiles (50%) have no ambulance available for emergencies. Although not shown in figure 19, the survey also revealed that 12.5% of all clinics in Northern Province, 25.8% in North West and 35.6% in Eastern Cape had no transport of any kind available for emergency referral.

Figure 20 compares the percentage of fixed clinics with response times for emergency vehicles of one hour or less between the 1998 and 2000 surveys. Nationally the situation has remained largely unchanged, 55% in 1998 and 57.7% in 2000. Provincially, however, some interesting developments have occurred. Northern Cape has improved from 71% to 91.7%. This is quite surprising since Northern Cape is geographically by far the largest province. KwaZulu-Natal and North West have also improved substantially, while in Eastern Cape, Free State, Gauteng, Mpumalanga, Northern Province and Western Cape, the situation remained the same or has even deteriorated somewhat.

# Figure 20: Emergency vehicle response time - fixed (1998, 2000) (percentage with a response time of one hour or less)



# Perceptions of the referral system

The majority of PHC providers interviewed at fixed clinics have a positive perception of the efficiency of the referral system. This perception varies from province to province, with respondents in Western Cape, Northern Province and Northern Cape apparently being most satisfied and respondents in Mpumalanga and KwaZulu-Natal least satisfied. Respondents in satellite and mobile clinics perceive the referral system to be more efficient than respondents in fixed clinics. The explanation for this may be that the referral among PHC facilities (satellites to fixed clinics) could be more efficient than referral from fixed clinics to higher levels of care.



# Human resources

This section describes the average number of patients seen by nurses, how much time nurses spend seeing patients, updating of the skills of staff, and the availability of medical doctors.

## Human resources - main findings

- The 2000 survey indicates that nurses at fixed facilities now have a substantially lower patient load than in 1997.
- Patient loads at mobile clinics are similar to that of fixed clinics, but nurses at satellite clinics carry a lower patient load.
- Skills updating in the field of HIV/AIDS has increased somewhat, whereas skills updating in the STD syndromic management approach and TB received less priority compared to 1998.
- The availability of doctors to consult patients at clinics has increased since 1998.

# Average number of patients

Nurses at fixed clinics in KwaZulu-Natal and Northern Cape have patient loads in excess of 600 per month, or 25 per day. In Mpumalanga and North West the patient load is less than 400 per month, or 16 per day. Nurses at satellites have a less heavy patient load than their counterparts at fixed clinics. The exceptions are Gauteng, with an average patient load more than double the national average for satellite clinics, and Mpumalanga and Western Cape where patient loads are substantially lower. In mobile clinics there is great variation between provinces, with a monthly patient load in excess of 1 000 patients per nurse in KwaZulu-Natal and almost as many in North West. In contrast, Gauteng, Free State and Northern Province have relatively low patient loads for mobile clinics.





# **Updating of skills**

Figure 23: Skills updates in the past twelve months – fixed (1998, 2000), satellite (2000) and mobile (2000) (percentage with at least one staff member who underwent skills updating in the indicated area)



With regard to the updating of skills of staff at fixed clinics, Eastern Cape, Gauteng and Western Cape are relatively more active than other provinces, while KwaZulu-Natal consistently fares worse. In all clinics it appears that TB skills updating has been prioritised with less attention paid to clinical diagnosis and screening. When compared with 1998, skills updating has improved in the field of HIV/AIDS.

# Availability of medical doctors

# Figure 24: Availability of doctors - fixed (1997, 2000) and satellite (2000) (percentage visited by a doctor to consult patients in the month preceding the survey)



The availability of doctors at fixed clinics has improved markedly since 1997. The 2000 survey indicates that nationally the proportion of facilities visited by a doctor in the month preceding the survey has improved to 63% compared to 54% in 1997. With the exception of KwaZulu-Natal and Western Cape, the situation has improved in all provinces.

Despite having dramatically improved since 1997, the availability of doctors at fixed facilities in Eastern Cape and Northern Province remains low. Interestingly, fixed clinics in some of the more rural provinces (Mpumalanga, Free State, Northern Cape and North West) are visited more often by doctors than predominantly urban provinces such as Western Cape and Gauteng. This suggests a real effort to compensate for the lesser accessibility of doctors at hospital complexes. Nationally, only about two in every ten satellite clinics had been visited by a doctor in the month preceding the survey with the exception of the Northern Cape for which the figure was 40%.

# Equipment

Equipment	– main findings
<ul> <li>The percentage of fixed clinics that a as follows:</li> </ul>	did not have essential PHC equipment were
Baby scales	
• Nationally:	6.3%
• Northern Cape - worst:	16.7%
• KwaZulu-Natal - best:	0%
Refrigerators	
• Nationally:	6.3%
• Northern Province - worst:	10.4%
• KwaZulu-Natal, Gauteng, Western	Cape - best: 0%
Blood pressure apparatus	
Nationally:	5.7%
• Northern Province - worst:	12.9%
• Gauteng, Mpumalanga, Western Ca	ipe - best: 0%
<ul> <li>One third of all mobile clinic health be unsuitable for the roads on which</li> </ul>	workers nationally believe their vehicles to a they travel.
◆ 20% of all fixed clinics dispose of med	dical waste by means other than incineration.

# **Clinic equipment**

# Figure 25: Availability of equipment – fixed, satellite and mobile (2000) (percentage with at least one of the indicated types of equipment in working condition)



Fixed clinics are generally better resourced with basic PHC equipment than satellites and mobiles. Although not indicated in these figures, provincial comparisons revealed that a functioning refrigerator was only available in 100% of fixed clinics in three provinces. Baby scales were available at 96% of fixed clinics, with Northern Cape in shortest supply. Stethoscopes, refrigerators, blood pressure apparates and diagnostic kits are most needed in the Northern Province . Diagnostic kits are in short supply in the North West, Northern Cape and Free State. The availability of adult scales is most problematic in Gauteng and Northern Province. There does not seem to be a lack of lockable storage rooms or cupboards, with the possible exception of Mpumalanga and Northern Province.

In many provinces all satellite clinics are equipped with the types of equipment required by a PHC facility although there is a shortage of adult and baby scales in Eastern Cape satellites. Mpumalanga does not seem to be well equipped with stethoscopes, blood pressure apparates and, especially, diagnostic kits and lockable storage rooms. Only 14.3% of Northern Province satellite clinics have diagnostic kits. To the extent to which the maintenance of the cold chain is dependent on the availability of refrigerators, Gauteng and the North West have a problem.

There are insufficient adult scales in mobile clinics in the Eastern Cape. Baby scales and stethoscopes are in short supply in the Northern Cape. Blood pressure apparates are in short supply in Gauteng, Mpumalanga and the Northern Cape. Generally, mobiles are poorly resourced with diagnostic kits. Only 50% of mobiles in Eastern Cape and Mpumalanga, and only 62% and 70% respectively in Northern Province and North West have diagnostic kits available.



As in 1998, the availability of basic PHC equipment does not differ much in urban and rural settings.

# Mobile clinic vehicles

Of the 92 mobile clinics included in the survey, 24 (26.1%) of the vehicles were out of order for one or more days in the month preceding the survey. In eleven of these cases the vehicle was repaired within one day. In both Eastern Cape and North West, there was one instance of a vehicle out of order for 30 days or more. In Mpumalanga and Northern Province some vehicles were out of order for 14 days or more. Nationally, one third of respondents perceive their vehicles to be unsuitable for the roads they have to travel on. In the Eastern Cape, Northern Province and Mpumalanga, most interviewees at mobile clinics considered their vehicles unsuitable.

# Disposal of medical waste

One fifth of fixed clinics dispose of medical waste by means other than incineration. North West is the province that uses open burning most. In the case of satellite clinics disposal is always by means of incineration, while a small percentage of mobiles employ unsafe means.

Provir	nce	Fixed		:	Satellite			Mobile	
	Safe means	Un me	safe eans	Safe means	Ur m	nsafe eans	Safe means	Uns	afe ans
	Incineration %	Pit %	Open burning %	Incineration %	Pit %	Open burning %	Incineration %	Pit %	Open burning %
EC	72.5	11	16.5	100	0	0	100	0	0
FS	88	4	8	100	0	0	100	0	0
GA	100	0	0	100	0	0	100	0	0
KZN	95	2.5	2.5	100	0	0	100	0	0
MP	78.6	7.1	14.3	100	0	0	75	25	0
NC	83.3	0	16.7	100	0	0	87.5	0	12.5
NP	85.1	10.6	4.3	100	0	0	92.3	7.7	0
NW	31.2	21.9	46.9	100	0	0	100	0	0
WC	100	0	0	100	0	0	100	0	0
SA	79.9	7.8	12.3	100	0	0	94.5	3.3	2.2

Table 3: Disposal of medical waste fixed, satellite and mobile (2000)

40

# **Pharmaceuticals**

# Pharmaceuticals - main findings

- The availability of drugs and supplies has improved in some cases and deteriorated in others. Condoms, oxygen, methyldopa, ORS, penicillin, ciprofloxacin and oral contraception are somewhat more readily available than in 1998, whilst iron tablets, doxycycline and erythromycin are less readily available.
- Spot checks showed that in almost no cases did clinics stock expired drugs.
- In general, satellite clinics are less well stocked with drugs and supplies than fixed and mobile clinics.

### Mother and child health drugs

Figure 27: Availability of selected EDL drugs also used for mother and child health – fixed (1998, 2000), satellite and mobile clinics (2000) (percentage with the indicated drugs/supplies in stock)



With the exception of iron tablets, there is a consistently lower availability of drugs for mother and child health at satellite and mobile clinics than in fixed clinics. For the antihypertensive drug, methyldopa, the discrepancy is particularly serious. Of all the substances, infant nutrition supplements is most poorly stocked at all three the facility types. ORS availability, especially at rural clinics, has improved since 1998.



# STD drugs

Penicillin is less available at satellite and mobile clinics than at fixed clinics. Satellite clinics are worst off with regard to STD drugs on the Essential Drug List. Mobile clinics are generally better stocked than fixed clinics, with the exception of penicillin. Of all the provinces, Northern Province has the lowest stock levels of STD drugs at satellite clinics.





The availability of both benzathine penicillin injectables and of ciprofloxacin at fixed clinics increased notably from 1998 to 2000, while the availability of doxycycline tablets and cotrimoxazole (Bactrim®) decreased.

# **EPI** vaccines

 Table 4:
 Availability of EPI vaccines – fixed, satellite and mobile (2000) (percentage with indicated vaccine in stock)

Type of drug	Fixed %	Satellite %	Mobile %
BCG	49.8	40	64.4
Combac HIB	79.3	82.5	91.3
Polio	91.8	90	97.8
Tetanus toxoid	89.1	72.5	94.6
DT/DPT	91.2	90	98.9
Measles	93.0	90	97.8
Hepatitis B	87.5	85	95.7

The low availability of BCG vaccine in only five of every ten clinics is probably due to the phasing out of this drug in its present form and application in certain provinces. In future the drug will be administered intradermally instead of subcutaneuosly.

The availability of measles vaccine has increased slightly at fixed clinics in urban areas, and substantially so in rural areas. Polio vaccine availability has deteriorated somewhat at fixed clinics in urban areas, but increased significantly in rural areas.





# Oxygen

The availability of oxygen increased from about 62% in 1997 to 67.4% in 2000. Although the availability of oxygen in fixed clinics has apparently improved since 1997, the fact that its abscence affects the provision of mainly emergency care in 32.6% of fixed clinics remains a concern. The province worst off is Eastern Cape. Although the situation regarding the supply of oxygen in Eastern Cape has improved since 1997, it remains a matter of concern, since 58.8% of fixed clinics, 83.3% of mobile clinics, and all of the satellite clinics still have no oxygen in supply.

Province	Fixe 1997 %	d 2000 %	Satellite 2000 %	Mobile 2000 %	
Eastern Cape	11	41.2	0	16.7	
Free State	45	64	N/A*	20	
Gauteng	100	92.9	66.7	75	
KwaZulu-Natal	92	89.7	62.5	7.7	
Mpumalanga	45	77.8	33.3	12.5	
Northern Cape	40	66.7	0	12.5	
Northern Province	78	70.2	0	23.1	
North West	88	68.8	0	50	
Western Cape	79	76.7	14.3	7.7	
South Africa	62	674	275	20.9	

Table 5:	Availability of oxygen - fixed (1997, 2000) satellite and mobile (2000) (percentage with oxygen
	available)

\* The are no satellite clinics in the Free State.

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# Condoms

The availability of condoms in fixed clinic waiting rooms increased from 79% in 1998 to 86.9% in 2000. This may be because of the emphasis that barrier methods have received in the prevention of STDs and HIV/AIDS.

Province	<b>1997</b> %	Fixed 2000 %	Satellite 2000 %	Mobile 2000 %
Eastern Cape	76	86.2	66.7	81.8
Free State	79	84	N/A*	100
Gauteng	100	100	66.7	100
KwaZulu-Natal	97	92.5	100	100
Mpumalanga	91	78.6	100	87.5
Northern Cape	89	91.7	80	87.5
Northern Province	57	85.4	100	92.3
North West	65	90.6	100	90
Western Cape	84	74.1	71.4	92.3
South Africa	57	86.9	85	92.2

#### Availability of condoms - fixed (1997, 2000) satellite and mobile (2000) (percentage with con-Table 6: doms in waiting room)

\* The are no satellite clinics in the Free State.

The availability of condoms in the waiting rooms at fixed clinics has increased in both urban and rural areas since 1998.





# CHAPTER 1

# Supervision, record keeping and support

# Supervision, record keeping and support - main findings

- On the whole, the regularity of nurse supervisor visits to fixed clinics has decreased substantially since 1997, from 79% to 67%. The situation is worst in Northern Cape (25%) and best in Gauteng (78.6%).
- Less than half of satellite and mobile clinics had been visited by nurse supervisors in the month prior to the survey, and as many as a third of the sampled clinics report that they are 'never' visited.
- The regularity of feedback on reports submitted by PHC facilities is highly unsatisfactory, with only 51.5%, 26.5% and 46.2% of fixed, satellite and mobile clinics respectively receiving regular feedback.
- ♦ A preliminary investigation shows that TB record keeping is poor. Seemingly, the problems are particularly acute at satellite clinics.
- Little progress has been made in facilitating community participation in PHC since 1998.

# Nurse supervisor visits

The percentage of clinics which had been visited by a nurse supervisor during the month preceding the survey, shows that in most provinces such visits to fixed clinics have declined since 1997. The only exceptions are Mpumalanga, where the frequency of nurse supervisor visits has increased from 56% to 67%, and Eastern Cape where the frequency has remained constant.

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Figure 32: Nurse supervisor visits - fixed (1997, 2000) (percentage where a nurse supervisor visited the facility in the preceding month)



With regard to satellite clinics, less than half are visited by a nurse supervisor once a month or more often. More than a third are 'never' visited. North West and Northern Province are the provinces where the largest percentages of satellite clinics are visited by nurse supervisors more than once per month, while all satellite clinics in Mpumalanga and Northern Cape said they were 'never' visited.

Mobile clinics are in a similar situation to that of satellite clinics. Less than half of mobiles are visited by a nurse supervisor once a month or more often, and just less than a third are 'never' visited. Supervision is least frequent in Northern Cape, Gauteng and North West, while the situation is most positive in Western Cape and Mpumalanga.

# Feedback on reports

Unequivocally, the regularity of feedback on reports submitted by PHC facilities is appalling. Only 51.5%, 26.5% and 46.2% of fixed, satellite and mobile clinics respectively receive regular feedback. Although not satisfactory in any of the nine provinces, the irregularity or entire lack of feedback is particularly problematic in the Northern Cape, Mpumalanga, KwaZulu-Natal and Northern Province. The regularity of feedback is most positive in the Western Cape.

South Africa	Always %	Often %	Sometimes %	Seldom %	Never %
Fixed clinics	35.5	16	19.4	9.6	19.4
Satellite clinics	11.8	14.7	14.7	23.5	35.3
Mobile clinics	30.8	15.4	15.4	8.8	29.7

Table 6: Regularity	of feedback on	reports submitted ·	- fixed, s	atellite and	mobile	(2000)
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# TB record keeping

To determine the completeness of record keeping, fieldworkers were required to copy information from the *outcomes section of the TB register* for the last ten patients who commenced with treatment before 1 October 1999. By the time of the interview took place (eight months or more later) registers should have had some outcome recorded.



# Figure 33: Maintenance of TB register – fixed, satellite and mobiles (2000) (percentage that do not have outcomes recorded)

Generally the data confirms the often-voiced suggestion that TB record keeping is in an unsatisfactory state of affairs with substantial percentages of clinics in all provinces not having outcomes recorded.

# **Community participation**

Based on the number of health/clinic/community committees in existence at sampled fixed and satellite clinics, and comparing this to the situation in 1998, it is clear that little progress has been made in establishing committees since 1998. In fact, the national percentage of fixed clinics with committees of various kinds has declined by about twelve percentage points.

# Conclusion

This survey indicates that there have undoubtedly been significant strides towards improvement in PHC provision. However, there are also areas in which inequity has been noted. Ongoing monitoring of progress in achieving equity will be important, particularly as PHC services are devolved to Local Government.





The Department of Health's 1999 – 2004 Strategic Framework focuses on accelerating quality health service delivery. This chapter addresses the broad question: Where does the Strategic Framework take us and are we getting there? It systematically reviews the situation pertaining to each of the ten components of the Framework and concludes that on the whole government is on track, but in a number of areas the pace will need to improve and the emergence of a "policy to implementation gap" be overcome. It suggests that the Department should not make the assumptions it does on financial resources, health personnel, management systems, co-operation by stakeholders and reversal of the HIV/AIDS epidemic, but should pro-actively address these and include them as part of its Framework. It also argues for a more concrete expression of the vision for the health system, both public and private, and for maximum attention to be given by top management to interventions that are key to overall acceleration.





**Eric Buch** School of Health Systems and Public Health and School of Public Management and Administration University of Pretoria

# Introduction

The Department of Health published its 1999–2004 Health Sector Strategic Framework to provide clarity on its health priorities for the next period of government.<sup>1</sup> It states that "while the first five years focussed on increasing access to health care, especially for those who did not have access, .... the next five years will focus on accelerating quality health service delivery". The Strategic Framework builds on the Department's understanding of the sector's strengths and weaknesses and "is to be read in conjunction with prior key reports".<sup>2-6</sup>

This chapter addresses the broad question, where does the Strategic Framework take us and are we getting there? It begins by outlining the difficult challenges inherited by the democratic government in 1994 and some of the progress made in the health sector since then. The 1999-2004 Health Sector Strategic Framework is briefly outlined and the core question of this chapter is posed: Is the national Health Department on track to meet the objectives, indicators and targets set in its Strategic Framework? The chapter systematically works through each of the ten components of the Framework and concludes that even at this early stage, on the whole, government is on track, but in a number of areas the pace will need to improve. It also concludes that work needs to be done to overcome the "policy to implementation gap".

The chapter is built on discussions held with key informants, including executives in the Health Department, and analysis of a number of reports and documents, many of which are not yet in the public domain. Drafts were also shared with a reference group, which provided invaluable comment, but responsibility for the content remains the author's.<sup>a</sup> As the situation remains very dynamic and as a great deal has happened since 1994, there is a limit to the amount of detail that can be offered in this review. Further information is available from a wide range of sources<sup>7-12</sup> and through contacting the relevant Directorate in the Department of Health.

# Key interventions in accelerating quality health service delivery

The Strategic Framework envisages a huge number of interventions. However, there are key interventions that must be successfully addressed early on. If not, they will have a profound effect on, or become limiting factors for the success of the plan as a whole. Some of these are:

*The affordability gap:* Even if all the possible efficiency gains were achieved, current funding seems insufficient to match desired services. As it appears that the Medium Term Expenditure Framework reflects government's current level of commitment to the health sector, quite fundamental decisions will need to be taken and rapidly actioned. These include types and levels of services and the personnel mix. Some decisions may be unpalatable to some and it will require strong political will to reshape the health system in the best interests of health and health care for all. This seems to be the only option, given limited resources, equity challenges and the goal of improved health.

a My thanks to Reg Magennis, Yogan Pillay, Sayo Skweyiya, Krish Vallabjee and Welile Shasha who offered invaluable insights and suggestions on drafts of this chapter. Thanks also to those who spent time with me sharing their experience – their openness was laudable and their insights certainly enhanced the product.

*Nature of Social Health Insurance:* Many ideas have emerged on Social Health Insurance over the past five years, but no finality has been reached. There is indeed virtue in not rushing in and making such a major policy decision without adequate policy analysis. However, the potential impact, on both the public and private health sectors, make it imperative that clarity emerges as soon as possible.

*The transfer of public servants:* The inability to enforce fair transfers on public servants, or to follow up declines of transfers with retrenchment, has effectively blocked key aspects of transformation of the health system. It has prevented balanced workloads, development of primary health care and shaping of the workforce. Without this tool, the cherished goal of equity seems an eternity away.

**Decentralisation:** There has been much debate about the weaknesses of the public sector's management cadre and the slowness with which new styles of management have been adopted. However, more significant have been the constraints on effective management imposed by the system, in particular the lack of decentralisation of decision making. The regulatory environment has recently become more friendly to decentralisation, so it should be effected rapidly and enabled by adequate support.

*Training capacity for assistants and auxiliaries:* The current human resource model, based largely on health professionals alone, is inappropriate and unsustainable for a middle income country. Large numbers of rehabilitation, pharmacy, environmental and other assistant categories (mid-level health workers), with one to two years of tertiary education, need to be rapidly but effectively trained and deployed. This will not happen on its own, certainly not at the pace required. National intervention will be required to drive policy, create the regulatory framework and establish training capacity.

An effective HIV/AIDS programme: The improvements in health that must have followed measures such as improved water supply and primary health care for the poor have been overwhelmed by the impact of the HIV/AIDS epidemic - the worst of which is not yet upon us. Measures that are known to achieve safer sex practices must be scaled up and the capacity for home-based care, through a network of community structures supported by health staff, must be set up.

*Clarity on mental health and rehabilitation:* Physically and mentally disabled people have unique service needs. When budgets were growing some improvements were made, matching stated commitments. But, as budget cuts started to bite, advances in these services were one of the first casualties and this needs to be revisited. However, in doing so, service models need to be changed to more effective and cost-effective approaches. Short-term funds will need to be made available to develop these alternatives, as existing services cannot be stopped to fund creation of the alternative.

**Enabling environment for non-governmental organisations (NGOs):** It is generally agreed that NGOs working in, and with, communities and those focussing on a health problem e.g. cancer, tuberculosis or disability, have the ability to achieve results and mobilise energy and voluntarism in a manner that is difficult for formal health services to match. This energy seems to be dissipating in our society, with people waiting for government to do things for them. The Health Department needs to intervene to create an enabling environment for NGOs, facilitate the emergence of local NGOs and provide seed funding in hitherto unserved areas.

Having raised these key interventions, the chapter now explores the difficult inheritance of the health sector, before considering the Framework in more detail.

# A difficult inheritance

The health service inherited in 1994 was a reflection of a system which focussed primarily on supporting the apartheid State, rather than on improving health or providing an efficient and effective health service.

Like the country, the health service had been fragmented into National, Coloured, Indian and White "own affairs", four provincial and 10 homeland health departments. These were not even contiguous, furthering inefficiency and there was wasteful duplication. Resources, and with them access to health care, had been distributed along racial lines. There was a predominant focus on hospital care, with hospitals serving Whites having more resources. Primary health care (PHC) was severely underdeveloped. In the "homelands", services were more integrated, but decidedly sparse, while elsewhere preventive services provided by local authorities were separated from the curative services of the four former provinces. First level curative care was often only available at a distant hospital outpatients' department.

Budgets were overspent, backlogs in hospital maintenance and repair were massive (R8 billion) and human resources maldistributed and trained to serve an elite, rather than the national need. Management inefficiencies were deeply rooted and many programmes for disease prevention and control were weak.

The private sector model of guaranteed fee-for-service payment to providers through forprofit medical administration companies, together with other factors, kept private health inflation well above that prevailing in the economy. The Medical Schemes Amendment Act, passed just before the hand over to democratic government, enabled subsequent package manipulation and risk rating of members, leading to a loss of cross-subsidisation, a central element of effective health insurance.

For its gross domestic product and health expenditure, the health of South Africans compared poorly to other countries, even discounting HIV/AIDS, which was only just beginning to have an impact. South Africans, whatever their socio-economic circumstance, carried a high burden of disease. This burden was worst amongst Africans.

The enormous difficulties that this "inheritance" has posed and continues to pose for health sector development should not be underestimated. Any critique of progress must fully recognise that deep-rooted structural and service elements that have existed for decades cannot be turned around overnight, however committed government and its Health Department staff may be.

# Progress 1994-1999

**Much good progress has been made since 1994 in overcoming the apartheid legacy**. The full extent of the challenges inherited by the new government and the progress made are not fully covered in this chapter. The purpose here is to highlight key areas. Past editions of this Review provide a rich source of information for those who wish to know more.<sup>8</sup>

# Achievements include:

 The establishment of a unitary health system with a single national department and nine provincial Health Departments

- The appointment, for the first time, of talented managers of "colour" to executive positions
- The removal of structural racism
- The upgrading of many clinics and health centres and the building of approximately 500 new ones, in poor, hitherto under-served communities. Although a number are yet to be made fully operational, this did bring elements of PHC within reach of many for the first time
- The introduction of free primary health care not only made good economic sense,<sup>b</sup> but also removed the affordability barrier that many faced
- Progress, albeit variable, in the establishment of a District Health System (DHS), with provinces and local authorities starting to pool their resources and integrate care, so as to offer a more comprehensive service under one roof. This not only improves economies of scale and efficiency, but means that parents do not have to go to two or more venues and face duplicate queues and examinations to get care for themselves and their family
- Community service for newly qualified doctors, which further strengthened services in the poorest parts of the country
- Contracting Cuban doctors to improve medical care in 'under-doctored' areas
- ✤ A massive primary school nutrition programme, which even with implementation difficulties, meant that many children were no longer too hungry to learn
- The addition of Hepatitis B and Haemophilus influenzae B vaccines to the routine immunisation schedule
- The launch of various programmes to tackle priority health problems, including Integrated Management of Childhood Illnesses, Directly Observed Treatment, Shortcourse for the management of Tuberculosis and a Maternal Mortality Programme
- Restructuring of the district surgeon system
- Promulgation of important pieces of legislation that are steering the health sector towards greater effectiveness
- Transformation of health governance institutions, such as the professional bodies
- Important efforts to improve public health, including measures to curtail use of tobacco
- The launch of a Patient's Charter to serve as a benchmark of how patients could expect to be treated.

But, not all has been positive. The negative aspects include:

- A relentlessly worsening HIV/AIDS epidemic which government has not sufficiently got to grips with
- A reduction in health budgets in real terms, after increases in the first two years. The reasons for the decreases include:
  - a reduction in the central hospital conditional grant
  - tightened provincial health votes and health inflation remaining above general

b The administrative cost of managing the small amounts of money paid by PHC patients was high, as were the costs of people delaying seeking care and then needing expensive treatment for complications.

inflation, and

- wide scale rank and leg promotions for health staff.
- An inability to retrench or transfer staff which prevented tackling of inequity and inefficiency
- The difficulties imposed by the rules governing management of the public service.

These and other factors have placed pressure on the health service, and have led to concerns about quality and delivery. Staff morale and motivation has also been affected.

The national Department, to its credit, facilitated an open look at progress over the 1994-1999 period,<sup>6</sup> shared it with other levels of government and, in line with government's five year strategic framework approach, emerged with a framework reasonably tailored towards addressing the needs identified. On this basis, accelerating quality health service delivery was identified as the strategic focus for the next five years.

# An outline of the 1999-2004 Health Sector Strategic Framework

After providing a brief background to the health sector, listing its achievements to date and locating health within its socio-economic context, the Department sets out its strategic health priorities for the period 1999-2004 in a ten point plan "to strengthen implementation of efficient, effective and high quality health services".

# The ten components of the Strategic Framework are:

- 1. Decreasing morbidity and mortality rates through strategic interventions
- 2. Revitalisation of public hospital services
- 3. Accelerating delivery of an essential package of PHC services through the DHS
- 4. Improving resource mobilisation and management and equity in allocation
- 5. Improving human resource development and management
- 6. Improving quality of care
- 7. Enhancing communication and consultation in the health system and with communities
- 8. Legislative reform
- 9. Re-organisation of certain support services
- 10. Strengthening co-operation with international partners.

The body of the Strategic Framework provides a brief analysis of the situation in each of these areas and the actions intended. Draft objectives, indicators and targets for some of the elements of the strategy are presented in the annexure at the end of the document, or are interspersed in the text. The plan is ambitious and the Department has certainly set its sights high.

In the Strategic Framework, the Department points out that its ability to deliver on its plan depends in part on the actions of others. The plan assumes sufficient financial resources, the ability to train, retain and deploy health personnel, co-operation from all stakeholders, the ability to reverse the HIV/AIDS epidemic and the removal of constraints on management.

The significance and implications of these assumptions are explored later in the chapter.

The Department should be commended for publishing a sector framework, with many timebound objectives. It is evidence of a commitment to transparent and accountable government. It also allows others to review the plans and the progress towards attaining them.

# Is the department on track to meet its 2004 objectives?

Eighteen months into the five-year period covered by the Strategic Framework, it is only possible to monitor progress, not evaluate outcomes. Clearly, an assessment of how much has been done in the last year or so needs to be seen in the context of the enormous challenges inherited in 1994 and the ambitious programme set for the next five years. But success for many of the strategic health priorities of the Framework will depend on progress made early on in the five years. This progress could be in foundation steps needed to enable meeting the full objective later, or because early developments towards one objective have a profound effect on another.

Although it has not been made public, an operational plan for the 2000-2001 year has been developed. It offers useful insights into the steps that top managers envisage the National Directorates must take towards achieving the Strategic Framework's objectives and will allow the Department to track short term progress. Over and above this short-term plan, there is still a need for a broader implementation plan for the five year period and for prioritisation of elements of the Framework. Such a plan will also enable provinces and local government to better align their efforts with the priorities of the Strategic Framework.

# 1. Decreasing morbidity and mortality rates through strategic interventions

This component of the Strategic Framework covers interventions aimed at reducing morbidity and mortality:

- Amongst children, youth and women
- From priority communicable diseases including HIV/AIDS, tuberculosis, malaria and immunisable diseases
- By improving nutrition and food security
- From non-communicable diseases including chronic diseases, substance abuse, cancer and mental health
- Through improved emergency medical services.

As this section of the Strategic Framework is extensive, broad generalisations are made in reviewing whether the Department is on track to meet the process, output and outcome objectives set, and whether these efforts are likely to result in a decrease in morbidity and mortality.

The diseases focussed on in the Strategic Framework are the important ones and many are amenable to effective interventions. The key to reduced morbidity and mortality lies in preventive and promotive health, on which the Strategic Framework is conceptually strong. The interventions set out in the Strategic Framework and the national guidelines emerging for various health problems are broadly in line with what is considered best practice internationally.

A number of targets in this section are about implementing programmes and there has been clear progress on most fronts. However, questions do remain about the ability to scale up

successfully, as many programmes are coming off a low baseline, and as to whether advances in primary health care are strong enough yet to absorb all the programmes. The link between programme strategies and integrated PHC, the so-called vertical-horizontal issue, also needs to be effectively addressed. Programmes should be offered within a comprehensive service model, while still ensuring that they have the necessary focussed attention and skilled support. They also require sufficient finances, effective human resources, stakeholder involvement and strong moves towards equity to achieve success.

The Integrated Management of Childhood Illnesses (IMCI) initiative and community-based mental health care are examples of services that depend on having a solid PHC foundation. Upping immunisation to 90% full coverage of one year olds and cure rates for tuberculosis to 85% are bold and appropriate targets, that not only require strong PHC, but also depend on the ability of services to reach those with the greatest need, the poorest. The evidence suggests that they remain underfunded and addressing this equity gap is critical to success.

Some programmes have insufficient evidence that they are emerging at the scale required to achieve their targets (e.g. a 10% reduction in substance abuse):

- The nutrition targets of reducing wasting to 1% and underweight children to 5% do not seem attainable, especially in the face of the HIV/AIDS epidemic, unless more effective poverty alleviation and food security programmes were to emerge very rapidly. Alone, the strategies in the Strategic Framework do not appear strong enough;
- The target of reducing under 5 mortality, especially because of its link to HIV/AIDS, also seems unlikely, unless one considers only non-HIV/AIDS linked mortality;
- The use of anti-retrovirals to stop vertical transmission seems an essential under 5 mortality intervention, but it is not in the Strategic Framework;
- Empowering parents to identify and know what action to take in the face of major killers of children, such as pneumonia and severe diarrhoea, are emerging, but too slowly;
- The National HIV/AIDS Plan puts a comprehensive strategy on paper<sup>13</sup> and initiating implementation can be achieved. But, scaling up successfully to the point of national impact is where this programme may be found wanting, e.g. in achieving effective homebased care for people with AIDS and supporting AIDS orphans.

Mental health is a good example of a service that has conceptually put the pieces in place, but seems to not receive the national profile it requires to advance rapidly. Like some other programmes, it will require bridging funding to change its care model and to increase community involvement, because it will be difficult to mobilise the funds required by stopping existing care for patients. Improving emergency services will similarly require a concerted effort to achieve satisfactory performance and necessary skill and resource levels.

The Strategic Framework, already large, cannot be expected to cover everything. However, environmental health as an entity is a notable absentee, trauma is a major problem needing attention and too little is said on rehabilitation. The recently approved National Rehabilitation Policy is good, but the current realities raise questions about its implementation. The Framework's goal of ensuring that the disabled have access to assistive devices will require an injection or reallocation of resources. It is unacceptable for a paraplegic to be without a wheelchair, especially when this one off cost is compared to the amounts spent on acute care. In summary, although the thinking is right and progress has been made, there will need to be an increased effort and a commitment of resources to attain many of the targets for the reduction of morbidity and mortality.

# 2. Revitalisation of public hospital services

A great deal of planning has gone into hospital services but not enough has been finalised or moved through to implementation. The Strategic Framework sets three targets, all with early 2000 timelines. These are:

- The National Planning Framework
- Rehabilitation of hospital stock
- A uniform patient billing system.

It also outlines strategies for decentralisation. Work has progressed in all these areas, but given the issues and sensitivities, the time scales were overly ambitious.

The National Planning Framework (NPF) is envisaged as a mechanism for co-ordinating planning of affordable service packages across levels of care. What this means is setting targets for:

- How many public hospital beds should there be in the country
- How many beds at different levels of cover (tertiary, regional and district)
- Where should they be located and
- What technology should be available.

There seem to be different messages emerging on bed levels and affordability of both capital stock and services. There are approximately 2.8 public hospital beds per 1 000 population or about 100 000 currently in place. The suggested number of beds has ranged between 1.0 and 3.0 per 1 000 population. An objective set of criteria is required to guide this decision. However until this is resolved, there remains a need for relocation of facilities to address historical imbalances and under utilisation. There is also a need for "step down" beds to bridge care between hospitals and home and for the reshaping of tertiary care.

The hard truth is that even if there is optimal efficiency we cannot afford to give all our citizens the number of hospital beds we would like to and what modern "high tech" medicine has to offer. For example, there are simply not enough resources to offer renal dialysis to all who might benefit, even if they fit the national criteria for care. In other middle income countries the issues are more around constant improvement off the baseline. In South Africa they are around providing services for all that were previously available to a few. This is the complex arena in which our rationing decisions have to be made. The Framework specifies the need to reduce tertiary beds, but not how to deal with demand, both from patients and from specialists. This is a real issue. The debates on affordability and on what specific tertiary services to provide, how to redistribute them around the country and how to link them to academic centres will require cool heads. Early efforts at redistribution have shown that this is not an easy task. We need to ensure that we don't destroy existing capacity or lose economies of scale on the one hand, or fail to enhance equity of access on the other. We also need to gain public and professional support for the changes. Major political commitment will be required.
### Because of its centrality to developments over the next five years, National Planning Framework decisions need to be taken sooner rather than later and an implementation strategy developed.

The urgent need for rehabilitation of hospital stock, which will include closing or shrinking some facilities and building new ones in other places, is tied to affordability and to the service platform.<sup>c</sup> There is no point spending precious money on a part of a hospital that may later not be required. At the same time as national funds are made available for hospital reconstruction and rehabilitation, provinces (as appears to be the case in some instances) should not take this as an opportunity to decrease their own capital or maintenance expenditure, as the aim is to reduce the backlog. Capital funding should also cover equipment, to avoid new buildings standing empty.

Revitalisation of public hospitals in not just about reorganising the numbers, levels and location of hospital beds. The Strategic Framework says it very clearly: "we need to accelerate the implementation of our decision to decentralise management authority for improved efficiency and quality of care." It outlines some of the strategies required, and says that the "rationale for these reforms is that they will bring about increased efficiencies .... with a system that promotes innovation and accountability to clients and funders". Yet, even though an enabling legislative environment has been in place for more than a year now, decentralisation has been slow in coming. The national and provincial levels of government, including the Treasuries, need to recognise the negative effect that this political and administrative hesitance is having and deal effectively with it.

Although the Department does not say so in the Strategic Framework, it is acutely aware that the ability to revitalise hospitals is dependent on the success of other elements of the Strategic Framework e.g. resource management, human resources development and quality improvement. Also, hospitals will need to be re-organised, efficiencies developed and stays shortened, strategic plans introduced, organisational culture changed, work ethos and absenteeism addressed, loss control tightened and above all, quality continually improved. An implementation tactic needs to be designed that can hold all these revitalisation elements together, weave them into the fabric of organisational function, build loyalty and morale amongst staff and ownership of responsibility by management.

# 3. Accelerating delivery of an essential package of PHC services through the district health system

There have been many good developments around building a district health system and improving primary health care since 1994, but some things have begun to stagnate. The reasons for this include the slow unfolding of the new municipal boundaries and structures, the lack of clarity of definition of "municipal health services" in the Constitution and financial and equity pressures. The situation in rural areas has posed special problems, especially due to the lack of resources and infrastructure.

The Strategic Framework specifies the comprehensive primary health care package and implementation of the district health system as a structural move towards efficient delivery of high quality care, as its two broad goals. The three specific objectives set in the annexure of the Strategic Framework do reflect the core of what is required next, namely equity of access, service agreements with local authorities and fully functional clinics. Equity and functionality have 2003/2004 time frames.

c The service platform for hospitals refers to the number of beds per thousand population at different levels of care i.e. district, regional and tertiary beds and their spread across the country.

Although some time away, considering the current shortfalls, achieving the equity target of the full essential package of primary health care in all facilities seems unlikely, unless there is a major review of financing and human resource strategies. One facet of this is to be sure about what it costs to provide the proposed package and a thorough costing review should be undertaken. Current estimates of around R200 – R250 per capita per annum can fund *a* package, but appear too low to fund *the* proposed package, especially if, as envisaged, rehabilitation and mental, oral and environmental health services are included. Notwithstanding savings that can be made from efficiency gains and revised service delivery models, either the package will need to shrink, or a major commitment of resources will be required. These resources will not easily come from reallocations within the health budget, unless hospital care is significantly reduced. This issue goes to the heart of the future of health care in our country.

The ability of local government to be the provider of primary health care has been strengthened by the new demarcation of local government, but many of the obstacles to fully implementing the local government approach remain unresolved. If the Strategic Framework's objective of an agreement for service delivery refers to limited services, this can be achieved by the September 2001 target. However, if it is for decentralisation of the provision of the full package, then urgent steps need to be taken to remove the obstacles, such as those blocking the transfer of staff from provinces to local authorities. Other organisational arrangements, including service agreements between provinces and local authorities will also take some time to effect. The changes in rural areas from traditional to elected governance pose specific complexities that will require careful nurturing, as will capacity development in municipalities. Clinics cannot function properly without adequate water, sanitation, electricity and roads, however rural they may be. Progress has been made in this regard, but tighter, funded plans will need to be put in place rapidly to reach the target that all clinics should have all infrastructural services by 2004. Infrastructure development in rural areas requires more than a quick connection off an existing infrastructure. The Strategic Framework also recognises the paramount role that effective referral and support systems play in ensuring performance, spelling out the necessary developments that should continue to receive attention.

Probably the most important question is whether there is constant improvement in PHC. The yes answer, is now very much a yes under pressure. Opening hours, waiting times, clinical skills and even the availability of medicines are but some of the issues that have hindered delivery.

### 4. Improving resource mobilisation and management, and equity in allocation

The Framework covers a range of resource-related issues and actions, which if successfully implemented, would support effective development of the sector. Four of the five targets in the annexure of the Strategic Framework, namely: costing the PHC package, increased revenue, effective referral systems and a donor policy, are achievable. The fifth target is to implement Social Health Insurance by 2002. However, the Strategic Framework's text highlights a number of other issues. Its approach to "improving resource mobilisation and management and equity in allocation" is related broadly to two areas, funding and budgeting, and financial and resource management.

On funding and budgeting, the starting point should be securing sufficient funding for PHC. The statement that "the funds required should be released by improvements in hospital efficiency" may not prove viable and would take time to accomplish. It is true that efficiencies

can and should be achieved, but the resources mobilised may be needed to meet desired hospital standards, as hospitals themselves are under pressure and the HIV/AIDS burden is growing. What does not come through adequately is that current public sector funding levels appear insufficient to provide the care desired - the key question of under budgeting or overspending. If the suggested costs of the PHC package are a significant underestimate, then the funds will be even harder to find internally.

There are two places that significant additional funds could come from. The first is a budget that grows significantly in real terms and the second through raising more funds from users.

There is evidence that the Medium Term Expenditure Framework (MTEF) together with the Public Finance Management Act No. 1 of 1999 is driving financial management in new directions. They require executives to look at spending and outputs more carefully, which is particularly important in the emerging era of performance budgeting and in the use of budget statements in place of the traditional "white books". However, **although conceptually an excellent tool for prioritising and making expenditure choices across sectors, the MTEF appears in practice to be too similar to incremental budgeting**. There is no evidence yet of a commitment to significantly change the available health budget. Plans will need to fit available funds.

On raising more funds from users, the proposal, in line with international best practice, is to move away from user fees and towards a form of Social Health Insurance (SHI). However, the SHI target "by 2002" seems too ambitious. The main concern is that, unless there is an assurance that SHI income will not be subtracted from tax based funding, there may be little nett real increase in funds for health.

Ultimately, tough choices on health care provision will need to be made: What value to health care? What level of funding? What services will be prioritised? The NPF will, when complete, lay bare the strategic choices for rationing health services. It is important that when this is done it is not a glossy technical document that hides the implications of its choices. If it does, it will leave the political and executive management cadres of the health sector badly exposed down the line. Rather, there should be more public involvement and transparency in resource allocation.

The Strategic Framework correctly recognises the importance of effective financial and resource management. A number of the elements identified have been on the drawing board for some time and should now be pushed through. These include revenue retention (which also encourages efficiency), simplified patient fee schedules, effective referral systems, financial management training, changes to the conditional grant system and possibly outsourcing of non-clinical services. However, ensuring that managers are given the freedom and tools to manage surely remains the most significant measure towards improving resource management.

The area of public-private partnerships (PPPs) has been spoken about a lot, and some pilots have materialised, demonstrating that the use of spare capacity to generate additional revenue holds particular promise. At the same time, public decision-makers should recognise that PPPs, especially in the health sector, are not a panacea to all the problems of the public system. They can be a double-edged sword, especially if government capacity to manage them is weak. A feasibility study and cost-benefit analysis should be done on each potential PPP before a decision is made.

### 5. Strengthen human resource development and management

A number of activities to strengthen human resource development and management are outlined in the Strategic Framework. The specific targets set in the annex relate largely to professionals: for postgraduate training, community service, incentives and doctor support to PHC. Much work has been done to set the base for transformation of professional education and practice, including identifying core competencies, curriculum change, continuing professional development and admission policies.

Implementation of community service for pharmacists and dentists, with all the benefits, is on the way, even if there are teething problems. Incentive packages for scarce personnel (and hopefully also for those who work in the most distant disadvantaged areas) should be negotiable by the 2001 target. This should include retention of primary health care nurses (PHCNs) and therapists and be supplemented by a training strategy for the former.

To assess the target that "all PHC facilities be supported by doctors by 2004", clarity is needed on the meaning of "support". If it means regular visits, this is feasible, but if it means resident daily in all clinics, or even larger rural ones, then a lot needs to be done to prepare for this.

The Strategic Framework correctly identified a national human resources (HR) plan by June 2000 as vital and urgent. A draft strategy has been prepared. It looks into the staffing implications of the PHC package, at scopes of practice, at supply and demand and at training. The HR plan also addresses the issue of management development, and does so rather well. Overall, it is a useful start, addressing crucial issues. The conclusions should be put out for discussion and finalised as soon as possible. However, the plan is incomplete. Its scope should be widened to cover other areas of human resource development and management, and it should take more account of the impact of HIV/AIDS on health sector staffing.

One conclusion drawn by HR planning process is that the current staffing model, based on professionals alone, is unaffordable and that extensive use should be made of midlevel health workers (MLHWs).<sup>d</sup> This critical and correct analysis should be debated to a conclusion and acted on urgently, to create an affordable human resource mix for achieving the country's health care goals. This does not mean the abandonment of professionals or dumping of high tech care. Rather, it offers a mix that will be more costeffective and enhance health outcomes. Once it is policy it will need to be given the same attention as professional development, a fact that should have been more recognised in the Strategic Framework. Realising a cadre of MLHW will require an investment in training, in posts, and in supervision systems. Plans should be put in place now for establishing the required training capacity, to enable the introduction of this new cadre of health worker as soon as possible.

The Strategic Framework also refers to fast tracking the training of community health workers (CHWs). This constitutes a shift in national policy, which previously left this to

d Professionals are those who receive a full university training e.g. physiotherapists and pharmacists, usually over 4-6 years. Mid-level health workers e.g. rehabilitation assistants and pharmacy auxiliaries, receive a more technical education over a year or two. Mid-level health workers are able to do a range of the more routine work currently undertaken by professionals at lower cost, freeing professionals to concentrate on the tasks that truly require extensive education. Also, the mid-level workers are more likely to come from and be willing to work in poor and rural communities. In combination with professionals, they would enable a more efficient, available and affordable health system.

the Provinces. CHWs potentially have a vital role to play, but there are enough wrecks of CHW programmes around the world to show that they have to be developed in an enabling environment, with clear role definition, appropriate selection, proper training, accreditation and ongoing support. There is too little evidence that these elements for sustainability are being put in place, especially if CHW programmes are a serious decision.

The Strategic Framework correctly identifies a set of needs for more effective human resources management, including skills and systems, streamlining discipline, supportive supervision and retention of staff. These have received attention and must now be blended into a cohesive action plan within the opportunities that are emerging for the public sector. For example, a clear strategy is required on retention of staff both within the public sector and the country. There are elements of this in place, but as this is more crucial now than production, (in some areas we may be producing too many professionals), it needs to become more focussed. Tied to this, a more pro-active approach to improving staff morale is required. Effective management and deployment would be aided by the development of tools to establish, monitor and correct staff profiles and, as the Strategic Framework recognises, through more effective information systems. Employment equity has made big strides in the past five years, but this important area should not be left to itself. Performance agreements have not turned out nearly as well as anticipated and in some instances have even had the perverse effect of limiting performance. The problems need to be understood and a revised approach to performance management implemented.

As set out in the Strategic Framework, skills development in human resources management is critical, not only at the managerial level, but also at the operational level. Even more important is ensuring that all staff have the ability to perform their tasks efficiently. Currently, short term budget pressures tend to force a short-sighted approach, as training is a soft target in expenditure containment. Maybe it would be a good idea if Health (government) Departments were obliged to pay the skills development levy. This would ensure that funds were committed to training. Also, skills training should be offered to those who might face retrenchment if there is to be a reshaping of the staff mix and distribution.

At the same time, the experience of many programme developments must not be forgotten. There has been lots of training for programmes, but the system has not always allowed the benefits to be effectively implemented. Training must be effectively targeted and an enabling environment put in place simultaneously.

It is anticipated that the developments outlined above will herald the necessary flurry of more detailed effort in this crucial field of human resources development and management. Without it, little in the Strategic Framework can succeed. We need to ensure that a policy to implementation gap does not emerge in this area.

## 6. Improving quality of care

Although the Strategic Framework states that "the next five years will focus on accelerating quality health service delivery", this section is one of the shortest in the document. It focuses on the operational aspects of a quality programme. This suggests implicitly that **most of the rest of the Strategic Framework ultimately impacts on quality**.

But, what of the operational aspects specified? A policy on quality and the objectives of implementing "Batho Pele",<sup>e</sup> complaints systems, clinical management guidelines, rational

e Good "customer" service.

prescribing and peer and clinical audits can all be in place by 2004 as planned in the Strategic Framework. The same applies to having boards and committees in all health facilities and ascertaining users' views and enhancing their awareness of their rights.

But, making sure that these elements of quality are effective is easier said than done. Better wages have not automatically brought greater staff commitment to "Batho Pele". Also, simply appointing a committee or board to a facility does not in itself change the way in which health services are provided. Finding sustainable ways of living up to "Batho Pele" remains a key challenge, as does interdepartmental co-operation for service delivery. Sustainability of quality initiatives in the face of the financial pressures faced by Provinces and local government will remain a major challenge. Continuous and systematic effort, innovative approaches and allocation of resources will be required for improved quality.

# 7. Enhancing communication and consultation within the health system and with communities

Setting a strategic objective around improved communication with a target date of April 2000, suggests an understanding of its importance to achieving organisational unity and effectiveness. The brief description of the approach in the Strategic Framework bears this out, but **the evidence of success in establishing information and communication cascades does not seem to match the intention**. There are tens of thousands of personnel in the public health sector, so improving communication and consultation is not an easy task. Approaches that have proven their worth in large private corporations need to be applied and innovative methods tested. The commitment to becoming a communicating organisation is not strong enough.

Sensible approaches to communication with stakeholders are outlined, but no specific objectives are set.

A subtle, but important distinction between the listing of the objective in the ten-point plan in the Strategic Framework and the heading of the actual section in the text occurs, as the heading adds in "empowerment of health service users." This element is crucial to the success of programmes to reduce morbidity and mortality and to raise expectations of quality of care and should not be allowed to slip out. Rather, in reviewing each strategy the question should be asked as to whether it sufficiently empowers people.

### 8. Re-organisation of certain support services

This area has received concerted attention. The Office of the Registrar of Medical Schemes is being re-organised for greater effectiveness, the structural basis for the establishment of the National Health Laboratory Service is at an advanced stage and the transfer of forensic mortuaries from Police to Health has been agreed to. The challenge now is to operationalise these effectively, including the transfer of staff. Early signs are positive, although there are gaps.

Development of the health information system (HIS) is multi-faceted and more complex. Progress has been slow, but a lot has started to come together in the past year, especially in links with other government departments and vital statistics, in tele-medicine and in district health information systems. There is still much to be done, so **the challenge now is** for further development to stay on track and **for the HIS data to be used by management to enhance their decision making**. The notification system, an area that is notoriously difficult, but which provides invaluable information, should also receive attention, as should hospital information systems. Lack of feedback of information to staff at facility level has been a long-term problem. Some measures have begun to address this, but if we want better information and better use of information, it is critical that those who are providing it are part of the feedback loop.

### 9. Legislative reform

A number of important pieces of legislation have been passed over the past five years. However it is now time to replace the 1977 Health Act. As legislation is not only the basis of good governance, but also a key tool for the expression of policy, it is inappropriate to be governed by an Act that has its roots deep in the apartheid era.

### 10. Strengthening co-operation with international partners

South Africa has played a full role in the World Health Organisation (WHO). More important has been its contribution in developing the Southern African Development Community's (SADC) health desk. This seems to be developing well, albeit a bit slowly and will require greater capacity to become fully effective. The benefits of effective regional collaboration are substantial and the Department should be complimented for not going it alone on issues, such as in dealing with offers of lower price anti-retrovirals. SADC and the WHO will need to take care to avoid overlap and duplication of their efforts in Southern Africa.

In all, even at this early stage one can deduce that on the whole, government is on track to match its strategic priorities, but in a number of areas the pace will need to improve and in others a "policy to implementation gap" avoided. But are the strategic priorities those that are required to accelerate quality health service delivery? On the whole, although one can debate the detail, it is hard to criticise what is covered in the Strategic Framework. It does take us in the right direction. However, there are three areas of concern. First, it annexes a number of assumptions that should rather be incorporated in its body. Secondly, the vision for the health sector is not made concrete. Thirdly, it doesn't make it clear that some elements are more critical and need higher priority than others, if the strategy as a whole is to be successful.

# Assumptions of the Strategic Framework

In the Strategic Framework the Department indicates that its success in reaching its objectives is based on the following assumptions:

- 1. The availability of sufficient financial resources, the assurance of financial stability during and between years and the absence of unfunded mandates
- 2. The ability to train, retrain, retain and deploy health personnel as needed
- 3. Removal of legislative and other obstacles so as to implement more responsive management systems and an appropriate workforce configuration
- 4. Solid co-operation from all partners, notably other national departments, provincial and local government, the private sector, non-governmental and community based organisations and communities
- 5. The ability to reverse the HIV/AIDS epidemic.

This list of assumptions reflects some hard lessons learnt over the past five years about external realities that have blocked performance. These areas are so fundamental, and

have been at the root of so much of the perceived and real inertia in the health service, that **objectives for impacting on them should have been integral to the Strategic Framework**. They are crucial to accelerating quality health service delivery. It may be a matter of tactics that they were placed separately, but the Department cannot afford to present itself as a powerless recipient in these relationships, dependent on the actions of other arms of government or stakeholders. In fact, the Department has to an extent been actively influencing each of the areas in which it makes assumptions, without necessarily acknowledging it in the Strategic Framework. Even if recent developments in some of these areas are cause for reassurance, the slow progress to date suggests that one cannot take one's eyes off them. It is instructive to briefly consider each in turn.

# 1. The availability of sufficient financial resources, financial stability and the absence of unfunded mandates

This assumption has arisen out of the experience of funding not matching requirements for services, decreases in real health expenditure and expectations of meeting decisions that have financial implications from savings, rather than from an additional fiscal allocation, such as was the case with rank and leg promotions. The financial pressures are not just from the complex inheritance, limitations on and of management and inadequate controls on spending, but seemingly also from under budgeting for *desired* services.

The question of "sufficient financial resources" raises the question of what "sufficient" is. Unless it is a tactical decision not to, it could have been expected that a sector strategic framework would broadly spell out what it requires to meet its responsibilities, and develop a case to sustain this. Without ignoring the efficiency gains that can be achieved, not enough seems to have been done to offset the view that some seem to hold that health service expectations can be met largely by more efficient use of current resources. In the ongoing negotiations with the national and provincial Treasuries and political decision-makers the core issues need to be opened up clearly for those not familiar with the complexities of health economics and financing. It is much harder to make the case for health, than for say education, housing or welfare, so extra effort should be put into making the analysis vivid. Statements that are open to misunderstanding, such as that South Africa is above the WHO baseline for percentage of GDP that should be spent on health, should be avoided.<sup>f</sup>

The national Department may not have pushed hard enough for the "health slice" to be increased and the system of provincial budgeting has not always served the health sector well, although some provinces have grasped the issues better than others. The process of centralised policy making with decentralised implementation by other arms of government offers potential efficiency and other gains, but does limit the leverage of central government.

### 2. The ability to train, retrain, retain and deploy health personnel as needed

In spite of much effort on the part of the Department, some tertiary education institutions have been slow to change to new needs. The Department should continue its active efforts to influence training and push more for appropriate retraining. Strong resolve should continue to be applied to the transformation of health professional education and to increase admissions of Africans to medical schools. We have enough training capacity in South Africa and there should be no need to send African students abroad. government should also be more willing to contractually bind those they have funded. **Public money is the source of** 

f Although expenditure is at about 8% of GDP, more than half of this is spent in the private sector on about 20% of the population.

# most of the funding of tertiary education and the public should get something back, before self-interest is allowed to supervene.

The old Public Service Act, personnel policies and bargaining chamber agreements prevented innovation and special arrangements, such as rural allowances and attractive packages for retention of scarce staff. The new code of remuneration may allow for more flexibility if effectively used, but the limited ability to deploy staff remains. Even if the capacity of a hospital is shrunk, it is still very difficult to move surplus staff to where they are needed. Similarly, if the mix of categories of staff is incorrect e.g. there are surplus staff in the kitchen, but a shortage of porters, it is also hard to correct. The effects of this inability to shape the deployment of staff, or to retrench surplus staff, has meant that in parts of the country some categories of staff have remained in oversupply, while there are shortages elsewhere. The high attrition rates of professional staff, spurred on by voluntary severance packages, continue to be felt.

In the recent round of bargaining government began to address these problems earnestly, but appears to have dropped them off the agenda in favour of reaching a clean agreement with the unions, including wage restraint. Clearly, the spectre of retrenchment would make staff more willing to be co-operative to fair moves that are in the interest of patients.

Unions have power and do influence their members. **The Department should therefore seek a social pact with the unions** that includes a wider range of issues than conditions of service. **Unions in turn must come to recognise the effect of the lack of flexibility on their part**, including on the issues of deployment and multi-skilling. This will only feed into pressures for retrenchment tools, for outsourcing and for new legislation on deployment in the public sector.

### 3. The removal of legislative and other obstacles so as to implement an appropriate workforce configuration and more responsive management systems

The issue of an appropriate workforce configuration reflects further on the problem of not being able to re-deploy or retrench surplus staff and to take other steps to shape the workforce.

The need for more responsive management systems comes out of a recognition that health managers have been akin to a boxer with one hand tied behind his back and the other having to continuously ward off flies i.e. deal with minor issues instead of the main tasks. Top executives have had to be involved in a host of issues that could and should be delegated e.g. dismissals for theft and purchase of any goods above R12 500. Hospital managers, some of whom are entrusted with budgets equivalent to companies on the stock exchange, are understandably frustrated at not being given the authority to manage and to achieve the efficiencies that would come with this.

The recent changes in the Public Service and Public Finance Management Acts herald opportunities for a new style of public management, in part because power for implementation has shifted from centralised bodies to Ministers and MECs. The delegation and decentralisation policy of the Department of Public Service and Administration, does not appear to enjoy serious enough support in the health sector. Of concern is that the process of delegation to heads of departments and to middle management does not seem to be progressing fast enough. The benefits are therefore also delayed and credibility lost with middle managers. At the same time, health managers need to explore where they have been at the root of inefficiencies and inadequate quality of care, display an openness about their weaknesses and develop strategies to continually develop and grow as managers and leaders. Outside factors are not always to blame and there is still much to be done about the style and skill of health managers.

### 4. Solid co-operation from all partners

Assuming solid co-operation from other national departments, provincial and local government, the private sector, non-governmental and community based organisations and communities is perhaps somewhat optimistic. Effective inter-sectoral collaboration and participation of civil society is complex anywhere in the world and South Africa is no exception.

The Department of Health has managed its constitutional joint responsibility for Health well with the Provinces, consulting appropriately. It is more difficult to gauge co-operation with other Departments.

Stakeholder perceptions of government's commitment to consultation and co-operation do not seem to be sufficiently positive. New strategies should be developed and some rethinking done on the existing fora for stakeholder consultation. Maybe it is too much to have such a mix of interests under one umbrella. Fora between a Director and relevant stakeholders in their field would focus the issues. There are some such fora and although they sometimes get bogged down, they do work better than large unfocussed groups. Beyond establishing such fora, government will need to prove that consultation is not just for show. In turn, stakeholders will have to accept that consultation is just that and not a mechanism for democratic government to receive instructions from or make joint decisions with interested parties. A new forum should be established that provides space for top executives from the public and private sectors, from NGOs and from academia to openly share expertise and ideas in a non-combative environment.

### 5. The ability to reverse the HIV/AIDS epidemic

This is quite an assumption, but is probably clustered here because HIV/AIDS is seen as an intergovernmental and joint public-private responsibility. It seems certain now that history will judge us harshly on our efforts to control the epidemic. As this review is focussed on the Health Department's Strategic Framework, no attempt is made to review the National AIDS Programme, other than to say that although it is comprehensive, government still has to show that it can implement it and can slow down the rate of expected new infections.

Where Health has gone wrong in the past is not always clear, but some of the Department's weaknesses have been made very visible and appear to have set back efforts to deal with the epidemic. Organisations outside of government may also have focussed too much on scoring points, which has led to a polarised relationship. A joint understanding of the need to put this behind us and to focus on the devastating situation at hand is critical.

There are those who believe that behaviour change will not occur until enough people are dying and orphans suffering. The evidence suggests that although behavioural change is not easy, it is possible to reverse (reduce the rate of new infections) the HIV/AIDS epidemic over the next five years. But, this will require sustained high profile effort, not intermittent attention. It will also need the Department to come out of its shell and provide the decisive leadership that is required. The Strategic Framework correctly says that this is the top priority, so let it be, and let us see senior politicians and executives relentlessly pursuing the issue and ensuring sufficient capacity for and commitment to effective operationalisation. The boldness that has taken us into vaccine development should be matched by similar boldness in other preventive efforts.

# A clearer picture of stewardship for the private sector

At the end of a strategic framework one should be able to have a concrete image of what the health sector would be like in five years time if its vision and mission had been fulfilled. Although the Strategic Framework gives a good sense of a huge variety of steps that will be taken, it requires the reader to pull together their own overall picture. For the public sector it is not that difficult. In the broadest terms, it is a public-provider model, with limited outsourcing and strengthened primary health care, funded through a mix of tax and Social Health Insurance (SHI).

The re-regulation of Medical Schemes in 1999 has certainly been an important step towards re-establishing the fundamentals of sound health insurance and the Strategic Framework refers to the potential of this and to the controversial areas of certificates of need and rationalising the availability of expensive technology.

However, the Strategic Framework does not provide a clear overall picture of what government envisages for the private sector. This may be tactical as government does not yet have an overarching plan and ideas are still unfolding. What is clear, however, is that government recognises that it has a responsibility to steer the private sector towards greater affordability and better value for money. Inflation in the sector needs to come under control.

The private sector's need for a clearer picture of government's intentions appears to be stifling development. For example, if government intends to regulate that SHI provide compulsory cover for public hospital care for lower income earners, then it would undercut hospital providers' efforts to do low cost deals with the unions. The unions themselves are giving mixed messages, flirting with private and social health insurance options, which makes the uncertainty greater. The private sector have also not proven their bona fides in being able to control inflation on their own and big business has been very lax in using its influence on the sector. This has fuelled concerns that the low cost deals are short term temptations and that as spare private capacity is filled, prices will escalate, making the system unaffordable and putting pressure on government to subsidise the sector through tax and other measures.

In many sectors government has warmed to the role of the private sector. The private health sector seems to wonder why this has not happened much in health. Much of the answer lies in the failure of the private market. If it wants to establish itself as a credible provider of lower cost options for low earners in formal employment, the private sector will need to show that it can control costs and over-servicing by professionals and shifting of funds by insurers.

Another area requiring clarity is the management of SHI funds. If government envisages a prepaid system with collections off payroll by a government agency that distributes lump sums to Provinces, then hopes that medical scheme administrators might have had of managing the SHI would not apply. Further, there are still those who live with the White Paper's notion of accredited private providers for primary care. They feel that government

should leave it to them to provide the service, although it seems clear that this is not the intention.

In other areas government intentions are clear, even if not spelt out in the Strategic Framework. An example is the intention to address perverse incentives in prescribing or selling drugs or from ownership of health facilities. However, the Strategic Framework does not cover how government intends to implement this. Also not covered is the next step in nudging the private sector more towards the managed care approach reflected on in its review of private health insurance. Clearer signals on this may facilitate more investment in this sphere, which is not receiving sufficient market support, but is quite important to achieving government's vision. The strengthening of the office of the Registrar of Medical Schemes will provide the stronger analytical and management framework required, but a clear message about tracking the effects of the Medical Schemes Amendment Act and acting on the findings is missing, even though it is the intention.

The financing and pricing structures of the pharmaceutical industry make it difficult to judge local performance fully, but the evidence does indicate that the pressure on them to reduce costs is justified. In contrast, the private hospital industry is not performing well on the stock exchange (although recent financial reports have been more positive). Some might see this and the squeeze on general practitioners (apparently not on specialists) as a positive signal, but as these are not reflections on overall efficiency or inflation, clarity from government seems vital to their stability.

Clarity is also required on whether the public sector aims to draw patients out of the private sector. Is the aim for the private sector to shrink or to become more cost-effective and grow? If the intention is for the public sector to compete, can it make a profit from its efforts? This is possible where there is spare capacity and where services can be offered at marginal cost. But, a lot of the private profit appears to come from over-servicing and sale of drugs and consumables. Given that public services would not do the former and have low profits from the latter (because of low tender prices) is it efficient enough to make a profit out of new patients? It would seem that government should in the first instance concentrate on retrieving income from current users who are able to contribute. This can be achieved through more efficient methods of billing and of confirming income.<sup>g</sup> This will certainly increase nett funds, as income will accrue without additional costs.

As soon as possible government will need to make decisions and show its hand fully on how it will steward the private for-profit sector. Regulation is not only important for protection of private sector users, but because what happens in the private sector also ultimately impacts on the public sector's ability to provide quality health services. Also, a country can only spend a certain amount of its GDP on health before it starts to impact on the performance of other sectors of the economy. Such regulatory intervention in the private sector is recommended by the World Health Organisation.<sup>14</sup>

There is still a gulf in understanding both ways between government and the private sector and this needs to be bridged. A top executive forum where perspectives and issues can be discussed would go a long way towards addressing this and building mutual understanding to the benefit of all.

When talking about the private sector, many forget the not-for-profit private sector. Although non-governmental organisations (NGOs) do not play much of a role in treating the sick at

g Hospital fees vary according to income

primary or hospital level in South Africa, they do play a vital role in health matters in the community, especially through focussing on specific health problems e.g. cancer, tuberculosis, HIV/AIDS, mental health and disability.

Government's stated commitment to see the NGO sector grow has not been matched by a sufficiently strong enabling environment. There is insufficient visible public support for NGOs, and inadequate provision of core funding on which to build a volunteer base or to seek other funding. Government is also not using its muscle to steer organisations into working with and in hitherto underserved communities, or helping new NGOs to emerge. If government truly sees a significant role for NGOs then it must provide much more active stewardship.

# Conclusions

If the unwritten framework for private sector stewardship is added and the assumptions in the Strategic Framework made an explicit part of it, then the 1999 – 2004 Health Sector Strategic Framework amounts to a second phase of transformation of the post-apartheid health sector. And that is precisely what is required; not to allow things to drift, but to actively build on the successes and momentum of the first phase and to deal with the shortfalls.

To attain many of the targets will require even stronger commitment to equity whereby more resources are allocated to the poor, and it will be good to see this. It will also require a stronger preventive effort, focusing on improving health and not just health care. And, as we get the restructuring right, we should remember that we are caring for people. One of the most effective elements of building a caring ethos is to get personalised care from a constant provider, rather than anonymous care from whoever happens to be available next. Even with our resource limitations, there are models that will enable this and which should be embraced.

Even at this early stage it can be seen that government has set a solid platform on which to build the implementation of its Strategic Framework and is making substantive progress. However, in some areas the pace will need to improve and the potential for a "policy to implementation gap" be offset. Prioritisation and a clear five-year implementation strategy are also necessary.

The Department has many talented executives who it can be anticipated will fulfil the challenge of bringing their components of the Strategic Framework to fruition timeously. Top management should focus their efforts on those key interventions that are critical for the acceleration strategy as a whole to be successful and also on areas lagging behind. In all, the Strategic Framework may be asking too much and the Department will have done well if it has achieved the bulk of what it has set out to do. But then, as one executive said, "why not set one sights high for something as important as accelerating quality health service delivery?"



This chapter draws attention to the health-related legislation emanating from the national and provincial legislatures in 2000. It also looks more broadly at other legislation passed this year that has an impact either on the health of individuals or communities or on the way that the health system operates.

New national legislation discussed includes the Pharmacy Amendment Act, the two Chiropractors, Homeopaths and Allied Health Service Professions Amendment Acts, the National Health Laboratory Services Bill and the Council for Medical Schemes Levies Bill. The recent laws of broader impact are the Public Finance Management Act, the Skills Development Act and Skills Development Levies Act, the Promotion of Access to Information Act, the Promotion of Equality and Prevention of Unfair Discrimination Act and the Local Government: Municipal Structures Amendment Act. In addition, regulations to and interpretations of earlier legislation (described in previous editions of the Health Review) are outlined.

The efforts of provincial legislatures to produce laws that define the operation of the health system are described.

Finally, the chapter reviews important Constitutional Court rulings with health implications, these being the SAMMDRA, Hoffman and Grootboom decisions.



Sagie Nadasen School of Law, University of Durban-Westville

Andy Gray School of Pharmacy and Pharmacology, University of Durban-Westville

# Introduction

It has been observed that the broader one's definition of health, the grander the scope of public health.<sup>1</sup> Complementing this perspective, Grad asserts that "the reach of public health law is as broad as the reach of public health".<sup>2</sup> Legislation impinging upon public health is therefore at once as specific and direct as it is also indirect in its import and effect. The recently published textbook of Public Health Law in South Africa lists 91 Acts of Parliament that currently or in the recent past have had an impact on health.<sup>3</sup> To those must be added the myriad regulations that give effect to the enabling sentiments of the legislation. Any attempt, therefore, to isolate and review all legislation that has an impact on health is doomed to failure.

To an extent, the task has been made easier by the paucity of health legislation passed in 2000. That might be indicative of a general slowing in the legislative programme. By October 2000, only 33 Acts had been passed by Parliament, compared to 60 in 1999, 136 in 1998 and 108 in 1997. However, Acts already passed continue to be of relevance as their regulations are developed and implemented, or as their application is tested in the courts. First, the chapter deals with health-specific legislation emanating from the national Department of Health or expected shortly. Then, progress with provincial health legislation is reviewed, with an emphasis on those laws that have attempted to shape the National Health System in the continued absence of an over-arching National Health Act. Thirdly, new legislation with broad implications for health is considered. Finally, the chapter deals with three important Constitutional Court rulings with health-related implications.

# Health-specific legislation

As was mentioned above, 2000 has been notable for its sparse legislative products. Nonetheless, regulations have been produced for some legislation passed in previous years, and the interpretation of other Acts has been tested in the field. By the end of the first week in November 2000, only 2 health-specific Acts had been passed. A further 2 were in the final stages, having been passed by the National Assembly (NA) and referred to the National Council of Provinces (NCOP).

### Pharmacy Amendment Act (Act 1 of 2000)<sup>4</sup>

This Act provided for the performance of remunerated community service in a State institution by all pharmacists requesting registration with the Pharmacy Council. This brings the pharmacy profession in line with those governed by the Health Professions Act (doctors and dentists having started community service in 1998 and 1999 respectively). The implementation of the Act has been somewhat complicated by the wording of the commencement section, which reads that the Act comes into operation on the same day as section 13 of the 1997 Pharmacy Amendment Act (Act 88 of 1997) is brought into effect. This requires finality on the Regulations to the Pharmacy Act. The regulations necessary to allow section 13 of Act 88 to come into operation, and hence for the commencement of Act 1 of 2000 and of community service by pharmacists, are expected in mid November 2000.

# Chiropractors, Homeopaths and Allied Health Service Professions Amendment Act (Act 6 of 2000)

This Act can hardly be considered an example of progress. In essence it merely covers up an embarrassing slip. When, in mid 1997, it became clear that the 24-month deadline for completion of the re-design of legislation for each of the professional councils was not going to be met, Parliament passed the Extension of Terms of Office of Members of Certain Councils Act (Act 45 of 1997). The Interim Nursing, Pharmacy and Medical Councils were given an extended life, allowing the orderly passage of each of their Amendment Acts later in 1997. The Chiropractors, Homeopaths and Allied Health Service Professions Interim Council was omitted from that measure, and technically became defunct in 1998. The 2000 Amendment Act merely amends its 1995 version to read that a new Act shall be ready within 60 months rather than 36 months of that Act (Act 40 of 1995).

### Chiropractors, Homeopaths and Allied Health Service Professions Second Amendment Bill, 2000 (soon to be passed as the Allied Health Professions Act)

Even though a request to have the final Bill on the chiropractors, homeopaths and allied health service professions dealt with by a "fast-track" process was initially refused, it was informally dealt with in a joint manner by both Houses. Joint hearings were held by the Select Committee of the NCOP and the Portfolio Committee on Health of the NA. The Bill was passed by the NA on 3 November 2000, and was expected to pass the NCOP and be assented to by the President by the end of December 2000. The Act will establish a professional Council, termed the Allied Health Professions Council, to regulate a wide range of allied and complementary practitioners (each with a professional board). In addition to the current registers for chiropractors and homeopaths, provision is made to open registers for ayurvedic practitioners, naturopaths, osteopaths, phytotherapists (previously referred to as herbalists), Chinese medicine and acupuncture practitioners, therapeutic aromatherapists, therapeutic massage therapists and therapeutic reflexologists. Interestingly, provision is made for certain practitioners to compound and dispense the medicines they have prescribed for their patients. This section is to be subject to the provisions of the Medicines and Related Substances Control Act (Act 101 of 1965). Therefore, if and when that legislation is finally amended, it is likely to distinguish between the dispensing rights of allopathic and complementary prescribers. Much though still has to be finalised in the Regulations to the Act, before its impact can be gauged.

### The National Health Laboratory Services Bill, 2000

This Bill was passed by the NA on 12 October 2000, and then referred to the NCOP. It is also expected to be assented to by the President by the end of 2000. The Bill had been the subject of intense negotiations, including the publication of a draft Bill prior to tabling in Parliament. Draft regulations had already been prepared prior to its passage through Parliament, and are expected to be published for comment. The Act will introduce a significant change to the way laboratory services are provided in the public sector. It creates a new Service, as an autonomous body, bringing together the staff and assets of the SA Institute for Medical Research (SAIMR), the National Institute for Virology (NIV), the National Centre for Occupational Health, the forensic chemistry laboratories owned by the State (with the exception of those operated by the police and military) and all provincial health laboratories. Given the complexity of the task, careful consideration of the commencement arrangements will have to be made. In any event, the changes brought about by the Act will be phased in over a period of some years (see chapter on Laboratory Services).

### **Council for Medical Schemes Levies Bill, 2000**

While technically a money Bill, and hence introduced by the Minister of Finance, this Bill provides for the imposition of levies by the Medical Schemes Council, to be paid by medical

schemes. These levies will be used to meet the administrative costs of the Council and the Registrar of Medical Schemes. It also provides for assessment of the efficiency, economy and effectiveness of the Council's management of the financial resources so provided. While such assessments may be requested by the schemes, they shall be performed at least every 5 years and reported to both the Ministers of Health and Finance.

### Regulations

The Regulations to the Medical Schemes Act (Act 131 of 1998) have been published, and continue to be amended. This Act was described in detail in the 1999 Health Review.<sup>5</sup> In June 2000, amendments to regulations dealing with the waiting periods applicable to members joining schemes and to those who declare pre-existing medical conditions were made. These changes were made without prior publication for comment, which elicited fierce reaction from many stakeholders including the medical aid industry body, the Board of Healthcare Funders (BHF). Threatened legal action was however averted following meetings between BHF and the Minister.

Another area of contestation was the demarcation between the business of a medical scheme and a health insurance product. This was particularly true in the case of so-called "new generation" products offered by companies such as Fedsure and Discovery Health. These were viewed by the Registrar as medical schemes that were attempting to circumvent the new Act and continue to apply risk-rating and to preferentially service younger, lower-risk members, thus destroying cross-subsidisation. In both cases, the Registrar prevailed, and a joint statement by the Council and the Financial Services Board in September 2000 clarified the demarcation. The result of this has been that both Fedsure and Discovery Health removed their health insurance products from the market. However, the waters were again muddied in late October 2000 when it became apparent that the Deputy Governor of the Reserve Bank had ordered a low-key investigation of the effects of the Act on the financial viability of the medical schemes industry.

Following publication of the final regulations to the Tobacco Products Control Amendment Act (Act 12 of 1999), the Act came into force on 29 September 2000. This Act was described in the 1998 Health Review.<sup>6</sup> A phased approach to enforcement, leavened by a measure of "reasonableness" has been signalled by the Health Promotion Directorate.<sup>7</sup>

### Other expected regulations and Bills

Other anticipated legislation for 2000 initially included a Bill to regulate medicines control, the Mental Health Care Bill, another Nursing Amendment Bill, legislation on Health Insurance, the Occupational Diseases in Mines and Works Amendment Bill and the everelusive National Health Bill. The Nursing Amendment Bill is still under discussion among the relevant stakeholders, as are policy issues in respect of Health Insurance legislation. It is therefore anticipated that the following Bills will only be tabled in 2001: the Mental Health Care Bill, the National Health Bill, the Medicines Control Bill and the Occupational Diseases in Mines and Works Amendment Bill.<sup>a</sup>

Other regulations in the process of finalisation and which have been submitted to the Minister of Health for approval and promulgation thereafter include the regulations in terms of the Health Professions Act (dealing, *inter alia*, with the qualifications entitling medical practitioners to registration; the registration and training of interns in medicine; the

Mr S Ramasala, Department of Health, personal communication.

registration of persons who qualified outside South Africa as interns, medical practitioners or dentists; and the qualifications entitling dentists to registration). The regulations dealing with "impairments" (such as problems with substance abuse) in students and practitioners and with the conduct of inquiries are still in the process of finalisation. Other regulations pending are those in terms of the Nursing Act (dealing with fees to be paid to the SA Nursing Council and regarding inspections and re-inspection fees), the Health Act (dealing with the fluoridation of water supplies) and the Foodstuffs, Cosmetics and Disinfectants Act (dealing with additives in food). Draft regulations on the disposal of medical waste were published earlier in 2000.

### **Provincial legislation**

As in previous Health Reviews, a short assessment is provided of the health legislation produced by provincial legislatures, with an emphasis on those Acts that attempt to regulate the nascent National Health System in the absence of a new National Health Act. However, as will be shown, most provinces are either still in the development phase, or have restricted themselves to narrower issues (such as hospital management and/or governance). Those that have committed to an overall provincial Health Act have chosen to defer to the as-yet undefined strictures of the national legislation.

### Eastern Cape

The Eastern Cape Provincial Health Act (Act 10 of 1999) was assented to on 24 January 2000. Among the objectives of the Act are the following: "to structure and provide for the implementation of Eastern Cape health service delivery in accordance with national and provincial health policies and procedures" and "to structure and provide for the implementation of comprehensive provincial and district health system management". Section 5 sets out the statement of the provincial health policy. Noticeable in this regard are the references to available resources, consultation and community participation. The first places emphasis on the qualified nature of the right to health care, as was demonstrated by Soobramoney.8 Consultation and co-operation between spheres of government (national, provincial and local) are the cornerstones of what is termed "co-operative governance". Accordingly, provision is made for the relevant Member of the Executive Council (MEC) to "consult with municipalities and organised local government in the Province in accordance with standards of co-operative governance in terms of section 41 of the Constitution". Similarly, community participation in the governance of the health system is one of the fundamental bases of the district health system. However, while mention is made of provincial health advisory and technical committees, the Act goes no further than the original national district health systems policy in defining exactly how districts will be governed or managed. In each case, the exact terms of reference of the relevant structures will have to be determined by the MEC.

### **Free State**

The Free State Provincial Health Act (Act 8 of 1998) was assented to by the Premier on 15 February 2000. The Act lists the functions of the provincial level, which include "the coordination of funding and financial management of District Health Authorities" and "technical and logistical support to District Health Authorities". However, the province is still responsible for ensuring that "comprehensive primary health care services" and "community hospital services" are rendered. All three governance options (provincial, local, statutory) expected to be included in the National Health Bill are provided for, with the functions of District Health Authorities (DHAs) being those determined by the Provincial Health Authority (PHA) and MEC.

### Gauteng

The Gauteng District Health Services Bill was initially tabled in 2000 but then withdrawn. It purported to provide for the delivery of primary health care services through a district system in the province, by creating a Provincial Health Authority as well as statutory District Health Authorities. However, the exact relationship between the DHAs and local government was not clearly stipulated.

### KwaZulu-Natal

The most recently passed provincial Health Act was that emanating from the KwaZulu-Natal legislature in mid August 2000, after an initial delay in June. The objectives of the Act include to "structure and provide for the implementation of the district health system". In addition, the Act seeks to establish an "integrated provincial health care network and health service delivery in accordance with provincial health policy". As the Act is the most recent to have been finalised, it does take into account the new local government scenario resulting from the work of the Municipal Demarcation Board. As with the other provincial Acts, this Act is written largely in enabling language. In other words, the Act is not detailed but merely indicates what matters will in time be prescribed by Regulation. The compositions of the DHA and District Health Advisory Committees are not defined in detail, and their functions will be stipulated in regulations produced by the MEC (in this province referred to as the Minister) "after consultation with the Provincial Health Authority and organised local government". In addition, each district will have a District Health Forum, seemingly distinguishing between the political structure (DHA) and that providing for community participation. The Act uses the term "municipal health services", but does not contribute to a clearer understanding of the term, preferring to define it only as "those services referred to in Schedule 4, Part B of the Constitution and determined in terms of national legislation". Although it steers clear of entering these troubled waters, the Act does provide evidence of a leaning towards districts rendering services on a delegation or agency basis, as it calls for a "written performance agreement with each district health authority, which may include each municipality within the health district". Not only the nature of the services rendered and the funding thereof are to be stipulated in the agreement, but also the "organisational and management structure of the district health authority". While the Act also touches on the contested area of the Certificate of Need (which still has to be finalised in the National Health Bill), the private hospital industry seems willing to live with provisions that require private health facilities to obtain a license to operate from the province. They have been described by the Hospital Association of South Africa (HASA) as "not so terribly different from the existing law".9 Outstanding issues however remain - for example, the current provisions do not distinguish between processes to determine the need of a particular community for a private health facility and those necessary to establish and ensure continued compliance with technical quality standards (equipment, buildings and operational procedures) as both have been captured in the single certificate, which is valid for 10 years.

The explanatory memorandum to the KwaZulu-Natal Provincial Hospitals Ordinance Amendment Bill of 2000 asserts that the proposed Bill intends, *inter alia*, to amend the Provincial Hospitals Ordinance 13 of 1961 in order to make provision for the appointment of a superintendent (manager) at all provincial health facilities who need not be a medical practitioner.

# **CHAPTER**

### Mpumalanga

The Mpumalanga Health Facilities and Services Bill of 2000 seeks to provide for the establishment, maintenance and management of health facilities and services and for nursing and emergency heath services colleges in the province.

### Northern Cape

The Northern Cape Nursing Education Bill will provide for the provision of nursing education, the establishment, maintenance and control of nursing colleges for the education and training of nurses and midwives. More expansive is the ambit of the Northern Cape Health Bill: this will, *inter alia*, consolidate the laws relating to health services facilities, and provide for the establishment, maintenance, organisation and management of health services and establishments in the province.

### **Northern Province**

Regulations in terms of the Northern Province Health Services Act (Act 5 of 1998) have been published for comment. These regulations deal, *inter alia*, with the following: the demarcation and variation of new health district boundaries; the naming and variation of health districts and facilities; appeals against these procedures; the abolition of the health facility board; membership of the district hospital board, the regional hospital board, the provincial tertiary hospital board and of District Health Authorities; and the establishment of a Provincial Consultative Health Forum.

### **North West Province**

Anticipated legislation includes amendments to the North West Health and Development and Social Welfare Hospital Governance Act. The amendments are directed towards the separation of governance structures relating to health institutions from institutions relating to welfare. Furthermore, provision will also be made for elected representatives at local level (councillors) to form a simple majority in the Forums and Health District Committees and will also permit hospital managers to be part of the governance structure being managed by that person. The Provincial Health Bill has already been published for public comment and the Bill has provisions relating, *inter alia*, to the following: the establishment of the Provincial Health Consultative Forum; the empowerment of the MEC to demarcate districts and the establishment of District Health Authorities; public-private partnerships; and the establishment of a Provincial Health Information Committee and a Provincial Health Research Committee.

### Western Cape

A draft Bill to provide for the establishment, functions, powers and procedures of Health Facility Boards is under consideration in the Western Cape. Further, the Minister of Health of the Province has published revised draft regulations for comment in respect of private health establishments (amending the previsions of the national R158 regulation). These regulations deal with the licensing of private health establishments, their construction, the closure of such an establishment where necessary, inspections of such facilities, and the sanctions and remedies available to the province.

# Legislation with broad relevance for Health

Reviewed here are Acts and Regulations that impact indirectly on the attainment of health goals and also those that affect the way in which health services are rendered and managed. While some were passed in previous years, their implementation or impact has only become apparent in 2000.

### The Public Finance Management Act 1 of 1999

This Act was assented to on 2 March 1999. Its object is to secure transparency, accountability, and sound management of the revenue, expenditure, assets and liabilities of institutions to which the Act applies. Institutions included are national and provincial departments and other public entities, including the South African Medical Research Council. The Act came into effect in 2000, and is already being referred to as constraining managers. For example, it has been alleged that provincial departments' apparent reluctance to work closely with non-governmental organisations can be traced to worries about being found guilty of contravening the Act, which requires close control of public finances. The relevant definitions in the Act in this regard are:

- *"fruitless and wasteful expenditure"* which means expenditure which was made in vain and would have been avoided had responsible care been exercised;
- *"irregular expenditure "* which means expenditure, other than authorised expenditure, incurred in contravention of or that is not in accordance with a requirement of any applicable legislation including the Public Finance Management Act and the State Tender Board Act of 1968, and
- *"unauthorised expenditure"* which means overspending of a vote<sup>b</sup> or a main division within a vote, and expenditure not in accordance with the purpose of a vote or main division.

Provision has been made for the appointment of accounting officers (in the case of departments) and accounting authorities (in the case of public entities). The responsibilities of accounting officers and accounting authorities are extensive and include, *inter alia*, ensuring that the relevant body has and maintains effective, efficient and transparent systems of financial and risk management and internal control. They are responsible for ensuring that systems of procurement and provisioning are fair, equitable, transparent, competitive and cost-effective. In addition they must prevent unauthorised, irregular and fruitless and wasteful expenditure and losses resulting from criminal conduct. The Act can in time be expected to have a dramatic effect on management practices in the health sphere, as in the rest of the Public Service.

# Skills Development Act (Act 97 of 1998) and Skills Development Levies Act (Act 9 of 1999)

These two Acts have established sector educational and training authorities (SETAs) and the means to fund their operation.<sup>10, 11</sup> SETAs are expected to manage the allocation of funds to providers of continued education for workers within a particular sector. The net result should, in time, be a sustained improvement in the skills and productivity of all workers. All health and welfare worker employers are now being registered with the Health and Welfare Sector Education and Training Authority (HWSETA). Levies to the extent of

b A "vote" in this regard is part of a budget approved by a legislature. A "main division" is a major and clearly delineated part of that budget (e.g. that for personnel).

0.5% of the payroll are contributed each month via the South African Revenue Services (SARS). This levy will increase to 1% of payroll in April 2001. After an initial call for nominations from stakeholders, the final composition of HWSETA is expected to be gazetted soon. The State will contribute to the management of the HWSETA, and both national and provincial departments of Health and Welfare have representation on the authority. However, development of the criteria and systems for paying out grants to contributing employers to fund training activities are still ongoing. In time, these Acts should contribute to the improvement of skills levels in the sector.

### The Promotion of Access to Information Act (Act 2 of 2000)

This Act was assented to on 2 February 2000 and its purpose is to give effect to the constitutional right of access to any information held by the State. It also guarantees access to any information that is held by another person and that is required for the exercise or protection of any rights.<sup>12</sup> An example might be information held by a hospital that is required by a patient in order to pursue a complaint against the owner of that hospital. The health service relevant definitions in the Act include the following:

*\* "personal information"* which refers to information about an identifiable individual, including information relating to the race, gender, sex, pregnancy, marital status, national, ethnic or social origin, colour, sexual orientation, age, physical or mental health, wellbeing, disability, religion, conscience, belief, culture, language and birth of the individual; information relating to the medical history of the individual; and the address, fingerprints or blood type of the individual.

Under the Act, which deals with both private and public bodies, access to medical records may be denied on the grounds of patient interest, to protect the privacy of a third party (a natural person, rather than a business or juristic person), or to protect research information. However, mandatory disclosure in the public interest must be made if the disclosure of the record would reveal evidence of a substantial contravention of a law, an imminent and serious public safety and environmental risk or where the public interest in the disclosure of the record clearly outweighs the possible harm.

It is anticipated that providing the necessary level of access will require a significant amount of work for health care institutions. Some leeway might be forthcoming, as the expected coming into operation of the Act in September 2000 has been delayed. However, even before the rights were tested under the Act, a case brought in terms of section 23 of the Constitution focused attention on this area. *In Korf v Health Professions Council of South Africa* the applicant wished to institute legal action against a medical practitioner.<sup>13</sup> The events that gave rise to this case had occurred in a provincial hospital. The hospital refused her access to the records of her treatment in the hospital (including bed records, medical records and reports, sonar and X-ray images), claiming that they had been passed to the Health Professions Council, which was entertaining possible disciplinary action against the medical practitioner (but had accepted his explanation of the events). In turn, the Council refused to allow her access to what they considered to be confidential documents. The court ruled in favour of the applicant.

# The Promotion of Equality and Prevention of Unfair Discrimination Act (Act 4 of 2000)<sup>14</sup>

This Act seeks to prevent, prohibit and eliminate unfair discrimination, and to promote equality. The foundational principles include equality, fairness, equity, social progress, justice, human dignity and freedom – all with strong resonance for health. The Preamble asserts South Africa's obligations under, *inter alia*, the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)<sup>15</sup> and the Convention on the Elimination of All Forms of Racial Discrimination (CERD).<sup>16</sup>

Among the obligations that compliance with such international conventions brings are many with direct relevance for health. Article 11(1)(f) of CEDAW declares that within the field of employment women shall have the right to protection of health and to safety in working conditions. Article 11(2)(d) obliges States Parties to take appropriate measures to provide special protection to women during pregnancy in types of work proved to be harmful to them. Relevant too is the following from Article 12:

- "1. States Parties shall take all appropriate measures to eliminate discrimination against women in the field of health care, in order to ensure, on a basis of equality between men and women, access to health care services, including those related to family planning.
- 2. Notwithstanding the provisions of paragraph 1 of this article, State Parties shall ensure to women appropriate service in connection with pregnancy, confinement and post-natal period, granting free services where necessary, as well as adequate nutrition during pregnancy and lactation."

Article 14(2)(b) provides that women in rural areas shall have the right to have access to adequate health care facilities, including information, counselling and services in family planning. Further, Article 14(2)(h) provides that rural women shall have the right to enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply and communication.

In CERD, Articles 5(e) (iii) and (iv) oblige State Parties to eliminate racial discrimination in all its forms and to guarantee the right of everyone, without distinction as to race, colour or national or ethnic origin, to equality before the law, notably in the enjoyment of the right to housing and the right to public health, medical care, social security and social services.

Relevant definitions in the Act are the following:

- "age" which includes the conditions of disadvantage and vulnerability suffered by persons on the basis of their age, especially advanced age
- *"HIV/AIDS status"* which includes actual or perceived presence in a person's body of the Human Immunodeficiency Virus (HIV) or symptoms of Acquired Immune Deficiency Syndrome (AIDS), as well as adverse assumptions based on this status; and
- *"pregnancy"* which includes any condition related to pregnancy, intended pregnancy, potential pregnancy or termination of pregnancy.

Specific provisions have been enacted dealing with the prohibition of unfair discrimination on the ground of race, gender and disability. The Act prohibits unfair discrimination in the provision or continued provision of inferior services to any racial group, compared to those of another racial group. It also prohibits the denial of access to opportunities, including access to services. The prohibition of unfair discrimination on the ground of gender also includes gender based violence, female genital mutilation, discrimination on the ground of pregnancy, and limiting women's access to social services or benefits such as health, education and social security. The Act makes provision for cases brought not only by individuals but by any person acting as a member of, or in the interests of, a group or class of persons (class action). Also included, in a schedule to the Act, is an illustrative list of unfair practices in certain sectors. These include the following with direct health applications:

- Subjecting persons to medical experiments without their informed consent
- Unfairly denying or refusing any person access to health care facilities or failing to make health care facilities accessible to any person
- Refusing to provide emergency medical treatment to persons of particular groups identified by one or more of the prohibited grounds
- Refusal to provide reasonable health services to the elderly
- Failing to reasonably accommodate the special needs of the elderly
- Unfairly disadvantaging a person or persons, including unfairly and unreasonably refusing to grant services, to persons solely on the basis of HIV/AIDS status.

Section 34 sets out a directive principle on HIV/AIDS. It notes that a person's HIV/AIDS status can be the basis for considerable discrimination and therefore instructs the Minister of Justice and Constitutional Development to urgently consider whether such status should be listed as one on which discrimination is prohibited. It is important to note though that the Act does cover the same ground as the Employment Equity Act (Act 55 of 1998). The Employment Equity Act prohibits unfair discrimination, directly or indirectly, against an employee, in any employment policy or practice, on the grounds of HIV status. Further, testing of an employee to determine that employee's HIV status is prohibited unless such testing is determined to be justifiable by the Labour Court. These rights have also been confirmed in recent Constitutional Court decisions involving the national airline, as is explained below.

### The Local Government: Municipal Structures Amendment Act (Act 33 of 2000)

As was covered extensively in the previous edition of the Health Review, progress in establishing a National Health System based on Primary Health Care (PHC) principles and delivered in accordance with the precepts of a District Health System (DHS) will require an over-arching new Health Act. Among the anomalies that such an Act would be required to address is the current constitutional allocation of responsibility for health. While the Constitution allocates "health" as a competency for national and provincial spheres of government, the exact wording used with respect to the local sphere is "municipal health services" (MHS). How this service differs from that provided for by the other two spheres is not clearly stated. The same wording was used, without explanation, in the Municipal Structures Act (Act 117 of 1998). When the Amendment Bill was tabled, there were initial indications that an attempt would be made to define MHS. In order to protect future municipalities from being required to render an expensive and expansive basket of services (perhaps closer to the ideal of comprehensive PHC services), arguments were advanced that MHS be defined narrowly as being equivalent to environmental health services (EHS), as a minimum. Any additional services would therefore have to be performed on behalf of the provincial sphere of government, as delegated or agency-based services, funded by

provincial grants rather than out of the local government equitable share or locally-raised revenue. This view received support from those perturbed by the possibility of "unfunded mandates". The opposing argument, made most strongly by Health Department officials and advisors, was that defining MHS as EHS (largely non-personal services) would entrench the very fragmentation of the health service that the DHS was meant to overcome. This latter view seemed to prevail, at least for the moment. Section 84 of the principal Act was therefore only slightly amended, still referring to district municipalities rendering MHS (with the ability to authorise a local municipality to perform such functions within its area).<sup>17</sup> The possible transitional arrangements, including the transfer of staff from one authority to another, remain rather murky at present. However, an urgent attempt is being made to identify those local municipalities with capacity to deliver health services (and hence with existing staff), and to arrange the appropriate delegations by the Minister ahead of the 5 December 2000 local government elections.

# **Constitutional rulings**

As South Africa's new legal environment settles down, rulings by the Constitutional Court will increasingly help to interpret the rights and obligations imposed by the law. Three recent rulings have health-related implications. The first is yet another step in the long-running saga of medicines legislation, the second established important rights for people living with HIV/AIDS and the last, as with *Soobramoney*, affirmed the obligation of the State to progressively ensure that the rights of citizens are met.

### The SAMMDRA decision

The previous edition of the Health Review reported on the precipitate promulgation of the South African Medicines and Medical Devices Regulatory Authority Act (Act 132 of 1998), usually referred to as the SAMMDRA Act.<sup>5, 18</sup> This had occurred without the necessary regulations or schedules being in place, thus rendering the entire medicines regulatory system inoperative. An initial application for the reversal of the promulgation notice was refused by the Pretoria High Court. On appeal by one of the applicants, the Pharmaceutical Manufacturers' Association (PMA), a full bench of the High Court had found that the original notice of promulgation was indeed invalid and could therefore be considered never to have taken place. This decision was in turn subjected to review by the Constitution Court and upheld, albeit for different reasons.<sup>19</sup> The result of the decision of the Constitutional Court means that the Medicines and Related Substances Control Act (Act 101 of 1965) is still in force. The narrow import of course is that progress in this area of law is no further forward than it was when the contested Medicines and Related Substances Control Act (Act 90 of 1997) was passed. The court action that has halted promulgation of that Act is slowly reaching some finality. A replying affidavit from the complainants was received in July 2000, and a court date was expected to be announced in October.

Whenever public bodies, authorities or organs exercise power, the exercise of such public power is subject to control by the courts. In the SAMMDRA case it was the exercise of power by the President and the Minister of Health that was controlled by the Court. The judge noted that administrative law is an example of the separation of powers (i.e. the separation of powers between the legislature, the executive and the judiciary), under which courts regulate and control the exercise of public power by the other branches of government. This is founded on constitutional principles that define the authority of each branch of government, their interrelationship and the boundaries between them. Furthermore, control is vested in the courts under the Constitution, which defines the role of the courts, their powers in relation to other arms of government and the constraints subject to which public power has to be exercised. In essence the Court found that the President's actions failed the test for rationality, as they could not rationally be related to the purpose for which the power (in this case the power to bring an Act of Parliament into effect) was given. The important precedent created though went beyond the confines of health or health legislation, by establishing the principle that the Constitutional Court could in fact set aside a decision by the President to bring an Act of Parliament into force.

### The SAA decision

In *Hoffman v South African Airways* (decided on 28 September 2000) the Constitutional Court had to consider the constitutionality of the South African Airways' practice of refusing to employ as cabin attendants people who are living with HIV. Although the High Court had initially agreed with the arguments put forward by SAA, this decision was set aside by the Constitutional Court. The court held that SAA was bound by the provisions of the Bill of Rights. It concluded that SAA had discriminated against Hoffman because of his HIV status and that neither the purpose of the discrimination nor the objective medical evidence justified such discrimination.

### The Grootboom decision

The Constitution of South Africa provides that "everyone has the right to have access to adequate housing " (section 26(1)) and that "every child has the right to basic nutrition, shelter, basic health care services and social services" (section 28(1) (c)). The Constitutional Court was asked to interpret these rights in the case of *The Government of the Republic of South* Africa v Grootboom (decided on 4 October 2000). This case concerned a group of persons who lived in appalling conditions while waiting in the queue for their turn to be allocated low-cost housing. They moved, but in doing so illegally occupied private land earmarked for formal low-cost housing. They were evicted and left homeless. Mrs Irene Grootboom and the other persons who were rendered homeless applied to the High Court for an order requiring the government to provide them with adequate basic shelter or housing until they obtained permanent accommodation. The State was ordered to provide those affected persons who were children (and their parents) with shelter. The High Court concluded that tents, portable latrines and a regular supply of water would constitute the bare minimum. All the spheres of government responsible for housing challenged the correctness of the order of the High Court. Although the Constitutional Court set aside the order of the High Court they declared that section 26(2) of the Constitution requires the State to devise and implement, within its available resources, a comprehensive and co-ordinated programme progressively to realise the right of access to adequate housing. It pointed to the Accelerated Managed Land Settlement Programme as an example of the means that the State must use to provide relief for people who have no access to land, no roof over their heads and who are living in intolerable conditions or crisis situations.

### **Concluding remarks**

The 1999 Health Review raised the issue of the health regulatory environment becoming unstable.<sup>5</sup> Two issues were highlighted: those affected by the laws having difficulty keeping track of rapid changes and perhaps resorting to resistance rather than accommodation to the new, and the real risks of an aggressive and rapid transformatory programme being

challenged as a result of inadvertent technical or procedural mistakes. This year would seem to have provided proof that both responses are indeed being encountered. Measures that have sought to fundamentally alter the operation of a system (such as the Medical Schemes Act) have been actively resisted. Medicines legislation remains effectively untouched as a result of repeated challenges and procedural errors. However, the basic lesion remains the lack of an over-arching piece of national legislation – the National Health Act. While there were positive noises in the early months of year, the expected Bill did not materialise. Perhaps once the local government transformation process is complete, and the December 2000 local government elections have been held, the political space necessary to grasp the nettle will have been created. It is promising that the Minister's Special Advisor has called for a national summit to consider the statutory definition of "municipal health services" and to plan the process of implementing that definition.<sup>e</sup> This impasse has already been mentioned in too many Health Reviews. For it to feature again in the 2001 Review would be tragic.

c An HST-hosted internet discussion forum has been created to continue the debate around local government provision of health services (mailto: localgov@lists.healthlink.org.za)



# Health Status and Determinants

South Africa is undergoing a demographic transition with declining fertility. However, compared with other middle income countries, the health status is poor. This is due to a triple burden of disease from a combination of poverty-related diseases, emerging chronic diseases and injuries. The HIV/AIDS epidemic has exacerbated this in recent years resulting in increased child and young adult mortality and reduced life expectancy. It is estimated that in the next 10 years 6 million South Africans will die from AIDS. However, even at this late stage of the epidemic, there is scope for reducing the impact. There is an urgent need for people to change their behaviour, the management of STD's needs to be strengthened and the transmission of HIV from mother to child needs to be prevented. Anti-retroviral drugs need to be made affordable in the public sector and it is essential to develop appropriate guidelines for the treatment of opportunistic infections.

Much could be done to reduce the overall burden of disease through health promoting and disease preventing strategies. These need to target the youth and focus on promoting safe sexual practices, preventing smoking, alcohol abuse and violence. Secondary prevention strategies are also important and the limited control of hypertension suggests that there is much room for improvements in primary care.

Extensive inequalities in health status by population group, urban/rural area and province have been observed. Social interventions are necessary to overcome the extensive levels of poverty and unemployment in South Africa. While some of the disparities in health reflect the underlying economic inequalities, the health sector needs to find ways to redress these inequalities.

The national epidemiological database has clearly improved over the last few years. Government needs to continue its efforts in this regard. In particular, mortality statistics need to be compiled more rapidly and the disease notification system needs attention. It is timely for South Africa to undertake a national burden of disease study to assess the coherence of the different data sources and provide consistent estimates of the health of the nation and subgroups.

### Debbie Bradshaw Burden of Disease Research Unit, Medical Research Council

Kefiloe Masiteng Directorate: District Health Systems National Department of Health

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Nadine Nannan Burden of Disease Research Unit, Medical Research Council





### Introduction

At the end of the second millennium, the health of the world's populations serves to highlight the profound divergence between the rich and the poor. The most recent assessment of health of 191 countries shows that, in general, richer countries have higher life expectancies than poor countries.<sup>1</sup> The gap in life expectancy is of the order of 40 years. A detailed analysis of the burden of disease at a global level has shown that the poorest 20% of the world's population experienced higher death rates than the richest 20%<sup>2</sup> and it was estimated that 70% of the deaths amongst the poor could be considered to be an excess if they had experienced the same death rates as the rich. In particular, more than 90% of the deaths due to infectious diseases and maternal causes and 32% of the deaths due to non-communicable diseases could be considered excess.

This chapter aims to examine the trends in health status and determinants within the last decade in South Africa and also focus on equity. Previous reports have shown that South Africa is undergoing a health transition and that we face the challenge of the simultaneous triple burden of infectious diseases related to poverty, emerging chronic diseases and injuries.<sup>3, 4</sup> In the last few years this has been compounded by the HIV/AIDS epidemic which has spread extremely rapidly and is likely to double overall mortality rates, undermine gains in child survival and halve life expectancy over the next few years.<sup>5</sup> The scope of this analysis has been enhanced by the improving epidemiological database. This includes the census and vital registration data, the Demographic and Health Survey (SADHS 1998),<sup>6</sup> the notification system, the cancer registry and the newly formed Injury Surveillance System. Although some of the data sets are yet to achieve the desired level of accuracy and coverage, they already provide useful information about the health of the nation.

# Population

The 1996 Census estimated a total population of 40.1 million after adjustment of the post enumeration survey.<sup>7</sup> The mid-year estimates for 1999 show there has been an increase to 43.1 million people based on annual growth rates of 2.4% for males and 2.0% for females.<sup>8</sup>

There are slightly more females (51.7%) than there are males (48.3%) in South Africa and the population remains youthful with 34% under 15 years of age and 7% over the age of 60. The HIV/AIDS epidemic will have an impact on the population age-sex structure and population projections to the year 2009, using the ASSA600<sup>9</sup> demographic model calibrated to reproduce the ante-natal clinic prevalence results, are shown in Figure 1. The population pyramid illustrates the expected loss of young adults and children due to the epidemic. The majority of premature deaths will occur in the prime productive years of young adults. It is expected that the impact of AIDS will be greater on women and there will be a marked increase in the number of orphans.



Figure 1: The age and sex distribution of the population in 2009 based on ASSA600

### Life Expectancy

There are various estimates of life expectancy. Statistics South Africa estimates that the life expectancy in 1996 was 52.1 years for men and 61.6 years for women.<sup>8</sup> The MRC estimates that as a result of the AIDS epidemic, life expectancy has dropped from 63 in 1990 to 57 in 2000.<sup>10</sup> It is expected to drop to about 40 years by 2010, bringing it to amongst the lowest in the world. This is the case for all the countries in the Southern African region, which has thus far experienced the worst spread of the HIV/AIDS epidemic.

### Fertility

Fertility is the driving force of a population's rate of growth. Analysis of recent data shows that overall fertility has been steadily declining in South Africa over the last two decades. Data from the SADHS 1998 indicate that women now expect to have an average of 2.9 births during their lifetime.<sup>6</sup> South African women, on average, bear the lowest number of children of any country in sub-Saharan Africa. Differences between subgroups show that fertility rates are correlated with education level, urban/rural residence, province and population group. The Total Fertility Rate (TFR) for each province is shown in Figure 2. Gauteng and the Western Cape represent low fertility and the Northern Province and Eastern Cape represent high fertility.

Source: Dorrington RE, 1999.9

### Figure 2: Total fertility rate by province



Source: South African Demographic and Health Survey.<sup>6</sup>

According to the survey, the Free State has the lowest TFR at 2.2 children per woman. Table 1 shows a provincial comparison of the survey results with an analysis of the fertility questions in the 1996 Census.<sup>11</sup> The results suggest that the level obtained by the SADHS for the Free State and the North West are too low. There is however, good agreement in the level of fertility for the remaining six provinces.

### Table 1: Total fertility rates based on the 1996 Census and the 1998 SADHS, by province

Province	Comourd	TFR	
	Census	SADHS	
Eastern Cape	3.5	3.5	
Free State*	2.8	2.2	
Gauteng	2.4	2.3	
KwaZulu-Natal	3.1	3.3	
Mpumalanga	3.2	3.1	
Northern Cape	2.7	2.7	
Northern Province	3.6	3.9	
North West*	2.8	2.4	
Western Cape	2.4	2.3	

\* Indicates province where the SADHS estimate is considered too low.

Source: a. Dorrington et al.11

b. South African Demographic and Health Survey.<sup>6</sup>

Detailed pregnancy history information suggests that all age-specific fertility rates over the last fifteen years have been declining as illustrated in Figure 3. Although it has been thought that teenage pregnancy was a growing problem, new information about adolescent fertility found the birth rate for teenagers of 15-19 years to be 116 per 1 000 women annually in mid-1988 and to have decreased to 78 births per 1 000 women by mid-1996. Declining trends in teenage fertility are also confirmed by the 1996 Census data, although it is difficult to be sure of the factors to which this can be attributed. The rate of teenage births is comparable to that in the USA and they are both high when compared with other developed countries.

### Figure 3: Trends in age specific fertility rates



Source: South African Demographic and Health Survey.<sup>6</sup>

### Migration and urbanisation

According to the 1996 Census, Gauteng and the Western Cape are largely urban while the Northern Province, North West and Eastern Cape are largely non-urban.<sup>7</sup> Inter-provincial migration patterns (1992-1996) show that Gauteng, the Western Cape and Mpumalanga experience net gains of people who have entered, while the remaining 6 provinces, particularly the Eastern Cape and Northern Province experience net losses.<sup>12</sup> The motivating force behind this movement of people is the search for employment opportunities. The flow of young men and young women leaving the less developed provinces for those with more industry has skewed provincial demographic profiles. The effect of persistently high outmigration has left those rural areas with disproportionately large numbers of children, households headed by women and a deficit of young men.<sup>13</sup>

Since 1994 and the normalisation of relations between South Africa and her neighbours, there has been an increasing number of legal and illegal immigrants.

### Ageing

Just over 5% of the population is over the age of 65 years, accounting for nearly 2 million people.<sup>13</sup> The largest number of elderly is African, the majority of whom live in rural areas. Very few elderly live in homes or institutions (0.1%). Just over half of the elderly (51%) have had no formal education. A large number of elderly live in poor conditions without basic facilities: 13% live in homes with no toilet and 25% without access to any water. According to the Census, 23% of the elderly reported that they were disabled and this was highest amongst Africans. The most common disability was loss of sight, which accounted for 47%, and physical disability, which accounted for 20%.

A national Policy on Ageing was developed in 1995. This mapped out expectations and a shift of resources from residential services to community care. However, Eckley<sup>14</sup> has recently argued that care for the aged has disintegrated and has called on government and NGO's to build an integrated care and support network for the aged. The issue of Elder Abuse is under investigation and the Portfolio Committee on Welfare and Population Development has been hearing evidence. The impact of HIV/AIDS will be felt particularly by the elderly who are poor, as they experience not only the death of their children but also the loss of their economic support through the 'orphan granny/grandpa' phenomenon, in which an elderly person loses their main bread-winner or care-taker.

### Socio-economic development

The human development index (HDI) is a comprehensive indicator that combines economic development, life expectancy and levels of education to give a broad measure of socioeconomic development. Estimates of the HDI for selected countries, based on the UNDP's life expectancy,<sup>15</sup> are shown in Table 2, alongside some health-related indicators.<sup>1</sup> The data show South Africa's relative wealth in the Southern African region. Comparing South Africa with other medium development countries, our Gross Domestic Product (GDP) is higher than the average of the medium development countries (PPP \$3390) but the ratio of the GDP for the richest compared to the GDP for the poorest is much higher than the average ratio of 6.8. Life expectancy is lower than the average of 67.5 years but the human development index is higher than the average of 0.67. Our health expenditure is high in relative and absolute terms but it is very skewed by the high spending in the private sector that serves a minority of the population.

# Table 2: Comparison of income, health expenditure, life expectancy and Human Development Index for selected countries

Country	Per capita GDP (PPP\$)ª								
	Average	Average for poorest 20%	Ratio of richest 20% to poorest 20%	% expenditure on health <sup>b</sup>	Per capita expenditure on health US\$ <sup>b</sup>	Life expectancy 1995ª	HDI 1995°		
South Africa	4334	516	19.1	7.1%	268	64.1	0.717		
SADC Countries									
Botswana	5611	-	-	4.2%	132	51.7	0.678		
Lesotho	1290	137	21.5	5.6%	28	58.1	0.469		
Mozambique	959	-	-	5.8%	5	46.3	0.281		
Namibia	4054	-	-	7.5%	153	55.8	0.644		
Swaziland	2954	703	8.6	3.4%	49	58.8	0.597		
Zimbabwe	2135	420	15.6	6.2%	46	48.9	0.507		
Other developing countries									
Brazil	5928	578	32.1	6.5%	319	66.6	0.809		
Cuba	3100	-	-	6.3%	131	75.7	0.729		
Thailand	7742	1778	9.4	5.7%	133	69.5	0.838		
Tunisia	5261	1460	7.8	5.4%	111	68.7	0.744		
Mexico	6769	1437	13.4	5.6%	240	72.1	0.855		
Philippines	2762	842	7.4	3.4%	40	67.4	0.677		
Sri Lanka	3408	1348	4.4	3.0%	25	72.5	0.716		

Source: a. Human Development Report 2000<sup>15</sup>

b. World Health Report 20001

A review of poverty in South Africa<sup>16</sup> shows that a large proportion of the population is living in poor conditions and that poverty is highly correlated with population group. It is estimated that 61% of Africans, 38% of Coloureds, 5% of Indians and 1% of Whites fall below the poverty line.<sup>8</sup>

Despite population growth, there has been a decline in the number of jobs in South Africa from 5.2 million in 1996 to 4.8 million in 1999. The official unemployment rate has risen from 19.3% in 1996 to 23.3% in 1999.<sup>16</sup> Using the expanded definition of unemployment that does not require that the person actively sought work in the last 4 weeks, the unemployment rate increased from 33.0% in 1996 to 36.2% in 1999.<sup>16</sup> There are marked differences between population groups and in 1999, 44% of Africans, 24% of Coloureds,

20% Indians and 7% of Whites were unemployed. African women in rural areas have the highest level of unemployment of 59%.

In terms of basic facilities (Table 3), data from the October Household Survey<sup>17</sup> of 1999 indicates that 11% of the South African population lives in traditional type of housing and the highest proportion of such households occurs in the Eastern Cape (32%) while the lowest proportions are in Gauteng, Western Cape and Northern Cape at less than 1%. Nearly 1 in 6 of the population live in shacks. The highest proportion is in Gauteng (25%), succeeded by the Free State (19%).

Access to piped water inside the home appears to have got worse in the last few years and has dropped from 45% to 39%. However, this is likely to be a result of the increase in the number of households and the fact that government policy has focused on the provision of piped water, not necessarily inside the home. The proportion of households with access to piped water has increased from 82% in 1996 to 87% in 1999.<sup>16</sup> The percentage of households without a toilet was 12% in 1996 and has decreased to 10% by 1999, indicating a slight improvement in access to sanitation. Lastly, 22% of the households in the survey reported hunger by the end of 1999. The highest proportion was identified by Mpumalanga (32%), succeeded by Eastern Cape (31%). Overall, it is clear that there are marked variations between the provinces and that the Eastern Cape, Free State, (where many data sources are showing that there is extensive poverty) and the Northern Province tend to be the poorer provinces while the Western Cape and Gauteng are the more developed provinces.

Province	House Type 1999 (N = 10 851 376)		% households with piped water inside		% households without toilet		% households reporting hunger
	% traditionalª	% shackª	1996⁵	1999ª	1996⁵	1999ª	<b>1999</b> °
Eastern Cape	31.9	12.1	24.7	23.4	29.1	25.1	30.9
Free State	7.0	19.4	40.6	29.9	8.8	5.3	23.8
Gauteng	0.2	24.7	67.7	58.8	2.5	0.8	14.7
KwaZulu-Natal	18.6	19.3	39.8	34.6	15.2	12.7	26.8
Mpumalanga	8.7	17.5	37.3	27.6	8.7	3.5	31.9
Northern Cape	0.9	12.9	50.0	48.1	10.7	10.7	15.1
Northern Province	15.2	6.2	17.8	12.1	21.2	18.8	15.5
Northern West	1.7	12.1	30.6	21.6	6.4	5.7	22.5
Western Cape	0.2	15.9	76.4	76.7	5.4	3.8	15.0
South Africa	10.9	16.9	44.7	38.8	12.4	9.7	21.9

### Table 3: House type, access to water and sanitation and food security, by province, 1996-1999

Source: a. 1999 October Household Survey<sup>17</sup>

b. 1996 Census<sup>7</sup>
# Child Health

# Child mortality

Under-5 mortality, reflecting the probability of a child dying before reaching the age of 5 years, is an important indicator of child health. The SADHS 1998 estimated that the under-5 mortality rate was 61 per 1 000 births over the preceding 10 years.<sup>6</sup> Comparison of the provincial estimates from different sources revealed that the SADHS estimates for three provinces required some adjustment and these are shown in Figure 4 and Table 4. It can be seen that the highest child mortality was experienced in the Eastern Cape where the rate of 80.5 per 1 000 was double that of the lowest figure of 39 per 1 000 in the Western Cape. The rates for the Free State and KwaZulu-Natal were also high.



# Figure 4: The under-5 child mortality rate by province, 1994-1998

Source: South African Demographic and Health Survey<sup>6</sup>

The infant mortality rate (IMR) is measured as the number of deaths among infants under one year of age per 1 000 live births. It is universally accepted as a measure of the community health status as well as an indicator of child health. The 1998 IMR was 45 per 1 000 live births according to the SADHS.<sup>6</sup> Provincial and population group estimates are shown in Table 4.

Province	Infant Mortality Rate (per 1 000 live births)	Under-5 Mortality Rate (per 1 000 live births)	
Eastern Cape	61.2	80.5	
Free State	53.0	72.0	
Gauteng	36.3	45.3	
KwaZulu-Natal	52.1	74.5	
Mpumalanga	47.3	63.7	
Northern Cape	41.8	55.5	
Northern Province	37.2	52.3	
North West	42.0	56.0	
Western Cape	30.0	39.0	
Population Group			
African	47.0	63.6	
Coloured	18.8	28.2	
Indian	*	*	
White	11.4	15.3	
South Africa	45.0	61.0	

Table 4: Infant and child mortality by province and population group, 1994-1998

\* Denotes a figure based on fewer than 250 cases that has been suppressed.

Source: South African Demographic and Health Survey<sup>6</sup>

In the last decade, the disparities between the population groups have been getting narrower. Based on child mortality estimates from the 1996 Census, the relative risk of dying for Africans was twice as high as for Whites in 1995 compared with being 4 times as high during the earlier period around 1990 (Table 5). The mortality rate for Coloured children was more that twice as high as that for Whites in 1990 and was only 1.3 times as high in 1995. The reduced differential is possibly a combination of declining mortality among Africans and Coloureds and a slight increase in child mortality experienced by Whites.<sup>18</sup>

### Table 5: The relative risk of a child dying before the age of 5 in 1990 and 1995

Population Group	Relative Risk 1990	Relative Risk 1995	
African	3.9	2.0	
Coloured	2.2	1.3	
Indian	1.1	1.0	
White	1.0	1.0	

An understanding of the causes of death is important in order to reduce child mortality. There have been deficiencies in the cause of death statistics as not all deaths were registered and some did not have adequate information on the cause.<sup>19</sup> However, government has made extensive efforts to improve the collection of death statistics and the top causes of death reported for children in 1995.<sup>20</sup> The most recent statistics available are shown in Figure 5. Since only 75% of deaths were registered in 1995,<sup>18</sup> it is not known what biases there are in the reported cause of death pattern. The data suggest that the major causes of death during infancy are conditions that occur during the perinatal period (22%), low birth weight (20%) and diarrhoea (16%). In the case of children aged 1-4 years, the most common cause of death is injury (24%), followed by diarrhoea (20%), malnutrition (13%) and lower respiratory infections (9%). In 1995, AIDS accounted for 3.2% and TB for 3.1% of the deaths of children aged 1-4 years. This is likely to have changed in the more recent years.





\* No later data was available at the time of writing, and the top 10 causes of death for this group has almost certainly changed in the intervening years (particularly due to HIV/AIDS). However, this data is presented as a baseline reference for future use.



Figure 5 (contd): The top 10 causes of death reported for children in 1995\* (children 1 - 4 years)

\* No later data was available at the time of writing, and the top 10 causes of death for this group has almost certainly changed in the intervening years (particularly due to HIV/AIDS). However, this data is presented as a baseline reference for future use.

The pattern of cause of death is different for young infants. Figure 6 shows the most common causes of death reported for neonates in 1995. It can be seen that the majority of the reported deaths occur during the first week of life and perinatal conditions such as low birth weight or short gestation are the major cause of death. The introduction of perinatal audit systems into hospitals will be an important strategy to reduce mortality and also improve the information regarding the causes of death in the young babies.

### Figure 6: The top 10 causes of death reported for neonates in 1995\*



\* No later data was available at the time of writing, and the top 10 causes of death for this group has almost certainly changed in the intervening years (particularly due to HIV/AIDS). However, this data is presented as a baseline reference for future use.

The national death statistics do not provide details about the cause of death in the case of injuries. The recently established National Injury Mortality Surveillance system based at

13 sentinel state mortuaries in 5 provinces provides details for a sample of fatal injuries.<sup>21</sup> Since the mortuaries are urban-based, the system does not represent rural areas. The data for 1999 shows that deaths due to injury are more common among boys than girls and it can be seen from Figure 7 that traffic accidents are the most common cause of injury deaths in children. This is followed by drowning for boys and burns for girls.





# Trends in child mortality

Figure 8 shows that infant mortality was decreasing in the early 1990s and then began to rise rapidly in 1995. This resulted in a similar trend in the under-5 mortality. The ASSA600 model projects that if mother to child transmission of HIV is not prevented, child mortality rates will double in the next 10 years.<sup>9</sup> This will largely be due to increases in the deaths of 1-4 year old children.



Figure 8: Child Mortality trends

Source: South African Demographic and Health Survey<sup>6</sup>

# **Nutritional status**

The national Food Consumption Survey<sup>22</sup> collected baseline data in 1999 to inform guidelines for food fortification as well as the development of appropriate nutrition education material for South African children. The results of the survey have revealed that nearly one out of five children aged 1-9 years is affected by stunting, which is by far the most common nutritional disorder in this country. The condition was found to be more prevalent on commercial farms and in tribal and rural areas as compared to urban areas. Stunting decreases with age and the highest prevalence was found among children aged 1-3 years. The prevalence of stunting is related to maternal education and the less education the mother has, the higher the chances that her child will be stunted. The prevalence of stunting was highest in the Northern Province (31%), Mpumalanga and Free State (27%), succeeded by North West (26%), Northern Cape (25%) and KwaZulu-Natal (24%). Table 6 shows the prevalence of stunting among children aged 1-6 years in 1999, compared with the prevalence in a comparable but slightly younger age group, 6 months - 5 years in 1994. There are some strange anomalies that suggest that the new survey has not been weighted to take the over-sampling of high risk areas into account during the analysis. For example, it is very unlikely that the extent of stunting in Gauteng could change from 12% to 22% in a 5 year period.

Province	1994 6 mth - 5 years of ageª %	1999 1 - 6 years of age <sup>b</sup> %	
Eastern Cape	28.8	21.5	
Free State	28.7	26.7	
Gauteng	11.5	21.7	
KwaZulu-Natal	15.6	23.7	
Mpumalanga	22.8	27.4	
Northern Cape	34.2	24.5	
Northern Province	20.4	30.5	
North West	24.7	26.2	
Western Cape	11.6	14.5	
South Africa	22.9	23.3	

Table 6:	The prevalence of stunting in young children by province
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Source: a. Vit A Survey<sup>25</sup>

b. Food Consumption Survey<sup>22</sup>

# **Child Morbidity**

# Measles

In recent years, the incidence of measles has declined dramatically following the national measles campaigns. This also resulted in a marked reduction in the number of notified deaths due to measles. The incidence of measles notification system was 2.3 per 100 000 population in 1998. The reported number of measles cases in 1999 was 385.<sup>23</sup> This implies an incidence of less than 1 per 100 000 in 1999. It is not clear whether the statistics for 1999 are reliable as problems in the system have been noted.

Immunisation coverage over the last 5 years has been stable at just above 60%. National targets have been set to improve immunisation to reach the goal of 90% coverage and the Expanded Program of Immunisation (EPI) has conducted provincial reviews and campaigns to establish a stronger immunisation program. However, it can be seen from Tables 7 and 8 that only the measles immunisation status has improved and there are wide provincial variations in the overall immunisation status. The Eastern Cape and KwaZulu-Natal have particularly low levels of immunisation.

	1994ª	1998 <sup>b</sup>	
BCG	94.8	96.8	
DPT 1	91.1	93.3	
DPT 2	86.6	86.2	
DPT 3+	73.4	76.4	
OPV 1	89.1	91.0	
OPV 2	84.5	82.7	
OPV 3+	71.5	72.1	
Measles	76.4	82.2	
All	74.4	63.4*	

## Table 7: The proportion of immunised children 12 - 23 months old in 1994 and 1998

\* "All" means a child has received BCG, 3 doses of DPT and polio, and measles, but not necessarily hepatitis B.

Source: a. Vit A Survey<sup>24</sup>

b. South African Demographic and Health Survey<sup>6</sup>

## Table 8: The proportion of fully immunised children 12 - 23 months old, 1998

Province	% children fully immunised	
Eastern Cape	52.6	
Free State	67.8	
Gautena	72 4	
KwaZulu Natal	40.5	
	49.0	
Mpumalanga	67.2	
Northern Cape	80.8	
Northern Province	74.9	
North West	60.6	
Western Cape	64.2	
South Africa	63.4	

Source: South African Demographic and Health Survey<sup>6</sup>

The ultimate goal of immunisation is to reduce the incidence or eradicate diseases and particular efforts, in line with the global initiative, have been put into the eradication of polio. No cases of polio were reported in 1998 and 1999, although a total of 98 cases of Acute Flaccid Paralysis were notified in 1998 and 81 in 1999. Not all of these were tested however, so although it is highly unlikely that there were any cases of polio, it is not certain.

# **Adolescent Health**

# Teenage pregnancy and sexual health

South Africa's severe HIV epidemic affects young people disproportionately. Of the approximately 4 million South Africans now infected with HIV, over half are youth aged 15-24.<sup>25</sup> According to the ante-natal survey, the prevalence of HIV in the 15-19 year age group was 16% in 1999.<sup>26</sup> The steep increase in this age group from 12.7% in 1997 to 21% in 1998, followed by a decline in 1999 warrants further investigation.

Although the teenage pregnancy rate has shown a decline in recent years (Figure 3), the rates are high. The SADHS showed that 35% of 19 year old women had been pregnant before.<sup>6</sup> As can be expected, the proportion of teenage women who have ever been pregnant increases with age (Table 9). It can be seen that teenage pregnancy is high in rural areas and highest among young African and Coloured women. Contraceptive use is fairly high amongst sexually active teenage women and two thirds reported using them, although the figure was lower in rural than in urban areas. Many young women started using contraception after their first pregnancy. Furthermore, there is low use of condoms and only 19% of the women in this age group reported that they had used a condom the last time that they had sex despite being at high risk of becoming infected with HIV. There is increasing evidence of the role of violence in sexual relations.<sup>27</sup> Although reliable data on rape and

violence against women are scarce, nearly 12% of the teenage women in the SADHS reported that they had been abused by a partner.<sup>6</sup>

Charact	teristic	% women ever pregnant	% sexually active women currently using contraceptive	% sexually active women who used condom at	% of women ever abused by partner
				last sexual encounter	
Age	15	2.4	52.9	18.6	13.4
	16	7.9	52.7	18.7	12.7
	17	14.2	53.6	24.8	6.8
	18	24.6	54.5	16.5	12.4
	19	35.1	56.3	16.2	14.2
Region	Urban	12.5	62.4	25.5	13.6
	Non-urban*	20.9	46.9	11.6	10.4
Populat	ion group				
	African	17.8	53.8	17.0	11.4
	Coloured	19.3	60.3	16.3	16.4
	Indian	4.3	53.3	13.3	26.7
	White	2.2	61.1	64.1	13.6
Total		16.4	54.5	18.5	11.9

### Table 9: The proportion of 15-19 year old women who have ever been pregnant, use contraceptives, used a condom at last sexual encounter, or ever been abused by a partner

\* Non-urban is defined by Statistics South Africa as areas without defined services

Source: South African Demographic and Health Survey (preliminary and full reports)

# Mortality

Deaths are generally rare amongst adolescents. The causes of death experienced by adolescents aged 10-19 in 1995 are shown in Figure 9. Injuries are the most common cause of death, particularly for males. In the 10-14 year age group, infectious diseases including lower respiratory tract infections, meningitis, diarrhoea, septicemia and TB are the major causes of death, following injuries. In the 15-19 year age group, deaths due to injuries are even more pronounced among young men. TB is the most common disease that causes death and is, in the case of women, followed by AIDS. Epilepsy is also a major cause of death. A recent review of the health of youth<sup>28</sup> argues that gender-based violence, sexual risk taking, excessive alcohol consumption and high levels of general violence are the most important causal factors impacting on the health of the nation's youth.





\* No later data was available at the time of writing, and the top 10 causes of death for this group has almost certainly changed in the intervening years (particularly due to HIV/AIDS). However, this data is presented as a baseline reference for future use.

Note: LRI = Lower respiratory (tract) infections



### Figure 9 (contd): The top ten causes of death of adolescents by age and sex, 1995\*

\* No later data was available at the time of writing, and the top 10 causes of death for this group has almost certainly changed in the intervening years (particularly due to HIV/AIDS). However, this data is presented as a baseline reference for future use.

Note: LRI = Lower respiratory (tract) infections

**CHAPTER 4** 

Data from 890 adolescent injury deaths<sup>29</sup> collected through the National Injury Surveillance System in 1999 are shown in Figure 10. It can be seen that the pattern is different for boys and girls as homicide accounts for 51% of the injury deaths of boys and 27% for girls. In a study of risk taking behaviour of high school pupils, Flisher *et al* found male adolescents reported violent behaviour much more than female adolescents.<sup>30</sup> There is an increasing number of studies showing a link between alcohol intoxication and violence.<sup>31, 32</sup> This all suggests that health promoting strategies targeted at the youth need to encompass safe sex, alcohol abuse and violence.





Source: National Injury Surveillance System

# Adult Health

# **Reproductive Health**

Although reproductive health concerns both men and women, there is very little data about men. A high proportion of sexually active women use modern contraceptives (61%)<sup>6</sup> which is reflected by the declining trend observed in fertility rates. Use is highest among Indians (80%) and Whites (76%), then Coloureds (69%) and lastly African women with 59% using contraceptives.<sup>6</sup> The Choice of Termination of Pregnancy Act No. 92 of 1996, which enables women to terminate their pregnancies if they so choose, was enacted in 1996 with the hope of limiting unwanted pregnancies and backstreet abortions. During 1999, this service was provided in all provinces and 45 000 safe terminations were performed.<sup>33</sup> However, there are still barriers making access to safe abortions difficult in some areas as there are regional disparities in the provision of such services.<sup>12</sup>

# Maternal mortality

The maternal mortality ratio (MMR) provides a measure of the risk of dying from causes associated with pregnancy and childbirth and covers deaths occurring during the period of pregnancy or within 42 days of delivery. The MMR varies enormously from less than 10 per 100 000 live births in industrialised countries to over 500 per 100 000 live births in parts of Africa.<sup>34</sup> The MMR in South Africa is 150 per 100 000 live births.<sup>6</sup> The second report of the recently established maternal mortality confidential enquiry system<sup>35</sup> showed that in 1999, non-pregnancy related infection was the greatest cause of maternal death, and that

AIDS accounted for almost 30% of the deaths. Hypertension accounted for 19%, and a further 15% of the deaths were linked to excessive bleeding. Fourteen percent were attributable to early pregnancy losses including septic abortions. Pre-existing medical conditions accounted for 8% of all maternal deaths.

# **Adult Mortality**

Even before the impact of HIV/AIDS, premature adult mortality in South Africa has been high as a result of the triple burden of poverty-related diseases such as TB and diarrhoea, injuries and emerging chronic diseases such as hypertension and diabetes. However, this pattern is rapidly being affected by the impact of AIDS. It is estimated that premature adult mortality (measured as the probability of a 15 year old dying before the age of 60) has started increasing and will reach levels close to 80% within the next ten years (Figure 11).

Figure 11: The projected premature adult mortality rate (the probability of a 15 year old dying before the age of 60)



Source: Dorrington RE, 19999

The latest cause of death statistics are based on deaths registered in 1995 and may include a bias due to under-reporting. The top 10 causes of death reported are shown in Figure 12 and reflect the pre-AIDS pattern. Deaths among men are dominated by injuries. TB is the most important infectious disease causing death in all the ages and stroke, ischaemic heart disease, diabetes and cancers play an important role in the 45-59 year age groups. Cervical cancer accounts for 1.8% and 4.1% of the deaths among women aged 15-44 and 45-59 respectively despite the policy of cervical screening.

### Figure 12: Top 10 causes of premature adult deaths reported in 1995\*



\* No later data was available at the time of writing, and the top 10 causes of death for this group has almost certainly changed in the intervening years (particularly due to HIV/AIDS). However, this data is presented as a baseline reference for future use.

Notes: LRI = Lower respiratory (tract) infection

IHD = ischaemic heart disease



### Figure 12 (contd): Top 10 causes of premature adult deaths reported in 1995\*

\* No later data was available at the time of writing, and the top 10 causes of death for this group has almost certainly changed in the intervening years (particularly due to HIV/AIDS). However, this data is presented as a baseline reference for future use.

Notes: LRI = Lower respiratory (tract) infection

IHD = ischaemic heart disease

**CHAPTER 4** 

# **Infectious Diseases**

# TB/HIV/STDs

The prevalence of HIV has been rising at an alarming rate. The ante-natal sero-prevalence survey conducted in public sector clinics has been the major surveillance mechanism and the most recent estimate of the prevalence of HIV is 22.4%.<sup>25</sup> Figure 13 shows the steady increase in prevalence since 1990. There are marked differences between provinces and KwaZulu-Natal had the highest prevalence (32.5%), succeeded by Free State (27.5%) and Mpumalanga (27.3%). Levels of HIV among pregnant women have increased in five of the provinces since 1998, whereas there were no increases over this period in KwaZulu-Natal, the Northern Cape, the Northern Province and Mpumalanga. The lowest prevalence was observed in the Western Cape (7.1%) and Northern Cape (10.1%).

# Figure 13: Trends in HIV prevalence based on ante-natal seroprevalence surveys



Source: Department of Health<sup>26</sup>

The age specific prevalence shows that women in their 20's continue to form the majority of the pregnant women infected with HIV (Figure 14). They represent more than half of the infected population in the 1999 study. AIDS will consequently have a tremendous impact on the social fabric of the country and on its economy, as this age category represents the largest portion of our economically productive class.

### Figure 14: The age specific prevalence of HIV based on ante-natal seroprevalence survey, 1998



Source: Department of Health<sup>26</sup>

The SADHS showed that women were reasonably knowledgeable about the transmission of HIV but that this has not been translated into behaviour changes that will reduce the risks of HIV infection.<sup>6</sup> From Table 10, it can be seen that knowledge about the transmission is slightly better in urban than in rural areas. The prevalence of sexually transmitted diseases, a co-factor in the spread of HIV, was high. Twelve percent of men reported that in the last 3 months they had experienced painful urination or had genital ulcers, symptoms typical of sexually transmitted diseases. In addition, only 8.4% of the women who had sex in the last year reported that they had used a condom the last time that they had sex. The proportion was 16.4% when it was a non-regular partner.

Factor	Urban	Non-urban
Knowledge of transmission		
Staying with one faithful partner	Not true - 7.8%	Not true - 9.7%
Using condoms	Not true - 5.5%	Not true - 8.5%
Avoid touching a person with HIV/AIDS	Not true - 82.8%	Not true - 61.5%
Symptoms of sexually transmitted diseases in men	9.1%	16.6%
Use of condom		
With spouse	6.5%	6.1%
With other partner	20.3%	10.6%

Source: Demographic and Health Survey<sup>6</sup>

TB is another disease of epidemic proportions in South Africa. The Department of Health declared TB a priority and introduced the Directly Observed Treatment, Short-course (DOTS) strategy to curb the problem. According to the data provided by the TB Control Programme, the incidence of pulmonary TB was 300 per 100 000 population in 1999.<sup>36</sup> While Figure 15 shows that the notification rate<sup>37</sup> has been fairly stable since the early 1990s with a sudden rise in 1999, there are concerns that the introduction of TB registers resulted in under-notification during this period and the trend should be interpreted cautiously.

# Figure 15: The TB notification rate for 1991-1999



Source: Department of Health<sup>36, 37</sup>

# Malaria

After TB, malaria is the second most common notifiable disease in South Africa. The incidence of reported malaria was 63 per 100 000 population in 1998 and doubled to 120 per 100 000 in 1999.<sup>8, 23</sup> As can be seen from Figure 16, the incidence rate of malaria showed a marked increase. Malaria is increasingly becoming an important health problem in parts of South Africa, affecting predominantly three malaria prone provinces viz. KwaZulu-Natal, Mpumalanga and the Northern Province. There are much fewer deaths due to malaria, but they display a similar trend over time (Figure 17). South Africa is one of the five African countries (with Botswana, Malawi, Swaziland and Kenya) that have had to switch from Chloroquine to Pyrimethamine and a long acting Sulphonamide as the first line antimalarial treatment.





Source: Department of Health,<sup>23</sup> using Stats SA mid-year population estimates<sup>8</sup>



Figure 17: Trend in malaria death notification rates, 1991-1999

Source: Department of Health,<sup>23</sup> using Stats SA mid-year population estimates<sup>8</sup>

# Chronic diseases and risk factors

# Cancer

The National Cancer Registry data provides minimal rates of the incidence of cancers for different sites.<sup>38</sup> The data for 1993-1995 shows that the lifetime risk of any cancer is 1 in 7 for women and 1 in 6 for men. Skin cancers, usually non-fatal, are the most common form of cancer. Table 11 reports the most common cancers by population group and sex, excluding non-fatal skin cancers. There are strikingly different patterns between the groups.

	MEN	Lifetime risk 1 in	WOMEN	Lifetime risk 1 in
African	Oesophagus	59	Cervix	34
	Prostate	61	Breast	81
	Lung	67	Oesophagus	141
	Larynx	204	Uterus	238
	Liver, bile duct	227	Lung	313
Coloured	Prostate	56	Cervix	52
	Lung	68	Breast	63
	Stomach	78	Lung	172
	Oesophagus	101	Uterus	189
	Bladder	147	Stomach	250
Indian	Colorectal	43	Breast	21
	Prostate	47	Cervix	54
	Bladder	51	Uterus	68
	Stomach	51	Colorectal	79
	Lung	62	Stomach	120
White	Prostate	14	Breast	13
	Bladder	29	Colorectal	44
	Lung	34	Melanoma	56
	Colorectal	34	Lung	61
	Melanoma	45	Cervix	93

### Table 11: The lifetime risk of the most common cancers, 1993-1995

Source: National Cancer Registry<sup>38</sup>

# **CHAPTER 4**

# Hypertension

Hypertension is the most important risk factor for stroke and is also a major risk factor for heart disease. Its proper management and control have been shown to result in reduced stroke and heart disease incidence rates. The SADHS found that 16% of adult women and 13% of adult men were hypertensive in 1998.<sup>6</sup> As expected, the prevalence increased with age. Of the hypertensive men, only 26% had blood pressures that could be considered controlled while blood pressures of 38% of women were controlled. This suggests that there is much scope for improving the diagnosis and treatment of this condition.

# Obesity

Body mass index (BMI) is the weight in kilograms divided by the square of the height in meters and is used to determine the extent of over-weight and under-weight in a population. Persons with BMI greater than 30 are regarded as obese. There has been no previous national data and the SADHS reflects a high prevalence of obesity among women (29%) and a much lower prevalence among men (9%).<sup>6</sup> Obesity is regarded as a major risk factor for diabetes, hypertension and other chronic diseases of lifestyle. Attention needs to be given to promoting healthy eating and exercise patterns which need to be established at young ages to reduce the extent of obesity.

# Work-related illness and injuries

According to the SADHS, 9% of working adult men and 5% of working adult women reported that they had experienced work-related illnesses or injuries in the previous 12 months.<sup>6</sup> The prevalence is higher in rural areas than urban areas and may reflect the migrant patterns of labour or the lack of safety measures on farms and in rural areas where labour is cheap and easy to replace. The prevalence differed by province as shown in Table 12. Work-related injuries and illness have a high prevalence and suggest inadequate implementation of safety and health regulations in the work environment.

Table 12: The prevalence of work-related illness or injuries among working adults 15 years and older

Province	Men (% )	Women (%)	
Eastern Cape	8.1	4.2	
Free State	7.3	2.7	
Gauteng	10.8	6.0	
KwaZulu-Natal	11.7	5.8	
Mpumalanga	7.4	6.6	
Northern Cape	10.0	3.6	
Northern Province	12.3	4.0	
North West	3.7	1.6	
Western Cape	9.9	6.3	
South Africa	9.4	5.1	

Source: South African Demographic and Health Survey<sup>6</sup>

# Smoking

Smoking is associated with lung cancer, cardiovascular diseases and other chronic respiratory diseases. South Africa has a very high prevalence of tobacco smoking among men (52%) and a typically lower prevalence among women (17%).<sup>6</sup> However, the prevalence of smoking does appear to have decreased after the introduction of the tobacco control measures including health warnings, restrictions on advertising and increased taxation. The Department of Health has been through a process of active intersectoral consultation which has culminated in the Tobacco Products Control Amendment Act No. 12 of 1999 which provides for the complete prohibition of advertising and promotion of tobacco products and strengthens the limitation of smoking in public places. This is in keeping with international trends to reduce the use of tobacco and its harmful effects. Some provinces have a very high prevalence of smoking (Table 13) and health promoting strategies are urgently needed in these provinces. From Figure 18, it can be seen that the prevalence among Coloured women is extremely high and this group should be targeted by health promoters.

### Table 13: The prevalence of smoking among adults 15 years and older by province

Province	Men (%)	Women (%)
Eastern Cape	46	11
Free State	44	11
Gauteng	42	12
KwaZulu-Natal	38	5
Mpumalanga	40	6
Northern Cape	58	31
Northern Province	29	2
North West	45	8
Western Cape	49	29
South Africa	42	11

Source: South African Demographic and Health Survey<sup>6</sup>



# Figure 18: The prevalence of smoking by population group and sex, 1998

Source: South African Demographic and Health Survey<sup>6</sup>

### Alcohol and substance abuse

Alcohol use is common in South Africa and 45% of adult men and 17% of adult women report that they currently consume alcohol.<sup>6</sup> It is likely that these are underestimates of the true levels due to the methodology of the survey. There are many signs that alcohol has a major detrimental effect on health in South Africa. Peden *et al* showed that almost 50% of the victims of homicide and fatal traffic collisions had raised blood alcohol levels.<sup>39</sup> The prevalence of fetal alcohol syndrome was found to be between 40.5 to 46.4 per 1 000 among school children in a farming area outside Cape Town.<sup>40</sup> The extensive use of alcohol in these farming areas is a legacy of the "dop" system which now takes the form of very easy access to wine. Parry reported that 22% of arrestees reported to be under the influence of alcohol at the time of the alleged crime for which the arrest took place.<sup>41</sup>

According to the South African Community Epidemiology Network on Drug Use (SECENDU), alcohol is the most common substance resulting in admission to treatment facilities. Treatment demand in the 3 centres under surveillance increased for cannabis and remained stable for mandrax and heroin. There was an increase in the demand for treatment resulting from cocaine use in Durban. While it remains difficult to know the extent of illegal substance abuse, there are signs that it has been on the increase in the last decade, but is secondary to the abuse of alcohol.

# Disabilities

The new Constitution has enshrined the rights of disabled people and has put the special needs of disabled people high on the government's agenda. A baseline survey of moderate and severe disability was conducted by the Department of Health in 1999.<sup>42</sup> It showed that 5.9% of the population have a moderate or severe disability and that the prevalence differs by province (Table 14). The results of self-reported disability in the 1996 Census were very similar.<sup>7</sup> The prevalence of disability among Africans is higher than other groups and the age pattern shows that there is an increase with particularly high prevalences among the elderly. Although the majority of the disabled respondents had more than one disability, the prevalence of each type of disability is shown in Table 15. Illness was the most common reported cause of disability (including high blood pressure, epilepsy, ear infection, psychiatric illness, hereditary diseases, diabetes, arthritis and polio). The survey provided information about the need for assistive devices in order to reduce the severity of the handicap and also showed that there is a clear lack of services to provide the required care in many areas.

### Table 14: The prevalence of moderate and severe disability by province and population group, 1999

Province	Prevalence (%)
Eastern Cape	8.9
Free State	5.8
Gauteng	5.2
KwaZulu-Natal	6.7
Moumalanaa	45
mpunnuungu	
Northern Cape	4.5
Northern Province	6.3
Northern West	3.1
Western Cape	3.8
Population Group	
African	6.1
Coloured	4.5
Indian	4.8
White	5.3
South Africa	5.9

Source: Baseline Disability Survey<sup>42</sup>

# Table 15: The prevalence of moderate and severe disability by type, 1999

Type of disability	Prevalence (%)	
Movement activity	2.0	
Daily living activities	1.8	
Seeing	1.7	
Moving around	1.7	
Learning	1.2	
Emotional	1.1	
Intellectual	1.1	
Hearing	1.0	
Communication	0.8	

# Conclusion

It is clear that South Africa is undergoing a demographic transition and that fertility has been dropping over the last 20 years. However, the predicted demographic trends are being altered by the AIDS epidemic which will result in a further decline in fertility, a sharp increase in young adult mortality (doubling for men and tripling for women) and a doubling of child mortality rates. It is estimated that in the next 10 years 6 million South Africans will die from AIDS and that population growth will slow down or cease. Models suggest that even at this late stage of the epidemic, there is scope for reducing the impact. There is an urgent need for people to change their behaviour and apply the government's "ABC" strategy - to abstain, be faithful and use condoms. The management of STD's needs to be strengthened and the transmission of HIV from mother to child needs to be prevented. At the same time, creative partnerships need to be created to make anti-retroviral drugs affordable in the public sector. While anti-retroviral drugs remain unaffordable, it is essential to develop appropriate guidelines for the treatment of opportunistic infections.

The AIDS epidemic has occurred on top of the already high disease burden caused by the combination of poverty-related diseases such as TB and diarrhoea, intentional and unintentional injuries and emerging chronic diseases such as stroke, heart disease and cancers. While these diseases result in substantial demands for curative health services, much could be done to reduce the burden through health promoting and disease preventing strategies. These need to target the youth and focus on promoting safe sexual practices, preventing smoking, alcohol abuse and violence. Secondary prevention strategies are also important and the limited control of hypertension suggests that there is much room for improvements.

Extensive inequalities in health status by population group, urban/rural area and province have been observed. The child mortality in the Eastern Cape is twice as high as it is in the Western Cape. Cervical cancer, a preventable cause of death, accounts for nearly 2% of deaths of women aged 15-44 years and 4% of women aged 45-59 years. From the incidence data, it can be seen that this disease occurs more often among African women. While some of these disparities in health reflect the underlying economic inequalities, the health sector needs to find ways to redress these inequalities.

The national epidemiological database has clearly improved over the last few years. However, there is an urgent need for government to produce the mortality statistics more rapidly and to improve the disease notification system. Population-based data on mental health is particularly lacking and it can only be surmised that the current economic conditions and poverty together with the social impact of HIV, have resulted in an extensive, unrecorded mental health burden. It is timely for South Africa to undertake a national burden of disease study to assess the coherence of the different data sources and provide consistent estimates of the health of the nation and subgroups.



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The funding of the public health care system in South Africa has reached a critical juncture. While much was done to improve equity in the funding of public health care in the first few years of democratic government, this trend appears to have reversed. Data on public health expenditure and human resources, from a recent National Health Accounts Project, are presented. They reveal that from 1997 there have been declines in the public per capita funding of health care, increased inequity in provincial resource allocation and even a decline in per capita funding of primary health care. Furthermore, projections of future revenue availability suggest a continued decline in per capita funding of the public health sector. All these factors should sound alarm bells for a government committed to the equitable provision of primary health care through the district health care system. In response, the chapter concludes by examining possible policy options for government to renew its attack on inequity in health funding.

> **Stephen Thomas** Health Economics Unit, University of Cape Town

Debbie Muirhead Centre for Health Policy, University of Witwatersrand

Jane Doherty Centre for Health Policy, University of Witwatersrand

Charlotte Muheki Health Economics Unit, University of Cape Town





# Introduction

The drive for equity has ostensibly been at the heart of public health sector policy since 1994.<sup>1-4</sup> Most visibly, there has been a commitment to the equitable provision of primary health care (PHC) to improve the health status of previously disadvantaged populations. The apartheid era left an appalling legacy of inequity in accessing services and inefficiency through the misallocation of resources to inappropriate activities. Subsequent attempts to redress these entrenched inequities have had to battle with the effects of the introduction of fiscal federalism and current macro-economic policy. This had led some authors to suggest that the drive for equity has stalled.<sup>5-6</sup>

This chapter reviews recent progress toward equity in health financing and expenditure and likely prospects for the future. The particular focus is on the expenditure in the public health sector where spending should match stated government priorities and, in particular, promote equity. The data are drawn from the draft public sector report<sup>7</sup> of the recent National Health Accounts (NHA) project conducted in South Africa<sup>a</sup> (this is described briefly in Section B). This chapter focuses on changes in overall spending in the public health care sector and the distribution of resources to primary health care and under-resourced provinces. From this will emerge a picture of government's progress toward alleviating inequity in the public health sector.

Before examining the NHA data it is useful to recap on the importance of the contextual environment for attaining equity in the public health sector. Achievement of goals is dependent as much on the prevailing economic and political conditions as on effective health policies. We briefly touch on two issues that have been covered in more detail by other authors in previous Health Reviews; namely the macro-economic environment and the budgeting process.

The **macro-economic environment** would appear to be quite hostile to the achievement of equity in the health sector. In June 1996, the government announced its new macro-economic policy, the Growth, Employment and Redistribution Strategy (GEAR). The focus of GEAR was economic growth. This was to be achieved through promotion of private investment, improvements in productivity and better export competitiveness. Business confidence was to be developed by reducing the public sector deficit and maintaining tight monetary and fiscal policies.<sup>8,9</sup> Nevertheless, progress has not been as planned. While 1995 and 1996 saw healthy growth in GDP, the economy slowed significantly in 1998 and 1999, with a contraction in GDP per capita (Table 1). It may well be that the openness of the economy to international market fluctuations increases its *vulnerability* to financial shocks in the global market. This may impede growth, through higher interest rates for example. The huge inequities left by the apartheid health care system might well have been a less massive obstacle had there been a subsequent period of significant economic expansion. Strong economic growth would have provided a platform for redistribution, a luxury the government was not afforded.

a The NHA project is being conducted by a consortium consisting of the Health Economics Unit, University of Cape Town; the Centre for Health Policy, University of Witwatersrand; the Department of Economics, University of Durban-Westville; the National Department of Health and an independent consultant.

### Table 1: Key macro-economic indicators, 1995-2000

	1995	1996	1997	1998	1999	2000
GDP (R billion)	548.1	614.9	680.2	737.8	793.2	862.6
Real GDP Growth	3.1%	4.2%	2.5%	0.5%	0.9%	3.5%
Real GDP Growth per capita	0.9%	2.0%	0.3%	-1.7%	-1.3%	1.3%
Inflation: Headline	8.7%	7.4%	8.6%	6.9%	5.5%	5.2%
Current Account Balance (% of GDP)	1.5%	1.3%	1.5%	1.6%	-0.5%	-1.3%

Notes: 1. Figures for 1999 and 2000 are projections

- 2. Real GDP Growth This refers to the change from year to year in real GDP, where the GDP figures have been deflated to remove any notional increase caused by rising prices.
- 3. Headline inflation This is the year on year growth rate of the Consumer Price Index.
- 4. Current Account Balance This is the balance of physical goods and services traded with other countries.

Sources: Department of Finance,<sup>10</sup> Statistics South Africa<sup>11</sup>

It has also been argued that GEAR imposes additional constraints on the resources flowing to the health sector. Recent studies claim that GEAR targets for the budget deficit and tax to GDP ratio place limits on the expansion of public expenditure. Specifically, public expenditure growth must be lower than overall economic growth.<sup>5</sup> Such a policy must be of concern when economic growth results have been so mixed (Table 1). Department of Finance<sup>10</sup> data showed that per capita expenditure through the national budget grew only marginally between 1996/97 and 1998/99. Further, McIntyre *et al*<sup>5</sup> argued that central bargaining of civil service salaries also ties up a substantial proportion of health sector expenditure, again placing limits on the potential for redistribution. This also reinforces the importance of redistributing human resources to the pursuit of equity which is explored further on page 142.

The **budgeting process** in South Africa has restricted the pursuit of equity in several ways:<sup>5, 6</sup>

- 1. Decentralisation of budgetary authority to provinces makes decisions around the provincial health allocation hostage to local politics.
- 2. The focus of conditional grants relates to levels of care and not to equity.
- 3. The budgeting process does not give explicit concern to equity in health sector funding across provinces.
- 4. The Department of Finance inter-provincial resource allocation formula waters down equity concerns by including components and weightings which favour richer provinces.<sup>5</sup>

The White Paper for the Transformation of the Health System in South Africa<sup>4</sup> is effectively the national health policy statement before the National Health Bill is passed. Its vision embraces a unified health system where all actors are co-ordinated in pursuit of the fundamental goals of equity.<sup>4, 6</sup> None of the above contextual factors appear to favour this approach. Health sector policy, directed at improving equity, appears to be at odds with

current monetary and fiscal policy. This may suggest that solutions to problems of resource allocation and financing in the public health sector cannot be resolved purely by action within the sector. We turn now to reviewing progress toward equity in the financing of public health care, having first set out background information on the NHA project.

# The NHA project

*Accurate* quantification of resource availability and resource distribution within the health sector is vital to inform the design of appropriate reforms and for monitoring progress during implementation of these reforms.<sup>12</sup> Consequently, the use of National Health Accounts (NHAs) to provide a picture of health related resource flows is an initiative undertaken by many countries throughout the world.

# The Scope of NHA

The current NHA initiative arguably provides one of the most comprehensive representations of health expenditure ever completed in South Africa, providing data on both public and private sectors. The South African NHA project is a direct descendent of the Health Expenditure Review (HER) conducted in 1994/95. Internationally, NHAs essentially reflect a logical progression from the earlier Health Expenditure Reviews towards more routine production of health resource availability and distribution estimates for both the public and private sectors. Nevertheless, they have much in common in terms of the analytic framework and the types of data presented. Typically, they evaluate:

- The size of the health sector relative to other sectors in the economy
- The overall sources of health care financing, their relative importance and implications along with the flow of funds within the health sector
- The distribution of expenditure between types of providers, geographic areas and public and private sectors
- The distribution of expenditure between line items (such as salaries and maintenance) allowing an analysis of recurrent and capital expenditure.

The current NHA project has completed such analyses for three financial years 1996/97, 1997/98 and 1998/99 for the public health sector which will be supplemented by private sector data for two of the three years. The NHA project produces one of the first analyses of health *expenditure*, as opposed to budgets, collected from primary data sources that uses the same methodology over a number of consecutive years in South Africa. It is far easier to analyse trends in budgets but this often does not reflect what was actually spent in the health sector. Hence, the NHA produces a more accurate picture of the actual *use* of resources which is vital when evaluating progress against stated goals.

This data and analysis in *this* chapter, however, are limited to the public sector as at the time of writing the private sector component of the study has not been completed. Nevertheless, the NHA team has taken great pains to capture expenditure on all directly health-related activities in the public sector. The NHA portrayal of financing and expenditure in the public health system includes not only spending by the national and provincial Departments of Health, but also health care expenditure by provincial Departments of Works, Local Authorities and other national and provincial institutions, departments and funds. The latter grouping incorporates the Departments of Defence, Education, Correctional Services and Police, along with Public Enterprises, the Workmen's Compensation Fund and the Road Accident Fund.

# Sources of Data

*Financial* data, including expenditure and funding flows, were collected systematically from all the relevant bodies of government, noted above. The dataset even includes the contributions by all government departments to employees' medical schemes. Some gaps in data were filled using the *Vulindlela* financial database, housed by the Department of State Expenditure. Local government datasets on health spending were the weakest and had to be subjected to considerable manipulation.

Provincial Departments of Health were the key source for *non-financial* data. The latter included indicators of outputs or activity in the public health sector, such as numbers and classification of facilities, numbers of beds, and activity data such as visits and inpatient days. However, it appears that the quality of such data in some provinces was questionable.

*Human resource* data for filled posts in provincial health departments were extracted from the PERSAL database housed in the Department of State Expenditure in Centurion. Underlying problems with the accuracy of PERSAL, and the extent of reclassification of data required for the NHA analysis, may mean that there are some inaccuracies in the personnel data, particularly where there are disaggregations. Interested readers are referred to Thomas and Muirhead<sup>7</sup> and Doherty<sup>13</sup> for further explanations of methodology. No personnel data from departments other than provincial health departments could be obtained.

# **Overall Financing and Expenditure**

An important basis for improving equity in public health financing is an expanding health sector budget accompanied by regular and predictable sources of funding. This allows authorities to anticipate additional funds and plan for their redistribution to under-funded activities or geographic areas. It is not impossible to achieve equity in health financing without this foundation but it is certainly difficult. In this section we review overall financing and expenditure of the public health sector in this light.

Expenditure in the public health sector is displayed in Table 2. It is important to note that there are different interpretations of what can be included. We explore this in relation to three possible definitions:

- Narrow Expenditure through the national and provincial Departments of Health<sup>b</sup>
- Broad Narrow plus expenditure by Local Authorities and provincial Departments of Works
- *Comprehensive* Broad plus expenditure by other national Departments and Funds and other provincial Departments.

As can be seen, the narrow definition of health expenditure excludes a substantial proportion of public health sector funding. By including Local Authorities, provincial Departments of Works and other national and provincial departments and institutions an extra R8 billion is added to spending in the public health sector, or an extra R235 per capita, without medical aid.<sup>c</sup>

b This is not an adequate definition of the public health sector as many provinces have substantial resources flowing through provincial Departments of Works and Local Authorities. Further, comparisons across provinces may for the same reason be invalid. This is explored later in this chapter.

c The basis for using this measure is that the *eligible* population for the public sector is probably better represented by leaving out those with medical aid. While this is far from perfect it may well portray a more accurate picture of funding to public sector *users* which might otherwise be underestimated by more than 20%. It is also common practice in such analyses in South Africa.

# Table 2: Public Health Sector Expenditure, according to different definitions, 1996/97-1998/99 (R million, 1999/00 prices)

	1996/97	1997/98	1998/99
Narrow	23 438	24 754	24 650
Broad	25 689	27 436	27 041
Comprehensive	30 941	32 963	32 695
Narrow	76%	75%	75%
Broad	84%	83%	83%
Comprehensive	100%	100%	100%

Figure 1 shows both the *comprehensive* expenditure in the public health sector in millions of Rands (left hand axis) and expenditure per capita<sup>d</sup> (right hand axis). Between 1996/97 and 1998/99 the total spending by the public health sector increased significantly by R 1.7 billion. Nevertheless, there was a slight drop, year-on-year, in 1998/99. This downward move is more notable when the per capita amounts are considered. The 1998/99 per capita figure is R29 lower than in 1997/98, but R10 higher than in 1996/97 (see Figure 1 and Table 3). The drop for 1998/99 was also reflected in the proportion of GDP and the Government Budget devoted to public health expenditure. In 1998/99 public health financing expenditure amounted to 4.1% of GDP and 15.1% of the overall budget, down from 4.3% and 15.8% respectively in 1997/98.

Figure 1: Total (R million) and Rand per capita Public Sector Health Financing, 1996/97-1998/99 (non medical scheme members, real 1999/00 prices)



What is the cause of this year-on-year decrease in health expenditure? Is it part of a longer term trend? To help examine the first of these questions it is worth exploring Tables 3 and 4 which show the different sources of funds for the three years, in total and per capita terms. By far the largest funding source in the public health sector is general taxation. General taxation accounts for approximately 94% of the total throughout the period, or

d Unless otherwise stated, all per capita figures are for those without medical aid.

R891 per capita in 1998/99 (Table 4). It is interesting to note that Local Authority sources (not including the subsidy from provincial Departments of Health) are the next largest, 3% of total funds in 1998/99, according to available data and best estimates.

Donors, which are so important in other sub-Saharan African countries, account for less than 1% or only R2 for every person in South Africa in 1998/99. It is important to note though that this is donor financing through the public sector for health and does not include financing through private organisations. The decrease in funding of the public health sector for 1998/99, noted above, appears to be due to declines in user fees from households and provincial own revenue.<sup>e</sup> In particular user fee revenue fell by an annual average of 17% between 1996/97 and 1998/99. There was also a slight decline in general taxation funding.

	1996/97	1997/98	1998/99
General Taxation	29 244	30 972	30 908
Local Authority Revenue	845	963	996
User fees from Households	499	418	340
Provincial Government – Own Revenue	334	578	384
Donors	18	33	68
Total	30 941	32 963	32 695

# Table 3: Sources of Comprehensive Public Health Sector Financing, 1996/97-1998/99 (R million, real 1999/00 prices)

Notes: 1. Households contribute user fees into the health sector, predominantly at provincially run facilities.

2. Local Authority Revenue is an *estimate* based on information from selected Local Authorities, provincial Departments of Health and Finance.

# Table 4: Per capita Comprehensive Public Health Sector Financing by source (excluding medical scheme members), 1996/97-1998/99 (1999/00 Rand)

1996/97	1997/98	1998/99
881	912	891
25	28	29
15	12	10
10	17	11
1	1	2
932	971	942
	1996/97 881 25 15 10 1 1 932	1996/971997/9888191225281512101711932971

e The structure of NHAs internationally identifies user fees or out-of-pocket expenditure as a separate source of financing. In South Africa, the link between user fees and expenditure in the health sector is presently circuitous in most provinces. Nevertheless, we keep the convention to allow an examination of user fees in the light of revenue retention proposals. For those readers who disagree with this approach households should be ignored as a financing source and the finances subsumed under provincial own revenue.
While the health sector is spared dependency on foreign resources, unlike most sub-Saharan African countries, its reliance on general taxation is pronounced.<sup>f</sup> The decline in user fees may, therefore, be of extra concern. User fees, as a source of funds, are the only existing domestic alternative to government taxation and local rates. Some observers see general taxation as a potentially unstable form of revenue given:

- The frequent low priority of health in national and provincial budget negotiations
- The low tax-base in many developing countries
- The domination of expenditure policy by macro-economic concerns; and
- The fragility of growth in developing countries.<sup>14</sup>

Given current macro-economic directives and reliance on general taxation based funding the financing of the public health sector is highly vulnerable. This is not a position of strength when it comes to tackling inequities in health sector funding. On the contrary it guarantees a "scramble for scarce resources".<sup>15</sup>

#### Longer Term Trends

It is useful to discern how overall financing and expenditure have changed since the apartheid era. Figure 2 displays average annual growth in different public health sector sources from 1992/93 to 1998/99 and reveals some interesting findings. First, total public *health* sector financial resources grew substantially between 1992/93 and 1998/99 by approximately 9% per annum, reflecting similar growth in general taxation financing of the public health sector. This is not surprising given the overarching importance of general taxation, discussed above.

It seems that the drop in 1998/99 is, therefore, not part of a previous trend. In fact, the public health sector enjoyed a large real expansion of funding from the end of apartheid of R275 per person without medical aid. Nevertheless, it would appear that this expansion has now come to a halt (see Table 3 and Section F).

Of the different sources, donor funds experienced the largest growth over the period in question. However, this was from such a low base as to make little impact on overall funding. The increase in funding from Local Authorities is more important, though slightly less impressive (increasing at a rate of over 20% per year – assuming accuracy of data). Such growth is welcome in the furthering of decentralisation, lower level decision making and the primary health care approach.<sup>g</sup> In contrast, user fees from households declined sharply, by 5% per year.

f The situation has improved marginally since 1992/93 when general taxation was 96% of total funding.

g Nevertheless, such growth is only an average and ignores the range of different Local Authority structures. It is highly likely that the large growth was driven by larger urban Local Authorities.

# Figure 2: Average annual growth in financing from different sources of the Public Health Sector, 1992/93-1998/99 (Real and per capita)



Notes: 1. Provincial government as a source was not relevant in 1992/93 and, therefore, is not included in the analysis.

2. Real data excludes any increases due to inflation.

3. Per capita data measure how well real increases keep pace with population growth.

# **Expenditure on Priorities**

This section reviews the extent to which expenditure patterns match stated government priorities, particularly related to equity. Key questions focus on whether resources have been redeployed to supporting the PHC approach and whether inequities in resource allocation across provinces have been reduced. While these markers by themselves do not achieve equity in financing of, and access to, public health care they are important stepping stones.

### Funding of PHC

Increased spending on PHC activities should be at the heart of government financing policy to alleviate inequity. Have government funds been redirected to supporting such services? To help answer this question it is useful to examine the division of expenditure by level of care and, in particular, those activities that support the PHC approach. Defining PHC in relation to expenditure is always open to debate.<sup>16</sup> For our purposes expenditure on PHC activities is defined as an aggregation of expenditure on:

- Out-patient care centres
- Public health programmes, including nutrition programmes
- Out-patient care in district hospitals.

While the first two are directly related to the NHA provider categories, the last is not. Current expenditure data in all provinces do not separate out expenditure on out-patients in district hospitals. Proxies, therefore, must be used to get indicative figures. Expenditure on out-patient care has been calculated crudely on the basis of cost and patient-day equivalents. This is not ideal and the results for *bospital based* PHC should therefore be taken as indicative only.<sup>h</sup> It must be noted further that PHC provided by higher levels of care is ignored in the calculation for simplicity.

Table 5 provides us with an approximate calculation of public sector expenditure on PHC between 1996/97 and 1998/99. The data reveal that expenditure on overall PHC activities rose in real terms from 21% of total provider expenditure to 22% in 1998/99, an increase of R 0.6 billion or R9 per person without medical aid (Table 6). In nominal terms this was equal to over 10% growth per year on PHC spending in the public health sector.

	1996/97	1997/98	1998/99
OP Care Centres	2 722	3 319	3 059
Public Programmes	1 303	1 507	1 453
Non-Hospital Based PHC	4 025	4 826	4 512
Estimated District Hospital OPD	1 836	2 015	1 958
Total PHC estimate	5 861	6 841	6 470
Hospitals	16 207	17 385	17 627
Total Public Providers	27 462	29 096	28 743
% Total PHC (of total providers)	21%	24%	23%
% Non-Hospital Based PHC (of total providers)	15%	17%	16%

# Table 5:Comprehensive expenditure on non-hospital based PHC, as well as total PHC services, 1996/97-1998/99 (R million, 1999/00 prices)

Notes: i) District Hospital OPD was derived using standard ratios of costs and patient day equivalents (i.e. the cost of one IP day is equal to 3 OP visits). These figures should, therefore, be treated as estimates only.

 Apart from the Total PHC Estimate and Hospitals, Total Public Providers includes expenditure on other providers such as ambulance services, laboratories, health administration, education and training institutes etc.

 Table 6:
 Real Per Capita Expenditure on PHC (for population without medical aid), 1996/97-1998/99 (1999/00 Rand)

	1996/97	1997/98	1998/99
a. OP Care Centres	82	98	88
b. Public Programmes	39	44	42
c. Total Non-Hospital Based PHC (a + b)	121	142	130
d. Total Hospital Based PHC	55	59	56
Total PHC (c + d)	176	202	186
Total Public Providers	827	857	828

h Until good activity data are available for hospitals throughout the country it will impossible to differentiate precisely PHC services, and therefore expenditure.

Comparisons of *overall* PHC expenditure between 1992/93 and 1998/99 are not possible, because of differences in classification. Nevertheless, there clearly has been a substantial increase in the funding of *non-hospital* PHC over the same time, by around 6% of total expenditure. While this is to be commended, the drop in funding between 1997/98 and 1998/99 may be of concern, especially when compared with high expenditure growth on tertiary hospitals (7.1%) over the same period.<sup>7</sup> Indeed, recent strong growth in the funding of such hospitals might threaten equity particularly if it crowds-out expenditure on PHC activities. This may well be the result of conditional grants which serve to protect and, indeed, develop central hospitals.

Nevertheless, the long run increase in funding of PHC since 1994 is positive and has complimented the free health care policies introduced in 1994 and 1996, capital investment in the form of the Clinic Upgrading and Building Project, and other initiatives to expand PHC delivery. Indeed, there appears to have been a dramatic increase between 1997/98 and 1998/99 in the proportion of staff working in provincial health departments and who are based in non-hospital PHC settings (see Table 7).<sup>13</sup>

Province	1997/98	1998/99	
Eastern Cape	6.6	8.8	
Gauteng	6.7	13.7	
KwaZulu-Natal	5.6	10.9	
Mpumalanga	17.7	18.7	
Northern Cape	14.1	17.7	
Northern Province	5.9	19.1	
North West	15.8	18.5	
Western Cape	1.3	8.5	
Average	7.2	12.8	

Table 7:	The proportion of provincial Health Department staff working in non-hospital PHC, 1997/98 of	and
	1998/99 (excluding the Free State) <sup>i</sup>	

Note: The proportion for the Free State in 1998/99 was 4.3.

This shift in part reflects policies that prioritise PHC services, including the downgrading of certain hospitals across the country to facilities that provide PHC services. However, the change also reflects the re-classification of several hospitals to community health centres according to new definitions agreed upon by the national and provincial health departments. In these cases, the nature of service provision would not necessarily have changed (that is, their re-classification does not necessarily imply an expansion of PHC services on the ground). The shift might also reflect improvements in the identification of staff on the PERSAL system as working in PHC. Nevertheless, the PERSAL system is still far from

i Data for the Free State were not available for either year and, hence, are excluded from Table 9.

powerful in terms of identifying PHC staff and many who do work in PHC services may still be hidden in the dataset within other provider categories. Certainly, reported problems in the accuracy of PERSAL mean that the data presented in Table 7 need to be interpreted with caution, particularly as they do not reflect the changes in PHC spending reported in Table 5 (it should be remembered, however, that this Table includes spending by departments other than provincial health departments). Also, comparison of one province with another is difficult, especially as some provinces outsource services to contractors (in which case personnel working in these services do not appear on the PERSAL system), while others have more extensive local authority-run (and staffed) PHC services than others.

#### Equity in Inter-Provincial Resource Allocation

Previous South African Health Reviews, along with the 1997 White Paper, have noted the difficulty of pursuing equity in a framework of fiscal federalism.<sup>4, 5, 17</sup> By analysing public health sector expenditure over three years and for all government departments and institutions, the current NHA is able to provide a full picture of resource allocation and its implications for equity. McIntyre *et al*<sup>5</sup> assert that the inclusion of non-health departments, such as Defence and Education may well "accentuate inter-provincial inequities." We evaluate this claim alongside the continuing effects of resource allocation policies on interprovincial equity in health spending. Our analysis considers the three differing definitions of public health spending as discussed earlier.

Results for the narrow definition of public health sector expenditure are shown in Figure 3, which deals only with expenditure by provincial Departments of Health in each province. This excludes expenditure on tertiary facilities as these are likely to serve populations wider than a single province. Figure 3 notes the provincial deviations in per capita expenditure from the national average. The graph highlights the vast differences in spending between provincial Departments of Health, with the Eastern Cape and Northern Province steadily moving further away from the national average. Gauteng has by far the greatest health expenditure per capita increasing slightly in real terms over the three financial years. Such data support prior analyses of public sector budgets, to show that geographic financing of health care is becoming more inequitable.<sup>5, 6</sup>



Figure 3: Deviations from National Average, provincial Department of Health real per capita spending 1996/97-1998/99 (Non medical scheme members, excluding tertiary hospitals 1999/00 Rand)

Note: The North West as an outlier province was removed from this analysis because of its over-weighted effect on the average per capita expenditure figure.

One suggested reason for lack of progress toward improving equity is the bargaining power of different provincial health sectors. Further, some commentators feel that health is losing out to other sectors in provincial budget negotiations. Nevertheless, as Table 8 shows, the share of provincial resources devoted to health appears to have increased slightly between 1996/97 and 1998/99 in all provinces except Mpumalanga and the Northern Province. This may suggest that it is the overall allocations to each province which have recently stalled redistribution rather than any sudden worsening in health's share of the pie.

Nevertheless, the share of total funding received by the health sector differs from province to province, probably as a result of existing health infrastructure and service activity. If incremental budgeting continues historical inequities will be perpetuated. Approximately one fifth of Gauteng's provincial expenditure is absorbed by the provincial department of health, (exclusive of tertiary care). This is a far higher proportion than in under-resourced provinces such as Mpumalanga and the Northern Province.

Table 8:	Provincial Department of Health spending (less tertiary hospitals) as a percentage of estimated
	total provincial spending 1996/97-1998/99 (1999/00 Rand)

	1996/97	1997/98	1998/99	
Eastern Cape	16	17	18	
Free State	17	18	18	
Gauteng	19	20	20	
KwaZulu-Natal	22	24	22	
Mpumalanga	12	14	12	
Northern Cape	14	15	13	
Northern Province	16	16	16	
North West	17	20	23	
Western Cane	15		17	
	16	18	18	
Aveluge	10	10	10	

Note: This does not include Provincial Department of Works expenditure therefore capital expenditure may be reflected for some provinces eg. Northern Province but not for others.

Source: Intergovernmental Fiscal Review 1999

What happens to the overall funding picture of provinces with more inclusive definitions of public health sector expenditure? Table 9 displays for five provinces the narrow expenditure on health, plus the increases implied by using the broad and comprehensive definitions (data for the remaining provinces are incomplete due to problems estimating expenditure by Local Authorities). As suggested, the effect of adding in Local Authorities, provincial Departments of Works and other national and provincial departments and institutions is to exacerbate the inequities across provinces. Figure 4 further highlights these increased inequities. Gauteng in particular receives a massive boost to its health sector funding, equivalent to over R385 per capita in 1996/97, from non-health-specific agents compared to only R84 per capita for the Eastern Cape.<sup>j</sup> This may be largely due to the additional revenue raising ability of the urban local authorities through property taxes and the like. This unequal ability exacerbates inequities in health expenditure between provinces and needs to be considered in resource allocation.

j While these figures present significant inequities across provinces, they do not take into account private sector expenditure data which greatly exacerbates the maldistribution of resources. Such issues will be more adequately addressed in the NHA consolidated report which will combine data from both the public and private sectors.

Table 9:	Breakdown of real per capita comprehensive health expenditure by selected provinces, 1996/97-1998/99 (non medical scheme members, 1999/00 Rand)

Year	Province	Narrow	Broad (add)	% added	Comp (add)	% added	Total pc exp
1996/97	Eastern Cape	509.93	55.37	11 %	28.43	5%	593.73
	Gauteng	703.35	143.53	20%	243.36	29%	1 090.24
	Mpumalanga	313.43	79.10	25%	16.60	4%	409.14
	Western Cape	605.82	172.64	28%	135.76	17%	914.22
1997/98	Eastern Cape	510.42	66.17	13%	26.68	5%	603.28
	Gauteng	724.46	151.66	21%	238.26	27%	1 114.38
	Mpumalanga	359.55	81.50	23%	17.18	4%	458.23
	Western Cape	599.62	154.03	26%	134.52	18%	888.17
1998/99	Eastern Cape	474.24	45.89	10%	24.54	5%	544.68
	Gauteng	714.49	146.46	20%	235.96	27%	1 096.91
	Mpumalanga	281.62	80.26	28%	15.58	4%	377.47
	Western Cape	597.90	147.51	25%	130.95	18%	876.36

# Figure 4: Comprehensive per capita spending on health in four provinces 1996/97-1998/99 (non medical scheme members, 1999/00 Rand)



How does the distribution of *human resources*, in total and by personnel types, match the population in each province? Table 10 presents the ratio of provincial health department personnel, by different categories, per 100 000 of each province's population without medical aid in 1998/99. The Western Cape and Gauteng are the only two provinces which consistently have ratios above the national average, except for environmental health officers (EHO's) (however, in these two provinces EHO's are employed by Local Government). In contrast, Mpumalanga has the lowest total personnel to population ratio at just less than half that of the Western Cape. These figures would appear to confirm the entrenched geographic inequities highlighted in earlier sections. Unfortunately trend data on personnel distribution is not currently of sufficient quality to be useful for analysis.

Table 10: Provincial health personnel per 100 000 population without medical aid, 1998/99

	Total specialists (excl. psychiatrists)	Total doctors (medical officers)	Total prof. nurses	Total psychologists and psychiatrists	Total dental staff (dentists and others)	Total pharmacy staff	Total environ. health officers	Total health professionals
EC	4	17	119	0	1	2	3	349
FS	4	30	136	0	2	3	2	364
G	27	45	170	2	6	7	0	524
KZN	6	24	120	1	1	3	1	390
MP	2	16	81	-	1	3	2	261
NC	1	17	97	0	2	2	1	275
NP	2	12	102	0	1	2	3	297
NW	2	15	92	0	1	3	1	304
WC	32	51	135	2	4	8	0	544
South Africa	9	25	121	1	2	4	2	380

Notes: 1. Staff employed by Local Government are not included.

2. Cells with a zero reflect cases where the number of personnel per 100 000 is less than one.

3. Cells with a  $\mathbb{C}$  reflect cases where there are no personnel in this category at all.

4. Shaded cells represent cases above the national average.

# Figure 5: Percentage difference from the national average of ratios of specialists, medical offices and professional nurses, working in provincial health departments, to 100 000 population without medical aid, 1998/99



Figure 5 illustrates the magnitude of the differences between provinces using three types of clinical personnel as examples (namely, specialists, other than psychiatrists, medical officers and professional nurses). The predominance of specialists in the Western Cape and Gauteng is to be expected, because of the concentration of high level services. Nevertheless, these provinces also have disproportionately high numbers of medical officers. Similar results are also evident for non-health professionals. Still, the PERSAL data suggest that there has been retrenchment of personnel in both the Western Cape and Gauteng between 1996/97 and 1998/99, by approximately 7% and 4% respectively. While this may be a step in the right direction, a more equitable allocation will require previously under-resourced provinces

to expand their public health sector personnel. Available data suggest that such an increase occurred in the Eastern Cape between 1997/98 and 1998/99, growing by just under 8%, but there appears to have been contractions in staffing in the North West (4.5%) and Mpumalanga (1%) for the same period. Further data and analysis are, however, required before comparisons can be drawn across all provinces.

### **Projected Financing of the Public Health Sector**

While there was initially progress made towards improving equity and the funding of PHC, recent data are cause for concern. Will this situation continue? To understand the likely trends in public health sector financing, and its implications for expenditure, we examine the economic outlook and explore possible trends.

#### Economic outlook and implications for future financing

Projections of the macroeconomic environment over the medium term allow us to assess the viability of pursuing equitable financing in the future. Real GDP growth is expected to reach 3%, up from current levels by 2000/01.<sup>10</sup> Nevertheless, public expenditure growth will be lower than GDP growth - as noted earlier this appears to be a stipulation of the GEAR policy - *and* public expenditure will decline in real *per capita* terms, by 0.9% per year between 1998/99 and 2002/03. Even this may be optimistic, as discussed earlier.

How do these economic forecasts translate into health sector funding? Figure 6 illustrates real health expenditure trends for the medium term. Here, available funds for public expenditure (equivalent to budget projections) are projected. Funds to be used for financing debt are removed. Of the remaining funds, health receives an allocation in line with that noted in the MTEF. The health budget figures are, therefore, derived from the MTEF health shares and remain approximately constant over the period (between 14.6-14.8%), implying very small growth in available health resources for budgetary expenditure. The year-on-year growth only climbs above 1% in 2002/03. When translated into per capita figures this equates into a decline in health sector budgets *each* year.





Key: GDP – Gross Domestic Product, ANIE – Available non-interest expenditure (through Public Sector Budgets), Health – Combined National and Provincial Department of Health Budgets.

#### Non-taxation-based financing

When other sources of financing are considered is the future picture any better? We discussed earlier the dependence of the public health sector on taxation. This situation is unlikely to change much in the next few years. Briefly let us consider the other sources of funds for the public health sector:

- *Donors* While there has been a significant expansion in donor funding of the public health sector since 1992/93, this is probably one-off and donor funds may increase only modestly from current levels, which are in any event not substantial.
- User Fees The declining trend in public sector user fees is troubling to those who see this source as a critical compliment to general taxation. Cost recovery ratios at facilities have slumped to just over 2% for all hospitals and 4% for tertiary hospitals.<sup>7</sup> Without major reform to fee collection, pricing, retention and utilisation of fee revenues, this situation will only get worse. Indeed, if fee revenues decrease at the rate experienced between 1996/97 and 1998/99 they will plummet to less than a quarter of their 1996/97 level by 2003/04, at approximately R120 million.<sup>7</sup>
- Local Authorities Funds from this source have grown substantially on average in recent years (though, as noted earlier, this may be driven by strong growth in large urban Local Authorities). This may well prove to be important especially to the funding of PHC. Nevertheless, there is much controversy about the appropriate funding of Local Authorities for health sector activities. Until appropriate roles and responsibilities are determined there may not be a large expansion in available funds from this source.

Pressure on government health sector budgets is therefore likely to continue for the foreseeable future, with little relief from other funding sources. The prospect of continued declining per capita funding of the public health sector is looming. Without corrective action little may be done to stop the slide toward increased inequity in resource allocation.

## **Conclusions, Options and Recommendations**

In the face of such constraints there are a number of initiatives that might help improve equity in the financing of and access to the public health system. These are explored below. First, however, we explore the general trends that arise from the analysis of expenditure and financing in the public health sector.

The data from the NHA exercise reveal two eras of public health sector financing. The first ran from 1992/93 to 1997/98. It was characterised by substantial growth in funding (both in real and per capita terms), reallocation of resources to PHC and redistribution of health sector funds across provinces. In contrast, the second era, from 1997/98 onwards, is characterised by falling per capita public health sector funding, a reversal of redistribution across provinces and a decline growth in PHC expenditure. The transition between the two periods would appear to relate to the introduction of both GEAR and fiscal federalism. As was argued earlier both these have affected the potential for increased equity in the public health sector. The current macro-economic environment translates into a highly constrained financing environment for health for the foreseeable future. Further, the current resource allocation formula for provinces and subsequent provincial budget processes have done little to encourage redistribution to where funds are most needed.

Nevertheless, there is still time for corrective action, before the features of the second era become entrenched. For South Africa to avoid a crash landing in the health sector it needs

to find ways of boosting public health sector financial resources and encouraging redistribution of resources. The importance of current budgeting arrangements has been noted. The formula for inter-provincial allocations (the equitable share formula) needs to reflect more of an equity perspective. A complementary measure to boost public health sector resources will be to introduce a Social Health Insurance scheme as part of a social security package (see chapter on Social Health Insurance). This, together with hospital management reform that attracts paying patients back to the public sector, may alleviate the current funding crisis by providing between an extra R1.5 and R3.0 billion.<sup>18</sup> These additional resources could well ease the process of redistribution and targeting toward PHC activities (nevertheless, to do this the finances raised must not be offset by lower allocations from general taxation). Indeed, expenditure on PHC activities must be protected from any effective health sector budget cuts.

Exploration of use of norms and standards may be one option to support the financing of a PHC package. Indeed, a detailed evaluation of the financing of PHC may well be an important additional area for research, especially as it relates to equity. It may be particularly useful to link such an exercise with an assessment of the combined impact of the various policy initiatives which have been introduced to boost equity through delivering PHC (such as the free PHC policy and the Clinic Upgrading and Building Project). Such an evaluation would provide an important foundation for furthering the government's PHC approach and renewing the attack on inequity.

# District health expenditure reviews

This chapter demonstrates the value of a District Health Expenditure Review (DHER) as part of a district manager's tool kit. DHERs provide a picture of how resources are allocated and used and assist district management teams in becoming better planners and spenders.

The initial five DHERs conducted in South Africa are compared showing differences across and within provinces, as well as within districts.

The most salient features are the under-resourcing of primary health care and poor staff utilisation and deployment in the district health system.

Emmanuelle Daviaud Provincial Adminsitration, Western Cape

> Beth Engelbrecht Health Systems Trust

Puleng Molefakgotla Health Systems Trust

**Gladys Crisp** *Taung District Management Team, North West Province* 

> David Collins Equity Project

Peter Barron Health Systems Trust



## Introduction

A health district functions well when there is good governance as well as proper allocation and use of resources to cater for the needs of the community. Up to now health districts have exercised little power over the resources allocated to them. Understanding how resources are distributed and used in districts is crucial to ensure informed changes in allocation and spending patterns. These are also the tools for transparency and accountability to the community.

Over and above the needs of the districts, there is a need for a common way of collecting and reporting information that will:

- Allow aggregation (e.g. district to province to national)
- Allow for comparison between districts
- Provide a common basis for decision-making among stakeholders.

District Health Expenditure Reviews (DHERs) have been developed to respond to these needs and this chapter presents the results of the first five DHERs in South Africa.

The first section briefly describes DHERs and the districts reviewed. The following section presents a comparative analysis across districts of indicators of equity, resource allocation, efficiency and sustainability, against the background of norms, where these exist. It highlights factors affecting variations in the findings: rural-ness, organisation of services, utilisation and workload. The final section focuses on the management information potential of a DHER at a district level and the health systems issues emerging from the picture provided by these DHERs.

# The District Health Expenditure Review

#### The DHER

- Is a situation analysis that combines financial, service and population data
- Presents information on expenditure and resource use in a format that ensures comparability over time and between districts
- Identifies inequities and inefficiencies in the system
- Enables the determination of financial performance targets
- Informs decisions on the organisation of services, staff deployment, and contracting out of services
- Is a tool for capacity building in both financial and service management.

The DHER is part of a district management tool kit. It is used optimally when viewed against the background of health status analysis and assessments of the scope and quality of services according to the primary health care (PHC) package.

Importantly, DHERs raise questions about the allocation and use of resources.

# Implementation of DHERs

The process of implementing DHERs in South Africa has been a collaborative exercise between the national and provincial Departments of Health, districts, health economics specialists and NGOs. Started in 1998, the DHER process was two-fold: conducting DHERs in a district and, from this experience, developing a set of guidelines<sup>1</sup> for districts to use in future DHERs.

Initially DHERs focused only on public sector spending within health districts, by both provincial and local government. This was in part because private sector financial and service data was difficult to obtain. However, the importance of gaining an understanding of funding and expenditure patterns within this sector is becoming increasingly clear.

#### Criteria and indicators used in DHERS

The principles of a district health system as well as the key performance areas for District Management Teams shaped the criteria used to analyse service, financial and population data per cost centre. The criteria and related indicators are:

Criterion	Indicators
Equity (Do people have equitable access to services?)	Expenditure per capita per district and per sub-district Expenditure per capita per facility; inpatients and outpatients separately for hospitals
Resource Allocation (Are resources allocated efficiently?)	Spending on each level of service Referral rate per facility Nurse to client ratio (workload) Utilisation rate per facility; inpatients and outpatients separately for hospitals Proportion of resources to different inputs (% expenditure per line item)
Efficiency (Are resources used efficiently?)	Cost per visit per facility; inpatients and outpatients separately for hospitals Cost per visit per line item (staff and drugs) Efficient use of inpatients: average length of stay, bed occupancy rate, admissions per capita Cost per km and per patient transported (ambulance services)
Sustainability (How reliable is the funding?)	Share of funds from different sources Percentage of allocated funds spent Revenue generated as a portion of expenditure

#### A Review of Five District Health Expenditure Reviews

This chapter focuses on DHERs conducted in 5 health districts (2 urban and 3 rural) in four provinces. Each DHER focuses on a financial year during the period spanning 1996/97 to 1998/99 financial years. The reviews were undertaken at different stages in the development of a common tool<sup>a</sup> and not all of these DHERs collected the same data. This limits the comparative analysis to only macro issues. With guidelines<sup>1</sup> for conducting DHERs in South Africa now available, future comparative analyses would benefit from a common approach being followed in DHERs.

For this chapter only recurrent costs were used. These were adjusted for 1999 Rand. Some allocation techniques were also used to ensure that like is compared with like. District office costs were allocated to service cost centres.

a "Tool" referred to here is the Guidelines to conduct District Health Expenditure Reviews in South Africa and the framework of analysis suggested there.

#### Methodology Issues and Challenges

Undertaking DHERs must be seen as an incremental process. The first set of reviews introduced a basic approach that in time would become more advanced. Identification of the skills and information gaps was found to be an important first step in DHER processes.

#### Information

The issues around information are presented here because they represent the context in which much planning and budgeting take place. The Health Management Information System is still at an early developmental stage, especially with regard to information that would inform finances. Data was found to be:

- Fragmented. The data had to be collected from different offices. This was especially so for financial data. One reason for this is because the management of district services and therefore the management of budgets for these services, has not been devolved to district level.
- Duplicated. Service data was often recorded more than once due to the routine statistic requirements for the various programmes.
- Incomplete. Some data was recorded ambiguously, not fully documented, or not available.
   Some allocation techniques had to be utilised where financial data was not available per cost centre.
- *Not accessible*. Some data was inaccessible, for example data from other Departments such as the Works Department.
- Inconsistent. For example, the same trip that is usually 44km would be recorded as 26km at one time and 350km at another time.
- *Incorrect*. Staff were not allocated correctly to the cost centres where they work, affecting the spending linked to these staff.

#### Capacity

The skills required to undertake DHERs are various and include:

- The capacity to negotiate access to the data
- The ability to interpret and analyse the data
- The ability to present information in a user-friendly format to support management decision processes and transparency.

#### The districts reviewed

The spread of districts in which DHERs have been undertaken was chosen to reflect the impact of differing levels of development and resourcing across provinces, and to reflect between urban and rural areas. The South Peninsula (Western Cape) and Uitenhage (Eastern Cape) districts are urban with a strong involvement of local government. Mmametlhake (Mpumalanga), Mount Currie (KwaZulu-Natal) and Mount Frere (Eastern Cape) represent rural districts where most services are rendered by the provincial Departments of Health.

Province	District	Urban/ Rural	DHER Year	Total Population	% Med Aid	Population minus medically insured
Mpumalanga	Mmametlhake <sup>2</sup>	Rural	98/99	144 073	0%	144 073
Eastern-Cape	Mount Frere <sup>3</sup>	Rural	96/97	290 000	0%	290 000
	Uitenhage <sup>4</sup>	Urban	97/98	247 725	13%	215 521
KwaZulu-Natal	Mount Currie⁵	Rural	97/98	247 537	0%	247 537
Western-Cape	South Peninsula <sup>6</sup>	Urban	97/98	340 000	35%	221 000

#### **Catchment Population and Weighting**

The total population of each district varied from 144 000 in a low-density rural district, to 340 000 in a high-density urban district. The target population for public services has been defined as the population reliant on public services, i.e., the non-insured population. No reliable information was available for the rural districts, but the likely number on medical aid would have been extremely low, and was put at 0%. For urban districts, this proportion was extrapolated from the October Household Survey 1996.<sup>7</sup> Whilst medical aid coverage is a good indicator of the socio-economic status of a population, surprisingly it is not as good an indicator of use of services.

The issue of cross-border flows further complicates the estimation of the catchment population. The DHER study in Mount Currie was faced with the challenge of unquantified, but significant, cross-border flows. In this review hospital admission rates were used as a proxy to determine the in-flows from the Eastern Cape.

Catchment population figures was determined at facility level and are debated in the DHER Study Reports. This was, however, a first exercise for many districts. The facility data are uncertain and are not used in this chapter.

#### Services

Services were generally rendered by a variety of providers. As this review concentrates exclusively on district level services, those facilities rendering regional or provincial level services have been excluded: e.g. TB hospital (Uitenhage) and regional hospitals. Future, more advanced DHERs would quantify these services and improve on comparative analyses.

District	Services per provider per district							
	Province	Local Government	District Surgeons	NGOs/ CBOs	Private Sector			
Mmametlhake	1 Hospital = 68 beds 4 CHCs = 24 10 Clinics 2 mobiles No Environmental Health	None	2	Traditional Birth Attendants	Not			
Mount Frere	2 Hospitals = 320 beds 17 Clinics	None	2		Recorded			
Uitenhage	2 Hospitals = 246 beds 13 Clinics 1 CHC = 29 beds	18 Clinics	3		Phase 1			
Mount Currie	2 Hospitals = 450 beds 2 mobiles 3 clinics	2 clinics	11	1 Santa Hospital = 250 beds				
South Peninsula	1 Hospital =65 beds 5 CHCs	17 Clinics	None					

Note: 1. The Uitenhage hospital renders both level 1 and level 2 hospital services. Level I services form about 60% of the patient load.

2. Many patients in the South Peninsula district use a regional hospital for level 1 care. This was not quantified in this study.

3. CHC = Community Health Care

#### The Findings

Findings are presented as inter-districts comparisons. A demonstrative case study of an intra-district situation is also included. The findings aim to pose questions that require further investigation.

#### Equity: Do people have equitable access to services?

*Equity,* in the DHER, is measured essentially in terms of expenditure and utilisation of services per capita at the district, sub-district and facility level. These indicators are highly dependent on the reliability of the primary data.

The expenditures per capita shown in Figure 1, emphasise the differences across districts.

- The district expenditure per capita is significantly higher in urban than rural districts.
   There are expenditure variations in primary health and hospital expenditure.
- A recent evaluation by the Department of Health<sup>8</sup> put the cost of the Core Package of PHC services at about R160 in 98/99 Rands. All but the South Peninsula district in the Western Cape are vastly below the PHC expenditure level suggested by the Department of Health.
- The district with highest PHC expenditure per capita also has the lowest hospital expenditure.
- The combined impact of PHC and district hospital expenditures spans a range from R140 to R384 per capita.





#### **Utilisation of Services**

Access is measured through utilisation rates (the average number of visits per person per year) for primary health care and outpatient department (OPD) and by admissions per 1 000 population for inpatients. The table below shows the utilisation figures for PHC and hospital outpatients as well the admission rate. PHC visits include all preventive, promotive and curative consultations at mobiles, clinics, community health centres (CHCs) and District Surgeons.

	Mmametlhake	Mount Frere	Mount Currie	Uitenhage	South Peninsula
PHC utilisation rates (no. of visits per person per year)	1.7	0.48	0.88	3.7	3.5
OPD utilisation (no. of visits per person per year)	0.05	0.51	0.24	0.26	0.12
Hospital admission rates (no. of admissions per 1 000 people per year)	22	N/A	86	81	22

N/A = not available

*PHC utilisation rate* is heavily dependent on the access to PHC facilities, their staffing, their drug supply and the perceived quality of care.

- The data from Mount Frere suggests either an under-supply of PHC facilities or difficult access, together with poor quality. As a result the OPD departments are partly used for primary care.
- At the opposite end of the spectrum, doctors who fulfil some of the functions of the OPD doctors mainly see the CHC patients in the South Peninsula. There, the PHC utilisation rate is 3.5, and the OPD utilisation rate is 0.12 (note also that the patient load using regional hospitals for level one services, was not quantified).
- In the Mmametlhake district, with a high supply of 24 hour facilities (four 24 hr facilities, apart from the hospital, 2 of which fall within the same sub-district as the hospital), the OPD utilisation rate is very low at 0.05.
- Overall, even after combining PHC and OPD utilisation rates, the data suggests that urban districts experience a utilisation rate about three times higher than their rural counterparts: 3.96 and 3.62 in the urban districts, compared to 1.12 and 1.75 in the rural districts. The Department of Health's Health Sector Strategic Framework<sup>9</sup> puts the target PHC utilisation rate at 2.9. The low utilisation rate in rural areas suggests poor access, lack of trust in services, and raises questions about the quality of care. Studies<sup>10</sup> on quality of care have shown that poor quality is a barrier to access, and would translate in a lower utilisation rate in the public sector. It would however be dangerous to conclude that the quality of services in the South Peninsula is so high that it results in high level of utilisation!

*Admission rates* in district hospitals vary widely from 22 to 86 admissions per 1 000 noninsured population. The Hospital Strategy Project<sup>11</sup> puts the affordable target admission rate at district level at 75. Uitenhage and Mount Currie districts are above this target. Note also that Uitenhage admits both level 1 and 2 patients. These were not quantified for this study. Quantification requires advanced analysis methods that the district will do in future. The limitation of the data should be borne in mind when interpreting it. The low level of admissions in the South Peninsula can be explained by the presence of the regional hospital situated in the district, where many primary level patients are seen. However the low admission rate in Mmamethlake cannot be fully explained by the presence of other 24 hour facilities.

Combining utilisation and expenditure shows a relative overuse of district hospitals in those areas where PHC expenditure is the lowest.

#### Are resources allocated effectively?

The three main indicators used relate to

- The relative share of spending by hospital, PHC facilities and community services
- The proportion of resources spent on staff and drugs
- The patient/nurse ratio (a measure of workload).



Figure 2: Proportion of recurrent district expenditure per type of service

This graph illustrates the allocation of resources amongst levels of care. It is worth noting that in Mmamethlake, nearly half of the district expenditure is accounted for by the hospital, which has very low utilisation rate of both its outpatients and its in-patients departments. It is important to note the role that district hospitals play in the present health districts. They are often the resource for district administration and the depot for drugs and stores. With future more advanced DHERs, these factors will be quantified, making comparison beteen districts easier.

*Community services* represent a very small proportion of the expenditure. Three main areas make up the community services expenditure: environmental health, health promotion and nutrition. Expenditure on nutrition services was often recorded as part of facility-based PHC due to the way the services are organised.

Proportion of unit cost (inpatient day or consultation) spent on staff and drugs												
		Mmametlhake	Mount Frere	Mount Currie	Uitenhage	South Peninsula						
Hospital	Staff	83%	85%	75%	66%	71%						
	Drugs	2.5%	6%	4%	6%	N/A						
Facility-Based PHC	Staff	91%	85%	77%	N/A	74%						
	Drugs	7%	8%	12%	21%	18%						

#### The relative share of staff and drugs in services expenditure

N/A = not available

Whilst staff and drug costs are only two of the components of recurrent costs, they have been isolated here for two reasons: staff is clearly, and by far, the main cost driver. Therefore optimising staff management will be a central part of optimising resource management.

- Staff costs: The Hospital Strategy Project (HSP)<sup>11</sup> suggested that the optimal ratio staff/ expenditure should be about 68%. This will ensure that enough funds are available for other necessary expenditure. However this suggestion was made in 1995 before the significant readjustment of health workers salaries in 1996. This may have resulted in an increase in the proportion of staff costs. Some provinces work on a target of about 74% for salaries. This leads to other costs being squeezed. In this context the situation in Mmamethlake and Mount Frere is particularly worrying. The relatively low salary share at Uitenhage Hospital must be linked to a high 16% of total expenditure spent on Professional & Special Services. This standard item reflects, amongst others, expenditure on sessional staff and outsourced services such as the laundry and security.
- Drug costs are compressed with increased staff costs. Drug shortages have a very detrimental impact on the quality of services, and lead to patients bypassing PHC services to go to higher levels of care where drugs are available. In Mmamethlake hospital staff costs constitute 83% of the expenditure, and drugs only 2.5%. Drug expenditure per visit appears to be lower than other hospitals.

#### **Underfunding or Overstaffing?**

Does a high proportion of expenditure on staff reflect underfunding or overstaffing? The patient to nurse ratio provides useful insight. A high patient to nurse ratio points to pressure on quality, whilst the mixture of high and low patients to nurse ratios within the same geographical area raises a question about appropriate allocation of staff. This is of particular relevance in the context of intra-district analysis, as will be shown later.

Across the reviews, different definitions of available nurse's days were used. For the sake of comparison the following definition was used: 225 days per nurse per year, calculated as follows: 52 weeks – 4 weeks annual leave – 1 week sick leave – 2 weeks statutory holidays = 45 weeks with 5 working days per week = 225 days (training not included).

There is currently no official Department of Health norm regarding patients to nurse ratio.

However, an average of 35 patients per nurse is considered reasonable.<sup>12</sup>

Number of patients per nurse												
	Mmametlhake	Imametlhake Mount Frere Mount Currie Uitenhage										
CHC	7	N/A	N/A	35	21							
Clinics	31	N/A	50	32	24							
Mobiles	29	N/A	20	N/A	N/A							

N/A = Not available

- The situation in Mount Currie reflects a very high patient to nurse ratio, raising concern about the quality of care. It probably explains both the low utilisation rate and the low PHC expenditure per capita in this district.
- In no other district is there evidence of clinical understaffing if staff are distributed optimally. In the South Peninsula, where CHCs are very doctor heavy, the ratio was calculated as patients to clinicians (doctors and nurses). Whilst this ratio is not high, the doctors have a heavy workload, as nurses are deployed more as assistants than clinicians. The next step should then be to assess whether the staff mix in a facility is optimal.

#### Are resources used efficiently?

Two sets of indicators are used to inform this question:

- The first one focuses on cost per visit or cost per inpatient day at the various types of facilities, and the average cost of staff and drugs per visit.
- The second set relates to efficiency within inpatient services: bed occupancy rate and length of stay.

		Mmametlhake	Mmametlhake Mount Frere		Uitenhage	South Peninsula	
Inpatient							
Cost per inpatient day		651	225	284	534	509	
	Staff	549	187	215	352	401	
	Drugs	16	14	12	32	N/A	
Outpatient							
Cost per visit		422	57	44	178	170	
	Staff	343	50	34	117	134	
	Drugs	11	5	10	11	N/A	
СНС							
Cost per visit		70	N/A	N/A	23	68	
	Staff	65	N/A	N/A	N/A	46	
	Drugs	3	N/A	N/A	5	16	
Clinic							
Cost per visit		35	56	13	24	44	
	Staff	31	48	9	N/A	37	
	Drugs	3	4	2	5	4	
Mobile							
Cost per visit		19	N/A	39	N/A	N/A	
	Staff	17	N/A	31	N/A	N/A	
	Drugs	2	N/A	4	N/A	N/A	
District Surgeon							
Cost per visit			20	133			

N/A = Not available

- The *cost per in-patient day* in the two urban districts lies towards the top range at R509 in the South Peninsula and R534 in Uitenhage. The staff costs are the main component. Drug costs vary from R12 in Mount Currie to R32 per inpatient day in Uitenhage.
- Costs of outpatient visits are driven by staff expenditure. These services are likely to reflect differing skill mix and organisation of services. The very high cost of OPD at Mmametlhake can be explained by the fact that the OPD has a number of beds, a very non-cost-effective approach given the low occupancy rate in the rest of the hospital and two 24-hour facilities at close range.
- Comparison of *costs per visit at CHC level* must recognise different types of organisation of services. The CHCs in Mmamethlake district are 24 hour facilities with beds, and at

times patients stay overnight. In this situation, counting as one visit an overnight stay gives a false reflection of the workload: a patient (recorded as one consultation) will potentially see three shifts of staff. This will be reflected in a very low patient to staff ratio. However, the break down of data between simple consultations and extended stay is not available.

- The high *staff cost per visit* may also be a reflection of skills mix. In the South Peninsula, CHCs were not 24 hours facilities, but the staff cost is explained by the high ratio of doctors to patients. Figure 3 below shows the variation in the costs per visit in PHC services in Mmametlhake, against the background of variations in the workload. It clearly points to the need to unpack the assessment of workload in a situation where both visits and stay-overs take place.
- CHC drugs costs appear worryingly low in Mmametlhake (at the same level as in the clinics), but very high in the South Peninsula. However, the South Peninsula CHCs provide drugs usually available from hospital OPD departments, to cater for patients discharged from secondary and tertiary hospitals, and avoid burdening these hospitals' OPDs. In this way, whilst not appearing cost-effective at first sight, such an arrangement benefits both the patients and the overall health system.
- ◆ Cost of staff per consultation at clinic level is higher in Mmamethlake and Mount Frere districts than in the urban areas, with both being nurse-based. Information is not available on the full staff complement. As mentioned above, the low cost of a clinic visit in Mount Currie district reflects the high patient to nurse ratio, but also the low cost of drugs. These findings could raise questions about quality of care.
- Cost per district surgeon visit varies from R20 in Mount Currie to R133 in Uitenhage, pointing to a serious need for investigation of these services.

The *relationship between cost per visit and workload per nurse* is shown very clearly in Figure 3 (details are presented in the intra-district analysis). The average target workload that respects efficiency and quality is estimated at 35 patients per day per nurse. Three out of the 10 clinics (Troya, Kalkfontein, Ga-Maria) function at that level. The reflected cost per visit at these clinics is between R18 and R20 per visit.





#### **Efficiency in Hospitals**

Efficiency in Hospitals											
	Mmametlhake	Mount Frere	Mount Currie	Uitenhage	South Peninsula						
Average Length of Stay	4.0	N/A	5.3	4.4	3.3						
Bed Occupancy Rate	59%	74%	69%	59%	68%						
Beds/1 000 Population	0.36	1.10	1.55	1.82	0.29						

- Average length of stay (ALOS) in the district hospitals ranged from 3.3 to 5.3 days, within an acceptable norm as suggested by the HSP.
- The bed occupancy rate varies from 59% to 74%, with all districts below the HSP optimum occupancy rate of 80%. Bed provisions assist in assessing whether this low occupancy rate is a function of over-supply of beds or of problems of access (the latter

was also assessed through admissions rates earlier). This varies widely from 1.82 beds per 1 000 population in Uitenhage to 0.29 beds in South Peninsula. The HSP puts at 1.1 the affordable number of district beds per 1 000 population. It is worth noting that the 3 districts which are at or above this norm (Mount Frere, Mount Currie, Uitenhage) are also the districts with a very low expenditure on PHC.

#### Over-supply and/or under-utilisation?

Under-utilisation of district beds can be observed throughout the country, often matched by low resourcing of these beds in terms of staff (particularly doctors) and drugs, leading to a higher than necessary level of referral to regional hospitals. For districts to move towards a better and more appropriate resourcing of both PHC and district hospital services, they could assess the number of beds needed for the current level of utilisation, the cost of resourcing those beds optimally (staff, drugs), and finally consider the possibility of shifting the likely extra amount of resources to strengthening the referral network within the district health system.

Assessing the number of inpatient beds needed												
	Mmametlhake	Mount Frere	Mount Currie	Uitenhage	South Peninsula							
Beds required according to HSP norm	154	319	272	237	243							
Actual Beds	68	320	450	275	65							
Beds Needed for Current Utilisation if 80% Occupancy Rate	39	286	371	220	53							
Possible Oversupply	29	34	79	55	12							

Another aspect of efficiency relates to the *use of appropriate level of care* given the huge variation in the cost per unit. It costs ten times more to see a patient at outpatients than at the clinics in Mmametlhake, and four times more in the South Peninsula.



#### Case study: The intra-district allocations

The previous sections concentrated on comparing districts in various provinces. McIntyre *et al*<sup>13</sup> noted that inequities within provinces are in many cases greater than inequities between provinces. The DHERs of Mount Frere and Uitenhage, both in the Eastern Cape, confirm this point.

This case study of intra-district allocations highlights inequities between sub-districts, and even between facilities within one sub-district, underscoring the important role of the DHER for district management and allocation of resources within the district. Given the limited geographical area covered, issues of staff redeployment can take place with less difficulties intrinsic to staff relocation.

The focus is on PHC facility-based services. The issues highlighted in this particular DHER are not atypical. *All* the questions raised would have applied to *all* the DHERs that have been done.

The format used for the presentation aims at making the information easily understandable by all levels of management, and thereby increasing transparency and buy-in for potential changes.

The overview of the district broken down between sub-districts and facilities shows a sub-optimal allocation of resources. One sub-district (the sub-district where the hospital is located) has a PHC expenditure per capita which is 40% above that of the other two sub-districts. Within sub-districts staff allocation is also very uneven, pointing to the possibility and need for redeployment, (although the complexities of re-deployment are acknowledged). Information on drug cost per facility highlights those facilities where this cost is so low that it raises issues about supply of drugs and quality of service. For other facilities, it is so high that it could point to disease patterns, prescribing patterns or even at possible "leakages".

S-Dist. 3 S-Dist. 1	sation Rate 1.6 1.7	end/capita R 80 R 76			Vanv low rotio	Does this hide higher real work with	overnight stay?			Why are these costs higher?	Is there a problem of leakage or of						Creator radantormant?	× • • • • •	And have a set of the	High start cost per consult, and high patient/nurse ratio: Could be due to	inappropriate staff mix.			
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		Drug cost	per visit	4 Hours	R 3	R 3	R 3	R 3	ling.		R 2	R 5			R 3	R 3	R 4	R 4	R 4	R 2	R 3	R 2	R 7	R 3
		Staff cost	per visit	h Centres - 24	R 54	R 70	R 56	R 83	kload and Staf	obiles	R 19	R 10		inics	R 33	R 34	R 17	R 55	R 38	R 16	R 17	R 47 🕨	R 35	R 17
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		Number of	visits	Con	32 442	23 357	🗼 24 493	25 562			9 339	3 530			16 524	11 687	15 624	10 466	19 096	12 932	11 547	18 949	3 891	11 019
		FACILITIES			CHC 1-1	CHC 2-1	CHC 2-2	CHC 3-1			Mobile A	Mobile B			Clinic 3-1	Clinic 3-2	Clinic 3-3	Clinic 1-1	Clinic 1-2	Clinic 1-3	Clinic 1-4	Clinic 2-1	Clinic 2-2	Clinic 2-3
		SUB-	DISTRICT		S-Dist. 1	S-Dist. 2		S-Dist. 3			S-Dist. 2	S-Dist. 3			S-Dist. 3			S-Dist. 1				S-Dist. 2		

#### Sustainability

Over-expenditure and the proportion of expenditure covered by revenue are, in the basic DHER, the main indicators used to assess sustainability.

	Mmametihake	Mount Frere	Mount Currie	Uitenhage	South Peninsula
Proportion over-expenditure	32%	N/A	N/A	21%	N/A
Revenue as % of hospital expenditur	e 0.3%	N/A	5%	7%	N/A

N/A = not available

The only two districts for which comparison between budget and expenditure was available showed an alarmingly high level of over-expenditure. In both districts the causes were due to a mixture of under-budgeting, inefficient allocation and inefficient use, mostly due to a lack of appropriate information for planning and decision-making. The task faced by the provinces and DMTs is then not just to allocate resources differently, but also to cut the level of resources used. DHERs assist by providing detail about how resources are used.

The level of revenue is affected by the socio-economic profile of the population covered, and their ability to pay. It is also affected by the existence of adequate billing systems and administrative support. These two factors are most often lacking.

## Conclusions

The review of these five initial DHERs focused on the link between resource allocation and services. It highlighted and/or confirmed a number of points, and posed questions that need further investigation:

- There is a very marked urban/rural divide in the level of district-level resources available.
   This is evident not just between provinces, but also within provinces.
- The low utilisation rate in rural districts points clearly to a problem of access.
- Hospitals often take the lion's share of the district expenditure: in 3 of the 5 districts, 70% of expenditure is incurred by the hospitals.
- High expenditure in hospitals contributes to a low expenditure on PHC, resulting in turn in overuse of hospital facilities. This is not a cost-effective pattern of delivery.
- All district hospitals in this review have a below optimal bed occupancy rate, including those districts where admission rates are higher than the norm. This could point to a lack of community trust in the hospital service or even to an oversupply of district beds. Consolidating beds and staff according to utilisation and in line with an optimal referral chain would lead to better use of resources.
- Expenditure on PHC in all but one district surveyed (South Peninsula in the Western Cape) is vastly below the expected cost of rendering the PHC Core Package of services.
- Overall, even in the poorly resourced districts, with the exception of Mount Currie, there is no evidence of a shortage of nursing staff. However nurses are often unevenly deployed leading to an insufficient number of nursing staff in some facilities with other

facilities being overstaffed. However the number of nurses does not provide information about skills, and it is likely that vast differences in the proportion of nurses trained as clinical nurse practitioners exist between the various districts. This in turn would affect both quality of care and the level of referrals to hospitals. High staff cost level can also reflect higher than necessary numbers of non-nursing staff.

- Expenditure on drugs is very varied, but is generally low, affected by the high proportion
  of the budget spent on staff. Norms are not available against which to compare spending.
  The costing model developed by the national Department of Health would assist in this
  interpretation.
- Spending on non-facility based services, especially environmental health, appears alarmingly low in all districts.

Overall the low level of resources available for PHC services, combined with poor staff deployment, are the most salient features of this analysis. Resources for PHC are affected by both the total allocation to the district, and the hospital allocation within the district. Importantly, the allocation and use of resources by big referral hospitals require scrutiny to release funds to strengthen the basket for district health services. Whilst provincial managers have influence over the allocations to various services, district managers have little power over the allocations to the district. They can, however, influence spending between levels of care and various facilities within their districts. District managers can also influence staff deployment and skills mix that would have a very significant impact on quality of care and access to services.

#### Looking ahead

As part of national policy, the rollout of DHERs to other districts within provinces has commenced in the Eastern Cape, the North West, Mpumalanga and KwaZulu-Natal.<sup>b</sup> The value of DHERs in the re-demarcated and larger districts becomes even more relevant due to their ability to influence equity, resource allocation and efficiency across and amongst sub-districts. The range and distribution of findings from DHERs are already providing some norms for these criteria. These norms are important for decisions about contractual arrangements, for assessing performance and for allocating resources at provincial and district levels.

Gilson noted that implementation of health policies is greatly enhanced when policies are linked to routine government processes.<sup>14</sup> Were DHERs to become part of routine government processes, targeting of interventions at district levels would be much enhanced by the improved information, improved skills and improved negotiating power for resources which would result.

b The term "district" used in this chapter was relevant during the period when the reviews were done. With health and local government linking their transformation processes, the term "districts" in future will apply to much larger areas and what were previously known as districts, will become sub-districts.



It was in the 1980s that social health insurance was first proposed as a key mechanism for extending health care coverage and promoting equity in South Africa. More than a decade later, and despite intensive investigation by three government committees since 1994, social health insurance is no nearer implementation. Lack of policy action on this front means that the wide disparities between health care in the public and private sectors remain untouched.

What lessons does this experience teach us? This chapter explains why consensus was never reached on the exact form social health insurance should take, and suggests strategies for building support – and offsetting opposition – amongst important stakeholders. The chapter also critiques features of the government's most recent proposal, published in 1997. It is argued that this proposal will have a limited impact on equity and is not sufficiently robust to generate the 'virtuous cycle' of improvements in resource availability and quality of care so badly needed by the public sector. Technical analyses are suggested that might resolve disputes about the fundamental principles underlying social health insurance in the South African context, thereby strengthening the design and acceptability of the policy. The chapter also highlights the importance of both hospital management transformation and fee policy reform as precursors to the successful implementation of social health insurance.

It is crucial that these issues be understood by more than a small circle of senior policy makers and academics. Social health insurance is a wide-ranging reform that seeks to translate societal values into real changes in access to health care on the ground: this makes it a policy worthy of extensive public debate. The resurgence of public discussion is warranted now, in particular, as social health insurance has been tabled once again for consideration by government, this time as part of a Cabinet-sponsored process to develop a co-ordinated social security system for the entire country. Given past experience it is important to ensure that social health insurance emerges from this process as an equitable and sustainable policy and that, this time around, it stands a chance of implementation.

Authors

#### Jane Doherty Centre for Health Policy, University of the Witwatersrand

**Di McIntyre** Health Economics Unit, University of Cape Town

Lucy Gilson Centre for Health Policy, University of the Witwatersrand Health Economics and Financing Programme, London School of Hygiene and Tropical Medicine
# Introduction

The notion of Social Health Insurance (SHI) has had a long and controversial history in South Africa. It was first mooted in the late 1980s as a mechanism the public sector could use to harness resources hitherto spent in the private sector, thereby improving health care coverage. Subsequently it has appeared as a favoured policy option in several documents associated closely with the new government (see Table 1).

	Table 1:	A chronology of official documentation proposing SH
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1994	The ANC Health Plan <sup>1</sup>
1997	White Paper for the Transformation of the Health System in South Africa <sup>2</sup>
1997	A Social Health Insurance System for South Africa <sup>3</sup>
1999	1999 Election Manifesto of the ANC <sup>4</sup>
1999	Health Sector Strategic Framework, 1999-2004 <sup>5</sup>

Yet, SHI does not appear any closer to implementation. Indeed, important stakeholders in the debate – such as the Department of Finance and the trade union movement – appear to have grave reservations with respect to the most recent proposal. Why is this so? This chapter offers some explanations, drawing on an examination of the process of SHI policy development in the 1990s to do so. It seeks to answer the following questions:

- 1. What is the likely impact of the most recent SHI proposal on the health system, especially with respect to equity and long-term sustainability?
- 2. What factors account for the failure to implement SHI?
- 3. What are the critical steps for SHI policy development in the short-term?

The chapter draws on information from an in-depth report entitled *The Dynamics of Policy Change: Health Care Financing in South Africa, 1994-1999* by Gilson *et al*<sup>6</sup> which examined the entire spectrum of health financing reform.<sup>a</sup> With respect to SHI, the report drew information from reviews of policy-relevant documentation, broader literature concerning SHI and the context of South African policy development, newspaper analyses of health issues and relevant parliamentary speeches. Detailed interviews were conducted with key informants from both inside and outside government.

The analysis of information from these different sources involved a process of interpretation that was undertaken with great care. A first step was to compare and contrast the information from different sources in order to seek confirmation of views and opinions as well as to identify different perspectives. In addition, a first draft report was sent out for review by a range of key informants, and their feed-back was considered when finalising it. A rigorous process is always important in analysing qualitative information. It was critical in this study because both the institutions involved in it were themselves participants, at some time or another, in the process of policy development reviewed in the report. As an additional

a This report in turn formed part of a two-country project entitled *Analysing the process of health sector reform in South Africa and Zambia*, otherwise known as 'The SAZA project'. The Department of Economics at the University of Zambia, the Health Financing and Economics Programme of the London School of Hygiene and Tropical Medicine, and the Swedish Institute of Health Economics were collaborators in this project.

precaution the research team was therefore careful to include some members who had *not* been participants in past processes.

# What is SHI?

SHI appears in many different shapes and sizes across the world. For example, the membership eligible to join an SHI scheme can range from a small group such as civil servants to the entire population. However, there are a few key features that are common to all schemes, and that distinguish SHI from other resource-mobilising policies such as taxation, private insurance and charging user fees at the point of service. These are:<sup>7</sup>

- It is legislated by government and requires regular, compulsory contributions by members
- Eligible members cannot opt out of a scheme or be excluded by the scheme
- Premiums are calculated according to ability to pay (i.e. according to income)
- Benefit packages are standardised; and
- Contributions are ear-marked for spending on health services.

Together these features create large 'risk pools' where a stable membership of contributors and their dependants cross-subsidises the care of the elderly, sick and poor with premiums paid by the healthy and wealthy. This has the effect of improving equity within the membership of the scheme. Also, where a scheme reduces the number of people whose health care has to be funded out of the public budget, or where it contributes to the public budget through fees paid directly to public services, it has the wider effect of improving equity across the entire health care system. Figure 1 demonstrates the routes through which these equity-enhancing features might theoretically operate, using the main elements of early South African SHI proposals by way of example.

The shaded areas in Figure 1 show the population currently dependent on public health services and the current size of the public health sector. The dotted lines show how SHI would change this situation. Essentially, the focus of past proposals was that all workers and their dependants would be obliged to belong to an SHI scheme which would cover at least the costs of their public sector hospital care. This would substantially increase the population who is covered by some form of health insurance (by a few million people) and reduce the proportion of the population dependent on tax-funded health services. This would mean that limited tax funds could be spent entirely on those who cannot afford to pay for health services. SHI would also benefit low-income workers who currently cannot afford medical scheme cover, as the higher SHI contributions of the wealthy would subsidise the costs of the health services used by low-income workers. In this way, low-income workers would have access to better-resourced health services than if they had to pay for health care themselves.

According to Figure 1, SHI would also provide a mechanism for drawing funds into the public sector which are currently devoted entirely to the private sector. At present, nearly sixty per cent of health spending occurs within the private sector, but benefits less than a quarter of the population.<sup>8</sup> SHI would combine some of the resources currently channelled via private medical schemes with the SHI contributions of low-income workers and make them available for paying for public sector hospital services. In this way, 'private' sector resources could be drawn into the public sector and be used to further improve public sector hospital and primary care services for those who cannot afford them.



# The Evolution of SHI in South Africa

The previous section illustrated how SHI could be used to improve equity, using the notion of SHI current in the early 1990s as an example. This section discusses how this notion evolved, and how it has shifted over time.

The concept of compulsory health insurance grew out of debates amongst members of the progressive health movement opposing the apartheid health care system. As a mechanism for mobilising additional resources, it displaced the notion of an entirely tax-funded National

**CHAPTER 7** 

Health Service that had been popular in the mid-1980s.<sup>9, 10</sup> National Health Insurance, as it was dubbed in the late 1980s, acknowledged the existence of a strong private sector with the administrative expertise to run health insurance schemes and the political strength to oppose reforms that suggested nationalisation of private providers.<sup>11, 12, 13</sup> It also acknowledged that the populace would be more likely to support an ear-marked contribution to compulsory health insurance than an increase in over-all taxation as the latter would not necessarily guarantee an improvement in health care benefits.

As Table 2 shows, National Health Insurance as a concept was itself replaced in the mid-1990s by a new concept, that of Social Health Insurance (SHI).<sup>1, 14, 15</sup> Whereas the former concept envisaged benefits being made available to the entire population, the latter restricted benefits to the families of contributors alone. This development was in recognition of the relatively small size of the formally employed sector in South Africa, this being the sector expected to pay premiums into the SHI fund. It was felt that this sector was too small to generate substantial benefits for the whole population. Thus it came to be that the leading liberation movement, the African National Congress, adopted as part of its platform in contesting the first democratic elections in 1994 a policy which allowed "tiering" of health services in South Africa.<sup>1</sup> Tax-funded services would serve the poor, SHI-funded services would serve low- and middle-income workers and their families, while the rich could continue to purchase additional services in the private sector. While it was anticipated that many SHI members would continue to use public sector hospital services, SHI members would have access to slightly different services. The differentiation between publicly funded services and those available for SHI members was intended, however, simply to be in terms of 'hotel'amenities (such as access to private wards) and not in terms of the quality of clinical care.

In 1997 an SHI policy was formally adopted by the new government's Department of Health.<sup>16</sup> By now the notion of SHI had been limited further to the provision of hospital cover only, and to membership only of those workers unable or unwilling to purchase private medical insurance (these are mainly low-income workers) (see Table 2). The 1997 proposals also suggested that eligibility for cover should become confined to workers who earn more than the wage level at which one becomes eligible to pay income tax, thereby excluding very low income workers. Furthermore, it was foreseen that the SHI scheme would be administered by a government agency, rather than by the administrators currently in charge of private medical schemes. In January 1998, shortly after this policy was published, a parallel reform was enacted. This was the new Medical Schemes Act No. 131 of 1998 which was finally implemented in January 2000 and which intends to limit 'dumping' of private patients on the public sector when their insurance limits have been reached, and also improve access to medical scheme cover by prohibiting discrimination against high-risk individuals through outright exclusion from membership or through the charging of high premiums.<sup>17</sup>

#### Table 2: The evolution of compulsory health insurance in South Africa

Features	National Health Insurance Before 1994	Social Health Insurance 1994-1996	Social Health Insurance in 1997
Contributors	All employed people	Formally employed only	Only formally employed above the income tax threshold and not on medical schemes
Beneficiaries	The entire population	Contributors and their dependants	Contributors and their dependants
Cover	Comprehensive	Hospital care only	Hospital care only
Providers	Mainly public, but role for the private sector (especially GPs)	Mainly public, but role for the private sector	Public hospitals
Administration	Potentially large role for medical schemes administrators	Potentially large role for medical schemes administrators	Government agency

SHI has not yet been implemented, however, nor does it appear that it will be implemented in the near future. Instead, it has become subsumed in larger debates concerning the development of a country-wide social security system. Specific elements of the 1997 SHI proposal have also become subject to important opposition from some key stakeholders, both inside and outside government. The Department of Finance, for example, is opposed to ear-marking tax money for one specific function (interview data).<sup>6</sup> On the other hand, the trade union movement appears to be cautious of a policy that would simply oblige its members to pay for the public hospital services that, until now, it has largely received at little or no cost, without any guarantee of improvements in the quality of care or of substantial equity gains for society at large (interview data).<sup>6</sup>

Even if this fairly substantial opposition were to be overcome, it seems unlikely that an SHI will be adopted that embodies the principles of the strongly pro-equity debates prevalent in the early and mid-1990s. This is because the policy accepted by the Department of Health, the 1997 proposal, is likely to have the least impact on current inequities of all the options so far proposed in South Africa. This is because it limits the opportunity for cross-subsidisation by reducing the scheme membership to low-income workers unable to afford private medical insurance. These members will not benefit from contributions made by the traditional medical scheme membership. Figure 2 attempts to illustrate this point.

In Figure 2, Model A represents earlier proposals. Here, government legislation acts in unison to create a network of schemes which individually include a greater membership than in the past (the dotted lines represent the impact of the Medical Schemes Act), but collectively also cross-subsidise one another to accommodate differences in the membership profiles of different schemes (for example, a scheme that has predominantly young, health members would cross-subsidise the costs of a scheme with a high number of elderly members). Thereby it creates a single risk pool out of all South African citizens. Model B represents the current official policy position of the Department of Health, where the Medical Schemes Act may increase the membership of medical schemes and SHI legislation sets up a competing SHI fund, making membership of one or the other compulsory, but failing to

achieve cross-subsidisation between the array of small 'risk pools'. This is a compartmentalised system that fails to achieve the main objective of SHI as it was proposed in the past, namely, the tapping of resources currently spent in the private sector in order to enhance cross-subsidisation between the rich and the poor.



Figure 2: Difference in risk pools created by two different models of SHI design

# Should the current SHI policy be pursued?

The South African health system has not yet found a mechanism to address its largest inherent disparities, namely, those between private and public sector care. The Department of Health's 1997 policy is unlikely to fill this gap. Is the policy then worth pursuing? To answer this, one needs to examine why the concept of SHI has been reduced to its current form. In part it seems to reflect an argument prevalent in the Department of Finance, namely, that South Africa's tax structure already burdens middle- and high-income earners unduly (interview data).<sup>6</sup> According to this argument, it would be 'unfair' to force further crosssubsidisation on this section of the populace, and a contravention of the government's macroeconomic policy which seeks to limit total taxation to 25 per cent of Gross Domestic Product.<sup>18-21</sup> However, Gilson et al<sup>6</sup> suggest that the progressivity of health care funding in South Africa may be overstated. VAT, for example, is a highly regressive tax and forms almost one quarter of total tax revenue. Also, reductions in both company and personal income tax rates over the past few years have reduced the progressivity of the overall tax structure.<sup>22</sup> In addition, there are a number of cross-subsidies from the public to the private sector. These include tax deductions on medical scheme contributions, which particularly benefit high-income members, as well as heavily subsidised training of health workers, the majority of who work in the private sector after graduation. Lastly, the notion of what is 'fair' or 'unfair' is ultimately a societal judgement that has never been fully explored in the context of SHI.

The Department of Health has also had a part to play in re-conceptualising SHI since the mid-1990s. In response to steep declines in the revenue raised from private patients using public hospitals, it appears that SHI became seen as a mechanism for recouping fees from those earners who still utilise public hospitals but, because of highly inefficient revenue collection systems, fail to pay for services. These are low-income workers unable to afford private care. It is difficult to assess whether this limited role for SHI is an acceptable one, all things considered, because the debate around the social objectives of SHI in South Africa occurred mainly within three technical committees set up by the Department of Health (see Table 3) and was not subjected to wider discussion within the Department of Health, across government and in civil society. Gilson et al<sup>6</sup> show that the objectives and design of SHI were disputed even within the technical committees, while fundamental differences were experienced between these committees and the senior policy-makers who had commissioned them. While the design of SHI shifted over time to accommodate some of these differences, not all stakeholders' concerns were addressed. Thus, while the current SHI policy represents a compromise to some extent, as mentioned earlier it still faces important opposition from the Department of Finance and trade unions, while its implications are not well understood by government or society at large.

#### Table 3: Committees set up by the Department of Health to develop SHI policy

1994	Health Care Finance Committee
1995	Committee of Inquiry into a National Health Insurance System
1997	Social Health Insurance Working Group

All in all, therefore, it seems appropriate to suggest a re-examination of the fundamental principles underlying SHI. This requires both some technical analysis to illuminate the real

extent of cross-subsidisation within the present health system, and a transparent process examining the willingness of society to accept – and even push for – further cross-subsidisation. In terms of concrete steps, Gilson *et al*<sup>6</sup> suggest that this would require:

- A comprehensive analysis of the extent of cross-subsidisation in health care funding and spending
- Conceptual work around the motivations and objectives of cross-subsidisation in health care funding and spending within the context of South Africa's past history and present social objectives
- A systematic analysis of the degree of cross-subsidisation that would be generated by different SHI design options
- Consideration of the acceptability of any option to key actors, particularly employers and trade unions, groups which have been neglected in the past; and
- Development of a clear strategy for engaging actors with different interests and organisational positions in relation to the Department of Health, in a way that establishes a pro-reform alliance that supports the direction of further policy development.

The last three of these steps would have to go hand in hand with a review of two design characteristics of the 1997 proposals that are problematic. First, as demonstrated by Figure 2, the separation of the SHI fund from the medical schemes environment (and of medical schemes from one another) not only limits opportunities for cross-subsidisation but also threatens the sustainability of the system in the long term, preventing the sharing of the costs of expensive health care events between different 'risk pools'. Although potentially complex, mechanisms which integrate the SHI and medical schemes environments may be prerequisites for impacting substantially on inequity and therefore warrant further investigation.

Second, primary health care cover was removed from the SHI benefit package following the introduction of free primary health care. The exclusion of primary care could result in perverse referral incentives. On the one hand, the gate-keeping function of the primary health care level for entry of patients into the hospital system would be removed, leading to potential over-utilisation of hospital services. On the other hand, the primary care level would have the incentive to shift patients up to the hospital level, and vice versa, in an attempt to minimise the burden on their respective budgets. One could also speculate that the trade union membership might find more attractive a scheme that also offers primary health care services (especially through GPs) than one simply locking them into payment for public hospital services. All in all, the side-effects of excluding primary health care from the benefit package are worthy of careful re-evaluation.

# Implementing SHI

It may seem premature to discuss the implementation of SHI when its prospects within the current social security debates – and even the very principles upon which it is based – are so unclear. Even at this stage, however, it is essential to plan for its implementation by initiating parallel efforts that are necessary precursors to implementation. This is because SHI is a particularly complex reform with wide-ranging impacts on the health system. Not only does it have a ripple effect on a range of other policies (see Box 1), but its success is dependent on the prior existence of a properly functioning fee-collection system.<sup>23, 24</sup> It will be difficult to gain political support for a policy that introduces payment for services currently

provided at little or no charge. Likewise, it will be difficult to gain user support for a policy that does not provide services of a higher quality than previously experienced. Additional fee revenue is required to make such quality improvements. Some progress has been made recently by the Department of Health in developing a national uniform hospital fee structure and some provinces are beginning to implement some form of revenue retention. However, other aspects of hospital fee policy reform vital to successful implementation of SHI and still requiring attention include:<sup>6</sup>

- The development of a mechanism to collect more timeously and easily fees which are presently charged to medical schemes for members using public hospitals but which, due to a variety of factors (including late submission of invoices) are not reimbursed to the hospitals;
- The development of a nationally co-ordinated revenue retention policy which provides incentives for fee collection at the hospital level, whilst also supporting the equitable re-distribution of resources between geographic areas and levels of care; and
- Re-design of fee collection systems to enhance efficiency.

As it will take years to complete these interventions successfully, the implication is that SHI should be conceptualised as a medium- to long-term, rather than as a short-term, reform.

# Box 1: International experience of the financing and other reforms required for effective implementation of SHI policy

#### Financing policies:

- User fee policy
- Alternative financing policies for the uninsured but not indigent
- Financing policies for special services (e.g. compensation for work-related or motor vehicle accident injuries)
- Policies to improve allocative and technical efficiency in the public sector (e.g. public hospital management reform)
- Geographic resource allocation policies
- Public hospital reimbursement policies
- Appropriate linkages with general taxation policy, including tax incentives

#### General health policy and organisational policies:

- Legal and regulatory frameworks
- The expansion of services to accommodate SHI enrolees
- Policies to ensure equitable access to a minimum package of health services
- The integration of publicly and privately funded and/or delivered services
- Decentralisation
- Pharmaceuticals policy
- Appropriate technology policy
- Human resource planning and development policy

Source: Doherty 1997

Apart from the need to sequence and inter-link other reforms with SHI, it is important to learn from the past experience of financing reform - such as the removal of fees for primary care - where the development and design of policies generally did not involve those tasked with their implementation. The consequences included poor implementation practices and unintended negative impacts.<sup>6</sup> Involving representatives of mid-level managers and providers as advisers, even in the early stages of SHI policy formulation, may be important in strengthening the eventual implementation of the reform. In addition, it would be worthwhile identifying 'policy champions' who are in a position to feed the work of special policy processes – such as special committees, working groups or task teams – into the daily processes that operationalise policy decisions. Lastly, strengthening skills and systems in preparation for implementation is also important. More gradual implementation processes can enable such capacity development. As experience has shown, in a changing structural environment it is important to recognise the costs of 'trying to do too much too quickly', even whilst accepting that problems demand urgent action.

The present moment also affords opportunities to evaluate the 1998 Medical Schemes Act in the early stages of its implementation, keep a watchful eye over its equity and sustainability impacts, and draw lessons for the design and implementation of SHI policy. An analysis of the impact of the new uniform fee structure on equity, net revenue generation and the efficiency of billing systems could also feed into SHI development. Whatever monitoring or evaluation is undertaken, it must allow assessment both of the progress towards objectives achieved by any policy change and of the factors influencing this progress: often it is the detailed understanding of 'explanatory' factors derived from one experience that can be used to effect change in another area.<sup>6</sup>

### Building capacity for SHI policy development

This chapter has suggested several processes that, together with some technical analysis, could strengthen SHI policy development in future. These processes require strong and strategic leadership. How can this leadership itself be strengthened? Past experience has shown that senior health policy-makers exercised considerable influence over decision making in South Africa between 1994 and 1999.<sup>6</sup> At the same time, the structures for channelling information and advice to these policy-makers on health economics issues were quite weak. Perhaps as a result, health care financing policy appeared to receive less attention than other aspects of health policy development despite its importance to health system change. Aspects of priority setting and design development for health care financing were also weak. This is a particular problem for SHI that is inherently complex. Several strategies are available to remedy these problems:<sup>6</sup>

- a) <u>Strengthening mechanisms for supporting policy-makers</u>: It is important to review the existing mechanisms of providing technical support to health policy-makers and to establish procedures that enable regular contact with technical advisers. This is particularly important as SHI becomes part of a bigger process to implement a social security system for South Africa. Opening up some policy issues for broader debate would be an important step in bringing a wider range of views to bear on health care financing policy development.
- b) <u>Strengthening health economics capacity within government</u>: It is particularly important to raise the profile of the national Department of Health's Directorate of Health Financing and Economics by improving its access to the highest level of government, and promoting systematic dialogue between it and key reform managers and policy makers at both national and provincial levels. A more routine and speedy flow of ideas is important. It is also important to increase the array of skills at the Directorate's

disposal, and to develop the demand for, and understanding of, its advice.

c) <u>Working with non-government analysts</u>: To make best use of the small, available pool of health economists in the country it would be useful to clarify research needs as well as the objectives and nature of external analysts' involvement on any issue.

While it is important for the role of technicians in SHI policy development to be consolidated, it is equally important for these technicians to recognise the need to develop clear policy process strategies as a complement to their technical analyses of SHI options. Past experience has shown that their skills in this aspect of policy development were limited, partly leading to the present lack of policy action with respect to SHI.<sup>6</sup> Three key activities appear important to build the skills of technicians:<sup>6</sup>

- a) <u>Actively addressing the values of policy elites as well as the broader public</u>: A striking feature of the 1994-99 experience of health financing reform in general is that political buy-in appears to have been a necessary pre-condition for further policy development. Thus, understanding the power, value bases and concerns of major actors in the health sector is a first step in managing the process of SHI policy development. It provides the basis for developing strategies that create alliances in support of reforms and offset opposition. It also allows reforms to be designed in recognition of actors' interests. In the process, the interests and concerns of the broader public must not be neglected: the wider public, too, are legitimate stakeholders whose support or opposition can affect the outcome of any policy.
- b) <u>Developing effective and appropriate strategies for engaging critical actors</u>: Once the power, value bases and concerns of different actors are well understood, a variety of techniques are open to policy-makers for their engagement. With respect to SHI, better communication and consultation with the Department of Finance is important for future policy development and must be rooted in better technical analysis by the Department of Health, working with or sometimes even challenging national economic policy frameworks. In taking forward SHI policy development it will be important to develop an explicit consultation and negotiation strategy with employees and/or trade unions, as well as to try to engage constructively with private sector groups that may be hostile.
- c) Improving the communication of complex policy design: As inappropriate presentation of technical inputs can impede reform, consideration of the dominant values of key political actors will help analysts appropriately frame their policy inputs. Complex reforms anyway need to be communicated clearly and simply both to policy makers and the broader public. Thus, SHI debates need to be opened for broader discussion by spelling out key objectives, broad policy options and even detailed design options simply and clearly. Formulating important issues in ways that can be understood widely need not necessarily sacrifice technical detail.

# Conclusion

SHI policy development is now being renewed as part of a wider effort to develop a social security system for the country. This chapter questions a number of the assumptions underlying the only official policy document on SHI to date which was published in 1997, and suggests some first steps for re-examining important features of its objectives and design. The chapter suggests that the process for doing so needs to be both more inclusive and strategic. In particular it asks individuals and organisations across national and provincial

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departments of Health and Finance - and across organs of civil society – to scrutinise policy developments for their ability to bridge the resource maldistribution between the rich and the poor, gain political support and overcome obstacles to implementation.

To attempt even these first steps within a short timeframe would be a grave mistake. Past experience of SHI policy development in South Africa has shown one committee after another working to tight deadlines, in the end to no avail. SHI is an unusually complex reform that requires a 'slow and steady' approach to resolving key design and process challenges. Caution – and thorough investigation – are essential for a reform that hopes to have a profound impact on the way health care is funded and delivered in South Africa.

# Impact of Changes To The Medical Schemes Act

There have been extensive changes to the law governing medical schemes in the last two years. Implementation of much of that law only began in January 2000. The legislative changes represent underlying changes in government policy in favour of increased regulatory control, not only of medical schemes but also contractors to medical schemes such as medical scheme administrators, managed care organisations and brokers. The chapter explores these legislative changes, issues surrounding their implementation and responses by the medical schemes industry to date.

Initially the legislation, the Council for Medical Schemes and even the Minister of Health were all challenged by a number of powerful stakeholders within the industry on a few important issues, namely, the lines of demarcation between insurance business and the business of a medical scheme, re-insurance of medical schemes, and the promulgation of additional regulations relating to waiting periods.

This chapter examines the changes in the functions of the Council for Medical Schemes in the light of the legislation's more consumer-oriented approach. The effect of the legislation on medical scheme contributions is discussed and some scheme membership figures are presented. It also offers a brief look at the implementation of the prescribed Minimum Benefits Package by schemes from a consumer's point of view.



**Debbie Pearmain** Hospital Association of South Africa Council for Medical Schemes

# Introduction

Private financing of health care expenditure in South Africa is not new. De Beers Consolidated Mines first introduced a forerunner of today's medical schemes in South Africa in 1889 for its employees. After the Second World War, medical schemes proliferated to the stage where, in 1960, there were 169 schemes covering 1.5 million persons.<sup>1</sup> A Medical Schemes Act was passed in 1967 which survived a number of amendments up until 1998 when the current Medical Schemes Act came into being. The last important amendment to the previous legislation took place in 1993 and significantly deregulated the medical schemes industry. The Representative Association of Medical Schemes (RAMS), which set a mandatory scale of benefits for medical schemes, lost its statutory status with this amendment. Other major changes effected by this amendment were:

- The abolition of compulsory direct payment to providers of services
- The abolition of the statutory status of the scale of benefits
- The acquisition by medical schemes of the power to vary benefit levels and structures as they saw fit
- The acquisition by medical schemes of the capacity to operate pharmacies, hospitals and similar health establishments.

The Medical Schemes Act No 131 of 1998 constituted, in many ways, the State's indictment of the manner in which the medical schemes industry had responded to the 1993 amendments to the previous legislation. Benefits offered by medical schemes for the elderly and ailing were greatly diminished in consequence of the 1993 deregulation. Schemes designed their benefit structures so as to attract the young and healthy and in some cases actively discouraged membership by high-risk individuals and groups through contribution loadings on the basis of risk profile. This resulted in increased demands on public sector hospitals by the elderly and ailing who fell out of the medical scheme system.

The new legislation responded with a compulsory minimum benefits package which all schemes are obliged to offer. Discrimination on the basis of age, medical history and health status is prohibited by the new Act. Contributions may be determined only on the basis of income level and/or number of dependants. There is thus the potential for cross-subsidisation not only of the elderly and ailing by the young and healthy but also of low earners by high earners. Medical schemes may enter in arrangements with public hospitals for the provision of minimum benefits to scheme beneficiaries but they are obliged to pay the public hospitals for their services.

The new Act allows for restricted membership schemes but the basis of the restriction is employment or former employment in a profession, trade, industry or calling or by a particular employer or class of employer. A major concern of the new legislation is equity of access to medical scheme membership. Consequently medical schemes may not exclude any applicants or their dependants for membership except on prescribed conditions. Even restricted membership schemes may not provide for the exclusion of an applicant or a dependant where such a person satisfies the employment criteria of that scheme.

There is also an attempt, in the 1998 legislation, to put some distance between medical schemes and their administrators. The latter have played an excessively dominant role in the affairs of medical schemes for a number of years without being directly subject to any of the law and policy relating to medical schemes.<sup>2</sup> Now administrators and other contractors

to medical schemes, for example brokers and managed care organisations, also fall under the regulatory umbrella of the Medical Schemes Act.

# **Material Changes**

#### Background

The legislation contained in the Medical Schemes Act No. 131 of 1998 and its regulations is substantially different, both in terms of focus and government policy, from the preceding law. As stated previously, the Medical Schemes Amendment Act of 1993 had the effect of considerably deregulating the medical schemes industry. It allowed detailed and individual specific risk rating and many variations in both the level and structuring of benefits. Risk rating principles require the detailed analysis and assessment of past claims experience in the case of groups, and medical history and current health status in the case of individuals. On the basis of such assessment, the standard or average contribution levied by a particular scheme is loaded or increased in proportion to the increased risk to the scheme represented by the group or individual applying for membership. Risk rating can be done on a continuous basis and not only on admission to membership of a scheme. For example the claims experience of a particular employer group which has been with a scheme for a few years can be assessed to determine whether the health profile of the group has improved or deteriorated with time. If the latter is the case then the contributions for the group may be increased by a specific number of percentage points above the norm to compensate for the increase in the risk. In an open scheme to which risk rating principles are applied, different employer groupings might end up paying very different levels of contributions for the same level of benefits depending on their risk profiles.

Risk rating greatly diminishes, and can even eliminate, the operation of cross subsidisation within a scheme. It facilitates offers of attractively low premiums to persons who are good risks, eg. the young and healthy, while requiring those who are old or sick to pay greatly increased premiums which they often cannot afford. It results in the fragmentation of both the medical schemes market and medical schemes themselves into high and low risk sectors or options. Consequently medical aid becomes extremely expensive for those who need it most. The result, from Government's point of view, is an increasing number of elderly and critically ill people falling back into the public hospital system at the point when they require the most expensive levels of health care. It was in an attempt to prevent this that the new legislation disallows risk rating on the basis of age, current health status and previous health conditions and insists on a minimum benefits package for all schemes.

The activities of medical aid brokers, medical scheme administrators and managed care organisations took place in a largely unregulated environment since the application of the previous legislation was confined to medical schemes. The new Act, by contrast, regulates not only medical schemes, but also brokers, medical scheme administrators and managed care organisations. It also imposes much stricter controls upon medical schemes themselves in terms of corporate governance, financial and membership requirements, and provision of benefits. At the time of writing, medical schemes and the Council for Medical Schemes are still grappling with implementation issues and are likely to be doing so for some time to come.

#### Functions of The Council For Medical Schemes

In the 1998 Act, the changes to the legislation governing the functioning of the Council for Medical Schemes are extensive. There is an express alignment with national health policy objectives as evidenced in the expanded functions of the Council for Medical Schemes listed in section 7 of the Act. Under the previous Act, the Council's functions were to:

- Control, promote, encourage and co-ordinate the establishment, development and functioning of medical schemes
- ◆ Advise the Minister on matters concerning medical schemes
- Investigate complaints and settle disputes in relation to the affairs of registered medical schemes as provided in the Act
- Perform such other functions as may be prescribed.

The new Act states the functions of the Council in far more purposeful and consumeroriented terms. They are to:

- Protect the interests of members at all times
- Control and co-ordinate the functioning of medical schemes in a manner that is complementary with the national health policy
- Make recommendations to the Minister on criteria for the measurement of quality and outcomes of the relevant health services provided for by medical schemes, and such other services as the Council may from time to time determine
- Investigate complaints and settle disputes in relation to the affairs of medical schemes as provided for in the Act
- Collect and disseminate information about private health care
- Make rules, not inconsistent with the provisions of the Act, for the purpose of the performance of its functions and the exercise of the Council's powers
- Advise the Minister on any matter concerning medical schemes
- Perform any other functions conferred on the Council by the Minister or by the Act.

Since the law provides that an administrative body such as the Council for Medical Schemes must have those powers necessary to carry out its statutory functions, it is quite clear that the powers of the Council in the new Act have been considerably extended. Furthermore there is a well defined focus on the protection of the interests of medical scheme members.

This focus is expressed in both specific and general terms. The Council is required to make recommendations to the Minister of Health on how to measure not only the delivery of the relevant health services, but also the quality and outcomes of those services. It has the power to collect and disseminate information about medical schemes but also private health care in general. The previous legislation made no mention at all, in terms of function, of the collection and dissemination of information at such a broad level.

# Time Frames

# Period of Operation

Although the Medical Schemes Act No 131 of 1998 became operative on 1 February 1999,<sup>3</sup> the first regulations were only published on 20 October 1999.<sup>4</sup> They came into effect in 2

phases. All of the regulations except those in Chapters 3,4 and 8 came into operation on 1 November 1999. Chapter 3, 4 and 8 regulations became operative on 1 January 2000.<sup>5</sup> In practical terms the new medical schemes legislation has therefore only really been implemented since the beginning of the year 2000. A meaningful assessment of the impact of the legislative changes on the private health care industry would require a period of a few years rather than months.

The short space of time between the publication of the regulations and their coming into effect meant that many schemes battled to incorporate the legislative changes into their rules by January 2000. Indeed the majority of medical schemes had not submitted rules by February 2000.<sup>6</sup> Once all of the scheme rules had been gathered in, it was a monumental task for the Registrar of Medical Schemes to scrutinize and approve them,<sup>a</sup> given the number of rule changes that had to be made.

#### **Review of Regulations**

The regulations to the Act are, in a sense, a work in progress. This is supported by the Department of Health's express recognition, in the explanatory note to the Prescribed Minimum Benefits (PMB), that this form of regulation is new in South Africa and that it is therefore necessary to monitor the impact, effectiveness and appropriateness of Prescribed Minimum Benefits provisions. In terms of the regulations, a review of the PMB provisions must be conducted by the Department of Health at least every two years. Stakeholders, provincial health departments, consumer representatives and the Council for Medical Schemes must be involved in this review process. The reviews are required to provide recommendations for the revision of the regulations and the PMB package on the basis of:

- Inconsistencies or flaws in the current regulations
- The cost-effectiveness of health technologies or interventions
- Consistency with developments in health policy
- The impact on medical scheme viability and its affordability to members.

It is in this spirit that the Council for Medical Schemes has established a Research and Monitoring Department within its full time office. The Research and Monitoring function is crucial to the successful implementation and adaptation of the regulatory and funding systems created by the Act.

In July 2000, the Council began a process of consultation with stakeholders concerning the impact of the Prescribed Minimum Benefits package. A Council-facilitated workshop involving some 20 stakeholder groupings participated in discussion of the interpretation and implementation of the Prescribed Minimum Benefits package. Some of the concerns raised in the workshop were:

- 1. The availability of services at public hospitals and public sector waiting lists
- 2. Problems with billing and fee structures in public hospital facilities
- 3. The ambit of the Prescribed Minimum Benefits
- 4. Understanding of clinical treatment protocols and policy issues, for example, whether infertility treatment at public hospitals was, and should be, covered as a prescribed

a Amendments to scheme rules, in order to be valid, must be approved by the Registrar in terms of section 31 of the Act.

minimum benefit and how HIV/AIDS should be managed as a Prescribed Minimum Benefit

- 5. Additional financial risk to medical schemes as a result of the minimum benefits and how schemes are managing this risk
- 6. Administrative problems experienced by medical schemes as a result of the Minimum Benefits Package.

Various recommendations came out of the workshop which will form the basis of further consultative work by the Council with stakeholders. Although the review of the regulations remains the prerogative of the Minister of Health, it is the intention that as a result of the consultative process, the Council will be able to make informed recommendations to the Minister.

#### Amendments To Regulations

There have been two amendments to the regulations since their initial promulgation in October 1999. The first amendment was made on 5 June 2000. It altered the regulations to the effect that:

- 1. A scheme could no longer impose a maximum waiting period of 9 months for costs of confinement due to pregnancy
- 2. A scheme may impose a waiting period of not longer than one month on a person or a dependant whose membership of another scheme has been terminated because of a change of employment and who has not been a member or a dependant for a continuous period of two years
- 3. A person contemplated in (2) above must apply for membership within 3 months of change of employment
- 4. The amnesty period for late joiners was extended up to 31 March 2001
- 5. A medical scheme must not prevent a person from applying for membership of a scheme for the reason that the person is not using a broker to make such application
- 6. Any person who has paid a broker compensation where there has been a material misrepresentation is entitled to the full return of all money paid.

There were also some changes to the conditions to be complied with by brokers in terms of their registration and accreditation by the Council for Medical Schemes.

These amendments caused no small stir within the medical schemes industry which threatened a court challenge to the Minister's authority to make changes to the regulations without consultation with stakeholders. After meeting with medical scheme representatives, the Minister apparently made some concessions concerning items 2 and 3 on the list above. In a notice published on 30 June 2000,<sup>7</sup> she removed these offending provisions from regulation 11.

#### **Consumer Affairs**

All schemes are required by the Act to make provision in their rules for the settlement of complaints and disputes. This was also a requirement of the previous Act. However, the jurisdiction of the Council over complaints has been significantly strengthened. This is the result of the inclusion of a definition of "complaint" in the 1998 Act. It allows for complaints by providers of health care services and contractors to medical schemes as well as medical

scheme members. The new Act includes as a complainant anyone who has an interest in the affairs of a medical scheme but emphasises that a complaint must relate to a specific complainant. The complaint may encompass the activities not only of the relevant medical scheme but also those of administrators, managed care and other service organisations, and employers, vis-à-vis the scheme. In keeping with the Act's emphasis on complaints, the development of a computerised, efficient and accessible, complaints processing system is under way within the full time offices of the Council at the time of writing.

Chapter 10 of the Act establishes a new hierarchy for dealing with written complaints. The first port of call, after the scheme itself, is the Registrar of Medical Schemes. If the Registrar is unable to resolve the matter then the Council must take all such steps as it deems necessary to do so. There is provision for an appeal to the Council against a decision of the Registrar. An innovation in the 1998 Act is the creation of an Appeal Board consisting of three persons appointed by the Minister. The chairperson of the Appeal Board must be appointed on account of his or her knowledge of the law and the remaining two members must be appointed on account of their knowledge of medical schemes. An appeal lies from a decision of the Council for Medical Schemes to the Appeal Board. The previous legislation did not provide for an Appeal Board of this nature.

Court proceedings can be extremely costly and are often out of the financial reach of the average person. Even assuming that a person has the means to go to court, the time it takes to resolve issues in a court of law could render the final decision meaningless for the plaintiff in a health care case. Time of delivery is usually a critical element in the health services arena. For these reasons an alternative, faster and cheaper system of dispute resolution such as that created in the Act has significant advantages.

At the extreme end of the spectrum, the Medical Schemes Act allows recourse to the criminal justice system where the complaint involves a contravention of the Act or certain specified activities. Section 66 stipulates that the penalty for such offences may be a fine or imprisonment not exceeding 5 years or both.

The legislation is clearly not lacking in mechanisms for dispute resolution. It remains to be seen what use will be made of these mechanisms by scheme members and other stakeholders.

#### Information Dissemination

The Council for Medical Schemes is very much aware of the need for the education of scheme members, providers of health care services and even the medical schemes themselves. Several workshops on the subject of corporate governance of medical schemes have already been held in major centres throughout the country for medical scheme trustees. There are plans for ongoing educational initiatives at various levels and using various communications media. A website (www.medicalschemes.com) has been established by the Council. Its present functions include the dissemination of circulars and other information by the Registrar of Medical Schemes and the facilitation of applications for registration or accreditation of schemes, brokers and administrators.

#### **Undesirable Business Practices Jurisdiction**

A significant new addition to the Medical Schemes Act of 1998 is an undesirable business practices jurisdiction. In terms of section 61 of the Act the Registrar may, with the concurrence of the Council and the Minister, by notice in the Gazette, declare a particular business practice undesirable for:

- (a) All or a particular category of medical schemes; or
- (b) All or a particular category of persons who render contractual, administrative or intermediary services.

The section clearly covers the activities of contractors to schemes, administrators and brokers as well as schemes themselves. It is useful for controlling at a broad level, undesirable business practices relating to medical schemes without the need to target each individual scheme, broker, administrator or contractor involved.

# Challenges to the new legislation

There have been a number of challenges to the legislation largely in the form of attempts to subvert or dilute the principles of community rating established by the Act. At the most extreme end of the spectrum even the jurisdiction and scope of application of the Act was challenged as in the case of the demarcation dispute (below).

#### **Occurrence of Undesirable Business Practices**

One of the very first corrective actions that had to be taken by the Registrar of Medical Schemes in terms of the new Act was the publication on 3 December 1999 of a notice of his intention to declare certain practices undesirable in terms of section 61 of the Act. The practices in question were:

- (a) The splitting of an employer group by moving the low risk members to a new scheme and leaving the higher risk members behind
- (b) Moving an entire employer group out of one scheme and splitting the group into two or more groups. The groups are then placed with different schemes with higher risk members directed to one scheme and lower risk to another
- (c) Encouraging this behaviour by financial incentives, including differential commission structures which discriminate against older members, higher risk members or on any other basis as provided for in terms of section 29(1)(n) of the Act.

The effect of these practices was to discriminate against certain schemes, and consequently their members, and to undermine the principle of community rating.

The result of a notice such as this is that all of the participants in the practices in question must refrain from such practices with immediate effect for a period of three months to enable the matter to be dealt with in terms of section 61(1) of the Act.

#### The Demarcation Dispute

Challenges to the new law were not slow in coming. Some major players within the market severely tested the Medical Schemes Act on the question of lines of demarcation between insurance business and medical schemes business. Discovery Health and Fedsure Health designed and offered hybrid products which had a baseline medical scheme component but which were structured in such a way that meaningful health care cover could only be obtained using allied insurance benefits. The attraction of classifying certain health related business as insurance business was that this would have provided an escape from the community rating requirements of the new Act. Whereas previously, schemes could risk rate members and their dependants on factors such as age, past medical history, claims experience, gender etc, the new law allows community rating based only on income and number of dependants.

Essentially the demarcation problem arose due to the definition of the business of a medical scheme in the 1998 Medical Schemes Act coupled with the fact that the insurance industry's Long and Short Term Insurance Acts do not deal with the details of insurance products. The insurance law allows for the licensing of specific types of insurance business rather than specific insurance products *per se*. The Medical Schemes Act stipulates that no person may carry on the business of a medical scheme unless that person is registered as a medical scheme in terms of the Act. Consequently insurance companies may not conduct medical schemes business, as defined in the Act, unless they register as medical schemes. Insurance companies are registered under the Long Term and Short Term Insurance Acts and fall under the jurisdiction of the Financial Services Board as opposed to the Council for Medical Schemes.

The demarcation question led to a number of meetings between the Council for Medical Schemes and the Financial Services Board. At one stage the insurance industry, as represented by the Life Offices Association and the South African Insurance Association, submitted their concerns to Gill Marcus as the chairperson of the Policy Board on Finance and Regulation. The insurance industry requested the intervention of Ms Marcus in the demarcation dispute between the medical schemes and insurance industries.

At the time of the resolution of the Fedsure Health issue, the Registrar of Medical Schemes indicated that the demarcation debate has largely been resolved. He indicated that the Council for Medical Schemes and the Financial Services Board were working on a joint statement that would finally bring the matter to an end.<sup>8</sup>

The Council for Medical Schemes strenuously opposed these products and instructed the schemes in question to stop marketing them. The schemes refused to do so on the grounds that they believed they were acting legitimately. Although Discovery Health ended up withdrawing its product within a few months, Fedsure Health continued the battle until August 2000 when it finally capitulated and agreed to withdraw the insurance component of its hybrid product from the market. In the meantime, Sanlam also produced a new e-commerce health insurance product which it began advertising extensively.<sup>9</sup> The Registrar of Medical Schemes took the view that the product could constitute the business of a medical scheme and indicated that he would seek an interdict if necessary in order to prevent continued marketing.

#### **Reinsurance Issue**

The issue of reinsurance and medical schemes came to the fore in June 2000 when the Council for Medical schemes completed a report based on 6 months of investigation into reinsurance practices among medical schemes. Reinsurance is the transfer of part of the hazards or risks that a direct insurer assumes by way of insurance contract or legal provision on behalf of an insured, to a second insurance carrier, the reinsurer, who has no direct contractual relationship with the insured.<sup>10</sup> There is no prohibition on the reinsurance of medical scheme liabilities in the Act. In fact many people would say that it is prudent to reinsure a scheme against sudden catastrophic or extraordinary liabilities which it cannot meet. Reinsurance of a medical scheme is a sound business principle when correctly applied. Unfortunately it appears that medical schemes and their administrators have in some cases abused reinsurance principles and used reinsurance as a way to strip the scheme of funds. The Council's report revealed that many medical schemes and their members lose millions of rands each year due to inappropriate reinsurance contracts taken out by schemes.

Two basic types of reinsurance arrangements were identified which are used to strip profits from schemes. The first arrangement occurs where the scheme takes out reinsurance with its administrative company, which has the insurance licence. The administrator/insurer then reinsures with an outside reinsurer which includes a profit share arrangement. The administrator/insurer and the external company will often belong to the same group of companies. The administrator also keeps all interest and investment earnings that would have accrued to the scheme. The second arrangement occurs where the administrator has no insurance license. In this case the scheme contracts directly with a reinsurer who has a special profit sharing arrangement with the administrator.<sup>11</sup>

It became clear that reinsurance is widely used as a conduit to remove reserves from medical schemes so that interest and investment income can occur elsewhere – often with the reinsurer. The Medical Schemes Act of 1998 and its regulations makes highly specific provision for the financial arrangements of schemes.<sup>b</sup>

For example, the Act stipulates that a medical scheme shall have assets, the aggregate value of which on any day is not less than the aggregate of:

- (a) The aggregate value on that day of its liabilities; and
- (b) The nett assets as may be prescribed.

A further provision states that a medical scheme shall not:

- (a) Encumber its assets
- (b) Allow its assets to be held by another person on its behalf
- (c) Directly or indirectly borrow money; or
- (d) By means of suretyship or any other form of personal security, whether under a primary or accessory obligation, give security in relation to obligations between other persons without the prior approval of the Council.

The liabilities of a scheme are statutorily defined as being inclusive of:

- (a) The amount which the medical scheme estimates will be payable in respect of claims which have been submitted but not yet paid
- (b) The amount which the medical scheme estimates will become payable in respect of claims which have been incurred but not yet submitted; and
- (c) The amount standing to the credit of a member's personal savings account.<sup>c</sup>

The Regulations to the Medical Schemes Act of 1998 provide that a scheme must maintain accumulated funds, expressed as a percentage of gross annual contributions for the accounting period under review, of not less than 25%. This is subject to the proviso that this percentage is:

- 10 % during the first year
- ✤ 13.5% during the second year
- ♦ 17.5 % in the third year

c Refer to section 35 of the Act for full details

b See generally Chapter 7 of the Act entitled 'Financial Matters' and Chapter 8 as read together with Annexure B of the Regulations

• not less than 22% during the fourth year after the regulations have come into operation.<sup>d</sup>

Arrangements in terms of which the bulk of a scheme's financial assets are paid out in the form of a reinsurance premium to a reinsurance company are bound to transgress at least one if not more of the provisions listed above. Contravention of the Act is a criminal offence in terms of section 66.

#### The Council's investigations revealed that:

- (a) There was a massive increase in the number of new reinsurance contracts used by medical schemes – especially from 1998 to 1999;
- (b) The total amount paid in reinsurance premium grew from R6 million in 1996 to R700 million in 1999;
- (c) Sixty percent of open schemes used reinsurance in 1999 compared with a mere 25% of restricted membership schemes;
- (d) Although 54% of the reinsured schemes were open, they accounted for 99% of the reported premium spent on reinsurance;
- (e) Of the 99% of the premium spent by open schemes, 90% of this was spent by large schemes with more than 15 000 members or more than 30 000 beneficiaries;
- (f) In 13 schemes, the reinsurance losses ranged from 7% of accumulated reserves to over 100%;
- (g) The five major traditional reinsurers in South Africa had 68% of the market in 1999 by number of contracts;
- (h) A surprising number of companies and agents were shown as the reinsurer and, together, represented 20% of the market in 1999;
- (i) The final 12% was made up of cases where the agreement was with other companies in the same group in models that appeared to be extracting profits from medical schemes;
- (j) The 12% of arrangements occurring in the same group represented 61% or R440 million of the reported reinsurance premiums coming from medical schemes;
- (k) In 1999, 12 % of contracts representing 94% of reinsurance premium appeared to have been created expressly for the purpose of removing profit from schemes;
- Larger schemes, which by virtue of their number of members did not need reinsurance, showed by far the largest participation in reinsurance contracts. In fact, in at least 6 very large open schemes, the whole medical scheme was reinsured;
- (m) Commission being paid to brokers in respect of reinsurance agreements appears to be in the order of 20% (at least R7 million was paid as commission in the 1999 financial year);
- (n) Commissions are being paid for medical scheme reinsurance contracts despite the fact that in the life insurance industry, commissions are not usually paid at all (and there are only 5 major traditional reinsurers in South Africa).

d See Chapter 8, Regulation 29 for further details.

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In response to these findings, the Council for Medical Schemes engaged in a number of meetings with the trustees and principal officers of about 14 medical schemes. They were alerted to the findings and requested to submit written comments and reaction together with additional information concerning their reinsurance practices. At the time of writing, the matter is still being pursued by the Registrar of Medical Schemes but there appears to have been a largely positive response from the schemes concerned.

# Market Trends

The anticipated merging of smaller schemes, in the light of the new community rating requirements of the Act and the stipulation in the regulations that new schemes should have a minimum of 6 000 members, has been slow in coming. There have been two or three significant mergers of a number of open schemes<sup>e</sup> but the much smaller restricted membership schemes have remained fairly static. Schemes have tended to polarize around administrators and there have been a number of business takeovers within the medical schemes administration market in the past eighteen months.<sup>f</sup> The minimum membership requirement of 6 000 for new schemes is a significant barrier to entry of new schemes and is also possibly one of the reasons why existing restricted membership schemes - even the smaller ones are reluctant to part with their registrations in favour of mergers with other schemes. Restricted membership schemes are further complicated by labour issues which, although a significant factor to open schemes, are perhaps not as sensitive or concentrated as they are in the restricted membership scheme environment. Restricted membership schemes are by definition restricted to specific sectors of the market and would therefore have involvement of only one or two labour unions whereas open schemes might be multi-sectoral and therefore not union specific. For these reasons, unions tend to have more power in the case of restricted membership schemes.

If a restricted membership scheme had to amalgamate with a larger open scheme and the former had higher reserves per member than the latter, this could be prejudicial to the members of the restricted membership scheme. The reserves of the scheme would have to fall into the reserves of the open scheme and, from the point of view of the restricted membership scheme, the overall reserves per member would drop. Since membership of a medical scheme, especially a restricted membership scheme, is very much an employment benefit, the labour union involved with that employer would have to agree to such a move. Such an agreement is unlikely given the fact that it may ultimately not be beneficial to the employees. Where the reserving position of the restricted membership scheme is very much worse than that of the open scheme with which it seeks amalgamation, the interests of the average reserves. Restricted membership schemes are unlikely to amalgamate with other restricted membership schemes because they are usually employer or trade specific.

e For instance the recent merger between Finmed, Premier and Meddent, schemes administered by Medscheme, and the earlier merger of Fedsure Health medical scheme with Northern Medical Aid scheme.

f For example Medscheme's take over of the administration of schemes formerly in the Southern Healthcare stable, as well as Sovereign Health which administered National Medical Plan and a number of other schemes, Fedsure Health's acquisition of Northern Medical Administrators and Davidson and Ewing (D & E), and Metropolitan Health's acquisition of the Bankmed medical scheme administration division.

# Medical scheme contributions

Heavy increases in medical scheme contributions have been predicted since the inception of the new Act. Annual inflationary increases and restructuring in terms of the Medical Schemes Act of 1998 were predicted as primary causes of significant increases in medical scheme contributions. Major changes to the Act affecting the cost structures of medical schemes have been cited as:

- The wider definition of a "dependant" in the new Act
- The fact that schemes must pay for a wider range of ailments including AIDS, organ transplants, tuberculosis etc that were often excluded in the past
- Payments for the treatment in hospital of any infections or illnesses that are AIDS related
- Expectations of a 20% to 25% rise in the cost of medicines.

An average increase of 18% in January 2000 for midstream medical aid contribution increases has been quoted. This is significantly higher than the CPI of about 7% for 1999.<sup>12</sup>

Unfortunately the statistics for 1999 prepared by the Council for Medical Schemes were not available at the time of writing. It is also, for the same reason, not possible to gauge, if any, the effects of increased contributions on membership of schemes. The figures for net contribution income, health care management expenses and administration costs for the years 1996 to 1998 are given in Table 1 below. These figures do not reflect the impact of the new legislation. They predate the implementation of the Medical Schemes Act of 1998 as read with its regulations. Consequently they are presented purely for the purpose of a year on year comparison.

The table below illustrates the percentage changes in net contribution, health care management expenses and administration costs between the years 1996 and 1998. The percentage difference in the net contribution income of medical schemes between 1996 and 1997 was 9%. This means that the net contribution income for 1997 was 9% more than that in 1996. Similarly the net contribution income for 1998 was 11.66% more than that in 1997.

Table 1:	Percentage changes in net contribution, health care management expenses and administration
	costs, 1996-1998

	1998	% Change	1997	% Change	1996
Net Contribution	R17 386 068 977	11.66%	R15 570 860 000	9.00%	R14 323 459 000
Healthcare Management Expenses	R312 463 110	116.51%	R144 321 000	100.00%	-
Administration costs	R1 459 374 149	33.48%	R1 093 289 000	-4.00%	R1 138 405 000

Source: Reports of the Registrar of Medical Schemes for 1996/97 and 1997/98

The percentage change in health care management expenses between 1997 and 1998 is alarming. Although it constitutes only about 1.8% of Net Contribution Income, the fact that the change took place over the course of a single year does not bode well for future cost escalations in this area. The fact the administration expenses increased by almost 33.5% in comparison to a reported 4% *decrease* between the preceding two years is also disquieting. If medical contribution increases are averaging 18% and health care management expenses and administration costs are increasing on the scale indicated by the 1998 figures then it is only a matter of time before the system will be unable to fulfil its primary function of funding the costs of health care treatment.

Membership figures as at 31 December 1998 are given in Table 2 below. These figures are only in respect of registered schemes and do not include exempted schemes. Exempted schemes in the past were schemes who were not obliged to comply with the requirements of the Medical Schemes Act of 1967. In terms of that Act, the Registrar could exempt a medical scheme from compliance with the Act. Exempted schemes were not regarded as registered schemes for certain purposes. They were often, in practice, schemes associated with trade unions and collective bargaining agreements. The current Act drew all of these schemes under its umbrella.

The member types in Table 2 refer to ordinary (principal) members of medical schemes and continuation members (those members who are retirees). The two types of dependants are similarly the dependents of current ordinary (principal) members and dependants of continuation members, for example the wife of a pensioner (continuation) member. The last two columns of the table contain the totals of the rows in first four columns. For example, the total number of continuation beneficiaries is the total of the continuation members and their dependants.

Member Type	Number	Dependant Type	Number	Beneficiaries Type	Total Beneficiaries
Continuation	285 826	Continuation	245 537	Continuation	531 363
Principal	1 944 608	Principal	3 424 234	Principal	5 368 842
Total	2 230 434	Total	3 669 771	Total	5 900 205

#### Table 2: Membership of registered medical aid schemes

Source: The Registrar of Medical Schemes

#### Implementation of the Prescribed Minimum Benefits Package

The confusion surrounding the implementation of the Prescribed Minimum Benefits (PMB) package initially caused some hardship for patients who could not be accommodated in public hospitals and whose schemes refused to pay private hospital rates for treatment. Schemes were under the impression that if patients could not be accommodated in a public hospital, for example because the hospital was full, then they could be accommodated in private hospitals but at public hospital rates. Since private hospitals are not subsidised by the taxpayer, they could not afford to treat patients at public hospital rates which meant that some patients ended up falling between the public and private health care systems. The Registrar of Medical Schemes subsequently issued a circular which made it quite clear to medical schemes that if patients could not obtain minimum benefits services in public hospitals they had to be accommodated in private hospitals at private hospital rates because the Act does not allow any co-payments by members for minimum benefit services. The provision of minimum benefits by a scheme is obligatory regardless of where the service is received. Although this issue now seems to have been clarified to a large extent, there is still a need for education of medical schemes and their members in this regard. The PMB is a

hospital-based package which means that it is biased against outpatient, ambulatory care and the control and medical management of chronic health conditions before they reach the stage where hospitalisation becomes necessary.

In the experience of the private hospital industry at least, there is still a significant level of discrimination by medical schemes against HIV/AIDS patients. Authorisations for hospitalisation or extensions of inpatient stays are being refused when the possibility of an underlying diagnosis of HIV/AIDS becomes obvious. Medical scheme issues are often also employer issues in the case of restricted membership schemes and the confidentiality of diagnoses remains problematic. Labour legislation prohibits the testing of employees for HIV/AIDS yet an employer in a restricted membership scheme could have illegitimate access to that information by virtue of its participation on the Board of Trustees of the scheme.

The PMB package contributes to the complexity of benefit management and scheme administration. HIV/AIDS is still a problem area for medical schemes, administrators, providers of services and patients. The extent of the risk to medical schemes presented by HIV/AIDS treatment as a part of the PMB is still not clear and a great deal of data collection and analysis will be necessary in order to accurately gauge its impact.

In conclusion it is perhaps worth noting that benefits listed in the PMB which were not generally previously covered by medical schemes are:

- Inpatient psychiatric care for 3 weeks
- Substance abuse and Drug Rehabilitation
- Attempted suicide
- HIV associated disease: infections and tumours
- Sexually transmitted diseases
- Imminent death: comfort care and pain relief
- Infertility.

# Strategic objectives within the broader health framework

The strategic priorities of the Department of Health include:

- The revitalisation of hospital services
- Legislative reform and
- Improving resource mobilisation and the management of resources without neglecting the attainment of equity in resource allocation.<sup>13</sup>

More than two years ago a discussion document on Social Health Insurance (SHI) was also put forward by the Department in terms of which State hospitals played a key role in the delivery of health care services to SHI beneficiaries. It has become clear in the interim that State sector hospital services need to be significantly refurbished. Treasury regulations, in terms of the Public Finance Management Act (PFMA) were recently passed which create the potential for State hospitals to become provincial government business enterprises (provincial public entities) and to retain their income.<sup>g</sup> In terms of the PFMA a provincial

g Section 22 of the PFMA stipulates that all money received by a provincial government must be paid into the province's Provincial Revenue Fund except money received by *inter alia* a provincial public entity as listed in Schedule 3 of the Act. Such money must be paid into a bank account opened by the entity concerned.

government business enterprise is an entity which:

- (i) Is a juristic person under the ownership control of a provincial executive
- (ii) Has been assigned financial and operational authority to carry on a business activity
- (iii) As its principal business, provides goods or services in accordance with ordinary business principles; and
- (iv) Is financed full or substantially from sources other than a Provincial Revenue Fund or by way of a tax, levy or other statutory money.<sup>h</sup>

A next step is to attract paying patients to public sector hospitals. The Prescribed Minimum Benefits provisions of the Medical Schemes Act and regulations are a reflection of this thinking. Medical schemes are required to provide unlimited minimum benefits where the service is provided in a public hospital.<sup>16</sup> It is the stated objective of the Prescribed Minimum Benefits to:

- (a) Avoid incidents where individuals lose their medical scheme cover in the event of serious illness and the consequent risk of unfunded utilisation of public hospitals
- (b) Encourage improved efficiency in the allocation of private and public health care resources.

Both of these objectives are clearly very much in keeping with the broader strategy of improving resource mobilisation and the management of resources without neglecting the attainment of equity in resource allocation. In its Strategic Framework, the Department of Health's key objectives in the revitalisation of public hospitals include equity of access to appropriate hospital services for all South Africans. It is therefore of critical importance, in the practical implementation of the Prescribed Minimum Benefits package, that public hospitals are able to suitably balance the need to attract paying patients with their obligation to serve the non-paying ones.

#### **Practical Experience**

The practical experience of medical scheme patients in the public sector demonstrates the need for an improved understanding between medical schemes and public hospitals concerning operational issues. Some medical schemes took the view that it was simply a matter of refusing authorisation for hospitalisation in a private hospital or precluding, in terms of the scheme rules, admission to a private hospital for a minimum benefit service. The result was that when public hospitals were unable to accommodate these patients they had nowhere to go for treatment. The Registrar of Medical Schemes found it necessary to publish an explanatory Circular<sup>i</sup> in order to inform schemes that they were legally obliged to provide minimum benefits irrespective of the availability of public sector hospital beds. The Circular emphasised that where beds were for any reason unavailable in the public sector, patients had to be admitted to private hospitals. In the latter instance, the full costs of the minimum benefit service in the private hospital are payable by the scheme. Many schemes erroneously believed that they were only obliged to remunerate the private hospital for minimum benefit services at public hospital are payable by the scheme.

h Karl Bremer Hospital is an example of a public hospital having a trading account with full revenue retention. Source: Dr Japie Du Toit, Business Manager, Department of Health, Western Cape

i Circular 3 of 2000

Schemes have now been advised to enter into formal arrangements with public sector hospitals for the provision of minimum benefit services to their members. These arrangements are advocated in order to ensure that the public hospitals concerned:

- (a) Have the necessary capacity to accommodate such patients
- (b) Are aware of the possibility of the need for admission of medical scheme patients and can plan accordingly; and
- (c) Have the mechanisms in place for recovery and retention of fees from the medical scheme so that the State does not end up further subsidising medical scheme patients at the expense of the taxpayer and to the detriment of the indigent.

The validity of the legislator's assumption that State hospitals will not only remain viable, but will become fully functional business units in their own right, capable of attracting and retaining income, is crucial to the success of public sector delivery of PMB services as well as the proposed Social Health Insurance system. If public hospitals are not able to cope with a relatively small volume of cases from the medical schemes sector, they will certainly not manage the volume of cases generated by a much wider Social Health Insurance system. The argument that they are already managing such a caseload is not necessarily valid.

It is a well-documented aspect of health economics that health insurance generates increased demand for health services. In a Social Health Insurance context, employed South Africans will be expected to contribute towards a public hospital system which was previously accessible to them at negligible cost. It is highly unlikely that the demands of such a population on the State health system will remain static. Many public hospitals even now are not able to calculate their operating costs for a specific period, let alone bill medical schemes for services rendered. Work has been done on a Universal Patient Fee Schedule (UPFS) and there is the possibility of a loan from the World Bank to refurbish public hospitals but such developments take time to implement, and, in the case of the UPFS, may not necessarily be successful on the first pass (see chapter on Social Health Insurance).

# Conclusions

The effect of the new Medical Schemes Act on the public and private health sectors is not yet clear given the relatively short length of time in which the law has been in operation. What is clear is that the new legislation is in many ways very much more complex than its predecessor. This creates a great need for education of all stakeholders including individual members of schemes, as to their rights and obligations in terms of the Act. For providers of health care services such as public and private hospitals, administration has become more complicated. Examples of such complications include:

- 1. The adaptation of hospital admission procedures to accommodate PMB issues
- 2. The need for more sophisticated billing systems and fee structures in public hospitals
- 3. The question of admission privileges in public hospitals for private medical practitioners
- 4. The question of if and when medical scheme patients must be transferred from private to public hospitals
- 5. The need for public hospitals to make formal arrangements with medical schemes to accommodate their members.

On the medical schemes side, administration has also been complicated by legislative

provisions relating to the various waiting periods, written managed care contracts incorporating specific terms, the application of community rating principles, and the need to extensively modify scheme rules within very limited time periods so as to comply with the legislative changes. Close monitoring over the next few years of the mechanisms of the Act and their operation in the industry will be necessary. Regular assessments of the efficacy and appropriateness of the prescribed minimum benefits package in particular, are essential to its success. The new Act has created a greater and more urgent need for closer communication and co-operation between public and private health sectors, not only at central and provincial government level but also at the level of the coalface - where the delivery of health services takes place.



# Drug pricing

Improving access to necessary drugs requires attention to all four component parts of the access equation – ensuring rational selection, providing sustainable financing and efficient systems to distribute and use the drugs but also making sure that prices are affordable. However, comparing drugs prices across countries and health systems is not always easy. Methodological pitfalls abound, and have in the past ensnared the South African Ministry of Health. The National Drug Policy contains a variety of proposed strategies to reduce the price of medicines in South Africa. This chapter considers the complex issue of drug pricing, the policy options outlined and available, and provides recommendations on steps that will advance the implementation of such policies.

Authors

Andy Gray School of Pharmacy and Pharmacology, University of Durban-Westville

> Thulani Matsebula Centre for Health Policy, University of the Witwatersrand

# Introduction

Any government wishing to pursue equity as a policy goal will commit itself to improving access to quality health care. Access may be constrained by many factors, both geographic and economic. If economic factors predominate, these are usually related to the costs of services. Out-of-pocket expenditure<sup>a</sup> on drugs is high in many countries, and has been quoted at being as much as 65% of total drug expenditure in sub-Saharan Africa, 81% in Asia and less than 40% in established market economies.<sup>1</sup> Growth in drug expenditure has been shown to have exceeded that for other components of the health care system, particularly in Europe.<sup>2, 3</sup> Drug prices may be considered a crucial element in determining access. Drug costs also impact directly on many policy choices, not least choices on whether or not to offer AIDS-related drug care in the public sector. The Panos Institute, an international global development think-tank, has stated that "the main reason why anti-retrovirals are not widely available in the developing world is the price of the drugs themselves".<sup>4</sup> The costs of drugs is a prime consideration in whether or not they are included in Essential Drugs Lists, both internationally and in South Africa.<sup>5, 6, 7</sup> Their cost alone, however, does not determine access (as is depicted in Figure 1).<sup>8</sup>

#### Figure 1: Interlocking contributions to drug access



Source: WHO/EDM staff

This chapter seeks to outline the relevant policy trajectory of the South African government since 1994. First, data are presented on current drug expenditure and price movements in South Africa. The nature of the local and global pharmaceutical industry is then briefly summarised. The chapter then considers the methodological problems associated with drug

a "Out-of-pocket" expenses refer to those made by patients themselves, rather than by the health system (e.g. the State, by providing free medicine) or paid by medical insurance (e.g. reimbursed by a medical scheme).

price comparisons, and the evidence of discriminatory pricing policies. The various policy options open to government are examined, and recommendations offered.

# South African expenditure and prices

Drug acquisition costs (to either patients or health care systems) are a major part of recurrent costs. In the South African public sector drug costs are second only to personnel costs. Data on actual consumption in the State sector is patchy. Current and historical data available to the Department of Health Chief Directorate: Pharmaceutical Services is shown in Table 1. The industry estimate of total public sector purchases in 2000 is R1.96 billion.<sup>9</sup>

Provincial drug budget/expenditure per financial year (R million)							
Province	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01
Eastern Cape	N/A	N/A	N/A	N/A	N/A	78.646	N/A
Free State	N/A	N/A	N/A	N/A	N/A	104.607	61.390
Gauteng	N/A	N/A	380.418	451.274	468.430	352.314	453.499
KwaZulu-N/Atal	188.995	207.600	274.523	284.630	251.948	296.459	310.000
Mpumalanga	N/A	N/A	N/A	N/A	N/A	103.000	N/A
Northern Cape	N/A	N/A	N/A	N/A	N/A	41.148	N/A
Northern Province	N/A	N/A	123 260	126 276	127670	146.319	149000
North West	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Western Cape	112.68	157.401	170.358	190.977	209.544	216.209	201.411

#### Table 1: Provincial expenditure on drugs per financial year

Notes: Actual expenditure is stated, where available. Where only budgets were available, these are indicated in italics. North West reported that drug expenditure could not be separated from the other items under Standard Item C (Stores and Livestock), but that payments to the Gauteng depot for 1998-2000 totaled R72.647 million, and to other suppliers for the period 1997-1999, R13.164 million. The SA Military Health Services also budgeted R100 million for drugs in the 1999-2000 financial year.

N/A = not available

Sources: National Department of Health and individual provincial Heads of Pharmaceutical Services

In the private sector, drugs are the single biggest cost driver. However, recent data on their relative contribution to costs are not available as only the 1998 figures have been reported by the Registrar of Medical Schemes.<sup>10</sup> In that year, of a total of R18.745 billion paid out by medical aid schemes, medicines accounted for 27%. However, of the 28.5% of payments that were made to private hospitals, some were also for drugs used by inpatients and issued as discharge medication. Per capita expenditure on drugs in the public and private sectors will again be markedly different this year. The following figures are based on the projected sales figures for 2000 quoted by the Pharmaceutical Manufacturers Association (PMA) and the estimated numbers of South Africans belonging to a medical aid scheme.<sup>9</sup> The total

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value of drug sales is anticipated to be R8.25 billion. Public sector sales are expected to make up 24%, which translates to R59.36 per person not belonging to a medical aid scheme. In contrast, the per capita expenditure on prescription drugs in the private sector would be R800.29 (excluding sales of over-the-counter (OTC) medicines, which are expected to constitute only 6% of the total value). This includes sales via private pharmacies, private hospitals and dispensing doctors. If, as is sometimes claimed, the dispensing doctors (who are responsible for 15% of drug sales) were servicing only indigent patients on behalf of the State, the private sector per capita expenditure would still be R641.69, which translates to more than 10 times the amount spent per person in the public sector.

The cost of drugs in South Africa relative to other markets has long been a contested issue. In 1997 government statements on the matter were the subject of a complaint by the PMA to the Public Protector. The first of these alleged "offending statements" was that "South Africa rated in the top five most expensive countries in the world for medicine". The final ruling by the Public Protector (aided in his inquiry by four independent experts) is perhaps indicative of the complexity of the subject. He stated that it was "not possible to say that the Minister of Health was able or unable to prove or substantiate the statement".<sup>11</sup> However, he went on to record his view that "pharmaceutical profits are substantial in this country; that the cost and price of pharmaceuticals in South Africa is high; and … the amount spent on medicine, is nearly double to triple that of other major countries". This area of policy has also been seen as part of a greater struggle, one that pits the health and economic interests of the South against those of global free trade.<sup>4, 12</sup>

The National Department of Health does not routinely collate price comparisons over time. However, in preparation for the 2000 tender adjudication round, a comparison was made for a selected basket of high expenditure items. For 31 of the 36 items, prices for the same pack sizes could be compared between 1997 and 1999. The median price change was an increase of 7.8% per annum. While the largest increase was 93.2% pa, the item with the greatest price decrease dropped by 7.5% pa. For the 22 items for which a 2000 price was already available, the median change from 1997 was an increase of 7.4% pa. The largest increase was 62.1% pa, and the item with the greatest price decrease had dropped by an average of 13.9% pa.

The Hospital Association of South Africa has closely monitored the prices of a basket of 1 000 high cost/high volume items, which have been compared to the prevailing consumer price index (CPI), and tracked against the Rand-US dollar exchange rate. Against a January 1997 index of 100 for each parameter, the all products basket reached 145.9 in May 2000, whereas the CPI was only 120.4. The rand had weakened to 154.1 by the same point. The close tracking of the exchange rate and the basket price is shown in Figure 2.



# Figure 2: Prices of a basket of 1 000 drugs used in private hospitals, plotted against the consumer price index (CPI) and Rand/US dollar exchange rate

Source: Hospital Association of South Africa

It should be stated clearly though that expenditure is a result of both unit price and volume of consumption. Countries with recognised low prices may not be able to keep prescribing levels under control (e.g. Italy, France).<sup>13, 14, 15</sup> The United Kingdom, with the highest prices in Europe, manages to keep drug expenditure to about 10% of total health care costs. Australia is recognised as the exception, which has managed to both curtail prices and improve on the rationality of drug use.

# The global pharmaceutical industry

The global pharmaceutical industry is predominantly located in the industrialised North. Its global sales in 2002 are expected to be \$406 billion.<sup>16</sup> Sales are predominantly in industrialised regions (46.7% in North America, 24.8% in Europe and 11.3% in Japan). Despite their numerical preponderance and disease burden, all the countries of sub-Saharan Africa are expected to account for only 1.3% of sales and the Indian sub-continent 1.8%.

The global industry is often viewed as being dominated by a small number of extremely powerful corporations. While it is true that about 10 large research-based firms account for just over a third of global sales, none has a dominant position.<sup>13</sup> Although it has been claimed that there is considerable market share turbulence, all the firms in the top 15 in 1992 were already in the top 20 in 1981. Recent years have seen increasing mergers and acquisitions. Recent deals include the merger of Glaxo-Wellcome (ranked number 1 in 1993) and SmithKline Beecham (ranked 8<sup>th</sup>), and that of Rhone Poulenc Rorer (14<sup>th</sup>) with Hoechst
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(3<sup>rd</sup>). Research-based firms have also sought to acquire or enter joint ventures with generic manufacturers. About 80% of generic drugs in the US are manufactured by research-based firms. However, it is within therapeutic sub-markets that there is considerable concentration. In other words, a firm may dominate the sales in an area such as cardiovascular drugs or in the management of a particular disease such as ulcers. The top 3 products in a particular sub-market may account for up to 60% of sales. This is also true within South Africa, where 4 firms account for 92% of local company sales in the private pharmacy market.<sup>9</sup> Such firms may, within that particular area, wield considerable influence.

Since manufacture of the raw materials is highly concentrated in the countries of origin of the major firms, but local finishing is common, there is considerable intra-firm trade. Local finishing is often necessary to comply with local registration, labelling and quality control requirements. This makes local subsidiaries liable to "transfer pricing" practices, where the raw material prices are inflated to ensure optimal profits at the global level.<sup>17</sup> This also means that local marketing and sales forces are required, resulting in marketing costs being nearly double those of research and development (R&D). High R&D costs are often assumed to be responsible for the high costs of innovator drugs. An analysis of the top 12 drug manufacturers in America in 1999 showed that the median percentage of revenue dedicated to R&D was 12.4%, whereas a median of 37.3% was dedicated to marketing and administrative costs.<sup>18</sup>

Yet another reason used to question the necessity for high drug costs is the high profits made by the pharmaceutical industry. For the past 10 years, the pharmaceutical industry has been the most profitable in America, with median profit rates more than treble those of other leading companies. Chief executive officers of the top 10 firms averaged \$10 million each in salaries in 1999, with stock options averaging another \$10 million each.<sup>19</sup> Profits for the 12 Fortune 500 drug companies in 1999 were 18.2% of revenue, compared to a median for all Fortune 500 industries of only 5.1%.<sup>18</sup>

Drugs' prices are therefore considered to a large extent to be managed by their manufacturers, rather than by the market. They have less to do with the manufacturing and development costs of the particular product, and more to do with the characteristics of the market in which they are placed (including average incomes, types of social security, exchange rate fluctuations, competitor price levels and future research and development costs).<sup>17</sup>

# Price surveys

As was demonstrated in the PMA vs Minister of Health spat over price comparisons, this entire area is fraught with methodological difficulties. Among the issues shown to have considerable effects on the results of surveys that attempt to compare prices over time or between countries are:<sup>20</sup>

- Sample selection (it may be necessary to include generics and OTC drugs that might substitute for the branded items being compared; also the choice of countries)
- Units of measurement for price and volume (often pack sizes vary considerably, and direct comparisons between bulk and patient-ready packs cannot be made on the basis of unit dose prices)
- The relative weight given to consumption patterns in the different settings
- The use of exchange rates or purchasing power parities for currency conversions.

Despite these concerns, it has been noted that policymakers continue to act on studies that display weaknesses in one or more area of methodology.<sup>21</sup> A study that sought to compare South African prices with those in known high price countries (USA, UK, Germany, Denmark, Netherlands) is still used by the PMA.<sup>22</sup> Price comparisons continue to make headlines, such as the recent study that showed that East Africans pay more for AIDSrelated drugs than do Europeans or North Americans.<sup>23</sup> Studies might however include a cautionary note, as in the case of the recent Médecins Sans Frontières (MSF) study, which stated "the price information presented in this report is not exhaustive and should only be considered as an indication of the variation in prices between countries for given drugs".<sup>7</sup> There is also a need for an internationally acceptable reference pricing system. The current International Drug Price Indicator Guide produced by Management Sciences for Health has been attacked from various quarters.<sup>24</sup> While it is not, as has been alleged in this country, a listing of "charity prices", it does suffer from a lack of data on the quality of the suppliers listed. It is in fact a listing of prices from supply organisations that service non-profit humanitarian projects (such as ECHO International Health Services), but also those that supply governments (International Dispensary Association, United Nations Children's Fund Supply Division) and government bulk-purchase structures themselves (Eastern Caribbean Drug Service and Costa Rica Social Security). A recent joint publication of the United Nations Programme on HIV/AIDS-United Nations Children's Fund-World Health Organisation (UNAIDS-UNICEF-WHO) has sought to gather price information on AIDSrelated drugs.<sup>25</sup> This is an on-going project. The provision of such information was also the subject of a May 2000 resolution adopted at the World Health Assembly.<sup>26</sup>

Within-country comparisons, while not devoid of challenges, are somewhat easier. In South Africa, there are considerable differences between private sector prices and those offered on State tender. Claims are made that the difference is on average 10-fold. It has also been alleged that the lower prices offered to the State are responsible for higher than usual prices in the private sector, in other words that higher private sector prices are used to offset revenue losses and that this constitutes cross-subsidisation. However, there are no accurate data to support either contention.<sup>9, 22</sup> There is also evidence of discriminatory pricing practices between different purchasers in the private sector. An in-depth Competition Board investigation in 1992 concluded that such discriminatory practices existed, that they constituted a "restrictive practice", and that this was not in the public interest.<sup>27</sup> Some of these practices, such as the selling of stock by dispensing practitioners to so-called "shortline" wholesalers,<sup>b</sup> would also have been dealt with by Medicines and Related Substances Control Amendment Act (Act 90 of 1997).<sup>28</sup> The Act will prohibit wholesalers from buying drugs from anyone other than a manufacturer or importer. However, this type of in-country market segmentation is not unique to South Africa, and has also been demonstrated in the United States.<sup>19, 29</sup>

b A "short-line" wholesaler is one that stocks only a restricted range of goods, rather than a comprehensive selection as is the case with a traditional or "full-line" wholesaler.

# The South African policy trajectory

Local policy is encapsulated in the 1996 National Drug Policy.<sup>30</sup> As early as mid 1994, the then newly constituted Drug Policy Committee was tasked to "develop a pricing plan for drugs in South Africa in the public and private sectors". The resulting drug policy therefore sought to "ensure the availability and accessibility of essential drugs to all citizens". While it sought, as a purely economic objective, to "lower the cost of drugs in both the private and public sectors", it also aimed to "promote the rational use of drugs", thus targeting both parts of the expenditure equation. As a national development objective, it aimed to "support the development of the local pharmaceutical industry and the local production of essential drugs".

Specific cost containment measures that were signaled in 1996 were:

- A pricing committee, to "monitor and regulate drug prices"
- Total transparency in the pricing structure (at all points of the distribution chain)
- ✤ A non-discriminatory pricing system
- Replacing the wholesale and retail mark-up system with one based on a fixed professional fee
- ◆ A database to monitor costs compared with other developing and developed countries
- Regulation of price increases
- Provision, in certain circumstances, of public sector stock to the private sector (e.g. supplying lower cost drugs bought by the State to private sector clinics in order to address a priority disease)
- Promotion of generics (multi-source pharmaceutical products, generally cheaper than the originator's branded products), including generic substitution, while maintaining a negative list (a list of drugs that could not be substituted by the pharmacist at the patient's request, but where the prescribed brand would have to be supplied)
- Measures to improve rational drug use, including establishing Pharmacy and Therapeutics Committees (PTCs) in all hospitals
- Control of pharmaceutical marketing practices.

Under the heading of "procurement and distribution", mention was also made of international tendering, of competitive negotiation for state supplies and price preferences for local manufacturers. Export of local products to neighbouring countries was also to be fostered.

Many of these measures required legislative action. This was first attempted in the Medicines and Related Substances Control Amendment Act (Act 90 of 1997). The subsequent court action by PMA-aligned manufacturers has been covered in detail in previous editions of the Health Review.<sup>31</sup> Measures such as generic substitution and parallel importation remain hostage to that court action. The return affidavit from the complainants was received in July 2000, and indications are that a court date will be set soon.

# **Policy options**

Medicines are not ordinary articles of trade. Specifically, their demand and supply characteristics do not follow classic market principles.<sup>1, 3, 17</sup> Firstly, there is a three-tiered demand structure – with the prescribers (physicians and others) as the actual demanders,

the patients as the consumers and the health care system frequently the payer (both in the public and private sectors). There is often limited competition between suppliers, especially in the case of patented products. Medicines also have both positive and negative externalities (e.g. effectively treating an infectious disease such as tuberculosis not only benefits that patient but has the additional positive "external" value of reducing the spread of the infection to other people in the community; conversely, not having the drug available increases the risk of spread and will also discourage patients from seeking help from a health facility). Information available to prescribers and consumers is often selective, unbalanced or incomplete, further demonstrating the supply-driven nature of trade in medicines. Finally, market forces rarely reflect true social costs and benefits, and cannot meet social objectives such as equity. The factors mentioned above, together with the apparent inability of the industry to develop and provide needed drugs for tropical diseases in poor countries have been called "market failure". Drugs can therefore be considered to be "meritorious" goods, worthy of government intervention.

This contention is not however shared by the pharmaceutical industry. Industry groups claim that "the market is working", and that interventionist policies "don't work, may actually increase health-care expenditures, and stifle innovation".<sup>32</sup> A June 1999 position paper by a European grouping called for "market pricing for all medicines", "less dependence on national social security systems", "more private/insured purchase", and "competitive purchasing systems operating in a price-deregulated environment".<sup>33</sup> There were also veiled calls for direct-to-consumer advertising (DTCA) of prescription drugs. In an area marked by interventionist stances and largely socialised health care systems, this amounts to a call to adopt US standards. However, a recent policy analysis of DTCA options for South Africa has suggested retaining a European rather than US standard.<sup>34</sup>

The options open to governments that do choose to intervene can be characterised in a number of ways. They can be either direct (primarily legal measures that have an immediate effect on suppliers or consumers) or indirect (usually market-related measures, which entail financial implications for the various actors).<sup>2</sup> They may either target prices themselves (supply side measures such as price controls, positive or negative lists, <sup>c</sup> promotion of generics) or consumption (demand side measures such as exclusion from positive lists, reclassification to OTC status, introduction of patient co-payments, caps on pharmaceutical budgets). Policy options have been described as resulting in either a total control situation (as in Ecuador and Honduras), a mixed system (as in Canada), a situation of monitored freedom (as in Brazil) or total freedom (as in the US).<sup>17</sup> Significantly, resorts to price control are more common in developed than in developing countries, even though price sensitivity might be greater in countries with poorer social security systems.<sup>1</sup>

While the South African policy commitment to some form of intervention is clear, the exact mechanics of the proposed system have yet to be revealed. Policy instruments available to any government can be described as either:

- Producer price control measures (direct price controls, reference pricing systems, equity pricing, generic policies)
- Distribution chain cost controls (mark-ups and fixed professional fees, value-added tax)

c A positive list includes those items that will be supplied or reimbursed, a negative lists in contrast indicates those items that will not be available to the patient.

- Bulk purchase measures (tender and negotiation strategies, regional initiatives)
- International trade agreement relief measures (compulsory licensing, parallel importing)
- Demand side measures (rational drug use, co-payments).

Each of these is examined in some depth. Since most experience with these measures has been documented outside of South Africa, the examples quoted are not always local. However, where possible local data or potential applications are identified.

### Producer price control measures

The imposition of direct price control would seem to be in conflict with South Africa's national trade and industrial practices, which are influenced to a large extent by global trends. The balance of evidence from other countries would seem to indicate that such practices, while commonly used, are complicated and cumbersome.<sup>1, 15, 17, 35</sup> They are easily circumvented by transfer pricing (inflation of the prices of imported raw materials), are open to political interference, and rely to a great extent on difficult to obtain industry transparency. For example, the Ecuadorean policy involved a production cost plus 20% margin for locally-produced goods, and a landed cost (CIF or "cost, insurance and freight") plus operating costs plus 20% margin for imported goods. Production costs are not often easily determined, while the use of a "landed costs plus" system is open to manipulation by transfer pricing.

A more transparent system is that of reference pricing. Internal reference pricing systems involve a national authority setting local prices for a drug by comparison with similar drugs on the national market (e.g. deciding that a new anti-hypertensive drug will be similar in price to other drugs already available to treat hypertension). External reference pricing systems use the prices of drugs sold in other countries as well, as part of the comparison. An example is the best available price (BAP) system for social security refunds in Canada. It is also a key component of the successful Australian system. In South Africa, a form of this system is already in effect in the private sector, where many medical aids use a maximum medical aid price (MMAP) system for drugs that are no longer controlled by a patent and are therefore available from many sources. Patients who wish to receive a branded version that costs more than the MMAP have to pay the difference in price themselves (an example of a patient co-payment). However, it is not clear that any such system is applied when adjudicating State tenders. The experience in the Netherlands and Germany has been that reference pricing is not effective, and is out-flanked by changes in prescribing habits. It may just shift the load to the patient, by way of the additional co-payments that are necessary.<sup>2, 15, 36</sup> Innovator drugs are usually not covered by reference price systems, as no comparator products exist. If applied internationally, this might result in convergence of prices at higher levels, hurting current low price countries.

An idea that enjoys some current favour in activist circles is that of equity pricing, where manufacturers agree to subsidise lower prices in developing countries by levying higher prices in wealthier countries. The Panos Institute has identified two potential problems with this approach.<sup>4</sup> Firstly, prices might not drop sufficiently. Secondly, consumers in the North might insist on either lower prices or the right to import drugs from low price countries. Legislative attempts to allow such parallel trade are already underway in the US. Equity pricing is the basis for the UNAIDS negotiations with major AIDS drugs manufacturers, and also underlies offers of drug donations to developing nations. Neither approach is without problems. Donations in particular are difficult to accept when accompanied by demands

for additional (and costly) monitoring or other systems costs and restrictions, as was the case with the Pfizer offer of fluconazole to South Africa in early 2000. Negotiations on this offer are ongoing.

Efforts to promote the production and use of generic medicines, while unpopular with the research-based industry, are effective. They not only stimulate competition, but also promote the development of local manufacturing concerns.<sup>37</sup> Two policy instruments are however lacking in South Africa. The first is an unambiguous legal framework for generic substitution (which is already practised in the public sector, and is often necessary in order to comply with MMAP restrictions in the private sector). The second is the enactment of so-called "Bolar" provisions that will allow prospective generic manufacturers to complete scientific and regulatory processes before the expiry of the patent, allowing for quick entry of the generic product onto the market and fair competition with both the originator product and any "generic" versions made by that company or its subsidiaries. Such provisions are not in conflict with international trade agreements.<sup>35</sup> Naturally, this practice is not welcomed by industry groups.<sup>38</sup> Perhaps the most dramatic evidence of the impact of generic competition on drug prices has been provided by Brazil. Anti-retrovirals that were only available from innovator companies (i.e. the original developers of the drugs, who held the patents) reduced in price by only 9% from 1996 to 2000. In comparison, the prices of those that did face such competition dropped an average of 79% over the same period.<sup>39</sup>

### **Distribution chain cost controls**

PMA contentions are that South Africa's distribution chain costs are among the highest in the world, adding more than 100% to the manufacturer's factory gate price.<sup>9, 22</sup> This is vehemently denied by the Pharmaceutical Society of South Africa (PSSA).<sup>40</sup> Direct control over mark-ups has been abandoned by government, but is still exercised indirectly by the reimbursement policies of the medical aid industry.

The traditional distribution route for pharmaceuticals in the private sector is as illustrated in Figure 3. At each step a percentage mark-up is applied, but this is also often accompanied by a discount. The actual mark-up might therefore be lower than theoretical figure. However, each stage starts from a presumed price resulting from application of the theoretical markup by the previous actor. In most cases, patients do not pay directly for their medicines. That payment is rendered by the medical aid, which is therefore a third party to the transaction between the seller (pharmacist or doctor) and the supposed buyer (the patient). The mark-ups are to a large extent the result of acceptance of the system by the payers, the medical aids. This acceptance is formalised in the Pharmaceutical Scale of Benefit published by the Board of Healthcare Funders (BHF), which is a voluntary association of medical aids. Most medical aids make use of intermediaries (medical aid administrators) to manage the payments for claims submitted by their members.

#### Figure 3: Traditional distribution chain for medicines



Note: the "retailer" is either a pharmacist in a retail pharmacy or private hospital or a dispensing doctor

The start of the process is the manufacturer's selling price, also called the factory gate or exit price. Theoretically the pharmaceutical wholesalers add a mark-up of 21.2%. However this is brought down by the practice of giving retail clients discounts, either on bulk purchases or as reward for loyalty (based on the total of that client's purchases over a period of time). These discounts average 10-11%. The retail pharmacy sector adds a 50% mark-up on the theoretical wholesale exit price (the manufacturer's price plus the 21.2% mark-up). This results in a maximum 81% mark-up from manufacturer to patient. Additional dispensing fees (R1.20 per item), broken bulk (10%), container and copy fees add negligible amounts to the final bill. However, third party payers demand discounts from the retailer, varying from 20% (which is the norm for acute medication) to 30% (for chronic medication). This can be confirmed by looking at the average cost difference between gross amounts claimed and net values paid by medical aid administrators. In 1999, this difference amounted to an average of 23.8% for one such administrator.<sup>41</sup>

In order to understand the net result of these mark-ups and discounts, it is easier to consider a product leaving the manufacturer at a nominal R100.00. This product would therefore be sold by the wholesaler at R121.20, but the discount offered would on average reduce the actual cost to the retailer to R109.80. The retail pharmacist would then add the 50% markup to the theoretical purchase price of R121.20, selling the product at R181.80. In turn, the retail pharmacist would be required to discount this price to either R165.25 (20%) or R145.08 (30%) depending on whether it was claimed against the patient's acute or chronic benefit. Value added tax would be levied at 14%.

If the actual amounts retained by each actor in this chain (after applying discounts) are expressed as percentage contributions to a final amount (100%), for each of the two discount scenarios described above, then the "contribution" of each step to the final cost can be seen. These figures are provided in Table 2.

Discount scenario	Manufacturer exit price (%)	Wholesale mark-up (%)	Retail pharmacy mark-up (%)	VAT (%)
20% (acute medicines)	60.5	5.5	21.7	12.3
30% (chronic medicines)	68.9	6.3	12.5	12.3

The greatest proportion of drug costs is accounted for by the manufacturer's exit price, with less than 40% being constituted by the entire distribution chain costs. A 1994 study in nine European countries showed that the manufacturer's contribution to the final price of a prescription item (including VAT) varied from 47.1 to 69.8%.<sup>42</sup> Put another way, pharmacy gross profit margins are between 14.5% and 24.8%. In most European countries, degressive margins are applied (lower mark-ups are allowed for more expensive items).<sup>2</sup> Retail pharmacy margins vary in similar ranges to those in South Africa, with some countries having higher margins. Wholesale margins vary from 4 to 18%. VAT rates vary considerably, from 0% on prescription items to as much as 25%. It is also worth noting that there has been significant vertical integration in South Africa. As much as 55% of wholesale trade now goes through direct distributors owned by consortia of manufacturers. This is the subject of an imminent antitrust suit in the High Court, brought by the traditional "full-line" wholesalers.

The situation in South African private hospitals is different, where a 0% mark-up on wholesale list price is levied. Private hospital pharmacies have however been able to use their collective buying power to extract rebates from manufacturers of up to 20%. In effect therefore, they make a profit on medicines despite levying no mark-up. When the 0% mark-up was introduced, an agreement was reached between the hospitals and the medical aids that prices should not rise more than 20% between December 1998 and April 2000. They had in fact only risen by 13.2% over that time period, as can be seen in Figure 2. Nonetheless, a steady increase in private sector drug prices is evident from these data.

The NDP objective of replacing mark-ups with a fixed professional fee has not been realised, despite intense negotiations between the PSSA and BHF. Current proposals include a professional fee of R20.00 per item, plus the disclosed non-discriminatory net unit exit price from the manufacturer, plus inventory related costs (5%) and practice costs (R4.00). No discount would be given to the medical aid, and VAT would be levied as before. However, as this fee would be applied regardless of the cost of the medicine, current very low cost items might actually increase in price. The logic behind the policy is that removing the profit motive will mean that the pharmacist earns the same amount, regardless of whether s/he dispenses an expensive branded product or a cheaper generic.

One effective cost containment measure that is in place is that for anti-retrovirals under the "Aid for AIDS" programme operated by Medscheme. Such drugs are paid for by the medical aids at factory gate prices plus R50.00, without any mark-ups at either wholesale or retail level.<sup>d</sup> However, this does not apply to other AIDS-related drug needs, such as drugs for opportunistic infections and palliative care.

### **Bulk purchase measures**

The State already uses the most basic measure – competitive bidding (tender) - as the major mechanism to ensure maximal price leverage. However tenders are only open to locally-registered firms. It is possible that better prices might be obtained on the international market. This does have implications for the reach of the Medicines Control Council. Manufacturers abroad must either be cleared by the inspectorate for Good Manufacturing Practice (GMP) standards, both before and during the tender period, or foreign regulatory systems or international certification schemes must be relied upon to guarantee the quality of goods purchased.

Recent indications are that competitive bidding alone is not assuring the State of sufficiently competitive prices. A number of products were identified where the price offered by a local tenderer was more than double the median price in the 1999 International Drug Price Indicator Guide. Post-tender negotiations have been successfully used to further reduce prices in some instances.

A growing demand is for regional bulk purchasing arrangements, particularly with other member states of the Southern African Development Community (SADC). These are crucial if African countries are to overcome their historical disadvantage in negotiating power with the global pharmaceutical market. Such arrangements can also be used to bolster local production. Africa still imports more than 90% of its pharmaceutical needs, and the African share of global production value has slipped from 1.3% in 1975 to 0.7% in 1995.<sup>43</sup> Three successful regional schemes have been assessed.<sup>44</sup> Bulk purchasing by countries of the *Union* 

d Medscheme Integrated Care Division, personal communication

Maghreb Arabe (Libya, Mauritania, Tunisia, Algeria, and Morocco) achieved price reductions ranging from 15-20%. The six-nation Gulf Cooperation Council (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates) achieved savings averaging 30%, compared to purchasing by individual countries. A trial by the African Association of Central Medical Stores for Essential Drugs (ACAME) in 1998 involved 5 essential drugs procured by three countries (Guinea, Mali, and Niger), compared to bulk purchasing tenders. The costs obtained by the bulk scheme were 7-27% lower than the individual countries had been able to obtain for the previous 3 years. Perhaps the most telling evidence of the power of collective bargaining comes from the recent MSF price comparison study. Wishing to place AIDS drug price reduction offers to African countries of 80-90% in perspective, MSF notes that far greater reductions have been obtained by international agencies.<sup>7</sup> The Pan American Health Organization (PAHO) supplies vaccines at discounts of between 86 (Haemophilis influenzae type B) and 99% (oral polio vaccine) compared to US public sector (Centers for Disease Control) prices. The United Nations Population Fund (UNFPA) is able to supply contraceptives at between 97% (injectables) and 99% (condoms and oral contraceptives) discounts compared to US wholesale prices.

### International trade agreement relief measures

A fundamental way to address prices would be to weaken the monopoly-like powers afforded the manufacturers by the patent system. The issue was covered in some detail in the Drug Policy chapter of the 1999 Health Review.<sup>31</sup> In essence this would involve either or both of the following measures:

- Compulsory licensing (giving a local firm the right to make a copy of an expensive patented drug at a lower price, while compensating the patent holder)
- Parallel importation (buying drugs from countries where prices are already lower, and so trading in parallel with the local seller of the same drugs).

Patent rights have been strengthened in recent years by new international trade agreements, in particular the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS). For example, by 2006 all signatories to the Agreement (which means all members of the World Trade Organisation) must give drug companies 20 years' patent protection on their inventions. Much attention has therefore been focussed on attempts to soften the potential access-denying impacts of these agreements. The WHO and other commentators have produced guidelines on the safeguards available to nation states under the TRIPS agreement.<sup>35, 45</sup> Opposing views on such measures can best be captured by two statements made at the 1998 Revised Drug Strategy meeting in Geneva. Dr Zafar Mirza of the Association for Rational Use of Medication in Pakistan stated that "a patent is not an absolute right nor an end in itself; public health is an end in itself". In contrast, Mr Harvey Bale of the International Federation of Pharmaceutical Manufacturers' Associations (IFPMA) held that "there are no winners in a game whose goal is to find loopholes in this [patent] protection – except for those who would drain society of opportunities and skills by copying rather than inventing".

Included in the relief measures outlined by the WHO, and in line with the international agreements, is the right to issue compulsory licenses. This right may be used where a patent holder (the manufacturer who first registered the invention, or drug in question) can be shown to be abusing its monopoly position, or in cases of national emergency. Such licenses may only be used predominantly for "supply of the domestic market", but both entire imports and partial exports are permissible. This could allow South African decisions to be made to

the additional benefit of our SADC neighbours. In other words, a compulsory license issued in South Africa could be used to allow importation of the drug that was the subject of the license from a manufacturer outside of South Africa (entire import). However, while the TRIPS agreement only allows this strategy to be used to mainly satisfy our own needs for the drug, there is some flexibility allowed. Some of the stock procured under the license, by local manufacture or importation, could in turn be exported. Such flexibility is important if South Africa is to export needed drugs to neighbouring countries, which perhaps lack the infrastructure to engage in manufacture under compulsory licenses. South Africa has recourse to the 1978 Patents Act, which includes a compulsory license provision. The Medicines Amendment Act (Act 90 of 1997) was an attempt to introduce health-specific measures to exploit the safeguards provided by TRIPS. However, it remains blocked by a court case preventing its promulgation. Most commentators agree that the wording of section 15C, as included in that Act, is flawed. Section 15C allows the Minister to alter the rights of a patent holder without involving a judicial process, as is the case under the Patents Act.

Parallel importation is based on the principle of exhaustion of rights - a patent holder's rights are said to be "exhausted" once the product is first placed on the market, allowing the purchaser to resell the product without offending the intellectual property rights of that patent holder. Specific mention is necessary in national law of where rights are considered to be exhausted, so that parallel trade can occur within that area. Industry groups have contended that even where regional exhaustion of rights does occur, as in the European Union, price reductions to the consumer have been modest.<sup>46</sup> It is alleged that profits are generally retained by the parallel importer. This might not be the case where the State is the importer, but might blunt the impact of parallel trade in the private sector. An industry-linked researcher, Patricia Danzon, warns that parallel trade and price regulation based on international comparisons might lead to price convergence at higher levels.<sup>47</sup> In other words, where pressures are brought to bear on manufacturers (either by publishing comparisons of prices in different countries or by moving products from high price to low price countries) the tendency will be to counter such measures by pricing such products in a narrower range that might be closer to that currently paid in the higher priced countries.

While US Trade Representative efforts to force developing nations to abandon moves to implement relief measures might have been stayed by President Clinton's Executive order in May 2000,48 this has yet to be translated into effective utilisation of these measures by such countries. Political announcements in South Africa have yet to be actioned, although some movement is expected soon. Many developing nations assume that innovator products are patented in their countries. It is important to note that international patents do not exist. Patents are only issued in terms of national law or regional agreements. Some countries and regions have mistakenly enacted patent measures in excess of the minima set by the World Trade Organization (WTO). This is particularly true of the West African signatories to the revised Bangui Agreement.<sup>49</sup> South African health authorities have also not made a systematic search for unpatented products, which might be available cheaper from generic manufacturers such as those in Brazil and Thailand. Interestingly, while compulsory licenses are opposed by the pharmaceutical industry, they have considerable experience in voluntary licensing practices. This is a major feature of the global pharmaceutical industry, to a greater extent than is seen in other manufacturing sectors.<sup>14</sup> Cross-licensing between firms that have shared R&D costs is also common. This experience can be put to good use in technology transfers between major multinationals and local manufacturers, without unduly impacting upon global returns on investment.

### Demand side measures

Efforts to improve the rationality of drug prescribing and use have been covered extensively in previous Health Reviews, and are therefore not repeated here. However, it is worth noting that coercive rules to force rational prescribing behaviours on prescribers have rarely been successful without considerable "buy-in" by those prescribers.<sup>50</sup> This remains a neglected area in both the private and public sectors in South Africa.

# **Conclusions and recommendations**

Chile faces similar challenges to South Africa, with very similar stratification between a private sector serving some 20% of the population and an overburdened and under-resourced public sector servicing the remaining 80%.<sup>51</sup> A report on their policy choices concludes that "it is not clear that the process of privatization of health care or the financing of health services, and the complete liberalisation of drug prices, are the best ways to achieve equitable and rational coverage in respect of drugs in Chile. The state urgently needs to devise mechanisms to exercise its normative functions in regard to drugs in order to prevent the present freedom from degenerating into anarchy". Both a WHO review on health reform and drug financing<sup>1</sup> and the Austrian Health Institute review of market controls in Europe<sup>2</sup> point to a "pendulum" effect. As governments act on an unfavourable situation by either tightening state control or relying on market instruments, so the local situation reacts, initiating a swing in the opposite direction. The challenge is therefore to minimise the amplitude of the swings, by finding an adequate but flexible mix of interventions. That different countries may be at different parts of the pendulum's swing might go some way to explain the apparent paradox that while developing countries are generally moving towards market-driven policies, developed nations are increasingly resorting to direct interventions. The policy instruments included in the NDP seem to vacillate between intervention and what has been termed "monitored freedom". This latter course has not been shown to be particularly effective.<sup>17</sup> There are also potential conflicts with overall trade policies. Some may also be in conflict with one another. For example, higher levels of price control may inhibit the development of a generic market.

What is clearly needed is action on some of the NDP steps that closely match those suggested by the WHO as general advice to all countries:

- More detailed data on price trends in both the private and public sectors
- More analysis of the impacts of policy decisions, with emphasis on indicators of equity, affordability and availability
- Finality on those policy choices which seem to hold clear advantages (such as fixed professional fees and non-discriminatory exit pricing based on volume)<sup>e</sup>
- Finality on the legal struggle to introduce generic substitution, to regulate marketing practices and to exploit the safeguards provided by the TRIPS Agreement
- Consideration of regional options, including bulk purchasing across the SADC region.

e A single exit price is not recommended. Instead, the policy seeks to ensure that all purchasers can obtain the same discounts if they buy similar quantities. This would prevent some of the perverse incentives introduced by current discriminatory pricing practice, such as the selling of medicines to pharmacies by dispensing doctors who have secured preferential prices.

Crucial to the success of these options will be strengthening of the national departments responsible, the Directorate: Pharmaceutical Programmes and Planning (and in particular the sub-directorate of Medical Stores and Systems, which provides the secretariat to COMED) and the Directorate: Medicines Administration (the secretariat to the Medicines Control Council). Significant strengthening of the inspectorate functions of the MCC will also be necessary if the potential pitfalls of parallel trade and compulsory licensing are to be avoided. Strengthening the entire system will ensure that the populace is not exposed to counterfeit and sub-standard medicines and will demonstrate that such exposure is not an inevitable consequence of the policy choices outlined in this chapter. In this regard, South Africa remains a test case, one watched closely by the international community.



Chapter 10 Developments towards a district health system

Chapter 11 Hospital Restructuring

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# Developments towards a district health system

The Minister of Health and Members of the Executive Council (MEC's) for Health of the nine provinces have reiterated the vision of a district health system (DHS) being the cornerstone of a national health system. They have also reiterated the view that the final home of the DHS is with local government. Therefore, the developments that took place in the local government sector in the year 2000 have had and will continue to have, a profound impact on the establishment of the DHS.

One of the major developments in 2000 was the demarcation of new local government boundaries. The total number of municipalities in the country was reduced from 834 to 285. Health district boundaries are being re-aligned to correspond with the boundaries of Metropolitan and District Councils. Although this will ensure that all government departments have the same managerial area of operation, it has caused major disruptions in terms of staff who have been working in the interim health districts. It is also a problem in terms of the concept of the DHS – many of the new "health districts" are now too large to be manageable and will have to be divided into smaller sub-districts. These problems are further elaborated on in this chapter.

Community participation and inter-sectoral collaboration are cornerstones of the DHS. This chapter looks at how the pursuit of these goals in the functioning of local government will facilitate their expression in the district health system. The issue of municipal financing is also discussed.

In addition, a number of key unresolved issues in local government which will affect the establishment and functioning of the district health system are highlighted. These include the necessity for a strategic framework to guide the implementation of the DHS, the role of national and provincial Health Departments, and capacity development within the newly created municipalities.

Authors

Peter Barron Health Systems Trust

Urmila Sankar Central entity health department, Durban Metropolitan Council This chapter discusses the developments towards establishing a district health system (DHS) that took place during the year. It discusses key aspects of local government transformation as well as developments in the health sector. Finally it attempts to analyse some of the obstacles to the implementation of the DHS. It should be read in conjunction with the chapter on "Establishing the District Health System" in the 1999 South African Health Review.<sup>1</sup> Many of the principles relating to the district health system, such as the purpose of the DHS, the size of a health district, the relationships between the three spheres of government, the role of the district hospital and the governance of the DHS were covered in that chapter.

It is important to remember that the DHS is a means to an end - the end being the rendering of equitable, effective, efficient health care of good quality and the implementation of a primary health care approach. The essence of the DHS is the organisation of health care according to the geographic sub-divisions of South Africa.

There are two tracks of transformation which impact on the DHS. The one is transformation of the health sector and the second is the transformation of the local government sector. During 2000 there were developments relating to both these tracks but unfortunately these developments do not run in neat parallel lines. They sometimes meander away from each other and sometimes criss-cross. This messy transformation has caused much confusion, wasted effort and time and has had a serious impact on the morale of health workers at the primary care level. This in turn has negatively impacted on the extent and pace of improvements in primary health care.

This confusion should not have been unexpected given the scale of transformation of both the health and local government sectors. With both sectors experiencing a large turnover in political and administrative leadership the weight of the challenges to the leadership has resulted in not enough attention being given to the realities and complexities of the DHS.

# Developments in local government

In this section some of the key developments in local government that are relevant to the establishment of the DHS are highlighted.

# The Transformation process

In 1996 the role and function of local government was formally laid out in the 1996 Constitution. According to the Constitution,<sup>2</sup> local government is no longer subordinate to provincial and national government, but has legislative and fiscal capacity. The Constitution also refers to a process of co-operative governance between the three spheres of government.

# **Municipal Demarcation process**

The demarcation of new local government boundaries was undertaken by the Municipal Demarcation Board which was established in terms of the Local Government Municipal Demarcation Act 117 of 1998. The Demarcation Board divided up the entire country into new municipalities. This process reduced the number from 834 to 285 municipalities in total. Every area in South Africa is now part of a municipality, including all farming areas and areas which fall under traditional leaders.

The final phase of the transformation of local government commenced with the local government elections on 5 December 2000. At these elections 285 brand new municipalities came into existence. These fall into the following types:

- 6 Category A municipalities (Metropolitan Councils)
- ✤ 47 Category C municipalities (District Councils)
- ✤ 232 Category B municipalities (Local Councils).<sup>a</sup>

# Metropolitan Councils

The Category A Metropolitan Councils are Durban, Cape Town, Port Elizabeth, Tshwane, (Pretoria), Johannesburg and the East Rand. In these areas all the powers and functions of local government are vested with the Metropolitan Council. These include municipal health services.

# **District Councils**

Forty seven Category C District Councils, including seven Cross-Border District Councils, were demarcated. A number of principles were used in determining these district councils. The criteria for demarcation included that they should be of manageable size. To ensure this, the following were taken into account:

- The geographic size in km.
- The population numbers
- The population density.

However, because of the geographical differences in the country and the differences in population densities, there is a wide range between District Councils, eg. District Council 12 in the Eastern Cape has a population of 1 657 373 people whilst District Council 5 in the Western Cape has a population of 56 167. This has implications for the organisation of the DHS.

The distribution of District Councils is shown in Table 1.

a The term "municipalities" is used interchangeably with the term "councils". Therefore a "metropolitan municipality" is the same as a "metropolitan council". The same applies to district municipalities or councils and local municipalities or councils.

#### Table 1: Distribution of District Councils by province

Province	Number of district councils	
Eastern Cape	6	
Free State	5	
Gautena	3	
Kwa7ulu Natal	10	
Kwazulu-Indial	IU	
Mpumalanga	4	
Northern Cape	5	
Northern Province	4	
North West	5	
Western Cape	5	
Total	47*	

The total of 47 includes the 7 cross-border district councils which for the purpose of this table have been allocated to one of the provinces which they straddle.

# Local Councils

Within these District Councils, two hundred and thirty two Category B Local Councils including seven Cross-Boundary Local Councils were demarcated. The basis of the demarcation included:

- Manageable size
- Resource sharing between "weaker" and "stronger" areas
- Functional linkages.

The category B municipalities have been divided into 6 gradings by the Demarcation Board based on their potential capacity. Grading 1 has significant and large municipalities with large budgets of over R300 million per year and with the management capacity to collect revenue and govern on their own initiative. Category 6 municipalities have budgets of less than R10 million. They are primarily former Bantustan areas where building capacity and the development of a tax base are high priorities. There are also huge differences in the population numbers of Local Municipalities. For example, within District Council 12 of Eastern Cape, Local Municipality 125 has a population of 682 287, whilst Local Municipality 128 has a population of 24 801.

The capacity grading of Category B municipalities is shown in Table 2.

#### Table 2: Category B Municipalities, analysed by province and capacity

Province	Capacity Grading								
	1	2	3	4	5	6			
Eastern Cape	1	1	2	5	9	20	38		
Free State	1	1	4	10	4		20		
Gauteng	1	1	4	3			9		
KwaZulu-Natal	1	4	1	14	7	24	51		
Mpumalanga		2	2	12	2	3	21		
Northern Cape		2	1	8	7	11	29		
Northern Province		1		10	3	9	23		
North West		2	4	7	4	7	24		
Western Cape		3	5	13	1	2	24		
Total*	4	17	23	82	37	76	239		
South Africa *	4	17	22	79	35	75	232		

\* The numbers for the total column and the numbers for South Africa have a difference of 7 due to the crossborder local councils being counted twice in the provincial lists – for both provinces they straddle.

Eighty one percent (81%) of all Local Councils (gradings 4, 5 and 6) will require assistance from District Councils and/or other levels of government to perform the range of functions expected of them.

### Division of Functions and Powers between District and Local Municipalities

As Local Councils (Category B Municipalities) fall within the boundaries of District Councils (Category C Municipalities) these municipalities serve the same population (see Figure 1). Therefore the functions and powers of local government have to be shared between them. The aim of this shared authority is to ensure redistribution and sustainability of municipal services.

Figure 1: Schematic representation of District and Local Councils



Section 84 of the Municipal Structures Act 117 of 1998 creates a framework for the division of functions and powers between District and Local Councils by the Minister of Provincial and Local Government based on the recommendations of the Municipal Demarcation Board.

Section 85 of the Act permits an adjustment of this division by the MEC for Local Government in the event that the municipality in which the function or power is vested lacks the capacity to perform that function or exercise that power.

The Local Government Municipal Structures Amendment Act of 2000 allocates the function of Municipal Health Services to District Municipalities. The allocation of powers and functions are to give effect to the new and central role that District Municipalities must play in seeking to achieve the integrated, sustainable and equitable social and economic development of its area as a whole.

### Local government restructuring and the DHS

In the Municipal Systems Act No. 32 of 2000, two issues are given prominence. The issues of community participation and intersectoral collaboration are of great importance to the envisaged development and role of local government. They are also two pillars on which the Primary Health Care Approach is built and are therefore of importance to the DHS.

A full chapter of the Act is devoted to the establishment of mechanisms for *community participation*. It advocates the building of a culture of community participation and imposes an obligation on local government to provide information and mechanisms for community participation as well as a contribution to capacity building to make this participation meaningful.

Implicit in the concept of *Integrated Development Planning* is the notion that different departments will plan together for the best good of the community concerned. As an example, in planning to prevent future cholera outbreaks the Health, Sanitation and Water sectors

need to put their heads together. Integrated development planning is a legal requirement for all municipalities and will therefore be an essential link to health planning in the district. The Act specifies the developmental orientation of this planning process and the requirement of community input into the plan.

The Integrated Development Plan (IDP) of a municipality is required to be aligned with and complement the development plans and strategies of other affected municipalities and other affected organs of state. The Act also gives effect to the Constitutional provision that local government participates in national and provincial development programmes. Provinces are required to assist and support municipalities in the development of their IDP's.

The *performance management system* of a municipality is based on these two pillars of community participation and IDP. Firstly, it has to be derived from its Integrated Development Plan thereby ensuring implementation of the Development Plan. Secondly, the municipality is required to involve the local community in the development, implementation and review of the performance management system particularly in setting key performance indicators and performance targets for the municipality.

An annual report comprised of a performance report, annual financial statements and the audit report must be submitted to the media, community, MEC for Local Government and the Auditor-General.

### **Municipal Finance**

As the financing of health services is a key to the development of a DHS the current status of municipal finances is of importance. The financing of many municipalities will be a significant challenge to the success of the new local government system. Firstly, many municipalities were neglected during the apartheid era, resulting in serious backlogs that now need to be addressed. Secondly, the payment of rates and services is very low in certain areas. Thirdly, financial management has been poor in many municipalities, and lastly, the process of transforming local government has in itself been costly.

In addition, many municipalities will now be expected to take on and fulfil functions which have previously been carried out by national and provincial departments. An example of this is the DHS. This will require funding and unfortunately many questions around funding remain unclear. How will the DHS be funded, by whom, via what route and by how much are some of the questions that need answering.

Financing policy to meet the needs of local government is still in the process of development. Section 10 G of the Local Government Transition Act No. 203 of 1993 has therefore been retained until such time as financial policy and legislation are finalised. The provisions of the section relate to municipal budgeting, investments, raising of loans and levy allocations. The power to levy and claim a regional services levy and regional establishment levy is given to Metropolitan and District Councils. The Municipal Systems Act permits municipalities to generate income by means of user charges. This has the potential to be in conflict with the policy of Free Primary Care.

# Developments in the health sector

The Minister of Health and the Members of the Executive Council (MEC's) for Health of the nine provinces in their MINMEC policy making structure reiterated the vision of a DHS being the cornerstone of a national health system. They also reiterated the view that the final home of the DHS is with local government. The MINMEC has also resolved that health district boundaries would be re-aligned to correspond with the boundaries of Category A and C municipalities (Metros and District Councils). Although this is highly desirable in terms of getting all government departments to have the same administrative divisions and is essential for inter-sectoral co-operation, it has two serious implications for developments within the health sector. Firstly the process of drawing health district boundaries has had to restart in many provinces with the 174 health districts in place in 1999 now having to be brought into line with the 6 Metropolitan and 47 District Municipality boundaries. This has major implications for health workers who have been working in interim structures for some time. Secondly it has implications for the concept of the DHS, as many of these new "health districts" will have to be subdivided to make them manageable in terms of the Primary Health Care Approach.

At provincial level, different provinces followed different routes in pursuing the development of a DHS. The Free State took the lead and in February 2000 published the Free State Provincial Health Act.<sup>3</sup> This Act spells out the functions and responsibilities of the still to be created District Health Authority that would be the governing body of the health district. In the Western Cape a bi-ministerial task team comprised of officials from provincial and local authority Health Departments has produced a detailed document setting out the way forward to transferring primary health care services rendered by the province to local government.<sup>4</sup> At the time of writing (January 2001) this document has still not received the necessary political endorsement for any action to take place.

However, on the whole there has not been much progress towards the establishment of district health systems in the provinces, largely because of the widespread uncertainty that resulted from the local government transformation.

# **Unresolved** issues

# Clear vision and strategic framework

The establishment of the DHS requires a close working relationship of at least the three Ministries of Health, Local Government and Finance. It also requires fundamental change to both the Health and Local Government sectors, and it is likely that a cabinet resolution is required to set the policy framework in place. To turn this policy framework into action will in turn require new legislation, as the current Health Act of 1977 is inadequate to set a strategic framework for the DHS.

This strategic framework needs to define the concept of Municipal Health Services by specifying the health functions which are allocated to the local government sphere. There are a number of ways which (in terms of the Constitution<sup>2</sup>) additional health functions can be distributed between the different spheres of government. These include devolution by assignment or delegation of national or provincial powers and functions, or an agency agreement between two spheres of government. In order for the DHS to come into existence some arrangement, in terms of these Constitutional options, needs to take place. The choice of option is complex and is contingent on further clarity on the definition of Municipal Health Services. It is also contingent on getting consensus on financing mechanisms between national, provincial and local government, and Treasury approval.

It is not likely that one option will cater for the different circumstances and state of development of all the health districts around the country. The strategic framework should also indicate the degree of flexibility and specify interim arrangements to be made whilst moving towards the overall vision. So for example in the more remote rural areas, where local government is basically starting from scratch, it is likely to take at least two years before the DHS concept even reaches the policy making table, and much longer before it is implemented at local government level.

### Municipal Health Services - the options

Schedule 4B of the Constitution<sup>2</sup> identifies Municipal Health Services as a local government competence. Four options have been identified to define this basket of services.

- Minimalistic Approach: This is comprised of environmental health services and related preventive and promotive services. This is the approach advocated by the Department of Finance.
- Flexible Approach: This would be negotiated individually for each municipality. This approach has Municipal Health Services being defined as services currently provided by the particular municipality.
- Core Primary Health Care Package: This comprises the full basket of primary health care services, but excludes District Hospitals.
- DHS Package: This includes the Core Primary Health Care package and District Hospitals.

The final definition of municipal health services has not yet been reached, but as an interim, pragmatic arrangement the health sector has agreed that the flexible approach will be followed. An intergovernmental workshop is planned for early 2001 to reach consensus on the definition.

### Financial arrangements

For the DHS to be properly established adequate financial arrangements will have to be in place to ensure that there are sufficient funds for the decentralisation process. Also required are sufficient funds for the setting up of a district health authority, the district health management team and the support structures such as drug supplies and transport. The quantity of funds and the mechanisms by which they reach the various local government districts will need to be guaranteed somehow, as there are grave concerns in the local government sector regarding "unfunded mandates". Put simply, "unfunded mandates" occur when functions are decentralised and responsibility to carry out these functions is given without provision of the necessary resources.

### Attention to the centre

As a parallel process to the decentralisation of health services and the setting up of a DHS, attention needs to be given to the changing role of the national and provincial Health Departments. In particular their role in various areas will need to be greatly strengthened if the DHS in particular, and the health system as a whole is to thrive. These areas include:

- Strategic planning for overall direction of the DHS
- Planning and resource allocation
- Support and monitoring and regulation of the DHS.

To fulfil this role, structures at the centre will have to change and new systems will have to be put in place and new values engendered. In this sense, the delivery of primary care will always be a joint (concurrent) responsibility of all three spheres of government.

### Communication

There is a need for those affected by the setting up of the DHS, a completely new system of primary care delivery, to be adequately informed of the introduction of the new structures and the likely changes that will occur. Health workers need to know how their work will be affected and what will happen to their personal benefits. Other stakeholders such as unions, government departments, communities and individual users will be affected directly by the decentralisation process and it is vital that they are kept up to date with the processes.

### Capacity development

Most of the newly created municipalities will not have the capacity to enable them to cope with the challenges and demands of a DHS. Plans need to be made and the necessary staff acquired and adequately trained in order for there to be orderly decentralisation without adversely affecting service delivery.

# Conclusions

During 2000 there were major developments within the local government sector culminating in the elections for 285 new, rationalised municipal councils in December. This means that one of the fundamental building blocks for the DHS is now in place.

However, it is inevitable that much of the focus in local government in the near future will be on the internal changes required for the creation of the new system of local government. New relationships have to be established, new organisational identities have to be created, new management structures need to be established with new organograms and new goals with new lines of communication. These factors need to be taken into account in deciding on the pace of the decentralisation process. Because all the attention of decision makers is being focussed on the structures of local government, it has meant that the Health and Local Government Departments have not been able to synchronise their policies and strategic frameworks around the creation of a DHS.

For the decentralisation of primary health care services from provincial to local government level to take place and achieve a DHS in a relatively smooth way without service delivery being compromised, a wide range of factors need to be addressed and taken into account. Many of these factors (e.g. ensuring an overarching strategic framework with clear funding mechanisms, adequate communication, legislation) have been discussed in this chapter.

The successful implementation of a DHS rendering primary level services could have a significant impact on improving the quality of life of many South Africans, especially the poor. For success to be achieved, clear leadership is required by decision-makers in Health and Local Government at all three levels of government. Only once there is a clearly articulated strategic plan that covers all the main elements and potential obstacles can pragmatic decisions to implement be taken.



Public hospitals account for 62% of public health sector expenditure and thus require consideration within any health sector review. There is a shortage of available information to construct an accurate national picture of public hospital services. This chapter reports on the findings of a recent national quantitative and qualitative study of hospital services and reviews a number of recent additional data sources.

There have been significant shifts in the shape of the national public hospital portfolio, but further shifts are necessary. These reductions have not been accompanied by significant increases in bed occupancy rates. Expenditure on hospitals since 1992/93 has increased at a rate slower than that of the public health sector as a whole, but in the last three years increases in funding to tertiary hospitals have outstripped those for other hospitals.

Key findings include:

Authors

- Despite some convergence between provinces there continue to be large inequities in hospital spending (R173-R958 per capita), bed availability (1.82-3.54 beds/1 000) and staffing (doctors 0.8-6.5/10 000).
- There have been reductions in the number of beds in use in most provinces, and in particular in the Western Cape and Gauteng. However relatively low bed occupancies and inability to maintain the existing hospital estate suggest that further bed reductions are required.
- ◆ Access to hospital services in terms of admission rates is on aggregate satisfactory.
- Capital infrastructure and equipment are deteriorating at levels significantly exceeding existing spending on rehabilitation, maintenance and replacement.
- Real increases in funding for hospital services have on aggregate not translated into increased staffing or outputs but are likely to have been spent largely on increased salaries and benefits.

Andrew Boulle Health Systems Trust

Mark Blecher Provincial Administration of the Western Cape

**Andy Burn** European Union consultant to the National Department of Health

- No systematic quality improvement plan has been implemented and this is an important priority.
- The absence of sufficient reliable standardised data on hospital services at a national level is cause for concern and requires improvements in national health information systems.

# Introduction

Hospital services account for the major portion of public health sector expenditure and developments within hospital services warrant further attention in this and future health reviews. This chapter begins the process by:

- Presenting data on quantitative restructuring since 1994, based on a survey conducted by the national Department of Health
- Tracing some of the current issues in hospital restructuring based on interviews conducted with national, provincial and facility-based hospital managers, and
- Reviewing a limited selection of additional recent data, including from the recent National Health Accounts process.

Substantial restructuring of hospital services has been a goal of health departments since 1994. Informing this need for restructuring have been:

- In the past, hospital services were disproportionately expensive if broader health service delivery goals were to be met
- Substantial inefficiencies existed which could partially be addressed through rationalisation, and
- Hospital services were severely maldistributed with large variations in quality, access to, expenditure on, and tiering of services, providing an opportunity to improve quality and equity of services.

The framework for this review follows inputs to outcomes, and additionally looks at management and efficiency. The trend data we have used derive from provincial returns to the national Department of Health, are of varying quality and are incomplete, especially in the earlier years of the review period. The most recent bed numbers reflect useable beds and derive from returns from individual hospitals directly to the provincial Departments of Health. The paucity of good quality, nationally aggregated data on public hospitals became strikingly apparent in the course of the review.

Key to the efficient utilisation of hospital services is the strengthening of the integrity of the various levels of care and the referral systems between them, based on a clear understanding of the differential costs of treating patients at the various levels in the health care system. The current tiered definitions covering the majority of hospital services are provided below:

#### **Hospital Definitions**

Hospital Level	Services	Referrals accepted from
District	Generalists only. Level I care	Clinics and GP's
Regional	General specialist services, mostly level II care	District hospitals additionally
Provincial Tertiary	Super-specialist services, mostly level III care	Regional hospitals additionally
National Central	Super-specialist services, mostly level III, high cost, multi-disciplinary care	Regional hospitals and inter- provincial referrals
Specialised Chronic Care	Specialised groups such as chronic psychiatry and tuberculosis	All levels

Source: Based on National Data Dictionary<sup>1</sup>

A chapter in a previous South African Health Review<sup>2</sup> dealt with the findings of the Hospital Strategy Project (HSP),<sup>3</sup> a year-long exercise that provided suggested norms, strategic recommendations, and guidelines for the development and improvement of hospital services. The recommendations were never formally adopted nationally, yet many of the thrusts emerging from that exercise continue to inform planning and implementation. We refer to bed-provision norms in some of our analyses. The most recent published norms were in the HSP. These were revised in a draft National Planning Framework (NPF) in 1998, which was never made public. The new NPF is expected to be released in the near future. Bed-provision norms have progressively been adjusted downwards based on what is thought to be affordable and sustainable for the country. It is likely that when revised recommendations are made, they will be significantly lower than the HSP norms we refer to in this chapter.

# Inputs

### Beds

There has been an overall pattern of reducing bed numbers in virtually every province (Table 1). There has been significant closure of beds in the Western Cape and Gauteng, with over 5 000 hospital beds closed during the period under review. Both of these provinces remain with aggregate bed/population ratios well above Health Strategy Project norms. The overall pattern of reducing beds may reflect trends towards shortening length of stay of acute admissions and de-institutionalisation in mental health care. With the reduction of beds in Gauteng, the Western Cape and KwaZulu-Natal there has been some convergence in the bed/population ratios between provinces. However the available beds/1 000 public population is still inequitable, varying substantially between Mpumalanga (1.82/1 000) and the Western Cape (3.54/1 000).

#### Table 1: Total hospital beds in use by province

Total number of beds in use - trend										
Province	1994	1995	1996	1997	1998	Change	Change %	2000 <sup>ii</sup>		
EC	-	-	-	-	-	-	-	19 953		
FS	-	-	6 141	5 794	5 119	-1 022	-16.6%	5 810		
G	20 738	20 430	19 967	20 012	17 694	-3 044	-14.7%	16 715		
KZN	-	28 355	28 483	28 483	27 674	-681	-2.4%	27 305		
MP	-	-	4 464	4 464	4 612	148	3.3%	4 813		
NC	-	-	1 965	1 965	1 965	0	0.0%	1 589		
NP	-	-	-	-	12 059	-	-	10 109		
NW	-	-	-	-	7 457	-	-	6 525		
WC	14 761	14 584	14 356	12 823	11 964	-2 797	-18.9%	10 682		
SA								102 411		

- Key: EC = Eastern Cape
  - FS = Free State
  - G = Gauteng
  - KZN = KwaZulu-Natal
  - M = Mpumalanga
  - NC = Northern Cape
  - NP = Northern Province
  - NW = North West
  - WC = Western Cape
  - SA = South Africa

Source: i National DoH, returns from provincial DoH's, on beds in use 1999.<sup>4</sup> Blank cells reflect instances where data was not submitted.

ii National DoH, returns from 420 hospitals nationally on useable beds, 2000 (except for EC which was supplied by R Kraus, and KZN supplied by K Naidoo, reflecting beds in use 2000)

#### Table 2: Beds per population in 2000, by level of hospital<sup>iii</sup>

Public Sector <sup>iv</sup>											Private	e Sector <sup>*</sup>		
		Dis	trict	Regi	onal	Ter	tiary	Sub- total	Spec	cialised	Total	1	otal	
Province	Public Pop 2000	%	Beds/1000 Public Pop	%	Beds/1000 Public Pop	%	Beds/1000 Public Pop	Acute Beds	%	Beds/1000 Public Pop	Beds/1000 Public Pop	Private Pop	Beds	Beds/1000 Private Pop
EC	6 112 093	50%	1.55	19%	0.59	7%	0.21	2.34	24%	0.75	3.09	679 121	1 185	1.74
FS	2 270 771	44%	1.12	34%	0.88	9%	0.22	2.22	13%	0.34	2.56	498 109	1 602	3.22
G	4 786 748	11%	0.39	34%	1.20	39%	1.36	2.95	15%	0.54	3.49	3 191 445	10 836	3.40
κzn	1 7 928 553	40%	1.37	28%	0.95	7%	0.25	2.57	25%	0.88	3.44	1 185 383	3 377	2.85
MP	2 647 988	45%	0.81	41%	0.75	8%	0.14	1.70	7%	0.12	1.82	431 403	703	1.63
NC	701 356	46%	1.03	34%	0.77	0%	0.00	1.81	20%	0.46	2.27	186 662	386	2.07
NP	5 052 045	62%	1.25	15%	0.29	15%	0.30	1.84	8%	0.16	2.00	439 583	267	0.61
NW	3 129 812	48%	1.00	24%	0.49	5%	0.10	1.59	24%	0.49	2.08	509 790	1 316	2.58
WC	3 017 762	14%	0.51	19%	0.66	28%	0.99	2.16	39%	1.38	3.54	1 232 578	4865	3.95
SA	35 647 128	38%	1.08	26%	0.74	15%	0.43	2.25	22%	0.62	2.87	8 354 074	24537	2.94
Adju affo	ısted <sup>vi</sup> HSP rdable norm		1.39		0.69		0.21	2.29		0.5	2.79			

Sources: iii National DoH, returns from 420 hospitals nationally on useable beds (currently authorised beds as opposed to bed capacity) 2000.

Data are presented by hospital type rather than level of care since detailed level of care assessments are not available.

iv Percentages refer to the proportion of total public sector beds comprised by the corresponding level of hospital in that province.

Public population figures are from Statistics South Africa mid-term estimates for 1999 adjusted to 2000 by Statistics South Africa growth rates; population adjusted for medical aid coverage.

- v Hospital Association of South Africa affiliated private hospitals only, except WC supplied by M Blecher
- vi The HSP optimal staffing norms adjusted to reflect recommendations for a public population of 80% of the total population.

The overall bed/population ratio (Table 2) of 2.87/1 000 in 1998 may still be high compared to the recommendations that are expected in the NPF. This together with low bed occupancy rates and an inability to maintain the existing bed infrastructure suggests that greater efficiencies can be achieved through further bed closures and hospital consolidation. A more efficient bed infrastructure could lead to better resourcing of a smaller, more moderate infrastructure.

When analysing data on levels of care (Table 2), it is important to note that most beds are classified according to the level of care that the hospitals in which they are located are capable of providing. This does not necessarily reflect the level of care that is required by patients occupying these beds.

District hospital beds range from 0.39/1000 in Gauteng to 1.55/1000 in the Eastern Cape. Even though it is expected that the demand for district beds will be less in urban areas, a deficient district bed infrastructure leads to higher cost structures in Gauteng and the Western Cape because hospital staff tend to care for patients at the highest level at which the facility is capable of providing services. Gauteng intends to address this as documented in a recent bed plan.<sup>a</sup> Regional beds vary between a low of 0.29 in Northern Province to 1.2 in Gauteng.

The combined levels of bed provision in central and tertiary hospitals in Gauteng and the Western Cape significantly exceed HSP affordable norms. These beds need to be reduced in order to shift funds to the resourcing of lower level beds, or resourced appropriately for multiple levels of care. The lack of clarity as to the levels of care provided within the affected hospitals impedes national planning.

Specialised hospital beds principally reflect chronic beds, of which the major categories are allocated to mental health care and tuberculosis. The data suggest an inappropriately high level of chronic beds in many parts of the country. In the Western Cape in particular, specialised beds are 1.38/1 000 public population, exceeding the HSP norms.

The analysis of private sector hospitals by province (only Mpumalanga, the Northern Province and the Eastern Cape have aggregate bed/medical aid covered patient ratios below 2/1 000) reflects the concentration of these hospital beds in major urban areas.

A current initiative which could drive the further rationalisation of bed provision is the National Planning Framework (NPF). The intention of the Framework is to provide targets for the country's hospital portfolio and to provide a framework for the hospital rehabilitation programme (see below). The target set by the national Department of Health (Table 11) was to have the NPF finalised by March 2000 and detailed plans developed by June 2000, although this has not been achieved.

One method of managing the development of hospital services is the Certificate of Need (CoN). This provision in the draft National Health Bill could regulate the licensing of facilities (and therefore beds) in both private and public sectors if implemented.

# Human Resources

Information on trends in hospital staffing is limited. It was only possible to access trend data for four provinces (Table 3), with the most recent data being for 1998. The inability to shift staff (because of inflexible Public Service provisions) was cited by a number of provincial managers as a key hindrance to the rationalisation of hospital services. From the available data (Western Cape, Gauteng, KwaZulu-Natal, Northern Province), it would appear that filled medical posts have remained relatively constant compared to nursing posts where significant reductions have occurred in Gauteng and the Western Cape (over 1 000 posts between the two provinces). It has not been possible to adjust for instances where posts are reflected on hospital establishments but where the staff are working in primary care facilities. This analysis examines only filled posts.

Personal Communication: Gauteng Department of Health

able 3:	ble 3: Filled medical and nursing posts: trend, by population and by bed ratios											
Filled medical officer and specialist posts combined												
Province	1995	1996	1997	1998	change	% change	Doctors/ 10 000 public pop 1998	Beds/ doctor 1998				
G	-	2 835	3 280	3 098	263	9.3%	6.5	5.7				
KZN	1 762	1 762	1 762	1 761	-1	-0.1%	2.2	15.7				
NC	-	-	-	121	-	-	1.7	16.2				
NP	412	426	508	451	39	9.2%	0.9	26.7				
NW	-	-	-	266	-	-	0.8	28.0				
WC	-	956	972	955	-1	-0.1%	3.2	12.5				
	Filled Professional Nurse (PN) and Senior PN posts											

Province	1995	1996	1997	1998	change	% change	Nurses/ 10 000 public pop 1998	Beds/ nurse 1998
G	-	8 776	8 590	8 377	-399	-4.5%	17.9	2.1
KZN	9 395	9 395	9 395	9 360	-35	-0.4%	12.1	3.0
NC	-	-	-	625	-	-	9.0	3.1
NP	4 394	4 428	4 486	4 768	374	8.4%	9.7	2.5
NW	-	-	-	3 291	-	-	10.7	2.3
WC	-	4 344	4 030	3 570	-774	-17.8%	12.1	3.4

#### То

Source: Returns from provinces to the national DoH.<sup>4</sup> No data were available for FS, EC, and MP, for medical interns, or to delineate part-time from full-time posts.

Substantial inequity exists in the number of doctors ranging from 0.9 and 0.8/10 000 public population in the Northern Province and North West respectively compared with 6.8 in Gauteng. This translates into a ratio of beds/doctor of 26.7:1 in Northern Province and 28:1 in North West compared to 5.7:1 in Gauteng.

Attempts to reduce staff have also had further negative consequences. Health managers cite the retention of skilled staff as a major challenge. The voluntary severance packages combined with active recruitment of nurses by overseas countries have depleted hospitals of many of their longest serving and most skilled nurses. An examination of the number of staff by province shows that the professional nursing staff categories have the most noticeable drop. The private sector hospitals cite their emerging difficulty in attracting these categories of staff as a barometer of a larger problem. There are concerns that the country is not training adequate numbers of nurses – between 1996 and 1998 the number of registered nurses in South Africa increased by 1 197, barely more than the increase in the number of doctors for the same period.<sup>5</sup> Filling vacant posts remains one of the key frustrations of hospital managers. Although it had been anticipated that the Public Service Amendment Act No. 5 of 1999 would increase the flexibility for hospital managers and allow them to appoint staff up to higher levels than was previously authorised, this has not been the experience and gaining approval for filling posts continues to be frustrating. As the staff cost is the biggest expenditure item for hospitals it is an area that the provincial management use to exert financial control.

In the past doctors were granted a special dispensation (Limited Private Practice) to earn additional income. This has been stopped and the common provision of the Public Service Regulations is now the route for doctors to earn additional income (Remunerative Work Outside of the Public Service – RWOPS). It is still too early to gauge the impact of this change.

A further concern frequently raised is the impact of restructuring and rationalising on specialist training. An audit of central and regional hospitals<sup>6</sup> found that the number of operations performed had decreased significantly, pointing to a decrease in elective surgery essential to the training of registrars in many specialties. Shortages of allied health personnel were perceived to impact negatively on quality of care. There was widespread resentment on the part of nurses at having to perform tasks that they saw as the role of support staff such as porters and general assistants, with friction existing around roles and responsibilities.

Whilst difficulties in attracting staff to rural areas was topical with informants, there was general appreciation of the positive impact of community service and foreign doctors in providing services in many of these areas. Counter posed to the above discussions on reducing and rationalising bed numbers and striving for optimal staff establishments are positive experiences of the appropriate strengthening of regional and tertiary services in a number of areas, including the hospital complexes in Pietersburg, Kimberley, Witbank and Potchefstroom, and the strengthening of regional hospitals in the Western Cape.

# Financing

Data on hospital financing are from the National Health Accounts.<sup>7</sup> When looking at overall expenditure on hospital services (Table 4), there a number of important points to be made:

- Hospitals accounted for 62% of public health expenditure in 1998/99. A reworked analysis comparable to the 1992/93 Health Expenditure Review (HER) showed hospital expenditure comprising 85% of total public health expenditure in 1992/93 compared with 79% in 1996/97.<sup>b</sup>
- In the last three years expenditure on public hospital services has increased at a rate of 4.3% p.a. with expenditure on tertiary hospitals outstripping the rest with an 8.0% p.a. increase. In the last year expenditure on district hospitals fell.

b In order for a comparison to be made with the HER, the reworked analysis excluded spending by non-health national departments and institutions, provincial expenditure on health administration, and research and training. Including these demonstrates a slight relative increase in hospital expenditure over the last three years, whilst still demonstrating a decline in relative expenditure on hospital services since 1992/93.

Table 4: Total national public expenditure (R millions, real 1999/00 prices) on hospitals and on health

	1996/97	% of total	1997/98	% of total	1998/99	% of total	Annual Change
Tertiary Hospitals	4 311	26.6%	4 674	26.9%	5 005	28.4%	8.0%
Regional Hospitals	5 032	31.0%	5 358	30.8%	5 384	30.5%	3.5%
District Hospitals	5 212	32.2%	5 592	32.2%	5 368	30.5%	1.5%
Other Hospitals	1 651	10.2%	1 761	10.1%	1 871	10.6%	6.7%
Total	16 206	100.0%	17 385	100.0%	17 628	100.0%	
Total expenditure on hospitals	16 206		17 385		17 628		4.4%
Total expenditure on health	27 462		29 096		28 743		2.3%
% expenditure on hospitals	59.0%		59.8%		61.3%		

Source: National Health Accounts

When looking at expenditure by only the provincial Departments of Health over the last three years (Table 5) i.e. excluding additional expenditure by the national department, there has been a greater prioritisation of regional and district hospitals by the provinces, where the growth rates in the expenditure on these hospitals over the last three years were higher than those of tertiary hospitals. Substantial inequity still exists in the per capita expenditure on hospital services by provincial departments of health (Table 5 and Figure 1) which varies between provinces from a low of R175 p.a. in Mpumalanga to R958 p.a. in Gauteng.

# Table 5: Total expenditure (R million, real 1999/00 prices) on public hospitals by individual provincial DoH's only

	1996/97	1997/98	1998/99	Annual Change	Public Pop 1999	Exp per capita
Eastern Cape	2 135	2 244	2 386	4%	6 659 000	R 358
Free State	1 210	1 295	1 204	0%	2 226 300	R 541
Gauteng	4 258	4 631	4 487	2%	4 684 200	R 958
KwaZulu-Natal	2 688	2 785	3 115	5%	7 763 880	R 401
Mpumalanga	449	564	451	0%	2 582 580	R 175
Northern Cape	233	271	227	-1%	691 250	R 328
Northern Province	1 211	1 070	1 436	6%	4 910 040	R 292
North West	712	1 008	930	10%	3 063 320	R 303
Western Cape	2 345	2 376	2 294	-1%	2 961 410	R 775
South Africa	15 242	16 244	16 530	3%	35 541 980	R 465

Source: National Health Accounts and Statistics South Africa mid-year estimates

#### Figure 1: Annual expenditure per capita in 1998/99



**CHAPTER 11** 

Whereas hospital expenditure has grown in real terms, the declining number of personnel affordable largely reflects progressive increases in real wage packages for health workers. The restructuring momentum was partially interrupted by this "wage drift" which was created by centrally bargained processes in the Public Sector Central Bargaining Chamber (PSCBC) and therefore beyond the control of the health department. This forced the adoption of crisis measures to contain spending, which were not necessarily in line with optimal strategic plans or the decentralisation of authority being striven for. In particular the rank and leg promotions and flatter structure implemented in 1997 impacted significantly on the salary bill.

The conditional grants for the ten designated central hospitals that are located in four provinces were designed to protect the funding of key services that are of national importance. The functioning of these grants is currently being reviewed, whilst as part of the NPF, a review of highly specialised services is being undertaken.

When the original projections of the Hospital Strategy Project were made, it was anticipated that significant income would be derived from public private partnerships. The norms that were developed as a result anticipated additional revenue sources. A number of processes are underway which can potentially increase the funding of public sector hospitals, although to date it is too early to establish whether this will happen to any significant degree.

- Certificate of Need (CoN): As mentioned above, the draft National Health Bill<sup>8</sup> includes a section on Certificate of Need to control the licensing of facilities, both public and private. At this stage it appears that the CoN process will apply to facilities and beds, but not to practitioners. The existing relative oversupply of private sector hospital facilities may limit the impact of CoN on public-private partnerships and their income generation (and savings) potential for public sector facilities.
- Social Health Insurance (SHI): It was anticipated at the time of the HSP that SHI would be instituted a lot sooner than will be the case. The revised interest in SHI as part of broader social security plans could impact positively on the funding of public sector hospitals (see chapter on Social Health Insurance).
- Uniform Patient Fee Schedule (UPFS): This initiative seeks to provide a simplified and efficient mechanism to recoup fees from full-paying patients. The focus is on patients treated for Road Traffic Accidents, for injuries for which claims could be made to the Worker's Compensation Fund, and those on medical schemes. It is currently being piloted in the Northern Cape where is has been a significant success. The target set in the Health Sector Strategic Framework is for all hospitals to have a billing system implemented by April 2001 (see Table 11).
- Retention of Revenue: Revenue retention has been supported in the interdepartmental meetings ("4 by 4's") between the Departments of Health and Finance. It has long been suggested that the incentive to hospital management of retaining a portion of generated income would improve the collection of fees, and provide incentives for other revenue generating activities. Gauteng and the Western Cape have concluded successful agreements with Provincial Treasuries for 100% and 50% revenue retention above revenue budget respectively.
#### **Physical infrastructure**

In 1996 a national health facilities audit was carried out which included 434 hospitals. The replacement value of the hospital estate was approximately R27.2 billion (2000 prices). The audit showed that a third of our facilities by value need complete replacement or major repair.<sup>9</sup> Recent detailed estimates and models by the Department of Health suggested this has risen to 40% and that backlogs and transformation of health facilities would require R12 billion over 8-10 years. The estate is deteriorating annually at approximately 4.5%, equivalent to R1.2 billion per year.<sup>10</sup> However annual maintenance expenditure, at only 1%-1.5% of capital value annually is far below need (3-4.5%). Despite existing maintenance and the Hospital Rehabilitation Program, hospital infrastructure is deteriorating at around 3% or R900 million per year.<sup>e</sup> The cost of upgrading and rehabilitation far exceeds the available funds. The Department of Health is expected to propose, in the National Planning Framework, transformation to a smaller hospital estate, which is properly maintained. Facilities that are in very poor condition (grade 1-2) would in most cases be written off.

Data on the national pool of medical equipment are poor. Models by the national Department of Health suggest serious problems with deterioration of medical equipment. Medical equipment requires substantial ongoing maintenance (approximately 10% of value per year) and has a short life-span (averaging approximately 10 years) requiring substantial replacement costs. In much of the country, backlogs of medical equipment exist. Models of replacement and maintenance suggest an annual requirement of R1.02 billion for each.<sup>d</sup> This is far below existing expenditure levels and unless addressed, the state of medical equipment will continue to deteriorate.

c R Bennett, Department of Health, personal communication

d R Bennett, Department of Health, personal communication

#### **Processes and efficiency**

#### Table 6: Bed occupancy rate (%)

Province	1994	1995	1996	1997	1998	Abs. change	% change
Free State	-	62.7	70.8	68.9	65.9	3.3	5%
Gauteng	72.0	73.0	69.0	66.0	77.0	5.0	7%
KwaZulu-Natal	-	74.0	79.0	72.0	67.0	-7.0	-9%
Mpumalanga	-	-	72.2	69.1	66.5	-5.7	-8%
Northern Cape	-	-	70.4	74.6	73.7	3.3	5%
Northern Province	_	-	-	67.9	70.9	3.0	4%
North West	_	-	66.9	66.9	54.5	-12.4	-19%
Western Cape	70.0	73.0	70.0	73.0	77.0	7.0	10%

#### Table 7: Average length of stay (days)

Province	1994	1995	1996	1997	1998	Abs. change	% change
Free State	-	5.0	4.9	4.6	4.7	-0.2	5%
Gauteng	6.8	6.7	6.4	7.2	7.1	0.3	4%
KwaZulu-Natal	-	9.9	10.8	9.5	8.8	-1.1	- 11 %
Mpumalanga	-	-	4.7	4.0	4.0	-0.7	-15%
Northern Cape	-	-	5.6	5.4	5.8	0.2	4%
Northern Province	-	-	-	5.9	5.8	-0.1	-2%
North West	-	-	8.4	8.4	7.7	-0.7	-8%
Western Cape	9.1	8.7	8.5	9.4	8.6	-0.5	-6%

Source: Returns from provinces to the national DoH<sup>4</sup>: EC omitted, as no comparable data were available

Bed occupancy (Table 6) is not high (only 2 provinces exceed 75%) and suggests inefficiency and potential for bed reductions. If bed occupancy were assumed to be 75%-80% across all hospitals, substantially fewer acute beds would be necessary than are currently available. The pattern towards shortening of length of stay in hospitals (Table Seven) is encouraging, but the data is difficult to interpret since it incorporates various hospital types.

The NHA data demonstrate that the cost per Patient Day Equivalent (PDE) has increased significantly for all hospital types over the last three years.<sup>7</sup> A recent study in three provinces<sup>11</sup> has indicated the potential for efficiency gains in South African hospitals. Reductions of

over 25% in recurrent hospital expenditure could be achieved if all hospitals were to function as efficiently as the most efficient hospitals of their kind. Careful consideration needs to be given to issues of access to services when striving for optimal efficiency. This is especially so when there are increasing returns to scale in smaller rural hospitals suggesting potential efficiency gains from consolidating these services into fewer facilities.

The extent of the year-to-year variation in these indicators as presented in Tables 6 and 7 is indicative of the poor quality of the available hospital data.

#### Outputs

Patient Day Equivalents (PDE's)<sup>e</sup> per capita have declined in all provinces. Both the inpatient and outpatient components have declined.

	1994	1995	1996	1997	1998	PDE/pop 1998
Free State		1 694 033	1 859 613	1 719 496	1 344 154	0.60
Gauteng	7 506 315	7 604 505	7 273 221	7 647 984	6 467 402	1.41
KwaZulu-Natal		9 502 667	10 024 775	9 397 346	8 290 831	1.09
Mpumalanga			1 067 804	785 012	1 019 809	0.41
Northern Cape			580 806	606 980	592 702	0.87
North West			2 333 774	2 269 307	2 223 714	0.74
Western Cape	4 769 323	4 651 727	4 479 387	4 403 862	3 952 841	1.36

#### Table 8: Patient Day Equivalents

e In this analysis PDE's are equal to all inpatient days added to one third of outpatient visits.

#### Table 9: Admissions

	1994	1995	1996	1997	1998	Adm/ 1 000 pop 1998
Eastern Cape					497 130	76
Free State			283 174	306 049	210 999	94
Gauteng	799 357	802 599	781 675	759 352	709 481	155
KwaZulu-Natal		784 989	760 891	783 489	765 896	101
Mpumalanga			196 441	161 657	212 841	85
Northern Cape			90 638	98 753	90 598	133
Northern Province			323 536	483 268	385 700	81
North West		229 834	229 668	288 794	96	
Western Cape	450 592	462 853	454 386	395 172	389 727	134
South Africa					3 551 166	102

#### Table 10: Outpatient Visits (OPD/Pop)

	1994	1995	1996	1997	1998	OPD/ pop 1997/98
Free State			1 458 657	907 468	1 044 716	0.47
Gauteng	6 212 063	6 681 274	6 811 503	6 541 949	4 290 261	0.94
KwaZulu-Natal		5 193 829	5 421 457	5 862 600	4 882 608	0.64
Mpumalanga			433 595	415 153	505 336	0.20
Northern Cape			219 700	221 141	201 701	0.30
North West			1 209 506	1 020 286		0.35
Western Cape	2 033 843	1 916 373	1 919 477	2 127 011	1 826 950	0.63

Source: Returns from provinces to the National DoH

Inpatient days per capita declined in all but one province (the Northern Cape). This is caused by a small decrease in admissions (Table 8) and a shortening of length of stay. Admission rates averaged 102/1 000 in 1998. This is comparable to the HSP recommended rate of 75/1 000. The Eastern Cape, which had the lowest admission rate of all provinces, had an admission rate of 76/1 000. The data do not yet show the overall increases expected due to the HIV epidemic. Despite this there is evidence of HIV/AIDS contributing to an increasing proportion of hospital inpatient load. Contrary to this general trend Hlabisa

Hospital reported an 81% increase in admissions from 1991 to 1998.<sup>12</sup> A Department of Health publication reported that around 40% of adult inpatients at King Edward VIII hospital in Durban were estimated to be HIV positive and in Gauteng this proportion ranged from 26% to 70%.<sup>13</sup> In some hospitals in South Africa the HIV prevalence among TB patients had been recorded as over 70%.<sup>14</sup>

There has been a convergence of admission rates (Table 9) with the Free State, Gauteng, and Western Cape declining and Mpumalanga, the Northern Province and North West increasing – these are a favourable indication of progress towards equity. Admission rates exceed 130/1 000 in three provinces, but there is no data that demonstrates the influence of inter-provincial flows.

Outpatient activity (Table 10) has declined in all provinces except KwaZulu-Natal and Mpumalanga.

#### Outcomes

#### Quality initiatives and hospitals

Data on quality of care is very patchy and this reflects a lack of any uniformly applied system of quality assurance for hospitals. The Health Sector Strategic Framework<sup>9</sup> stated that there is consensus that service quality is of major concern and that improving quality is the single biggest challenge facing the health sector. Concerns around quality were expressed repeatedly during our qualitative interviews with managers.

Recent studies<sup>6, 15-17</sup> reported highly variable quality in regional and district hospitals. Problems described included:

- Unreliable water and electricity supplies in a third of institutions
- Lack of clinical protocols in many regional hospitals
- Tests for haemoglobin and syphilis often not performed in antenatal care at regional hospitals
- Blood transfusions not available on a 24 hour basis in about half of district hospitals
- Maintenance of facilities and equipment poor in many district hospitals
- Variable pharmaceutical supplies.

One study<sup>17</sup> reported that standards in central hospitals generally remained high despite the many changes that have taken place. Medical records were well kept, there were up to date clinical protocols in most departments and most had quality assurance mechanisms in place (e.g. meetings to review hospital infections, mortality rates and some forms of clinical audit). However there was widespread sentiment that standards cannot be maintained for much longer and that cracks are beginning to appear. For example, they report an increase in serious errors in radiotherapy in one hospital, increases in multiple drug resistance in nurseries in two hospitals and more widespread drops in quality in another with rising rates of surgical wound infection, a number of preventable anaesthetic deaths and inattention to detail in medical records.

Given these problems, quality is starting to be placed on the national health agenda. Elements in the Department of Health's 5-year Health Sector Strategic Framework 1999-2004<sup>9</sup> include:

Strengthening the Batho Pele Program;

- Development and operationalisation of a National Policy on Quality in Health Care. A discussion document has been released<sup>18</sup> and a national policy is expected in the near future;
- The Patients Charter spelling out rights and obligations for patients was launched in November 1999 and a national initiative to enhance users awareness of rights and obligations is underway;
- Establishment of complaints mechanisms in all facilities. A process to finalise a nationally standardised complaints mechanism has been initiated.<sup>f</sup> A tool to measure patient satisfaction in district hospitals has been developed and piloted in two hospitals;
- Development and implementation of clinical management guidelines;
- Introduction of peer review and clinical audit in all facilities;
- Establishment of either a Hospital Board or Hospital Committee at all facilities;
- Training of personnel in strategies to improve quality of care.

A wide range of professional associations and councils has the potential to contribute to improving quality. The Department of Health is in the process of developing norms and standards for district hospitals.<sup>19</sup> Various provincial departments have started quality initiatives. For example, KwaZulu-Natal has created a unit for Quality Assurance and Institutional Accreditation; the Northern Province established a *Tiger Team Organisation -* a team of managers who conduct facility and systems audits; Mpumalanga established a clinical audit team who assess eleven categories of management and specialised areas in hospitals; Gauteng established an Accreditation Committee that will certify hospitals' compliance with identified standards; and the Free State developed a Quality Service Improvement Programme of which the main thrust is continuous quality improvement in all facilities.<sup>g</sup>

The Council for Health Service Accreditation of Southern Africa (COHSASA) conducts quality-based accreditation programs for hospitals. There are currently 210 facilities in the program, the majority being hospitals. Public sector hospitals involved are mainly in KwaZulu-Natal and the Eastern Cape. A system of graded recognition has been introduced to progressively encourage hospitals to improve standards. Hospitals on the program have progressively improved quality on a wide range of areas.<sup>h</sup> COHSASA has published the 6th edition of Standards for Hospitals.<sup>20</sup>

Virtually no standardised data is available on hospital health outcomes e.g. peri-natal mortality rates and post-operative infection rates, reflecting information system limitations.

f L Claasen, Department of Health, personal communication

g L Claasen, Department of Health, personal communication

h S Wittaker, COHASA, personal communication

#### Management of hospital services

#### Processes directing hospital restructuring

The Hospital Strategy Project published its final report in mid-1996. The same year, a National Hospital Co-ordinating Committee was established to drive the process of hospital restructuring. This committee has representation from all of the provinces in addition to the national Department of Health. The committee has also dealt with issues such as intern allocation and community service for doctors. A draft National Planning Framework was developed in mid-1998, to guide the development of hospital services. The Health Sector Strategic Framework (HSSF)<sup>9</sup> published in 1999 and applicable till 2004 identifies the finalisation of this National Planning Framework as a key intervention for hospitals, together with the rehabilitation of hospital stock and the decentralisation of hospital management. The HSSF contains three major strategies with targets (Table 11).

#### Table 11: Revitalising Public Hospitals – Health Sector Strategic Framework 1999-2004

Strategy	Indicator	Target
1) National Planning Framework (NPF)	NPF used to determine hospital rehabilitation programme	NPF finalised by March 2000, and strategic plans developed by June 2000
2) Hospital Billing System Implemented	Number of hospitals with billing system in place	Full implementation in all hospitals by April 2001
3) Decentralising hospital management	Number of hospitals with authority for key functions devolved	Management decentralised to all hospitals and Performance Management Agreements signed by April 2003

A ministerial task team on hospital decentralisation was set up in April 1999 and made recommendations in August that year which included;

- Launching a communication strategy
- Determining the costs of restructuring
- Cost-centre management in all hospitals
- Instituting performance management agreements across all hospitals, and
- The appointment of General Managers and Chief Executive Officers based on assessed competencies.

The PHRC and the Health MINMEC adopted these recommendations.<sup>21</sup>

#### Interventions directed at institutions

Within institutions there have been a number of interventions to improve functioning and efficiency.

Appointment of Chief Executive Officers (CEOs): Most provinces have amended regulations to allow for non-medical CEOs to be appointed instead of Medical Superintendents, with the aim of strengthening the management capacity of hospitals. To date it has been mostly in provincial/tertiary and central hospitals that such appointments have been made. Changes to the Public Service Act have allowed for performance agreements to be entered into with individual managers.

- Decentralising management: A great deal of attention has been given to this. The Public Finance Management Act, No. 1 of 1999, has created conditions for CEO's and accounting officers to be individually accountable for expenditure. Performance agreements between the DoH and individual institutions have run into legal hurdles. It has been problematic for such agreements to exist between two bodies that are the same legal entity. Where such agreements exist these are currently providing performance targets. With the exception of a few pilot projects where individual hospitals have become trading entities of there own, progress has otherwise been slow in realising the aims of this strategy. Many informants felt that it will still be many years before the conditions for decentralised management are realised and enable hospitals to function effectively.
- Systems: Technical interventions have sought to both create conditions for decentralised management, and to improve performance and efficiency in key expenditure areas. Cost-centre accounting was introduced in ten hospitals nationally (subsequently expanded to fifteen) as a forerunner to wider implementation, and pharmacy and stores systems have been targeted for improvement. Central to most of these activities are properly functioning hospital information systems, and most provinces are in the process of installing or completing tender arrangements for such with varying coverage.

#### Conclusions

The last few years have seen significant downsizing of hospital services, especially in the richest provinces, and in some instances there has been appropriate strengthening of services to create a more rational hospital portfolio. This has not been achieved to the extent that was initially hoped for, with important constraining features being the unanticipated budget shortfalls and the difficulties associated with rationalising the staff establishment. There is significant scope for further reshaping, with a need for fewer central/tertiary and chronic beds, and possibly other categories as well, depending on the norms that are used. Where there has been strengthening of regional hospitals and the development of academic complexes where previously they did not exist, it is generally felt that the initiatives have impacted positively.

Many interventions have been introduced to improve the functioning and efficiency of hospitals. These have so far been concentrated on the biggest hospitals and real decentralisation of management is still some way off. Budgeting has continued to be largely determined by prior expenditure. In most provinces rational planning models and service driven budgets have not been apparent, undermining one of the key prerequisites for many of the other initiatives being introduced.

The absence of or failure to adopt nationally a fully enumerated transparent framework directing restructuring has contributed to the uncertainty in hospital services. Inter-provincial inequities in service provision continue, with the division in roles between national, provincial and local governments in respect of resourcing and directing hospital services not yet fully worked through in order to address these issues.

There is discordance between what is documented on paper and perceptions of what is happening within hospitals. Decreases in the number of beds have not been accompanied by dramatic increases in bed occupancy, whilst the perceptions of staff and patients are of a sector in crisis. Many of the frustrations relate to the perceived lack of strategic plans and uncertainty around development of hospital services. Quality of care issues are lost in an analysis such as this, and it is crucial that this review in the future objectively monitors quality within hospitals, together with developing indicators that adequately reflect the progress being made on the stated objectives for further hospital sector development.

#### Recommendations

#### Understanding hospital services

- A common reporting format currently being implemented for all hospitals needs support and nurturing to ensure that accurate and comparable information is accessible in the future;
- An objective and repeatable review using indicators reflecting restructuring goals, service levels and quality of care would further improve the understanding of hospital services.

#### Managing further restructuring and rehabilitation of public hospitals

- Tighter co-ordination is necessary between provincial and national Departments of Health if remaining inter-provincial inequities are to be addressed, including refining the role of the central grants;
- The National Planning Framework needs to be completed (with adequate detail), endorsed and communicated to the hospital community;
- The provincial strategic plans developed out of the National Planning Framework process should be transparent and include achievable and committed targets for their implementation;
- Staff establishments need to mirror the bed plans if potential gains are to be realised.

## 12 Transformation of laboratory services

A comprehensive clinical laboratory service is indispensable to proper patient care. It plays a part in making a diagnosis and influencing treatment decisions in patient care and has public health value. Public health sector laboratory services are very fragmented and range widely in quality. There have been attempts over the years to rationalise and restructure these services and to upgrade the quality where it is poor but there have always been reasons why this has not occurred. The fragmentation of the services has resulted in a loss of economies of scale, especially where highly specialised equipment, expensive reagents and unique skills are concerned.

In this chapter, the history of the many players in the provision of the services that is relevant to the developments and the failure to rationalise the services in the past is briefly discussed. For many years all roleplayers have recognised the need to improve the whole laboratory system. Immediately after the 1994 elections the Minister of Health established a commission to investigate the rationalisation and reorganisation of the laboratories. One issue was the joint ownership of the South African Institute for Medical Research (SAIMR) by the Chamber of Mines (CoM). In October 1998 the CoM unconditionally donated their interests in the SAIMR to the government. A Transformation Task Team (TTT) was appointed to make new recommendations for the restructuring of the public health laboratory services. The TTT recommended the establishment of a new parastatal (public entity) and for all public health laboratory services to become a part of that entity. Since May 1999 a Project Implementation Team has been designing the new entity in earnest.

The vision is for a single entity that is large enough to derive benefit from economies of scale and therefore to ensure that services can be provided even where they are not independently viable. The control over purchasing services will remain with the clinicians that request laboratory tests. The new entity will employ about 4 500 employees and will have an annual turnover that is expected to be close to R1bn within the next two years. The National Health Laboratory Service Bill has been adopted by Parliament.



Nicholas Crisp Project Leader, NHLS Implementation Team

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The staff who currently work in the laboratory services of ten different employers have to be transferred to the employment of a single new employer. There has therefore been a very heavy planning focus on human resources issues. The relationship between universities and laboratory services has resulted in a "hybrid model" that is briefly outlined. A 'total quality management' (TQM) programme and information technology as supporting processes to the laboratories have also received attention.

The chapter concludes with some lessons that can be learnt regarding transformation of government functions and services into a public entity generally and with others that are specific lessons and opportunities related to the laboratory services.

#### Introduction

This chapter has a dual function. It reports on the developments in the public health laboratory arena but it is also a useful case study of the processes that are involved in the transformation of services in the country.

The laboratory service is often taken for granted in a clinical setting. However, a comprehensive clinical laboratory service is indispensable to proper patient care. The services that are offered include consultation on the correct specimen to be collected, the management of the specimen (including its storage, transport, safety and ultimately disposal), the performing of tests on the specimen, the provision of a result and finally the interpretation of that result. So, while the laboratory service is in the business of "providing results" it is also very much a part of making a diagnosis and influencing treatment decisions in patient care. Of course there is also a massive public health value provided by the laboratory services. The monitoring of causative organisms of disease, their vectors and hosts is all part of the work of the laboratory service. The thousands of test results obtained every year provide extensive information about the behaviour of disease.

The medical laboratory services in the public health sector of South Africa are very fragmented and range in quality from the services that one would expect from any worldclass accredited laboratories to very poor and unreliable services. There have been attempts over the years to rationalise and restructure these services and to upgrade the quality where it is poor but there have always been reasons why this has not occurred.

The private health sector has an extensive range of private pathology services. This is a very lucrative business in the private sector, reputedly second in profitability to only radiology. The public and private sectors do interact and there are examples of sharing of resources and contracting out to one-another but these arrangements are mostly loose and unstructured, having developed by convenience over long periods of time.

Blood transfusion services and human tissue services are managed as totally different services and are not part of routine diagnostic services. However, the diagnostic laboratories in smaller and more peripheral areas frequently serve as blood product depots and perform the compatibility testing on issued products on behalf of the transfusion services. Blood transfusion services are run by "not-for-profit" section 21 companies. There have, until recently, been several separate companies but there is a process currently underway to unite them all into a single larger service.

Vaccine research and manufacturing was previously also a function of the pathology laboratories, but as described in the chapter, this is no longer the case. Anti sera for the treatment of snake, spider and scorpion venom are still manufactured by the South African Institute for Medical Research (SAIMR).

This chapter describes the recent developments in the restructuring of the diagnostic laboratory services. The fragmentation of the services has resulted in a loss of economies of scale, especially where highly specialised equipment, expensive reagents and unique skills are concerned. The need and desire to overcome the fragmentation is not new. It has been topical since the early 1970s. Since 1994 (and very intensively since 1999) there has been a concerted effort to restructure the laboratory services. The process is still unfolding so the end result may be different from what is described and anticipated in the chapter.

#### Historical background

There are many players in the provision of laboratory and pathology services to the public sector health services. Each player has its own history and the history is relevant to the developments and the failure to rationalise the services in the past. A brief synopsis of each is provided to contextualise the chapter.

#### Major Laboratory Services Providers in South Africa

#### South African Institute for Medical Research (SAIMR)

The SAIMR, which provides about half of the country's public sector laboratory capacity, was established by an agreement that was entered into between the Union government and the Witwatersrand Native Labour Association in 1917.<sup>a</sup> In the years preceding this, and from the time of union in 1910, the mining industry had grown very rapidly and there was a need for the mines to ensure that their labour force was healthy. There was also concern about the influence that the growing industry would have on the health of people in the mining areas of the Witwatersrand. The labour recruitment agency, then called the Witwatersrand Native Labour Association, and the government each contributed 30 000 Pounds to the establishment of the SAIMR and the government contributed land in Braamfontein for the erection of laboratories.

Over the years this establishment grew and expanded to include diagnostic services as well as perform the research for which it had been established. The SAIMR also expanded services to all provinces and homelands except KwaZulu and Natal.

The SAIMR also developed significant vaccine capabilities and for many years manufactured all of the country's diphtheria/tetanus (DT), diphtheria/pertussis/tetanus (DPT) and Tetanus Toxoid vaccines, plus others.

When the University of Witwatersrand Medical School was established, the SAIMR became the School of Pathology of that faculty but remained a separate entity owned jointly by the government and the mining industry.<sup>b</sup> The Chamber of Mines eventually became the representative of the mining industry when the Witwatersrand Native Labour Association was replaced by the Chamber's own recruitment agency. The SAIMR Board of Management was jointly appointed by the Minister of Health and the Chairman of the Chamber of Mines until 1998.

a Founding Statement of the South African Institute for Medical Research, 1917.

b Minutes of the Meetings of the Board of Management of the South African Institute for Medical Research between 1934 and 1936.

#### Provincial Departments of Health

There has never been any requirement placed on either the former provincial administrations or the present provincial administrations to use the services of the SAIMR. Three of the four former provinces (Cape Province, Transvaal and Orange Free State) chose to use SAIMR services but not exclusively and Natal chose not to use the SAIMR at all. The three provinces using SAIMR services also established their own laboratories in some hospitals. These were largely, but not exclusively, in the teaching hospitals associated with the medical schools, the University of Witwatersrand associated hospitals being notable exceptions.

#### National Institute For Virology (NIV)

The Poliomyelitis Research Foundation was founded in 1948 as a non-government initiative and the laboratory complex developed between 1951 and 1953. On 1 April 1976 the government took over the foundation's activities and the NIV was established.<sup>c</sup>

The "Poliomyelitis Research Foundation" still exists as a research foundation. The SAIMR did not develop any capacity in the Transvaal for virology, and the NIV became the Department of Virology of the University of Witwatersrand.

Since the NIV had been instrumental in the development of polio vaccine there was a plan to establish a polio vaccine production plant at NIV. This was partly erected in the mid 1990's but was never completed.

The NIV is the main virology reference centre in the country and has several WHO accredited reference laboratories, including one of only two bio-level four laboratories in Africa. This is the highest safety status accorded to a laboratory and it provides the environment for scientists to work with highly contagious and dangerous bio-hazardous materials and causative organisms such as Congo fever, Lassa fever, Ebola virus, etc.

#### National Centre For Occupational Health (NCOH)

The NCOH was established as the Pneumoconiosis Research Unit of the SAIMR in the 1950s.<sup>1</sup> It was subsequently transferred to the Council for Scientific and Industrial Research (CSIR) and then to the Medical Research Council (MRC). In 1979 the NCOH became a part of the Ministry of Health. This centre has capacity for investigation of occupational diseases and laboratories for occupational environment analysis. Since 1983 it has been associated with the University of Witwatersrand for which it serves as the occupational medicine department. The NCOH was internally restructured in 1997 to accommodate a changing occupational health environment.

#### University Pathology Departments

There are eight medical schools in South Africa. Each has a pathology department and laboratories. The medical schools are involved in teaching, research and in the provision of services to the hospitals in which they teach their students. The situation is different in each of the medical schools. The University of Witwatersrand has the SAIMR laboratories in Johannesburg as its major resource, for which the university pays the SAIMR about R4.8m per annum. The University of Pretoria established the Institute of Pathology (UPIP) in the 1920's and manages this within the university, independent of the hospital services. The

c Prof B Schoub, Director of the National Institute for Virology, personal communication.

UPIP "sells" pathology services to the government on a cost-recovery basis according to an agreement that has been amended over the years. The pathology department of the Medical University of South Africa (MEDUNSA) is a part of the GaRankuwa hospital establishment but the laboratories are on the premises of MEDUNSA. The university funds some of its own posts to increase capacity in the pathology department. The University of Natal, University of Orange Free State, University of Cape Town and the University of Stellenbosch pathology departments comprise employees of the provincial Departments of Health, some of whom are appointed as "joint appointees" with the universities in order to provide the teaching and research functions.

#### Homeland Services (now provincial Departments of Health)

During the apartheid years each homeland had its own Department of Health and each had a need for pathology and laboratory services. There was no prescription on the homelands as to how they would provide the services. Many of the hospitals in the rural areas were taken over from churches and church organisations that had provided their own laboratory services. In some instances the SAIMR was asked to take over the provision of the service. This allowed for an agency arrangement for blood banks to be made available in the laboratories because it was not cost effective for the blood transfusion services to establish separate blood banks in every hospital. However, over the years there was a growing unhappiness with the levels of service that were being delivered and some homelands felt that they could provide the laboratory services cheaper themselves. This resulted in several hospitals setting up their own laboratories, often duplicating the SAIMR laboratories to perform a basic range of common tests. This created animosity and decreased the viability of SAIMR laboratories that needed sufficient volume of the common tests to cross-subsidise the more complex services. By 1994 these services were grossly duplicated and most were very poorly developed. Staff in government hospital laboratories have been finding it more and more difficult to obtain reagents and materials to do their work as provincial budgets have become tighter. The provinces have no means of retrenching these workers and attempts to second them to vacancies in the SAIMR have not been successful.

### South African Military Health Services (SAMHS), formerly South African Medical Services (SAMS)

The military have their own laboratory services. These are essentially concentrated in the two major military hospitals in Pretoria and Cape Town. Other military sick-bays and smaller hospitals that are not accessible to these two centres mostly use the services of the SAIMR.

#### **Private Sector**

There are five or six large pathology companies in South Africa that have developed from the amalgamation of individual practices. However, there are also many small independent outfits, some run by medical technologists, that sell services in the private sector.

#### Attempts at rationalisation

The descriptions that are given in this chapter so far are a simplification of the complexities that have developed at a micro-level. For many years all role-players have recognised the need to improve the whole laboratory system. The problem has been the very complexity that needs to be overcome, and the intense vested interests that have become entrenched in the way things are done. People have established laboratories and services that are dependent on their professional and technical inputs and are reticent to change the way that things are

#### done.

In 1973 a Commission was set up by the Minister of Health under the leadership of Judge Meiring Naude to investigate the restructuring of laboratory services.<sup>1</sup> It must be remembered that this was prior to the 1977 Health Act and the 1919 Act still applied. This also came at a time when the government was gearing up on its homeland policy. The recommendations of the commission were technically sound and called for a single national health laboratory system. However because of the government's drive to establish independent homelands, the opposite happened in the ensuing years and the services were further fragmented.

Immediately after the 1994 elections the Minister of Health established a series of commissions to investigate areas of service provision that had been identified as being in need of rationalisation and reorganisation. Professor van den Ende, the Director of the SAIMR at the time, was appointed to chair a commission to make recommendations to the Minister on the restructuring of laboratory services for the public health sector. The commission made broad recommendations and described the options that were available. However, no consensus recommendation could be agreed upon by the members of the commission.<sup>2</sup> Part of the problem was that the options ranged from total re-incorporation of all laboratory services into the public service, through corporatisation in a parastatal body, to full privatisation of the service. The Chamber of Mines still owned 50% of the interests of the SAIMR and was an important stakeholder in the process.

During 1996 and up to 1998 a Cabinet Committee of the Social Cluster of Cabinet was tasked with engaging the Chamber of Mines with a view to getting their agreement on the establishment of an entirely new laboratory system. During this period the provincial administrations were coming under increasing budgetary pressure and as a result had, amongst other services and suppliers, identified problems with the SAIMR billing system. Their response had been to stop paying while the SAIMR corrected the invoices. This proved to be a complex situation and the practice of not paying for the laboratory service was rapidly entrenched. Concurrently the provincial health departments were putting pressure on clinicians to request less tests, less radiology investigations and to prescribe more judiciously. Volumes of tests decreased at an average of 10% per annum for three years in a row.

By mid-1998 the SAIMR was in financial trouble and it became clear for the first time that if cash flow was not restored the services and the viability of the SAIMR would be compromised. In October 1998 the Chamber Of Mines wrote to the Minister of Health and unconditionally donated their interests (assets and liabilities) in the SAIMR to the government.<sup>d</sup> The Chamber agreed to participate in the management until the end of 1998 to give the government time to reorganise its approach to the SAIMR.

This paved the way for two things. The Minister immediately appointed a Transformation Task Team (TTT) under Professor M. Kallichurum from the University of Natal, who was Chairperson of the South African Medical and Dental Council at the time, as the chair to review the previous recommendations and to make new recommendations for the restructuring of the public health laboratory services. The TTT submitted a report to the Minister and the meeting of national and provincial political heads of health (known as the

d Letter from the Chairman of the Chamber of Mines, Mr B Godsell, to the Hon Minister of Health, Dr N Dlamini Zuma. October 1998.

Health MINMEC) at the end of March 1999. The second action was that the Minister appointed a new Interim Board for the SAIMR with effect from 1 January 1999 with members and representatives of the Provincial Health Restructuring Committee (PHRC) as the majority of the Board's membership. The task given to the Interim Board by the Minister was to stabilise the financial situation of the SAIMR and to prepare the SAIMR for transformation.

The TTT recommended the establishment of a new parastatal (public entity) and for all public health laboratory services to become a part of that entity. This recommendation was adopted by the PHRC and the Health MINMEC. In April 1999 the Cabinet accepted the essence of the TTT report and decided that a small implementation team should be set up to manage the establishment of the new entity and that an Interim Negotiating Forum be convened with labour representatives of the affected personnel to agree on the labour details.

#### **Transformation 2000**

On 1 May 1999 the Minister appointed a leader (the author of this chapter) for the Implementation Project Team and the matter of designing the new public entity began in earnest.

It is important to understand what a "public entity" is. This term replaces the informal use of the word "parastatal" and is defined in the Public Finance Management Act No.1 of 1999 (PFMA). There are three categories defined in the PFMA, viz, constitutional institutions (such as the Human Rights Commission and the Finance and Fiscal Commission), major public entities (such as the Airports Company, Telkom SA Ltd and ESKOM) and other public entities. These other public entities are divided into National Public Entities (such as SA Bureau of Standards and The Medical Research Council), National Government Business Enterprises (such as Rand Water Board) and Provincial Public Entities (mostly agricultural, gambling and liquor boards) and Provincial Government Business Enterprises (eg. Algoa Bus Company). The PFMA defines the responsibilities for all public money. For the first time there is clarity on the reporting structure and accountability of all of the bodies that function outside of the Public Service but use public funds. The advantage of a public entity is essentially that it is able to respond to technical developments in a more flexible manner because decisions are taken by a Board, rather than by Cabinet or Parliament. However, the PFMA is clear that this does not mean that decisions can be taken recklessly.

Notwithstanding the regulatory environment established by the PFMA, each public entity is established in terms of its own law which determines its structure, powers, functions and details of its financing mechanisms. In the case of the National Health Laboratory Service (NHLS), this will be a National Public Entity (Schedule 3A) that derives income from charging fees for services. The entity is to be established as the preferred provider of laboratory services for the entire public sector (all departments in all three spheres of government). It will also be able to sell services to other countries and to private purchasers and will also be involved in research and training in the laboratory environment. The vision is the establishment of a single entity that is large enough to derive benefit from economies of scale and therefore to ensure that services can be provided even where they are not independently viable. The control over purchasing services will remain with the clinicians that request laboratory tests. They will know the costs and, much as is the case in respect of a telephone service, will be charged for only the services that they use. If it is in the interest of the service the NHLS will be able to enter into partnerships with private service providers.

An organisational structure and staff establishment were developed with the inputs and assistance of the Provincial Laboratory Service Co-ordinators and their working committees in each province. This establishment provides for a Head Office, seven Branches and several specialised Institutes and Committees. Based on available figures of the current staffing levels, it is anticipated that the service will employ something like 4 500 employees and will have an annual turnover that is expected to be close to R1bn within the next two years

The establishment of the NHLS as a public entity is not supported by all stakeholders. There are different reasons for rejecting it. The Western Cape Provincial Department of Health fears that it will lose autonomy, and some university departments of pathology fear losing committed funding to research and teaching. Some detractors criticise the failure to fully privatise the laboratory services and others feel that there is too much emphasis on business practices and commercialisation.

#### **Progress to date**

#### Legislation

The National Health Laboratory Service Bill (Bill 52 of 2000) provides for the establishment of a public entity that functions outside of the Public Service but under the provisions of the Public Finance Management Act, reporting in the first instance to the national Minister of Health. It also provides for the abolition of the South African Institute for Medical Research, the National Institute for Virology, the National Centre for Occupational Health, certain forensic chemistry laboratories and all provincial health laboratory services and for matters connected therewith.

The first draft of the National Health Laboratory Service Bill was circulated for comment to stakeholders in July 1999. There were two subsequent drafts that incorporated many of these comments. The fourth draft was discussed in principle with the Portfolio Committee of the National Assembly whereafter it was published in the Government Gazette for public comment during September 1999. Some 250 direct stakeholder organisations (including all national government departments and provincial Health Departments) were consulted but less than 25 made written submissions.

The Bill was debated in the National Council of Provinces and subsequently in the National Assembly where it was adopted by a majority vote on 12 October 2000. Once the President has assented to the Bill it will be promulgated with a set of commencement dates to enable effective implementation of the new entity, the National Health Laboratory Service (NHLS).

The Bill provides for Rules of the Board. These Rules have the same status in law as Regulations but they are drafted by the Board and not the Ministry of Health. They have to be published in the Gazette by the Board and the Minister of Health still has to approve them before they are effective. Several of these Rules have been drafted and were almost ready for the required consultation processes at the time of writing.

#### Assets

The Bill provides that the assets of the entities that are being abolished and whose functions are being transferred to the NHLS will be transferred to the NHLS and become a part of the property of the NHLS once it is established. This can be likened to the contribution of equity in the establishment of a company.

In terms of "fixed assets", the Deeds of all of the buildings and properties that are 100% laboratory service buildings have been researched and documented. Each property has been valued in terms of replacement cost, insurance value and presumed market value. The Registrar of Deeds will be approached by the NHLS Board to transfer the Deeds once the Board members have been appointed. Moveable assets of all of the present authorities have been bar-coded and listed in a single asset register. These registers will be given to the accounting officers of those authorities for them to obtain Treasury approval for the transfer of the assets. The same applies to the transfer of contracts for services and lease agreements for equipment.

#### Structure and Financial Viability

The staffing structure has been costed (using the estimated average staff costs, historical fixed and variable cost percentages and the anticipated new remuneration and benefits) and amendments to the structure are expected based on these cost estimates.

It is evident from the costing that there are components (certain laboratories and offices) that are over ambitious and over designed, that are therefore not affordable and that are not going to add value to the organisation and its ability to deliver quality services to the public health services. There is likely to be a change in the structure of the organisation before implementation begins.

#### Human Resources (HR) and Industrial Relations (IR)

Probably the greatest challenge is that the staff who work in the laboratory services of ten different employers (all the provinces excluding the Northern Cape which does not render any of its own laboratory services, the national Department of Health and the SAIMR) have to be transferred to the employment of a single new employer. There are an estimated 4 500 staff members involved. They are employed under two different sets of conditions of employment and under the provisions of different bargaining arrangements, those of the Public Service and those of the SAIMR.

There has therefore been a very heavy focus on human resources issues. Eight unions are involved in the NHLS and all eight are involved in the Interim Negotiation Forum (INF) that was required by the Cabinet decision to establish the NHLS. The first year was marked by a rejection by the unions of the "parastatal" as the vehicle for the NHLS and this resulted in a stalemate.

The INF was established to enable discussion of labour issues that will affect all of the prospective employees of the NHLS. The Cabinet required that this be done in the spirit of the National Framework Agreement for the Restructuring of Parastals (NFA).<sup>3</sup> The NFA is an agreement that the government, organised labour and organised business entered into in February 1996 for the orderly restructuring of state owned assets. While the focus was on the four large state owned enterprises, Telkom, Transnet, ESKOM and DENEL, the NFA specifies that the agreement includes the state assets of the Transkei, Venda, Bophuthatswana and Ciskei (TVBC) states.

Clearly the establishment of the NHLS involves the restructuring of the public sector laboratories. This will include the introduction of a single new job grading system, a new remuneration model and a set of common benefits for the NHLS. While the provisions of the Basic Conditions of Employment Act No. 75 of 1997 (BCEA) establishes the minimum requirements that are protected in law, there are "matters of mutual interest" that have to be negotiated and agreed to by labour and the employer. The matters that have to be negotiated are prescribed in the Labour Relations Act No. 66 of 1995, as are matters that the employer must consult labour on and the mechanisms and procedures for reaching agreements. The NHLS does not presently exist as an employer so no permanent bargaining structure can be formed yet. The dilemma that the INF tried to overcome was that the Public Service Sectoral Bargaining Chamber (PSCBC) does not cater for the SAIMR staff and the SAIMR bargaining arrangements do not cater for Public Servants. The Project Team attempted to use the INF as a consensus-building forum. The idea was that the consensus would be 'banked' and only agreed to once the NHLS was established, at which time a valid bargaining structure would be implemented. To this end the Project Team tabled a "procedural agreement" for discussion, but the insistence of the unions that the NHLS should not be a parastatal resulted in the document, plus draft documents containing proposals on various conditions of service, never being discussed. The INF meetings were suspended for four months until NEHAWU met the Minister and then agreed that the public entity would be established. The INF met again on 5 July 2000 at which time it was agreed that the unions could arrange their own workshop to determine their collective position on labour participation in the way forward. This workshop finally took place on 4 and 5 October 2000. Subsequently on 17 October 2000 the unions demanded the disbanding of the INF and its replacement with structures detailed in the NFA.

During this time the Project Team continued with the detailed planning of HR issues. These included the process for the designation by the respective government departments of those employees who work in government department laboratories and who are therefore to be transferred to the NHLS, conditions of service, a grading system, remuneration policy, employment equity policy and several other labour issues. The unions and the project team were transmitting different messages to the staff and anxiety began to rise. The Project Team embarked on a "Roadshow", visiting all major centres and addressing mass meetings of staff, in an attempt to allay fears that had been expressed.

While it was always clear who the SAIMR employees are, it was not possible to identify the government department laboratory employees in all instances. In some provinces the organisational structure is such that the employees are only identifiable as part of a hospital staff establishment. It was therefore necessary to get the provincial Departments of Health to create new 'components' for laboratory services in their personnel systems (PERSAL). Since only these components will be abolished and their functions and resources transferred to the NHLS, the Bill provides for the 'designation' of the affected employees. This different provision for Public Servants was misinterpreted despite deliberate communication of the facts and created a lot of anxiety for the staff concerned. At the time of writing all separate laboratory components have been created with the exception of one province.

Related to this lack of clarity was the fact that the inability to identify the affected personnel meant that it was not possible to determine union affiliation with any degree of confidence. The ideal would have been to extract the details from stop orders to unions in the personnel systems. This is an issue because it has not yet been possible to determine proportional representation of the eight unions in the INF or any other process.

One major issue that caused heated debate in the development of the organisational structures, and in drafting job titles and descriptions, is the question of laboratory management. Most pathologists feel strongly that only a pathologist can be a laboratory manager while medical technologists and medical scientists feel that they too are capable. The  $\partial e$  facto situation across the country is that laboratories are managed by a wide range of

professionals and the main criteria for success seems to be management skill and not any one professional background. Another issue that causes constant tension is that academics often hold different perspectives to those of other staff who run the services. The debate is complex and there are different issues at stake in each medical school and between disciplines of pathology. The impression is that the most important factor that influences successful laboratory service is the ability of a group of people to work together.

In any organisation there is a need to determine the relative value of each job to the organisation. This guides recruitment policies and lays the basis for a consistent remuneration policy. Job value is arranged and managed through a grading system. There are many systems available, some widely implemented in South Africa. The Project Team pursued the Hay Grading System because it offers an opportunity to separate the core professions (pathologist, medical scientist, medical technologist and medical technician) from the administrative support and management jobs of the organisation. The professionals can pursue chosen career paths in their professions by gaining in competence and making themselves indispensable to the organisation for technical reasons. This means that they do not have to pursue managerial positions as the only means of advancement (although of course they may still choose to become managers). The implementation of this dispensation will require some careful management if it is to bear fruit.

#### Quality Assurance, Research and Development

In the early stages of consultation the Project Team promoted a model that would have seen the laboratories associated with university faculties fully incorporated in the NHLS. Several universities, however, were in favour of a model that would have taken all of these laboratories out of the NHLS and seen them run by the university faculties. This was not in keeping with the TTT report and the Cabinet decision to establish one national entity.

More recently a "hybrid model" proposes that the laboratories be inside the NHLS and a core staff who are responsible for the academic functions of teaching and research be employed by the university concerned. The details of the model rely on flexibility for the university to be able to generate revenue from clinical trials and other research-linked work. This will decrease their dependence on revenue from the NHLS services and enable the NHLS to offer services to the provincial administrations at tariffs that do not subsidise academic functions. The NHLS will however still have to support the universities, especially in the beginning, to ensure that there is proper provision of trained staff for the future. The issue of university faculties having to generate revenue and the prospect of not being guaranteed resources and funding by the NHLS for teaching and research have resulted in a fair measure of anxiety for the medical schools. Methods of securing transfer funding from the national Department of Health through the mechanisms of conditional grants are being explored.

Quality assurance and control have been hotly debated. As indicated the present laboratory quality country-wide ranges from very poor to world-class. The aim has been to build consensus on the content of a policy that will result in all laboratories participating in a quality control programme and, where appropriate, an accreditation programme. There are developments that will soon see all laboratories being required to obtain accreditation with the South African National Accreditation Standards (SANAS). The implications are not clear and the costs of this have not been spelt out yet. Meanwhile the 'total quality management' (TQM) programme that is envisaged is based on the standards of the International Standards Organisation (ISO), the relevant standards being ISO 25.

#### Information Technology (IT)

Laboratory services essentially sell test results as their main product. The process requires that the specimen be taken to a laboratory that can do the test, in a form that preserves the element to be tested, that the specimen be tested and that the result be transmitted to the requesting clinician in an acceptable time period (and with confidence that it is accurate) in order to influence the clinical management of the patient.

IT is an integral part of every supporting process in laboratory services. This includes the laboratory system itself plus the HR, procurement, transport and billing systems that enable cost-effective and efficient management of laboratories.

There are a myriad of systems presently in use in the several administrations and organisations that will become a part of the NHLS. There is a process underway to set a vision for an integrated laboratory management information system and to determine how to make the most of the existing systems during the interim period. Step one will be to consolidate the capacity and optimise the current systems so that they can be rolled out to the parts of the NHLS that have no computerised systems. The second step will be the introduction of the totally integrated management system.

#### Communication

A mass national meeting was convened on 8 June 1999 to initiate the NHLS process. On two occasions the Project Team also conducted 'Road Shows' where mass meetings of staff and stakeholders in eight main centres across the country were addressed and questions answered. Staff, managers, union representatives and other interested parties attended all of these meetings.

A full list of each and every stakeholder was compiled and each person has received a personal copy of a 'Transformation Survival Kit', to which is added fact sheets from time to time as the details unfold. These kits are essentially files that have been provided to each individual wherein they can file all NHLS correspondence and communication pamphlets during the transformation period. A helpdesk is provided with the assistance of co-ordinators in each province and each major institute. A 'Business Television Broadcast' was held on 1 December 1999. This is a closed circuit television broadcast to specific receivers. It was possible to use existing networks to about 50 sites around the country. In this way over  $2\,000$  stakeholders were reached in the two hours available. The broadcast was from a studio in Johannesburg. Viewers were able to phone in to speak to a panel and many questions were posed and answered. All unanswered questions were answered in 'Fact Sheets' of the 'Transformation Survival Kit'. Several bi-lateral meetings were held with unions (notably NEHAWU, HOSPERSA and ISA). A website has been established by the Government Communication and Information Service (GCIS) and is regularly updated (www.nhls.gov.za). All documentation relevant to the NHLS is on this site. So far most of the enquiries that have been received in connection with this site have been from international parties.

#### **Payment of the Transformation Process**

The costs of all of the consultants except the Project Leader are paid for from funds set aside in the SAIMR and approved by the Director General of the national Department of Health. This money will also provide for changes such as signage and stationery when the NHLS commences and cash flow bridging finances in the initial months. What this means is that when the NHLS commences the personnel that were previously paid by both the SAIMR and all of the government departments will have to be paid by the NHLS. However, the system will inherit the cash flow of only the SAIMR fee-for-services. It will have to wait until the end of the first month to invoice the government departments for services rendered. These departments could take two or three months to process the payments. This means that the NHLS will have to carry the cash flow of these costs for some time until the new cash flow stabilises. The money had been deposited in an account of a trust (SAIMR Foundation) established in 1995 to protect research funding. This money was from the reserves of the SAIMR, accumulated in the good financial times. The trust, which contained about R62m at the time, has been terminated and the funds are to be shared between research funding (through a new trust for the benefit of all eight university pathology departments), and the costs of the restructuring. Most of this money is set aside for the stabilisation of the cash flow.

#### **SAIMR** developments

The developments at the SAIMR are critical to the establishment of the NHLS because it is the biggest of the services. Its systems are designed for a public entity and its staff are familiar with managing a public entity. Of serious concern therefore is the financial decline of the institute over the past few years. Table 1 shows the main figures from the annual reports of the SAIMR since 1997.<sup>4</sup> At the present trend the SAIMR cash reserve will be depleted in March 2001. This has been partly due to the poor payment record of the provincial administrations that account for 95% of SAIMR business. Payments have improved in the past six months but are still not optimal. The Institute has embarked on a strict payment management plan that will result in closure of laboratories if the payment schedules are not met.

#### Table 1: The South African Institute for Medical Research, Audited Group Balance Sheet History

1996/97 R'000	1997/98 R'000	1998/99 R'000	1999/00 R'000
332	332	332	332
73 984	70 359	41 877	23 889
19 080	19 080	19 080	19 080
26 970 120 366	27 190 116 961	26 151 87 440	25 943 69 244
52 292	50 908	39 621	29 346
35 370	23 198	8 453	3 553
32 704	42 855	39 366	36 345
90_942	94 149	83 757	84 639
7 736	6 464	4 263	4 608
60 072	80 854	62 774	72 410
1 260	-	901	-
21 874	6 831	15 819	7 621
58 238	51 294	44 391	48 294
40 136	31 849	28 376	32 161
18 102	16 276	16 015	16 133
-	3 169	-	-
120 366	116 961	87 440	69 244
	1996/97 R'000 332 73 984 19 080 <u>26 970</u> 120 366 52 292 35 370 32 704 <u>90 942</u> 7 736 60 072 1 260 21 874 <u>58 238</u> 40 136 18 102 <u>120 366</u>	$\begin{array}{c cccc} 1996/97 \\ R'000 \\ \hline \\ R'000 \\ $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

The other major cause of the financial decline is a steady decrease in volumes of tests requested by clinicians (Figure 1). This has undoubtedly been as a result of the financial pressures that provincial departments of health experience themselves. The normal response would have been to downsize the labour-force. This was not done because of the pending NHLS. It was felt that it would be unwise to trim only part of the organisation prior to amalgamation with the public service components. The consequences of this approach were known and agreed to at the time that the Interim Board was appointed but the price has been high.



The Institute embarked on other measures to try to contain costs and to increase revenue. Top managerial position salaries were frozen, new posts were filled by contract employees rather than permanent employees and an evaluation has been done of the internal laboratory media and reagents manufacturing capacity and quality in the Institute. There has also been a process to evaluate the introduction of a single automated laboratory in Johannesburg General Hospital. The aim is to make routine tests available 24 hours a day from a single laboratory. This will reduce specimen collection and introduce better economies of scale. However, it means moving to a shift system instead of overtime and will result in a reduction of staff. There is also a risk that the remaining specialised laboratory capacity is compromised by the removal of equipment and other resources to the automated laboratory. If this happens the likely response will be a demand for additional (duplicated) equipment.

The Institute owns a company called South African Vaccine Producers (Pty) Ltd (SAVP). The production of vaccine has been economically non-viable for years. The Institute was trying to upgrade to a new more technologically advanced system but fell short of funds. The bulk of the work in 1999 was therefore a subcontract to Pasteur Merieux Connaught to combine and package various vaccines from imported bulk. The vaccine production capacity has been stopped and key staff were seconded to other scientific institutions (such as CSIR and NIV) pending government's decision on a joint venture vaccine manufacture initiative. The SAVP also manufactures and distributes anti-venom sera. There is a project underway to examine ways to make the anti-sera operation profitable.

An additional source of revenue for the SAIMR (and therefore the NHLS) is the private sector. The University of Pretoria won a tender to provide laboratory services to Transmed, a large national medical aid. The university trades under a company called Health Enterprises at University of Pretoria (HE at UP). This company entered into an agreement with the SAIMR to provide the services in the rest of the country outside of Pretoria. This contract has stretched the managerial capacity of the Institute but it will increase volumes of tests to a point that will make more laboratories independently viable. The reaction of the private pathology firms has been predictably very negative. Some of them are owned by the same companies that own some of the private hospital groups and there has been an attempt by the hospitals concerned to prevent the HE at UP and SAIMR from providing the service. The SAIMR retains any profit that it makes from the services that it provides to Transmed in terms of this contract as does the HE at UP. However, the objective for SAIMR at this stage is not necessarily to make a "profit" but to increase volumes of tests to the underutilised laboratories and so avoid increasing unit costs. It also means that several unprofitable laboratories can be sustained, and therefore services to the public service assured by ensuring sufficient volumes of work. For the university it means a source of revenue to pay for their contribution to academic pathology services (teaching and research). This is a very important development to monitor in the future. The potential exists for the NHLS to force pathology prices down in both the public and private sectors by dominating the market and providing a cheaper service that private health care providers choose above private pathology services. The government health services, including Pretoria Academic Hospital, will be obliged to purchase laboratory services from the NHLS and the NHLS will have to decide if it is most efficient and effective to contract HE at UP (or any other company) to provide services as a subcontractor.

The Faculty of Health Sciences at University of Witwatersrand is inextricably linked to the SAIMR which is the  $\partial e$  facto School of Pathology of the university. The university has established a company called Wits Health Consortium (WHC) that has a section known as Contract Laboratory Services (CLS). The WHC and the SAIMR have entered into an agreement to contribute capacity from each of the partners to secure clinical trial work for their mutual benefit. There is an ongoing discussion about how to structure the relationship and the profit sharing of this arrangement.

#### Other developments

#### **NIV BL4 Laboratory**

South Africa has one of only two bio-level four laboratories in Africa. The other is in Egypt. Virtually all of Africa's testing on African Haemorrhagic Fevers (Congo Fever, Lassa Fever, Marburg Fever, etc.) is done in this laboratory in Rietfontein. The laboratory is old and has reached a point where it will become dangerous soon. Technology has progressed and there are newer designs that will require the building of a totally new laboratory, rather than renovating the existing structure. Government will have to take a strategic decision on whether to continue to provide such services in the future. If the decision is to do so then a new laboratory will have to be constructed. These laboratories cost about R50m or more.

#### New Durban Laboratory

The new academic hospitals in Durban and Umtata have both been provided with modern laboratories. These offer excellent opportunities for developing integrated laboratory services from the outset in these two major centres.

#### New Head Office Premises for NHLS

The NHLS needs to have its own identity. The SAIMR owns a large complex of buildings at Rietfontein, most of which is not utilised. A process has been embarked upon to renovate a part of the complex for the Head Office of the NHLS. It is a very accessible site, safe environment and offers opportunities for expansion.

#### Other

The NHLS will include all public laboratory services, including human genetics, occupational health, forensic pathology, entomology and some food and water testing. It will also manage the National Cancer Register (NCR). The provision of these services is relatively complex and fragmented. Each is being managed separately. There is still some discussion between the Department of Health and the Department of Labour regarding occupational health laboratory services, and between the Department of Health and the Department of Safety and Security concerning forensic services. Water and food testing is still very fragmented. Some of the more complex food laboratory testing is done in the forensic chemistry laboratories. Rationalisation of these services needs to be attended separately in the future. Some entomology services will be integrated into the new NICD but it may be necessary to review the arrangement in this respect with the Medical Research Council in due course.

#### Next steps

Once the NHLS Bill is enacted, and commencement dates have been promulgated, the provisions can be implemented. This is a fairly complex process and there are several options for the sequence of events to follow in 2001.

#### Transfer to the NHLS (S197 and S189)

Essentially what is to happen is the transfer of "businesses" from the current ten employers to a totally new employer.

The main legal provisions are in terms of sections 189 and 197 of the Labour Relations Act, No. 66 of 1995. There are eight provincial administrations, the national Department of Health and the SAIMR who are current employers. Technically there are only two employers (SAIMR and the Department of Public Service and Administration) but in practise there are ten. Section 197 provides for the transfer of a "going concern", in which case the employees will be transferred with their current remuneration and conditions of service to the new employer. Section 189 provides for the restructuring of a business due to operational needs.

The problems of transferring employees from ten employers at the same time are enormous. It will be tempting to minimise the problems by taking employees on their current conditions of service. However, these conditions are very different and very soon employees who perform the same jobs will be very unhappy about being rewarded in different ways. So, even if the section 197 route is followed it will be necessary to embark on a section 189 restructuring exercise soon anyway. The option is to start with the section 189 restructuring as the tool for establishing the new entity. There are risks and complications. Firstly, there has to be a bargaining and consultation mechanism in place and this cannot be put in place until the NHLS is a 'juristic person' (with a Board and management to represent the organisation). Secondly, the risk is that personnel are disenfranchised by the changes in conditions, notwithstanding the fact that the law requires that conditions may be no worse than prior to the restructuring. Thirdly, personnel have to understand the new remuneration policy and conditions and it will be a long time before everyone understands them sufficiently to make the transition. Finally, where there are matters of 'mutual concern' the new conditions have to be negotiated between the employer and the unions. This can be a very lengthy process.

#### **Provincial Preparation**

At the same time that decisions are being taken on the route to follow for the establishment of the NHLS the present employers must prepare for the transfer of the function. In the case of the SAIMR this is relatively straightforward. All employees, all assets and all goods, services and contracts will be transferred. In the case of the government departments it is infinitely more complex. As has been described, in most cases the employees were part of sub-components of hospitals in the PERSAL personnel system. Staff who are part of the laboratory services are still not automatically identifiable. Each person has to be 'designated' as a part of laboratory services. The posts that these staff occupy are being moved to new, separate components for laboratory services in the PERSAL system. This will make the transfer of their records and conditions easier when the time comes.

The government departments also have to reorganise their budgets. At present they budget for salaries, administrative costs, equipment, 'stores and livestock', etc. Once the NHLS is the service provider they will purchase the services from this third party. This requires that the funds have to be reallocated to 'Professional and Specialised Services' in the budgets. The funds that provincial departments use to pay for the laboratory services are, in some cases, in different programmes and sub-programmes in their budgets (ie, not all clearly identifiable as 'laboratory services'). It is therefore not possible to simply 'ring-fence' an existing amount and change its description in the budget to reflect the fact that laboratory services will be purchased in future from the NHLS. This increases the amount of work that has to be done in preparation for the NHLS. There are cases where parts of the money that is budgeted for laboratory services are in totally different government departments, such as the Department of Public Works.

It may be advisable to transfer the services from one or two administrations at a time and therefore to stagger the commencement dates.

These are a few of the many administrative issues that have to be managed. Photocopiers may be on hospital stock but be 'laboratory property', lease contracts for equipment and premises have to be transferred, etc. This will take many months to finalise and depends on the decisions regarding commencement schedules and the labour relations route to be taken.

#### Lessons and recommendations

There are lessons to be learnt generally regarding transformation of government functions and services into a public entity and there are specific lessons and opportunities related to the laboratory services.

#### Transformation lessons:

- 1. It is clear that the establishment of a new public entity is an enormous job and requires dedicated resources (people and money). This cannot be done as a part-time job of officials in the Department of Health.
- 2. The preparation and piloting of legislation for such an entity takes time and requires very wide consultation.
- 3. The labour issues are complex, time-consuming and require specialist legal advice.
- 4. Historical prejudice and entrenched personal agendas are far more prevalent and powerful than first meets the eye.

- 5. No matter how much communication there is during a transformation process it is not enough. People hear what they want to hear and what they think that they have heard from perspectives prejudiced by their personal comfort with the perceived vision.
- 6. The establishment of a new public entity requires a large dedicated "cash float".
- 7. Restructuring implies integration of functions and amalgamation of components. This causes suspicion, anxiety and fear of change. There is a need for a separate Change Management process over and above the technicalities of Project Implementation.

#### Lessons and opportunities for Laboratory Services:

- 1. Great care has to be taken to preserve an appropriate, acceptable and affordable balance between the 'academic functions' and the services.
- 2. The viability of laboratory services is extraordinarily volume sensitive and the purchasers have to be aware that prices (tariffs) are linked to the volumes of tests that they request. Cross-subsidisation of services is absolutely essential if stable services are to be provided as a public health imperative.
- 3. There are ways to improve and/or stabilise volumes. One way is to capture additional market share but this is essentially from the private sector. This means that service levels must be competitive and that a backlash must be expected from the private competitors (many of these competitors own shares in private hospitals and can sabotage entry into this market).
- 4. Another way to improve viability is to reduce the unit costs. The most dramatic way to do this is to automate tests. This has service organisation implications and raises labour relations issues.
- 5. A public entity does not have the private sector competitor motivation to demand quality and higher levels of service. Quality assurance and Total Quality Management have to be driven by other forces. The main force that will determine quality is likely to be academic and professional pride. This has to be nurtured. Mandatory accreditation is not likely to be the solution but voluntary and progressive accreditation with appropriate reward systems may well achieve the goals.

The implementation of the NHLS has not yet commenced. It will be interesting and important to follow the process in 2001.

# Transformation in Nursing Education

This chapter examines progress made in the transformation of nursing education with respect to relevant changes that are currently taking place in South Africa and within the framework of the Department of Health's White Paper for the Transformation of the Health System in South Africa. The chapter outlines basic nursing education and training programmes available in South Africa immediately prior to 1994, and addresses transformation targets envisaged by the role players involved with transforming nursing education.

The content presented is derived from a variety of official discussion documents, publications, reports and submissions from various stakeholders, among them the South African Nursing Council and the Democratic Nurses Organisation of South Africa (DENOSA).



Julia Mekwa University of the North

#### Introduction

Health care in South Africa is in a state of flux. The change in emphasis from hospitalcentred care to primary health care and the establishment of the district health system are both affecting the way in which health care is delivered. Nurses, frequently viewed as the backbone of the health system, will both be affected by and required to participate in effecting this change. Nursing education therefore must be adapted to prepare nurses for the environment in which they will work. In addition, new philosophies in nursing education which emphasise the student as active rather than passive in the learning process are permeating educational institutions.

This chapter considers the structure of nursing education prior to 1994, and presents some of the changes that are envisaged. These include the organisation of teaching institutions, the philosophy of teaching and learning, and the content of the nursing curriculum among others. The difficulties encountered with the transformation of nursing education and the progress made thus far, are discussed.

## The Role of the South African Nursing Council in Nursing Education

The government of South Africa through the Nursing Act No. 50 of 1978 as amended, has delegated the responsibility for the promotion and maintenance of standards in nursing education to the South African Nursing Council (SANC). This statutory body is thus faced with the responsibility to monitor the process of nursing education as it takes place through various programmes, in the various institutions, ensuring that the public receives quality, safe and ethically sound nursing care within the ambit of the Constitution, Act No. 108 of 1996. In undertaking this transformation the SANC has to take into consideration the provisions of the South African Qualifications Authority Act No 58 of 1995 pertaining to accreditation, certification and the maintenance of national standards in education and training.

#### Nursing Education Programmes Immediately Prior to 1994

Nursing education in South Africa dates back to 1899. Since this time, several programmes have evolved and been modified in response to needs and pressures. These programmes are divided into two main categories namely, pre-registration and post-registration. The following programmes were recognised by the SANC immediately prior to 1994:

#### **Pre-registration Programmes**

- A comprehensive four year Diploma or Degree qualification in General, Psychiatric and Community Health Nursing and Midwifery in accordance with SANC Regulation No. R425 of 22 February 1985 as amended
- A two year Diploma in General Nursing (often referred to as the bridging programme) lending to registration as a general or psychiatric nurse in accordance with the SANC Regulation No. R683 of April 14, 1989 as amended
- A two year certificate programme leading to a qualification as an enrolled nurse (SANC Regulations No. R1664 as amended and R2175)
- A certificate programme leading to a qualification as an enrolled auxiliary nurse, the duration of which varies depending on the institution.

#### Post-registration programmes

- Post-basic degree programmes leading to specialisation in Nursing Education, Nursing Administration and Community Health Nursing in combinations of two or three qualifications
- Post-basic Diplomas which lead to a variety of single diploma qualifications in the above fields or any of the disciplines in the comprehensive four year programme
- Supplementary Basic Diplomas
- Post-basic certificates (short courses)
- Honours and Masters degrees, both of which may be taken following any of the basic degree programmes.

Although all post-registration programmes are controlled by the same SANC regulations, flexibility exists in terms of the format and structure of the programmes depending on the policies of the various institutions i.e. universities, nursing colleges, technicons and hospitalbased nursing schools. Given that pre-registration programmes are more uniform and therefore likely to give a clearer indication of the transformational progress than their post-registration counterparts, this chapter addresses transformation as it exists in the pre-registration four year comprehensive programme.

#### Flaws in the pre-1994 System

Various factors have impeded personal development and upward career movement in the nursing profession, particularly in the sub-professional categories. Among these factors is the system's failure to acknowledge the additive nature of cognitive development resulting in non-recognition of prior learning. This oversight led to unnecessary duplication of learning content as learners progressed from one basic programme to another with each programme existing in isolation, even in those cases where the learning content was the same. A typical example has been the biological sciences where, for instance, the anatomy studied during the registered nurses programme has been routinely repeated during the midwifery course. Similarly, enrolled nurses wishing to study for the professional nurses qualification underwent some theory repetition as well as some of the manual skills training. Although the four year comprehensive programme has to a certain extent eliminated repetition of learning content among the four constituent disciplines, some nurse educators still find it difficult to come to terms with the recognition of prior learning, a practice to which they themselves were not exposed.

The bridging course for enrolled nurses through SANC Regulation No. R683, introduced in 1989, resulted in some formal acknowledgement of prior learning but even then only implicitly. The bridging course makes it possible for the two year trained enrolled nurse to proceed to the professional level within a period of two years instead of the prescribed three.

Another weakness in the system of nursing education has been the dual status of the student as both learner and employee. Historically the provincial Departments of Health have been responsible for the provision of both nursing education and health services, thus simultaneously serving as both patron and employer to the nurse learner. In most nursing education institutions the learner forms part of the work force on which patient care is dependent, thus compromising the learning needs of the student. This situation coupled with the unrelenting pressure from workers' unions for students to be given full recognition of their employee status contributes negatively to the effectiveness of nursing education programmes.

The failure of nursing education institutions to provide part-time programmes at basic levels, has also contributed to limited career movement for those who, because of work and family commitments, cannot afford to take up full-time studies.

#### What is Being Envisaged?

A number of Acts guide the current process of transformation:

- a The Constitution of the Republic of South Africa, 1996, which assigns all tertiary education to the jurisdiction of the Ministry of Education under a single co-ordinated higher education system
- b The Higher Education Act No. 101 of 1997, governing higher education institutions and programmes
- c The South African Qualifications Authority (SAQA) Act No. 58 of 1995 aimed at the development of a National Qualifications Framework (NQF) and serving the purpose of setting criteria for registration of programmes and qualifications in South Africa
- d The Nursing Act No. 50 of 1978 as amended, providing for the control of nursing education and training by the SANC.

To facilitate effective discussion around the issues pertaining to transformation in nursing education, the SANC in collaboration with the Health Systems Trust and the Department of Health held a National Nursing Summit in August 1999. Several objectives were identified of which the following are pertinent to the subject of this chapter:

- "To review nursing education and training, including curricula
- To focus on competency based education, in accordance with the principles of primary health care philosophy
- ◆ To improve the quality of health care within primary health care delivery
- To promote multi-disciplinary research"<sup>1</sup>

Certain measures were identified as being crucial to the process of transformation. These include:

- Recognition of prior learning
- Curricula that allow for multiple exit levels from degree and diploma programmes
- Changes in teaching approaches to ensure development of critical thinking through a problem-based approach to learning
- Re-orientation of nursing curricula from being content-based to outcome-based
- A shift of focus to primary health and community-based care.

Overall the emphasis is on the implementation of learner-centred as opposed to teachercentred approaches where the teacher takes on the role of a facilitator within the learning environment.

#### Location of Nursing Education and Training

Under the provisions of the Higher Education Act No. 101 of 1997, nursing education qualifies as "higher education" giving it the same status as education in other professions. Higher education "means all learning programmes leading to qualifications higher than grade 12 or its equivalent in terms of the National Qualifications Framework as contemplated in the South African Qualifications Authority (SAQA) Act No. 58 of 1995, and includes tertiary education as contemplated in Schedule 4 of the Constitution".<sup>2</sup> The relocation of nursing education from the patronage of the Health Department to the main stream of education under the Ministry of Education provided for by the Higher Education Act is perceived as the most significant achievement to take place in the transformation of nursing education in South Africa. If successfully completed this move will fulfil the nursing profession's longstanding quest for equal status with other professions. Significantly, this move will probably result in the students' loss of a readily available labour force for health departments.

The consultative exercise by the Reddy Task Team, (appointed by the Department of Education), involving stakeholder discussions on the process of this relocation was a step towards this objective. The purpose of these consultations has been to enable nursing colleges to make informed decisions regarding their future locus of control. Three options were suggested to the colleges namely, to become autonomous, to integrate into a university, or integrate into a technicon. Although the Reddy Task Team created a stage for discussions with the various stakeholders on this matter, the discussions were limited by time constraints. As a result many crucial questions remain unanswered in the minds of those who would be affected. Should colleges integrate with another institution, there is concern at the individual level among college academics regarding their job security and possible loss of status for those already higher up their career ladders. At an institutional level, fears have been expressed regarding the maintenance of colleges' autonomy and the possible threat of failure of a complete merge between the institutions concerned.

Further the universities and technicons have indicated concern about the administrative protocols that may need to be put into place to accommodate increases in the numbers of students and employees, and the resultant financial burdens. On the positive side however, the assumption is that those universities and technicons that integrate with nursing colleges will benefit from an increase of student numbers while the colleges will gain in status and in the strength of their programmes.

Those colleges that wish to remain autonomous, and choose not to integrate with another institution, may find themselves faced with increased financial burdens when they have to fend for themselves.

Notwithstanding these concerns, observations show that the majority of university nursing departments and certainly the technicons, have welcomed the idea of absorbing the nursing colleges into their structure. The situation is not so clear in the case of the colleges themselves. It has been established that the report by the Reddy Task Team has been submitted, and that the discussions to finalise the matter are taking place between the Department of Health and the Department of Education. With the discussions still under way it is not yet clear which of the three location models will be adopted, nor when their implementation will take place. The most daunting challenge is to find the most cost-effective way to a smooth transition from the current system of nursing education to one that wholly embraces tertiary

education and the supernumerary status of nurse learners within a collaborative environment.

#### The Proposed Unified Nursing Education System

As a function of their higher education status, nursing education programmes are obliged to comply with SAQA's requirement of exit points. An exit point is an identified level in an academic programme at which a learner has acquired specific competencies for which a qualification may be awarded. An exit point therefore allows the learner to exit the programme with certain marketable skills for general use or use in a specific profession. After exiting, such a learner qualifies to re-enter the programme to complete the rest of it.

To comply with this requirement, and based on the assertion that "all nurses should be equipped to practice nursing independently as members of the health team"<sup>3</sup> the South African Interim Nursing Council in 1997 proposed the establishment of a comprehensive four year unified system of nursing education with two possible exit points, thus providing for the creation of "only one category of nurse, that is a professional nurse."<sup>3</sup> On successful completion of the second year of this programme the individual would be expected to have acquired knowledge and skills in nursing "to function as the executor of care plans and or programmes" and would qualify for registration as a generic nurse. The second and final exit point would occur at the end of the four year programme qualifying the individual as a comprehensive generalist nurse who in addition to the generic skills would "function as the designer, executor, co-ordinator and evaluator of care plans/programmes".<sup>3</sup> In comparison with the current enrolled nurses' programme, completion of two years on the proposed unified programme would qualify the individual for professional nurse status. This proposal therefore assumes that all individuals entering the four year comprehensive programme would have the potential to cope with the academic demands of the comprehensive programme.

This proposal was endorsed by the National Summit on Nursing. Subsequent to this endorsement, the SANC issued Circular 18/99 announcing its resolution to phase out the bridging course for enrolled nurses, the two year enrolled nurses course and the enrolled auxilliary nursing course, confirming its intention to create only one category of nurses. However, a month later on January 13, 2000, the SANC released Circular 1/2000 stating that despite the previous circular the two year and one year basic courses for enrolled nurses and nursing auxiliaries respectively, would still remain in force until the necessary consultations had taken place. In this latter circular no reference was made to the bridging course which is also continuing.

The proposal to create only one category of nurses is highly controversial. Those in support of it are advocating for equal status for all nurses, asserting that maintenance of subprofessional nurse education programmes perpetuates the injustices of the past. On the other hand its antagonists are concerned about the cost-effectiveness and the practicality of such a move, questioning its feasibility especially in view of the limited resources in health care.

The Department of Health appears to hold the latter view. At the workshop on Restructuring of Academic Health Service Complexes held on 19 April 2000, the Department distanced itself in no uncertain terms from the move to phase out the sub-professional categories of nurses. However, some provincial Health Departments, prompted by the initial SANC circular, altered their policies on the intake of candidates to the programmes in question with the intention to either phase them out or to accelerate the bridging process.

Although fully embraced by the nursing profession, the unified education system has not been implemented nor vigorously pursued outside of the Nursing Summit Forum. Further, the SANC has been somewhat reticent regarding implementation. Observations suggest that the unified nursing education system has been put on hold.

#### The Existing Four Year Comprehensive Programme

Having been established under the provisions of the SANC Regulation R425, February 22, 1985<sup>4</sup> as amended, the existing four year comprehensive programme is not a newcomer to the nursing education scene. However, its reform would contribute significantly to the transformation of nursing education. The programme provides for simultaneous qualifications in general, psychiatric and community health care nursing and midwifery. The driving force behind this programme has been the profession's compelling ideal of a generalist who can function efficiently in all the four disciplines.

However, since it is rare for any one individual to be required to practice in all four areas of care simultaneously, logic suggests that the current four year comprehensive programme approach is not as cost-effective as it is often alleged to be. For example, in South Africa, due to cultural factors, many male graduates show reluctance to engage in midwifery practice on completion of the programme, thus rendering the midwifery qualification redundant. Also, observations show that people tend to have preferences for one area of practice above another. Perhaps of particular importance is the shortage of nurses in other crucial areas such as primary health care who do not have the appropriate skills to undertake the responsibility.

While it may be argued that the broad grounding at the basic level allows for a choice of specialisation at a later stage, the benefits derived from the "jack of all trades" approach, which offers no option for flexibility and personal choice, are questionable. Weighed against the issues at the very heart of the current transformational processes such as cost-effectiveness, the individual's right of choice, the drive for the primary health care approach, and the need for flexibility of educational programmes as described in the National Qualifications Framework principles,<sup>5</sup> the four year comprehensive programme as it currently exists proves to be counter-productive. A possible alternative could be restructuring of the four year comprehensive programme to effect more flexibility in terms of the individual's right of choice based on preference rather than obligation. Such a move would provide for greater depth in the chosen but fewer areas of study.

#### Transformation in Curricular Approaches

Any major changes in health care must be underpinned by relevant education and training. Accordingly, nursing education institutions are increasingly challenged to develop programmes to produce the type of nurse practitioner capable of matching the education requirements dictated by the National Health Policy SAQA directives, and simultaneously meeting the increasing demands for affordable health care. To accommodate these needs, SANC has advocated for the development of "teaching and learning strategies that enhance learner-centred education and training, and the acquisition of core competencies and learning outcomes with particular focus on the health care needs/problems of individuals, families and communities as the main method of acquiring knowledge. This to be provided through an integrated learning programme that supports the Primary Health Care(PHC) approach."<sup>6</sup>
to orientate them towards outcome-based education (OBE), community-based education (CBE), and learner-centred problem-based learning (PBL), with emphasis on primary health care. To boost this process, workshops have been held by various structures with the aim of creating collaborative awareness and determining strategies. The objective for nursing education to focus on the PHC approach is in direct response to current health policy. Community-based education is intended to re-direct curricular activities to health needs identified by communities, thus narrowing the gap between the learning content and the realities of health care practice.

OBE is seen as an attempt by the present government to address the legacy of apartheid education. OBE is intended to produce a workforce for participation in an increasingly competitive global economy.<sup>7,8</sup> As an approach it is meant to encourage skills development by focusing on what learners can do with their knowledge as opposed to the input-based model characteristic of the apartheid schooling. However, OBE is condemned by critics for its singular emphasis on procedural knowledge (outcomes), arguing that procedural knowledge without propositional knowledge potentially treats learners as uncritical participants in the learning situation.

The SANC has identified PBL as a technique of choice in the enhancement of the primary health care learning and teaching.<sup>6</sup> Mangan,<sup>9</sup> and Biley & Smith<sup>10</sup> describe PBL as an appropriate pedagogical technique for the development of nurses who can explore options, are articulate and have the capacity for developing strategies based on reflective decision-making. The development of critical thinking skills is universally acknowledged as the hub of most nursing education programmes. It is believed that by strengthening critical thinking and reflective skills, learners and registered practitioners can influence change and cope with diversity in a more creative way.

This effort is however thwarted by the observation that "despite the best efforts of nurse teachers to promote critical skills acquisition, these skills are exercised only to a disappointing degree in clinical nursing practice."<sup>11</sup> Greenwood cautions that while teaching or facilitating the acquisition of critical thinking skills is one thing, ensuring their intelligent exercise is clearly another. For nursing education to achieve the ideal of the development of critical thinking, much more effort is needed than simple lip service. "If critical thinking skills are to be exercised in clinical areas, at least some (probably most) components of such skills must be constructed in clinical areas. This implies that nurse teachers should get into action with nursing students, both pre- and post-registration, to encourage the development and use of critical thinking skills. More importantly, however, clinically based mentors and preceptors, because they are students' primary role models, should encourage students, where appropriate, to analyse and respond flexibly to individual patients' problems."<sup>11</sup>

This brings into question the benefits derived from the SANC's prescribed requirement of four thousand hours minimum clinical experience for nurse learners on the comprehensive programme. Assuming that the requirement for prescribed hours is being complied with, a question of importance arises concerning the availability of the clinically-based role models referred to by Greenwood, and the level to which the learners are prepared to participate consciously in the development of critical thinking skills. There is a lack of convincing evidence to prove that the programme indeed achieves its goals for critical thinking skills development.

#### **Clinical Experience for Nurse Learners**

The need for the four thousand hours clinical experience prescribed by the SANC for the comprehensive programme is a factor that is increasingly being questioned. Based on the argument that prescribing hours for clinical practice does not guarantee competencies, a resolution was taken at the National Summit on Nursing proposing that the number of hours attached to each discipline in the four year programme, (as per guidelines for SANC Regulation No. R425, 22 February 1985, as amended), "should not be specified, rather competence/outcomes and measures to control the attainment thereof should be specified."<sup>12</sup> Although this statement appears valid, equally true is the observation that competencies cannot be developed in the absence of calculated measures to guide learners. In the absence of an alternative measure visibly in place to ensure achievement of desirable programme outcomes, the system of a specified number of hours in clinical practice *if properly utilized*, turns out to be one reliable approach to the achievement particularly of dispositional knowledge skills.

#### **Recognition of Prior Learning (RPL)**

SAQA describes recognition of prior learning as "the comparison of previous learning and experience of the learner howsoever obtained against the learning outcomes required for a specific qualification, and the acceptance for purposes of qualification that which meets the requirements."<sup>2</sup> Literature suggests that RPL is a process whereby a prospective candidate obtains formal recognition for the knowledge and skills acquired from forms of learning other than formal study. These may include work experience, work-based training, working with experts in a specific field, life experiences, and other activities that may be classified as informal study. RPL therefore, is about what the person knows and what s/he can perform.<sup>13</sup> The major purpose is to enable "non-traditional" learners to achieve upward and lateral career mobility through recognition of other forms of education, without compromising the quality of the programme to which the candidate seeks admission.

In nursing education, the RPL principle is seen as a means of creating access opportunities for registered nurses (with a basic qualification in general, psychiatric and community health nursing and midwifery or a combination of any two of these), enrolled nurses, and enrolled auxiliary nurses to study for higher level qualifications. In consideration of this principle the SANC resolved to allow the present sub-professional categories of nurses to gain access into the 4 year comprehensive programme, thus short-circuiting the longer processes provided for in relevant SANC regulations for those who wish to upgrade to the levels of registered nurses. Furthermore the Council resolved to do away with the previous requirement of a Grade 12 certificate or its equivalent as the only qualification for entry into this basic comprehensive programme. Instead, it advocated that relevant knowledge and skills should be considered. Further, it undertook to consider partial registrations for all single courses passed within the four year comprehensive programme, where candidates fail to qualify for all four disciplines or part thereof. These reforms gave the sub-categories of nurses opportunities "to register as:

- a General nurse only, or
- b General nurse and midwife, or
- c General nurse and community health nurse, or
- d General nurse and psychiatric nurse, or

#### e A combination of (a) and any one of (b), (c) and (d)."<sup>14</sup>

While the RPL principle is welcomed as the single most profitable factor to revolutionise nursing education in South Africa, its worth lies in its successful implementation. Taking into account that there are various informal settings in which knowledge and skills acquisition can take place, and the differences in the degree to which individuals can utilise such learning opportunities, the task for any higher education institution to validate in a credible and fair manner the candidate's knowledge and skills acquired from previous learning is quite formidable. To facilitate the assessment, the candidate seeking recognition is expected to be actively and purposefully engaged in providing authentic evidence of the possessed prerequisite knowledge or skill. In a country where most learners have been socialised into perceiving the teacher as the custodian of all knowledge and regarding themselves as passive absorbers of that knowledge, and within the framework of rigidly structured programmes, the expectation that candidates will facilitate the process becomes a huge challenge in itself. An added factor is the cultural emphasis on "modesty" which would view any act of self-marketing on the part of the learner as arrogance and therefore discouraged.

For nursing education the problem is compounded by the large numbers of candidates from diverse working backgrounds who due to historical factors, inequalities in terms of e.g. resources, employment environment etc., may have different assessment needs. Since RPL underscores the importance of visible evidence of the current knowledge, skills and attitudes and the non-importance of experience based on time or duration, the development of individualised assessment protocols becomes crucial to its implementation. For this to take place nurse educators have to be able to match up to the demands of these procedures.

# What has been achieved?

To determine progress in curricular approaches a small survey was conducted on the 17 university nursing departments that offer the comprehensive four year programme. Responses were received from 12 of these.

The aim of the survey was to obtain information regarding progress made on the six issues identified by SANC for transformation in nursing education as outlined in Circular 15/99 of SANC. The target issues on which the information was required included RPL, OBE, PBL, CBE, PHC, and research. Respondents were required to indicate in each case:

- a Whether their universities had adopted the given principle
- b Whether the given principle was being implemented by the university and/or the college/s associated with it
- c If implemented, the degree to which the implementation had progressed i.e. whether at discussion level; included in the curriculum; or fully implemented.

The following table illustrates the progress that has been made by university nursing departments in adopting SANC education principles.



Table 1: Extent to which university nursing departments have implemented SANC education principles

Note: Discussed = the principle is still in the discussion phase in the university Curriculum = the principle has been included in the curriculum of nursing students

In the case of the nursing colleges, seven universities indicated that research was fully implemented at their colleges of association. At one other college research implementation was at discussion level. Six university departments indicated their colleges had implemented the PHC principle while five departments indicated implementation of CBE by their affiliated colleges. OBE was acknowledged in the case of colleges associated with four university departments. For the RPL and PBL acknowledgment of implementation by colleges was confirmed only in the case of three nursing departments.

Although some nursing departments did not return the questionnaire it is evident that the six principles identified by SANC as transformational targets, have been adopted by the majority of the nursing departments at universities. Because of the mentor relationship between the universities and the colleges it is assumed that the colleges associated with the twelve universities would have been influenced to adopt the identified principles for their transformation process. Since the number of technicons offering nursing programmes is very small compared to the number made up by the colleges and the universities, it is reasonable to assume the findings from this survey are representative of the general picture of progressachieved by nursing education institutions in transforming curricular approaches.

# Conclusions

The purpose of this chapter was to examine progress made in the transformation of nursing education with respect to relevant changes that are currently taking place in the health and education systems of the country. To determine this progress six issues pertaining to nursing education were identified and examined and the following conclusions were reached:

- The move to relocate nursing education institutions to the main stream of education with options for them to integrate either into the universities or technicons, or to become autonomous has not been effected;
- The proposed unified system of nursing education aimed at the creation of a more organised system of nursing education is still on hold, as is a related proposal to create a single category of nurses namely, the professional nurse;
- The existing four year comprehensive programme, designed to produce generalist nurses appears counter-productive and therefore needs reviewing as a matter of urgency;
- The proposal not to specify clinical experience hours for nurse learners but instead to focus on competence/outcomes and to specify measures to control the attainment thereof has not gone further than the proposal stage and no reliable scientific measure has been developed to facilitate the implementation of this proposal. Being the least implemented with only two universities that have managed its full implementation, RPL appears to be the most challenging task facing nursing education in its reform;
- The majority of university nursing departments has adopted the six principles suggested by the SANC for reform in curricular approaches.

# Recommendations

Although there is general acceptance of the relocation of nursing education to the main stream of education, the fact that approximately five years have gone by without this matter being finalised is a source of concern to all involved parties. It is desirable that the matter be brought to finality by the two authorities concerned as a matter of urgency. Due to uncertainty and fears, the effects on both individuals and institutions should be given attention. To take care of the anxieties it may be necessary for more information to be made available to all interested parties. It is also suggested that collaboration between universities and technicons be encouraged to promote cost effectiveness in taking up the responsibilities of integrating the colleges. To mobilise progress the report by the task team needs to be released as soon as possible.

Since nursing education stands to benefit tremendously from reforming its current system to the proposed unified system it is imperative that the apparent conflict between SAQA's requirement of exit points and the concept of a single category of nurse being proposed by the SANC be reconciled. The fact that there always will be those individuals who, for various reasons are not able to complete the four year programme but would have acquired the necessary skills for which they can earn a qualification, points to the difficulty of eliminating the sub-professional category of nurses. Also, since the proposal suggests that individuals exiting at the two proposed exit levels will both qualify as professional nurses, the current distinction between a professional and a sub-professional nurse will need to be reviewed. Traditionally, more demands for professional independence were made on the professional nurse as opposed to the enrolled nurse with an academic preparation of two years. For this reason the creation of a single category of nurses and its implications on the status of the nursing profession need to be more fully considered.

The question of whether there should be other discipline options available in the four year comprehensive programme is an important one. Abundant evidence is available indicating the shortage of nurses with skills in primary health care, especially to service clinics in the rural areas e.g. in the Northern Province where the 1999 figures suggested a total of 2.4% of the total nurse body.<sup>15</sup> In view of this need, introduction of other option tracks within the four year comprehensive programme must be considered. These could include PHC, Integrated Management of Childhood Illnesses, and care of the elderly whose needs seem to be on the increase. Since there appears to be an overproduction of midwives, the non-optional status of the comprehensive programme components needs to be reviewed.

Taking into account the identified lack of clinically-based role models and preceptors to develop nurse learners with critical thinking skills, the need for clinically based mentors and preceptors needs to be officially recognised and supported by all management levels in nursing education institutions. The provision of preceptors must be consciously provided for and not left to chance. Because learners need to participate consciously in their development of critical thinking skills, nurse educators must be appropriately prepared for this task and be assisted to build learners' receptivity to the learning environment.

Since learning theories attest to the value of repeated exposure in the acquisition of proficiency and expertise, the existing system of prescribed hours for clinical experience must be sharpened to serve the purpose until a more suitable and practical alternative is found. For this to happen a scientifically guided, evidence-based investigation will have to be undertaken as a matter of urgency. In doing so it must be borne in mind that dispositional knowledge competencies are not always measurable.

To ease the burden in determining credits for RPL it is imperative that nursing curricula be constructed in a manner that ensures a singular point of departure for all categories of nurse learners at the basic level. Since the proposed unified nursing education system seems to provide for this need, this proposal will need to be further developed. In addition sound evaluation strategies for assessing the prior learning of candidates need to be given attention.

#### Chapter 14 HIV/AIDS - current issues

Chapter 15 HIV/AIDS - facts, figures and the future

Chapter 16 Models of community-based HIV/AIDS care and support

**Chapter 17 Tuberculosis** 

Chapter 18 Malaria

**Chapter 19 Child Health** 

**Chapter 20 Youth Health** 

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# HIV/AIDS current issues

South Africa has one of the highest incidence and prevalence rates of HIV/AIDS in the world. The fact that these numbers have been increasing during the period when the national AIDS response was being mustered and implemented is of particular concern. This chapter looks at some of the reasons why efforts to stem the epidemic have not been as successful as hoped. The HIV/AIDS and STD Strategic Plan 2000 - 2005 is analysed, as are issues such as access to treatment, voluntary testing and counselling, confidentiality and notification, and the controversial debate around the link between HIV and AIDS. Recommendations are given regarding the way forward from here.

Mary Crewe Pretoria University AIDS Unit

Dawn Betteridge National AIDS Convention of South Africa **CHAPTEI** 



### Introduction

Seventy-one percent of the estimated global total of people with HIV/AIDS live in sub-Saharan Africa.<sup>1</sup> In most sub-Saharan countries adults and children are acquiring HIV at a higher rate than ever before. There were 4.0 million new infections in the region during 1999.<sup>2</sup> South Africa has a high infection rate, and with a total of between 3.5 and 4.2 million infected people, has the largest number of people living with HIV in the world.<sup>3</sup>

HIV prevalence figures in South Africa are based on the results of annual, clinical, anonymous antenatal surveys undertaken at sentinel clinical sites. This surveillance, usually done each October, has been measuring HIV infection rates since 1990.<sup>4</sup> South Africa has been described as having one of the fastest growing epidemics in the world. From 1990 up to 1998 there had been a 32 fold increase with a slight flattening for 1999.<sup>3</sup> In 1990, South Africa had an infection rate of less than 1%. By 1999, an average infection rate of over 22.4% was estimated for antenatal attendees, as compared to Thailand that has remained at levels recorded in the early 1990's.<sup>5</sup>

HIV prevalence rose dramatically during the period when the national AIDS response was being mustered and implemented. Projections show that the country is likely to be in the throes of the AIDS epidemic by 2004.<sup>4</sup>





Source: Southern Africa Journal of HIV medicine, launch issue July 2000.

Increase in prevalence has been measured in all provinces, though the rate of spread and level of infection are uneven across the country. In 1998, infection rates rose in seven of the nine provinces and seemed to level off in the other two (the Western and Northern Cape). The prevalence ranges from approximately 7% in the Western Cape to 33% in KwaZulu-Natal.<sup>1</sup>



#### Figure 2: Provincial Rates, South Africa 1999

Source: The Impending Catastrophe, loveLife 2000.

Of the 4.2 million adults and children infected with HIV/AIDS as of the end of 1999 it is estimated that there are 2.3 million infected adult women (15-49 years) and 95 000 children (0 - 14 years).<sup>2</sup> The cumulative number of orphans<sup>a</sup> is estimated to be 420 000 and the estimated total number of deaths for 2000 is expected to reach 90 000.<sup>1</sup>

With more than 1 700 people infected daily with HIV, approximately 550 000 new infections are expected to have occurred over the last 12 months in South Africa. By the year 2005 the total number estimated to be positive in South Africa would be 6 million.<sup>3,4</sup>

At the present rates of AIDS or late stage HIV infection, estimates of death due to AIDS stand at 120 000 per year, with this figure climbing to 250 000 by 2002, and reaching one million per year by 2008. Current indicators are that we are running ahead of expected figures, and our total estimates are now 2 years ahead i.e. in 2000 we are in line with the projections for 2002.<sup>5</sup>

a Children less than 15 years who have lost a mother to HIV

The fact that there has been an exponential increase during a time of extensive HIV/AIDS prevention messages and a growing awareness of AIDS is of great concern, especially considering:

- South Africa now has one of the largest number of people living with HIV in any country in the world<sup>2</sup>
- The high rates of infection in women and men of reproductive and economically active age
- The projection that women of 20 30 years have the highest rates of all age groups and sexes, with prevalence rates of approximately 26%<sup>3,4</sup>
- The increasing mortality over the last 5 years across all ages including infants and especially amongst women<sup>6</sup>
- The decreasing life expectancy with 15 year old youth having a 70% lifetime risk of AIDS death<sup>2</sup>
- The impact of the epidemic on young black and economically poor women is more severe than in any other group.<sup>5</sup>

The reasons why the epidemic has spread so rapidly in South Africa, despite the experience of the USA, Europe and other African countries are many and complex. Factors including poverty, migration, the position of women, socio-economic conditions, unemployment, the challenge of development, illiteracy and poor education were all detailed in the introduction to the 1994 National AIDS Plan. These same factors continue to fuel the ongoing epidemic. The epidemic, in turn, exacerbates these factors, creating a cycle of infection and vulnerability, and leading to more poverty.

Increased susceptibility to infection is due to numerous environmental, cultural, class, racial and socio-economic factors. Being a newly democratic society in transition, with a developing economy, our vulnerability to its' impact is potentially immense.<sup>5</sup> In addition, through historical neglect, there are high rates of sexually transmitted diseases<sup>3</sup> amongst the population, a generally early age of sexual debut;<sup>7</sup> a high number of concurrent sexual partners; low levels of condom usage;<sup>8</sup> poor rates of successful STD treatment; high mobility of the society; high rates of poverty; low levels of literacy<sup>9</sup> and political manipulation.

In addition, it appears from meagre data at hand that South Africa has one of the highest rates of sexual assault in the world, but this crime is notoriously under-reported for many social reasons.<sup>7</sup>

There is no certainty at which level and when the epidemic will plateau.<sup>2, 5</sup> It is possible to predict an exponential increase in deaths across all ages, with a wave of deaths occurring over the next few years, and increasing numbers becoming evident with time.<sup>5,9</sup> South Africa currently ranks 103 out of 174 on the UNDP human development index rating, which places the country in the medium human development category. However, like her northerly neighbours, South Africa is seeing a reversal of its human development index because of a decrease in life expectancy, largely due to HIV/AIDS.

South Africa has one of the highest incidence rates per capita of TB in the world. HIV will continue to keep these levels high, if not push them higher, as more of the population becomes immune compromised and thus more susceptible to TB. This is also the case in children where it is estimated that between 30% and 50% of HIV infected children will present with TB during their life.<sup>10</sup> Many patients cured of TB will rapidly become re-infected and it is

not uncommon for patients with HIV to present with TB 2-3 times in a life-time, placing a huge cost on their health, as well as the system. TB results in increased morbidity and mortality of those dually infected.

The impact of HIV/AIDS programmes is hard to measure and takes time to manifest, but what is alarming are the rates of increase in areas where the overall prevalence rates are relatively low, e.g. the Western Cape which had a 36.5% increase from 1998 to 1999.<sup>4</sup> As South Africa had the experience of the rest of Africa to learn from, so the Western Cape could take lessons from the failed campaigns in the rest of the country. The Western Cape has the opportunity to introduce integrated multi-strategic and multi-sectoral programmes, which in turn could be copied by the rest of the country. The province did make the decision to move ahead on the introduction of AZT and Nevirapine to reduce Mother to Child Transmission (MTCT), but even this has been somewhat cautious.

# The HIV/AIDS and STD Strategic Plan for South Africa 2000 - 2005<sup>11</sup>

The precursor of the 2000-2005 Strategic Plan, the 1994 HIV/AIDS Plan was reviewed in 1997.<sup>12</sup> This was an extensive national review, which gave a very frank and critical assessment of the Plan. A series of findings from this review were presented to the Minister of Health.

#### The main strengths of the Plan were identified as follows:

- The general availability of treatments for the syndromic management of sexually transmitted diseases (STDs)
- ✤ An improved National TB programme
- Highly motivated community service organisations (CSOs) operating with limited resources.

#### The main constraints were identified as being:

- The delayed employment of personnel due to restructuring at national and provincial levels
- Limited human and financial resources at all levels
- Lack of adequate referral mechanisms and continuity of care, including hospital and home-based care
- Lack of integration of TB and the HIV/AIDS programmes
- Lack of multi-sectoral approach outside of Health.

On the 14<sup>th</sup> of January 2000, the National Department of Health launched the HIV/AIDS and STD: Strategic Plan for South Africa 2000 - 2005.

Essentially, this is a revised version of the 1994 AIDS Plan, which was only implemented in part. Although most provinces adopted policies that were based on the Plan, there was no united and co-ordinated effort to implement it. This may be because the implementation section of the plan was ambitious, costly and difficult to co-ordinate. Most government departments seem not to have used the plan as a working document.

Some important guiding principles of the 2000 - 2005 Strategic Plan, which were retained from the 1994 Plan, include:

- People with HIV and AIDS shall be involved in all prevention, intervention and care strategies
- People with HIV and AIDS, their partners, families and friends shall not suffer from any form of discrimination
- The vulnerable position of women in society shall be addressed
- Confidentiality and informed consent with regard to HIV testing and test results shall be protected.

The Strategic Plan has four Priority Areas:

- Prevention
- Treatment, care and support
- Research
- Human and legal rights.

Each priority area is detailed through:

- Objectives
- Selected strategies
- Lead agencies.

The Strategic Plan does attempt to create the mechanism for an integrated response, with other government departments, non-governmental organisations (NGOs) and communitybased organisations (CBOs) that are detailed in the Plan, being responsible for delivery in certain areas.

While it can be argued that this 2000-2005 Strategic Plan is simpler than the 1994 Plan, it remains somewhat generalised in terms of what is to be done and how resources are to be prioritised. The Plan does not sufficiently reflect an understanding of where we are in dealing with the epidemic, and what has been learned in the past six years. Strategies to turn the principles into reality require clearer crafting and development with clear, obtainable and measurable indicators being identified, and concrete steps need to be outlined as to how the goals are to be achieved.

Although the principle of having people with HIV and AIDS involved at all levels forms part of the plan, their voice needs strengthening. Despite the principle of having concern for the particularly vulnerable position of women, women's issues need to be made more prominent. The greater vulnerability of younger women to HIV transmission needs to be acknowledged, and there is a need for an indication of the steps that will be taken to address this. Confidentiality is acknowledged as one of the principles that underlies the Strategic Plan, but the Plan needs to state what mechanisms are to be put in place so that client confidentiality can be guaranteed. Commitment in the Plan to the provision of anti-retroviral treatments, such as AZT and Nevirapine, is unclear.

In a country that seems to be lacking a sense of urgency, the 2000-2005 Strategic Plan should capture this sense of urgency and give vision, purpose, and leadership while calling for decisive action. Plans for dealing with the impact of the escalating epidemic over the next ten years or more should be outlined.

The Plan needs to deal with some of the important issues which will impact on South Africa. These include:

- Community devastation
- The skills shortage within all sectors, especially those of service delivery
- The burden of costly funerals on communities
- The loss of creativity and talent
- Erosion of parental authority.

It requires a timeline to be put in place, as well as mechanisms for monitoring and evaluating progress. A more concrete and measurable plan would enable various departments to identify a clear way forward, and sectors other than health to build on a solid base. Support for various departments and sectors, in terms of the development of their operational plans, needs further development.

There are several questions to be asked of the Strategic Plan, given that this is the response almost 20 years into the epidemic:

- Who takes the overall lead?
- Who takes the ultimate responsibility?
- What power does the South African National AIDS Council (SANAC) have?
- Who sets the national priorities?
- Who determines and allocates budgets?
- What are the time frames for the various strategies?
- With what authority can the Technical Task Teams<sup>b</sup> make recommendations?

To be effective against HIV and to be able to mitigate the effects of AIDS, an integrated plan needs to be strategic and also to command sufficient resources. Financial resources need to be guaranteed, but there is ongoing and distressing evidence that the AIDS budget has been consistently under-spent, both nationally as well as provincially.<sup>13, 14</sup> This in part may be a reflection of a lack of decisiveness and clarity in the Plans, and the failure to generate a united response. There are in effect 10 responses to HIV/AIDS in South Africa - the national plan and the nine provincial ones. On paper these are a united response, but in reality there are still tensions between the different spheres of government as to who is able to do what. It is not clear as to what authority provinces have in determining their own collective response.

Resources in the form of trained personnel support staff and counsellors should be committed to assist in implementing the Strategic Plan, and CBOs and NGOs should be involved so that available resources are used as effectively as possible. This has been slow in getting off the ground. NGOs and CBOs feel that they are able to do more. Their potential should be recognised and support funding should be easier to obtain.

The national response has to be viewed in the context of the size and growth of the epidemic. By world standards, we have so far not been successful in halting the spread of this disease in South Africa.

b The task teams that give advice to the South African National AIDS Council

To succeed, the Strategic Plan requires:

- Commitment at all levels
- Understanding of the science of HIV and AIDS
- Understanding of the economic and political issues
- Action that is decisive and strategic
- Recognition of what did not work in the past and why
- Finding ways to understand what does work, and how such interventions can be strengthened and replicated.

### Does HIV cause AIDS?

At the same time as the Strategic Plan was launched, an AIDS controversy was raging in the country. This was over the question, raised in debate by the President, about the causal links between HIV and AIDS. From the President's office came the question of whether HIV was sufficient to cause AIDS, and indeed whether there was any link between them.

The debate was raised in the light of views of AIDS dissidents. These dissidents, represented most forcefully by Peter Duesberg and David Rasnick, claim that there is no clear evidence that HIV causes AIDS, but rather that there is evidence to show that the so-called anti-AIDS drugs cause AIDS.<sup>16, 16</sup> The debate is over a decade old and has been roundly dismissed, but it was revived in South Africa. Coupled with this question was the question of what is it about AIDS in Africa that might make HIV/AIDS such a different epidemic as compared to the West, requiring different treatments, responses and interventions.<sup>6, 15, 17-19</sup>

To answer these questions the President convened a specialist panel with members comprising AIDS dissidents and people who held the view that there is a proven, causal connection between HIV and AIDS.<sup>6,15</sup> The debate was put forward as being between two competing and equal views - the so called orthodox view and the dissident view and, in a clear misunderstanding of how science works, it was hoped that a consensus view would be reached over two meetings, but this did not prevail. The report from the meetings and the subsequent cyber discussion is still awaited.

By the time of the Durban conference in July 2000 the debates were heated and led to the Durban Declaration<sup>20</sup> in which over 5 000 scientists worldwide re-affirmed their belief that HIV was the cause of AIDS.

The debate was accompanied by a disconcerting insistence upon accepting the official line and the net effect was that it created in the minds of many people yet another reason to doubt the existence of HIV/AIDS. It fed into the denial and the refusal to take seriously the behavioural connection between sex and HIV infection, and it is believed by many health workers that HIV/AIDS campaigns were seriously set back. Once broken, safer sex behaviour patterns might be impossible to revisit, and at this stage of the epidemic, such a reversal in understanding and behaviour would have grave consequences.

The failure on the part of the Department of Health, and especially the Minister, to state early and categorically that HIV is the cause of AIDS, as well the refusal to give a direct answer to a direct question, was regrettable.<sup>17</sup> Subsequent claims that the national intervention programme is being based on the premise that HIV does cause AIDS were confusing for many. The Director General and the Director of Maternal, Child and Women's

Health in the Department of Health did express their views that there is a causal link between HIV and AIDS; albeit somewhat belatedly. While it gave some security to people working in the field, it occurred late in the debate, and people could have been unaware of it.

The debates<sup>c</sup> have had a positive spin off in that HIV/AIDS has been given a higher profile than ever before and in the ferment of discussion, denial and accusation, there is the sense of renewed commitment to new and successful campaigns.

#### Access to treatment

One aspect of the debate was the question of the provision of treatment. This was linked, in the first instance, to the government's refusal to sanction the use of AZT for pregnant women and rape survivors, questioning of the efficacy of AZT particularly for the "African" setting. The Treatment Action Campaign (TAC) was founded in 1999 to be a pressure, lobbying and advocacy group for improved access to treatment for all.

At the heart of the treatment question are three fundamental issues:

- First, the retention of patents by pharmaceutical companies with the link to the high cost of drugs
- Second, the restriction on imports of generic medicines
- Third, the ability of South Africa to administer and monitor the use of drugs and supply adequate nutritional and medical infrastructure to ensure the safety of people taking these drugs.

The South African government has been in a protracted dialogue with the pharmaceutical industry and there has been a great deal of debate about how drug companies appear to be profiteering from the illness of people with HIV and AIDS. A few major companies have announced free supply of certain drugs, or the provision of drugs at greatly reduced prices. However, in some cases these have been found to have restrictive conditions attached, raising the concerns of government and AIDS activists, and thus delaying access to these medications (see the chapter on Drug Pricing.) The important positive aspect is that negotiations continue and prices appear to be coming down.

The reasons for government's objections to the provision of the drugs, and to the acceptance of the free/reduced price offers remain unclear. Government has been cautious in accepting the results of the trials that show the significant cost effectiveness of Nevirapine and AZT on the rate of MTCT, and after much pressure, limited new trials are now being undertaken in provinces.<sup>24</sup> Quite apart from the human rights issues of not giving women access to a proven and effective drug, there is also the consideration of what the effect of such an intervention would be on the rate of the epidemic. There is clear evidence to show that access to the counselling and testing that would accompany a drug programme would have a significant impact on limiting the progression of the epidemic.<sup>23, 24</sup>

c These debates/mixed messages and intellectual confusion around the origin and pathogenesis of HIV, the level of infectiousness of the virus as well as its detection are described in many texts.<sup>6, 15, 17</sup> However, the scientific explanations for the link between HIV/AIDS are very clear. The virus has been isolated and photographed by electron microscopy, showing virus budding off an infected T-cell surface.<sup>21, 22</sup> Contaminated bodily fluids transmit it and that includes sexual transmission. The Elisa tests and the other more recent rapid tests are very reliable and positive tests are always checked for confirmation and to rule out human error. Most people who are HIV positive will unfortunately progress to fully developed HIV infection and AIDS (although there are medications - anti-retrovirals - that can dramatically slow down this process).<sup>23</sup>

The government has raised the question of cost of drugs, stating that in the current financial climate and with all the competing demands they would be unable to afford the treatments. The debate has centred on what is affordable and what is cost effective. It may be difficult for the government to afford the treatments now, but it would certainly be cost effective in terms of the cost of replacing the skills lost to AIDS deaths, and the costs of providing care for the dying.

Clearly this is a complex issue. There is no doubt that people on the complicated combination drugs would need skilled and careful medical attention, and there is also a need for physicians to develop those skills. The debate about drugs comes at a time when some provinces (for example Gauteng) appear to be reducing their dedicated HIV clinics, thereby reducing the level of specialised skills available.

Party politics has also entered the fray, detracting from the central issues which impact on the whole country. The toxicity of anti-retrovirals has been stated as a reason for not providing greater access to them. However this argument is undermined by the fact that members of Parliament can access these drugs through their medical aid scheme.

The Medicines Control Council (MCC) has been cautious in getting the registration process completed for the broader use of anti-AIDS drugs such as Nevirapine and has also been restrictive in how they have granted licenses for use.

No one doubts the effects that HIV infection and AIDS illness will have on the country, that many of the possible development gains will be eroded, and that the country will face unprecedented levels of suffering, as well as a threat to social, political and economic security. It must be asked whether, in the light of this and the overwhelming epidemic that is being faced, the most constitutional and effective decision would be to provide comprehensive treatment and care.

There is little doubt that an effective HIV vaccine would be a major factor in dealing with HIV. However, it is also the case that there is unlikely to be an HIV vaccine before 2008, and by then many thousands of South Africans will have been infected and died.<sup>25-27</sup>

# South African National AIDS Council

The South African National AIDS Council (SANAC) is supported by technical task teams, made up of 5 expert groupings whose function it is to assist and advise the SANAC and which to some extent mirror the strategies of the Strategic Plan 2000 - 2005:

- Prevention
- Care and Support
- IEC and Social Mobilisation
- Research, Monitoring, Surveillance and Evaluation
- Legal Issues and Human Rights

Other key support committees to the Strategic Plan are The Inter-Ministerial Committee on AIDS (IMC); The Interdepartmental Committee on AIDS (IDC); MinMec;<sup>d</sup> the provincial health restructuring committee;<sup>e</sup> the Director-General forum and the HIV/AIDS

d MinMec is comprised of all provincial MECs for Health and the national Minister of Health. This committee meets every six weeks. They approve national policies and guidelines.

e This committee is made up of all provincial Heads of Health, and meets monthly.

and STD Directorate in the national Department of Health. The Directorate facilitates the workings of the Technical Task Teams.

SANAC has to be more vocal about the debates of the last year. This Council is the highest body that advises government on all matters relating to HIV/AIDS. It is chaired by the Deputy President and made up of 15 government representatives and 16 civil society representatives. This body is in a position to advise the government on the effect of the HIV/AIDS debates as well as on the appropriate way in which to deal with the subsequent controversies. To be more effective, SANAC has to be clearer about where it stands and what it supports.

In response to the perceived shortcomings in the make-up and functioning of SANAC, a shadow national AIDS council has been established. This body attempts to highlight the kinds of questions which the SANAC should be debating.

#### Voluntary testing and counselling

Part of the government's strategy is to encourage the development of voluntary counselling and testing (VCT) sites at district level. It is hoped that this will have a number of benefits:

- More people will come forward for counselling and testing and ongoing support
- Having an HIV/AIDS test will be normalised
- More people will feel secure in disclosing their HIV status to partners, families and associates.

Establishing such a programme relies on a body of well-trained counsellors and on the facilities to provide testing free of charge in a supportive and enabling environment. Despite having a programme to develop minimum standards for counselling for close on five years, this has not yet been established and not enough counsellors have been trained to make VCT available nationally at the primary level. But there is some evidence from Zimbabwe to show that VCT programmes do not always have the desired effect.<sup>28</sup> People who have been tested tend to have increased morbidity and mortality, believing their status to be some form of punishment. Women tested in antenatal clinics may suffer from increased postnatal depression, especially where there is little perceived benefit offered to patients.<sup>29</sup> VCT requires a full support network for a continuum of care from the test through to illness and possible death.<sup>30</sup> There needs to be an established network of home-based care, home visitors and extensive support structures. For VTC to be effective, there has to be a continuum of care.

Dealing with HIV/AIDS is not only a case of making the present more manageable, but of transforming the conditions under which people live and how they deal with the illness and death of themselves, close family and friends.

It is believed that VCT will help to reduce the stigma which still surrounds HIV and AIDS and that people will be able to disclose their status in an environment of security and trust. It is also believed that VCT will improve the health services for People Living with AIDS (PWAs) in that nurses will gain greater experience and that clients will get early diagnosis and support. However, in the absence of treatment, disclosure may not be what people wish to do. VCT can only work where there is some support and treatment following diagnosis.

# **Confidentiality and notification**

Believing that the secrecy that surrounds the diagnosis of HIV was contributing to the stigma and prejudice surrounding HIV and AIDS, the government, in 1999, announced its intention to make AIDS a notifiable disease. This they believed would help to normalise AIDS and encourage greater openness. This decision was challenged on a number of grounds. It was believed that:

- It would drive the epidemic underground
- Having information on the number of AIDS cases would have no bearing on the number of HIV cases and thus not be of any use in planning for the future impact of the epidemic
- The parameters of "close family" in the legislation was too broad
- In the absence of legislation to protect people with HIV and AIDS, greater hostility to people with HIV and AIDS was likely, as this was the tone of these regulations.

There was a call that, since government was asking people to disclose their status, the leadership for this initiative should come from government itself and that prominent people living with HIV and AIDS should declare their status to make the path of disclosure easier for other people. To date this has not happened and the debacle surrounding the death of the Presidential Spokesman Parks Mankahlana highlighted what happens when there are rumours about HIV and AIDS in a society that looks to sensationalise rather than to normalise an illness.<sup>31</sup>

# **Conclusions and recommendations**

The UNAIDS report on the global HIV/AIDS epidemic of June 2000 summarises the common features of effective national responses that have brought about a decrease in the incidence of HIV, or at least stabilised the epidemic.<sup>2</sup>

These are:

- Political will and leadership
- Societal openness and determination to fight against stigma
- ✤ A strategic response
- Multi-sectoral and multi-level action
- Community-based responses
- Social policy reform to reduce vulnerability
- Long-term national/global response
- Learning from experience
- Adequate resources

It is possible to see, in general terms, that the South African response in the Strategic Plan does address these factors. But these UNAIDS factors are also generalised and lacking in specific detail of how such a programme is implemented effectively.

For South Africa to survive this catastrophe we need strategic leadership, especially at the political level, as well as from our community, religious, private and academic sectors. We need a clear, focused and incremental approach to education and service delivery on all aspects of HIV/TB/STD's, from prevention through to care and support.

Linked to education are comprehensive communication strategies. Information needs to get out and reach the entire population. For this to work requires an integrated multi-sectoral response at the district level, with national support and the appropriate legal framework. Clear milestones have to be laid, achievable goals with timelines have to be set, and this requires effective management at every level.

Women and positive people have to feel part of the plan and we all have to own it. Hope has to be given; without it we will be a destroyed nation. All of the above came out in the 1997 review<sup>12</sup> and yet, three years down the line, how much closer to these goals are we?

Despite more than a decade of policies and programmes to manage the HIV/AIDS epidemic, South Africa has not yet made any significant impact on the rate of the epidemic; although there are some signs that this is beginning to change.

We do now have a Strategic Plan which is "not a plan for the health sector specifically, but a statement of intent for the country as a whole, both within and outside of government. No single sector, ministry, department or organisation is by itself responsible for addressing the HIV epidemic."<sup>11</sup> However implementation of the goals of this Plan is still awaited.

It is essential that we cease to see prevention and care as separate entities. By offering and providing a comprehensive and holistic programme with hope and care and with the aim of achieving positive outcomes, more people will feel part of the national response.

To quote Dr Jonathan Mann "...separation and fragmentation dominate... Few if any, can tell us, clearly and coherently, what our global strategy is today. Instead of a strategy, we have a series of tactical approaches. We have learned that traditional, individually-focused, HIV risk reduction efforts, while necessary and useful, are clearly not sufficient to control the pandemic... public health must deal directly with the societal conditions which create and enhance vulnerability to HIV." Although this is meant in a global context, it does also have a national relevance to South Africa. He goes on to say "... true healing requires connecting with others; the creative, religious, and artistic life of every culture celebrates this fundamental reality. To be connected is to choose life."<sup>32</sup>

Our response must be based on a calm sense of urgency and solidarity, and carried out with a sense of connectedness, not panic. Only together can we turn the tide.

# OUR CHILDREN LIVING NAWORLD WITH AIDS facts, figures and the future

Using data obtained from annual surveys of pregnant women attending public sector antenatal clinics, this chapter attempts to estimate the current and future size and impact of the HIV/AIDS epidemic by means of projection models. The chapter looks at the possible impact of HIV/AIDS on the economy of the country as well as the economies of households, the capacity of traditional coping mechanisms to deal with ill and dying people and orphans, future health care costs in both the public and the private sectors, and the possible impacts of various interventions on the growth of the epidemic.

This paper is adapted from a report published by loveLife with support from the Henry J. Kaiser Family Foundation. Demographic projections were undertaken by Metropolitan Life AIDS Research and Consulting.

Malcolm Steinberg Anthony Kinghorn Neil Söderlund Gill Schierhout Shaun Conway *Abt Associates* 

Authors

#### Introduction

Despite the scale of the HIV/AIDS epidemic, there is relatively little data on impacts at personal community, firm or national levels. One reason for this is undoubtedly the enormous stigma that is still attached to HIV infection. Routine anonymous surveys of public sector, antenatal clinic attendees remain the only national source of information on the scale of the epidemic. Thus assumptions regarding impact have to be based on mathematical simulation models which are calibrated to antenatal data. This methodological approach underlies much of the work contained in this chapter.

Most data on the South African HIV/AIDS epidemic is obtained from the anonymous, annual survey of pregnant women attending public sector antenatal clinics. HIV infection levels in the general community in South Africa are thought to be lower than in the public sector antenatal clinic attendee population. Children and the elderly, who are at substantially lower risk of HIV, are not captured by antenatal surveys. Even among adults in sexually active age groups, the antenatal survey prevalence figures do not reflect the lower overall risk of men, people who are less sexually active, and communities using the private sector. On the other hand, recent studies indicate that fertility among HIV positive women is substantially lower than among uninfected women, and this suggests that antenatal data may in fact underestimate HIV prevalence in women of reproductive age in many communities.

Although imperfect, these data are sufficient to estimate the current and future size and impact of the epidemic by using projection models, particularly the Doyle simulation model (see appendix 1), to extrapolate from antenatal clinic attendees to the rest of the population.

It is important to emphasise that these data only provide a picture of the epidemic for the general population by provincial area, gender and age. While these data give some sense of the different risk profiles in the population, additional surveys serve to remind us that the majority of the population is at risk of HIV infection and that certain sectors of the population are at much higher risk of infection than the general population. Provincial estimates from these data mask large differences between regions and HIV impacts on specific communities within any region may differ markedly.

For example, in a survey that explored HIV infection rates among people aged 20-50, in a sub-provincial area, estimates ranged from 21% among people living in private houses to 36% among those living in informal settlements.<sup>1</sup>

# Projections for the future impact of the epidemic

#### **HIV** prevalence

It is estimated that around 3.5 million South Africans are currently HIV infected. This number is projected to more than double over the next 10 years (in the absence of any major behaviour changes that could significantly alter the course of the epidemic) and there could be around 5.3-6.1 million infected individuals by 2005, and 6-7.5 million by 2010. Figure 1 shows projected numbers of HIV infected individuals - best and worst case scenarios.



#### Figure 1: Projected numbers of HIV infected individuals - best and worst case scenarios

While there are large provincial variations in HIV infection levels, the antenatal survey has thus far shown similar epidemic patterns for all provinces except the Western and Northern Cape, indicating that current differences can be attributed more to time lags than intrinsically lower risk of infection. This suggests that in most provinces the epidemics in populations served by public sector health services could well be of similar severity to the provinces worst affected at present.

Approximately 13% of all South African adults aged 20-64 are currently infected and these levels could rise to 20-23% by 2005 and 22-27% by 2010. HIV is a disease that mostly affects younger people with around half of all adults who acquire HIV becoming infected before they turn 25. These young people typically die of AIDS before their 35th birthday. Figure 2 shows the proportion of all new infections projected between 1995 and 2010 by gender and age categories.

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Gender differences are also quite pronounced, with women at highest risk between the ages of 15 and 20, whereas men probably achieve their highest incidence at older ages. Infection levels among teenagers, which tend to be the first to reflect reduction in risk behaviour, are still increasing at alarming rates. Fifty three percent of South Africa's population is under the age of 25 years, emphasising the enormous impact that infection on young people will have on the population as a whole.

#### AIDS cases

There are currently between 159 000 and 163 000 people estimated to be living with AIDS in the country. This will rise rapidly over the next decade to almost a million by the year 2010, when it will not yet have reached its peak. Half a percent of all adults are expected to

have AIDS in the year 2000 and this will rise to between 2.8 and 3.2% by 2010. Figure 3 shows the projected numbers of AIDS cases under best and worst infection scenarios.



Figure 3: Projected numbers of AIDS cases under best and worst infection scenarios

#### **AIDS deaths**

The number of deaths each year due to AIDS is expected to rise rapidly in South Africa from around 90 000 in 2000, to between 354 000-383 000 in 2005, and up to 545 000-635 000 for the year 2010. Figure 4 shows the estimated AIDS and non-AIDS deaths in 2010 by age. AIDS deaths will soon outstrip non-AIDS deaths in adults in the economically active age groups. In the most severely affected provinces, the proportion of the adult population dying from AIDS will reach 2.2-2.6% by 2010.





### Impact of HIV/AIDS on population size and structure

HIV/AIDS will impact on population directly through deaths of infected people. In addition, birth rates are expected to decline due to deaths among people in relatively high fertility age groups, and reduced fertility of HIV-infected women. In the absence of HIV/AIDS, the South African population would have been expected to grow from 43.7 million in 1999 to 51.3 million in 2010, with a growth rate of around 1.7% in 1999, falling to around 1.5% by 2010. As a result of HIV and AIDS, the population is now expected to reach only 47 million in 2010 under a best-case scenario. Under the worst scenario, the population will peak at 46.7 million in 2008, and have slightly negative growth thereafter.

# Effect on households

Although the HIV/AIDS epidemic affects all sectors of society, poor households in South Africa carry the greatest burden of disease, experience the greatest negative impacts and have the least reserves available to cope with the disease. Many households in South Africa have to provide care in cramped housing with limited or no access to basic amenities such as water and sanitation. Household impacts of HIV have received minimal research attention in South Africa,<sup>2</sup> and it is critical that government and international funders commit resources to this task as soon as possible. The discussion which follows draws from anecdotal evidence and research from other countries.<sup>3</sup>

The most severe impact of HIV/AIDS occurs at household level. The impact of HIV/AIDS is greater than for other diseases for several reasons.

- AIDS mainly strikes adults aged between 25 and 45, so people are ill and die in the years in which they tend to have the greatest role as providers, carers and nurturers. Financial impacts of AIDS on households have been shown to be as much as 30% more than deaths from other causes.<sup>4</sup>
- Enormous costs can be incurred for anti-retroviral drugs and other drugs, sometimes for long periods of time, and these are not paid for by the State or by most health insurers, thus depleting household savings.
- The disease is stigmatised, and this prevents affected people from accessing some of the few means of social support that they might be eligible for.
- AIDS typically strikes more than one household member.

# Impact on household economies

Initial household impacts due to HIV status and societal discrimination can include loss of insurance and medical benefits, as well as costs of pre-AIDS treatments or attempts to find a cure. Once a household member develops AIDS, increased medical and other costs, such as transport to health services, occur simultaneously with reduced capacity to work, creating a double economic burden. Members who would otherwise be able to earn income or perform household and family maintenance activities may now spend their time caring for the person with AIDS.<sup>5</sup>

Many families may become entirely dependent on an elderly member's old age pension, other social support grants, or sale of assets.<sup>2</sup> Expenses will often reduce ability to pay for children's education, food, housing, basic utilities and home maintenance, causing economic losses that will extend well beyond the affected person's death. Many families will use a

large proportion or all of their remaining resources to cover burial costs. Burial conventions, including large outlays and attendance requirements, resulting in travel expenses to relatives and community members, who often live far apart, may change as the epidemic progresses. Surviving members, including children, may be forced into very low paid work, crime or sex work, which would in turn perpetuate the epidemic.

#### Impact on women

Women are particularly heavily affected by the epidemic. They are at greater risk of infection due to biological, social and economic factors, and are also more vulnerable to impacts for several reasons. Women headed households in South Africa tend to be poorer than those headed by men, and therefore have less reserves.

Unemployment is far higher amongst women than men. Even amongst married women, there is a high level of economic maltreatment; a recent survey indicated that partners of one in five married women regularly withheld money for essential living expenses, such as food, rent or bills, whilst having money for other things. Violence against women is high, with 13% of women reporting being beaten by a partner. Many women face risk of abandonment and abuse, following disclosure of HIV positive status. Women traditionally provide care to the terminally ill, and girl children in particular may be required to provide care especially in single-parent households or when one parent has already died of AIDS.<sup>6</sup> Widows may become dependent on a husband's male heir for support under some customary legal arrangement, which may make them more vulnerable.<sup>2</sup>

# Orphans

Orphans are perhaps the most tragic and enduring legacy of the HIV/AIDS epidemic. Caring for them is one of the greatest challenges facing South Africa. By 2005 there are expected to be around 800 000 orphans under the age of 15, rising to 1.95 million in 2010.<sup>a</sup> This is shown in Figure 5.





Many orphans will grow up as street children or will form child-headed households to avoid being separated from siblings.<sup>7</sup> Others will be brought up by grandparents with limited capacity to take on parenting responsibilities. All will have been traumatised by the illness and death of parents, and often by separation from siblings.<sup>8</sup> Trauma will be exacerbated by stigma and secrecy around HIV/AIDS that hampers the bereavement process and exposes children to discrimination in their community and even extended family. Orphans will probably be more susceptible to becoming HIV-infected through abuse, sex work or emotional instability leading to high-risk relationships.

As children grow up in these pressurised circumstances, without adequate parenting, support and opportunities, they are at high risk of developing antisocial behaviour and of becoming less productive members of society. The consequences for affected children and society as a whole will be profound.

# Capacity of traditional coping mechanisms

Throughout Africa, households and communities have shown remarkable capacity to cope with HIV/AIDS impacts, including orphan care. However, even strong coping mechanisms have often broken down under the huge burden imposed by HIV/AIDS. Certain households (e.g. poor, single parent or breadwinner, multiple infected members) are more vulnerable. In addition, short-term coping may hide long-term impacts on individuals and society through factors such as reduced childcare and education.

In South Africa, traditional extended family and community coping mechanisms are likely to be weak in comparison to many other African countries because apartheid has left a legacy of disrupted family and communal life. Rapid urbanisation and expectations that the State will provide health care and other support have weakened mechanisms further. A 1992 survey indicated that 62% of Sowetans felt that care for AIDS orphans was government's responsibility. Only 28% felt that relatives should take care of them.<sup>9</sup>

South Africa, unlike many affected countries, does have a formal welfare system, including institutional care of orphan or foster care support. However uptake of foster care grants is low, and even at current uptake rates, large cost implications of HIV/AIDS have been projected. Costs of institutional care are prohibitively high. Alternate models of providing support for vulnerable children and communities need to be explored urgently.

#### **Economic impact**

#### **Background: The South African Economy**

The HIV/AIDS epidemic confronts South Africa at a time its economy has shown growth averaging 2% p.a. between 1995 and 1999, and inflation averaging around 7% p.a. Although its GDP per capita positions South Africa as a middle income country, this masks large differences between rich and poor. South Africa's Gini coefficient of 0.61 is among the highest in the world, and is large relative to other African countries such as Kenya (0.57) Nigeria (0.59) and Zambia (0.44).<sup>10</sup>

Manufacturing is the largest contributor to GDP in South Africa, followed by community, social and personal services. The greatest percentage of workers is employed in these sectors. Some industries, notably mining, are undergoing a rapid shift from labour-intensive to mechanised production methods. The government's current strategy is to spur economic growth via restraint in public spending and encouraging international investment. It has done little to directly stimulate employment.

Current unemployment in South Africa is estimated to be about 30%, and despite modest economic growth, there has been a steady shedding of formal sector jobs throughout the 1990's. Unemployment amongst women is far higher than that of men, with approximately 38% of women and 22% of men unemployed. There are large provincial differences in unemployment rates, ranging from a low of 19% the Western Cape to a high of 41% in the Northern Province and Eastern Cape.

#### Effect of HIV/AIDS on businesses

The HIV/AIDS epidemic primarily affects working age adults and far outweighs any other threat to the health and well being of South African employees. AIDS deaths will soon exceed all other causes of death put together amongst employees in South African workforces. Over the next 10 years, the number of employees lost to AIDS is expected to be the equivalent of 40-50% of the current workforce in many South African firms.

At the level of individual businesses, HIV/AIDS among managers, employees and their families will impose significant direct and indirect costs. Direct costs to companies include costs of health care and other employee benefits. However, as lower income earners who are disproportionately affected typically have few benefits, HIV/AIDS impacts on these direct costs will not be as much as may have been expected. Nonetheless, HIV/AIDS is already resulting in rising costs of employee benefits in South Africa. The cost of an average set of risk benefits is expected to double over the next 5-10 years, unless they are restructured.

Projected cost increases, for specific benefits, as a percentage of salary in South Africa, are illustrated in Table 1.

	1997	2002	2007
Lump sum death or disability benefit	1.5	2.9	4.5
Spouse's pension	4.0	5.9	7.5
Disability pension	1.5	2.1	2.6

Table 1:	Projected costs of risk benefits as	s a percentage of salary in South Africa
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Source: Metropolitan Life Ltd

The most significant costs for most companies are likely to be indirect. These costs include costs of absenteeism due to illness or funeral attendance, lost skills, training and recruitment costs, and reduced work performance and lower productivity. Obviously, these costs are most striking for skilled workers, where instant substitution is more difficult. By 2010 it is estimated that approximately 15% of highly skilled employees will have contracted HIV.

The vulnerability of businesses to HIV/AIDS impacts will vary, depending on factors such as the type of business and production processes. Labour intensive firms may appear to be at higher risk of lost production. The impact will depend on the ease with which employees can be substituted, however. For a high skill, labour intensive industry, such as education, it will be very costly to retrain replacement staff, whereas low-skill industries such as commercial cleaning will be easily able to find replacement employees even at the height of the epidemic.

Some capital intensive industries can be more vulnerable to HIV/AIDS than labour intensive ones, where employees specialise in operating particular machinery. Within the mining industry, for example, gold mine employees have borne the brunt of the HIV epidemic, but because there is relatively little task specialisation, production has not been seriously affected. Coal mining, on the other hand, employs small numbers of machine operators each performing specialised tasks, and loss of a few operators can lead to substantial production losses.

Other factors influencing costs include the risk profile of employees, risk modification attempts by firms, and the degree to which work processes have been planned to take HIV infection into account.

For most businesses, costs of HIV/AIDS among employees are unlikely to be devastating in any one year but, over time, costs will be substantial, and will affect international competitiveness in particular. In some firms, illness and death of owners or key managers may be disastrous. Small and medium size businesses reliant on local skilled people are probably particularly susceptible.

Businesses may also be susceptible to inadequate responses to HIV/AIDS among key suppliers. Particularly important are likely to be water and electricity, telecommunications and basic government service suppliers, where breakdowns due to HIV/AIDS impacts could have a downstream effect on many other firms. Impact assessment and forward response planning by all sectors of government will be critical to minimising these impacts.

#### Impact on markets

HIV/AIDS will also impact on the growth of many markets for goods and services. Vulnerability of particular markets will be influenced both by the nature of the good or service produced, and the demographic and risk profile of consumers. Certain markets will even expand, most notably for health care services.

Probably the most profound impact on consumption will be in distributional terms. Affected households are likely to divert expenditure to HIV/AIDS-related needs such as health care and funeral expenses. "Luxury", non-essential goods with high income elasticities of demand are likely to be more susceptible to household expenditure shifts to HIV/AIDS-related expenses. HIV/AIDS is also expected to increase polarisation of incomes and expenditure. Poor households, which will bear the main burden of illness and deaths, will be pushed further into poverty. Many middle income households will fall back into poverty. Market growth for goods and services targeted at upwardly mobile households may be more severely affected.

The risk of default on credit payments will also increase significantly in response to the epidemic. Pre-loan testing will offset some of this, but for long term loans, such as mortgages, this will be of limited value as borrowers will have a high probability of becoming infected after approval of the loan. Long term lenders and insurers have already begun adapting products to reduce their exposure. Furthermore, affected households will need to draw on savings for more immediate needs, thus reducing savings levels and credit supply.

# Macroeconomic impact of HIV/AIDS

Any estimates of the macroeconomic impacts of HIV should be treated with circumspection. Economists have great difficulty predicting the effect of factors that have been studied for the last 100 years on economic growth. It should thus come as no surprise that predicting the likely effect of a new phenomenon like AIDS is a far from exact science. Having said that, the impact of HIV/AIDS on economic growth is anticipated to be relatively small compared to other shocks like war, significant natural disasters, and cyclical and global economic events. Nonetheless, the epidemic has the potential to reduce growth through:

- Reducing the numbers of workers available in the economy (human capital) and increased production costs; these may reduce international competitiveness
- Decreased public sector, corporate and personal savings due to health care and other HIV/AIDS related expenses, which in turn may reduce investment, and drive up the costs of capital
- Reduction in direct government investment in areas such as infrastructure and education due to diversion of expenditure to HIV/AIDS needs.

Impacts on human and social development are expected to be much more profound than reflected in very limited indicators such as GDP or per capita GDP. Increased illness and deaths, and reduced life expectancy, will clearly compromise development objectives. Affected people, particularly orphans, will also have greatly reduced chances of fulfilling their human potential. Apart from disadvantages of reduced nurturing, many affected children will have less educational and other opportunities. HIV/AIDS is also likely to increase socio-economic disparities. HIV/AIDS can be expected to exacerbate poverty and inequality.

### Health care cost projections

One of the most immediately evident economic impacts of the HIV/AIDS epidemic is the increasing need for resources for caring for people ill with AIDS. Although these are not routinely measured, they can be estimated using demographic projection models and currently observed HIV-associated health care costs.

South African health care is characterised by two largely distinct funding and provision environments. The private health sector is funded mainly via employment-related health insurance schemes, covering around 20% of the population. The balance of the population makes use of a publicly funded hospital and primary care clinic system funded out of general tax revenue. Although public hospitals are required to charge means tested user fees, services are essentially free of charge.

A mathematical simulation model was used to project likely health care expenditure increases due to AIDS in both public and private sectors. This approach assumes that levels of care offered early on in the epidemic (1992-1996), and associated expenditure per affected person, will be maintained despite increasing levels of illness. It thus gives an estimate of likely costs should all needs continue to be met at mid-1990s levels. The data sources and methods underlying these projections of health care costs are described in appendix 2.

#### Public and private sector impact

Both public and private sectors are likely to be seriously affected by the AIDS epidemic, with whole population seroprevalence levels reaching 13% and 9% respectively by 2010 under the best projection scenario. Impacts on the private sector are likely to be delayed compared to those on the public sector. While public sector data can easily be confirmed by comparison with antenatal sero-survey data, there is little by way of confirmatory prevalence data for the private sector. We are also likely to see a change in the relative mix of different stages of disease across the study period. As the epidemic progresses, a greater proportion of people will be in the later stages of disease, as the pool of newly infected people declines and the bulk of infected people enter the late stages of disease.

Health care costs differ significantly at different stages of disease. Table 2 shows estimated in-patient and outpatient average costs of care per year for public and private sectors by stage of disease.

		Public sector		Private sector		
	Total	inpatient	outpatient	Total	inpatient	outpatient
Stage 4	R 17 000	R 15 500	R 1 400	R 38 300	R 35 100	R 3 200
Stage 3	R 6 200	R 5 200	R 1 000	R 14 200	R 11 800	R 2 400
Stages 1 and 2	R 1 300	R 700	R 600	R 3 000	R 1 600	R 1 400

#### Table 2: Average cost of care per infected person per year by stage and sector

Importantly, neither include the costs of anti-retroviral therapy. Triple anti-retroviral therapy costs around R44 000 per year according to a recent study from Costa Rica,<sup>11</sup> with another approximately R7 000 per year required for monitoring.
When demographic projections are combined with cost data, expenditure projections are produced until 2010. Figures 6 and 7 show these for the public and private sectors respectively in constant 2000 terms. Costs include all acute in and outpatient care but exclude prevention activities, long-stay and rehabilitation activities, and administration and management costs in both private and public sectors.









Acute health care costs would be expected to more than double in real terms in the public sector if levels of care were to remain constant. The proportional impact on the private sector is significantly less than in the public sector. This is partly because of lower infection

rates, and partly because of high levels of expenditure in the private sector on non-HIV related interventions, which are not commonly provided in the public sector. The main form of care that falls into this category is elective surgery for non-life-threatening conditions, for example, hip replacements, cataract surgery, and hernia repair.

Non-HIV associated spending is projected to decline, or experience a slower rate of growth in both public and private sectors because of demographic changes. Early on in the epidemic, a decrease in the number of women of childbearing age leads to a decrease in pregnancy and birth-related expenditures. Later in the epidemic - around 2025, the model suggests that non-HIV associated costs will decrease as a result of the relatively small proportion of people entering old age.

### Anti-retroviral use

It seems unlikely that anti-retroviral use will reduce overall costs of care. Figure 8 shows the likely costs of care in the private sector with and without provision of anti-retrovirals for stage 3 and 4 patients, taking into account likely savings in hospital and ambulatory care.



Figure 8: Private sector costs in South Africa with and without provision of triple anti-retroviral therapy

Costs of cover would increase by R9 billion in 2010, and the costs of HIV-related care more than double. For triple anti-retroviral therapy to at least pay for itself through savings in other HIV-related costs, it would have to cost less than one tenth of current market prices in South Africa, assuming effectiveness equivalent to that used in the Costa Rican study.<sup>11</sup> Such drastic price reductions seem unlikely at the moment.

Provision of triple anti-retroviral therapy within the public sector would be proportionately far more expensive than the private sector because of lower levels of resources generally, and a higher burden of HIV disease. If triple therapy at current market prices were given to all public sector patients in stages 3 and 4 it would cost R70 billion per year by 2010, thus approximately tripling South Africa's public health care budget for that year.

### Rationing

The increased health care burden imposed by the epidemic will fall mainly on the public hospital sector. Figure 9 shows projected increases in required expenditure in inpatient and ambulatory components of public and private sectors.



Figure 9: Projected required increases in expenditure by type of care and sector

If 1995 levels of care were maintained, public spending on hospitals would have to increase 2.3 times. The impact on ambulatory care in both public and private sectors is likely to be significantly less. These estimates reflect the degree to which South Africa relies on acute hospitals for care, which may be more cost-effectively provided in other settings. There is thus a serious need for developing hospice-type institutions, which would provide some substitute for acute hospital care. So far, very little by way of public or private sector resources has been put into such initiatives.

Projected expenditure requirements will almost certainly not be sustainable given public and private sector affordability constraints. This implies that some rationing will have to occur to reconcile needs with available resources. There are indications that this is already happening within the public sector. Figure 10 shows decreased hospital utilisation per child ill with an AIDS-related disease at Baragwanath hospital over the period 1991-1996.



Figure 10: Rationing of access to hospital care for children ill with AIDS with increasing levels of infection

It is possible that HIV-related disease sufferers will experience a greater degree of rationing than other health service users. There are already anecdotal reports of public hospitals refusing to admit patients at all if they have a positive HIV test, or refusing them any form of surgery even for trauma. There will be increasing temptation to blame the victims of the epidemic for the strain caused to health services, and deny them access to basic care. Clearly, the challenge for both public and private sectors is to shift to fundamentally more cost-effective modes of therapy for people ill with HIV-related diseases, rather than resort to irrational or even discriminatory exclusion from services. This will need to include a fundamental re-orientation towards lower-cost hospice-type care instead of acute hospitalisation, and consistent and substantial support to community-based care initiatives. Economic evaluations of a number of these initiatives are currently being assessed.<sup>b</sup> These confirm findings from an earlier study that these community-based care initiatives may be more cost effective.<sup>12</sup>

Neither of the above interventions has yet received much attention from the public sector. At the primary care level, widespread roll-out of cost-effective secondary prevention programmes, such as TB and pneumonia prophylaxis should be urgently implemented.

It appears that widespread use of anti-retroviral therapy for people ill with AIDS does not offer a realistic solution to the health care impacts projected. Even in the relatively wealthy private sector, an order of magnitude price reduction would be required before net savings could be expected. AIDS activists and international agencies would better spend their time advocating delivery of basic programmes of care.

b Dr Saul Johnson, Abt Associates. Person communication.

### **HIV** prevention in South Africa

With no prospect of an AIDS vaccine in the foreseeable future, HIV prevention requires sustained efforts of social mobilisation toward healthier and safer sexual behaviour. Data presented above have shown high rates of HIV infection in the sexually active population. This indicates high risk behaviour, which has been confirmed by various behavioural surveys.

For example, data from the South African Demographic and Health Survey of 1998 indicate early onset of sexual activity and poor condom usage. The survey showed that approximately 35% of non-married women, aged 15 - 19, had at least one sexual partner in the last 12 months, and that only 16% of all women interviewed, who had sex in the last 12 months, had used a condom in their last sexual encounter with their non-spouse partner.

A further example demonstrates that people have a good knowledge of HIV/AIDS, its mode of transmission, and how it can be prevented but often fail to act on this. In a study conducted in the mining community of Carletonville, all questions asked regarding risk factors for HIV infection and modes of prevention were correctly answered by the majority of responders.<sup>1</sup> There was a relatively weak relationship between perceived risk of infection and actual infection, however. Twenty two percent of those who thought they were at low-risk were infected, compared to 29% of those who thought they were at high risk of infection. Of those who had no opinion as to their risk status, 36% were infected. Men surveyed reported using condoms in less than 25% of contacts with non-regular partners, however, and in less than 5% of contacts with their regular partner.

The greatest barriers to achieving HIV prevention are fear and ignorance. HIV prevention efforts have been plagued above all by silence brought on by the denial and stigmatisation that is associated with the disease. In one study of home-based care schemes in Southern Africa, fewer than 1 in 10 people who were caring for an HIV-infected patient at home acknowledged that their relative was suffering from AIDS. Patients themselves were only slightly more likely to acknowledge their status.

Achieving sexual behaviour change is a complex task, requiring integrated intersectoral approaches implemented at all levels of society. Prevention initiatives need to succeed in creating a social consciousness that leads to appropriate personal action.

Once effective interventions are adopted, their actual success will depend on how they are implemented and sustained. Implementing agencies (which may include the State; employers; schools; non-governmental and community-based organisations) require the organisational support, staffing and skills, sufficient resources and technical assistance in order to achieve the desired impact of the intervention. Decisions to commit increased resources to HIV prevention will be determined, to a large extent, on a perception of their cost effectiveness.

### Cost-effectiveness of prevention

The costs of delivering prevention programmes can vary widely, depending on the strategy used and the nature of the implementing agency. However, most prevention programmes are far more cost-effective when they are introduced as early as possible in the course of the epidemic, as they prevent both primary cases of new HIV infections and their complications, as well as subsequent new HIV infections. Prevention interventions are likely to be much less costly than managing HIV complications at a later date. It has been estimated, for work place settings, that costs averted are estimated to be around 3.5-7.5 times the costs of prevention interventions.<sup>13</sup>

Despite almost universal acceptance that prevention strategies are far more cost effective than treatment of HIV, relatively little research has gone into rigorously evaluating the relative effectiveness of different approaches. Sufficient evidence exists, though, that prevention efforts can be successful.

- Blood screening and mother to child transmission prevention programmes
  - There is good evidence locally and internationally that blood screening and mother to child transmission prevention programmes are both effective and cost-effective in medium and high prevalence contexts. While the former has been in place in South Africa since the late 1980's, the latter has yet to be implemented in the public sector.
  - Mother to child transmission prevention programmes are more cost-effective within
    mature epidemics, where they are likely to pick up high numbers of infected people
    who have not yet manifested with secondary infections that would draw attention
    to their HIV status. Figure 11 shows the cost-effectiveness of an antenatal screening
    and maternal to child prevention programme at different levels of HIV prevalence.<sup>14</sup>





- Management of sexually transmitted diseases
  - An important study in the Mwanza district of Tanzania showed that improving the quality of STD services could reduce new cases of HIV infection by as much as 40%.<sup>15</sup> A similar study conducted in the Rakai district of Uganda at a much later stage of the epidemic showed minimal effect of STD treatment on HIV incidence, however, suggesting that this intervention is effective mainly early on in the epidemic and should be especially targeted at the youth.
  - Evidence for the cost-effectiveness of treating other sexually transmitted diseases during the rapid growth phase of the epidemic has been shown in a mining sector prevention programme in South Africa. This programme was estimated to have

avoided costs of HIV/AIDS over the next 8-10 years equivalent to 45 times the cost of the programme.

- Programmes aimed at changing sexual behaviour
  - Interventions that rely on behaviour change have not often been shown to be successful. One encouraging report from Uganda, however, indicated that HIV incidence is declining, particularly in the 15 to 19 year age group.<sup>16</sup> This was linked to changes in sexual behaviours: younger people are waiting longer before they become sexually active, have fewer sexual partners and are using condoms more regularly.

### Modelling the impact of targeted prevention programmes

In most cases, targeting limited resources towards specific high-risk or high prevention opportunity groups represents the best value for money. The nature of these groups changes with the maturity of the epidemic. Early on, emphasis is appropriately placed on educating specific high-risk groups, such as commercial sex-workers. Later in the epidemic, it is harder to identify risk groups so narrowly, and whole sexually active sectors of society need to be targeted. For this reason, early HIV diagnosis through voluntary counselling and testing and subsequent partner notification, with intensive education and support, makes sense.

Projections can be used to estimate what effect interventions might have on the epidemic in South Africa. Using a standard epidemiological projection model, with the assumption that an intervention is introduced that increases condom use by 15% for all sexually active people starting in the year 2000, the profound impact of this relatively modest intervention on population HIV prevalence rates and AIDS cases can be shown. This is illustrated in figure 12.





**CHAPTER 15** 

HIV prevalence amongst women declines before it does in men because of their higher susceptibility to infection, but the time-lag between the sexes is minimal. The effect on AIDS cases is significantly delayed, however, and suggests that even very effective preventive strategies will take a long time to reduce the burden on treatment institutions.

Age effects are of interest. The 20-24 year age group shows the greatest benefit from the intervention, as shown in Figure 13. It is this group that would have been exposed to youth education programmes in the preceding 5 years. The impact is modest in the 15 to 20 year age group because this group is being regularly refilled with 'at-risk' people. This emphasises the need for repeated intervention in the 10-15 year age group, who will go on to constitute this group of susceptibles. Because of greater susceptibility to infection, girls in particular need to be targeted before the age of 15. If we assume a five year lag between effective, sustained interventions and HIV seroprevalence changes, then it would appear that educating those over 25 yields proportionately little by way of epidemic reduction.





In addition to condom use, models have been used to estimate the effect of increased treatment of conventional sexually transmitted diseases (STDs) and decreased partner change. Figure 14 compares the effects of a 15% improvement in each of these in preventing HIV.





Interventions are very similar in terms of their projected impact by 2010. Importantly, the impact of all sustained interventions is not only in saving those people directly affected by the intervention, but also in reducing the total number of people able to infect new cohorts entering sexual maturity. This suggests that combined interventions will be more effective than the sum of isolated single interventions.

Figure 15 shows projected seroprevalence decreases due to each of the interventions, and all three of them combined. By 2010 we would estimate that the decrease in HIV people in the population due to the combined intervention would be more than 50% greater than the sum of the effectiveness of each of the three individual interventions. Furthermore, while the effectiveness of individual interventions are showing signs of plateauing by 2010, the combined intervention is not.





Although not shown in the graphs, the long term effect of all of these interventions is to reduce the level at which HIV seroprevalence plateaus, rather than eliminating infection altogether.

### Appendix 1: The Doyle Model

The model used to produce estimates of demographic impacts of HIV/AIDS for this report is the most up to date version of the Doyle model developed by Peter Doyle of Metropolitan Life Ltd. The model's calibration is continuously updated by the Metropolitan Life AIDS Unit to incorporate any significant new demographic and epidemiological data from South Africa and other African countries. The model has the longest track record of use in South Africa and is the most flexible model for projecting the HIV/AIDS epidemic in South Africa. A simplified, spreadsheet model developed by the Actuarial Society of Southern Africa is based on the approach used in the Doyle model.

The Doyle model combines features of a macro-simulation model and a micro-simulation programme. A macro-simulation model is calibrated in terms of inputs at a macro level, such as reported HIV prevalence levels at national or regional level. Pure macro-simulation models rely on inputs which can be very broad, and which are not directly defensible except through confirmation of the results they produce.

A micro-simulation model is built on comprehensive, scientifically defensible input parameters which consider the risk behaviour of individuals within a given population and aggregate their effects to produce projections of HIV/AIDS for whole groups or populations through complex iterative calculations. Pure micro-simulation models depend on a range of input parameters for which little reliable information can be found and also have difficulty in producing reliable projections.

Combination of features of a macro and micro model thus make the Doyle model robust and better able to produce reliable medium and longer term projections at a macro level without losing sensitivity to underlying micro parameters which may be relevant to particular sub-populations. The epidemic in a province, region or the whole country is assumed to be an aggregation of many sub-epidemics in particular population sub-groups. Each of these is defined by its unique demographics (eg race, gender, age profile), its geographic location and the timing of the epidemic in the area relative to other areas, and risk in terms of sexual behaviour patterns.

Of crucial importance to the projections is the notion that the epidemic moves through a population through interaction between various risk groups. Four behavioural risk groups are defined in the model: commercial sex workers and frequent clients; other people with high incidence of sexually transmitted diseases; people at risk of infection; and people not at risk of infection. Sub-epidemics are initially fed by infected people from outside a community and then multiply through contact between people in these risk groups.

# Appendix 2: Projection of health care costs: data sources and methods

As detailed in this chapter, the public and private health sectors differ fundamentally in the socio-economic profile of their users, their risk of HIV infection, and ability to pay for expensive AIDS care. HIV-associated expenditure requirements were thus calculated separately for public and private sectors. The detail of projections was constrained by the availability of reliable data, and a description of the data used is given below. Projections indicate likely health care costs due to HIV/AIDS, and all other health care costs. Obviously spending on AIDS and other medical conditions will always be limited by available resources. Likely costs can thus only be predicted with some knowledge of what resources will be

available, and in reality, we would expect a series of trade-offs between the quality and quantity of care offered, and constraints on both public and private sector affordability. All projections make use of the 'Best' projection scenario.

Assumptions regarding costs were based on studies of HIV/AIDS care at Chris Hani-Baragwanath Hospital<sup>17</sup> and three South African mine hospitals.<sup>18</sup> In both cases utilisation levels and costs were measured for different stages of the disease (using the four WHO clinical stages). Staging for the mine hospital data was done retrospectively from date of death assuming that all those who had had at least one HIV-related admission were in stage 3 or 4, and that the mean duration of stage 4 was 1.2 years. This produced a mean duration for stage 3 of 2 years. All care provided in acute or general hospitals likely to be due to underlying HIV disease, but excluding chronic TB care was included. This included admission for terminal or hospice type care to the extent that this occurred naturally in the settings studied. A simple average was taken between the mine hospital and Baragwanath costs and standardised to constant 2000 rands.

There are virtually no data on HIV seroprevalence and associated costs for the South African private sector. This is at least in part due to the fact that most private medical schemes excluded cover for HIV-associated disease prior to 2000, and it was thus in the interests of infected members to hide their status. We do have relatively good data on unit cost differences between public and private sectors, however, and these were used to construct notional private sector costs assuming HIV-related utilisation was the same as calculated from public sector sources.<sup>c</sup> Importantly, the costs of provision of anti-retroviral drugs such as AZT were excluded from expenditure projections as these are not normally covered even in the private sector.

The calculated annual inpatient and outpatient costs in each of the stages for both public and private sectors, were applied to the respective HIV positive population over the years 1995 to 2010 to project the expected utilisation of these services in future. Expenditure on non-HIV disease (i.e. utilisation for uninfected people and non-HIV associated utilisation for infected people) was calculated from total expenditure for the Gauteng public health sector in 1993 and 1996 data from a large health insurer for public and private sectors respectively. In both cases, relatively old data were used to minimise possible double counting of undetected HIV-associated disease. The model-projected HIV-related costs were stripped out of total public sector costs to yield the non-HIV associated proportion of total utilisation. All non-HIV associated costs were age sex standardised year by year across the study period. This is necessary because we would expect fewer adults reaching old age as a result of HIV/ AIDS, and as a result, lower levels of old age-associated health service utilisation.

Projections should be interpreted with due consideration to the following issues in particular. Data on the natural history of HIV infection and health service utilisation in the South African context, particularly the private sector, are very limited. Both public and private sectors have little information on costs associated with the early stages of the disease, since contacts tend to be in outpatient or clinic settings, where minimal data are collected. This is further complicated in the private sector, where members of medical schemes may have risked restrictions on benefits, or even expulsion, if the HIV status was revealed.

Organisation of health services and approaches to managing people with HIV/AIDS will undoubtedly change with time and the introduction of new technologies. Some, such as an

c Private sector costs per bed-day were approximately 2.5 times those of the public sector.

AIDS vaccine would fundamentally transform the course of the epidemic itself, whereas others, such as access to low-cost anti-retrovirals would change patterns of care only.

TB infection is the most common cause of hospitalisation for HIV-positive South Africans. Risk of TB infection in the non-HIV infected population is assumed to stay constant over time in this model. Given the rapid growth of TB in the HIV-infected population, and thus vastly increased levels of exposure to the whole population, this is unlikely. Most of the impact of this increase will probably be seen after 2010, as a result of growth in the pool of people susceptible to reactivation.

# **Models of community-based HIV/AIDS care and support**

Over the past few years, the previously largely silent epidemic of HIV in South Africa has shifted to a visible epidemic of AIDS. The impact of this on health services, families and communities are emerging at a rapid pace. In an attempt to deal with this impact, it is common practice for health care facilities to ration services to people with HIV, with much of the burden of caring for the ill falling onto households and communities. In South Africa, "home-based care" has become a national policy priority. This chapter presents the findings of a review of various NGO, community and religious-based projects which are involved in helping people infected and affected by AIDS. The chapter looks at programmes which provide funding, technical assistance and support to communities, those which are involved in advocacy and community mobilisation, drop-in centres and support groups, home visiting and comprehensive home-based care as well as the care of orphans. The challenges to these programmes are listed and discussed, as are the factors which promote their success.



Michele Russell Centre for Health Policy, University of Witwatersrand

**Helen Schneider** Centre for Health Policy, University of Witwatersrand Over the last few years, the previously largely silent epidemic of HIV in South Africa has shifted to a visible epidemic of AIDS. The impacts on health services, families and communities are emerging at a rapid pace. In 1997, 20% of all patients admitted to the paediatric wards of Chris Hani Baragwanath Hospital in Johannesburg were HIV-infected,<sup>1</sup> and in 1998, more than half (54%) of the admissions to the medical wards of King Edward VIII Hospital in Durban were HIV-related.<sup>2</sup> By the year 2005, conservative predictions are that there will be nearly 1 million children orphaned by AIDS in the country,<sup>3</sup> clearly overwhelming the current capacity of the welfare system.

In an attempt to deal with impacts, it is common practice for health care facilities to ration services to people with HIV. Much of the burden of HIV care in developing countries is now falling onto households and communities, and in South Africa, 'home-based care' has become a national policy priority. Any discussion of AIDS care and support thus inevitably turns to a consideration of how to achieve greater community participation, both in minimising impacts on the formal health sector and in meeting the needs of people infected and affected by HIV. Community mobilisation is often described as key to the sustainability and success of care and support strategies.<sup>4</sup>

Yet decades of experience in implementing primary health care have shown that meaningful community involvement in health services is not easy to develop and sustain, and is especially hard to institutionalise on a wide scale. Communities are often assumed to homogenous and unproblematic entities and little thought is given to the tasks involved in mobilising them. This is especially so in South Africa, where households and communities have been systematically disrupted by apartheid. Moreover, evaluations in various southern African countries have dispelled the idea that home-based care is necessarily a quick fix and cheap alternative to hospital-based care.<sup>5, 6</sup>

Despite these considerable challenges, a number of non-governmental organisations (NGOs), community and religious-based projects, attempting to grapple with HIV/AIDS care and support needs at community level, have emerged across South Africa. A review of these projects was conducted during the latter half of 1999,<sup>a</sup> the aim of which was to identify the models of community based HIV/AIDS activities being implemented, the challenges facing them and the possible role of government in promoting such activities. This chapter gives findings from the review.

The review methods included a literature review, 68 key informant interviews and visits to 20 projects across the country. Key informants and projects were identified through a snowball sampling strategy, starting with a list of 15 contacts known to the researchers.

We defined AIDS community-based care and support as, all AIDS activities:

- That are based outside conventional health facilities (hospitals, clinics, health centres), but which may have linkages with the formal health and welfare sector; and
- That address any aspect of the 'continuum of care and support', from time of infection through to death and impact on survivors.

# **CHAPTER 16**

### Models of care and support in South Africa

Although it is not possible to quantify the presence of community-based services across the country, it is very evident from discussions and visits that coverage by community care and support for PWAs is very patchy, and most often lacking. However, in almost all parts of the country, evidence can be found of attempts to initiate activities and programmes. Many do not refer to themselves as 'AIDS' organisations, but rather as 'palliative care' projects, and many are still in their infancy, operating with little external support and with uncertain prospects of sustainability. Some have benefited from contact with, and the materials of, projects in other parts of southern Africa such as the Family AIDS Caring Trust (FACT) in Mutare, Zimbabwe,<sup>7</sup> the Catholic Diocese in Zambia's copperbelt,<sup>8</sup> and the AIDS Support Organisation (TASO) in Uganda.<sup>9</sup>

Five 'general' and four orphan care and support models were identified and are summarised in Table 1.  $^{\rm b}$ 

Ge	neral models	Type of activity			
1.	Funding, technical assistance and support programmes	Umbrella structures channeling funds, providing technical assistance and monitoring and evaluation functions.			
2.	Advocacy and community mobilisation	Community structures to protect the rights of individuals and facilitate access to health and welfare services and schooling.			
3.	Drop-in centres/support groups	Physical facility that provides a space to run support group and income generating activities.			
4.	Home visiting programmes	Home visiting, assistance with chores and psychological support.			
5.	Comprehensive home-based care	Package involving palliative care and well developed referral network to health facilities and welfare agencies.			
Models for placement of orphans					
Extended family					
Child headed households					
'Create a Family or Cluster Foster Care'					
Placing responsible adults in the homes of orphaned children					

Table 1:	Community	/ based	<b>HIV/AIDS</b>	care and	support	models i	n South	Africa
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b In the following section, we have avoided naming organisations as examples, except where there are only one or two in the category or where describing the programme is necessary to understanding the category.

### Funding, technical assistance and support programmes

Two examples of this encountered in the review are the AIDS Foundation in KwaZulu-Natal and the Mpumalanga Project Support Association (MPSA). These organisations are non-governmental entities providing a support function to community-based organisations (CBOs) in: mobilising and channelling funds; providing technical assistance and training for home-based care; project management; report writing; and project monitoring and evaluation. Such structures could be one vehicle for public-NGO partnerships to promote the development of community-based action, and could also play a co-ordination and standard setting role.

### Advocacy and community mobilisation projects

An example of this is the Thandanani Project in Pietermaritzburg. Thandanani has created Community Child Care Committees (CCCCs) comprised of community leaders and residents, whose task is to identify children who are abandoned, abused or at risk of being orphaned. The CCCC will not only protect the rights of the child but will also help in accessing child welfare grants, medical and home-based care and schooling. The CCCCs do not themselves provide services, but have created linkages and referral relationships with social, medical, nutritional, child welfare and other support service providers.

Community mobilisation programmes are often perceived as easy to develop. However, they are a time consuming endeavour requiring specific skills in the areas of motivating and sustaining community involvement, developing partnerships and linkages, and creating opportunities where all participants feel equally respected and able to make a valued contribution.

### Drop-in centres/support groups

This model is perhaps the most common form of community-based care and support. It consists of a simple facility where people can receive HIV counselling and education, and can participate in support group activities.

Most providers feel that the traditional support group model centred on verbal problem exploration and psychosocial counselling, is not sufficient, and combine it with an income generating activity (IGA). This has a twofold benefit: participants are engaged in an activity that facilitates conversation, and the activity has the potential to generate some income. The IGA activities include beaded ribbons, paper bowls, hats from plastic bags, tablecloths, gardening, chicken farming and making foodstuffs. In practice very few projects actually do manage to generate income, and as one person put it *"I have a room full of things people have made but we can't sell them. They're just packed in there.* "One project has acquired maize-grinding and fence-making machines, an oven for baking bread, juice making equipment and battery recharging facilities. With the income generated they are able to fund the activities of the drop-in centre.

Support groups are reported to build self-confidence, help people cope with their diagnosis, overcome depression and create social networks for people who are isolated. Bonds are formed outside of the group, resulting in assistance with small chores for sick members. Through support group activities, HIV-infected adults can also be engaged in discussions about the future placement of their children, and to acquire the documentation which is necessary to access welfare grants.

### Home visiting

Drop-in centre activities may include a home or 'friendly' visiting service. Volunteers visit patients in their homes and spend time talking and educating patients and their family about basic care needs. They also provide support with cooking, cleaning and helping with errands, including accompanying patients to health facilities. They may also arrange access to food parcels and other material support.

### Comprehensive home-based care

Comprehensive home-based care programmes provide, in addition to the above, varying degrees of palliative care. These programmes tend to be run by more established NGOs (such as Hospice, Red Cross Society and church linked groupings). A number of such relatively large projects (catering for hundreds as opposed to tens of clients) have been identified.

Training of caregivers includes supportive counselling, cleaning and dressing of wounds, oral hygiene, supervision of drug taking and in certain instances, necrotic wound care, pain management and diagnosis of opportunistic infections. The package of services also often includes DOTS (Directly Observed Treatment Short-course) for tuberculosis. At least two projects have been trained in and adopted the Zimbabwean 'FACT' model. This has a strong spiritual component, and many of the volunteers are recruited from the church.

All projects have invested considerable energy in creating partnerships and referral networks. Relationships are formed with the local welfare department, schools, businesses, hospitals, respite care facilities and clinics. Building these partnerships is time consuming. However, once created, the package of services that can be offered to clients is more comprehensive.

### **Care of orphans**

Many community-based HIV/AIDS care and support programmes have been confronted with the needs of orphaned children, and feel they have no option but to address these needs.

The models of care and support for orphaned children include:

- The extended family approach A family member is identified to care for orphans after the death of parents. Often the family member is a grandmother.
- Child headed households When parents die and there is a sibling fifteen years or older, social services may work with that child to keep the family together. The younger siblings remain in their home with the older sibling acting as a parent. They may receive support from volunteers who will visit the household to ensure that they are coping and to resolve problems.
- 'Create a Family or Cluster Foster Care' This intervention, based in Durban, involves identifying a surrogate mother, who is hired to care for six orphans in the community. She is provided with a home, in which they all live, and she raises the children as though they were her own. With the assistance of the Durban Child Welfare Society, foster care grants are accessed to pay for school fees and uniforms, and the foster parent receives a stipend. This model serves as a job creation opportunity for women.
- Placing adults (usually older women) in the homes of orphaned children This approach has worked successfully in the Masoyi Project (Mpumalanga). This approach benefits

both the children and the adult, as often the latter live in the poorest of housing (mud shacks) while the children tend to live in better quality (brick) houses.

The key tasks in child care and support programmes are accessing welfare benefits (child care and foster grants), including the documents required for grants, maintaining children in school, and ensuring that basic necessities are provided such as food and clothes.

### Challenges to community based care and support

### Managing a volunteer base

With a few notable exceptions, most organisations have only one or two paid staff, with the bulk of services provided by volunteers, who may or may not receive a stipend. Recruiting and maintaining commitment from volunteers is one of the main challenges facing projects and many programme managers admitted to struggling with the problem of *"how to engage people to commit with no incentive?"* Interviewees report high turnovers of volunteers who, once trained, move on to other opportunities, drop out, or are unreliable. Conversely, if a significant stipend is provided, a major concern is its sustainability over the long run.

Non-financial incentives such as a sense of belonging, a supportive work environment, opportunities to gain skills, and passing a rigorous screening process all appear to be crucial to maintaining volunteer commitment. As one put it: *"The volunteers in these projects undergo a four to six month training, and not everyone makes it..."* (project interviewee).

### Organisational structure, staff capacity and access to resources

Project readiness and ability to provide services differ widely. Programmes started by and within poor communities seem to have the most difficulty developing strong and sustainable programmes. Although many of these community based organisations have great intentions, they do not have sufficient internal capacity to implement those ideas. They also lack resources. In many cases, the project managers access some initial funding (such as pension payouts) to get started but experience difficulty as this money runs out. They do not have sufficient knowledge on how to maintain documentation and account for, or strategise around, funds. One retired nurse commented, *"I'm a nurse - not an administrator. I don't know about budgeting and administration. I know how to take care of people."* Another voiced in frustration, *"We work from band to mouth"*.

The larger NGOs with a sizeable infrastructure, a history of programme development, and connections with actors locally and internationally, appear to be in a much better position to provide services. They are able to provide services over a larger area, of a higher level, and possibly with greater efficiency (through economies of scale) than some of the smaller projects visited.

### Ability to form linkages and partnerships

Programmes that are able to develop partnerships or referral relationships with other service and care agencies are more successful. Relationships with welfare agencies, hospitals and clinics are cited as particularly important. Several projects have agreements with clinic and hospital providers, facilitating admissions to hospital or access to prescriptions and medications. In some cases, programmes also negotiate supplies of antiseptic solution, gloves, bandages and other home-based care necessities from hospital and clinic partners, in exchange for providing care to discharged patients in the community. Some projects are also able to engage local businesses to provide food parcels, soup kitchens, transport or office supplies.

### Lack of standardisation

There is little standardisation across projects regarding the training and quality of services provided. Some programmes send their volunteers and staff to formally established training programmes, whilst others conduct their own in-house training. Hence, the content and quality of care vary enormously.

### Conclusions

While a rich base of experience in community-based care and support is being developed in South Africa, access to these services is still far from universal. Large scale technical assistance and capacity building programmes, networking and co-ordinating opportunities, development and dissemination of standards/guidelines, and the establishment of monitoring and evaluation systems are all key to the creation of an effective and sustainable communitybased care and support movement. There are still many unanswered questions as to the feasibility of extending community-based care and support activities to all parts of the country, both in terms of being able to mobilise activities on a wide scale and the costs of programmes.

However, it is clear that government has an important role in supporting and facilitating wider access to community-based care and support, and in ensuring a basic health and welfare safety net. Perhaps the biggest challenge will be the ability to form meaningful partnerships between government at all levels and the non-governmental sector. This may necessitate a paradigm shift in the minds of many health and welfare professionals, *"from the assumption that counselling, treatment and care of patients can only be done by highly technical personnel, to an appreciation that in every family and community there is some level of counselling and caring. Scientists must cease perceiving themselves as custodians ... but rather as facilitators."*<sup>10</sup>



# Tuberculosis in South Africa

Despite sustained progress in control since the formulation of new policy guidelines in 1996, tuberculosis still remains a major public health threat in South Africa. The effects of the rapidly growing concurrent HIV epidemic further compound the prominence of the tuberculosis epidemic and the proportion of TB patients co-infected with HIV is increasing. There is an urgent need to hasten the integrated management of these two epidemics.

The promotion of voluntary counselling and testing (VCT) for HIV in TB treatment centres, provision of materials for advocacy and health education for TB/HIV/AIDS as well as the development of training and management guidelines for dually infected patients will go a long way towards achieving this goal.

The introduction of combination anti-TB drugs during 1999 will assist in improving adherence to treatment as well as reduce the occurrence of drug resistant strains of tuberculosis. However, in order to achieve this, there is need to further the progress already made in delivering directly observed supervised treatment to TB patients, particularly within the context of community-based care.

Improvement within the computerised recording and reporting system to make it simpler and uniform for all the provinces will further assist in more accurate documentation of the tuberculosis burden in the country and lead to targeted interventions where necessary.

The National Tuberculosis Control Programme hopes to achieve its objective of reducing the tuberculosis burden in the country through increased collaboration with other role players at local and regional levels as will be discussed in this report.



Samson Kironde Oxford University, Institute of Health Sciences, England Medical Research Council, Kimberley

### Introduction

Tuberculosis is still a major global health problem today despite the fact that effective treatment has now been available for over 50 years.<sup>1</sup> The disease accounts for 7% of global deaths annually and more than one in four preventable deaths in developing countries.<sup>2</sup>

Four of the countries with the highest global tuberculosis incidence rates are in the Southern Africa Development Community (SADC) region, and South Africa is one of them.<sup>3</sup> According to the World Health Organisation, South Africa remains one of the 22 countries worst affected by the tuberculosis epidemic.<sup>4</sup> This year, the country is expected to contribute at least 15% of the total tuberculosis caseload for Africa<sup>5</sup> yet it accounts for only about 7% of the continent's total population.

Here, as in many other countries in the sub-Saharan Africa region, the epidemic is compounded by the effects of the rapidly growing spread of HIV infection. Currently, it is estimated that South Africa has a TB/HIV co-infection rate of 2 540 per 100 000 and a tuberculosis case fatality rate (death from tuberculosis) of 166 per 100 000, a rate which is not only five times higher than the global TB fatality average of 32 per 100 000, but is second only to Zimbabwe's world wide.<sup>3</sup>

The incidence of tuberculosis, based on figures from national TB quarterly reports, has been rising over the last five years as is illustrated in Figure 1.



### Figure 1: Reported incidence of tuberculosis in South Africa 1995 - 1998

Source: Department of Health, Health Systems Research Co-ordination and Epidemiology Directorate, June 2000

Tuberculosis in South Africa mainly affects the economically active age group as is graphically represented in Figure 2, where 86.6% of the TB patients reported in 1999 are in the age group of 20-59 years. This distribution could have ominous economic implications since HIV infection, the most important factor responsible for the progression of latent tuberculosis to active disease, also affects this broad age group most heavily.

### Figure 2: Age distribution of TB patients reported in South Africa in 1999



Source: Department of Health, Health Systems Research Co-ordination and Epidemiology Directorate, June 2000

Considerable progress has been made in tuberculosis control efforts in South Africa in the past twelve months. This chapter seeks to highlight trends in tuberculosis control in the country over the past five years with particular emphasis on progress that has been achieved in the past year. Constraints still facing tuberculosis control are discussed and finally recommendations for further action are made.

### Focus on progress

Tuberculosis control in the country has undergone major progress during the last year notably in the following areas:

- Increased case finding
- Improved bacteriological coverage
- Further integration of TB/HIV management
- Expansion in DOTS coverage
- Further introduction of combination anti-TB drugs
- Strengthening of partnerships and collaboration both nationally and internationally

Progress is discussed for the above mentioned areas and constraints to progress cited whenever possible. The data presented in the sections below are collated mainly from annual statistics on the tuberculosis epidemic collected by the Department of Health Communicable Disease Control Directorate as well as from projections by the Medical Research Council National Tuberculosis Research Programme. The National Tuberculosis Control Programme (NTCP) is responsible for co-ordinating the fight against the tuberculosis epidemic in the country. Highlighted below are the short and long term objectives contained in the NTCP strategic plan.<sup>6</sup>

### Objectives of the National Tuberculosis Control Programme

- To achieve sputum smear conversion rates of at least 85% among new sputum smear positive patients and 80% among re-treatment cases at the end of the intensive phase of treatment
- To cure at least 85% of new smear positive cases with short course chemotherapy anti-TB drugs
- To ensure accurate measurement and evaluation of programme performance
- To prevent the development of drug resistance to tuberculosis
- To reduce mortality and morbidity attributable to tuberculosis in South Africa.

Progress in tuberculosis control discussed in the sections below is evaluated with the above objectives in mind.

### Case finding and reporting

Reporting rates continue to be a major impediment to accurate estimation of the tuberculosis epidemic in the country. Consistent under-reporting to the NTCP as evidenced in the trends for 1995-2000 given in Table 1 below results in an under estimation of the national tuberculosis burden.

Under-reporting is mainly due to the following reasons:

- Delays in the development of functional health districts for the whole country
- Delays in collecting and collating data from primary health care units where treatment of patients normally takes place, through to the district, provincial and finally national levels often results in fewer reports being sent to the NTCP than the expected 1 628 from all the provinces for each national quarterly report
- Poor communication between provincial and local authorities in some provinces
- Differences in the computerised information collecting systems at provincial level result in some data not being easily interpretable and comparable at national level<sup>a</sup>
- TB registers at primary health care level are not always up-to-date in terms of actual numbers of patients on treatment. This is often a result of an excessive number of patients seen at some facilities compounded by relative understaffing experienced in the TB care delivery sections at many of these facilities. Furthermore, at some facilities there is a failure of clinic staff to realise that proper and timely completion of all sections of the TB register is a very important management tool rather than simply another administrative burden.

The figures provided in Table 1 below should therefore be interpreted with the above constraints in mind.

H Chabalala, Health Systems Research Co-ordination and Epidemiology Directorate, Personal Communication

### Table 1: Reporting completeness for South Africa (1995-2000)

Year	% Reporting facilities	Actual cases of TB reported	Expected cases (assuming 100% reporting rate)
1995	45.3	73 917	164 260
1996	68.0	109 328	160 776
1997	62.7	118 741	188 478
1998	71.6	135 904	188 756
1999	370 <sup>b</sup>	87 566	236 665
2000	N/A	N/A	273 635°

N/A = not available

Source: Department of Health, Health Systems Research Co-ordination and Epidemiology Directorate, June 2000

Reporting completeness to the Department of Health has improved considerably over the past five years (see Table 1 above). However, the low reporting rate for 1999 illustrates some of the problems facing reporting to the NTCP as discussed above. Only 37% of reports had been received at the NTCP at the time of writing, ostensibly due to some of the problems noted above.

The high number of projected cases for the year 2000 (273 635) further indicates that the tuberculosis burden for South Africa is actually higher than that calculated using TB register data available to the Department of Health, from provincial quarterly reports.

A further indication of the impact of under-reporting on the estimate of the tuberculosis incidence rate in South Africa is given in the Global Burden of Tuberculosis Report.<sup>3</sup>

This report calculated an incidence rate of 392 cases per 100 000 for 1997 in South Africa compared to that of 252 cases per 100 000 calculated for the same year from registered cases reported to the NTCP. This discrepancy results from the fact that the Global Burden of Tuberculosis report took into account under-reporting and employed statistical procedures to correct this.

In the same vein, the projected tuberculosis case load for the year 2000 results in an estimated incidence rate in excess of 600 cases per 100 000,<sup>5</sup> which is well beyond that of 254 cases per 100 000 based on actual registration data for the period 1996-98.<sup>7</sup>

This figure may well be an over estimate but is probably nearer to the true incidence rate for South Africa if under-reporting is taken into account.

In order to counter this problem, the NTCP is currently piloting a new TB electronic register system developed through the Botswana-USA collaboration programme (BOTUSA) in four provinces in the country.

b Reporting completeness from figures available from the NTCP as of 30/6/00

c Estimated caseload assuming a 100% reporting rate (TB Research Programme, MRC Pretoria)

This Epi-Info based system is cheap, patient-centred, user friendly and employs a threelevel (clinic, district and provincial/national) structure. It requires no prior knowledge of Epi-Info and needs minimal training to learn; furthermore this system can automatically generate case finding and treatment outcome reports for any of the levels noted above. Introducing this data collection system in all provinces will not only ensure uniformity of reporting but also will enable feedback to individual clinics which could have a positive motivational effect on primary health care givers who rarely get access to aggregated National reports.

# Bacteriological Coverage<sup>d</sup> and Bacteriological Positivity<sup>e</sup> of registered TB patients

Trends for these measures are shown in Figure 3 (national trend; 1995-99) and Table 2 (provincial figures; 1998-99).





Source: Department of Health, Health Systems Research Co-ordination and Epidemiology Directorate, June 2000

d Bacteriological Coverage measures the percentage of pulmonary tuberculosis patients on whom bacteriological investigation was requested at diagnosis.

e Bacteriological Positivity refers to the percentage of all registered patients with pulmonary tuberculosis who had a positive smear or culture-positive bacteriological result at diagnosis.

### Table 2: Bacteriological Coverage and Positivity per Province 1998 – 1999

Province	Bacteriological coverage (%) 1998 1999		Bacteriological positivity ( 1998 199		
Eastern Cape	88.9	N/A	88.2	N/A	
Free State	76.9	85.0	68.3	74.0	
Gauteng	89.9	93.0	82.4	88.0	
KwaZulu-Natal	81.9	81.0	65.2	65.0	
Mpumalanga	94.7	97.0	82.3	88.0	
Northern Cape	81.8	93.0	69.6	73.0	
Northern Province	90.7	90.0	73.8	76.0	
North West	81.4	84.0	76.4	78.0	
Western Cape	97.2	98.0	91.8	93.0	

N/A = not available

Source: Department of Health, Health Systems Research Co-ordination and Epidemiology Directorate, June 2000

Figure 3 and Table 2 above, show that both Bacteriological Coverage and Positivity have increased over the past 5 years, with provinces like Mpumalanga and the Western Cape currently achieving bacteriological coverage rates of 97% and 98% respectively.

This indicates that a higher number of sputum smear positive patients are being identified. This achievement is consistent with the principles of the Directly Observed Treatment – Short course (DOTS) strategy, which aims at proper identification and treatment of sputum smear positive patients who provide the infectious pool from which tuberculosis spreads. Correct identification and cure of these cases using DOTS will eventually lead to a reduction in the tuberculosis burden of South Africa.

It is worth noting however, that Bacteriological Positivity is extremely high in most of the provinces, being higher than the 60-70% expected from a well functioning tuberculosis control programme. In programmes that exceed this expected figure it means that either: many of the TB patients are presenting late to the health services for diagnosis (and hence infecting many of their contacts before they start treatment), or that the tuberculosis screening algorithm for a positive smear result before treatment, as outlined in the NTCP Practical guidelines<sup>6</sup> is being applied too stringently at clinic level and many of the sputum smear negative patients are being missed.

With the HIV epidemic now well established in South Africa, this could mean that a significant number of dually infected patients are actually not receiving anti-tuberculosis treatment since HIV infection is known to be commonly associated with sputum smear negative tuberculosis.

### Tuberculosis and the HIV/AIDS epidemic in South Africa

HIV infection, if it remains uncontrolled, has the potential to swamp progress made in tuberculosis control as it is the most important risk factor for the progression from latent to active disease in people infected with the tubercle bacillus.

Tuberculosis reporting rates have significantly increased in the last five years as indicated in Table 1. This increase, though partly attributable to improvements in reporting and case finding over the same period of time, is also a result of the effect of the burgeoning HIV epidemic concurrently ravaging the country.

This synergy between a disease of antiquity and a newer pathogen has resulted in up to 40% of tuberculosis patients in South Africa being co-infected with HIV.<sup>6</sup> HIV affected individuals have a 30 times higher probability of acquiring tuberculosis than non-HIV infected people. The Medical Research Council estimates that this year, HIV co-infection will lead to an excess 123 616 new cases of tuberculosis which would otherwise not have occurred. This will contribute 42% of the expected caseload for the year.<sup>5</sup>

The increase in HIV prevalence in the country as measured from sentinel surveys of women attending antenatal care, over the period 1995 – 1998 (Figure 4) closely parallels the increase in incidence of tuberculosis.



### Figure 4: Tuberculosis incidence vs HIV prevalence in South Africa 1995-988

The prevalence of HIV infection among TB patients varies according to province as indicated in Table 3; which gives the proportion of TB patients who are expected to be HIV coinfected, per province for the year 2000. As shown, KwaZulu-Natal and Mpumalanga provinces are the worst affected. This can directly have an impact on the treatment outcomes for the TB patients as is graphically demonstrated in Figure 5.

### Table 3: Estimated tuberculosis caseloads per province and proportion expected to be HIV co-infected in 2000

Province	Total TB cases	Proportion HIV positive(%)
Eastern Cape	56 495	40.0
Free State	14 654	51.7
Gauteng	45 598	44.8
KwaZulu-Natal	65 695	64.6
Mpumalanga	15 657	59.1
Northern Cape	4 649	33.2
Northern Province	23 338	36.3
North West	15 549	45.5
Western Cape	34 211	31.6
South Africa	273 365	47.6

Source: Medical Research Council, National Tuberculosis Research Programme

### Cure rates

Despite the constraints posed by the HIV epidemic, cure rates for new sputum smear positive TB patients have generally improved (see Figure 5 below). Treatment outcomes for tuberculosis patients registered in any particular year are evaluated one year later, hence the 1997/98 cure rates presented below are the most current complete figures available.





Source: Department of Health, Health Systems Research Co-ordination and Epidemiology Directorate, June 2000

It is worth noting that those provinces that show a decline in cure rates (Kwazulu-Natal from 61% in 1997 to 47% in 1998 and Mpumalanga from 56% in 1997 to 55% in 1998) also have the highest proportion of HIV infected TB patients (64.4% and 59.1% respectively) as shown by Table 3.

The decline in cure rates as noted above cannot be directly and wholly attributed to the impact of the HIV epidemic. Rather the death rate of TB patients where contributory factors to the cause of death are stated is a more accurate indicator. However, this information is not easily obtainable from registration data as HIV is not routinely tested for in TB patients.

However, one explanation for the decline in cure rates is that more patients are dying from HIV related infections before completion of anti-TB treatment in these provinces. This is an ominous indication that the HIV epidemic has the potential to wipe out progress made in tuberculosis control in provinces like Mpumalanga since 1996.

If the current trends of the impact of HIV on the tuberculosis epidemic in South Africa continue, it is likely that in the next decade an even higher proportion of tuberculosis patients will also be HIV infected. In recognition of this threat, all provincial health departments in the country have agreed to promote the management of TB and HIV as a joint epidemic.

Four TB/HIV integrated management pilot sites were established in the country during 1999. These are sited as follows:

- Eastern Cape East London
- KwaZulu-Natal Ugu South in Port Shepstone
- Northern Province Bushbuck Ridge
- Western Cape Langa Central district

These projects seek for best practice in the management of dually infected patients. The goal of the NTCP and the STD/HIV/AIDS Directorate is to increase the availability of voluntary counselling and testing (VCT) services for HIV at tuberculosis treatment points in the country.

### **Expansion in DOTS coverage**

The South African Tuberculosis Control Programme aims to reduce the TB burden in the country through the provision of supervised anti-TB treatment to all patients. This objective at provincial level is being achieved through the establishment of Demonstration and Training Districts (DTDs) to assist health workers with the implementation of the DOTS strategy.

The number of (DTDs) in the country increased from 63 at the end of 1998 to 130 as of July 2000 (see Table 4 below). 84% of the districts in the country now have clinics offering tuberculosis treatment to patients based on the principles of the DOTS strategy.

Sputum smear conversion rates in one-third of these DTDs are greater than 80%. This has resulted in more patients being cured, further reducing the infectious pool as well as preventing the development of drug resistant tuberculosis strains.

At this pace of DOTS expansion, (up from 36% in 1998 to 84% by July 2000) the goal of the National Tuberculosis Control Programme to have the whole country covered with DOTS and at least half the districts achieving sputum smear conversion rates of greater than 80% by the end of 2001, is likely to be achieved.

It is of importance to note however, that the most accurate way of assessing DOTS coverage should be in terms of actual patient numbers receiving supervised anti-TB medication and not the number of DTDs. Usage of only DTD coverage data may give a rather skewed picture as many of these training districts have only a very small number of clinics actually practising DOTS and hence small patient numbers. This could result in little or no epidemiological impact on the overall tuberculosis situation for the country. Unfortunately, it is not possible at present to obtain an accurate estimate of the number of patients actually getting directly supervised anti-TB treatment as this information is not routinely recorded in the TB registers at clinic level.

### Table 4: Number of Demonstration and Training Districts per province, July 2000

	No. of Districts <sup>f</sup>	No. of DTDs
Eastern Cape	21	19
Free State	14	12
Gauteng	25	19
KwaZulu-Natal	11	6
Mpumalanga	16	12
Northern Cape	5	5
Northern Province	19	14
North West	18	18
Western Cape	25	25
South Africa	154	130

Source: Department of Health, National Tuberculosis Control Programme, July 2000

### Introduction of combination drugs

There was a further drive towards the introduction and increased availability of combination drugs for the treatment of tuberculosis during 1999. Combination drugs though more expensive than single drug preparations greatly simplify treatment regimens and reduce the daily number of tablets a patient has to take at clinic level. They also ease ordering and stock control at district level.

Reducing the number of tablets a TB patient has to swallow may have a positive impact on compliance and hence improve cure rates and reduce the need for re-treatment. More importantly, combination drugs also reduce the likelihood of development of multi-drug resistant strains of tuberculosis, which are up to 100 times more expensive to treat than drug sensitive tuberculosis.

In the long term therefore, these drugs will prove more cost-effective than single drug preparations and should be advocated for all TB patients by the National Tuberculosis Control Programme.

Bulk procurement of anti-TB drugs through the Southern Africa Tuberculosis Control Initiative (SATCI) has been proposed. This will result in effective drugs being bought at more affordable prices from international manufacturers hence reducing expenditure as well as leading to a better procurement practise for SADC countries.

The challenge for the NTCP now, is to standardise the drug combinations available so as to avoid having too many different preparations and strengths, which may serve to further confuse health care providers and TB patients.

f The number of health districts has decreased from 174 in 1998 to 154 currently

# TB/HIV collaborative programme – strengthening local and international partnerships

South Africa under the auspices of SATCI has joined efforts initiated by the Africa regional office (AFRO) of the World Health Organisation and the UNAIDS inter-country office in moving towards a regional integrated framework for the recognition and management of tuberculosis and HIV as a joint epidemic. Areas cited for integration in the management of these two epidemics include: advocacy, information dissemination, planning, training, case management, disease surveillance, partnerships and operational research.

### SATCI's immediate objectives are as follows:

- Promotion of voluntary counselling and testing (VCT) for HIV in TB services
- Providing advocacy and health education materials for TB/HIV/AIDS
- Development of generic management guidelines for TB/HIV/AIDS patients
- Development of training modules on the management of TB/HIV/AIDS patients
- Creating an inventory for TB/HIV research in the region.

In South Africa, the TB/HIV pilot sites already mentioned aim to achieve some of the objectives outlined above. At these sites, strategies are being developed to seek practical ways of linking DOTS, community-based home care and care provided through the general health service, through integration of tuberculosis and HIV control programme activities.

Non-governmental organisations have also been recognised as important partners and have been co-opted in this venture. The TB Alliance DOTS Support Association (TADSA) for example, has been contracted by both the NTCP and the STD/HIV/AIDS Directorate, to develop a manual for training tuberculosis treatment supporters in community-based care for dually infected patients.

### Multi-drug resistant TB

The actual prevalence of multi-drug resistant TB (MDR TB) in South Africa in not known with any degree of certainty but a survey is currently being conducted by the Tuberculosis Research Programme of the Medical Research Council to accurately estimate the prevalence of MDR tuberculosis in all of the provinces. This will help quantify the MDR problem in the country and assist the development of targeted interventions for identified hot spots.

As part of the DOTS Plus initiative, which is a joint collaborative effort between the Medical Research Council TB Research Programme and the National/Provincial Tuberculosis Control Programmes, specialised centres for the treatment of MDR tuberculosis have been established. These aim to evaluate the effectiveness of treating MDR TB patients using a standardised regimen of second line anti-TB drugs and to monitor the reduction of the burden and spread of multi-drug resistant strains of the tubercle bacillus.

### Conclusions

Tuberculosis caseloads have doubled in most provinces over the last five years, reflecting improved reporting rates, but also a real rise in the incidence rate for the country. However, reporting rates continue to be a major impediment to accurate estimation of the incidence

of tuberculosis. Bacteriological Coverage has continued to improve with some provinces now achieving a nearly 100% coverage rate.

The rapid rise of HIV prevalence in South Africa from less than 1% in 1990 to 22.4% in 1999<sup>9</sup> has definitely played a crucial role in the increase of tuberculosis patient numbers.

There has been a positive expansion in DOTS coverage and the NTCP goal of achieving DOTS in all districts by 2001 looks as if it will be achieved. The challenge is to ensure that all tuberculosis patients in these districts are actually receiving supervised treatment.

The proposed bulk procurement of TB drugs for the region should be put into practice as South Africa not only contributes about 40% of the TB burden in the SATCI countries but accounts for up to 50% of the expenditure on anti-TB drugs bought in southern Africa. Cure rates of new smear positive TB patients have marginally improved but are still well below the 85% target of the NTCP.

Therefore constraints to further progress should be addressed so as to achieve better treatment outcomes and reduce the burden of tuberculosis.

### Recommendations

Whilst efforts to contain the tuberculosis epidemic in the country over the last five years have been notable, the following areas still require especially sustained attention in order to achieve the objectives of the Tuberculosis Control Programme:

### • Expansion and sustainability of DOTS

Supervision of anti-tuberculosis therapy is one of the cornerstones of the revised TB control strategy of the NTCP. A further increase in the provision of directly observed treatment (DOT) for TB patients and the development of accurate methods to monitor this should be undertaken. DOT ought to be fully functional at primary health care and community level, and this should be evident from improved cure rates, if integrated management of dually infected (HIV and TB) patients is to be effective.

There is need for sustained commitment by health care providers and other role players, notably NGOs and civic leaders, to educate the public as well as to facilitate and advocate for the expansion of community-based supervision of tuberculosis treatment. Otherwise, there is a danger that the introduction of integrated community-based TB/HIV/AIDS care may be seen as another burden placed on the shoulders of unpaid community volunteers.

### • Further progress in the integration of HIV/TB management

Even on a global scale, tuberculosis does not attract as much attention and socio-political mileage as HIV and other major health problems.<sup>10</sup> Perhaps linking the management of TB and HIV will go a long way towards changing this perspective and result in the channelling of much needed funds to efforts aimed at combating tuberculosis. Regional partnerships should be encouraged in order to strengthen cross-border support in combating the dual epidemic as well as standardisation of control strategies.

Guidelines are being developed for the provision of co-trimoxazole and isoniazid prophylaxis for patients with TB and HIV co-infection. These should be standardised. It is also imperative that the concept of community-based management of TB/HIV patients be further developed into practical programmes. To achieve this objective, building on capacity already present through voluntary lay health worker programmes for DOTS support at community level is of vital importance.

### Tuberculosis treatment services should offer:

- Voluntary counselling and testing for HIV infection
- Education on HIV/AIDS
- Condoms
- Management of opportunistic infections for HIV patients

### HIV services should offer:

- Education on tuberculosis
- Diagnostic facilities for tuberculosis
- TB prophylactic treatment for HIV patients at high risk
- Directly observed treatment for HIV patients with TB

### Improving the monitoring and reporting system

Accurate measurement and evaluation of programme performance is one of the key objectives of the South African National Tuberculosis Control Programme. In seeking to achieve this objective, it is important that a uniform, computerised data collection system be established for the whole country, to augment the paper-based system already in place and that the current situation of incompatible systems be overcome. The electronic system currently being piloted in four provinces should eventually cover the whole country.

### Sustained prevention and management of MDR tuberculosis

Multi-drug resistant tuberculosis spreads just as easily as drug sensitive strains but is prohibitively expensive to treat. It is therefore imperative that the development of this dangerous form of tuberculosis be prevented by ensuring improved compliance to anti-TB medication through effective patient treatment support systems and provision of combination drugs.




Malaria has devastating effects on African communities and economies. South Africa is not exempt, illustrated by the high poverty and unemployment rates in the most affected districts. In the early decades of this century malaria was much more widely distributed and much more severe than it is now. This reduction has been due to intensive control activities that have targeted both the Anopheles vector and the Plasmodium parasite. Unfortunately recent developments, such as resistance of the parasite to drugs, re-emergence of an eradicated vector species and its resistance to insecticide, have resulted in considerable resurgence of malaria. The number of malaria cases started rising in the mid-1980's, when chloroquine resistance was first detected, and has continued to rise exponentially ever since. The 1999/2000 malaria season saw close to 40 000 cases, concentrated mainly in a small number of districts of the three north-eastern provinces and along the Mozambique border. Spatial analysis has confirmed a spread to previously low-risk areas. While the situation is far from that in the early 1930's, the trend is likely to continue unless radical steps are taken to stop the spread of the disease. Efforts to overcome the escalating problem have involved a range of activities. To keep pace with changes in drug efficacy, drug policy has been updated repeatedly. Insecticide usage has been changed recently in an attempt to once more eliminate the dangerous vector An. Funestus. The wider implementation of insecticide treated bed nets is under discussion. A major regional control effort – the Lubombo Spatial Development Initiative – is underway, and better malaria reporting and information systems have been introduced. The national policy, in line with international malaria control strategies, and guided by the National Malaria Advisory Group, addresses specific situations in each province. Future priorities should focus on appropriate control strategies, using effective drugs and insecticides, both within South Africa and, through collaboration, within the SADC region; adequate information flow to drive evidence-based policy decisions, again both nationally and regionally; ongoing monitoring of control operations; ongoing surveillance of drug and insecticide efficacy; and ongoing research into key areas.

Brian Sharp Medical Research Council

Authors

Marlies Craig Medical Research Council

Bronwyn Curtis Medical Research Council Abaraham Mnzava Medical Research Council

Rajendra Maharaj Sub-Directorate Vector Borne Diseases Department of Health

> Immo Kleinschmidt Medical Research Council

# Malaria in Africa

The year 2000 may well be a landmark in regard to recognising the devastating effects of malaria on African economies and communities. Over 40 African governments gathered in Nigeria for an African Summit and signed the Abuja declaration on Roll Back Malaria in Africa. Recognition, by African leaders, of the extent of the problem is highlighted by the following excerpts:

Malaria is a "barrier ... to development and alleviation of poverty" in Africa. Families living in endemic areas "are some of the continent's most impoverished", and may have to spend "up to 25% or more of [their] annual income on prevention and treatment". Consequently, malaria makes families poor, and once down, it "keeps them poor". "Malaria has slowed economic growth in African countries", to the extent that some countries are experiencing negative growth rates, and that since the 1960's the continent as a whole has sacrificed a third of its economic output (as GDP), for a loss now reaching \$100 billion annually.

# Malaria in South Africa

## **Historical situation**

South Africa is not exempt from the potential ravages of malaria with its debilitating effects on communities and development. But malaria reaches into South Africa only at its very fringe, affecting the three north-eastern provinces of KwaZulu-Natal, Mpumalanga and the Northern Province. Due to the local climate, malaria transmission follows a distinctly seasonal pattern, and experiences marked inter-annual fluctuations resulting in periodic epidemics. An important reason for reviewing the historical profile of a vector borne disease is that it indicates what may happen, should there be a resurgence. It also emphasises the role of and the need for operational research in the development and maintenance of a successful disease intervention programme.<sup>1</sup> Unless total eradication is achieved, vigilance and stringent control measures must be maintained to keep the disease in check.<sup>2</sup>

The historical distribution of malaria in South Africa is shown in Figure 1. Control measures were instituted in the malarious areas of South Africa in the late 1940's. Prior to this, malaria epidemics were recorded as far south as Durban<sup>3</sup> and as far inland as Pretoria on the highveld.<sup>4</sup> The severity and effects of these "pre-control" epidemics in KwaZulu-Natal were reviewed by le Sueur *et al.*<sup>2</sup> Malaria mortality estimates by magistrates in KwaZulu-Natal from November 1931 to June 1932 totalled 22 132 (population at risk = 985 000), an exceptionally high mortality rate of 2.2%. In 1932 all the districts of KwaZulu-Natal, bar one, reported cases of malaria. Huletts representatives had visited hundreds of sugar cane planters, whose average workforce was 80, but typically only three were reporting for work. The Amatikulu sugar mill was only receiving one truckload of sugar cane per day (5 tons) instead of the expected 1 500 tons, due to the workforce being affected by malaria. Malaria was having a pronounced and detrimental effect on communities, as well as on the agricultural and economic development in this area.



Figure 1: Malaria risk in South Africa in 1938, prior to the introduction of disease control

Source: Malaria Survey by the Department of Public Health of the Union (in collaboration in the case of Swaziland, with the Swaziland Administration), 1938

The fact that malaria in South Africa was peripheral, and the tremendous amount of resources invested in its control, contributed to the success of the malaria control programme, which rendered large areas practically malaria free, thus facilitating economic development.

# Past and current trends in malaria incidence

Malaria became a notifiable disease in 1958 and notifications have been captured with varying degrees of completeness since then. Notification data covering all the malarious areas of South Africa are available from 1971, when the malaria control programme became more structured. In spite of the inconsistencies inherent in notification systems, this still constitutes an extremely valuable data set. Reported malaria case numbers over the last 30 years are shown in Figure 2 and have been increasing exponentially since the mid-1980's.<sup>a</sup>

Malaria transmission is distinctly seasonal in South Africa with notifications generally increasing from November onwards. Peak rates in malaria outpatients at health facilities usually occur in April and decline by June.<sup>5</sup>

There is significant inter-annual variation in both the annual malaria case totals and in the timing of malaria transmission, the season starting as early as November or as late as February. Malaria seasons vary in the distribution of cases across the season, timing of peaks, or the presence of two peaks. The seasonality of malaria transmission determines when resources need to be available and when control measures need to be in place, and has implications for tourism with regard to high-risk periods and prophylactic use.





Source: Malaria information system and from 1996 onwards from the Department of Health

It is possible that the epidemic "jumps" in certain years (1987, 1993, 1996) were caused by environmental/climatic factors. However, the relationship of climate with epidemic increments in malaria incidence and with the annual progression of the malaria season is not clearly or consistently linked.

a Craig et al. Manuscript in preparation

While climate may to some extent drive inter-annual variation in malaria, it is unlikely that climate is responsible for the persistent upward trend. Before 1985, malaria case totals in the country were low, corresponding to a period when chloroquine was an effective drug in an environment supported by vector control. The increase of cases in the late 1980's must be attributed to the advent of drug resistance, possibly aggravated by a period of high rainfall.

The numbers of cases reported in the last four seasons in the three endemic provinces are shown in Figure 3. The almost quadrupling of cases over this four-year period in KwaZulu-Natal stands in stark contrast to the relatively small increases in the other two provinces, and must be attributed to the high levels of sulphadoxine pyrimethamine (SP) resistance in KwaZulu-Natal. The re-emergence of *An. funestus*, which is a highly efficient vector and now resistant to the synthetic pyrethroid used for house spraying is likely to have exacerbated the problem.

While it is difficult to pinpoint the exact cause for the spread of malaria over the last 15 years, there is no doubt that drug resistance and lately the re-emergence of *An. funestus* are largely to blame. More detailed analysis is required to dissect the contribution of other likely and possible factors such as irrigation schemes, increased cross-border travel between South African and Mozambique, the spread of HIV, the change from DDT to synthetic pyrethroids and reduced spraying coverage.





Source: Department of Health

# Malaria distribution

In 1998/99, a total of 24 of the 354 magisterial districts in South Africa reported in excess of one malaria case per 1 000 head of population, with an estimated population of 3 010 451 at some level of risk (Table 1). All but two of the malarious districts have incidence rates below 20 cases per 1 000 head of population. The two districts with higher incidence are in the north of KwaZulu-Natal, one of which, Ingwavuma district, borders on the uncontrolled malaria areas of southern Mozambique.

	KwaZulu-Natal		Mpumalanga		Northern Province	
1998/1999 Malaria Incidence per 1 000 population	Number of Districts	Population at risk	Number of Districts	1998* Population at risk	Number of Districts	1998* Population at risk
1 – 10	5	794 522	3	160 433	10	1 324 071
10 – 20	-	-	2	302 069	2	112 145
20 - 50	1	137 950	-	-	-	-
» 50	1	179 261	-	-	-	-

#### Table 1: The extent of the malaria problem during the 1998/99 malaria season

Source: 1998 population calculated from 1996 population census data (exponential growth rates inferred from the population projected through the cohort-component method, 1991 - 1998: Statistics South Africa, Statistical release; P0302 Mid-year estimates)

Malaria distribution during the 1998/99 season compared to the distribution ten years previously (1988/89) is shown at magisterial district level in Figures 4 and 5. These maps show the local cases according to notification district, and include those that are "unclassified" in terms of whether they are local or not. We have estimated the average increase in malaria incidence over the ten-year period from 1988/89 to 1998/99 to be approximately 525%.

In Mpumalanga, incidence rates have changed between 1988 and 1999 due to changes in the notification system. The fact that Nkomazi was part of the former Kangwane government in 1988 meant that the majority of their cases were not notified as they were clinically diagnosed, hence the apparent low incidence rates in 1988/89, followed by higher rates in 1998/99. The improvement in the notification system and the emphasis on correct and accurate data led to the change in incidence rates, depicted in the 1998/99 data. This is a much more reliable picture of the situation as mass surveys are no longer in practice and cases are notified correctly.<sup>b</sup>

b Booman and Le Grange, Mpumalanga Malaria Control Programme, personal communication.



Figure 4: Local malaria case incidence per thousand people in 1988/89

Figure 5: Local malaria case incidence per thousand people in 1998/99



Maps produced by MRP, MRC, Durban, 2000

Source: Provincial Malaria Control Programmes and Statistics South Africa CHAPTER 18

## KwaZulu-Natal

Small area analysis of malaria incidence provides a more detailed picture of malaria distribution. The magisterial districts of Ingwavuma and Ubombo, in KwaZulu-Natal, were sub-divided into Areas and Sectors for the purposes of targeted malaria control. While district level analysis assumes an incidence rate of 66 per 1 000 for the entire district, high-resolution level reporting reveals that there is in fact considerable variation in incidence within the district, with rates above 500 per 1 000 in parts of Makanis Drift and Muzi. Ten years previously the highest incidences were also reported in Makanis Drift, but at much lower levels.

A retrospective analysis found that malaria incidence has increased more in the low risk areas than the high risk areas, which means that there has been a geographical spread of high-risk malaria areas in these districts.<sup>6</sup> This has serious implications, not just for public health, but also for tourism and economic development.

## Mpumalanga

The highest incidence magisterial districts of Nkomazi, Barberton and Nsikazi have been divided into twelve sectors. The highest incidence rates are found in Komatipoort (64 per 1 000) and Figtree (39 per 1 000). While the magisterial district level map highlights the entire district of Nkomazi as having an incidence of 19 per 1 000, small area analysis immediately identifies the Figtree sector as being the area of highest risk. Similarly, the high sector level incidence in Komatipoort is averaged out at the magisterial district level, since it incorporates the lower rates of Barberton (1 per 1 000) and Kaapmuiden (19 per 1 000). Again, more detailed mapping has made it possible to focus and rationalise malaria control. This has become particularly important in the face of decreasing malaria control budgets, which are being diverted partly towards addressing the mounting problems of HIV/AIDS.<sup>7</sup> The Mpumalanga Malaria Control Programme is also mapping the malaria cases according to "localities" (towns) and is currently capturing the stand (house) level data, which will allow the data to be mapped at this fine resolution and allow cases to be pinpointed to houses.

#### **Northern Province**

The malaria incidence data for the Northern Province has previously not been mapped other than at magisterial district level. It has recently been decided that malaria case data should be mapped according to "locality," which is equivalent to a town. The malaria cases are in the process of being linked to geographic town boundaries. However numerous problems are being experienced because different names have been used for the same place. The latest "locality" boundaries have been made available from the Department of Water Affairs, who incorporated the 1996 Census data and field-work, to establish an accurate data set of localities. These are being used currently for geo-linking malaria cases, in an effort to identify the highest incidence localities.

That malaria is associated with poverty, certainly appears to be true for South Africa. Table 2 shows the approximate per capita income of the three malarious provinces, and of the two districts in each with 1. the highest and 2. the second-highest malaria incidence respectively. The relationship between malaria and its socio-economic impacts and causes is of great importance and needs further investigation.

#### Table 2: Unemployment rate and approximate per capita income in 1996 of the three malarious provinces and the two magisterial districts in each experiencing the highest malaria incidence rates.

	Unemployment rate (%)	Overall per capita income	
KwaZulu-Natal	39.1	1 170	
1. Ingwavuma	63.2	390	
2. Ubombo	57.6	560	
Mpumalanga	32.9	1 050	
1. Nkomazi	45.3	580	
2. Pilgrims Rest	20.1	910	
Northern Province	46.0	780	
1 Mutali	68.6	500	
2. Lulekani	49.0	630	

Source: 1996 Census, Statistics South Africa

# Malaria information system

Marked changes in the epidemiology of malaria in the mid-1980s emphasised the need for good quality incidence data. This led to increased research into computerised malaria notification and information systems. The importance of the spatial aspects of malaria and the potential of geographical information systems (GIS) in analysing the distribution of the disease were also realised, and this added further impetus.<sup>8</sup> Generalised descriptive records of district-level malaria were no longer sufficient. More detailed data and a spatial examination of the trends were required to understand the changes that were occurring.

The first district level maps of malaria were published in 1996.<sup>1</sup> A more detailed malaria notification system at the sub-district and household level (the latter only in the former KwaZulu malaria areas) was developed and implemented. Analysis of these data revealed patterns of malaria distribution which allowed appropriate human resource allocation, targeting and rationalisation of control efforts.<sup>1</sup>

Mapping and analysis has become possible through the successful implementation of a malaria information system in the three malaria control programmes. The malaria case data is collected by control programme agents and at health facilities, and is captured in the malaria information system. The Medical Research Council (MRC) Malaria Research Programme, in collaboration with the malaria control programmes, developed this system after end user requirements had been established. The system allows for entry, validation and reporting of malaria case data. Output is provided as standard summary reports and charts, and, since the system is GIS-based, also allows automatic production of maps.<sup>c</sup> The system was implemented in 1997 in all three malarious provinces and has effectively improved case detection and information flow.

c Martin et al, manuscript in preparation

# Policy

There is no single formula for malaria control in the country. There are provincial differences in both management of control and research priorities. The Department of Health's policy is in line with the recommendations made by the World Health Organisation (WHO) in their Global Malaria Control Strategy<sup>9</sup> and the Implementation of the Global Malaria Control Strategy.<sup>10</sup> In recognition of the devastating effect of malaria on the African economy, the Organisation of African Unity Heads of State adopted a Declaration in 1997 calling on Member States to intensify the fight against malaria. In response the Director-General of the WHO established Roll Back Malaria (RBM) in July 1998. As a participating country in the RBM initiative, the Department's policy has been aligned to the goals of the RBM initiative. The goal of RBM in the WHO African Region is to reduce the malaria burden to a level where it is no longer one of the major contributors to mortality and morbidity in the African region.<sup>11</sup>

Within the overall policy, the Health Sector Strategic Framework (HSSF) targets activities to ensure the efficient and nationwide control of malaria through establishing and maintaining an effective control programme. The objectives of the current HSSF are to:

- Decrease the incidence of indigenous malaria by 50% in the next five years
- Improve the malaria information system
- Test alternative methods of vector control to strengthen the control programme
- Establish sentinel sites to monitor drug resistance patterns and trends
- Clarify risk perception in malaria areas to encourage tourism
- Encourage community involvement in vector control programmes
- Assist with the implementation of the Spatial Development Initiatives (Regional perspective)
- Develop forecasting mechanisms to identify potential epidemics
- Develop a regional approach to control.

The HSSF is in line with the policy of the national malaria control programme and the goals of RBM. The objectives are realistic and achievable within the next five years. However, one weakness in the identified priorities is a failure to develop integrated vector management strategies which has been recognised as needing closer attention.

The implementation of the malaria policy is largely the responsibility of the provincial Departments of Health. The policy has been tailored to suit local conditions at provincial level. The responsibility for implementing the vector control strategy of residual house spraying and parasite control has been further devolved to a regional level. Malaria control at a district level has not been implemented due to logistic obstacles. Devolving spraying activities may compromise quality control and effectiveness of the spraying programme, as it requires specialised expertise that is not available at district level.

The implementation of the HSSF is closely monitored by the Malaria Advisory Group, a core group of experts from the national and provincial governments and from research institutes and academia. Its function is to guide the malaria control programme by making policy recommendations. Making use of research findings, the Subcommittee for Chemoprophylaxis and Therapy recommends the drugs to be used for prophylaxis and treatment of malaria while the subcommittee for Vector Control recommends insecticides

to be used for controlling mosquito vectors.

Current policy essentially endorses the maintenance of the status quo in respect of malaria control in South Africa. To make further gains and achieve possible interruption of malaria transmission in South Africa, innovative and aggressive approaches targeting the interventions will be required: there must be increased resource allocation; the successful implementation of control measures in adjacent countries; and cross border involvement and collaboration must be sustained over several years. This is further reliant on maintaining a pool of well-trained and experienced malaria managers, supported by the research community.

# **Malaria Control**

Malaria control is based on mosquito vector control by intra-domiciliary spraying with a residual insecticide, and parasite control by definitive diagnosis and treatment towards parasitological cure. Additional control measures include the use of focal larviciding and more recently insecticide impregnated bed nets as subsidiary control measures in specific areas.

#### **Parasite control**

Three species of *Plasmodium* are found in South Africa: *P. falciparum, P. ovale* and *P. malariae*. As elsewhere in Africa, *P. falciparum* is by far the most common. Malaria cases in South Africa are defined by the presence of parasites in the blood, through definitive diagnosis by microscope or, more recently, by rapid diagnostic kit. Case detection has been by passive reporting to health facilities by patients and, in the high-risk areas, by active case detection undertaken by the malaria control programme staff. Active case detection was carried out with varying intensity in the different provinces.

Quinine was used for treatment and prophylaxis in the early decades of this century, and was replaced by chloroquine when the latter became available. However, by 1985 all southern African countries including South Africa had reported resistance to chloroquine by the malaria parasite *Plasmodium falciparum*. By 1987 and 1988 *in vitro* drug resistance in KwaZulu-Natal was >80%,<sup>12</sup> and treatment failure figures of around 20% were reported in the latter 1980s.<sup>13, 14</sup> Thus in KwaZulu-Natal the first-line drug was changed to sulphadoxine/ pyrimethamine (SP) in February 1988.

It appears that chloroquine resistance developed at a much slower rate in Mpumalanga. In this province reported chloroquine treatment failures only started rising in the early 1990's<sup>15</sup> and *in vitro* resistance was 70% by 1996.<sup>16</sup> The first-line drug was thus also changed to SP in 1997. In the Northern Province a small-scale study found *in vivo* chloroquine resistance to be around 40% in early 1997.<sup>d</sup> Drug policy change took place two years later and SP was introduced in the 1998/99 malaria season.

In KwaZulu-Natal, where SP has been in use since 1988, SP resistance started rising slowly and reached around 25% *in vivo* resistance by 1996.<sup>17</sup> *In vivo* SP resistance was found to be above 60% in 2000,<sup>18</sup> and another drug policy change is of necessity about to be implemented. A decision was taken to change from monotherapy to combination therapy. In the interim, a combination of sulphadoxine-pyrimethamine and chloroquine was used but for the 2000-2001 malaria season, a drug combination including artemesinin will be used as the treatment of choice for malaria.

d P. Kruger, Northern Province Malaria Control Programme, personal communication.

Two factors are affecting the rate of transmission and exacerbating the problem. Firstly, patients with resistant strains remain infectious longer than patients with sensitive strains, thereby accelerating the spread of resistance. Secondly, several authors<sup>17, 19</sup> have found an increase in the number of patients with circulating gametocytes under SP treatments as compared to patients on chloroquine treatment. The simple use of SP is therefore causing a relative increase in the rate of transmission by increasing the pool of infectious people.

# Vector control

The general success of the malaria control programme in South Africa to date is largely due to intensive vector control. Historically, the major vectors of malaria in this country were *An. arabiensis* and possibly *An. gambiae*, members of the *An. gambiae* group, and *An. funestus* of the *An. funestus* group.<sup>1</sup> Individual species of each group are indistinguishable morphologically but differ in their resting and biting behaviours, which are relevant for malaria vector control.

Indoor house spraying of insecticides was first started in 1932, DDT being used from 1946 onwards, and complete coverage was achieved by 1958.<sup>1</sup> After the introduction of house spraying, *An. gambiae* and *An. funestus* were eliminated from all the provinces where they previously occurred, leaving only *An. arabiensis* as the local vector. In 1996 DDT was replaced by synthetic pyrethroids due to mounting international pressure to have DDT banned. An increasing number of donor agencies would not fund malaria control programmes using DDT, even though the World Health Organisation still supported its use in public health.

Unfortunately *Anopheles funestus* has recently been re-discovered in KwaZulu-Natal and has also been found to be resistant to synthetic pyrethroids.<sup>20</sup> Resistance in this species was also found in neighbouring areas in Mozambique, where no vector control had been carried out at all.<sup>e</sup> This species, due to its habit of breeding in permanent water bodies rather than temporary puddles, tends to be associated with all-year transmission, a possible contribution to the tremendous increase in winter malaria observed over the past few years.

In the winter of 1999 the control programme in KwaZulu-Natal therefore re-sprayed all houses in this region with DDT, and it will be used for the 2000-2001 malaria season as well. Pyrethroids will be used in the other two malaria-affected provinces of Mpumalanga and the Northern Province.

# Insecticide treated bed nets

Following the success of insecticide treated nets against malaria transmission elsewhere in Africa, a study to compare bed nets and house spraying for malaria control in South Africa was carried out in northern KwaZulu-Natal.<sup>21</sup> Local people readily accepted nets and there was high demand from areas that were not earmarked for bed net distribution. Re-treatment of nets was highly successful and rapid, but cost per person protected was higher than spraying (assuming temporary employment of spraying teams) and cost recovery was deemed not viable.<sup>f</sup>

Malaria incidence decreased by about 31% in bed net areas compared to an increase of 18% in sprayed areas. However, before bed nets can be considered as a replacement for house spraying in South Africa, more data on longer-term sustainability and acceptability must be evaluated. This is expected to go hand in hand with scaling up of bed net programmes in all the three provinces in the country. For the time being bed nets can only be considered as a

e Lubombo Spatial Development Initiative, Regional Malaria Control Commission, unpublished data.

f A. E. Mnzava, Medical Research Council, personal communcation.

# **Regional Malaria Control Initiatives**

## Collaboration within the Southern African Development Community

Recognition of the magnitude of the malaria problem within Africa has risen during the 1990's. In June 1997, African Heads of States and governments declared their commitment to strengthening malaria control in Africa. In May 1998 the African Initiative for Malaria Control (AIM) was adopted by African Ministers of Health at the 52<sup>nd</sup> World Health Assembly; and, most recently at the Abuja African Heads of States Meeting on Malaria there was a strong commitment to tackle the malaria problem.

Collaboration within the region has been enhanced by the increased political commitment to combating the malaria problem within the region. A Task Force on malaria was set up by the Southern African Development Community (SADC) Health Ministers to encourage inter-country collaboration.

Regional collaboration has also been improved through the formation of the Southern African Malaria Control (SAMC) initiative of the WHO-AFRO. The SAMC has been instrumental in bringing together malaria control managers from the SADC countries to encourage networking through sharing of experience. So far no studies have been undertaken to quantify the socio-economic impact of malaria in the SADC region. Consequently, within Southern Africa, there is need to investigate the relationships between malaria and socioeconomic development.

# The Lubombo Spatial Development Initiative

A regional project, the Lubombo Spatial Development Initiative (LSDI), aimed at accelerated development of the north-eastern region of KwaZulu-Natal, southern Mozambique and eastern Swaziland, is currently funded for year one by the Business Trust with partial funding for the next 3 years by the government.

LSDI seeks to unlock the tourism potential of the Lubombo region, with the primary objective of alleviating poverty and unemployment. The commitment to regional collaboration comes from the highest office in all three countries and their respective Heads of State signed the general protocol of agreement at the World Economic Forum in Durban in May 1999. This is a high risk malaria area in a border district. Early survey data showed infection rates as high as 90% in children aged 2 to <15 years of age in the Mozambique sector.<sup>g</sup> Thus malaria control cannot be viewed as a country specific problem, but is best viewed in a regional context. Malaria control forms an integral part of the LSDI development project and in October 1999 a malaria protocol between Swaziland, Mozambique and South Africa was signed at ministerial level, creating a legal framework for co-operation on a regional basis, based on sound technical proposals and international law.

The protocol put in place the Regional Malaria Control Commission, which encompasses a group of African scientists, public health professionals and malaria control programme managers from the three countries with exceptional experience in communicable disease control in Africa. The expertise base extends from individuals who have started malaria control programmes in 3 countries through to extensive experience in research, intervention and health management.

g Lubombo Spacial Development Initiative, Regional Malaria Control Commission, 2000, unpublished data.

Vector and parasite control strategies are in place in Swaziland and South Africa and these will be extended to include southern Mozambique. The objectives of the malaria control component are towards protecting communities in the area, enhancing development potential and protecting economic investments.

# **Conclusions and Recommendations**

Analysis of the malaria trends in the country shows an increase since the mid-1980's, rising dramatically since 1996, with district and sub-district analysis clearly indicating a geographical spread to previous lower risk areas. However, there is no reason to believe that malaria cannot again be controlled effectively by use of appropriate insecticides and effective drugs, and sustained in the longer term through a regional approach to control.

The national malaria control policy and HSSF are appropriate for the country. Malaria is a dynamic disease, evidenced by drug and insecticide resistance, which requires close collaboration between research and control. The strategic plan addresses the need to develop new tools, e.g. strengthening the Malaria Information System (MIS) to enable focusing of scarce resources, and developing new approaches, e.g. tackling malaria control from a regional perspective. Although aspects of malaria control have been decentralised to the district level, e.g. diagnosis and case management, there is a strong need to retain a core of well trained and experienced malaria control experts at both provincial and national level. There is a global consensus that sequential monotherapy should be replaced by combination therapy including an artemesinin derivative towards delaying the emergence and spread of drug resistance but also towards improved clinical cure rates and reduced transmission.<sup>22-24</sup>

The following are needed:

- 1. Continuous monitoring and evaluation of the malaria vector control programme and its efficacy
- 2. Ongoing sentinel surveillance network to monitor both drug and insecticide resistance for evidence-based policy decision-making
- 3. Ongoing development of a MIS to allow effective and appropriate data flow to the control departments and the tourism and public sectors
- 4. Research into the effects of malaria on development of communities, business, industry and tourism
- 5. Research into the long-term benefit and sustainability of insecticide treated bed nets in terms of efficiency and community acceptance
- 6. Increased and ongoing capacity development at both national and provincial level
- 7. Increased collaboration between the research and control communities
- 8. Regional approach to malaria control to facilitate regional policies with regard to antimalarial drugs and insecticides
- 9. Regional mechanisms of information flow between SADC countries
- 10. Maintenance of the National Malaria Advisory Group and appointment of Provincial Malaria Advisory Groups.



# **19** Child Health

Children have been prioritised in the process of South Africa's transformation. In the health sector, a number of policies and programmes have been formulated in the past five years. Implementation of these policies and programmes has not been uniformly successful. This chapter examines the progress made within the health sector and whether children's health needs have been adequately addressed.

Health status indicators for children reflect a mixture of successes and concerns. The majority of areas in the country still have child mortality rates that are much higher than in other countries with comparable levels of income. Immunisation coverage has not improved much in the last 5 years. Yet, there has been a considerable drop in childhood infectious diseases such as measles, polio and neonatal tetanus. The countrywide Integrated Management of Childhood Illnesses has the potential to improve child health significantly.

Two problems that have emerged as serious threats to child health and well being are highlighted. These are the rapidly rising rate of HIV-infections, and the scourge of trauma and violence against children. The current organisation and delivery of child health services are not adequately equipped to deal with these emerging problems.

The chapter concludes that some important strides have been made in terms of responding to the health needs of children, but that many gaps and challenges still remain.

Maylene Shung-King Sonja Giese Michael Hendricks James Irlam

Eva Abrahams Teresa Guthrie Gregory Hussey Marian Jacobs

**Paula Proudlock** 

Authors

Child Health Unit, Department of Paediatrics and Child Health, University of Cape Town

# Introduction

Children have been given priority in the process of South Africa's transformation. The State has ratified the Convention on the Rights of the Child,<sup>1</sup> included a special focus on children in the Constitution,<sup>2</sup> and initiated the implementation of a national plan of action to address the needs of children. South Africa has thus committed itself to protecting children as a vulnerable group and ensuring that all government policies, laws, programmes, budgetary decisions and executive actions will prioritise children. A specific portfolio committee on Children, Youth and the Disabled has been established in national parliament to monitor activities relating to these vulnerable groups.

The health sector has responded to the challenge by establishing directorates for children at national and provincial levels and by developing a number of policies and programmes to improve the health of children.

This chapter examines the health sector's progress in upholding the rights and meeting the needs of children. The chapter explores:

- The current status of child health
- The government's response in terms of policies, laws and programmes and
- Key challenges in child health.

# The current status of child health in South Africa

"Every child has the right to the highest level of health possible. Every child has the right to life."

The key child health problems in South Africa are malnutrition, preventable childhood infections such as diarrhoea and respiratory infections, emerging epidemics including HIV/ AIDS and the scourge of violence and trauma against children.

In December 1999, the National Department of Health released the draft report on the national Health and Demographic survey (SADHS)conducted in 1998.<sup>3</sup> The data released for child health suggests that much work is needed to address the priorities as outlined in the Health Sector Strategic Framework (HSSF) of the Department of Health.<sup>4</sup>

## Child mortality rates

Child mortality rates remain one of the more commonly used indicators to assess the performance of the health system and the country as a whole in terms of addressing the health needs of children. Figure 1 reflects the mortality rates for children across different provinces.





Source: South African Demographic and Health Survey 1998.

## Infant mortality

Infant mortality refers to deaths in children under the age of one year.

The national infant mortality rate (IMR) as indicated in the SADHS 1998 is 45 per 1 000 live births. There is significant variation between provinces as outlined in Figure 1 and Table 1.

#### Table 1: Infant mortality rates by province

Province	IMR
Eastern Cape	61.2
Free State	53.0
Gautena	36.3
KwaZulu Natal	521
	52.1
Mpumalanga	47.3
Northern Cape	41.8
Northern Province	372
North West	42.0
Western Cape	30.0

Source: South African Health and Demographic Survey 1998

The IMR for the Western Cape as reflected masks intra-provincial variations. The metropolitan region of the Western Cape had an IMR of 22.5 and 22.9 for 1998 and 1999 respectively. However, Khayelitsha, a peri-urban informal settlement on the borders of Cape Town had an IMR of 49.1 and 64.5 in 1998 and 1999 respectively.<sup>a</sup> This situation of inequity between areas within the same province prevails throughout the country.

The SADHS further showed that the IMR is higher in:

- Rural areas
- Babies born to mothers with no formal education
- Families with 4 or more children
- Families where the birth interval between children is less than two years.

These factors are all linked to underlying poverty, poor access to formal education and a lack of empowerment to make more appropriate life-decisions about issues such as family spacing for example.

## Under-5 mortality

Under-5 mortality refers to deaths in children under the age of 5 years, including the birthto-one year interval. The national under-5 mortality rate as outlined in the SADHS is 59 per 1 000 live births. Figures from the recent World Health Organisation (WHO) report show that countries with a comparable income level to South Africa such as Mexico and Brazil have far lower mortality rates in the under-5 age group.<sup>5</sup> This suggests that South Africa needs to use its resources in a more effective manner to impact on child health. The WHO report quotes mortality rates of 67 for girls and 85 for boys respectively. The difference

a Mr Danver Roman, Information component of the Metropole Regional Office, Department of Health, Western Cape. Personal communication.

between the SADHS and the WHO figures are quite marked. A possible reason for this could be a real increase in under-5 mortality due to the HIV-epidemic in the country. However, the reported increase might be due to the use of different databases in the two studies and thus would need to be analysed more closely.

#### Perinatal mortality

Of specific concern is the difficulty in obtaining a perinatal mortality rate at a national level. This remains one of the most sensitive indicators of health services to pregnant mothers and their newborn babies. Estimates from local studies range from 50 perinatal deaths per 1 000 live births in the rural Mount Frere district of the Eastern Cape<sup>6</sup> to 268 in a district in Soweto.<sup>7</sup> There is an urgent need to ensure that health information systems are able to provide information about this basic indicator for child health.

#### Trends in mortality rates

The national IMR declined from 50 in 1986 to just under 40 in 1991. From 1991 it steadily increased to its current level. Preliminary analysis suggest that the increasing trend from 1991 is strongly associated with the HIV epidemic in this country. Estimates indicate that the under-5 mortality rate will almost double from its current rate of 59 to 99.5 per 1 000 by the year 2010.<sup>8</sup> Similar trends are expected for the infant mortality rate.



Figure 2: Mortality rates by age, with and without AIDS in 2010

Source: HIV/AIDS and Human Development in South Africa, UNDP, 1998

#### **Child morbidity**

Morbidity rates for children are less easily obtained. The greatest threat to child survival at the moment is the HIV/AIDS epidemic. Recent estimates indicate that in the absence of a suitable intervention approximately 6 000 newborn babies per month will become infected with HIV.

Other infections that have been part and parcel of poverty stricken communities for decades are also not yet well controlled. Thirteen percent of children in the SADHS had an episode of diarrhoea in the 2-week period preceding the survey. The latest figures (March 2000) from the Department of Health showed that:<sup>9</sup>

- Children constitute approximately one fifth of all reported TB cases annually, totalling more than 5 000 cases in 1999
- A significant proportion of the 32 000 cases of malaria reported in 1999 are estimated to be in children under the age of 15
- Congenital Syphilis cases reported decreased from 552 in 1997, to 139 in 1998 and further down to 59 in 1999. This might mean a significant improvement in antenatal services to women. Alternatively might reflect an under-reporting of cases.

In addition, nearly 2 000 children under the age of 1 year contract a serious form of meningitis every year. Approximately 10-20% die.

Morbidity data for children are not complete and often total figures for diseases are not broken down by age. In order to monitor trends in child morbidity, the surveillance system would need to take special cognisance of child-specific data.

## Morbidity and mortality due to trauma

Currently trauma and violence are the commonest causes of death in the 5-19 year age group. An estimated 800 children die due to gunshot injuries each year.<sup>10</sup> In the national non-natural mortality surveillance system a sample of 10 mortuaries showed that for a six month period in 1999 more than 600 deaths in children under the age of 18 were trauma-related. This sample is estimated to represent about 25% of all deaths in the country. It is estimated that for every child death due to trauma, a further 5 children are injured. Many of these would be left with some form of disability. Based on this ratio, the figures from the mortality surveillance suggests a national estimate of more than 12 000 injuries in children per year. The available figures, whilst only estimates, do indicate that trauma is a significant contributor to child morbidity and mortality.

#### Immunisation coverage

Immunisation is one of the most effective public health measures in reducing childhood morbidity and mortality. The SADHS showed that health services had not yet obtained optimal immunisation coverage. The national average is 63% only. Coverage remains marginally higher in urban (67%) versus non-urban (60%) areas. Immunisation coverage in different provinces is outlined in Figure 3.





Of note is the fact that coverage levels between the 1994 South African Vitamin A Consulting Group (SAVACG) survey and the 1998 SADHS have not changed much. This is despite the stated goal of the Expanded Programme on Immunisation to attain greater than 90% immunisation coverage nationally by December 2003 and a minimum of 80% coverage in every province. The 1994 SAVACG survey reported a national coverage of 63.3%. The most notable increase in coverage is in the Northern Cape, that had a coverage of 60.4% in 1994 increasing to the highest reported coverage of 81% in 2000. Despite the apparent lack of increase in coverage nationally, the latest notification data show that:<sup>11</sup>

- Very few measles cases are now notified each year. The figure for 2000 indicates 20 cases for the first 5 months of the year, with no deaths;
- For the past 5 years no cases of acute poliomyelitis have been reported. However, proper investigation and follow up of new cases of Acute Flaccid Paralysis are essential to exclude polio as a cause;
- A single case of tetanus neonatorum had been reported in the last 17 months;
- The last significant measles outbreak in children of school-going age was in 1992 with no outbreaks in the under-5 age group.

Source: SADHS, Department of Health, 1998

It appears that coverage levels throughout the country are adequate in controlling outbreaks of these common childhood conditions and that the prevalence of these conditions has decreased substantially over the past few years. The validity of the notification system does, however, rely on good notification as well as good case detection.

## Chronic illness as a measure of child health status

A chronic illness is by definition an illness that lasts for a year or longer. There are no national statistics available on the numbers of children affected by chronic illnesses. Estimates indicate that at least 1 in every 10 children have some form of chronic illness. Asthma is the most prevalent, with an estimated prevalence in children of 13%. With the rise of HIV infection, more children are likely to be added to the pool of people with chronic illnesses. Chronic illnesses in children are likely to continue into adulthood. They thus contribute significantly to the total burden of disease and are deserving of better attention.

3% of all births are of children with genetic disorders, which also often result in chronic illness or severe physical or mental disability. The major impact on the family is the care of this child - which often means the mother who is the care giver has to look after this child on a full time basis. This means less income for the family and contributes to the cycle of poverty. The limited access to genetic counselling also means that these women may have a second or third child with the same condition. Certain conditions like asthma also have a genetic basis.

# Child rights and the law

A number of international instruments have been put into place in order to ensure that the rights of children are upheld. The two key instruments that have been adopted by South Africa are the Convention on the Rights of the Child and the African Charter on the Rights and Welfare of the Child. For children in South Africa, the political will to honour the obligations outlined in these instruments are without dispute. This section outlines some of the country's responses to the challenge of ensuring child rights.

## The Convention on the Rights of the Child

South Africa ratified the United Nations' Convention on the Rights of the Child<sup>1</sup> (UNCRC) in 1995.

The Convention provided the South African government with an important framework within which to formulate its action plans for children.

The specific rights in the Convention that relate to child health are outlined in Box 1.

#### Box 1: Children's health rights, Convention on the Rights of the Child.

- All actions concerning children should take full account of their best interests. The State is to provide adequate acre when parents or others responsible fail to do so (Article 3).
- Every child has the inherent right to life and Parties shall ensure to the maximum extent possible the survival and development of the child (Article 6).
- The state must provide special protection for children deprived of their family environment and ensure that appropriate alternative family care or institutional placement is made available to them, taking into account the child's cultural background (Article 20).
- Children have a right to the highest level of health possible which includes the right to health and medical services, with special emphasis on primary preventive health care, public health education and the diminution of infant mortality (Article 24).

Source: Convention on the Rights of the Child, 1989

#### The Constitution

"Every child has the right to family care or parental care, or to appropriate alternative care, to basic shelter and social services and to be protected from maltreatment, neglect, abuse or degradation"<sup>2</sup>

Unlike the general socio-economic rights in the Constitution, children's socio-economic rights are not expressly limited by the "progressive realisation" and "limited resources" principles. This means that the government has an obligation to make these rights a reality for all South African children immediately and that it will struggle to argue "lack of resources" as a defence in a court of law. The Grootboom Case taken before the Constitutional Court in October 2000, while overturning the ruling of the High Court which underlined the responsibility of the State towards children and their families, did confirm the responsibility of the State to provide relief for people living in intolerable conditions.

#### **National laws**

#### The National Health Bill

In 1995, the Department of Health started drafting a new National Health Bill to replace the National Health Act of 1977.<sup>12</sup> The bill is in its 14<sup>th</sup> draft<sup>13</sup> and has not yet been finalised or distributed for public comment. While the draft bill does provide mechanisms to ensure the equitable allocation of resources and the equitable delivery of services to all South Africans, no specific mechanisms are created to ensure priority for children.

#### The Child Care Bill

The current child care system in South Africa is flailing as large numbers of children require special care and protection. This situation is exacerbated by the HIV/AIDS pandemic. Existing child care and protection legislation is outdated and fragmented. In order to address the gaps in existing legislation, a complete revision of child-care and related legislation is required.

The South African Law Commission is re-writing the 1983 Child Care Act. The 1983 Act is very narrow in its focus and concentrated on removing abused and neglected children from their parents and placing them in institutions. The new Act will adopt a broader focus and will take into account South Africa's new obligations in terms of the Convention on the Rights of the Child and the Constitution. The Act will create protection and care mechanisms for vulnerable children including street children, refugee children, children with HIV/AIDS, children orphaned by AIDS and abused and neglected children.

The drafting process began in July 1998 and a draft bill should be available for comment by February 2001. The drafting process will involve a comprehensive review of the existing 1983 Act, and all other South African legislation affecting children, together with common law, customary law and religious laws relating to children.<sup>14</sup> One aspect that the review will address is the harmonisation of the definition of a child, as several existing laws used different definitions. The relevant health aspects in the Act will also be substantially expanded.

# Recent policy and legislative developments on prevention of violence against children

- The Firearms Control Bill was tabled in Parliament in May 2000. The passage of the bill will contribute to reducing the high levels of gun violence in South Africa which will be to the benefit of all South Africa's children;
- The Domestic Violence Act was passed in 1998. It provides better protection and redress for children who are victims of domestic violence;
- The re-drafted Child Care Act will hopefully address the issue of child abuse more thoroughly;
- The Sexual Offences Act and Criminal Procedure Act, in so far as it relates to sexual offences, are being extensively re-written by the South African Law Commission to improve the arrest, prosecution, conviction and sentencing of sexual offenders. The new legislation will also concentrate on setting up victim and witness support services.

# Tobacco legislation and child health

The 1999 Tobacco Products Control Amendment Act and regulations directly attempt to protect children and youth from the influences of the industry's advertising campaigns, which specifically target this group, as well as tightening up on the ban on cigarette sales to minors.

The challenges are therefore to implement the regulations attached to the Tobacco Act, decrease childhood and adult smoking rates, and to protect children from environmental tobacco smoke in their own home.

# **Rights-based programmes**

# National Programme of Action for children

In 1996, the National Programme of Action (NPA) was officially launched, with the purpose of ensuring the realisation of the rights of children as laid out in the UNCRC. In 1998, the NPA moved to the Deputy President's office as one of the responsibilities of the "Office on the Status of the Child". When Thabo Mbeki became President, the Office on the Status of the Child moved with him to the President's office.

In January 2000, the NPA presented a report to the United Nations on South Africa's progress with the implementation of the UNCRC. While the United Nations committee

evaluating South Africa's country report expressed appreciation for the efforts made at legal reform, they had several concerns. These included the fact that improved legislation had not translated into the development of effective programmes at community level and that insufficient resources are allocated to children's programmes and activities.<sup>15</sup>

The Committee recommended that South Africa reinforce its efforts to allocate appropriate resources and develop comprehensive programmes to improve the health situation of children, particularly in rural areas.

Provinces are currently developing provincial plans of action in order to translate the sentiments in the NPA into action plans.

## The Patients' Charter and Children

The Department of Health finalised and distributed the Patients' Rights Charter towards the end of 1999.<sup>16</sup> The Charter is aimed at setting a common standard for achieving the realisation of everyone's right of access to health care services.

Although the right of access to health care services includes the right to provision for special needs in the case of newborn infants, children, pregnant women, the aged, disabled persons, patients in pain, persons living with HIV or AIDS patients; when it come to children's special health rights, the Charter does not reflect the Constitution. Of all the "vulnerable groups," children have been singled out for special attention in the Constitution by the inclusion of a children's clause.<sup>2</sup> The Charter does not follow the lead of the Constitution in singling out children for prioritisation. Furthermore, it does not take into account the fact that children's constitutional health rights are different to the general adult rights. Children have a constitutional "right to" basic health care services in contrast to the general and more limited "right of access to" health care services.<sup>2</sup>

The success of the Patients' Rights Charter depends to a large extent on a far reaching public awareness rights empowerment campaign and the successful realisation of the last right, the right to complain about the health care services and to have that complaint investigated and responded to. Without an accessible and working complaints referral and response mechanism, the rights in the Charter will remain ideal statements of intent. For children who often do not know their rights or how to claim or enforce them, an efficient complaints mechanism is essential. Children, whose ability to complain and be heard is disadvantaged by their young age, will need special help in this respect.

# Child health policies

In response to the government's prioritisation of children, the Maternal Child and Women's Health (MCWH) Chief Directorate in the Department of Health and other related directorates formulated a number of new policies and programmes. The frameworks for these policies are provided in the White Paper for the Transformation of the Health System,<sup>17</sup> the draft MCWH policy released in 1995<sup>18</sup> and the more recent Health Sector Strategic Framework for 1999-2004.<sup>4</sup> Specific aspects such as child nutrition and childhood infections have been highlighted as priority areas in these documents.

#### The Health Sector Strategic Framework

The Department of Health's Strategic Framework (HSSF) for the next four years makes provision for specific child-related interventions in a number of areas.<sup>4</sup>

# Box 3: Child health objectives in the Health Sector Strategic Framework

- Reduce infant mortality rate and under-5 mortality rate
- ◆ Implement the National Programme of Action for Children in all provinces
- Implement Integrated Management of Childhood Illnesses (IMCI) in all provinces
- Finalise clinical guidelines for youth and adolescent health
- Reduce teen pregnancy
- Reduce mortality and substance abuse (including smoking) among adolescents
- Reduce prevalence of wasting and stunting among children, as well as underweight for age among children under six years of age.

For children with HIV/AIDS, the relevant sections in the Framework are:

- Social mobilisation of communities
- Increasing use of community and home-based care, and strengthening support and referral mechanisms for patients and their care-givers
- Expanding the Life Skills Programme to both primary and secondary schools
- Searching for affordable and practical strategies to reduce mother-to-child transmission

The HSSF recognises violence against women and children as an important health priority requiring multi-sectoral interventions. It outlines three key strategies for addressing this issue:

- Raising awareness of basic human rights for all
- Training health personnel to provide necessary support to victims of violence
- Developing protocols for the management of violence and abuse by December 2000.

Source: Department of Health, 1999

In translating these objectives into practice, there is an opportunity to review norms and standards for the delivery of health care services to children. At the same time, it presents an opportunity to revise targets for monitoring progress towards improving the health of children through the transformation process.

# New policies

The two most recent policies that have been released are the National Breastfeeding guidelines<sup>19</sup> and the Vitamin A supplementation policy.<sup>20</sup>

In January 2000, the Nutrition Directorate launched the Breast-feeding Guidelines for health workers and health facilities. The policy applies to all health facilities and health workers who are engaged in the health care of pregnant and lactating women, newborns, infants and young children. The policy protects, promotes and supports breast-feeding and encourages all health care facilities to implement the Baby Friendly Hospital Initiative. The Baby Friendly Hospital Initiative encourages the active promotion of breastfeeding from birth and is intended to be implemented in all facilities where babies are born. Currently eleven hospitals country-wide have successfully implemented the Baby Friendly Hospital Initiative. The document does recognise that many sectors of society, for instance the workplace, need to undergo changes in attitudes and practices in order to attain a true breastfeeding culture. A crucial policy gap at this stage is the absence of clear breastfeeding guidelines to mothers with HIV, as well as the absence of any policy on reducing the transmission of HIV from pregnant and lactating mothers to their babies.

In April 2000, the Directorate for Nutrition released the Vitamin A supplementation policy. It was developed to address the high prevalence of marginal Vitamin A deficiency in children. The policy specifically targets children at risk of malnutrition and childhood infections. The policy will be implemented in all public sector facilities that are responsible for child health. Poor nutritional status contributes to morbidity and mortality in HIV infected children. Vitamin A deficiency in particular has been linked to an increased risk of mother-to-child transmission of HIV.<sup>21</sup> The Vitamin A supplementation programme should contribute positively in this regard. Numerous logistical issues around the availability of Vitamin A in the appropriate dose and at a reasonable cost still need to be finalised before country-wide implementation can take place.

Policy guidelines for the management and prevention of genetic disorders, Birth Defects and Disabilities have been adopted by the Provincial Heads of Health. These guidelines deal with genetic services that should be offered prior to conception, during pregnancy, at birth, in infancy and childhood, as well as in adolescence and adulthood. The priority conditions include neural tube defects, Down's syndrome, albinism and foetal alcohol syndrome.

#### **Policies in progress**

A number of policy guidelines are currently being formulated and are in various stages of completion. These policies cut across different programmes and sectors.

## Policy Guidelines on Youth and Adolescent health<sup>22</sup>

These are the first national policy guidelines for youth (people aged 10 to 24 years). The guidelines are based on a framework developed by the Adolescent Health and Development programme of the World Health Organisation. The policy guidelines are aimed at preventing and responding to specific health problems in youth, such as unsafe sexual behaviour and substance abuse; and promoting the healthy development of all youth.

## The Health Promoting Schools policy<sup>23</sup>

The Health Promotion Directorate is drafting Guidelines for the Development of Health Promoting Schools. The School Health Care Services Policy Guidelines that are being drafted by the MCWH Directorate will form an integral part of the Health Promoting Schools approach.

## Policy guidelines on Child and Youth mental health services<sup>24</sup>

Mental health promotion and provision of services for children and youth in South Africa has been and still is a neglected area. The guidelines envisage the development of Child and Youth Mental Health Care Services at all levels of health care in the provinces and the adoption of an integrated and intersectoral approach to the promotion of child and youth mental health.

## Policy for children with Chronic Diseases

This area of child health has been neglected until now. In September 1999 a workshop was organised by the Child Health Policy Institute.<sup>25</sup> One of the key recommendations from the workshop was a need for a clear national policy to shape services for children with chronic diseases. The Directorate for Chronic Diseases, disabilities and geriatrics is currently coordinating the development of the policy. The policy aims to improve service delivery to children with chronic diseases at all levels of the health system.

# Health policy challenges

Whilst the progress made with policy and programme development is commendable, a number of challenges influence effective implementation. In addition, a number of policy gaps still exist.

Many of the child-related polices and laws require close co-operation between different components within the health department and with other sectors such as safety and security and welfare for example. A problem of the policy process is the lack of co-ordination between the writers of various policies and laws. The lack of co-ordination exists between different directorates within the national and provincial health departments, as well as between sectors. This often results in unnecessary duplication, fragmentation or complete omission of an important component of child health.

In addition health care workers, non-governmental and community-based organisations working in the child health arena are not always given opportunities to comment and make inputs into policy processes. They are thus confronted by the policy for the first time when it has already been finalised. Ideally all policy should be formulated in consultation with the final implementers of the policy throughout all stages of policy development and not only at the final stage of implementation. In this way policies might become more practical, as the staff responsible for implementation would provide valuable insight into potential implementation pitfalls and would also feel a better sense of ownership of the policy. However, the balance between too broad and too little consultation is challenging and needs to be appropriately adapted for each policy.

While the policy documents set the foundation and principles for our new health system with a firm focus on prioritising child health, the draft National Health Bill does not flesh out principles or create the necessary mechanisms needed to ensure effective policy implementation. The development of clear implementation guidelines, together with the allocation or re-prioritisation of resources are two such mechanisms that need to become consistent parts of the policy process and that will contribute to improved implementation.

# Management and organisation of child health services

The MCWH directorate in the Department of Health is responsible for the formulation of national policies and laws and the development of national programmes. The provincial MCWH directorates are responsible for the effective implementation of these policies, laws and programmes. The districts are the ultimate level of implementation.

# National cluster for MCWH

The Chief Directorate for MCWH was established in 1995. In the past two years the Chief Directorate, together with other national structures had undergone significant structural changes. The introduction of "Clusters" within the Department of Health was an attempt

to ensure better co-ordination and planning. Thus the portfolio of the MCWH Chief Director has changed to that of Cluster Manager for MCWH.

The MCWH cluster has three directorates, namely the Directorate for Women's Health and Genetics, the Directorate for Child and Youth Health and the Directorate for Nutrition. Unfortunately, vacancies at the most senior level in the Directorate have left a significant gap in the management of programmes for children.

The Directorate for Child and Youth health is mainly responsible for the following programmes: The Expanded Programme for Immunisation (EPI), the Integrated Management of Childhood Illnesses (IMCI), school health, youth and adolescent health, the health component of the National Programme of Action for children and for children in difficult circumstances. Other aspects of child health such as chronic diseases, mental health and HIV/AIDS are dealt with under different clusters. This presents a significant managerial challenge to ensure co-ordinated planning and management of all child health-related programmes. The Directorate for Nutrition oversees nutrition-related policies and programmes. The main programmes currently implemented under the Directorate for Child and Youth health and Nutrition are IMCI, the Integrated Nutrition Programme (INP) and the Baby Friendly Hospital Initiative. Children with genetic disorders and birth defects are dealt with by the Sub-directorate: Human Genetics.

The challenges to this Cluster in the next five years are:

- To provide support for the implementation and monitoring of the many policies and programmes that it has instituted in the past few years
- Monitoring the impact of the polices and programmes on child well-being
- The development of new policies for aspects of child health that currently have no coherent national policy
- Co-ordination with other programmes that impact on child health
- Prioritisation of operational support to the nine provincial MCWH managers
- An urgent and co-ordinated response to reduce the infection of babies and children, especially teenagers with HIV, as well as the problem of trauma and violence against children.

## **Provincial MCWH directorates**

The MCWH programmes within provinces are located in sub-directorates, which fall under the Directorate for programmes. The specific structure and activities within MCWH deputy directorates vary from province to province. In a 1999 review of provincial MCWH programmes by the Child Health Policy Institute,<sup>26</sup> the MCWH programme managers highlighted their main challenges. The main issues were:

- The difficulties with integration and co-ordination between the different programmes that relate to child health
- The implementation of policies in the absence of sufficient human and other resources
- Minimal support to programme managers from other key directorates such as Policy and Planning.

#### **District level MCH services**

There are currently no designated district MCWH programme managers at district level, with the exception of a few districts in the Eastern Cape province.

The scope of public sector services for children at a district level includes: health promotion, preventative health care, outpatient primary level curative care which includes emergency care and trauma, inpatient curative care at district hospitals and rehabilitative care. Emergency services are available 24-hours a day in designated facilities and in district hospitals. Health care for children at primary level facilities is free. There is still a fee that has to be paid for children when they visit a secondary or tertiary facility without an appropriate referral.

Additional services at district level are:

- School health services: These services are currently only operative in Gauteng, KwaZulu-Natal and the Western Cape, having largely collapsed in other provinces;
- Perinatal services: Perinatal services are divided into antenatal, obstetric and postnatal services. Antenatal services are rendered at clinics and midwife obstetric units, whilst obstetric services are rendered either at district hospitals, midwife obstetric units or at community health centres. Midwife obstetric units are exclusive to the Western Cape and provide obstetric services on a 24-hour basis in the province. Postnatal services for babies are rendered at clinics that provide preventive and promotive services for children.

Other services at district level include the services run by NGO's, traditional healers and the private sector. Throughout the country child health services are provided through industry. For example, in the Western Cape there is a health service delivered for workers in the clothing industry and their dependants. This service provides primary level curative care to children of clothing workers. In the mining industry children have access to health care through the medical schemes that provide for workers and their dependants, and similarly in the South African National Defence Force. Most large agricultural estates in the northern part of the country provide health services to everyone living on the estates. These initiatives in the private sector are very viable alternatives to public sector care for children. The relationship between these services and public sector services need to be explored further to ensure a fruitful exchange of options for children and to ensure coordinated protocols, referral systems and drug regimes that will benefit all children. The role of the private-for-profit sector in child health, needs further exploration.

The challenge for primary level child health services include the need for improved access in rural and peri-urban areas, as well as to improve the quality of care. Many recent studies, such as the chapter on Quality of Care in the 1998 South African Health Review<sup>27</sup> and a recent evaluation of after hours services for children by the Child Health Policy Institute,<sup>28</sup> indicated that staff training, child-friendly health services and the execution of basic child health activities are below an acceptable standard in many parts of the country. A basic package with stipulated norms and standards is required in order to achieve comparable quality of services in all areas.

# A core package of primary health care services for children

The Department of Health released the final draft of the proposed Primary Health Care Package for South Africa, together with a set of proposed norms and standards in February 2000.<sup>29</sup>

For children it makes provision for a comprehensive package of services to be provided at a primary level through mobile clinics, fixed clinics and community health centres. A separate package is being developed for district hospitals.

The package includes:

- Health promotion and prevention activities
- Immunisation
- Developmental and genetic screening
- Growth monitoring, amongst others.

It also makes provision for acute curative care using approved protocols such as IMCI, emergency care and school health services. The package makes little mention of children with chronic conditions, nor of support services for children who are victims of violence, physical and sexual abuse. Whilst it does address these areas in a general way, more thought is required into the specific needs of children in these areas.

The accompanying norms and standards provide guidelines for the minimum acceptable standard to be achieved in each facility that deals with children. Not all the standards have been outlined for all aspects of child health services. As this is a work in progress, child health workers should have the opportunity to make further input into the documents.

# Financing health care for children

In terms of the National Programme of Action (NPA) for Children, the way to evaluate government's performance in putting children first in the health and nutrition sector, is to examine the extent to which children's health and nutrition needs are prioritised in government policy, budget allocations and service delivery.

It is very difficult to monitor the exact expenditure on child health as a special line item, as the Finance Department does not document expenditure according to priority groups.

The Institute for Democratic Alternative in South Africa (Idasa) examines expenditure on child health in their latest Children's Budget book.<sup>30</sup>

The chapter on health and nutrition estimates that 10% of the Department of Health's budget is allocated to services that target children. A significant amount of funding has been made available for child nutrition through the Integrated Nutrition Programme (INP) conditional grant to provinces. The largest proportion of this grant is currently allocated to children through the Primary School Nutrition programme. If the INP conditional grant is excluded, then the Department of Health only awards 1% of its total budget specifically to children.

In addition the chapter highlights that:

- Most provinces' health budgets are set to decline in real terms over the next three years
- There is substantial inequity in health spending per capita and hence per child across the provinces
- Provinces have been shifting resources out of the Academic Health Services (AHS) programme and into the District Health Services (DHS) programme, which holds more direct benefit for poor children through the delivery of district level services.

However, the difficulty in extracting the child health-specific financial information and the fact that the chapter mainly used assumptions around nutrition-related programmes leaves the extent of funding prioritisation of child health care still unresolved.

# Key child health priorities and programmes

A number of old and emerging health problems and priorities currently threaten the health and well being of the children of South Africa. The United Nations at their June 2000 summit meeting had identified a number of global priorities for children, including child nutrition, HIV/AIDS, trauma and violence against children and social security for children. South African priorities for children are similar.

# HIV/AIDS

The HIV/AIDS epidemic is having a significant impact on child health. In Africa in 1999, it is estimated that approximately 500 000 children were infected with HIV, and that almost 400 000 AIDS-related child deaths occurred.<sup>31</sup> Most HIV infections in children under the age of 12 years occur through mother to child transmission at or soon after birth. South Africa is experiencing one of the fastest growing epidemics in the world, with 75 000 infants expected to be born with HIV infection during the year 2000.<sup>32</sup> One study suggests that within state hospitals at least 20-35% of paediatric beds are occupied by HIV-infected children.<sup>33</sup>

The impact of the epidemic on millions of HIV-negative children, through the death of one or both parents, the loss of the family breadwinner and the strain on general support structures within communities, is alarming.

The HIV/AIDS orphan crisis is one of the greatest humanitarian and development challenges facing the global community.<sup>34</sup> The 'orphan epidemic' is still in its infancy and over the next few years the impact of HIV/AIDS on children will grow to proportions difficult to imagine. The needs of an orphaned child have historically been met by that child's extended family. Poverty and the HIV/AIDS epidemic have however created a situation in which the extended family safety net has reached a point of saturation in many communities.<sup>35</sup> An increasing number of children are living in child headed households or turning, in desperation, to life on the streets. By 2005, it is estimated that over one million children in South Africa will have lost one or both of their parents to AIDS.<sup>36</sup>

Recent scientific studies do provide direction as to the possible intervention strategies that South Africa could employ to reduce the impact of HIV infection on children, namely:

- Studies from Malawi and South Africa showed that a single dose of the drug, Nevirapine, given to the mother at the onset of labour combined with a single dose given to the infant at 2-3 days old, was successful in reducing mother to child HIV transmission by approximately 50%. This reduction in transmission rate would translate into saving the lives of over 3 000 children every month. Nevirapine is a cost effective alternative to zidovudine (AZT), a drug routinely given to HIV-positive pregnant women in developed countries.
- A recent study in Durban indicated that HIV transmission rates in exclusively breastfed infants at 3 months of age (15%) was similar to that in artificially fed infants (19%), but significantly lower than in infants who received mixed feeding.<sup>37</sup> Further research is needed in this area.

Pneumocystis Carinii Pneumonia (PCP) has been identified as a major cause of childhood morbidity and mortality in HIV infected children. A cost effective prophylaxis is available for children. Supporting children with HIV infection to reduce secondary infections and other complications is essential. This includes ensuring an optimum nutritional status for all children and readily available drugs for opportunistic infections.

Statistics on the numbers of children who are infected with HIV through sexual abuse are not available. Child victims of abuse are particularly vulnerable to HIV infection if their abuser is HIV positive, and the provision of anti-retrovirals to children who have been raped should be standard practise. Effectively promoting HIV/AIDS awareness to protect young children, especially girls, from being infected with the virus through rape, sexual abuse and sexual exploitation by older men is one of the key challenges that need urgent action.

#### Malnutrition

Malnutrition remains one of the biggest contributors to child morbidity and mortality in South Africa. Globally it has remained on the agenda of key priorities for the next century. In South Africa, child nutrition has been identified as a priority area.

In 1999 a national food consumption and anthropometric survey was done on a sample of 3 120 children aged 1-9 years. Table 2 outlines results on the anthropometric status of children from the food consumption survey.

Commercial	Formal Farms	Informal Urban	Tribal Urban	Rural	Urban	National	
Percent stunted	30.6	16	19.3	25.3	26.5	17	21.6
Percent under-weight	18	8	8	11	13	8	10
Percent wasted	4	2.6	2	5	5	2.5	4

Table 2: Anthropometric Status of South African Children Aged one to nine years

Source: National Food Consumption Survey April 2000.38

The survey showed that among children one to nine years of age that:

- One in five children are stunted, making this the most common nutritional disorder.
- One in ten children are underweight
- Stunting and underweight are more prevalent on commercial farms, tribal and rural areas compared to urban areas
- The prevalence of stunting was highest in the Northern Cape (31%), Free State (30%), Mpumalanga (26%), North West (24%), Northern Province (23%) and the Eastern Cape (20%).

## The Integrated Nutrition Programme (INP)

The Integrated Nutrition Programme (INP) includes a co-ordinated, intersectoral approach in solving nutritional deficiencies among women and children. It aims to:

- Enable women to exclusively breastfeed their infants for the first 6 months of life and to continue breastfeeding for 2 years after introducing solids
- Reduce the prevalence of malnutrition and hunger
- Ensure optimal growth of infants and children
- Promote health among pregnant and lactating women
- Improve capacity at all levels to solve malnutrition and hunger
- Facilitate intersectoral collaboration and community ownership of community-based programmes.

The framework within which these aims are to be achieved includes the health facility-based, community-based and nutrition promotion programmes.<sup>39</sup>

#### Progress in implementing the Integrated Nutrition Programme (INP)

The INP has made a number of achievements in the last three years.

- Guidelines have been completed on implementation of the INP, the health facility-based nutrition programme, parasite control and breastfeeding.<sup>19, b</sup>
- More than 200 officials have been trained in implementing the INP through advocacy workshops under the auspices of the National Training and Capacity Building Project. Health professionals have been trained in lactation management (206), provincial assessment of the Baby-friendly Hospital Initiative (BFHI) (27) and monitoring the INP (212). There are currently 23 baby-friendly hospitals in South Africa.<sup>38</sup>
- Progress has been made towards controlling micronutrient deficiencies. The vitamin A supplementation policy will be implemented. Key steps towards implementing the national food fortification programme includes the establishment of a Food Fortification Task Group with representation from the maize and wheat milling industry and the sugar industry on the group. The Iodine Deficiency Disorder Survey conducted in 1999 showed substantial improvements in iodine status, following mandatory iodination of salt, with 90% of primary schools surveyed having an adequate iodine intake.<sup>b</sup>
- The Primary School Nutrition Programme (PSNP) reached 15 428 (96%) of schools targeted, resulting in the feeding of 4.7 million learners in 1999/2000. In six of the provinces the PSNP has formed linkages with school gardens and bread baking projects that contribute to income generation for a number of beneficiaries. A primary school nutrition education programme has been developed in conjunction with the Department of Education and incorporated into the primary school curriculum. A Task Team of the PSNP has developed a draft policy on community-based parasite control. Parasite control projects that include both preventive, promotive and treatment strategies have been set up in KwaZulu-Natal and Mpumalanga. The PSNP is a good example of linkages with other sectors such as Department of Agriculture, non-governmental organizations, the business sector, Directorate of Food Control and Food Safety and school project committees.<sup>b</sup>

b Department of Health, Nutrition Directorate. Personal communication.

 The Poverty Alleviation Fund has allocated R29.4 million in the year 2000/01 to household food security, income generation and nutrition intervention projects. These community-based projects currently benefit 16 341 beneficiaries in the various provinces. Monitoring mechanisms incorporating key indicators have been set in place to track the impact of these projects on the nutritional status of mothers and children.<sup>b</sup>

#### Further challenges to the implementation of the INP are:

- Addressing the costs of implementing the national food fortification programme
- Extending implementation of the BFHI to the other 363 hospitals nation-wide
- Targeting nutritionally needy mothers and children through income generation projects
- Implementation of effective parasite control at preschools and schools nationally.<sup>b</sup>

#### Acute childhood illnesses

The Integrated Management of Childhood Illnesses (IMCI) has been adopted as a national programme to address acute childhood illnesses.

This programme is an internationally endorsed WHO/UNICEF strategy which aims to reduce childhood mortality and morbidity by addressing the five common illnesses directly responsible for 70% of all childhood deaths world wide in an integrated manner.

IMCI was introduced in South Africa in 1997 and is currently one of the key child health activities of the national and provincial MCWH directorates. The focus of the programme is threefold:

- To improve health workers' skills at the primary level in the diagnosis and management of common childhood illnesses
- To improve the quality of the health care system in which the programme is delivered
- To involve the community in the management and care of children. This component is still in its infancy.

The first training to implement the programme commenced in June 1998. The programme has since been implemented in all nine provinces. An evaluation of IMCI implementation at the end of 1999 and in August of 2000 identified a number of challenges and operational difficulties.<sup>40</sup> These included lack of follow-up after health workers were trained, inadequate facility support systems to optimise the implementation of the IMCI, difficulties in the referral system and poor understanding of senior managers of the programme and its infra-structural requirements. Recommendations have been formulated to address the concerns. No evaluation has yet been done of the impact of IMCI on child morbidity and mortality or quality of care.
The following case study describes the implementation of IMCI in the Northern Province.

#### Box 6: IMCI implementation in the Northern Province

The Northern Province wants 90% of PHC nurses to be using IMCI skills by 2005. A small team have trained over 200 nurses and 30 doctors in 2 years, and firmly established IMCI as provincial PHC policy.

How did they do it?

The MCWH sub-directorate drives IMCI jointly with MEDUNSA Community Paediatrics and Public Health. They targeted 3 existing pilot districts for implementation, and collaborated with local ISDS facilitators from the Health Systems Trust for support systems. Those already acting as clinical supervisors were prioritised for training, including paediatric or community doctors. From each course the best students were hand picked as potential trainers, and then given additional facilitator skills. IMCI practices in clinics were entrenched by ensuring that all registered nurses in the facility were trained before moving to another clinic. In addition IMCI has been incorporated into existing nursing curricula. Changes to the medical curriculum have been slow.

#### Main problems

The main problem has been to keep a critical mass of medical and nursing expertise, without administrative support. Attaining management commitment at all levels has been an ongoing process. Follow - up after training has been behind schedule, and evaluation limited to process and output factors, and not community level outcomes. Far more research and work is needed on family practices in child health.

The team believes rapid results are the way to build sustainable commitment. IMCI is seen as a model of PHC package implementation within the district health system.

Source: Dr Steven Donohue, Department of Community Health, Medunsa, August 2000

#### Trauma, violence and neglect

In South Africa, trauma accounts for 25% of deaths in children in the 1 to 4 year age group. The figure grows to 60% for the 5 to 19 year old age group.<sup>41</sup>

The Child Accident Prevention Foundation based in Cape Town estimates that approximately 3 000 children under the age of 15 die annually as a result of accidental injury. An additional number of children are permanently disabled. At the top of the list of trauma injuries are "falls", motor vehicle accidents (MVA's) and poisoning. Falling is a common entry into trauma records, especially for the age group 1 to 9. Most child MVA victims are pedestrians and child passengers without safety restraints. Most poisoning cases involve medicine or paraffin. Firearm injuries to children is on the increase. A study by the Child Health Policy Institute shows that from 1992 to 1996 a total of 1736 children under 19 years in the Cape Town area were victims of firearms related incidents.<sup>42</sup> Of the 1 736 children injured, 322 died. The study showed that the numbers increased from 142 per annum in 1992 to 421 in 1996. Current estimates indicate that these numbers are continuing to increase annually. Other causes of trauma injuries and death include burning and drowning.

Child physical and sexual abuse also accounts for a large group of trauma injuries. While the trauma records of hospitals record the cases that present with physical trauma, the records of child welfare and child abuse NGO's present a fuller picture of both physical and psychological trauma caused by child abuse. The South African National Council for Child and Family Welfare (SANCCFW) reports that the trend in child abuse and neglect from 1994 to 1998 shows a steep increase, particularly for sexual abuse, from the previous three years in which child abuse cases were decreasing. The number of new sexual abuse cases reported to SANCCFW for the year 1998/99 were 3 684 compared to 1 886 during the previous year of 1997/98. The number of child neglect cases reported to SANCCFW during 1998/99 was 3 658 compared to 2 233 in 1997/98. In South Africa about 3 000 children are abandoned every year.

Delegates at the 13<sup>th</sup> International Conference on Child Abuse and Neglect (held in Durban from the 3<sup>rd</sup> to the 6<sup>th</sup> September 2000) told the conference that 40 000 cases of child abuse have been reported in South Africa in the past year. Children under the age of two are contracting HIV through sexual abuse because of the belief that having sex with a young virgin would cure the disease. While the rape of young girls is still under-reported, statistics on the sexual abuse of young boys are even more difficult to come by.

#### **Childhood disability**

#### Prevalence of disability among children in South Africa

The WHO estimates a global prevalence of 10 - 12% of the population for all disability. A South African national survey in 1996 indicated the total prevalence of disability in the population to be 12.8% (National Health and Population Development). The results from the Community Agency for Social Inquiry national study for the under-20 age group reflect prevalences ranging from 0.6% to 5.6% across different age and racial groups<sup>43</sup> (see Table 3).

Age Categories	African (%)	Coloured (%)	Indian (%)	White (%)	Total (%)
1-5 years	1.7	0.6	1.3	1.5	1.6
6-10 years	3.3	1.7	1.0	5.6	3.2
11-15 years	4.7	2.6	1.9	5.2	4.5
16-20 years	4.6	2.1	1.0	2.4	4.1

#### Table 3: Disability prevalence by age and race

Source: CASE 1999.

#### **Problems and Challenges**

While the Integrated National Disability Strategy calls for equalisation of opportunities and the full participation of persons with disabilities in societal life, there is no specific mention of children with disabilities or of their particular needs. Many barriers still exist for people with disabilities from physical obstructions to societal attitudes and prejudices, as well as inequity in access to basic health, welfare and educational services. Children in rural areas are particularly disadvantaged in access to services. Many children with disabilities do not have access to rehabilitative services, many not even receiving aids or prostheses. Children below 6 years receive free basic health services, however children with disabilities over this age do not benefit from these free services. There have also been cuts in transport to and from clinics for these children.

Lack of access to education is one of the major factors hindering the full development of children with disabilities. The CASE report found that while 79% of their respondents were attending primary mainstream schools, with 12% in special schools, only 44% were attending high schools. "No or little provision exists at high school in South Africa for learners who are disabled and they are not provided with the necessary support."<sup>43</sup> School attendance is affected by the age of onset and the number and severity of disabilities. Much has still to be achieved in enabling integration into mainstream schooling.

With regard to the Care Dependency Grant there are many legislative and administrative problems, including a lack of clear definitions and guidelines for inclusion/exclusion, and lengthy and inaccessible application procedures. Children with chronic illnesses do not have access to any forms of social assistance. This group of vulnerable children requires urgent attention.

Much still needs to be done to adequately address the needs of children with disabilities in a practical and supportive way. Not only must existing policies be implemented, but new legislation must be developed to protect and promote the rights of children with disabilities.

## School health

## Health Promoting schools

A Health Promoting School (HPS) is described by the WHO as one that "aims at achieving healthy lifestyles for the total population by developing supportive environments conducive to the promotion of health. It offers opportunities for, and requires commitments to, the provision of a safe and health enhancing social and physical environment".

HPS have been established to varying degrees in all provinces. In the Western Cape, where the establishment has been widest, the process has been driven by school health nurses in partnership with educators. Evaluations of such projects and the establishment of provincial co-ordinating bodies will be paramount to providing implementation guidance for areas that have not yet started implementing the HPS initiative.

## A school health service

Research carried out in both developed and developing countries demonstrates that school health programmes can simultaneously reduce common health problems, increase the efficiency of the educational system, and thereby advance public health, education, and social and economic development.<sup>44</sup>

The restructuring of the Health System<sup>17</sup> started the process of re-organising School Health Services from a vertical programme to one that is integrated into a comprehensive Maternal Child and Women's Health (MCWH) Programme. This process has had varying results in the provinces. In some provinces school health nurses have been devolved to primary level facilities whilst in others school health teams still operate independently. Services currently differ between provinces and between districts in the same province with rural areas receiving the least coverage.<sup>45, 46</sup>

The only comprehensive evaluation of School Health Services done in KwaZulu-Natal

found that school health services have a nurse to pupil ratio between 1:10 000 to 1:55 000.<sup>47</sup> The coverage of school children by the service was estimated to be 18%. School Health management identified "the poorly defined role of school health services and the need to revisit the objectives of the services" as two areas requiring attention. In support of the service teachers, pupils and parents all considered the School Health Service to be "very important" and felt that "a large number of children had unattended health problems that would otherwise go undetected."<sup>3</sup>

The Primary Health Care service package suggests that the school health service operates through a "School Health Promoting Team" of which there will be a minimum of one for each sub-district. These teams will be supported from provincial level with transformation training programmes and standardised resource packs, both of which will be completed by 2003. This approach could transform the school health service from its previously largely curative focus to a more comprehensive service that can operate in an inclusive school environment. This approach is also outlined in the current education policy. Thus careful attention to the co-ordination of school health with services from health and other sectors is needed.

#### Policy development

The national directorate for Child and Youth health is currently developing a national School Health Policy as a component of and within the framework of HPS. In the absence of school health service audits, this process will allow for consideration of various school health models currently operating in the country. The main challenge is to integrate school health within the district health system and to link it with HPS. This would allow school health services to respond to the needs of children within an inclusive education setting.

#### **Critical and Intensive Care Services**

Intensive care unit (ICU) care is an essential component in the continuum of health care services to children. An estimated that 50% of children admitted to ICU did not have access to intensive care. The provision of intensive care to a child is believed to cost only 10% of that for an adult. In the allocation of resources, this is an important consideration, taking into consideration our constitutional commitment to children. With the improvement of primary level services, the demand for higher level care is likely to increase. Equitable access to ICU for all children in the country is a major challenge. ICU care is a highly specialised service requiring a concentration of very scarce and expensive resources. It is different from acute emergency care that should available at all primary and secondary level services. ICU services should strategically be placed in a few centres around the country to ensure adequate critical mass, rather than having many ICU services that are all poorly staffed and managed. At the same time it is essential to improve emergency transport to ensure equitable access for children in outlying rural areas and small towns.

Further thought is required in national strategic process as to how to ensure equitable intensive care access to all children with an accompanying set of admission criteria and outcome measurements.

#### Children with chronic health conditions

The current section on Chronic Diseases in the HSSF makes no specific mention of children. Despite the fact that 1 in every 10 children has a form of chronic illness and/or disability, this remains a neglected area in the health system. One example that illustrates the magnitude of the problem of chronic illnesses in children is that of asthma.<sup>48</sup> The national prevalence is estimated at 13%. In the PWV area, indoor and outdoor pollution are considered to be significant contributors to respiratory problems in children.<sup>49</sup> Asthma, like all other chronic illnesses, requires expensive long term care and medication. Recent studies show that 1 in every 10 children have a mental or physical disability, and that 1 in every 12 children born will be infected with HIV. All these children will require long term health care punctuated by multiple hospital admissions and expensive medication.<sup>c</sup>

At a national workshop co-ordinated by the Child Health Policy Institute in September 1999, a number of pertinent service and other challenges were highlighted.<sup>25</sup> The key problems in the system that were highlighted included:

- The absence of a national policy
- Weak or absent support systems for the children and their families
- Poor co-ordination between different levels of care and
- Inefficiencies in the system result in children at times being denied repeat medications.

The Directorate for Chronic Diseases, Disabilities and Geriatrics is currently compiling a national policy that will guide health services in the provision of care for children with long term health conditions.

National guidelines for the management, treatment, counselling and prevention of the most common genetic disorders and disabilities are being finalised by the Directorate: Women's Health and Genetics. These guidelines are to be used at primary health care facilities by health care workers that may not have extensive training in medical genetics.

The twelve common conditions dealt with are: Down's Syndrome, neural tube defects, albinism, fetal alcohol syndrome, mental retardation, impaired vision (including hereditary blindness), impaired hearing (including hereditary deafness), abnormal head growth, cerebral palsy, neurofibromatosis, cleft lip and/or palate, and clubfoot.

## Recommendations

Based on the review of child health, it is clear that many gains have been made, but that a number of challenges still need to be addressed as South African children are still dying and falling ill due to preventable causes.

The recommendations based on the chapter are:

- The obligations under the Convention on the Rights of the Child to put children first must be honoured in all policy, legislative and resource allocation processes.
- Practical mechanisms must be put into place in documents such as the National Health Bill to ensure that children are prioritised. The allocation of financial resources, as well as the development of national norms, standards, targets and priorities for the delivery of basic health care services to children are some of the ways in which the Bill could address this.
- A special section on children's health rights should be added to the Patient Charter to bring it into line with South Africa's Constitution and public promises to put children first.

c Dr Tony Westwood, consultant paediatrician, Red Cross Children's Hospital. Personal communication.

- Support to programme managers for maternal and child health must be strengthened. It is essential that the vacant posts in key child health management structures be filled as a matter of urgency.
- Mechanisms to ensure good co-ordination and joint planning between different programmes that impact on child health must be developed at all levels. This pertains to co-ordination both within the health sector and between health and other sectors.
- An equity gauge for children is needed as many inequities between different areas still exist.
- Responsive health information systems are needed to ensure that data on child morbidity and mortality is reliable and available. Such data should support action plans at all levels to address the main child health problems.
- The two emerging health threats to children viz. HIV and trauma and violence need to be prioritised. Thus:
  - Urgent measures to reduce HIV transmission to babies and children must be implemented.
  - Further measures are urgently needed to support children infected and affected by HIV and measures should be put into place to appropriately respond to the impending HIV-orphan crisis.
  - Appropriate legislative, administrative, social and educational measures to protect children from all forms of physical or mental violence, injury of abuse, neglect or negligent treatment, maltreatment or exploitation including sexual abuse is required.
  - Further overall measures should include effective procedures for the establishment of social programmes to provide necessary support for the child and for those who have the care of the child.

## Conclusions

The commitment to children in South Africa by the highest level of government is indisputable. This is evidenced by the numerous initiatives that aim to improve the health and well being of children.

The challenge remains to ensure that child rights are upheld in every activity of South African society. For the health sector it requires a focus on urgent child health priorities, without ignoring the many other components of child health. A critical component of the health sector response to children is to ensure the successful implementation of well-thought through action plans that will improve child health and well-being in all communities.

Ultimately the eradication of poverty and ensuring social justice and equity for all will have the greatest impact on the health of our children.



## 20 Youth Health

**CHAPTEI** 

The world today is experiencing an unprecedented increase in the number of young people. One in every five persons in the world is a young person. In South Africa, there are currently about 18 million people under the age of 20 years.<sup>1</sup> These young people account for approximately 44% of the total population. Young people are at risk of a broad range of health problems. Sexual and reproductive health behaviours are among the main causes of death, disability, and disease amongst young people; among these health problems are sexually transmitted diseases (STDs), HIV/AIDS, unwanted pregnancies, and pregnancy-related complications. In the past few years, the spread of HIV infection among South Africa's youth has been daunting. Between 1997 and 1998 alone HIV infection rates amongst young people almost doubled. Although fertility is declining amongst all age groups, one third of all teenagers have been pregnant or had a child by the age of nineteen years. Young people are also at risk of physical and psychological trauma resulting from sexual abuse, gender-based violence, and other forms of physical violence and accidents.

Policies and programmes have been developed to address the problems and challenges facing the youth in South Africa. The rapid spread of the HIV epidemic especially amongst adolescents has also meant that programmes have had to focus their attentions on interventions that aim to raise awareness and influence positive behaviour change among adolescents. Such interventions include media campaigns, lifeskills, and peer education. These interventions need to be supported by services that are both accessible and acceptable to adolescents. The National Adolescent Friendly Clinic Initiative (NAFCI) and theY-Centre model are some examples of how services are being made more accessible and acceptable to adolescents.

This chapter aims to bring together information from a wide range of sources to provide a picture about the health status of young people in South Africa. The major health problems and needs of young people are highlighted. The chapter also gives a summary of national policies and programmes for young people in South Africa. Although an attempt has been made to identify the main programmes and key stakeholders in the provision of health care to young people, inadvertently some omissions will have been made. Some recommendations are made for future research and action.

Authors

Kim Dickson-Tetteh Reproductive Health Research Unit

Sophia Ladha Reproductive Health Research Unit "Youth are the valued possession of the nation. Without them there can be no future. Their needs are immense and urgent. They are the centre of reconstruction and development."

> Nelson Mandela, May 1994 National Youth Policy 2000, National Youth Commission

## Introduction

The world today is experiencing an unprecedented increase in the number of young people. One in every five persons in the world is a young person.<sup>2</sup> Of an estimated 1.2 billion young people in the world today, 85% of these live in developing countries. In South Africa, there are currently about 18 million people under the age of 20 years.<sup>1</sup> These young people account for approximately 44% of the total population. Twenty one per cent (8.8 million) of young South Africans are adolescents between 10 and 19 years.

In South Africa, the term "youth" has many political and cultural connotations as a result of the apartheid era. The mobilisation of young men and women against apartheid policies and racial oppression aligned young people as instrumental members of the political struggle. In addition, the history of apartheid left a legacy that still affects many young people today, especially young black individuals. The discrimination and inequality imposed by the apartheid regime resulted in the majority of areas, particularly black townships and homelands, remaining under developed and under-resourced. This resulted in poor access to health services, limited and racially biased access to education and training; limited employment opportunities with resultant high unemployment rates for the majority of young people.

## **Definition of Young People**

The World Health Organisation has defined "adolescents" as persons in the age group 10-19 years, while "youth" has been defined as the 15-24 years age group. These two overlapping groups have been combined into one entity, that of "young people" as those in the age range 10-24 years.

The Department of Health uses the same definitions as the WHO, and focuses on the health of young people between the ages of 10 to 24 years. The Department of Health has set up a sub-directorate for youth and adolescent health in the Maternal, Child and Women's Health (MCWH) Directorate to develop and implement health policies and strategies that target this particularly vulnerable sector of the South African population that traditionally has been neglected. Although young people have particular health needs, they were previously not specifically catered for in the traditional Maternal and Child Health, or other Adult Health programmes. By using the WHO definitions, the Department of Health has begun to focus on, and target the different groups of young people in the planning and implementation of health programmes.

## Young People's Health Rights

Extensive research has shown that young peoples' health rights are likely to be overlooked or not respected. However, health rights are firmly entrenched in the South African Bill of Rights. In the past five years, through national participatory processes, a Health Rights Charter,<sup>a</sup> and a Patients Rights Charter<sup>b</sup> have been developed to protect and promote the health rights of all South Africans. This process has been taken further to develop an Adolescent Sexual and Reproductive Health Rights Document.<sup>c</sup>

#### The National Adolescent Friendly Clinic Initiative (NAFCI) -Adolescent Sexual and Reproductive Health Rights

A young person irrespective of age, sex, race, religion, culture, social status, mental and physical ability has basic health rights that include:

- The right to information on health
- The right to a full range of affordable health services
- The right to privacy when receiving health care
- ◆ The right to be treated with dignity and respect when receiving health care
- ◆ The right to be assured that personal information will remain confidential
- The right to be given an explanation of the processes that the young person goes through when receiving health care
- The right to be treated by people who are trained and knowledgeable about what they do
- The right to continuity of services
- The right to be treated by a named provider
- The right to express views on the services provided and to complain about unsatisfactory health services
- The right to gender equality
- The right to a healthy and safe environment
- The right to make free informed choices in matters relating to sexual expression, sexual pleasure and sexual orientation.

Source: National Adolescent Friendly Clinic Initiative, Adolescent Health Rights Document.

a The South African Health Rights Charter: Your Passport to Health Rights. The National Progressive Primary Health Care Network 2000.

b Patients Rights. National Patients Rights Charter. Department of Health, 2000.

c NAFCI Adolescent Sexual and Reproductive Health Rights Document. Reproductive Health Research Unit, 2000.

## Health Status of Young People in South Africa

Young people are at risk from a broad range of health problems. The major causes of death, disability, and disease among young South Africans is similar to young people in many other developing countries. They are at risk of physical and psychological trauma resulting from sexual abuse, gender-based violence, and other forms of physical violence and accidents. Other important health needs are sexual and reproductive health disorders; among these are sexually transmitted diseases (STDs), HIV/AIDS, unwanted pregnancies, and pregnancy related complications.

#### Sexual & Reproductive Health

#### Age at first intercourse

For the majority of young South Africans, sexual activity starts in the mid-teens. Based on the most representative studies, it is reasonable to conclude that the national average age of first intercourse is 15 years for girls and 14 years for boys.<sup>3, 4</sup> There is however, great variability around these figures. Significant numbers of young people have their sexual debut well before age 14, while many are virgins at age 18. Boys start to have sex significantly earlier than girls do, and in greater numbers.

However, adolescents' knowledge on reproductive function and sexuality is generally poor.<sup>5, 6</sup> A substantial number of young people have indicated that they need information on matters such as pregnancy, STDs, sexual intercourse and relationships.

#### STD/HIV/AIDS

It is estimated that approximately four million episodes of STDs occur each year in South Africa, with over half these infections occurring among adolescents and young adults. There are many reasons why adolescents are particularly vulnerable to sexually transmitted diseases. Apart from physiological vulnerability, they are very susceptible to peer pressure, have a tendency to engage in risk-taking behaviour, are less able to negotiate safe sex practices, and have difficulties accessing health information and services.

In the past year, the spread of HIV infection among South Africa's youth has been daunting. The 1998 national antenatal sero-prevalence survey revealed that HIV prevalence among South African women less than 20 years old was 21 percent.<sup>7</sup> This is close to double the 1997 figure of 12.7 percent and by far the largest increase in any age group. In 1999 it was noted that the HIV prevalence in women below 20 years was lower (16.5%) than in 1998.<sup>7</sup> However, the trends continue to show that women in their 20s represent the group with the highest number of individuals with HIV infection. HIV infection is spreading at a rate of at least 1 500 new infections per day, one of the fastest growing rates of HIV infection in the world. Over half of these new infections occur in young people.<sup>8</sup>

There is a high level of awareness of HIV/AIDS among young people.<sup>9</sup> Ninety five percent of teenage women interviewed during the South African Demographic and Health Survey (SADHS)<sup>10</sup> knew about AIDS. The two basic facts about AIDS (that it is sexually transmitted, and that it is fatal) appear to be most widely known among adolescents.<sup>8</sup> However, more than half of them did not know that a healthy-looking person could have AIDS, and only 13% of teenagers said that they knew someone with HIV/AIDS. Most of the young people surveyed said that they got their information from the television, radio, friends, and health workers. Newspapers and pamphlets are also an important source of information. The majority of South African youth know how HIV can be acquired, and that condoms, abstinence, and mutually faithful monogamy are protective. However, most young people are sexually active, condom use is low, and a small but significant proportion of the youth engage in sexual intercourse with multiple partners, sometimes having many relationships at the same time. There is a clear gap between what people know to be HIV protective behaviour and what they do.<sup>8</sup>

#### Teenage pregnancy

Teenage pregnancy is more prevalent among Coloured and rural African girls, and those with little or no education. Although the 1998 SADHS<sup>10</sup> suggests that all age group specific fertility rates have been declining steadily over the last fifteen years with a birth rate for teenagers aged 15 – 19 to be 116 per 1 000 women per year in mid 1988, to 78 births per 1 000 women per year in mid 1996, teenage pregnancy still remains unacceptably high. By the age of 19 years, 35% of all teenagers have been pregnant or had a child.<sup>10</sup> Not only are teenage pregnancy rates high, but it is also disturbing to find that one in eight teenage deliveries are by caesarean section, which indicates complicated births, and highlights the risk that adolescents place themselves at by becoming pregnant at such an early age.

The health and socio-economic consequences of adolescent pregnancy are enormous. Whilst by law pregnant teenage girls are allowed to complete their schooling, it is reported in some instances that community control over schools means that girls have been refused this right. Early parenthood is likely to affect educational achievement with significant employment and socio-economic ramifications, while health complications for both the teen mother and the unborn child are high.

Prior to the amendment to the legislation governing the termination of pregnancy (TOP), it was suggested that between 6 000 and 120 000 illegal abortions were undertaken per annum in South Africa, most of which were on young women.<sup>11</sup> It is estimated that in 1999, 11% of terminations were on women under 18 years of age.<sup>12</sup>

#### **Contraceptive Use**

Contraceptive use in general is quite high amongst teenagers in South Africa, with more than one in four teenagers using a modern method of contraception.<sup>10</sup> Among sexually active teenagers almost two-thirds are currently using a modern method of contraception. However, teenage pregnancy and abortion figures remain unacceptably high; this could suggest inconsistent use of contraception. Contraceptive use amongst groups of sexually active youth has been estimated to be as low as 25 percent in certain areas.<sup>13, 14</sup>

The most common contraceptive method amongst sexually active adolescents is the injectable, with just over 50% of all women aged 15-19 currently using it. The majority of young people have either never used a condom during sexual intercourse, or use them inconsistently. In the 1998 SADHS only four percent of teenage women interviewed reported that they were using a condom as their current method of contraception. However, about one in every five teenage women reported using the condom during their last sexual encounter. This confirms research that has shown that many people, including young people, do not regard condom usage as a form of contraception but rather as prevention against STDs and HIV, therefore when asked about the current method of contraception, very few people will mention condoms even if they are currently using condoms. One such study of over 1 200 young people between the ages of 12 and 17 reported the following regarding condom usage: approximately 25% of both males and females said they used condoms to prevent HIV, over 50% said they used condoms to prevent STDs, and only 8% of the group reported

using condoms for contraception.<sup>15</sup>

#### **Gender-based Violence**

Gender-based violence is another significant reproductive health issue facing the lives of South African youth. During the 1998 SADHS,<sup>10</sup> one in five currently married women reported some form of abuse. A survey among urban youth in three large centres revealed that 28% of female respondents had been subjected to forced sex.<sup>16</sup> Equally worrisome is the negative impact that gender-based violence appears to have on young women's ability to successfully negotiate sexual relationships.<sup>16</sup> Further, many adolescents seem to view sexual coercion as a routine part of a relationship.<sup>17</sup>

There also appears to be a link between gender-based violence and early child-bearing. Research in the Western Cape exploring factors related to adolescent pregnancy found that one third (32%) of pregnant teens and 60% of all study participants had had forced sexual encounters.<sup>18</sup> The study also found that girls who experienced forced sexual intercourse were fourteen times more likely to fall pregnant than those coerced into having sex.<sup>d</sup>

#### Mental Health and Substance Abuse

South Africa has a number of characteristics that place its young people at risk of mental health problems, such as widespread poverty and familial disruptions. However, there are few studies that attempt to provide prevalence rates of psychiatric disorders in young people. Based on existing estimates and international data, it would be reasonable to assume that approximately 15% of young people in South Africa suffer from mental health problems warranting a psychiatric diagnosis.<sup>19</sup>

Alcohol is the substance most frequently abused by young South Africans. A representative national study of black youth aged 10-21 years reported that 80% had used alcohol at some time, while 34% were current drinkers (i.e. had used alcohol in the last twelve months prior to the study).<sup>20</sup>

Another drug that is frequently abused is tobacco. The prevalence of smoking among teenage men is quite high. About one in seven teenage men smoke cigarettes daily or occasionally. The prevalence is lower among teenage girls. Overall, ten percent of all teenagers smoke.<sup>10</sup>

#### Young people with disabilities

There are no accurate data regarding prevalence rates of disabilities among young people. In its 1995 survey, the South African Central Statistical Services reported a national disability prevalence rate of approximately 5% and it has been estimated that there are about 4 million South African children (under sixteen years of age) who experience different forms of disabilities.<sup>21</sup>

## Mortality

The recording of deaths and other vital national statistics can be very difficult, and is often incomplete in many developing countries; this is also true for South Africa. However, the reported death statistics can be used to identify the main causes of death if it is assumed that the deaths that were not reported follow the same pattern.<sup>22</sup>

d "Forced sex" occurs when a person is raped and "coerced sex" is when sex is performed for some inducement, for example for money.

The highest proportion of deaths among young people are seen to be as a result of injuries, including all forms of accidents, homicide, and suicides. The proportion of deaths due to injuries is particularly high amongst young men. These deaths account for approximately 78% and 41% of deaths amongst teenage males and females respectively. The figures for deaths due to injury among young people aged 20 – 24 years are similar, 82% (men) and 34% (women). HIV/AIDS may be also the underlying cause in many of the deaths among young people, where the immediate cause is attributed to tuberculosis, diarrhoea, and lower respiratory tract infections.

## **Youth Health Policies and Programmes**

#### **Policy Framework**

#### National Youth Policy 2000

The National Youth Commission was established in June 1996 by President Mandela to develop a comprehensive strategy to address the problems and challenges facing the youth in South Africa. Health is one of the key areas where the policy recognises the need for substantial, informed and practical strategies that address the major needs, challenges and opportunities facing young people in this area.

Issues which the policy states must be addressed in the National Youth Health Action Plan include:

- Health promotion strategies appropriate to young women and men which emphasise healthy lifestyle habits and behaviours and which promote the concept of total wellness
- Access to health and rehabilitation services by young men and women, and the provision of "youth friendly" health services and programmes
- Issues affecting the mental health of young men and women, including a comprehensive understanding of mental health and an awareness of the factors which influence mental well-being
- The identification of well-defined gender disaggregated and quantifiable data and research on a wide range of youth health matters
- Issues associated with youth suicide and high-risk activities of young men and women, such as alcohol and substance abuse, violence and "unsafe" sexual behaviour
- Issues of customary practices (e.g. circumcision of males and females) and the impact or dangers to the health of young people in consultation with the communities concerned
- The establishment of community support structures for young men and women who require support in dealing with health, including preventive health issues (e.g. through peer support, information and advice provided to alcohol and drug abusers, lonely or depressed young people, etc.)
- Issues associated with young sex workers.

Additionally, there are particular issues raised in the policy about young people and HIV and AIDS including strategies which address:

- Education and awareness of HIV transmission and safer sex practices
- Strategies to ensure access to condoms
- Access to HIV testing and counselling services.

Furthermore, strategies which address the issues of teenage pregnancy, school attendance and youth health and the law are also dealt with.

#### Department of Health, Policy Guidelines for Adolescent and Youth Health

The Sub-Directorate of Youth and Adolescent Health formed a Task Team to develop Policy Guidelines for Adolescent and Youth Health. The process started in 1998 and the policy is currently in its final draft stage. These guidelines advocate a holistic approach to adolescent and youth health. There are six guiding principles for adolescent and youth health that underlie these policy guidelines. These include:

- 1) Adolescent development underlies the prevention of health problems
- 2) Problems are inter-related
- 3) Adolescence and youth are times of opportunity and risk
- 4) The social environment influences behaviour
- 5) Not all young people are equally vulnerable, and
- 6) Gender considerations are fundamental for adolescent and youth health.

The Department has also identified five general intervention strategies for adolescent and youth health:

- Promoting a safe and supportive environment, which includes relationships with families, social norms and cultural practices, mass media, accessibility of key opportunities and commodities, and policies (including legislation)
- Providing information
- Building skills
- Counselling
- Ensuring access to health services.

This draft document is in the process of being officially endorsed.

## Programmes

One of the main causes of death, disability and disease among young people is unsafe sexual and reproductive health behaviour. The rapid spread of HIV/AIDS amongst young people in particular, has lead to the development of programmes for young people that aim to increase knowledge, raise awareness and effect positive behaviour change. The programmes that have been developed utilise a variety of approaches which include media campaigns, lifeskills, and peer education programmes. These interventions need to be supported by services that are both accessible and acceptable to adolescents. The National Adolescent Friendly Initiative (NAFCI) and the Youth Centres are some examples of how services are being made "friendly" to adolescents.

## Media Campaigns

Media activities typically form the backbone of HIV prevention activities, and have been crucial in raising awareness about HIV/AIDS amongst the youth. A range of activities have been carried out both by the government and the NGO sector. Some of the national campaigns include the following:

#### Soul City

Soul City is a multi-media health project. Through drama and entertainment Soul City reaches more than 12 million South Africans.<sup>23</sup> Soul City makes information popular and accessible. It has examined many different health issues, and empowers learners to make healthy choices, both as individuals and as communities. The Soul City project is made up of:

- ✤ A prime time television series
- ✤ A daily radio drama
- Booklets on the health topics covered in the broadcast media
- A publicity campaign which keeps people talking and thinking about Soul City
- Adult education and youth lifeskills materials.

#### Soul Buddyz

Soul City believes that fundamental behaviours and attitudes are formed before the age of 12 and if one is to impact on these, it is essential to target children younger than 12 years. Soul Buddyz is a 26 part television drama series into which health and development messages are integrated. The target group is 8-12 years of age. The television series is an adventure drama in which all the protagonists are children who uncover problems and take action in order to deal with them.

Soul City's activities have been rigorously evaluated, and have been shown to be an effective educational vehicle on sexual and reproductive health for South African youth.<sup>24</sup>

#### **Beyond Awareness Campaign**

The Beyond Awareness Campaign is part of the South African government's AIDS Plan. The goal of Beyond Awareness is to develop a campaign that does more than simply raise awareness. Its focus is to provide and promote access to communication tools and resources that can be used in support of prevention, care and support activities and initiatives at local level.<sup>25</sup> Although the Beyond Awareness Campaign does not target youth specifically, as a National Campaign, it has contributed significantly to raising awareness of HIV amongst young people.

The campaign focuses on:

- The red ribbon icon. By actively promoting the red ribbon in all communications activities, the Beyond Awareness Campaign has helped to make the AIDS epidemic more visible
- The AIDS Helpline and AIDS write-in service
- Providing key messages through advertising
- Providing free educational materials.

## Peer Education in Sexual and Reproductive Health

Peer education is a popular tool in adolescent reproductive health activities in South Africa. Most of the peer education programmes are based in schools, youth centres, and clinics. Almost all these programmes are voluntary with skills improvement and material provision being offered as incentives for the participants. The peer educators are expected to educate peers about HIV/AIDS and sexuality, and organize workshops around these issues.

## YMCAe

The YMCA's "Better Life Options" (BLO) is an extension of a previous pilot project, which involved the sensitisation and mobilisation of the community with regard to adolescent reproductive health needs generally, and HIV/AIDS needs specifically. The primary problem to be addressed by this project is the incidence of HIV amongst adolescents and youth, and attitudes and perceptions amongst community members (including parents, teachers, and religious leaders) within the broader context of adolescent reproductive health.

This is essentially an education and prevention programmes targeted at adolescents, with the primary target being girls and young women aged 13-19 years. Peer educators are trained as "HIV activists" in order to run workshops and discussion groups in their own communities, including schools and churches.

This project operates within the wider context of YMCA's national adolescent reproductive health programme, currently running in four provinces (Eastern Cape, KwaZulu-Natal, Gauteng/North West, and the Western Cape).

YMCA peer educators have reached close to 1 600 youth in KwaZulu-Natal and about 5 000 nationally. Twenty seven schools and a few churches have also benefited from peer educator activities. In the year 2000 in KwaZulu-Natal alone, 100 peer educators operating in eight communities have been trained.

## Old Mutual

Old Mutual's "I Have Hope AIDS Peer Group Project", begun in 1993. Since 1999, the project has realised the importance of prioritising and focusing on target groups which could multiply the HIV/AIDS message effectively.

The project focuses primarily on implementing HIV/AIDS peer groups in secondary schools. The target market comprises teenagers between the ages of 15 and 18 years as well as teachers in these schools.

The aim of the project is to make peer leaders intensely aware of the realities of AIDS and how it could affect themselves, their family, friends and community. As they accept responsibility for their own sexual behaviour and act upon their understanding of AIDS, the peer leaders, in their unique way, bridge the communication gap. They start a domino effect which enables many others to make informed choices about their sexual behaviour and encourages them to have a more caring attitude towards people living with HIV and AIDS.

The project also motivates peer group leaders not only to be active AIDS ambassadors in their schools and communities, but also to assist HIV/AIDS service organizations.

## Society for Family Health

The Society for Family Health peer-helper education project was developed as a result of the findings of their community analysis, and was branded the Abasha Phezulu Peer Helper project (Zulu for "youth on top"). The purpose of this project is primarily to influence

e "YMCA" is the acronym for "Young Men's Christian Association". However, the organisation is now known more by its acronym than its full name.

behaviour change with regard to condom use amongst peers i.e. 15-25 year old black urban youth. Activities include clinic-based workshops, drama presentations, promotional shows, safe sex parties, and a series of radio shows on adolescent reproductive health (ARH) issues. Male and female condoms are also sold at reduced prices. Records are kept concerning the number of condoms sold, number of community participants, etc.

#### Planned Parenthood Association of South Africa (PPASA)

PPASA's peer education programme began in 1996. Peer educators work in youth centres as part of the adolescent reproductive health service (ARHS). Peer education programmes are monitored through: clinic use statistics, individual feedback, numbers of workshops conducted and participants attending, number of contraceptives distributed, reported pregnancies among pupils in local schools, etc. It is estimated that in 1999, PPASA's 150 active peer educators reached nearly 15 000 young people and distributed 35 000 condoms.<sup>26</sup>

#### The Youth Commission's National Youth HIV/AIDS Programme

This programme is driven by three activity areas:

- The provision of capacity-building, education and training for youth organisations, youth leaders and young people to deal with, and counsel and lead matters on HIV/AIDS.
- This project involves a group of personable young people who are living with HIV/ AIDS, in an extensive peer communication programme at schools, and community groupings. These ambassadors of hope provide other young people with information on prevention. In addition, they also provide positive images of young people living and coping with AIDS. The pilot phase of this project was initiated in KwaZulu-Natal in 1998 with a plan to replicate in other provinces.
- A Public Awareness Campaign, that has included the development and distribution of appropriate material and information to youth organisations, as well as media appearances and schools visits by Positive Living Ambassadors.

#### Sexuality & Life Skills Programmes

Sexuality and Life Skills activities are another popular form of sexual and reproductive health interventions in South Africa. This section describes some of the national programmes that provide sexuality and life skills training.

#### National Life Skills Education in Schools

The National Departments of Education and Health commissioned PPASA to develop and implement a Life Skills and HIV/AIDS Education Programme for primary schools. The content of the Life Skills programme is designed to support youth's personal development, confidence, social competence, self-esteem, and ability to act with mutual respect and responsibility. PPASA developed and implemented the programme between 1996 and 1997, and trained 6 603 teachers in five provinces.<sup>27</sup> One of the challenges to the programme has been the limited capacity of teachers to implement the programme, with the teachers themselves lacking the life skills they are trying to teach. The Departments of Health and Education took joint responsibility for further training, and organised consortiums of local experts to offer programmes. At the end of 1997/98 financial year, over 9 000 secondary school teachers had been trained to offer life skills programmes.

#### DramAidE

DramAidE began as an HIV/AIDS intervention project in schools in KwaZulu-Natal in 1991. Drama is used as a means to explore sensitive issues surrounding HIV/AIDS that learners, teachers, and parents are reluctant to tackle. Life skills courses in schools and Colleges of Education have been developed, using a drama approach and paying special attention to sexuality education, prevention of HIV/AIDS and STD infection, and the development of self-esteem. DramAidE is involved in forming self-sustaining school-based peer educator youth clubs responsible for sexuality education, and also provides both preservice (college-based) and in-service life skills training for teachers. The most recent statistics on the reach of the programme show that in 1995, DramAidE reached 772 schools, and a further 500 000 people through teacher training in life skills, peer education, and community involvement.

## PPASA

PPASA has engaged in numerous sexuality and life skills activities targeted at youth as well as the general public. One of PPASA's tools in the field of sexuality and life skills education is Stepping Stones. Adapted in partnership with the Medical Research Council — Centre for Epidemiological Research in South Africa (MRC-CERSA), Stepping Stones is a workshop series designed to promote sexual and reproductive health and life skills. The workshops are designed to be undertaken within peer group settings.

PPASA's work in life skills and sexuality training has also been recognised by tertiary institutions. PPASA has trained medical students in the Western Cape to introduce them to the participatory and consultative methodology of addressing reproductive health, and to help them better communicate with young people. Other innovative life skills approaches that have been introduced by PPASA include programmes for teenage parents, and for young refugees.

## **Reproductive Health Service Provision**

This section explores issues surrounding reproductive health service delivery for adolescents and youth. Health care facilities can play an important role for young people in promoting sexual and reproductive health and wellbeing, and in shaping positive behaviours around reproductive health. This can be achieved by improving the quality of comprehensive services provided to young people. This requires health care providers to maintain a friendly and open attitude and to provide accurate information and advice.

Extensive research has established that South African health facilities are failing to provide adolescent-friendly health services.<sup>13, 14, 28</sup> Services are either physically inaccessible, or have opening times that prevent easy access to youth. Staff attitudes can be judgmental or even hostile, and the professional norms of confidentiality and empathy are often neglected when providers deal with young people. The main programmes that have been designed to ensure that young people receive good quality health services are outlined below.

## PPASA

PPASA also runs specialised nationwide youth-focused reproductive health services, the Adolescent Reproductive Health Service (ARHS). The ARHS integrates clinical services (pregnancy testing, contraceptive distribution, and STD treatment), counselling and education with other activities such as recreational or skills development activities. PPASA

has established stand alone youth health services, and also works with the public sector to provide youth friendly services in primary health care facilities.

Some provincial authorities and other NGO's have also set up youth friendly services but on a more limited scale.<sup>24</sup>

#### The National Adolescent-Friendly Clinic Initiative (NAFCI)

The National Adolescent Friendly Clinic Initiative (NAFCI), is a comprehensive service performance and quality improvement accreditation programme designed to strengthen the public sector's response to adolescent health needs.<sup>29</sup> NAFCI focuses on improving the quality of services at primary health care facilities, and one of the indicators for success will be increased utilisation of health care facilities by adolescents. NAFCI will work with health care providers in the public sector to assist them to improve the quality of adolescent health care, so that services will become more accessible and acceptable to the majority of young people, without having to set up stand alone youth centres. NAFCI has been developed by the Reproductive Health Research Unit (RHRU).

NAFCI is currently being implemented in four phases. The *concept* phase included problem and needs identification, development of programme guidelines, and promotion of the Initiative. The *planning* phase established programme targets, activities, and timelines, developed and tested the assessment tools, and identified pilot sites. The *accreditation* phase includes clinic self-appraisals and improvement, to be followed by an external assessment which will be done when the clinics feel that they are ready. In its last phase, *monitoring and evaluation*, NAFCI will monitor standards in accredited clinics, evaluate the pilot studies, and feed the lessons learned into planning for national roll out. NAFCI is being implemented by the RHRU, and its partners the Initiative for Sub-District Support (ISDS) and PPASA. The Quality Assurance Project, USA, provides technical support to the programme.

The assessment tools are based on the NAFCI standards and allow objective evaluation and scoring of a clinic's performance. Bronze, silver and gold stars will be awarded to clinics depending on the score they attain on assessment.

To date, 10 NAFCI pilot clinics have been identified in four provinces: KwaZulu-Natal, Mpumalanga, the Northern Province, and the Western Cape. Baseline assessments have been conducted in all the sites, and the clinics are currently in the phase of improving their quality of adolescent health care. The first adolescent-friendly clinics will be accredited by early 2001.

NAFCI information, education and communication (IEC) materials during the year 2000 include:

- ✤ A Clinic Self-Appraisal Manual
- A community leaflet providing information about NAFCI
- NAFCI Brief (provides summary information about the Initiative for health care providers)
- An adolescent sexual and reproductive health rights document
- ✤ A Values Clarification Manual
- A clinical guide for health care providers
- A Resource Directory of adolescent training programmes and IEC materials

- An external assessment tool and guide (which are currently being developed)
- A NAFCI handbook: a quick reference document for health care providers of common adolescent sexual and reproductive health problems.

#### **Department of Health Programmes**

In addition to funding some of the initiatives mentioned above such as the Beyond Awareness Campaign and the life skills programs in schools, the Department of Health has also supported the implementation of programs that have been spearheaded by NGOs.

The Department has also embarked on a wider implementation of the primary schools life skills and HIV/AIDS education programme. The programme aimed to train 180 master trainers and 5 250 teachers, and conduct motivational workshops with officials, headmasters and representatives of school governing bodies, community leaders, and traditional healers, by the end of 2000. The programme is also being evaluated continuously. The Department has also expanded the life skills programme in secondary schools. The secondary schools programme aimed to train 180 new master trainers nationally, 1 800 new teachers nationally, and to conduct 72 motivational workshops by the end of 2000.

More recently, the Department has commissioned an institution to develop a training programme for health care providers in providing adolescent friendly services. This training programme will be piloted by the University of the Free State Nursing School in the Northern Cape Province in 2001.

The provincial Departments of Health have also developed their own youth programs. For instance, KwaZulu-Natal provincial Department of Health has developed a peer education programme sponsored by South African Breweries aimed at training out-of-school youth as peer educators. The program began in 1999 with the aim of providing youth with skills in order for them to begin education activities in their home communities. The Northern Province, North West and the Northern Cape provinces have set up youth friendly services and youth information centres in collaboration with PPASA under a UNFPA/DfID funded adolescent programme.

## A Multi-Dimensional Approach to Adolescent Health Care

#### loveLife

loveLife is a multi-dimensional initiative focused on the sexual and reproductive health of South African adolescents between 12 and 17 years of age. loveLife uses a combination of strategies as a concerted effort to make an impact on adolescent health in South Africa. loveLife is run by a consortium of existing lead organisations in the field of sexual and reproductive health: The Reproductive Health Research Unit, The Planned Parenthood Association of South Africa, Advocacy Initiatives and the Health Systems Trust. The intervention strategies include:

- Awareness and Education
- Services Development, Outreach and Institutional Support including establishing a national programme of adolescent friendly clinic accreditation, establishing youth centres in under resourced areas, and enhancing the quality of peer education
- Monitoring, Research and Evaluation through ongoing, rigorous monitoring and evaluation of all loveLife programmes and activities.

Some of the loveLife activities implemented in 2000 include:

- Y-Centres these are multi-purpose facilities for young people, providing a range of entertainment, sports and educational opportunities including clinical services. The Y-Centres are located in Motherwell (Eastern Cape), Kutlwanong (Free State), Mandeni (KwaZulu-Natal), Orange Farm (Gauteng), and Acornhoek (Northern Province).
- 2) S'CAMTO@Large this is a TV series that looks into the lives of 12 young South Africans. It explores how they deal with the choices they make in their lives. S'camto@large talks to young people about their personal experiences with sexuality and violence, body image, the media, abortion and other topics people are reluctant to talk openly about.
- S'camto Print is a youth publication, published in partnership with the Sunday Times and deals with issues important to young people e.g. fashion, music, sex, etc.
- 4) *The Love Train* carries messages of leading South Africans across the country, getting young people to talk about issues that affect them, and providing comprehensive sexual health education.
- 5) *The loveLife Games* was organized under the auspices of the United School Sports Association of South Africa (USSASA). The loveLife games also included activities designed to motivate young people to make healthy choices in lifestyle and behavior.
- 6) *loveLife on Air* is a partnership with various radio stations around the country to develop and air programmes that address issues of importance to young people.
- 7) Telephone Helpline Service The Thetha Junction The Helpline is a nation-wide toll free line with strong referral links to other information and crisis lines and youth services. The line is functional for a total of 50 hours a week, both weekdays and weekends. Callers also receive by mail a loveLife information pack.

On average, the line responds to about 31 600 calls per month. Calls to the line rise significantly when the line is marketed through the various loveLife media activities.

8) The National Adolescent Friendly Clinic Initiative (NAFCI) – this has been described above.

#### **Conclusions and Recommendations**

#### **Health Information Systems**

The research in putting together this chapter highlighted a number of deficiencies. There is a paucity of data on the specific needs and circumstances of young people in South Africa. Data sets at all levels are not set up to capture and reflect vital information on the health of young people. National data sets need to be modified so that they begin to capture health information on young people. District data collection forms, and clinic registers and records also need to be modified so that health information on young people can be adequately recorded. It will be important that there is sufficient training of health care providers as to how and why it is important to record adolescent health data when modifying, and introducing any new data collection forms, to ensure adequate data collection at all levels.

CHAPTER 20 

It is important to chart levels, trends and patterns in adolescent health so that appropriate interventions can be developed to respond to the health needs of young South Africans.

#### **Research and Documentation**

There is a need for further research specific to the needs of young people. There needs to be adequate documentation of adolescent health programmes, so that the lessons learnt from best practices can be applied to other programmes. Many programmes have not been rigorously evaluated. Most of the programme indicators used are process indicators, and not outcome indicators. Even though it is recognised that outcome and impact studies are difficult to design and implement, and can be expensive, it is recommended that for large scale national programmes an attempt is made to do this.

#### **Policy and Programmes**

A very comprehensive national youth and adolescent health policy has been developed by the Department of Health through a two-year process. The draft document is currently in the process of being officially endorsed. However, it is widely recognised that good policies alone do not guarantee that health needs and priorities are adequately addressed. Therefore, the process of endorsement and acceptance of the policy needs to be speeded up, so that programmes can be planned and systematically implemented to achieve the aims of the policy.

The relentless spread of the HIV epidemic, especially amongst South African youth, means that both policy and interventions need careful attention. Innovative approaches to HIV prevention for young people need to be developed and implemented. Condoms need to be made consistently available in places which young people frequent such as schools, stadiums, and youth clubs. Young people should also be encouraged to go for voluntary counselling and testing. Further, the stigma attached to HIV infection also needs to be addressed so that people infected with the virus can be open about their status, and receive early treatment and prevention for opportunistic infections. This will also serve to enhance the visibility of the epidemic.

Peer education programmes internationally appear to have positively influenced the lives of the peer educators themselves, with less impact on the people being educated.<sup>24</sup> However, the most significant problem facing peer education programmes, is the fact that very few of these have been properly evaluated in terms of programmatic and message content, training, supervision, and behavioural impact.<sup>24</sup> These programmes need to be evaluated rigorously and the long-term impact on both the peer educators themselves and the participants of the programmes needs to be studied.

Government recognises that life skills programmes are an integral component of improving the health and well-being of young people, and therefore continues to implement life skills programmes in primary and secondary schools. However, building skills in settings other than schools, such as in health facilities, work places and on the street has not yet been prioritised.

It is evident that reproductive health problems contribute significantly to the morbidity experienced by young people.<sup>29</sup> It is imperative that if the quality of life of young people in South Africa is to be improved, then their current reproductive health problems need to be addressed. There is an urgent need to ensure that health services become youth friendly. Since the public sector is the greatest provider of health care, improving the sensitivity of

public sector services to young people is crucial. Most notably provider-client relationships need to be transformed so that access to services and satisfaction with care remain priorities.

Finally, it is important that the health needs of young people are approached in a more holistic manner. This means that creative partnerships need to be forged with all sectors of society, so that as their health needs are being addressed, socio-economic and cultural factors that significantly impact on the health and development of young people in South Africa are addressed in a more comprehensive manner.



# 21 Women's Health

Women continue to occupy a vulnerable position in society, which is reflected in their health status and in their ability to access relevant health services.

In the past few years, great strides have been made in policies to improve women's health, including the passage of the Choice on Termination of Pregnancy Act, the appointment of a National Committee for Confidential Enquiry into Maternal Deaths, and the drafting of the National Contraceptive Policy Guidelines and National Maternity Care Guidelines. However, women's health has yet to improve.

Maternal deaths continue to be unacceptably high, even taking into account the effect of HIV/ AIDS on this mortality rate. Women are the majority (59%) of those infected with HIV in this country, which further undermines their health status. Women are still too often victims of violence, with estimates showing that between one in four and one in six women are in abusive relationships. The inadequacy of the health system in caring for victims of violence, as well as in offering women easy access to services such as screening services for cervical cancer and termination of pregnancy, exaccerbates the plight of women in society.

This chapter looks at the health status of women in South Africa, the policies designed to improve this and the progress that has been made. It argues that women's health should no longer be seen as limited to reproductive and child health, but should be viewed more holistically, encompassing all the aspects of women's health needs throughout their lives.



Jane Adar Integrated Women's Health and Development Organisation

> Marion Stevens Centre for Health Policy

## Introduction

This chapter aims to assess the progress, strategies, achievements, challenges, gaps and policies that have been in place between 1994-1999 to improve women's health. It presents a review of some of the Department of Health's strategies that are aimed at improving women's health. In addition it attempts to review the progress of the expansion of health services to include:

- Improving the quality of contraceptive services
- Monitoring of maternal mortality and morbidity
- Implementing services to deal with HIV/AIDS and violence against women
- Expanding cervical cancer screening services.

Women's inferior social, economic and cultural status, their exclusion from many aspects of human development as well as their specific biological needs and functions have historically meant that women could not take good health for granted. And many women live lives characterised by poor health and inadequate access to the benefits health care can give.

Women are affected by many of the same health conditions as men, but these conditions manifest and are experienced differently. The prevalence among women of poverty and economic dependence, their experience of violence, negative attitudes towards women and girls, discrimination due to race and other forms of discrimination, and lack of influence in decision making are social realities which have an adverse impact on women's health. Additional to the adverse effects on women themselves, women's ill health has a broader societal impact. It impacts on children and families.

All the basic components of sexual and reproductive rights and health were articulated in the Reconstruction and Development Programme:<sup>1</sup> mothers and children were addressed through 'maternal and child' health, the right of people to control their fertility was asserted, including that: 'Every women must have the right to choose whether or not to have an early termination of pregnancy according to her own individual beliefs'; sexual health and AIDS were to be addressed through tackling sexually transmitted diseases (STDs) and through mass education; references to mental health included counselling services 'particularly for those affected by domestic or other violence, rape or by child abuse'; 'prevention, early detection and treatment of carcinoma of the cervix' was included, as was the need to coordinate services for the youth, 'in particular education campaigns to combat substance abuse, teenage parenthood and sexually transmitted diseases'. A commitment to empowerment and to addressing women's health throughout the lifecycle was also made.<sup>1</sup> Thus the basic components of sexual and reproductive health were policy in South Africa before they were articulated as international policy at the International Conference on Population and Development (ICPD) in Cairo, 1994 and the Fourth World Conference on Women (FWCW) in Beijing, 1995. The government is committed to the implementation of these international policy agreements.

In addressing women's health issues, it is important to recognise the inter-related components and influencing factors that relate to reproductive and sexual health, particularly contraception, HIV/AIDS, adolescent fertility, cervical cancer, nutrition, termination of pregnancy (TOP), infertility, rape and violence against women.

## **Implementation Strategies**

The South African health system has historically been fragmented, unco-ordinated and under-resourced with unequal access to the people in the country. The provision of adequate health services in rural areas has been gravely deficient. However, since 1994, maternal, child and women's health has been recognised as a priority by the government,<sup>2</sup> and the Maternal, Child and Women's Health Directorate (MCWH) has been established as a separate directorate in the national Department of Health. The Directorate's tasks are to facilitate the planning and reorganisation of services to address women and children's health needs including reproductive health. In addition, the MCWH Directorate's responsibilities include the development of standardized case management protocols for the care of women and children.

The White Paper for the Transformation of the Health System in South Africa<sup>2</sup> has separate sections on 'maternal, child and women's health' and on HIV/AIDS and STDS. Conceptually there is confusion regarding what constitutes reproductive health, sexual and women's health and this filters down to provincial and district level. Most often services are understood only in terms of women's reproduction and are linked with children's services. Services concerning contraception, HIV/AIDS, sexual and domestic violence and cervical cancer screening should be viewed as women's health and sexual health services.

Despite the conceptual misunderstandings, there are significant achievements, which have had a positive impact on the health of women. These include:

- Government's initiative in making health care services more accessible by building more clinics and by use of mobile clinics
- Providing primary health care services free at the point of delivery to pregnant women and children
- Making maternal death a notifiable condition since 1997
- Appointment of a National Committee for Confidential Enquiries into maternal deaths (NCCEMD)
- Organising MCWH services in its own directorate with a national director
- Empowerment of health professionals (through in-service training) to sharpen their skills and to expand primary health care services to include antenatal care, deliveries and postnatal care
- Review of the Sterilisation Act, No 44 of 1998
- Promulgation and implementation of the Choice of Termination of Pregnancy Act, No 92 of 1996
- Drafting of a National Primary Health Care (PHC) package (a set of norms and standards for service delivery points)
- Drafting of the National Contraception Policy Guidelines
- Drafting of the National Maternity Care Guidelines
- Review and implementation of NCCEMD recommendations concerning supplies and equipment e.g. partograms, improved blood transfusion facilities, access for transport system for referrals

- CHAPTER 21
- Strengthening of reproductive health training programmes
- Redeployment of doctors to underserved areas
- National Cervical Screening Guidelines
- Domestic Violence Act, No 116 of 1998.

The above achievements were noted in all provinces, although some provinces have more advanced training capacity and have made more progress with the implementation of the NCCEMD recommendations.<sup>a</sup>

Most health service providers and beneficiaries indicated that the expansion of primary health care services to include maternal, child and women's health has enabled the provision of health services to be rendered in a more comprehensive and more accessible way. Observations from the provinces and districts indicate that even though much progress has been achieved in terms of accessibility and equity, more still needs to be done.

#### Contraception

The Department of Health has been in the process of developing the 'National Framework and Guidelines for Contraceptive Services' since 1998 in consultation with various stakeholders. It plans to launch the new guidelines in 2001. The last official draft was completed in February 1999. The backbone of health services for women historically took the form of 'family planning' under the previous government's plan of population control. The impetus for this new policy is to move away from that and to use the opportunity to increase women's choice and access to quality women's health services.

There is a high percentage of contraceptive use. The South African Demographic and Health Survey 1998<sup>3</sup> (SADHS) indicates that three quarters of women of reproductive age have had the experience of using contraceptive methods. Sixty two percent of South African women aged between 15 and 49 years use some form of contraception. Overall the injectable contraceptive is by far the most common method used. The total fertility rate for the 5 years preceding the SADHS was 3.3% nationally. The SADHS suggests that some groups of women are much more likely to use contraception, i.e. women in their teens and 20s, Indian and White women, those with two and three living children, urban residents and women with higher education.

Significant differences also exist in the type of method used by women of different ages, the injectable being the most popular method used by women under 40 years and female sterilisation for women over 40 years old. With regard to race, the injectable is commonly used by African and Coloured women and the pill and female sterilisation by Indian and White women.

In both urban and rural areas the onset of sexual activity ranges from around 13 to 18 years. Some 5% of men and 19% of women use contraception during their first sexual encounter. It appears that some fifty percent of all young people have had more than one sexual partner.<sup>4</sup>

Over 83% of clinics in urban areas and 78% in rural areas provided contraceptive services every working day in 1998.<sup>3</sup> In 1999 most provinces reported that more than 95% of their clinics provided services every day of the week.<sup>5</sup>

Marima J, Department of Health, Subdirectorate: Women's Health. Personal communication, June 2000.

While contraceptive services have been available for sometime, there are still many challenges to ensure quality services. Women need to be enabled to choose the kind of contraception that suits them and to have the information to make that choice. It is also apparent that in certain clinics in rural services, health systems are not in place to ensure that there is a regular supply of methods.

The main challenge however is to use the infrastructure of contraceptive services to expand other women's health services. Women should have the opportunity to have their other needs met such as services for STDs/HIV/AIDS, cervical screening, abortion, sexual violence and antenatal care. It is evident that health workers are feeling challenged and stretched and as a result may be resistant to having to provide more services. Improved management and careful training could assist in motivating health workers.<sup>b</sup>

#### Maternal mortality and morbidity

The Confidential Enquiries system of recording and analysing maternal deaths commenced in October 1997 under the National Committee on Confidential Enquiries into Maternal Deaths (NCCEMD). The committee has produced a number of reports describing the magnitude of the problem of maternal deaths, the pattern of disease causing maternal deaths, the avoidable factors, missed opportunities and substandard care related to these deaths as well as recommending ways of decreasing maternal deaths. The information in this section is derived mostly from the Second Interim Report on Confidential Enquiries into Maternal Deaths,<sup>6</sup> which was launched in November 2000 and includes data from 1999 up until April 2000.

Some 774 maternal deaths occurred in 1999 and were reported to the NCCEMD secretariat before 5 April 2000. This represents an increase of 98 deaths from the previous year. There was a significant increase in reported deaths from the Eastern Cape, KwaZulu-Natal and the Northern Province. The Department of Health argues that this increase is probably a reflection of improved reporting measures rather than a true increase in maternal deaths.

b A Mabote, Department of Health. Personal communication, December 2000.

## Table 1:Number of maternal deaths reported in relation to population and province in South Africa in<br/>1998 and 1999

Province	Census 96 Population	% of SA Population	No. Maternal Deaths 1998	% of Maternal Deaths 1998	No. Maternal Deaths 1999	% of Maternal Deaths 1999	Deaths/100 000 Population 1999
Eastern Cape	6 302 52 5	15.5	56	8.3	84	10.8	1.33
Free State	2 633 504	6.5	94	13.9	79	10.2	3.0
Gauteng	7 348 423	18.1	131	19.4	123	15.9	1.67
KwaZulu-Natal	8 417 021	20.7	188	27.8	248	32.0	2.95
Mpumalanga	2 800 711	6.9	66	9.8	72	9.3	2.57
Northern Cape	840 321	2.1	22	3.3	18	2.3	2.14
Northern Province	4 929 368	12.1	27	3.3	62	8.0	1.26
North West	3 354 825	8.3	58	8.7	54	7.0	1.61
Western Cape	3 956 875	9.7	34	5.0	34	4.4	0.86
Total	40 583 573	100	676	100	774	100	

Source: DoH/NCCEMD 2000: 6

The highest incidence of maternal deaths are being reported in KwaZulu-Natal with 2.95 maternal deaths per 100 000 population. The Eastern Cape reported 1.33/100 000, the North West 1.61/100 000 and the Northern Province 1.26/100 000 maternal deaths. The Department of Health believes that the above four provinces being rural should have a similar rate and argues that there is under-reporting then in the Eastern Cape, North West and Northern Province. They argue that there may be as many as 2 000 maternal deaths that are not being reported. In 1999 there were only 16 maternal deaths reported within the private sector; the NCCEMD also believe that there is under-reporting in the private sector because care is not integrated and women who die are usually managed by a physician at that stage. Although the reliability and process of data collection is still a challenge, there has been considerable improvement. The Eastern Cape still remains an area of concern in the collation of consistent and reliable data.



The five main causes of maternal deaths in 1999 were:

- Non- pregnancy related sepsis 29.6% (mainly deaths due to AIDS)
- Complications due to hypertension in pregnancy 19.0%
- Obstetric haemorrhage 15.4%
- Pregnancy related sepsis 13.9%, including septic abortions and puerperal sepsis
- Pre-existing maternal disease, 7.9% (mainly cardiac disease)

These five account for 85.8% of maternal deaths.

#### Table 2: Primary obstetric causes of reported Maternal Deaths, 1998 and 1999

Primary cause of maternal death	1998 N	1998 %	1999 N	1999 %
Direct deaths	358	63.4	345	59.1
Hypertension in pregnancy	131	23.2	111	19.0
Postpartum haemorrhage	48	8.5	55	9.4
Antepartum haemorrhage	27	4.8	23	3.9
Abortion	32	5.7	32	5.5
Ectopic pregnancies	11	1.9	8	1.4
Pregnancy-related sepsis	41	7.3	55	9.4
Anaesthetic accidents	27	4.8	22	3.8
Acute collapse and embolism	41	7.3	39	6.7
Indirect deaths	190	33.6	219	37.5
Non-pregnancy-related infections	130	23.0	173	29.6
AIDS	82	14.5	93	15.9
Pre-existing maternal disease	59	10.4	46	7.9
Cardiac disease	28	5.0	23	3.9
Not classifiable	18	3.2	20	3.4
Total maternal deaths	565	100	584	100.0
Fortuitous deaths	20		13	

Note: The NCCEMD note the following definitions in this regard:

- Maternal deaths: Deaths of women while pregnant or within 42 days of termination of pregnancy from any cause related to or aggravated by the pregnancy or its management, but not accidental or incidental.
- Direct: Deaths resulting from obstetric complications of the pregnancy state (pregnancy, labour and puerperium), from interventions, omissions, incorrect treatment or from a chain of events resulting from any of the above.
- Indirect: Deaths resulting from previous existing disease, or disease that developed during pregnancy and which were due to direct obstetric causes, but which were aggravated by the physiological effects of pregnancy.
- · Fortuitous: Deaths from unrelated causes, which happen to occur in pregnancy the puerperium.
- · Unknown: Deaths during the pregnancy or puerperium where an underlying cause was not identified.

Source: DoH/NCCEMD 1998:viii

There has been a reduction of direct causes of maternal deaths from 63.4% to 59.1% and an increase in indirect causes from 33.6% to 37.5%. Some 35.5% of the mothers whose deaths were reported were tested for HIV, with 68% of these being positive. In the category of non-pregnancy related sepsis, 38% were not tested for HIV, including those with pneumonia,

tuberculosis and meningitis. The NCCEMD argues that the 93 women who have died due to AIDS is an underestimate. They only classified women as having AIDS if they complied with the standard definitions of AIDS. Sixty-seven percent of women dying due to septic abortion were HIV positive, as were 46% of women dying with puerperal sepsis. These women were not classified as having AIDS because they did not fulfil the criteria.<sup>6</sup>

Even though there has been a slight decrease in the proportion of direct deaths caused by hypertension, this is not the result of improved treatment for hypertensive diseases in pregnancy. Rather it reflects the increase in non-pregnancy related sepsis, mainly AIDS-related. There is an increase in the incidence of puerperal sepsis and postpartum haemorrhage, which the Department of Health argues could be a result of HIV infection. Of the 16% of those who died of postpartum haemorrhage, 57% were HIV positive. Thrombocytopaenia is a well-recognised effect of HIV infection and may have contributed to the increase in postpartum haemorrhage. Women are also dying at lower levels of care from sepsis. There is clearly an issue relating to lack of referral to a higher level of care, but also may be due in part to the masking of the signs and symptoms in women with HIV infections. Clinicians need to be more aware of the complications of HIV infections so that they can treat patients more appropriately.<sup>6</sup>

Disease category	Tested	Positive %	
Septic abortion	15/26	(57%)	67
Puerperal sepsis	28/56	(51%)	46
Cardiac disease	3/23	(13%)	50
Post partum haemorrhage	7/44	(16%)	57
Pneumonia	*0/25		-
ТВ	*0/16		<u>_</u>
Meninaitis	3/5	(60%)	66
	7.01	(00%)	
Malana	//21	(33%)	43

Table 3: HIV status in maternal death disease categories likely to be affected by HIV in 1999

\* If the patients tested positive, they were classified as having AIDS

Source: DoH/NDDEMD 2000: 16

The HIV epidemic is clearly impacting on the nature and causes of maternal deaths. While the reported deaths due to AIDS have risen from 82 in 1998 to 93 in 1999, this does not reflect the full extent of the impact of HIV on maternal mortality. An additional 41 women who if tested positive would have been classified as dying of AIDS, were not tested. There has been an increase in the number of maternal deaths which were classified as due to non-pregnancy related sepsis (130 in 1998 to 173 in 1999). Non-pregnancy related sepsis has become the major cause of maternal deaths at all levels of care. This brings into question the issue of health workers being trained and provided with protective equipment for exposure during obstetric procedures.<sup>6</sup>

## HIV/AIDS

The Department of Health has put in place a number of partnerships, plans, processes and reviews to deal with HIV/AIDS, the most recent being the HIV/AIDS and STD Strategic Plan for South Africa launched early in 2000. Despite these efforts, South Africa is facing an onslaught that is savagely affecting all sectors of society, with women bearing the brunt of the infection.

More than 59% of the 4.2 million HIV-infected persons in South Africa are women. Women of the age group 20-29 had the highest prevalence of HIV infection in 1999. Currently, an estimated 2.3 million women and 95 000 children (0-14 years) are living with HIV/AIDS in South Africa.<sup>7</sup>

Women in South Africa are especially vulnerable to the AIDS epidemic for two reasons. Firstly, the risk of becoming infected with HIV during unprotected vaginal intercourse is as much as 2-4 times higher for women than men. One major reason for this is that women have a larger surface area of mucosa (the thin lining of the vagina and cervix) exposed to their partner's secretions during sexual intercourse. Additionally, semen infected with HIV typically contains a higher concentration of virus than a woman's sexual secretions. Women are also more vulnerable to other STDs (multiplying the risk of contracting HIV tenfold). Younger women are even more at risk because their immature cervix and scant vaginal secretions put up less of a barrier to HIV, and they are prone to vaginal mucosal lacerations. There is also evidence that women again become more vulnerable to HIV infection after menopause. In addition, tearing and bleeding during intercourse, whether from rough sex, rape, or prior genital mutilation (female circumcision), multiply the risk of HIV infection, as does anal intercourse, which is sometimes preferred to vaginal intercourse because it is thought to preserve virginity and avoid the risk of pregnancy. Anal intercourse often tears the delicate anal tissues and provides easy access to the virus.<sup>8</sup> Secondly, due to social inequalities it is often impossible for women to negotiate for safer sex, or even to choose their sexual partners.9

Prevention messages urging abstinence, fidelity (faithfulness to one partner), condom use, and encouraging and enabling people to get prompt treatment for STDs have the potential to help avoid HIV infection. However, for most women, their ability to make these decisions and to act upon them is crippled by their socio-economic circumstances. The majority of women in the world, including South Africa, lack economic resources, and are fearful of abandonment or violence from their male partners. Thus they have little or no control over how and when they have sex, and hence have little or no control over their risk of becoming infected with HIV.<sup>8</sup>

Health promotion messages stressing respect to women's sexual rights are sorely lacking. In a context of endemic sexual violence against women, the Department of Health needs to disseminate affirming messages which state that the human rights of women include their right to have control over and decide freely and responsibly on matters related to their sexuality, including sexual and reproductive health, free of coercion, discrimination and violence. This concept of sexual rights was first articulated in paragraph 96 of the Fourth World Conference of Women in Beijing; in 1996. Government agreed to these commitments in Beijing, however, this message is only being disseminated and funded by NGOs, as in the Sexual Rights Campaign.

The specific cost, in personal and social terms, posed by the rapid spread of HIV among women is profound, given the critical roles women play in every society as food producers and processors, traders, income earners, and mothers. In the context of HIV/AIDS, women usually become infected during childbearing and productive years and are often seriously disadvantaged by their own infection and morbidity or by the morbidity and death of their partners and spouses. Women and in particular older women are having to step in to be the caregivers within their extended families in caring for their children and grandchildren who are dying of AIDS.

Women with HIV need access to health care, information and counselling and wellness management that will enable them to make informed choices – for example whether to risk breast-feeding or attempt costly bottle-feeding. At the same time, enthusiasm for saving the foetus needs to be balanced with the need to also ensure women's access to treatment. Even if anti-retrovirals were given to prevent mother to child transmission of HIV, this would cease after the birth of the child, thus prizing the foetus's life over the woman's. The role of the Department of Health in combating HIV/AIDS infection has been a major issue of concern for HIV/AIDS lobby groups, political opposition parties and NGOs who believe that the government has not done enough to combat the disease.

Progress has been made in some provinces in formulating policies to integrate HIV/STD activities with primary health care (and TB in particular) and to reduce mother to child transmission, but this has taken place in a context of massive administrative restructuring, and is not uniform across the country. It is now a challenge to the Department to fully develop and implement these strategies.

#### Violence against women

As with many other issues, there are no reliable comprehensive statistics on the extent of violence against women. However as the Human Rights Report on Violence Against Women in South Africa states, 'What is certain....is that South African women living in one of the most violent countries in the world are disproportionately likely to be victims of that violence'.<sup>10</sup> Women do not find it easy to go through with the process of going to a police station to report this crime, thus there is always under-reporting. As a result convictions against abusers are less than adequate. With these limitations in mind, research on violence against women has estimated that between one out of every four, and one out of every six women in South Africa are in abusive relationships and that one women is killed by her partner every six days.<sup>11</sup> It has also been estimated that an average of 80% of rural women are victims of domestic violence.<sup>12</sup> The South African Police Services report show that 49 289 rapes were reported in 1998.<sup>13</sup> According to police statistics, rape was one of the few serious crimes that increased steadily by an average of 7% from 1994-1997. By comparison, the twenty most serious crimes increased by an average of 1% over the same period. When South African crime ratios are compared with those of 89 Interpol member states reflected in Interpol's 1996 statistics, South Africa has the highest number of reported rape cases per 100 000 in the world.<sup>13</sup>

Violence against women takes many forms, such as physical, sexual, economic and psychological abuse. Traditionally, services for sexual violence were fragmented. The departments of Justice, Safety and Security and Health did not have a comprehensive plan of working together. Women who experienced sexual violence had their incident recorded under general assault and were only given services to deal with their physical ailments.
Health workers also do not believe that dealing with sexual violence is part of their work, and continue to only deal with physical ailments.<sup>c</sup> Referral for counselling, dealing with possible STDs or the need for an abortion was not articulated in policies.

Jacobs discusses how research has shown that women who experience domestic violence are more likely to visit a health worker with health problems related to abuse than to access any other statutory service.<sup>d</sup> In her participatory research investigating a model for the health sector to respond to gender violence, she found that health workers recognised their limitations in dealing with domestic and sexual violence and would welcome training. She also reports how doctors are notorious for failing to detect abuse and thus failing to respond to patients' needs. At the same time it is clear that within the health system there are dysfunctional relationships between staff and patients, with staff often sharing societal norms and thus legitimising and perpetuating the problem. Services for violence against women are now part of the umbrella of women's health services to be implemented at a primary health care level. The Vezimfihlo (an Nguni word for getting things of your chest, breaking silence) project model for a health sector response to gender violence piloted by Jacobs in two districts in the Eastern Cape and Western Cape is an excellent start to tackling this issue.

There have been a number of policy and legislative initiatives to deal with violence against women. The Domestic Violence Act was passed in 1998. The Act provides for the categories of relationships which fall under the Act to be broadened to include people living together, lesbian and gay people, young people and people living in institutions. The definition of domestic violence has been broadened to include financial abuse, emotional abuse, harassment and stalking. The general legal procedure of an interdict has been changed to a more specific protection order. It was twelve months before the Act began to be implemented.

Most efforts in implementing the Act have been initiated and funded by NGOs. These have been far reaching, from the re-orientation of magistrates to the training of police. Within the health sector, efforts have been to train nurses at primary health care level and GPs to recognise and treat sexual violence and to improve the quality of recording incidents in order to improve conviction rates.

In a study (n = 269) describing the impact of service delivery regarding violence against women in metropolitan areas in South Africa, 73% of women described the emotional impact as the most debilitating.<sup>13</sup> The 111 women who identified sexual abuse as the most serious were asked about their fears of a range of conditions. The most common single fear was that of contracting a STD (39%). This was followed by a concern about becoming pregnant (36%) and having a child (33%). Less than a third were worried about contracting HIV. Few women (14%) were worried about infertility as a result of abuse. Of the 111 who responded, 15% said they had contracted a STD and 5.5% contracted HIV. Pregnancy was reported by 14% of women who were sexually abused. Seven percent had an abortion and 6% had a child as a result of the abuse. Four percent were infertile as a result of the abuse. Clearly this data points to the need for integrated women's health services which deal with women's needs for counselling, STD treatment, emergency contraception and abortion services following sexual abuse.

c Mseme K. Gauteng National Network on Violence against Women. Personal communication, December 2000.

d Jacobs T. Border Institute of Primary Health Care. Personal communication, June and December 2000.

#### **Medico-Legal Services**

Medical evidence is central to the successful prosecution of sexual assault cases. Often, the medical evidence will be the only corroboration of the complainant's case, required to confirm not only the fact that sexual contact or intercourse took place, and with a particular individual, but also that such a contact took place without the complainant's consent. A thorough and well-recorded medical examination can provide circumstantial evidence to support a rape survivor's story, by noting injuries ranging from obvious scratches and tears, to small and easily missed abrasions indicating that sexual intercourse took place without lubrication.<sup>e,f</sup>

If survivors of sexual assault are examined by health workers who are properly trained, who have experience in the field and are aware of what would assist the judiciary in reaching a decision, the chances of a conviction would be substantially improved. Examination of patients for medico-legal purpose is a specialist task; appearing in court also requires special skills. The whole experience of reporting to the police and being examined by a medico-legal practitioner can be an intimidating experience for the victim. It is, therefore, essential that those who carry out this work have specialised training.

The system of reporting assault and rape first to the police becomes more problematic for women who are afraid to contact the police or who are uncertain as to whether they wish to pursue a criminal case at the time immediately after the attack. There are potential medicolegal and jurisprudence issues that prevent hospitals from keeping a stock of 'crime kits' and J88 forms (the South African Police Service's forms used for the recording of details of an alleged assault). An alternative would be for hospitals to develop protocols regarding examination for assault and rape at the time that complies with legal requirements. For instance, when a woman presents with her injuries or description of her assault or rape the standby officer at the relevant police station could be contacted to come to the health facility to register the crime report and to commence the investigation.

There are deficiencies in

- i) The clinical examination and care of assault and rape victims
- ii) The counselling services and
- iii) The management of the evidence by health and welfare professionals in the criminal justice process.

In hospitals, medico-legal services are integrated into the general work of the institution and carried out by regular doctors working there. Nurses, although they are the main cadre of health workers servicing primary health care facilities, are not yet legally allowed to fill in J88 forms. Outside of the hospitals there are still full-time and part-time district surgeons who see patients. The integration of these services into primary health care services has meant increased access to medico-legal services to some degree for women. However, many women have reported long delays before receiving attention.

Currently NGOs and Community-Based Organisations (CBOs) are the main role players in providing counselling services to the victims of violence against women. They are also providers of victim empowerment and support. The integration of the forensic service into the general health service brings out the need to equip medical personnel with skills in counselling of women victims of violence.<sup>10, d, g</sup>

e Waterhouse S. Rape Crisis, Western Cape. Personal communication, August 2000.

f Makhetha P. People Opposing Women Abuse, Gauteng. Personal communication, August 2000.

g Usdin S. Soul City. Personal communication, August 2000.

In most health institutions, there are already people trained in HIV/AIDS counselling. It would probably be cost effective if the same people are given additional training in violence against women. Medical doctors are assumed to possess the skills to carry out a forensic examination, but this may not be true for most doctors. The Gender Unit of the national Department of Health as well as the Departments of Health in the Western Cape, Gauteng and the Eastern Cape, have taken the initiative to carry out training of medical officers and nurses in forensic examination.

The Western Cape provincial Health Department has taken steps to develop policy guidelines on the management of survivors of rape at the hospital level. These include guidelines for the management of victims of sexual assault and proper completion of the J88 examination form. Women presenting to a health institution before going to the police station will not need to be sent first to the police station. Hillbrow medico-legal clinic in Johannesburg has developed a training system for new medical officers and district surgeons. In addition, NGOs like ADAPT, Soul City, and the Women's Health Project run training courses for health professionals.

Despite the lack of a training strategy within the public health system that will address the deficiencies in managing rape and violence against women, various NGOs have been carrying out a number training courses. CERSA-Women's Health, Medical Research Council and the Border Institute of Primary Health in East London, for example, are in the process of piloting a training course for health professionals.

#### **Cervical Cancer Screening**

Screening for cervical cancer has been erratic and unevenly distributed throughout the country. The Department of Health has been developing National Guidelines for Cervical Cancer Screening in consultation with a variety of stakeholders for a number of years. These Guidelines were launched in November 2000 and most of the information in this section is from this policy. The intention of these Guidelines is to facilitate comprehensive and systematic cervical cancer screening for all South African women.

It is debatable as to whether cancer of the cervix is the most common form of cancer amongst South African women. Whilst breast cancer figures show the largest incidence of cancers in women, the National Cancer Registry argues that this could be due to fewer cervical screenings taking place.<sup>14</sup> Cancer of the cervix is the most common cancer in women in developing countries. Approximately one in every 41 women will within their lifetime, develop this form of cancer. It is the most common cancer in African (31%) and Coloured (22.9%) women, and second most common in Indian (8.9%) and fourth most common in White (2.7%) women. To date no association has been found between invasive cancer of the cervix and HIV infection.<sup>14</sup> Papanicolaou smears (Pap smears) to detect cervical abnormalities are the best form of secondary prevention. Cancer of the cervix is thought to be associated with a certain strain of a sexually transmitted virus, the human papillomavirus. Other related risk factors include the early onset of sexual activity, number of sexual partners, poor socio-economic conditions and parity.

The Department's policy aims to reduce the incidence of and mortality due to cervical cancer by more than 60%. The screening programme will be introduced incrementally depending on health service capacity and the ultimate goal is to screen at least 70% of women nationally within the target age group within 10 years of implementing the programme. The proposal is for the Department to provide three smears per lifetime, with a ten-year interval between each smear, commencing after 30 years of age. The success of screening programmes is dependent on good attendance rates by women at high risk. The best predictor of high risk is age. A smear as a diagnostic investigation is not regarded as an element of the screening programme. Women with an inadequate smear should be re-screened; if the second is also inadequate, the women should be referred to a known competent screening service. Women screened for the first time at age 55 or more will have only one smear if the first smear is normal.

The management objectives of the policy are:

- To reduce the incidence of carcinoma of the cervix, primarily by detecting and treating the pre-invasive stage of the disease
- ◆ To reduce the morbidity and mortality associated with cervical cancer; and
- To ultimately reduce the excessive expenditure of scarce health funds currently spent on invasive cancer of the cervix.

Provinces are now in the process of developing action plans to implement screening services. The challenge is for health services at primary health care level to expand and include cervical screening as a regular service, along with other women's health services. Part of the challenge is to manage the process of screening, and ensure that services have the equipment needed, including specula and spatulas. Health systems need to be strengthened in order to provide for good co-ordination between laboratories and the health services and referral centres for follow up and treatment. At the same time, health workers need to be motivated and trained with regard to the policy, in order for them to identify target women to screen and to have a referral system to rely on.<sup>h</sup>

# Role of NGOs and CBOs in women's health

NGOs and CBOs provide a supportive role to the government, complement the work of the public service and most importantly NGOs lobby and advocate for changes in society. Various NGOs, like ADAPT, Planned Parenthood Association of South Africa, Rape Crisis, National Network on Violence Against Women, People Opposing Women Abuse, and The Women's Health Project have contributed towards improving women's health by providing the following services:

- Information, education and communication (IEC) services
- Provision of contraception services and other reproductive health and rights services
- Lobbying and advocacy for legislative reforms and better services for women
- Providing counselling and support services to survivors of violence against woman and all people infected or affected by HIV/AIDS
- Institutional and individual capacity building through training; in e.g. sexual assault, empowerment, capacity building, reproductive health, sexual rights
- Mobilisation of community members
- Research and policy development.

h Tlebere B. Department of Health. Personal communication, December 2000.

# Conclusions

The transformation of the health system in South Africa has resulted in many new policies and programmes. However, the pace at which these reforms are taking place is slow and the implementation of policies is not uniform throughout the country. The result is that the quality of health care services rendered to women is still compromised. For example the integration of Maternal, Child and Women's Health services into Primary Health Care is positive in principle. However, unless extra resources are made available to assist all categories of the health team to understand the new tasks and policies, services will remain inadequate.

From a health management and systems perspective, the concept of women's health still needs to be articulated and mainstreamed, despite all the different policies concerning women's health. Women's health is more than reproductive health and children's health. As can be seen from the issues raised in this chapter, interventions and services for women's health are much broader than reproductive health or maternal health and child care. For example, most women who seek contraception, whether adolescents or older women do not want to have children (at the time). Health workers who attend to those seeking contraception could also take the opportunity to discuss issues around negotiating safer sex, the use of condoms as preventative strategies for STDs including HIV, and cervical cancer. Women who present following an incident of sexual violence also need services for emergency contraception, counselling and to deal with the possible contraction of STDs including HIV.

The definition of comprehensive health services for women, as health care which treats and acknowledges women's health needs holistically through their lifecycle, needs to be articulated and understood at national, provincial and district level. Conceptual clarity and more focus will encourage health services to be more directed.

# **Challenges and Recommendations**

# Data

In many of these women's health issues, there is inadequate data. The challenge is to improve the management of information systems so that the Department can have information readily available to make decisions, review strategies, and formulate policies that will enable the delivery of women's health care needs in a more equitable way.

# Contraception

Although contraceptive services are widely available, there is still a need to expand such services so that they become readily available in all health institutions, to ensure that there is a regular supply, available at all times. There is also a need to expand female condom availability. The relationship between clients and service providers needs urgent attention to enable clients to feel that they are choosing the contraceptive that best suits them as opposed to the health provider. Health workers also need to take this opportunity to counsel clients on issues such as safer sex practices to prevent the spread of STDs including HIV.

# Maternal deaths

Those maternal deaths not caused by HIV/AIDS could be prevented with good quality of care management protocols, proper referral systems, better transport and communication systems and regular in-service training courses for health professionals in maternity care.

Abortion on request should be available to women, and clinics need to ensure that their referral service is working should the clinic not be a designated facility or provide the service at a particular trimester. Women who test positive for HIV also need to be told of their right to a termination of pregnancy. Now that most maternal deaths are caused by non-pregnancy related sepsis related to HIV/AIDS, this needs careful management. Protocols for the identification and treatment of various infections and sepsis need to be developed for primary health care facilities.

#### HIV/AIDS

The importance of the need to encourage women to develop and enhance their sexual health by being able to negotiate safer sex cannot be over-emphasised. Similarly, women who present to a facility having experienced sexual violence, need to be counselled as to how to go about obtaining post-exposure prophylaxis if possible and how to deal with re-infection issues.

#### Violence

Awareness of sexual violence is very high, but despite this, violence against women will not be eliminated until something can be done to change community values, cultural attitudes and beliefs that give rise to men's abusive behaviour towards women and permit such behaviour to persist. There are efforts at reform within the justice and safety and security arenas, however our focus has to be on how the health sector should be dealing with violence against women. Efforts underway to train health workers at all levels in terms of recognising sexual violence and in providing counselling for survivors of sexual violence need to be supported. Health workers also have a role to play in assisting women to gain a protection order under the Domestic Violence Act. Similarly, procedures to assist women to gain evidence to convict perpetrators need to be simplified and made empowering for women.

#### **Cervical cancer**

Primary prevention of cervical cancer can take place within women's health services in providing adolescents and women with information regarding the risk of early onset of sexual activity, multiple partners and unsafe sex. The new guidelines on cervical cancer screening aim to provide all South African women with an opportunity to be screened for cervical cancer. The challenge is to ensure that the policy is implemented and that women who are at risk are identified for screening; at the same time to use this opportunity to ensure that all health facilities have in place systems of working with laboratories, transport, referral and follow up.



During the past six years, the government has discouraged tobacco use through public education, support for smoking cessation programmes, and legislation. Taxation has been a key tobacco control measure. Steep tax increases have simultaneously reduced cigarette consumption and increased government excise revenues. Overall, tobacco use has dropped dramatically in South Africa. The prevalence of cigarette smoking among adults has declined, from 34% in 1992 to 24% in 1998. About 42% of men and 11% of women smoke cigarettes. Among adolescents aged 15-19 years, 14% of boys and 6% of girls are current smokers.

The Tobacco Products Control Amendment Act No. 12 of 1999 came into effect on 1st October 2000. The Act prohibits all tobacco advertising, sponsorships and promotions; restricts smoking in enclosed public places to specially designated smoking areas; outlaws the free distribution by the trade of tobacco products; and sets maximum limits on the nicotine and tar yields of cigarettes. The Act provoked fierce attacks by the tobacco and allied industries. The industry used the same standard repertoire of arguments that it has used in other countries considering tobacco control legislation. Their arguments were no more successful in South Africa than they were elsewhere.

The shift in policy away from a sole focus on public education to creating supportive environments and social norms that discourage tobacco use, has been successful in South Africa. Opportunities for further reducing tobacco use are discussed.



Yussuf Saloojee National Council Against Smoking

# Introduction

Since 1994, the political ground has shifted in both the national and international debate over tobacco policy. Nationally, the long-standing neglect of tobacco in health policy development has been reversed. The new democratic government has shown real political commitment to tackling the issue with advances in policy formation, public education, and services for smokers. This has resulted in significant declines in tobacco consumption in South Africa. In August 2000, the Ministry of Health received the inaugural Luther L Terry award for "exemplary leadership by a government ministry" at the 11<sup>th</sup> World Conference on Tobacco or Health in recognition of these achievements

Internationally, the forced release through litigation of 35 million pages of internal tobacco industry documents have disclosed that the industry engaged in a decades-long effort to silence critics including the World Health Organisation (WHO), distort science, resist legislation, and avoid litigation.<sup>1</sup> These revelations have given rise to a fresh wave of law suits in the United States that could have worldwide repercussions.

This chapter outlines recent developments in tobacco control in South Africa and looks ahead to future challenges and opportunities.

# The Global Epidemic

The marketing strategies of the tobacco transnationals have led to the widespread use of tobacco, particularly cigarettes, in the last century. By 1998, 30% or 1 236 million adults smoked world-wide, with men (48%) four times more likely to smoke than women (12%).<sup>2</sup> The vast majority of smokers (900 million) now live in low and middle-income countries. The addiction has spread from men to women in high-income countries and then to men in low-income regions.<sup>3</sup> The future growth market for the industry is women in low-income countries.

According to the WHO, only two major global causes of death are increasing rapidly deaths from AIDS and from tobacco. If unchecked, tobacco use will be the leading cause of premature death worldwide by 2030. At present, the WHO attributes about 4 million deaths a year to tobacco<sup>4</sup> and this is expected to rise to 8.4 million deaths annually by 2020.<sup>5</sup> Virtually all this future increase will occur in low-income and middle-income countries, which are most vulnerable to the tobacco industry and where tobacco control activism is rare (Figure 1).





The long "incubation period" of the tobacco epidemic, however, leads many governments to seriously underestimate the dangers. After a population begins smoking it takes 30 to 40 years before tobacco death rates reach their maximum.<sup>6</sup> The fact that the health consequences of current levels of tobacco use are far removed in time, makes it easy to remain unconcerned and complacent. Moreover, health promotion and disease prevention in all counties of the world are traditionally given lower priority than treatment.

In sub-Saharan Africa the tobacco epidemic will peak towards the middle of this century. Rarely do we have the ability to predict an epidemic so far into the future and also the knowledge to prevent it now.

# The South African situation

After increasing steadily from 1948 to a peak in 1990, tobacco consumption in South Africa has fallen for eight consecutive years since 1991. In 1998/99, over 30 billion cigarettes were released for consumption from bonded warehouses, down from 36 billion in 1993/94, a 17% decrease.<sup>7</sup>



Figure 2: Cigarette consumption in South Africa, 1986-98

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There are currently about 5 million smokers in the country. The prevalence of smoking among adults has declined substantially, from 34% in  $1992^8$  to 24% in  $1998.^9$  About 42% of men and 11% of women smoke cigarettes.

Snuff use is more common among women than men (11% of women vs 0.9% of men) and as many women use snuff as smoke cigarettes. African women are twice as likely to use snuff daily (12%) as to smoke cigarettes daily (5%). Coloured women (52%) are ten times more likely to smoke cigarettes than African women.

Cigarette smoking prevalence rates are higher in urban than in rural settings, especially for women where the difference is two fold (13.2% urban vs 6.6% rural).

# Youth smoking

National data on the prevalence of smoking among adolescents aged 15-19 years also became available for the first time in 1998.<sup>9</sup> Overall, about 14% of boys and 6% of girls were current smokers. Smoking prevalence increases with age; so while 4.1% of boys and 2.4% of girls smoked at age 15, this rate had increased to 22.4% and 9.5% respectively by age 19. The majority of people begin smoking before the age of 25 years, and it is only the rare individual who begins after this age.

About 2 out of 3 regular adolescent smokers had tried to stop smoking but only 27% actually succeeded in doing so. The transition from childhood through adolescence to adulthood is still accompanied by large numbers of teenagers becoming addicted to tobacco.<sup>9</sup>

# The Health Impact

In 1992, the Medical Research Council estimated that 25 000 deaths a year in SA were attributable to tobacco-related diseases.<sup>10</sup> There has been no major update of the data since then.

A case control study at Garankuwa Hospital between 1993 and 1995, found that smoking was the most important risk factor for the development of lung cancer in the Northern Province.<sup>11</sup> Male smokers were ten times more likely to get lung cancer than male nonsmokers and women smokers had a five fold higher risk. This level of risk is similar to that found in high-income countries in the 1960s and 1970s, which suggests that the epidemic is still at an early stage and its full effect is yet to be felt in this province. The Northern Province, incidentally, has the lowest smoking prevalence rate in the country (29.2% of men and 1.8% of women smoke).

New data suggests that more deaths from smoking may be attributable to tuberculosis (TB) than to lung cancer in South Africa. An analysis of death certificate data found that smoking increases the risk of dying from TB by 60%.<sup>a</sup> Similar findings of an excess risk of mortality from pulmonary tuberculosis among smokers was also found in the UK and China.<sup>a</sup> TB causes over half-a-million deaths each year in sub-Saharan Africa, suggesting that smoking may contribute to more deaths in Africa than was previously supposed.

# Public Awareness of the Dangers

A 1986 survey found that while there is widespread public awareness that smoking is harmful, there is little specific knowledge of the actual diseases caused by smoking. So although over

a F Sitas, National Cancer Registry. Personal communication, 2000.

90% of the public believe that smoking is bad for one's health, only 70% knew that it causes cancer and fewer than 30%, that it causes heart disease.

Further, it is probable that people in South Africa greatly underestimate the risks from smoking as they do in many other countries. In the UK, for instance, about 4 000 people die each year from road accidents and 120 000 are killed by diseases caused by smoking, yet most Britons believe that more people die in road accidents than from smoking.

#### **Tobacco Manufacturing and Growing**

The South African cigarette market is a virtual monopoly with one company, British American Tobacco (BAT), controlling 95% of the market. BAT merged with previous market leader Rothmans International in 1999. BAT has two competitors, Japan Tobacco International (JTI) and Mastermind, which have about 2% and 1% market share respectively. JTI has no local manufacturing facilities and its brands for the South African market are produced by BAT.

Beyond the manufacturers there are 691 farmers. They produced 26.1 million kilograms of tobacco in 1997, while domestic consumption runs at approximately 34 million kilograms a year. The local tobacco-growing industry has been shrinking since 1985, when there were 1 883 farmers, because it is unable to satisfy the manufacturers' demand for high grade tobacco at competitive prices. Only about 50% to 60% of the tobacco in South African cigarettes is home grown. Substantial amounts of tobacco are imported from Zimbabwe and Malawi duty-free under existing trade agreements. This amounts to a government subsidy to the manufacturers.

#### **Tobacco Control Measures**

Measures to prevent disease have been described as falling into two categories: "popular prevention" and "unpopular prevention". "Popular" prevention involves low-key educational programmes like the production of posters and pamphlets, and other cosmetic but inconsequential activities. "Popular prevention" serves as a smokescreen for politicians afraid to take meaningful action but who want to be seen to be doing something. As such it is popular with governments, the tobacco and advertising industries and the media.

"Unpopular prevention" entails legislation, taking on major industries, and fighting political battles. It actually has some impact on the problem but it is unpopular because it involves making difficult decisions. "Unpopular" measures can become popular as they demonstrate their effectiveness and as attitudes change.

With one or two singular exceptions all the actions taken in South Africa until the 1990s were "popular". These measures never seriously threatened the market, or profitability of tobacco. The exceptions were the bans on smoking in cinemas and on domestic air flights.

The first Tobacco Products Control Act was passed in 1993 just before the country's inaugural democratic election. The Act was symbolic of the change that was taking place in the country at that time. The South African Medical Journal first called for a comprehensive tobacco control policy including a tobacco advertising ban, restrictions on smoking in public places and higher excise taxes as far back as in 1963.<sup>12</sup> This call was ignored for three decades. Instead, the domestic industry benefited from the apartheid government and was protected by it.<sup>13</sup>

The 1993 Act was modest in intent but it was nonetheless the first major dent in the solid wall of vested tobacco interest. It provided for:

- The control of smoking in enclosed public areas
- The labelling of tobacco packages and advertisements with health warnings and the nicotine and tar content; and
- The prohibition of sales to children under the age of 16.

Upon becoming Minister of Health in 1994, Dr Nkosazana Zuma immediately gave teeth to the Act. The Department of Health passed regulations that mandated strong, prominent, rotating health warnings on tobacco packaging and advertisements. The warnings were better than those in most other countries,<sup>14</sup> for in addition to warning people about the harms from tobacco it also stated the benefits of stopping and provided a telephone number which people could ring for further help and advice in quitting.

#### New Legislation

In March 1999, the Parliament passed the Tobacco Products Control Amendment Act. This Act came into effect on 1 October, 2000 and its main purposes are to:

- (a) Reduce the pressure on young people to begin a lifelong addiction at age 15 and younger
- (b) Protect the constitutional right of the non-smoking majority to a smoke free environment; and
- (c) Attempt to reduce the harmfulness of cigarettes for those who cannot or will not stop smoking.

The Act did this by prohibiting all tobacco advertising, sponsorships and promotions. No advertisement may contain trade marks, logos, brand names or company names used on tobacco products. Nor may these marks be used in association with sporting, cultural or educational activities. This provision of the Act becomes effective in April, 2001.

With effect from 1 January, 2000 the Act also forbids smoking in all enclosed public places, including the workplace, except in specially designated smoking areas. The Act further permits the Minister to regulate the maximum amounts of nicotine, tar and other ingredients in cigarettes.

From 1 October, 2000 the law banned the free distribution by the trade of tobacco products. Awards or prizes to induce the purchase of tobacco products are also prohibited. Finally, the law requires that vending machines must be supervised so that children under 16 cannot gain access to cigarettes.

# Advertising

A ban on tobacco promotions is an essential component of any strategy designed to reduce smoking among youth. Such a ban is advocated by both the World Bank and the World Health Organisation. Much of tobacco advertising is deliberately designed to exploit young people's social insecurities and the desire to be popular to get them to start smoking. For example, in its internal marketing documents a manufacturer specified that the aim of its advertising is to create "[T]he perception that Camel smokers are non-conformist, selfconfident and project a cool attitude, which is admired by their peers".

Cigarettes are one of the most advertised products in South Africa. Spending on direct tobacco advertising has increased five-fold from R49 million in 1987 to R250 million in

1997. In that year, the industry also disbursed sponsorships amounting to R64 million to sports, arts and cultural organisations and spent about R163 million on advertising and promoting these events. In total the industry spent R477 million on advertising, sponsorships and promotions.

Since 1995, when the health warning regulations were enacted, the industry has greatly increased its sponsorship activities. Because of a loop-hole in the 1993 Act, sponsorship messages are not required to carry health warnings and could be aired on television, thus by-passing a ban on the broadcast of tobacco advertising.

#### **Smoke Free Environments**

The new regulations will contribute to a safer, healthier and cleaner indoor environment. There is an overwhelming consensus in the medical community that passive smoking causes disease in nonsmokers. This includes lung cancer and heart disease in adults, and lung disease, middle-ear infections and asthma attacks in children. Passive smoking also causes eye irritation, coughs, and headaches.

The regulations treat both nonsmokers and smokers fairly; making enclosed public places mostly smoke-free but allowing smoking in designated areas caters to both groups' needs and preferences. The South African public have long demanded the restriction by law of smoking in public places. Over 70% of both smokers and nonsmokers support this measure.

#### Less toxic cigarettes

Since the introduction of filters, the amount of nicotine and tar in cigarettes has been greatly reduced. By setting upper limits on the amount of nicotine and tar that a cigarette can yield, the government is formalising this trend. Smokers should, however, know that there is no safe cigarette and that the benefits, if any, of smoking low-tar cigarettes can be easily voided by either smoking more or inhaling more deeply on a cigarette.

#### **Smoking Cessation Services**

A nationwide telephone advice service, the Tobacco or Health Information Line, was launched in 1995. The service provides free advice to smokers who want to quit and counselling to those who are in the throes of withdrawal. Self-help smoking cessation material is available in association with the advisory service.

# **Tobacco Industry Reaction**

Big business is in a powerful position to oppose pro-health policies and perpetuate unhealthy ones. The response of the industry to the 1998 Tobacco Bill was predictable. From Canada to Sri Lanka they have echoed the same standard arguments against legislation: The bill is draconian. They were inadequately consulted. Jobs will be lost. The Bill is an attack on "freedom". We are becoming a "nanny" state.

Large sections of the media, fearful of a loss of tobacco advertising revenues, adopted these arguments uncritically and mounted fierce partisan attacks on the Minister of Health and the Bill.

The industry attempted to delay the parliamentary debate on the Bill by seeking a High Court injunction requiring the Health Ministry to make available all the information it used in preparing the Bill and requesting time to study this information. The injunction was denied, and a subsequent appeal dismissed. The industry also built alliances with other business groupings and labour unions. By opposing the Bill while claiming to be autonomous of the tobacco industry, these groups lent 'independent' credibility to the industry's views. A 'Freedom of Commercial Speech Trust' (FCST) was established in 1997 soon after Dr Zuma had announced her decision to regulate tobacco marketing. The Trust was financed by a levy on all advertising in South Africa and represents the media and marketing industries, the South African Chamber of Business, the American Chamber of Business and the Council of South African Banks.

The Food and Allied Workers Union, which represents workers employed in cigarette manufacturing, claimed that the Bill would result in a loss of 8 000 jobs in the industry. On the other hand, the tobacco companies stated that since an advertising ban would not reduce cigarette consumption, the Bill would not affect jobs in their industry. The contradiction between these claims clearly reflects the difference between the industry's public statements and the threats it was making in private to turn workers against the Bill.

The industry employed highly credentialed local and international 'experts' to give evidence to the Parliamentary Health Committee about the constitutionality of the bill, to question the science behind the Bill and to raise doubts about its effectiveness. Recipients of industry "philanthropy" such as sports organisations also testified about the contribution of the industry in developing sport and tourism in South Africa.

Many individuals, the larger health community, including physicians' and nurses' organisations, economists, academics and NGO's defended the Bill. The public remained sceptical of the tobacco industry's tactics and supported the legislation. A nationwide survey in August, 1998 revealed that 67% of the respondents agreed that smoking in public places and tobacco advertising should be banned. Eleven per cent were undecided on the issue and 22% disagreed with the restrictions.

#### Box 1: Some key debates around the Bill

#### 1. Jobs will be lost

Since 1987, about 39 000 jobs have been lost in the tobacco sector. Yet, during this entire period South Africa consumed more tobacco than it produced. The job losses were caused because South African cigarette manufactures find it more profitable to buy tobacco leaf abroad instead of locally. The result has been an outflow of foreign exchange and South African tobacco farmers going out of business. The industry is silent about this fact.

Economists at the University of Cape Town predict that a reduction in tobacco consumption in South Africa will result in more jobs - not job losses. This is because people who stop smoking will spend their money on other goods and services resulting in an increase in employment in those sectors of the economy supplying these new consumer demands.

The main contribution of tobacco to the economy is not jobs and wealth but increased health costs and lost productivity. In 1988, 1.4 million working days were lost to South African industry due to absenteeism caused by smoking related diseases.<sup>15</sup> This was more than the number of days lost to industrial strikes in that year.

#### 2. The Bill is an attack on freedom

Some people are concerned that a ban on tobacco advertising may be an attack on freedom of speech. Groupings like the FCST claim that in opposing such a ban they are not "protecting tobacco but free commercial speech". Almost every country in the world, including our own Constitution, permits restrictions on freedom to protect the public welfare. Many countries with excellent democratic traditions, including France, Australia and Norway, have banned tobacco advertising for just this reason.

Most societies accept many restrictions on their freedom: speed limits, prescription only medicines, no drinking and driving, gun laws, bans on child pornography. They do so because they believe these restrictions are for the common good. The freedom of children to grow up healthily, and free from harm and addiction is a common good worth protecting.

It is also important to remember that censorship assumes many forms, one of which is self-censorship. The latter is often more destructive than an outright ban because it is hidden. Surveys show that self-censorship on tobacco issues by sections of the South African media is common. Magazines, for instance, which carry cigarette advertising are considerably less likely to publish articles on the risks of smoking than are magazines without cigarette advertisements.

The millions the industry spends annually on advertising provides a formidable basis for influencing editorial policy, which the industry is not afraid of using. In November 1987, a Rembrandt Group company, R & R Tobacco, withdrew over R1 million of advertising from *The Star* newspaper in the wake of an editorial that supported the regulation of tobacco advertising. This was a clear warning to the newspaper that if it opposed the industry it would lose revenue.

#### Tobacco Taxes

A basic law of economics states that the price of a commodity is the single largest shortterm determinant of consumer demand for that product. Economists have consistently found that a fall in cigarette prices increases consumption and that price increases reduce consumption.

Tobacco taxes make up a large part of the retail price of tobacco products and so it is important to know how taxes are changing and the effects of this. If excise tax increases do not keep up with inflation, then prices may fall in real<sup>b</sup> terms and cigarette sales will increase. For example, between 1970 and 1990 there was an 82% fall in the real excise tax rate, accompanied by a 31% decrease in the retail cigarette price, while cigarette consumption increased by 139%. Not unexpectedly, real government excise revenues from cigarettes fell by 34%.

On the other hand, between 1994 and 1999, real excise taxes increased by 149%, real cigarette prices went up 81%, while consumption decreased by 21% and government revenues nearly doubled.

b To allow comparison of prices across different time periods, the 'real' price is calculated by adjusting the current price for inflation.

Figure 3: Changes in cigarette tax rate, price, excise revenues and consumption



In summary, tobacco tax and price changes are firm predictors of future smoking patterns. Since 1994, the State's fiscal policy has complemented its health policy, and achieved the double goal of not only promoting public health and saving lives but of increasing government revenues.

Moreover, making cigarettes less affordable is probably one of the best ways to ensure that children do not start smoking. Recent budgets have probably prevented more children from becoming addicted to cigarettes than the combined efforts of the medical profession.

# **Future Challenges**

Key components of a comprehensive tobacco control policy have now been enacted in South Africa. There has already been a significant reduction in tobacco use and further progress can be expected once the regulations issued under the Tobacco Products Control Amendment Act No. 12 of 1999 come into effect.

The tobacco industry, however, has a remarkable capacity for adapting to legislative challenges and not only overcoming them but turning them to its advantage. Every effort to regulate has been met with attempts to evade. In South Africa, the industry overcame a ban on direct advertising of tobacco products on television by switching to sponsoring sports, so that sports stars became walking billboards for the industry.

The following still needs to be done:

- Continued public education. Although there is widespread general awareness that "smoking is bad" most people still grossly underestimate the real risks, perceiving tobacco to be less harmful than it really is. The public need to be provided with accurate, complete and relevant information on the health, economic and legal aspects of tobacco use. School-based programmes also need to be greatly strengthened.
- Mobilising communities in support of the regulations. It is necessary to build upon community support for tobacco control measures by creating mechanisms for the public to monitor, report and follow through on infringements of the law. Tobacco control laws are usually

self-policing but additional measures will be needed to increase compliance. Restrictions on smoking in public places, for instance, will require nonsmokers to stop being passive and become assertive of their right to clean air, if they are to be effective. Similarly, parents have a prime responsibility in ensuring that retailers do not sell cigarettes to their children.

- Litigation. Internal US tobacco industry documents reveal that the cigarette companies knew they were selling a defective product while publically denying that it was defective. The industry has belittled the health effects of smoking and addiction and even used fabricated science to dispute the truth. Litigation by individual smokers and by governments to recover tobacco attributable health costs is an important strategy although unused in South Africa to hold the industry accountable for its conduct. Unlike the US industry, the local industry has not yet come clean on what it knew about the harms of smoking, when it knew it, and what it did about it.
- Research and monitoring. To provide evidence-based support for tobacco control, ongoing research will be required on consumer awareness and behaviour, and on the implementation and effectiveness of the legislation and its economic impact.
- Supporting international tobacco control activities. It would be a hollow victory if South Africa's success in reducing tobacco use resulted in the country exporting more cigarettes to neighbouring states. The government should take the lead in encouraging greater co-ordination and co-operation on tobacco control issues within the SADC region.

South Africa must also advocate for a rational, evidence-based, global treaty on tobacco control.

The WHO is currently negotiating its first public health treaty, the Framework Convention on Tobacco Control, which is expected to allow countries to share expertise, and to cooperate in dealing with national and international tobacco issues.



# 23 Alcohol and other drug use

High levels of abuse of alcohol and other drugs (AODs) by certain groups in South Africa are documented as well as an indication of the resulting health and social burden incurred. A critique of the most prominent policy initiatives promoted by various government departments at a national level to address AOD abuse indicates that there have been activities on several fronts. Activities undertaken by the Department of Health specifically have included strategic planning exercises, departmental restructuring, support for research in key areas, the establishment of a committee to look into advertising, and support for certain prevention initiatives. Gains have, however, been less than hoped for at national and particularly at provincial levels. Various recommendations are presented for taking things forward. In the short term priority should be given to addressing AOD treatment and rehabilitation, instituting work place interventions, forbidding or restricting alcohol advertising, and implementing specific harm reduction strategies. In the medium term attention should be given to increasing community support for substance abusers, and education of persons at risk as well as the general public. Other recommendations include the need for the Department of Health to work with other departments, for example, in increasing excise taxes on alcohol, in establishing a national substance abuse clearing house, and in lobbying the Department of Finance to provide the funds needed to implement the National Drug Master Plan.



**Charles Parry** Medical Research Council

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# Introduction

Following the first democratic elections in South Africa optimism was expressed in the government's willingness to tackle all forms of substance abuse.<sup>1</sup> In this chapter we review progress made since 1994 in addressing alcohol and other drug (AOD) use. The focus will mainly be on policy developments and their implementation by the health sector.

# The nature and extent of alcohol and other drug use and associated consequences

Based on the findings of the Department of Health's South African Demographic and Health Survey (SADHS) conducted in 1998 by the Medical Research Council (MRC) and Macro International Inc., just under half of men (45%) and one-fifth of women (17%) 15 years and older report that they currently consume alcohol (Table 1). For both sexes, the rate is 28%, which translates to 8.3 million South Africans 15 years or older. Rates of current drinking differ substantially by population group and gender, with the highest levels reported by White males (71%), followed by White females (51%), and Coloured males (45%). The lowest rates were reported by African and Asian females (12% and 9% respectively). For both men and women higher rates of current drinking were recorded in urban areas. For both men and women, persons with either low or high levels of education are more likely to drink than those with moderate education (Standards 4 - 9). For males the highest current drinking levels were reported in the Free State and Gauteng (50% or more) and the lowest levels were reported in the Northern Province (28%). For females, the lowest levels were also recorded in the Northern Province (9%), with the highest levels being in the Free State, Western Cape and Northern Cape (23%-25%). For both men and women the highest levels of current alcohol use were recorded among persons in the 35-44 and 45-54 year age groups, and the lowest levels in the 15-24 year group. Given the method used (a few questions in an omnibus survey) the reported levels of drinking are likely to underestimate actual levels.

Background characteristics	Total sample (5 574 males and 7 962 females)		es) (2	Current drinkers (2 478 males and 1 321 females)			
	Drink now (Current drinking)		Risky drinking - weekdaysª		Risky drinking - weekendsª		
	Males	Females	Males	Females	Males	Females	
Age							
15-24	23.5	8.5	3.1	1.2	29.3	30.1	
25-34	51.8	15.6	8.4	9.1	37.2	33.4	
35-44	61.1	21.0	7.5	7.4	39.0	32.4	
45-54	60.1	23.5	8.1	14.0	31.7	35.3	
55-64	54.2	20.4	7.6	12.5	27.2	31.8	
65+	45.8	20.3	6.6	7.0	21.0	30.2	
Residence							
Urban	46.7	19.2	6.4	7.1	30.0	29.5	
Non-urban	41.4	13.2	8.3	12.9	38.0	39.3	
Province							
Eastern Cape	47.5	16.2	6.5	9.8	31.4	33.6	
Free State	56.2	24.5	5.6	5.6	27.3	30.0	
Gauteng	49.7	20.6	6.1	4.7	24.0	22.1	
KwaZulu-Natal	39.8	11.5	8.5	14.2	31.7	37.8	
Mpumalanga	45.9	14.2	5.8	8.6	49.4	46.4	
Northern Cape	48.5	23.1	6.2	7.7	38.1	48.7	
Northern Provinc	e 28.3	8.6	11.1	18.1	41.1	45.2	
North West	46.6	17.0	9.1	14.9	42.9	43.0	
Western Cape	43.6	24.2	6.1	5.4	33.4	30.2	
Education							
No education	54.6	22.9	6.9	14.6	36.0	38.6	
Sub A - Std 3	50.7	16.3	12.1	11.3	40.3	44.6	
Std 4 - Std 5	42.0	13.2	10.5	9.5	42.9	44.9	
Std 6 - Std 9	39.6	12.7	4.7	7.6	30.4	32.5	
Std 10	46.7	18.5	6.9	5.9	24.4	18.3	
Higher	57.8	33.4	2.0	1.9	24.0	12.6	
Population group	)						
African	41.5	12.3	7.7	13.3	35.7	42.1	
Afr. Urban	43.6	12.8	6.6	11.3	32.5	40.7	
Afr. Non-urban	38.8	11.8	9.2	15.3	40.2	43.5	
Coloured	44.8	23.2	9.3	4.3	39.2	34.2	
White	71.4	50.5	3.4	2.7	18.7	14.0	
Indian	37.4	9.0	1.5	0.0	6.1	0.0	
Total	44.7	16.9	7	8.8	32.8	32.4	

# Table 1:Percentage of males and females (≥15 years) reporting current use of alcohol, and percentage of<br/>current drinkers engaging in risky drinking

Source: Department of Health's 1998 South African Demographic & Health Survey

a Defined for males as drinking  $\geq$ 5 drinks per day, and for females as drinking  $\geq$ 3 drinks per day

Risky drinking was defined as drinking five or more standard drinks per day for men and three or more drinks per day for women. While communal drinking is often also risky, respondents who reported communal drinking were not classified as 'risky drinkers'. Rates of risky drinking for males and females were very similar and were roughly 4-5 times greater at weekends than on weekdays, with one-third of current drinkers drinking at risky levels over weekends. For both males and females, risky drinking at weekends appears to be highest among persons in the middle categories for age (35-44 years for males and 45-54 years for females), among persons residing in non-urban areas, with a low level of education (Sub A to Standard 5), and Coloureds and Africans. This data should not, however, be interpreted to mean that there is a simple relationship between race and level of risky drinking. Instead it is likely that factors such as poverty and lack of access to recreational and other resources are intervening variables which need to be taken into account. While an analysis of such factors has not been undertaken on this part of the SADHS dataset, analysis of data on use of drugs and crime did indeed show that race, monthly income and patterns of drug use were highly correlated (see below).

Weekend risky drinking by males appears to be highest in Mpumalanga, whereas for females the highest levels appear to be in the Northern Cape (Figure 1). The provincial differences may partly reflect inequities in terms of the distribution of treatment and rehabilitation services as well as prevention/health promotion activities. According to the Department of Welfare's 1997 Resource directory on services and facilities for the prevention and treatment of substance abuse<sup>2</sup> there are no detoxification facilities or inpatient treatment centres listed in the Northern Cape. In Mpumalanga one detoxification facility and two inpatient facilities are listed. Seven percent of pregnant women (13/190) acknowledged current drinking.



Figure1: % of weekend risky drinking (current drinkers) - 1998 SADHS

No recent, national statistics are available on drug use in South Africa, nor is information available on national trends in alcohol and drug use. The most up-to-date information available is from the South African Community Epidemiology Network on Drug Use (SACENDU) Project, an AOD sentinel surveillance system operational in Cape Town, Durban, Port Elizabeth (PE) and Gauteng (Johannesburg/Pretoria). Mpumalanga was added in 2000. The system, initiated by the MRC and the University of Durban-Westville in 1996 monitors trends in AOD use and associated consequences on a six-monthly basis using multi-source information. According to the SACENDU Phase 7 (July 1996 to December 1999) findings, alcohol is still the dominant substance of abuse across sites and dominates admissions to specialist substance abuse treatment facilities, with between 50% (Cape Town) and 65% (Durban) of all patients admitted for treatment having alcohol as their primary substance of abuse.<sup>3</sup> Since 1996 the proportion of alcohol-related treatment admissions has shown a steady decline in Cape Town and Gauteng relative to other substances. Although treatment demand does not equate with prevalence and is dependent on factors such as admissions policies, the SACENDU data supports the view that drug use is increasing in South Africa and that there is a move towards a greater variety of drugs of abuse.

Treatment demand for cannabis increased in three of the four sites, whereas for Mandrax (methaqualone and antihistamine) alone or in combination ('white-pipes'), treatment demand

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was stable or declined. Between 50% (Gauteng) and 78% (PE) of patients attending specialist treatment centres had cannabis and/or Mandrax as their primary drug of abuse. Treatment demand for heroin has remained fairly stable. Heroin use is mostly concentrated in Cape Town and Gauteng where 7% and 8% respectively of patients in specialist treatment centres have heroin as their primary drug of abuse. The abuse of over-the-counter and prescription medicines (mainly benzodiazepines and pain killers) continues to be an issue across sites especially in PE. However, demand for treatment where these substances are the primary drug of abuse was either stable or showed a slight decrease across the sites. Treatment demand for cocaine powder/crack cocaine has increased in Durban (26% of patients have cocaine or crack as their primary drug of abuse), but remains stable in the other sites (ranging from 3% in PE to 28% in Gauteng). Overall, the level of drug use as well as the range of drugs used is higher in Cape Town and Gauteng compared with PE and Durban. Polysubstance abuse is also common, especially alcohol in combination with most other drugs, cannabis and Mandrax, cocaine and heroin, and Ecstasy, LSD and Speed.<sup>3</sup>

The statistics presented above, however, do not give a complete picture of substance use among young people. More localised research<sup>4</sup> found that 36% of male and 19% of female grade 11 (Standard 9) students in state-funded schools in Cape Town in 1997 reported binge drinking during the two weeks prior to the study. This was 4% to 7% higher than in a similar study conducted in 1990. Four percent of female students reported ever having used cannabis compared to 16% for males, almost doubling between 1990 and 1997. Club drugs appear to be entrenched in youth culture, particularly middle to upper class Whites. A 1998/99 RaveSafe study among 228 young people attending rave parties in Durban and Johannesburg reported lifetime prevalence rates ('use ever') of 77% for Ecstasy, 70% for LSD and 60% for poppers (amyl nitrate).<sup>5</sup> With regard to children of younger ages, Visser and Moleko<sup>6</sup> found that 14% of 460 grade 6 and 7 learners from an historically disadvantaged area in Pretoria indicated that in the 14 days preceding the study they drank alcohol to get drunk. Nine percent had used over-the-counter-medicines, 4% had smoked cannabis and 3% had sniffed solvents in the preceding 30 days. Solvent use is reportedly much higher among street children.<sup>7</sup>

Currently, in developing countries alcohol-related problems commonly result in trauma, violence, organ system damage, various cancers, unsafe sexual practices, injuries to the brain of the developing foetus and general poor nutritional status of families with a heavy drinking parent/parents. Many of these problems are associated with intoxication episodes.<sup>8</sup> Research on the heath consequences of AODs in South Africa has focused mostly on alcohol, and on fatal and non-fatal injures and foetal alcohol syndrome (FAS). A study of alcohol-related mortality in 10 mortuaries spread throughout five of South Africa's nine provinces was conducted in 1999 as part of the National Non-Natural Mortality Surveillance System. Data are currently available on 4 484 autopsies, 37% of the 12 269 autopsies registered in the 10 mortuaries.<sup>9</sup> Over 50% of cases were found to have positive blood alcohol concentration (BAC) levels, with 29% of cases having BAC levels at or over 0.08g/100ml. Almost 50% of cases involving death due to homicide and traffic collisions had BACs of 0.08g/100ml. Just over one quarter of deaths resulting from suicide or other 'accidents' had blood alcohol levels of 0.08g/100ml.

With regard to non-fatal injuries, a study conducted in state hospitals in Cape Town, Durban, Umtata, and PE in 1999 found that 61% of patients admitted to trauma units in these cities were alcohol positive with a mean alcohol level of 0.12g/100 ml. The study showed that 74% of violence cases were alcohol positive, 54% of traffic collisions and 42% of trauma

from other 'accidents'. Across sites nearly 40% of trauma patients were positive for at least one drug (29% cannabis, 11% Mandrax, 5% cocaine, 5% opiates, 0.3% methamphetamine and 0.2% amphetamine).<sup>10</sup> Research undertaken by the MRC on the relationship between BAC in injured drivers and pedestrians clearly demonstrates that the amount of alcohol consumed is proportional to injury severity.<sup>11</sup>

Little research has been undertaken in South Africa to directly assess the burden experienced by the health care system as a result of AOD use, but one in four general hospital admissions in South Africa are estimated to be directly or indirectly related to alcohol use.<sup>12</sup> Proportions of AOD–related presentations are lower in primary health care (PHC) settings, with one study indicating that 8% of male and 3% of female patients reported experiencing health problems because of alcohol or drug use.<sup>13</sup> An enormous economic and social burden associated with alcohol use in South Africa occurs as a result of Foetal Alcohol Syndrome (FAS). In 1997, 992 children in their first year of school were screened in the rural community of Wellington outside Cape Town. A very high rate of FAS was found in the sample with age-specific rates for the entire community ranging from 39.2 to 42.9 per 1 000.<sup>14</sup> These rates are 18 to 141 times greater than prevalence estimates for the USA. FAS in South Africa is in large part thoght to occur as a result of the 'dop' (or 'tot') system and its legacy.<sup>15</sup>

#### The 'dop' system in South Africa

Under the 'dop' system, farm workers were paid part of their wages in the form of alcohol (typically wine). The practice dates back to colonial times and was aimed at inducing indigenous peoples in the Cape to work for their masters. The practice played an important role in maintaining control over the labour force and it became indispensable to labour and social relations on farms.<sup>15</sup> Alcohol was usually supplied at the end of the working day or at the end of the week in later times.

The 'dop' system is no longer legal, but wine is still made available to workers on many farms – either directly or purchased on credit by employees.<sup>15</sup> The legacy of the dop system continues and it is likely to be a major contributing factor behind alcohol-related problems such as trauma, interpersonal violence, occupational injuries and social disruption, especially in provinces such as the Western and Northern Cape.

Substance abuse not only has a negative impact on the health sector, but also impacts negatively on the family and society in terms of crime and negative effects on economic and social development. In a study of women abused by their spouses in the previous Cape Province, 69% identified alcohol/drug abuse as the main cause of conflict leading to abuse.<sup>16</sup> In terms of the link between drugs and crime, research conducted by the MRC and the Institute for Security Studies in Cape Town, Durban and Johannesburg in February/March 2000 suggests a very strong link between drug use and various crimes with, for example, over 70% of persons arrested for either theft of motor vehicles or housebreaking testing positive for drugs (excluding alcohol). Up to a third of arrestees who indicated that they were under the influence of substances at the time the crime took place stated that they had used substances to assist them in committing the offense.<sup>17</sup> This research also highlights major differences between race groups in terms of levels of drug use and the different kinds of substances of abuse. For example, a much higher proportion of Coloured arrestees (61%) tested positive for drugs as compared to African arrestees (38%). The drug/race interaction

was, however, found to be linked to income. White arrestees (who were most likely to be in the highest income group), for example, were most likely to test positive for drugs like cocaine (29% as compared to 5% for Africans). Patterns of drug use in South Africa are still highly segmented in race terms with Whites in general consuming a far broader range of drugs than other groups. These differences are likely to be due to different marketing practices in different residential suburbs (which are still to a large extent racially segregated) and differences in disposable income.

Less data is available on the impact of substance use on the economy of the country and social development in general, but it is likely to be considerable. In economic terms, based on international experience (Australia, Canada and the USA), the economic costs associated with alcohol and drug use could be in the region of 1.3% and 2.6% of Gross Domestic Product (GDP).<sup>18</sup> Based on the Canadian experience, direct health care costs associated with alcohol and illicit drugs could amount to about 16% of the total economic cost.

# Selected key policy initiatives relating to alcohol and drug abuse

Alcohol and drug policy initiatives are not only the domain of the health sector. In fact, to date the bulk of drug policy development and implementation has been undertaken by the Department of Justice.<sup>19</sup> Since 1994 however, the role of the Department of Health in addressing substance abuse issues has been steadily increasing. Below is a chronological listing of some of the most prominent national policy initiatives promoted by the Department of Health since 1994:

- Report of the Department of Health's Mental Health & Substance Abuse Committee (1995).<sup>20</sup> The Committee recommended immediate involvement and full participation of the Department of Health in all aspects of prevention, treatment and rehabilitation of substance abuse. It also recommended the establishment of an intersectoral structure to facilitate co-operation between health and welfare sectors in the substance abuse area and the re-establishment of the Drug Advisory Board.
- The Department of Health's report 'Towards a national health system' (1995)<sup>21</sup> detailed the guiding principles for policy formulation in the mental health and substance abuse area. The national Directorate of Mental Health & Substance Abuse is responsible for co-ordinating the restructuring of mental health services that includes the development of standards of care and the integration of mental health services into PHC services. Epidemiological research and the continuous monitoring and evaluation of mental health services is also the responsibility of the Directorate. Specific programmes addressing substance abuse are to be promoted and encouraged. Functions set out for the provincial health authorities include facilitating intersectoral co-ordination, and ensuring the comprehensive integration of mental health and substance abuse services. District health authorities are tasked with planning and providing substance abuse prevention, promotion and rehabilitative services at district and community level, training of health facility staff, and co-ordinating health education programmes in communities.
- The Department of Welfare's National Drug Master Plan (1999).<sup>22</sup> This plan was formulated by a committee on which the Department of Health served. It sets forth a broad strategy for integrating the efforts of various government departments and civil society in addressing substance abuse. The Plan identifies the following as priorities: crime, youth, community health and welfare, research and information dissemination, international involvement, and communication. A Central Drug Authority (CDA)

comprising both governmental appointees and experts from the non-governmental sector was established in 2000. It is expected that during its first year of operation, priority will be given to several activities, including establishing a Secretariat, getting key government departments to set up mini-drug master plans, establishing substance abuse fora in the provinces, initiating a mass communication initiative, and setting up a national substance abuse clearinghouse. Towards the middle of 2001 the CDA will have to report back to Parliament on progress achieved.

#### Draft Health Sector Strategic Framework: 1999-2004 (1999)<sup>23</sup>

The following target areas are listed:

- i Decrease alcohol/drug abuse by 10% by 2004. Activities listed include implementing the National Drug Master Plan and developing decentralised treatment at general hospitals and rehabilitation programmes and campaigns.
- ii Reduce the incidence of FAS by 50%. This is to be achieved through implementing community-based programmes involving education and assistance to 'problem drinkers'.
- iii 50% of all health facilities will have nurses trained in mental health and substance abuse. This is to be realised by integrating mental health and other health activities at all levels.
- A Framework for the Development of Substance Abuse Policy Guidelines (2000)<sup>24</sup>

This draft document set out the Sub-directorate's aims as being:

- i To develop policy guidelines for the prevention and management of substance abuse
- ii To raise awareness of substance abuse within the context of PHC
- iii To educate and train PHC practitioners to fully integrate substance abuse prevention/management within the PHC domain; and
- iv To develop community-based prevention/management models to reinforce positive behaviours that promote healthy lifestyles. The document also spells out specific objectives relating to these aims and some strategies for their achievement.

Policy initiatives of other government departments which have had or which could have an impact on substance abuse include the following:

<u>The Department of Transport's Arrive Alive Campaign</u>

The ARRIVE ALIVE Road Safety Campaign was initiated as a short-term initiative by the Department of Transport in 1997 to reduce the carnage on South Africa's roads. There have been four campaigns to date: October 1997 to January 1998, February 1998 to April 1998, October 1998 to April 1999, and May 1999 to April 2000. The core targets of this initiative are speed and alcohol. ARRIVE ALIVE 1 brought down the number of crashes by 7.7% and fatalities by 9.3% (in real terms saving 279 lives). The cost-benefit ratio was 4:1 based on an investment of R50 million, most of which came from the Road Accident Fund. Comparison studies found a 2%-4% decrease in drinking rates for the months targeted.<sup>25</sup> In 2000 the government promulgated legislation passed previously to reduce the amount of alcohol permissible in the blood of ordinary drivers to 0.05 gms/100ml and to 0.02 gms/100 ml for professional drivers. The value of the new policy, however, will depend not only on having new regulations on the statute books, but more importantly on their rigorous enforcement. Increased random breath testing will be essential, as will rapid, consistent processing of drunk driving cases and the application of appropriate sanctions to offenders.

The Department of Finance's excise tax on alcohol products

Another strategy used by the government to control the use of alcohol and indirectly raise revenue to meet some of the social costs associated with alcohol use is that of excise taxes on alcohol products. Currently the excise tax on beer comprises approximately 34% of the retail price of beer, 20% of the retail price of wine, and 28% of the retail price of spirits.<sup>26</sup> The government has, however, been criticised for allowing the excise taxes on most alcohol products to lag considerably behind the inflation rate and thereby missing an opportunity to reduce alcohol-related problems while at the same time increasing revenue.<sup>27</sup>

<u>The provincial Departments of Economic Affairs' policies regarding liquor outlets</u>

In 1999 there was a Constitutional Court ruling that certain aspects of the national Department of Trade & Industry's 1998 Liquor Bill<sup>28</sup> were deemed unconstitutional in that they related to provincial powers. In particular, those aspects of the Bill pertaining to liquor outlet regulations were deemed to be a provincial competency. As of the end of 2000 the only province to have drafted a green paper putting forward policy on liquor outlet regulations has been the Western Cape. The Western Cape policy is expected to make getting a liquor license easier in order to draw many of the unlicensed operators into the regulated market while at the same time offering increased community protections. Such protections are likely to include increased access to information, increased opportunities for community input at the license application stage, ongoing monitoring and annual reports to the provincial legislature, a Code of Conduct for liquor retailers, a provincial inspectorate, and a range of provisions aimed at strengthening the State's ability to take action swiftly against offenders.

With regard to other drugs the major impetus has been in the supply reduction area (reducing the supply of drugs into South Africa and the trade in drugs within the country). Most initiatives have been undertaken by the Departments of Justice and Finance.<sup>19</sup>

- The International Co-operation in Criminal Matters Act of 1996. This Act provides formal procedures to be used in the obtaining and providing of information in the course of a criminal investigation that spans international borders as well as the procedures for the repatriation of the proceeds of crime.
- <u>The Proceeds of Crime Act of 1996</u>. This piece of legislation criminalises money laundering in general, and provides procedures for the restraining and confiscation of the proceeds of crime.
- The Money Laundering Control Bill of 1997. This Bill makes certain bodies and institutions 'accountable institutions'. Bodies and institutions which receive money on behalf of clients in the normal course of business will be required to identify them and to keep proper records of business transactions with them. Certain transactions which have the potential of being used for money laundering purposes will have to be reported to a central authority. This bill, however, has yet to be enacted.
- The Prevention of Organised Crime Act of 1998. This Act makes provision for drastic new powers for police and prosecutors including the forfeiture of criminals' assets on the grounds of 'a balance of probabilities' rather than 'beyond a reasonable doubt'. The focus here is on civil rather than criminal prosecution. The legislation allows the state

to confiscate assets gained through illegal means regardless of whether the suspects are convicted or not. February 2000 saw the first deposit of monies confiscated from alleged drug dealers into the Criminal Assets Recovery Fund. The money is to be used to support law enforcement initiatives. The legislation initially ran into difficulty in the courts and several forfeitures of property belonging to alleged drug lords by the Scorpions' Asset Forfeiture Unit were overturned by the courts, resulting in amendments to the legislation.

In terms of regional co-operation, South Africa is also a signatory to the Protocol on Combating Illicit Drug Trafficking in the Southern African Development Community (SADC) Region. This was ratified by Parliament in July 1998. The Protocol provides a policy framework that allows the SADC region to co-operate to ensure that it does not become a producer, consumer, exporter and distributor of illicit drugs or a conduit for illicit drugs destined for international markets. South Africa is also an active member of the Southern African Regional Police Chiefs Co-operation Organisation (SARPCCO). While the SADC Regional Drug Control Programme<sup>29</sup> focuses mainly on drug supply reduction, Article 7 of the SADC Protocol gives special attention to demand reduction by requiring member states to 'develop, implement and evaluate policies and strategies aimed at establishing a comprehensive and integrated demand reduction programme that will include the development of community prevention, public and school education and research activities so as to address the underlying causes of drug abuse'.<sup>50</sup>

# Implementation of policies and general critique of the department of health's strategic plan

At a national level the Department of Health has been active in seeking to implement many of the broad strategies outlined in the first part of the previous section. Activities given priority have included:

- The restructuring of the Mental Health Directorate to include substance abuse (also at provincial and regional levels)
- Supporting the re-establishment of the Drug Advisory Board in 1995 and the ongoing functioning of the South African Alliance for the Prevention of Substance Abuse (SAAPSA). One of the intended outcomes of SAAPSA initiatives is the development and evaluation of demonstration projects designed to prevent substance abuse among disadvantaged youth.
- Epidemiological research on AOD use (via the SACENDU Project, the 1998 SADHS, and the development of a national injury surveillance system), and research into the toxic effects of home-brew alcohol, and alcohol advertising
- National guidelines to support the integration of substance abuse management into PHC are under development. To date effort has gone into collecting and assessing existing manuals.
- The development and evaluation of a life skills programme aimed at reducing substance abuse among school going youth in grades 8-12. This programme is designed to be included in HIV/AIDS education initiatives and will be implemented in schools throughout the country.
- Training PHC workers in all provinces to work with women of childbearing age to reduce the prevalence of FAS. Health promotion material (videos and pamphlets) have

been developed. The main focus of activity to date has been in the Western Cape and Gauteng, but further initiatives are planned for the remaining provinces, starting with the Eastern and Northern Cape.

- The establishment of a committee in 1998 to look into alcohol advertising restrictions and the need for counter-advertising and warning labels.
- Holding workshops during 2000 in each of the 9 provinces to refine the Department of Health's Substance Abuse Policy Guidelines

The Department of Health<sup>23</sup> is to be commended for listing specific, measurable targets to be achieved by 2004, although these require substantial refinement and expansion. The Department of Health has, however, failed to forge a link between substance use and priority areas such as TB, teenage pregnancy, and violence against women and children. It is of concern that more than five years after the establishment of a Mental Health and Substance Abuse Directorate, no substance abuse policy guidelines with specific objectives, strategies for implementation and indicators for assessing progress have been finalised. The Alcohol Advertising Committee established by the Directorate in 1998 has been put on hold due to a decision to first tackle tobacco advertising. However, during 2000 the Department awarded a tender to the South African National Council on Alcoholism and Drug Dependence (SANCA) to summarise local and international information on the impact of advertising of alcoholic beverages (including sponsorships of cultural events and electronic and print media). It is expected that the Directorate will resurrect the Alcohol Advertising Committee at the beginning of 2001. The Directorate, has however, been notably silent in responding to the furore around the sponsorship of the Springbok rugby team. This occurred as a result of the Castle Larger logo being branded in large letters on the jerseys of players selected to represent the national team. Concern has been expressed in various quarters to this form of advertising by among others Advocate Frank Kahn (the Chair of the CDA), the MRC, UCT Public Health, SANCA, past Springbok rugby players, and the public. It is expected that the CDA will work together with the Department of Health's Alcohol Advertising Committee to draft legislation in 2001 to end such practices. The main argument against allowing this form of advertising is that it may influence young people to start drinking. It may also increase the number of drinking occasions people have. It may also work against persons who wish to stop or cut down on their drinking and create a positive societal attitude towards alcohol which will make it difficult for persons working towards alcohol policy reform.<sup>31</sup>

Progress has also been limited in other areas deemed as priority by the Directorate, viz. research into unhealthy forms of home-brew alcohol and the development of treatment protocols for staff at PHC and other levels. The Department has also not provided leadership to other key government departments (e.g. Finance and Safety & Security) in ensuring that their policies adequately address substance abuse issues. The Department of Finance has, however, indicated its intention to consider increasing the excise tax on alcohol products and held one meeting in 2000 which was attended by the Health Promotion Directorate of the national Department of Health.

At a provincial and local level the pace has been slower than at national level due to the delay in establishing mental health and substance abuse sub-directorates. Substance abuse services at a provincial level have in many cases deteriorated since 1994. The Western Cape, for example, has seen the closure of an adolescent substance abuse unit at Lentegeur Hospital and the Avalon alcohol treatment facility without any concomitant improvement

in services at a PHC level.

It is only more recently that steps have been taken to formulate and implement a coherent provincial substance abuse policy. For instance in 1999 the Western Cape Department of Health and Social Services prepared a draft strategy to implement the National Drug Master Plan and ran four workshops in different parts of the province to solicit feedback. Both the Western Cape and Gauteng Provinces have prepared protocols for alcohol detoxification at regional hospitals and the former is in the process of drafting a similar protocol for other substances. The Eastern Cape Department of Health has initiated a demonstration project to address the abuse of alcohol and other drug use among PHC clinic attendees.

# Recommendations

There are several things that the Department of Health needs to do to move the process forward. Further details are provided by Parry and Bennetts.<sup>11, 32, 33, 34</sup> In particular, policy formulation at both national and provincial levels must be completed as soon as possible. Serous consideration should be given to drawing up an action plan specifically to address alcohol abuse.

In the short term, consideration should be given to:

- Increasing access to affordable and effective treatment and rehabilitation, including access to detoxification services in public hospitals and brief intervention therapy through PHC services;
- Instituting work place interventions to address substance abuse, including work place policies, setting up employee education programmes, and treatment referrals;
- Outlawing the advertising of alcoholic beverages or at a minimum placing restrictions on the types of beverages to be advertised, their location, and times of advertising;
- Making available a range of interventions including those designed to reduce the impact of injecting drug use, such as needle exchange programmes and oral methadone maintenance for heroin addicts – in a way that does not condone use.

In the medium term:

- Support should be provided to community structures to address substance abuse-related problems including out-patient programmes for chronic substance abusers;
- Education should be aimed at high risk groups (e.g. teenagers, pregnant women, and persons in certain occupations) or persons who work with high risk groups (e.g. the police and servers at liquor outlets);
- Public education programmes aimed at the community at large are required, both active measures (e.g. mass media and social marketing campaigns – including counteradvertising relating to alcohol) and passive measures (e.g. warning labels on alcohol containers).

The Department of Health must work hard to ensure substance abuse issues are on the agenda of other government bodies responsible for national planning and policy. This will include working with:

- the Department of Finance to increase excise taxes on products such as beer and brandy;
- the provincial departments of Economic Affairs to implement and enforce strategies for licensing liquor outlets which are sensitive to public health concerns (including

minimum drinking age and restrictions on hours of sale);

- the Departments of Transport, Safety & Security and Justice to ensure that laws related to driving under the influence of AODs are adequately enforced and offenders swiftly punished;
- the Department of Correctional Services to ensure improved treatment and rehabilitation of prisoners; and
- the Department of Education to ensure that schools have adequate policies on managing substance-related incidents and are working towards drug-free environments.

Priority should be given to establishing a national substance abuse clearinghouse to collect, collate and disseminate local and international information useful for informing policy and practice around substance abuse. Support must also be given to substance abuse surveillance and the evaluation of interventions.<sup>35</sup> Steps must be taken to facilitate the translation of such policies into action. In particular the Department of Health needs to ensure that there is adequate funding for key policy initiatives, that it has skilled and motivated staff to drive the process at national and provincial levels, and that partnerships with key stakeholders in other departments and civil society are forged.

# Conclusion

The time is now ripe for the Department of Health to take a more active role in co-ordinating national efforts to reduce the abuse of substances. Valuable lessons have been learned from formulating and implementing tobacco policy, and the experience gained can profitably be used in the alcohol and drug arena. In a recent speech delivered on her behalf at the 9<sup>th</sup> International Congress on the Treatment of Addictive Behaviours held in Somerset West in September 2000, the Minister of Health, Dr Manto Tshabalala-Msimang,<sup>36</sup> indicated that substance abuse was related to most other national priorities. She urged participants not to focus too much on whether substance abuse is a cause or an effect of various problems but rather to focus their energies on addressing substance abuse. She indicated substance abuse was an intersectoral problem and that there was a need to deal not only with addiction, but also on other issues such as poverty alleviation and job creation.

Phase 1 of policy drafting in the substance abuse area must be brought to completion and the pace of policy implementation must be increased substantially. It is essential that all relevant government departments, including the Department of Finance, give their full support to the CDA (and its Secretariat) as it seeks to implement the National Drug Master Plan. It is encouraging that the Department of Health and other departments are beginning to work more closely with the Department of Social Development in this regard. However, without more tangible financial support from the Department of Finance there will be very real limits on what can be achieved. Civil society is already carrying a substantial burden in terms of providing treatment services for substance abusers and in designing and implementing prevention services. There remains a fair amount of good will to work with the government (nationally and provincially) in addressing substance abuse, but more state resources must be expended to address a problem which could be costing the country about 2% of our GDP – R12 billion per year, or R270.00 for every man, woman and child.<sup>37</sup>



Disasters (events usually characterised by negative human impact and exceptional demands for intervention) are inevitable. Impact can be substantially reduced by adequate preparation, early warning, and swift, decisive responses. Disaster Management encompasses all aspects of planning for and responding to disasters. It applies to management of both risks and consequences of disasters. Disasters need to be declared to secure the release of government resources for intervention.

Disasters are not entirely unpredictable. Floods occur in valleys, droughts occur in areas with unstable and low rainfall, and oil spills occur in shipping lanes. This predictability provides opportunities to prevent and to mitigate the impact of disasters.

Governments are key players in such prevention and mitigation. They exercise this role through legislation, through resource allocation and through rational planning and sustainable development. The capacity of civil society and NGO's, particularly at local level, play a significant role in mitigation of impact.

In South Africa, a White Paper on Disaster Management has been published. Its strength lies in a thoroughly modern and developmental approach with a focus on risk reduction, creation of permanent management structures, and delineation of accountability and responsibility. However, there is a lack of recognition of what is feasible. The White Paper makes incorrect assumptions around capacity of local level government and local civic organisations. Therefore the draft bill points to the ideal but fails to accommodate the reality of limited peripheral capacity, particularly in rural areas which are most vulnerable.

The local shortcomings were all-too-apparent in the 2000 floods in South Africa. Lessons were learnt and recommendations made which highlight the mismatch between policy and operational capacity and which offer suggestions for more appropriate and rapid responses during future disasters.

Steven Donohue Senior Specialist, Community Health, Northern Province/MEDUNSA

> Thulani Masilela Health Systems Trust

> John Gear Health Systems Trust



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The role of the media appears critical in mobilising public concern and response, and in holding the relevant authorities accountable. The recent oil spill off the Western Cape and its impact on penguins generated more media attention than the flood devastation in the Northern Province. Media interest during the 2000 floods focused more on Mozambique and the Kruger National Park and less on the many isolated and devastated villages in the extreme north east of the country, thereby downplaying their plight.

Future disasters are inevitable. The impact can be significantly reduced by development policies and strategies that target the most vulnerable, provided that interventions are co-ordinated, and sustained beyond the immediate emergency phase. South Africa has the right policy, but still lacks the peripheral capacity to deliver on that policy. These capacity shortcomings must be systematically and urgently addressed.

# Introduction

The year 2000 saw a series of disasters in South Africa. They arose from both natural and human causes, and the responses stretched community and government capacity to the limit. Huge floods devastated the Northern Province, Mpumalanga and neighbouring countries; massive fires and an oil spill threatened Cape Town; and separate floods hit rural communities in KwaZulu-Natal and the Eastern Cape.

By coincidence, the government White Paper on Disaster Management<sup>1</sup> led to the release of a draft bill this year. They set out an advanced policy framework for dealing with such events in the future. How do they measure up to the need to plan for and mitigate disasters in South Africa?

Disasters are inevitable. We do not always know when they will occur. But their worst effects can be partially or completely prevented by adequate preparation, early warning, and swift, decisive responses. This chapter will outline the basic theory of disaster management; examine some recent disasters from a health perspective, and describe the lessons learnt for dealing with adverse events in the future.

# Disaster theory

A *disaster* is "a natural or human-caused event, occurring with or without warning, causing or threatening death, injury or disease, damage to property, infrastructure or the environment, which exceeds the ability of the affected society to cope using only its own resources". Disasters can be *natural* (arising in the environment and outside our control) or *human-caused* (from identifiable human actions, directly or indirectly, deliberate or not). Often disasters such as famine or drought have interacting human and natural causes.<sup>2</sup>

Sudden disasters can lead to *emergency:* an unforeseen event that calls for immediate measures to minimise its adverse consequences. *Slow onset disasters* result when the ability of people to support themselves, and sustain their livelihoods, slowly diminishes over time. Such disasters may also be aggravated by ecological, social, economic and political conditions.

Which events qualify as 'disasters' is a social issue. Is HIV or TB a disaster? Poverty, taxi violence, global warming? Oil spills and threatened penguins? While all these problems are serious, we should remember that a disaster is an exceptional event. It should have some negative human impact and reach a scale where abnormal interventions are required. Disasters need to be *declared* in a legal sense to release government resources. In general,

smaller, insidious, and environmental events, affecting poor and remote communities, are less likely to be officially recognised as disasters.

It is not true that disasters are entirely unpredictable. Floods occur in valleys and flood plains; fires occur after the accumulation of dry material; wars after the accumulation of weapons. Earthquakes and cyclones occur mostly in places with a known history of such events. Mudslides may occur in uninhabited areas; but when there are homes in their path they can become disasters. *Hazards* are threats to life, well-being, property and/or the environment. Hazards result from extreme natural processes, technological developments, and various forms of social exclusion. They are risks that can be described in advance. *Vulnerability* results from the interaction of a community, its environment and those hazards. Storms of equal magnitude might cause minimal disruption in the USA, but kill thousands in Bangladesh - people in Bangladesh are more vulnerable to storms.

*Disaster management* encompasses all aspects of planning for and responding to disasters, including hazard analysis, vulnerability reduction (preparedness), prevention, mitigation, response, recovery and rehabilitation. It may refer to the management of both the risks and consequences of disasters. *Contingency planning* relates to events, which may or may not occur, in which objectives and scenarios are agreed, managerial and technical actions defined, and potential responses put in place to prevent, or respond to an emergency situation.

*Mitigation* is action to reduce the consequences of a disaster. While it may not be possible to prevent all disasters, the effects can be modified or reduced if appropriate steps are taken. Responses can be divided into early and late phases. Early responses are *rescue* and *relief*; later responses are *rehabilitation* and *reconstruction*. The first people to respond to any disaster are communities themselves, not governments. Their resourcefulness and resilience is the key to disaster mitigation. Local people are also the main drivers of reconstruction and continued development. In developing countries, longer-term effects of a disaster on local economies, social conflict, nutrition and disease patterns can cause far more deaths than the event itself.

Many international disasters have been described in terms of the ideal management, and what actually happened. Characteristically, even quite predictable and regular events have not been planned for; communities have been far more vulnerable than they could have been; and authorities have been slow to recognise and declare disasters. Responses have ranged from superb to downright incompetent or absent; relief has often been too little, too late, misdirected, or inappropriate. Often disaster responses are clouded in apathy and confusion; there are often severe deficiencies in communication and information systems. The usual *distortions* from a rational response are caused by political and media factors, corruption, inadequate resources, and various local and foreign agencies working at cross-purposes. Disaster responses often focus on short-term, high profile rescue operations and neglect the bigger, long-term issues.

Finally, several authors have described the interconnections between disaster management and *sustainable development*. While good disaster planning minimises interruptions to development, poor responses can divert scarce resources, increase dependency, and actually increase vulnerability to further disasters.

Post-mortems, enquiries and *evaluations* are an essential part of the cycle. While it is easy to criticise after the event, they are also opportunities to do better the next time. Let's examine our own and some international disasters to learn a few of those lessons.
#### Case study: Maharashtra earthquake 1993

In September 1993 an earthquake struck the state of Maharashtra in India. Measuring 6.4 on the Richter scale, it killed 7 928, destroyed about 27 000 houses and extensively damaged roads and water systems. The state government, with outside help from the World Bank, the Asian Development Bank, the Department for International Development (DfID) and the national government devised and implemented a disaster management plan. It incorporated emergency and long-term strategies, with initial financial guarantees secured within 2 weeks of the disaster. Over the subsequent five years 28 000 new homes were built, 200 000 houses were strengthened, 157 km of road were constructed and numerous dams and other engineering projects undertaken, each aimed at economic development while reducing vulnerability and risk. Quality assurance was a critical dimension of the plan, protecting resources and ensuring efficiency. This intervention has become a model of disaster management and has been exceptionally well documented, offering a template for others to follow. Its strength lies in the systematic approach, co-ordination between local and international groups, tight financial controls, government commitment, and the balance achieved between the short and long-term interventions. This case study will be the point of reference when we reflect on South Africa's responses to recent disasters.

Disaster management is a recognised dimension of government responsibility. Many have **permanent structures**, at national, regional and local level, set up specifically to manage disasters due to natural or other causes. Maharashtra had state, provincial and local structures active in the management of the 1993 earthquake.

#### Southern Africa floods, 2000

Between February and March 2000 a rare series of tropical storms and cyclones from the Indian Ocean hit Southern Africa. These caused several waves of flooding in Madagascar, southern Mozambique and Zimbabwe, Botswana, Swaziland, Mpumalanga and the Northern Province.

Low-lying districts in Mozambique were submerged for weeks under metres of water, which swept away virtually all infrastructure. Hundreds drowned, and large populations were displaced and destitute. Outbreaks of malaria, dysentery and cholera added to the mortality. A major international rescue and relief operation was mounted, and reconstruction efforts are still in progress. Development in this extremely poor and indebted country has been set back by several years.

In South Africa, flash floods swept away dozens of roads and bridges, destroying crops, domestic animals and homes across much of the North-East Lowveld. Worst hit were poor rural communities in the former homelands of Venda and Gazankulu. Water and sewerage systems were destroyed, and at least a million people were left without clean water. Major roads such as the N1 and N4, and access to the Kruger Park were cut. The Limpopo river flooded to levels not seen for years. About 100 deaths were directly attributable to drowning, collapsed buildings and accidents.

The scale of the disaster stepped up with each new storm and flood wave. Temporary refuge places and repairs to roads, bridges and buildings were washed out soon afterward; attempts to replant destroyed crops met the same fate. Only toward the middle of March was the full extent of the disaster apparent.

In the Northern Province, Joint Operations Centres at Pietersburg and in each region were set up, led by the security forces and involving several government departments.<sup>3</sup> Initial responses were simply to rescue stranded people, distribute food and clothing parcels, and repair essential infrastructure. Regional Disaster Management Units under various local governments were responsible for assessment and aid distribution. The Health and Welfare Department set up its own Operations Centre to deal with concerns of disease outbreaks, to restore health and welfare services, and focus on planning for longer – term problems such as malnutrition.<sup>4</sup>

#### Cape Town fires, 2000

In January 2000, the worst fires in many years spread through the peninsula mountains south of Cape Town.<sup>5</sup> There were fire warnings prior to the outbreak, fires were sporadic on farms in the Boland and hot dry winds were forecast. Despite this, when major fires first broke out, the allocation of resources was limited, giving the fires a chance to get established. Fire fighters struggled to cope and assistance had to be sought from the air force and fire fighters from as far afield as Gauteng. By then the fires were totally out of control.

Several homes were destroyed and many others were evacuated. It is not clear why fires in the south were never declared a disaster, as outside assistance had to be sought. Commentators argued that a better disaster plan, with a greater emphasis on prevention and containment, would have prevented the eventually very costly intervention that failed to prevent enormous damage.

#### Cape Town oil spill, 2000

On 23 June the Panamanian oil carrier 'Treasure' sank and broke open near Cape Town harbour. An opportunity to tow the distressed vessel into deeper waters had been missed. The oil slick threatened Robben and Dassen Islands, home to the majority of the world's rare African Penguins. Within hours of the event, a massive penguin cleaning and rescue operation was mounted. Resources from the province, the military, animal welfare organisations and community volunteers were mobilised. The rescue received massive international publicity and donations. The operation was a great success with only about 10% mortality of oiled birds. Again, an official disaster was not declared.

#### White Paper on Disaster Management

Disaster Management is typically divided into an emergency rescue and subsequent rehabilitation phase. This approach is too simplistic and indeed is one reason why we are so susceptible to recurrent disasters. There is now a more comprehensive approach that is intended to address the more complex issues of risk, vulnerability and prevention in addition to ensuring capacity to respond to a given disaster. South Africa's White Paper admirably incorporates this new approach.

In the White Paper, the critical issues of purpose, policy frameworks, organisational structure, and financing are comprehensively addressed. Particularly strong points in the White Paper relate to the incorporation of modern principles of disaster management, particularly the link to development and reduction of vulnerability of communities, an emphasis on prevention and mitigation and clear delineation of accountability and responsibility. Potential weaknesses relate to what is currently a pervasive problem in South Africa: the gap between progressive legislation and current capacity to deliver on and implement that legislation. A problem linked to capacity is the relatively complex bureaucracy envisaged.

Each of the recent disasters can be examined in the light of the White Paper policies. How well was the problem managed? Would the new Disaster Management structures and processes have helped?

#### Planning and Recognition

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There is little evidence that a comprehensive plan existed to deal with any of the floods, fires or environmental disasters seen this year. None of them were impossible to predict. Hopefully the mandatory disaster offices at all levels of government could have allowed better planning, and at least at local levels the severity of the danger could have been assessed earlier.

For the Cape fires, one factor was the danger of alien vegetation reducing water run-off and increasing the fire hazard. This is not new and it should not have needed a disaster on such a scale to produce the regulations now promulgated to control the removal and eradication of alien plants. However, vegetation was only part of the picture and more careful planning and provision of housing might have avoided the fires, which from all accounts started in informal settlements.

Alien vegetation and informal settlement patterns are examples of predisposing factors for fires. No-one can expect government to cope with the massive influx into cities such as Cape Town, but it is reasonable to expect that sites be set aside for informal housing where open fires do not pose a general environmental hazard. Any planning and management consequence of the fires that does not include a strategic approach to the organisation of informal settlements is deficient in that it leaves a large group vulnerable, fails to reduce risk and thereby predisposes to a similar disaster in the future.

## Declaration

Successful disaster management is partly about enabling authorities to react quickly and with certainty that resources consumed in a rescue will be recouped; the White Paper is less reassuring in this regard and depends on a relatively still-too-clumsy process of disaster declaration. However the mechanisms allowing for early local or provincial declaration might have been helpful in the disasters of 2000.

Evidence from the recent floods in the Eastern Cape shows that the disaster was declared too long after the event, with at least two months between the floods in February and Gazette 21064 declaring a disaster on 4 April 2000. Disaster declarations in Mpumalanga were even more delayed with Gazette 21167 declaring a disaster on 10 May 2000. Such tardy declarations delayed access to urgently needed provincial and national resources. The fires and oil spill in the Cape were not declared as disasters. It is not clear that the requirements of the White Paper will ensure a more rapid response in future disasters.

## **Emergency responses**

Perhaps the fastest emergency reaction seen this year was the penguin rescue, which started within hours. Responses to the Southern African floods were rapid in places, but the scale of the unfolding disaster and poor communications left many people on their own. South African helicopters responded quickly in the Northern Province and Mozambique; international assistance at anything like the level needed for rescue operations took weeks. Aid parcels were still in storage at Maputo at the time of writing.

In the Northern Province, the Joint Operations Centre at a military base co-ordinated

emergency responses. Food parcels and blankets were rapidly moved from the central warehouse to local Disaster Management Units. Local government officials were charged with assessing need and distributing the aid, but in many places it was impossible to verify that the material reached its intended recipients. Weeks afterward, researchers flew into isolated valleys in Venda which had not even been assessed, because the officials could not reach them! Here, destroyed bridges and roads meant an additional 40km walk for the elderly to collect pensions. Prices for mealie meal and taxi transport rocketed after the floods. With no crops left nor income, the result was near starvation for whole communities.

With the Cape fires, initial fire fighting reactions were inadequate considering the potential consequences, but gathered momentum as public indignation grew. The willingness of communities to help was remarkable, but stories abound of lack of co-ordination and inappropriate deployment of volunteers. Often this led to volunteers putting themselves in danger and distracting from a properly co-ordinated response. Yet without the huge volunteer contribution, it seems certain that property loss would have been much greater than it was.

### The media

The tremendous influence of communications is perhaps the most important lesson of the year. There is usually considerable media and public support for emergency measures. However this depends on how easily the message can be found, packaged, and used to capture the public imagination.

The Southern African floods were not adequately reported in the first weeks. Images of broken bridges and raging rivers held limited interest, until TV pictures showed helicopter rescues from trees and rooftops in Mozambique. The rescue of a woman and her baby born in the tree was shown all over the world, and probably mobilised more relief than anything else.

But the pictures showed a distorted view of the total situation; in most places the destruction of infrastructure and basic services was the real threat. Radio messages on how to clean contaminated water were useful. Starvation and epidemics were to kill far more people than drowning; people started to die just as the media was losing interest.

The biggest story by far was the oil threat to the penguins. Skilful communications enabled conservation groups to maintain a massive and expensive volunteer operation. The scales of the flooding and oil spill disasters were completely reversed in the international media. The Mozambique coverage largely obscured the facts of South Africa's own worst flood disaster for decades.

## Reconstruction

Medium and long-term effects are very important with 'natural' disasters like fires and floods. Unfortunately, media and public attention to reconstruction is limited. If the enemy of initial rescue operations is confusion, the enemy of reconstruction is apathy.

In the Northern Province, the medium-term threat was epidemics of cholera and malaria, as happened in Mozambique. This realisation prompted the Department of Health and Welfare to set up its own operations centre to urgently restore services and prepare to respond. Even then, co-operation from some officials was deficient – managers had to order staff to attend briefings, and the centre had to be run largely by students and volunteers.

In South Africa major roads and bridges were re-opened, and larger water supply schemes

repaired, in the first few months. However, poor rural communities rely even more on small, local infrastructure. The effort to fix smaller road and water systems across the region will take years, and there is no prospect of the hundreds of millions of rands required to do it. The lack of sufficient international or government funding for reconstruction will be a profound setback to economic development, resulting in further poverty, malnutrition and disease.

# Review

The only formal disaster review the authors know of was on the response of the Northern Province Department of Health and Welfare to the floods; this is a pity since without learning the lessons we are likely to repeat them.

The Northern Province review identified several strengths and weaknesses. In general, the responses were well managed centrally, mobilising NGO and academic public health support. Peripheral management was poor in some places, but most health workers performed superbly. The major problems were inadequate communications, information and transport capacity, as existed prior to the floods. Public health interventions were largely successful. These included 'disaster packs' to re-supply clinics, public education on water and sanitation, training with new disease control protocols, helicopter support for evacuations and surveillance, and preparations for outbreaks. There was however some reliance on inappropriate technology – expensive water purification tablets and mosquito coils, which could not be distributed to the whole population at risk. In the event, big epidemics of malaria and cholera did not occur: this was largely due to repeated flooding of mosquito breeding sites, and limitations on transport slowing disease transmission.

The disaster review led to the following recommendations under a series of headings:

### Management

- Establish a permanent disaster management line function assigned to a senior post director or higher (currently Director Health Care Support)
- Create a post of Assistant Director to head a "Disaster Unit" with full-time responsibilities for disaster planning and management, which would include:
  - Develop and maintain a written and regularly updated Disaster Plan
  - Set up and run a disaster operations room and team that can be activated at short notice
  - Establish a central epidemiological and administrative data facility and functional communications network with centre and periphery
  - Liaise and network with key officials, other departments, NGOs, and with Disaster structures at all levels of government
  - Plan health/welfare scenarios for likely or predictable disasters
  - Train and evaluate for disaster readiness, and advocate for prevention, especially reductions in vulnerability and risk.

#### Personnel

- Delegated Disaster Manager to have authority to co-opt essential personnel
- Training materials for likely eventualities to be made immediately available e.g. protocols for diarrhoea management
- Trainers should keep abreast of interventions likely in disasters so that they can offer training at short notice
- Disaster plans to have capacity to cover basic board and lodging costs of volunteers
- Officials unable to reach their normal place of work in a disaster must report to the nearest health facility
- Disciplinary action to be taken against staff who neglect their duties during a disaster.

#### **Communication infrastructure**

- A high-profile telephone connection campaign, with censure of Telkom for past failures to prioritise health facilities (most clinics still do not have telephones, and old radios were unreliable)
- In circumstances where lines are not available digital radios should be introduced
- Managers are given access to email and outdated fax technologies are replaced
- Some calls from private phones in disasters to be cost recoverable to facilitate better contact
- A dedicated "disaster hotline" should be established at all co-ordinating facilities. During normal times such lines form part of the routine communication infrastructure.

#### **Communication channels and practices**

- Disaster Unit to have direct access to any appropriate level within the department
- Health service to ease communication (a flatter organisation and faster verbal authorisations)
- Up-to-date records of key contacts and their numbers to be compiled.

#### Information and epidemiology

- Accelerate implementation of basic district and hospital information systems (information capacity was a major weakness after the floods)
- Collection of additional facility-based data during a disaster should be determined and managed by a specialist epidemiologist
- The disaster team should have the capacity to plan and execute rapid assessments in the field (independent verification of interventions was essential)
- Province to update the geographical information system (GIS) capturing all facilities and their map locations (available GIS data was out of date)
- Provision of health care takes precedence over administrative "processing" of refugees.

#### Facilities

- Facilities should be designed and built with hazards in mind (many were susceptible to flood damage, and the floods exposed pre-existing maintenance backlogs)
- ◆ Access to facilities should be a priority in road network design and maintenance
- Facilities should have emergency supplies of drinking water, and hospitals should have standby generators
- Hospital disaster plans should anticipate natural disasters and epidemics, not just acute trauma
- All health facilities should clear helicopter landing sites and have means of identification from the air.

### **Health Promotion**

- Liaise with regional and community-based radio stations. They should be obliged to assist with disaster messages
- Prepare health promotion messages in advance for likely disaster scenarios. They should be in appropriate languages as printed and audio materials, for rapid dissemination as required.

### Welfare Branch (Department of Health and Welfare)

- The Welfare Branch to designate an individual or specified post as member of the disaster response team
- Mechanisms to rapidly restore pension pay-outs after disasters to reduce the burden on relief handouts
- Profiteering on essentials such as food during disasters should be monitored as it puts an extra burden on victims. Price controls in disaster situations need consideration.

# South Africa: a reality check

Disaster management is about mobilisation of resources, rapid responses, and having a long-term strategy to prevent disasters and reduce the risks of vulnerable groups. We have seen that the community and media respond to emergencies – but that apathy and even neglect surround the long-term consequences and prevention issues. It is this apathy that necessitates a structured and legislated approach to disaster management, so that there are always people who can be held accountable and so that processes of maintenance and prevention are enabled. The Disaster White Paper and Bill go a long way to ensuring that we are well prepared, at least in theory.

At the level of implementation the picture is different. The White Paper alerts the authorities to the need to integrate disaster management and overall development. It includes complex management and financing mechanisms at three levels of government, but are the resources and capacity available on the ground? Without political will and redistribution of resources, the circumstances aggravating and predisposing to disasters will go unattended.

Disaster management must be seen in the context of our other problems. Paraphrasing the comments of the Director of Disaster Policy at the International Red Cross and Red Crescent Societies in Geneva:

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"While 80 000 died as the consequence of disasters world-wide in 1999, 30 million died from entirely preventable diseases".

South Africans must try to balance preparedness for the disasters with disastrous background of ill-health in the country, especially TB and HIV/AIDS. Our region is at the mercy of the faceless 'global economy', while Third World debt is arguably one of the world's great creeping disasters. We have no choice but to integrate disaster planning with an overall development strategy; otherwise crippling disasters will continue to occur, affecting the poorest and most vulnerable as usual.

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# **Health and Related Indicators**

The objective of this section of the Health Review is to present the best available data on a wide range of health and related indicators. Where possible data from multiple years are presented. However, caution should be used when attempting comparisons across time. Data are presented from a variety of sources, not all of which are comparable. The major sources included:

- The 1996 Census (http://www.statssa.gov.za/census96/HTML/). In addition to the report itself, a number of analytical papers are made available on the Census web site. A census is planned for 2001.
- The Mid-Year Estimates provided by Statistics SA (referred to as the P0302 release). The latest version was released on 8 November 2000 (http://www.statssa.gov.za/ RELEASES/DEMOGRAP/98/0302.htm, http://www.statssa.gov.za/RELEASES/ DEMOGRAP/99/p0302.htm, http://www.statssa.gov.za/RELEASES/DEMOGRAP/ 2000/p0302.htm). The mid-2000 estimate was different in that it provided two population estimates, one taking into account the estimated additional deaths that might have occurred as a result of HIV/AIDS (http://www.statssa.gov.za).
- The October Household Surveys (OHS) provided by Statistics SA (referred to as the P0317 release). The report on the October 1999 survey was released on 31 July 2000 (http://www.statssa.gov.za/RELEASES/Household/P0317.htm). Each of the surveys is an independent cross-sectional study, using a different sample of households. The 1996 survey targeted 16 000 households selected from 800 pairs of adjacent enumerator areas. The subsequent surveys were less clustered, using 10 households per selected enumerator area, to give sample of 30 000 in 1997 and 1999, but only 20 000 in 1998. Each of these samples was designed to provide the same urbanization, age, gender and population group distributions as the 1996 Census. The values for these variables provided by the OHS in each year cannot therefore be compared.
- The South African Demographic and Health Survey (SADHS) performed in 1998, and reported in August 1999. A repeat of this exercise was performed in 1999, but has yet to be reported. The sampling methodology for this survey also drew on the results of the 1996 Census, but in addition sought to provide data on each health region of the Eastern Cape, and increased the samples from the smaller provinces and from selected areas (urban Gauteng and KwaZulu-Natal, in order to increase the number of Indian/ Asian households). The three questionnaires used were completed by 12 247 households, 11 735 women and 13 827 adults.
- The National Department of Health, for the results of the annual HIV antenatal seroprevalence study, and for data from the PERSAL and notifiable disease databases.
- The 1998 and 2000 surveys of primary care facilities. In each case this involved a 10% sample per province of clinics/community health centers, without additional stratification. The sample sizes were 294 facilities in 1998 and 308 in 2000.

#### **Demographic Indicators**

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	Average/Total
Population										
1996 <sup>1</sup>	6 302 525	0.000 504	7 348 423	0 41 7 001	2 800 711	0.40.001	4 929 368	0.054.005	3 956 875	40 500 570
1998 <sup>2, a</sup>	6 5 1 9 3 0 0	2 633 504	7 627 600	8 41 / 021	2 924 400	840 321	5 178 700	3 304 820	4 086 900	40 583 573
1000	0 0 10 000	2 724 600	7 027 000	8 726 300	2 024 400	861 400	0 170 700	3 481 200	4 000 000	42 130 500
1999 <sup>2, a</sup>	6 658 670	2 714 654	7 807 273	0 0 0 1 6 1 2	3 003 327	075 000	5 337 267	2 562 200	4 170 971	42 054 206
2000 <sup>2, a, b</sup>		2 7 14 0.04		0 924 043		015 222		5 502 200		43 034 300
with additional deaths	6 811 373		7 780 631		3 004 916		5 495 679		4 178 598	
due to HIV/AIDS		2 760 558		8 8 5 7 6 1 5		869 248		3 532 824		43 291 441
without additional deaths due to HIV/AIDS	6 84/ 162	2 790 733	/ 8/3 205	8 986 857	3 042 637	872 866	5 514 807	3 566 777	4 190 656	43 685 699
% Population por provinc										
	15 5	65	18.1	20.7	69	21	12 1	83	97	100
1999 <sup>2</sup>	15.5	6.3	18.1	20.7	70	20	12.1	8.3	97	100
2000 <sup>2, b</sup>	1010	0.0	1011	2017		210		0.0	017	
with additional deaths										
due to HIV/AIDS	15.7	6.4	18.0	20.5	6.9	2.0	12.6	8.2	9.7	100
due to HIV/AIDS	15.7	6.4	18.0	20.6	7.0	2.0	12.7	8.2	9.6	100
Annual population arowth	h rate <sup>c</sup>									
1983-1996 <sup>3</sup>	2.6	1.5	1.3	2.8	3.0	0.8	4.0	3.1	1.7	2.4
	57	5.0	6.1	25	2.0	0.5	26	57	6.9	4.0
1994	5.7	5.6	0.1	3.0	3.2	0.0	2.0	5.7	0.0	4.9
Total fertility rate®										
1991 <sup>4</sup>	4.6	3.7	3.0	4.3	4.3	2.9	5.8	4.5	2.7	3.3
1998°	3.5	2.2	2.3	3.3	3.1	2.7	3.9	2.4	2.3	2.9
% teenage mothers <sup>f</sup>										
1991 <sup>3</sup>	13.1	14.9	12.9	15.3	13.5	12.8	16.4	12.6	11.8	14.6
19985	14.8	8.4	8.9	13.8	18.8	15.2	14.9	11.0	13.7	13.2
Average household size										
1990 <sup>3</sup>	5.2	3.9	3.5	5.7	4.6	4.3	5.2	3.8	3.9	4.5
1994 <sup>4</sup>	4.9	4.0	3.9	5.0	4.8	4.1	4.7	4.5	3.9	5.5
1996 <sup>1</sup>	4.6	4.1	3.7	5.0	4.6	4.3	4.9	4.6	3.9	4.4

a Please note: although the population figures do not add up to the total given, they are quoted directly from source.

b A new feature of the 2000 Mid-Year estimates was that two population estimates were provided, one taking into account the estimated additional deaths that might have occurred as a result of HIV/AIDS. The assumptions that underpinned these estimates are outlined in the latest P0302 Statistical Release (URL).

c Annual Population Growth Rate: the rate at which the population is increasing or decreasing in a given year expressed as a percentage of the base population size. It takes in all the components of population growth, namely births, deaths and migration.

d Crude death rate: number of deaths in a year/population at mid-year per 1000 population.

e Total fertility rate (TFR): Total fertility rate: an estimate of the number of children a woman would have at the end of her reproductive life, given a set of age-specific fertility rates. The 1998 national TFR is considered to be an under-estimate. The real figure is considered to be about 3.2 (see Udjo EO, Lestrade-Jefferis J. Fertility and mortality in South Africa. URL).

f % teenage mothers: the percentage of women aged 15-19 who are mothers at the time of the survey.

# Socio-Economic Indicators by Province

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	Average/Total	
Area as a % of total area of S	South Afric	a									
1996 <sup>1</sup>	13.9	10.6	1.4	7.6	6.5	29.7	10.2	9.5	10.6	100	
Population density (people pe	er km²)										
1996 <sup>1</sup>	38.4	21.0	448.4	95.1	36.7	2.3	41.7	29.9	31.5	34.4	
% Urban <sup>g</sup>											
1996 <sup>1</sup>	36.6	68.6	97.0	43.1	39.1	70.1	11.0	34.9	88.9	53.7	
04 Non urban											
% NON-URDAN	63.4	31.4	30	56.9	60.9	20.0	89.0	65.1	11 1	463	
	00.4	01.4	0.0	00.0	00.0	20.0	00.0	00.1		40.0	
Literacy rate <sup>n</sup>	50.0	00.0	00.0	507	FAC	070	507	55.0	71.0	01.4	
1991 <sup>4</sup>	59.0	60.0	69.0	58.7	54.6	67.6	52.7	55.8	71.9	61.4	
1990.	59.0	02.7	00.0	01.2	57.0	56.9	53.0	06.3	/0./	00.0	
% Non school attendance (2	0yrs+)										
1991 4	9.4	9.7	8.7	11.3	8.5	7.3	8.6	13.7	6.4	9.6	
1994 <sup>4</sup>	23.6	15.3	16.6	25.2	16.3	16.7	24.8	22.3	13.3	19.4	
1996 <sup>3</sup>	20.9	16.1	9.5	22.9	29.4	21.7	36.9	22.7	6.7	19.3	
Labour dependency ratio											
1994 <sup>4</sup>	3.7	1.4	0.9	2.3	2.1	1.6	4.8	1.6	1.2	1.9	
Age dependency ratio											
1996 <sup>4</sup>	83.5	56.4	42.0	68.2	68.3	62.3	92.4	63.5	52.4	64.4	
Per capita income (Pands)											
1994 <sup>4</sup>	1 358	2 419	4 992	1 910	2 164	2 865	725	1 789	4 188	2 566	
		2 110	1002	1 010	2 10 1	2 000	120	1700	1 100	2 000	
Unemployment rate (official o	definition) <sup>k</sup>	~ ~	00.4	070	05.0	170	05.7	005	10.5	05.0	
1998°	36.9	21.3	23.1	27.2	25.0	17.9	35.7	26.5	13.5	25.2	
1999,	29.8	23.3	20.6	25.9	24.5	18.1	34.0	23.6	13.7	23.3	
Unemployment rate (expande	ed definitio	n)									
1998 <sup>6</sup>	51.9	31.6	32.6	42.7	34.9	29.8	49.2	41.3	20.9	37.5	
1999 <sup>6</sup>	46.8	34.0	32.5	37.8	37.0	29.1	50.2	42.1	18.9	36.2	
% households with piped wa	ter inside										
<b>1996</b> <sup>1</sup>	24.7	40.6	67.7	39.8	37.3	50.0	17.8	30.6	76.4	44.7	
1999 <sup>6</sup>	23.4	29.9	58.8	34.6	27.6	48.1	12.1	21.6	76.7	38.8	
% households with no toilet											
1996 <sup>1</sup>	28.9	8.8	2.5	15.1	8.6	10.6	21.1	6.3	5.4	12.5	
19996	25.1	5.3	0.8	12.7	3.5	10.7	18.8	5.7	3.8	9.7	
% households using electrici	ty for cook	ina									
1996 <sup>1</sup>	31.7	57.1	79.6	53.5	56.6	70.7	36.6	44.1	85.2	59.4	
% households with taland		-				-				-	
70 nousenoias with telephone	15.7	220	15.0	071	19.9	30.0	75	165	55.4	20 C	
1990.	10.7	20.0	40.0	<i>L I</i> .1	10.3	30.9	1.5	10.0	55.4	20.0	

- g Since the urbanisation, age, gender and population group distributions from the 1996 Census are used to construct the samples for the October Household Surveys (OHS) and South African Demographic and Health Survey (SADHS), the distributions obtained in those surveys cannot be used to depict trends over time. Accordingly, age dependency rates also cannot be calculated from OHS reports.
- h People aged 20 years and more with no schooling or with some primary schooling are illiterate. Although literacy has been addressed in the OHSs, the definition used is different, precluding comparison.
- i Labour dependency ratio: the number of people supported by every member of the labour force excluding him or herself.
- j Age dependency ratio: the ratio of the combined child population (0-14 years) and the aged population (65 years and over) to the intermediate age population (15-65 years).
- k The official definition of the unemployed is that they are those people within the economically active population who (a) did not work during the 7 days prior to the interview, (b) want to work and are available to work within a week of the interview, and (c) have taken active steps to look for work or to start some form of self-employment in the 4 weeks prior to the interview. The expanded definition excludes criterion (c). It therefore includes discouraged work seekers who have failed to take active steps to obtain employment in the 4 weeks prior to the interview.
- I The consistent upward trend in official unemployment rates seen in previous OHSs, from 1996 (19.3%), to 1997 (21.0%) and 1998 (25.2%), appeared to be reversed in 1999 (23.3%). The 1999 OHS report provided 95% confidence intervals for unemployment estimates. The report states that "we are 95% confident that sampling error cannot account for the larger proportion of people who were employed in 1999, compared with 1998, or the overall decrease in the unemployment rate". (URL)

#### Health Status Indicators by province

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	Average/Total
Infant mortality rate (per 1 00	00 live birtl	hs) <sup>m</sup>								
<b>1998</b> ⁵	61.2	36.8	36.3	52.1	47.3	41.8	37.2	36.8	8.4	45.4
Under 5 mortality rate (per 1	000 live b	irths) <sup>"</sup>								
<b>1998</b> ⁵	80.5	50.1	45.3	74.5	63.7	55.5	52.3	45.3	13.2	59.4
Maternal mortality ratio (per 1998 <sup>5</sup>	100 000 liv *	ve births)° *	*	*	*	*	*	*	*	150
HIV prevalence (%) (antenata	ıl)									
1998 <sup>7</sup>	15.9	22.8	22.5	32.5	30.0	9.9	11.5	21.3	5.2	22.8
1999 <sup>7</sup>	18.0	27.9	23.9	32.5	27.3	10.1	11.4	23.0	7.1	22.4
Syphilis prevalence rate (%)	(antenatal)									
1998 <sup>7</sup>	17.5	10.8	16.2	8.1	9.8	11.0	4.7	17.6	3.8	10.0
Reported cases of TB (per 10	000 000)									
19988	201.0	245.0	123.0	110.0	106.0	300.0	40.0	160.0	464.0	169.0
Reported cases of malaria (p	er 100 00	0)								
1998 <sup>8</sup>	0.1	0.9	2.0	153.0	200.0	0.9	65.0	5.6	0.7	160.0
Reported cases of typhoid (p	er 100 000	))								
1998 <sup>8</sup>	2.6	0.0	0.1	0.4	1.5	0.3	1.7	0.0	0.2	0.3
Reported cases of measles (	per 100 00	00)								
1998 <sup>8</sup>	1.3	3.5	1.5	1.6	2.7	1.2	5.6	0.7	2.3	1.9
Reported cases of tetanus (p	er 100 000	))								
1998 <sup>8</sup>	0.0	0.0	0.0	0.0	0.6	0.1	0.0	0.0	0.0	0.8
Reported cases of viral hepa	titis (per 10	000 000)								
1998 <sup>8</sup>	0.9	1.4	2.7	2.3	1.7	3.2	2.7	0.5	7.8	2.6
% adults (15+yrs) experience	d work rel	ated illnes:	s/injuries							
<b>1998</b> ⁵	6.3	5.1	8.0	9.0	7.1	7.4	8.2	2.8	8.2	7.3
Hypertension prevalence me 1998 <sup>5</sup>	asured (%)	P								
Men	12.5	14.5	11.7	11.1	6.2	14.2	6.4	11.8	10.9	11.0
Women	14.2	15.5	13.1	14.7	8.5	17.0	6.6	16.2	14.2	13.2
% men (15+yrs) with painful	urination, p	oenile discl	narge or ge	enital sore	s in the las	st 3 months	;			
19985	15.1	15.2	5.5	18.9	20.1	6.7	11.5	8.4	5.6	11.9

m Infant mortality rate: the number of children less than one year old who die in a year, per 1000 live births during that year.

n Under 5 mortality rate: the number of children under 5 years old who die in a year, per 1000 live births during that year.

o Maternal mortality ratio: the number of women who die as a result of childbearing or within 42 days of termination of pregnancy in one year, per 100 000 live births during that year.

p Includes all patients on treatment for hypertension or with a blood pressure greater than or equal to 160/95 mmHg.

## Health Status Indicators by province continued

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	Average/Total
NUTRITION STATUS										
% Wasting <sup>q</sup>										
Children in grades 1 and 2 19949	2.5	1.8	2.1	1.9	5.4	1.8	3.1	4.4	2.8	2.6
Children 6 - 71 months 1994 <sup>9</sup>	3.2	4.5	1.2	0.7	2.5	1.7	3.8	4.5	1.3	2.6
% Stunting <sup>r</sup>										
Children in grades 1 and 2 1994 <sup>9</sup>	11.6	11.7	7.1	11.8	19.2	13.4	11.4	14.1	13.8	13.2
Children in grades 3 and 4 1994 <sup>9</sup>	16.8	11.2	7.1	11.8	11.4	19.2	13.4	14.1	13.8	13.2
Children 6 - 71 months 1994 <sup>9</sup>	28.8	28.7	11.5	15.6	20.4	22.8	34.2	24.7	11.6	22.9
% Under-weights										
Children in grades 3 and 4 1994 <sup>9</sup>	9.2	8.0	4.6	5.6	6.2	20.9	10.4	12.0	12.0	9.0
% Obesity <sup>t</sup>										
Obesity prevalence in adults 1 1998 <sup>5</sup>	5+yrs (%)									
Men	9.8	8.0	9.8	10.2	7.2	7.5	6.1	5.4	12.8	9.1
Women	28.9	29.1	34.7	34.2	25.4	24.5	19.4	18.8	30.8	29.4
DISABILITY										
Prevalence of disability										
199810	8.9	5.8	5.2	6.7	4.5	4.5	6.3	3.1	3.8	5.9
Prevalence of sight disability										
1996 <sup>1</sup>	2.6	5.2	2.9	2.2	3.6	2.3	2.3	3.4	3.8	2.7
Prevalence of physical disab	ility 1.9	1.6	1.0	1.6	1.1	1.2	1.5	1.8	0.9	1.4
Prevalence of mental illness										
<b>1996</b> <sup>1</sup>	0.7	5.4	0.3	0.5	0.5	0.5	0.4	0.7	0.4	0.5
Prevalence of hearing disabil	l <b>ity</b> 1.1	1.3	0.8	0.9	1.2	0.8	1.1	1.6	0.5	1.0
RISK TAKING BEHAVIOUR										
Prevalence of smokina %										
19985										
Men	46.0	44.0	42.0	38.0	40.0	58.0	29.0	45.0	49.0	42.0
Women	11.0	11.0	12.0	5.0	6.0	31.0	2.0	8.0	29.0	11.0

q Wasting: weight for height under 2 standard deviations from the norm.

r Stunting: height for age under 2 standard deviations from the norm.

s Under-weight: weight for age under 2 standard deviations from the norm.

t Defined as a body mass index (body mass in kg divided by the square of height in m) equal to or more than 30kg/m2.

# Health Status Indicators by province continued

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	Average/Total
HEALTH FACILITIES & PRIMA	RY HEALTH	H CARE								
Immunisation coverage of ch	ildren 12-2	23 months	(%) <sup>u</sup>							
19985	52.6	67.8	72.4	49.5	67.2	80.8	74.9	60.6	64.2	63.4
% pregnant women who rece	eived anter	natal care	from a nur	se, midwif	e or doctor					
19985	94.7	94.8	94.8	94.4	94.0	93.3	94.1	94.1	91.7	94.2
% pregnant women who rece	eived tetan	us toxoid v	/accine							
<b>1998</b> <sup>5</sup>	57.4	75.8	37.6	74.9	61.8	53.4	80.8	56.3	17.8	58.8
% women 15-45 who use a r	nodern co	ntraceptive	method							
<b>1998</b> ⁵	59.9	67.9	60.9	57.1	53.2	65.9	53.3	69.6	73.7	61.2
% deliveries in institution with trained birth attendants										
<b>1998</b> ⁵	74.6	88.0	94.0	82.6	76.0	90.3	78.5	88.3	96.1	84.4
% clinics with EPI services e	very week	day								
1998 10	76.0	79.0	69.0	52.0	42.0	67.0	93.0	54.0	44.0	67.0
200010	89.0	72.0	50.0	85.0	32.1	66.7	97.9	71.9	40.0	73.7
% clinics with antenatal serv	ices every	week day								
199810	59.0	71.0	25.0	26.0	33.0	33.0	91.0	39.0	22.0	50.0
2000 <sup>10</sup>	78.0	44.0	32.1	70.0	21.4	50.0	95.8	56.3	10.0	59.3
% clinics with family plannin	g services	every wee	k day							
1998 <sup>10</sup>	94.0	96.0	81.0	58.0	58.0	89.0	100.0	79.0	72.0	83.0
2000 <sup>10</sup>	96.7	96.0	82.1	95.0	46.4	87.5	100.0	87.5	70.0	87.1
% clinics with STD services e	every week	a day								
1998 10	100.0	93.0	94.0	94.0	92.0	100.0	100.0	93.0	78.0	94.0
200010	97.8	100.0	89.3	95.0	82.1	83.3	100.0	100.0	90.0	94.9
% clinics with TB services ev	ery week o	day								
1998 <sup>10</sup>	85.0	82.0	94.0	65.0	79.0	82.0	82.0	89.0	84.0	82.0
200010	94.5	100.0	89.3	57.5	60.7	83.3	81.3	93.8	86.7	84.1
% clinics with emergency res	sponse she	orter than '	l hour							
1997 <sup>10</sup>	37.0	61.0	79.0	29.0	65.0	71.0	65.0	27.0	77.0	55.0
2000"	40.0	54.0	71.4	00.3	00.3	91.7	92.1	60.0	76.7	ບ <i>1.1</i>
% PHC facilities where cond	oms are fro	eely availa	ble	070	~ ~		530	05.0		70.0
1998™ 200010	/6.0	/9.0	100.0	97.0	91.0	89.0	5 /.0	65.0	84.0	/9.0
2000	66.2	84.0	10.0	92.0	/8.6	91.7	60.4	90.6	/4.1	00.9
% PHC facilities where HIV to	esting is m	ade availa	ble	40.0	70.0	100.0	00.0	40.0	070	500
200010 200010	39.0	/9.0 275	100.0	48.0 ⊿∩∩	79.0 571	100.0	20.0	40.U 53.1	97.0	56.2
2000	-1-1.0	07.0	100.0	-10.0	57.1	100.0	14.0	55.1	100.0	00.Z

u Defined as the percentage of children aged 12 to 23 months who had received BCG, 3 doses of DTP and Polio, and Measles vaccine, but not necessarily Hepatitis B.

## Health Status Indicators by province continued

	stern Cape	e State	luteng	/aZulu-Natal	oumalanga	rthern Cape	orthern Province	orth West	stern Cape	erage/Total	
	Ea	ц	õ	Ϋ́	ž	Ň	Ň	ž	Ň	Ā	
NUMBER OF PUBLIC SECTOR HEALTH PERSONNEL POSTS (PER 100 000 POPULATION*)"											
Medical Practitioners	745	548	1 693	1 842	419	198	604	361	1 181	7 591	
	(12.3)	(24.3)	(36.6)	(24.0)	(16.4)	(28.9)	(12.5)	(11.9)	(39.7)	(21.9)	
Medical Specialists	160	247	1 500	566	31	14	48	46	1 269	3 881	
	(2.6)	(10.9)	(32.4)	(7.4)	(1.2)	(2.0)	(1.0)	(1.5)	(42.7)	(11.2)	
<b>Dental Practitioners</b>	47	25	225	61	45	11	30	41	112	597	
	(0.8)	(1.1)	(4.9)	(0.8)	(1.8)	(1.6)	(0.6)	(1.4)	(3.8)	(1.7)	
Dental Specialists	0	1	34	4	2	0	0	0	12	53	
	(0.0)	(0.0)	(0.7)	(0.1)	(0.1)	(0.0)	(0.0)	(0.0)	(0.4)	(0.2)	
Dental Therapists	3	1	28	31	8	2	22	15	2	112	
	(0.0)	(0.0)	(0.6)	(0.4)	(0.3)	(0.3)	(0.5)	(0.5)	(0.1)	(0.3)	
Professional Nurses	6 429	2 909	7 984	9 195	2 306	839	5 058	2 855	4 159	41 734	
	(106.1)	(128.9)	(172.5)	(119.8)	(90.5)	(122.3)	(104.6)	(94.3)	(139.9)	(120.3)	
Enrolled Nurses (including pupils)	3 586	815	2 159	6 521	1 087	302	3 077	1 397	1 782	20 726	
(	(59.2)	(36.1)	(46.6)	(85.0)	(42.7)	(44.0)	(63.6)	(46.1)	(60.0)	(59.7)	
Nursing Assistants	4 381	2 131	5 010	5 508	1 519	564	2 786	2 395	3 900	28 194	
-	(72.3)	(94.4)	(108.2)	(71.8)	(59.6)	(82.2)	(57.6)	(79.1)	(131.2)	(81.3)	
Student Nurses	1 282	501	2 005	1 420	377	89	715	326	794	7 509	
	(21.2)	(22.2)	(43.3)	(18.5)	(14.8)	(13.0)	(14.8)	(10.8)	(26.7)	(21.6)	
Pharmacists	141	52	238	253	58	16	97	48	182	1 085	
	(2.3)	(2.3)	(5.1)	(3.3)	(2.3)	(2.3)	(2.0)	(1.6)	(6.1)	(3.1)	
Psychologists	23	11	97	35	2	1	5	10	54	238	
	(0.4)	(0.5)	(2.1)	(0.5)	(0.1)	(0.1)	(0.1)	(0.3)	(1.8)	(0.7)	
<b>Occupational Therapists</b>	14	32	115	69	21	5	54	18	86	414	
	(0.2)	(1.4)	(2.5)	(0.9)	(0.8)	(0.7)	(1.1)	(0.6)	(2.9)	(1.2)	
Physiotherapists	37	27	120	115	13	4	42	11	85	454	
	(0.6)	(1.2)	(2.6)	(1.5)	(0.5)	(0.6)	(0.9)	(0.4)	(2.9)	(1.3)	
Padiographere	227	10.2	634	361	11	01	Q1	63	183	2 116	
Kaalogiupileis	(3.9)	(25)	(13.7)	( <u>4</u> 7)	(17)	(3.1)	(17)	(2 1)	(16.3)	(61)	
	(0.0)	(0.0)	(10.7)	(1.7)	(17)	(0.1)	(1.7)	(4.1)	(10.0)	(0.1)	

Ratio calculated excluding medical aid members per provincial population (1998-9 figures from the Council for Medical Schemes) so as to approximate the public sector-dependent population. Caution should be exercised when interpreting these data as not all posts are occupied, nor perhaps occupied by the appropriate personnel. However, this table does show considerable variation in staffing establishment across provinces.

v

### Demographic Indicators by population group

	African	Coloured	Indian/Asian	White	Other/ Unstated	South African
Population group figures						
1996 <sup>1</sup>	31 127 631	3 600 446	1 045 596	4 434 697	375 204	40 583 573
1998²	32 449 200	3 721 000	1 074 900	4 500 400	385 100	42 130 500
1999 <sup>2</sup>	33 239 879	3 792 631	1 092 254	4 538 727	390 815	43 054 306
2000 <sup>2</sup> (without additional deaths due to HIV/AIDS)	33 879 852	3 796 858	1 092 522	4 521 664	394 803	43 685 699
Population group as a % of t	otal population					
1996 <sup>1</sup>	76.7	8.9	2.6	10.9	0.9	100
1998 <sup>2</sup>	77.0	8.8	2.6	10.7	0.9	100
1999 <sup>2</sup>	77.2	8.8	2.5	10.5	0.9	100
2000 <sup>2</sup> (without additional deaths due to HIV/AIDS)	77.6	8.7	2.5	10.4	0.9	100
Annual population growth rat	ew					
1994 <sup>4</sup>	2.5	1.5	1.5	0.7	*	2.1
1991 - 19964	2.4	1.5	1.3	0.5	*	2.0
Crude death rate <sup>x</sup>						
19944	10.2	7.2	7.3	6.7	*	9.4
Total fertility rate <sup>v</sup>						
1991 4	3.7	2.7	2.3	1.8	*	3.3
<b>1998</b> ⁵	3.1	2.5	*	1.9	*	2.9
% teenage mothers <sup>z</sup>						
1991 <sup>4</sup>	10.7	14.8	6.1	6.3	*	-
19985	14.2	15.7	2.9	2.2	*	13.2
Average household size						
19944	5.3	5.3	4.5	2.7	*	4.5
1996²	4.7	4.7	4.3	2.9	*	4.4
* data not available by popula	tion group					

w Annual Population Growth Rate: the rate at which the population is increasing or decreasing in a given year expressed as a percentage of the base population size. It takes in all the components of population growth, namely births, deaths and migration.

x Crude death rate: number of deaths in a year/population at mid-year per 1000 population.

y Total fertility rate: an estimate of the number of children a woman would have at the end of her reproductive life, given a set of agespecific fertility rates.

z % teenage mothers: the percentage of women aged 15-19 who are mothers at the time of the survey.

#### Socio-Economic Indicators by population group

	African	Coloured	Indian/Asian	White	Other/ Unstated	South African
% Functional urbanisation %	urban					
199312	35.8	83.2	96.2	91.1	*	48.3
<b>1996</b> <sup>1</sup>	43.3	83.4	97.3	90.6	*	53.7
Literacy rate <sup>aa</sup>						
1991 4	54.0	66.0	84.0	99.0	*	-
1996 <sup>3</sup>	*	*	*	*	*	66.0
Unemployment rate (official o	definition) <sup>bb</sup>					
1998 <sup>6</sup>	32.0	15.8	14.7	4.4	*	25.2
1999 <sup>6</sup>	29.2	15.3	15.5	4.7	*	23.3
Unemployment rate (expanded definition)						
1998 <sup>6</sup>	46.0	23.8	19.4	6.4	*	37.5
1999 <sup>6</sup>	46.0	23.8	19.4	6.4	*	37.5
* data not available by popula	tion group					

aa People aged 20 years and over with no schooling are illiterate.

bb The official definition of the unemployed is that they are those people within the economically active population who (a) did not work during the 7 days prior to the interview, (b) want to work and are available to work within a week of the interview, and (c) have taken active steps to look for work or to start some form of self-employment in the 4 weeks prior to the interview. The expanded definition excludes criterion (c). It therefore includes discouraged work seekers who have failed to take active steps to obtain employment in the 4 weeks prior to the interview.

### Health Status Indicators by population group 1998<sup>5</sup>

	frican	coloured	ndian/Asian	Vhite	)ther/ Instated	outh African
	4	0	-	>		0
Infant mortality rate <sup>cc</sup> (per 1000 live births) <sup>5</sup>	47.0	18.8	*	11.4 <sup>dd</sup>	*	45.4
Under 5 mortality rate <sup>®</sup> (per 1000 live births) <sup>5</sup>	63.6	28.2	*	15.3 <sup>dd</sup>	*	59.4
Maternal mortality ratio" (per 100 000 live births)	*	*	*	*	*	150.0
% immunisation coverage	61.8	74.6	*	62.7	*	63.4
% teenage mothers <sup>99</sup>	14.2	15.7	2.9	2.2	*	13.2
% using modern contraceptive methods	57.6	68.4	80.1	74.9	*	61.2
Hypertension prevalence me	asured (%) <sup>hh</sup>					
Men	10.3	12.4	9.9	15.2	*	11.0
Women	13.0	17.1	9.3	12.0	*	13.2
% men (15+vrs) with painful	urination penile (	lischame or aenit	al sores in the la	st 3 months		
	12.1	56	38	17	*	11.9
	12. I	0.0	0.0	,		11.0
Obesity prevalence (%) <sup>11</sup>						
Men	7.7	9.1	8.7	19.8	*	9.1
Women	30.5	28.3	20.2	24.3	*	29.4
* Data not available by popula	tion group					

cc Infant mortality rate: the number of children less than one year old who die in a year, per 1000 live births during that year.

dd Figures are based on an inadequate sample of only 250 to 500 cases.

ee Under 5 mortality rate: the number of children under 5 years old who die in a year, per 1000 live births during that year.

ff Maternal mortality ratio: the number of women who die as a result of childbearing or within 42 days of termination of pregnancy in one year, per 100 000 live births during that year.

- gg % teenage mothers: the percentage of women aged 15-19 who are mothers at the time of the survey.
- hh Includes all patients on treatment for hypertension or with a blood pressure greater than or equal to 160/95 mmHg.
- ii Defined as a body mass index (body mass in kg divided by the square of height in m) equal to or more than 30kg/m2.



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# Glossary

ABC	"to Abstain, Be faithful, use Condoms" strategy	
ACAME	African Association of Central Medical Stores for Essential Drugs	
ADAPT	NGO with a focus on women issues	
AFRO	African Regional Office	http://www.whoafr.org/index.html
AHS	Academic Health Services	
AIDS	Acquired Immune Deficiency Syndrome	
AIM	African Initiative for Malaria Control	
ALOS	Average Length of Stay	
ANC	African National Congress	http://www.anc.org.za/
ANIE	Available Non-Interest Expenditure	
AOD/s	Alcohol and Other Drug/s	
ARH	Adolescent Reproductive Health	
ARHS	Adolescent Reproductive Health Service	
ASSA600	Actuarial Society of South Africa AIDS Model version 600	http://www.assa.org.za/
AZT	Zidovudine (HIV/AIDS drug)	
BAC/s	Blood Alcohol Concentration/s	
BAP	Best Available Price	
BAT	British American Tabacco	http://www.bat.com/
BCEA	Basic Conditions of Employment Act No 75 of 1997	http://www.polity.org.za/govdocs/ legislation/1997/act75.pdf
BCG	Bacille Calmette Guerin	
BFHI	Baby-Friendly Hospital Initiative	
BHF	Board of Healthcare Funders	http://www.bhf.co.za
BLO	Better Life Options	
BMI	Body Mass Index	
CASE	Community Agency for Social Enquiry	http://www.case.org.za/
CBE	Community-Based Education	
CBO/s	Community-Based Organisation/s	

CCCC	Community Child Care Committees	
CDA	Central Drug Authority	
CEDAW	Convention on the Elimination of all forms of Discrimination Against Women	http://www.un.org/womenwatch/ daw/cedaw/
CEO/s	Chief Executive Officer/s	
CERD	Convention on the Elimination of all forms of Racial Discrimination	
CHC	Community Health Care/Centres	
CHWs	Community Health Workers	
CIF	Cost, Insurance and Freight	
CLS	Contracts Laboratory Services	
COHSASA	Council for Health Service Accreditation of Southern Africa	
COMED	Co-ordinating Committee for Medical Procurement	
CoN	Certificate of Need	
COPD	Chronic Obstructive Pulmonary Disease	
CSIR	Council for Scientific and Industrial Research	http://www.csir.co.za/index.html
CSO/s	Community Service Organisation/s	
DDT	Insecticide used for the control of malaria, typhus and other insect-transmitted diseases	http://www.epa.gov/opptintr/pbt/ ddt.htm
DENEL	Private company with a wide spectrum of management, research and development, engineering and manufacturing abilities	http://www.denel.co.za/
DENOSA	Democratic Nursing Organisation of South Africa	
DfID	Department for International Development	http://www.dfid.gov.uk/
DHA/s	District Health Authority/ies	
DHER/s	District Health Expenditure Review/s	
DHS	District Health System	
DMT/s	District Management Team/s	
DOH	Department of Health	http://www.health.gov.za/
DOTS	Directly Observed Treatment, short course	
DPT/DP	Diphtheria-Pertussis-Tetanus/ Diphtheria-Tetanus	
DTCA	Direct To Consumer Advertising	
DTD/s	Demonstration and Training District/s	
EC	Eastern Cape	http://www.ectourism.co.za/
ECHO	A licensed pharmaceutical wholesaler regulated by the Medicines Control Agency (UK Department of Health)	http://www.echohealth.org.uk

EDL	Essential Drugs List	
EDM	Essential Drugs and Medicines	
EHO/s	Environmental Health Officer/s	
EHS	Environmental Health Services	
EPI	Expanded Programme of Immunisation	
ESKOM	Electricity Supply Commission	http://www.eskom.co.za/
FACT	Family AIDS Caring Trust	
FAS	Foetal Alcohol Syndrome	
FCST	Freedom of Commercial Speech Trust	
FS	Free State	http://www.fstourism.co.za/
FWCW	Fourth World Conference on Women	
GA	Gauteng	http://www.gauteng.net/
GCIS	Government Communication and Information Service	
GDP	Gross Domestic Product	
GEAR	Growth, Employment and Redistribution	
GIS	Geographical Information System	
GMP	Good Manufacturing Practice	
GPs	General Practioner/s	
HASA	Hospital Association of South Africa	http://www.hasa.co.za/ information_frameset.html
HDI	Human Development Index	
HE at UP	Health Enterprises at University of Pretoria	
HER	Health Expenditure Review	
HIB	Haemophilus Influenza Type B	
HIS	Health Information System	
HIV	Human Immunodeficiency Virus	
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency	Syndrome
HOSPERSA	Hospital Personnel Association of South Africa	
HPS	Health Promoting School	
HR	Human Resources	
HSP	Hospital Strategy Project	
HSSF	Health Sector Strategic Framework	
HWSETA	Health and Welfare Sector Education Training Authority	

ICPD	International Conference on Population and Development	
ICU	Intensive Care Unit	
IDASA	Institute for Democratic Alternatives in South Africa	
IDC	Interdepartmental Committee on AIDS	
IDP	Integrated Development Plan	
IEC	Information, Education and Communication	
IFPMA	International Federation of Pharmaceutical Manufacturers' Asso	ociations http://www.ifpma.org/
IGA	Income Generating Activity	
IHD	Ischaemic Heart Disease	
IMC	Inter-Ministerial Committee on AIDS	
IMCI	Integrated Management of Childhood Illness	
IMR	Infant Mortality Rate	
INF	Interim Negotiation Forum	
INP	Integrated Nutrition Programme	
IR	Industrial Relations	
ISA	A South African Union	
ISDS	Initiative for Sub-District Support	http://www.hst.org.za/isds/
ISO	International Standards Organisation	http://www.iso.ch/
IT	Information Technology	
JTI	Japan Tobacco International	
KZN	KwaZulu-Natal	http://www.tourism-kzn.org/
LRI	Lower Respiratory (tract) Infections	
LSD	d-lysergic acid diethylamide	http://www.erowid.org/chemicals/ lsd/lsd.shtml
LSDI	Lubombo Spatial Development Initiative	http://www.lubombo.org.za/ index.html
MCWH	Maternal, Child and Women's Health	
MDR TB	Multi-drug Resistant Tuberculosis	
MEC/s	Member/s of Executive Council	
MEDUNSA	Medical University of South Africa	http://www.studysa.co.za/uni/ meduni.html
MHS	Municipal Health Services	

MINMEC	Ministerial Forum These are sectorally-based meetings of national ministers and provincial MECs, established to promote co-operation, coordination and communication between the national departments and their provincial counterparts. MINMECs comprise a national minister and members of the executive council (MECs) in each of the provinces, e.g. the Minister of Finance together with the MECs for finance in each of the provinces.	http://www.gov.za/reports/prc98/ chap2.htm
MIS	Malaria Information System	
MLHWs	Mid-level Health Workers	
MMAP	Maximum Medical Aid Price	
MMR	Maternal Mortality Ratio	
MP	Mpumalanga	http://www.mpumalanga.com/
MPSO	Mpumalanga Project Support Organisation	
MRC	Medical Research Council	http://www.mrc.ac.za/
MRC-CERSA	Medical Research Council – Centre for Epidemiological Research in South Africa	
MSF	Médecins Sans Frontièrers	http://www.msf.org/
MTCT	Mother to Child Transmission	
MTEF	Medium Term Expenditure Framework	
MVA/s	Motor Vehicle Accident/s	
NA	National Assembly	http://www.polity.org.za/govdocs/ parliament/natass.html
NAFCI	National Adolescent Friendly Clinic Initiative	
NC	Northern Cape	http://www.northerncape.org.za/
NCCEMD	National Committee for Confidential Enquiries into Matemal Deaths	
NCOH	National Centre for Occupational Health	
NCOP	National Council of Provinces	http://www.polity.org.za/govdocs/ parliament/ncop/index.html
NCR	National Cancer Register	
NDP	National Drug Policy	
NEHAWU	National Education, Health and Allied Workers Union	http://www.cosatu.org.za/ affiliates.html#nehawu
NFA	National Framework Agreement for the Restructuring of Parastatals	
NGO/s	Non-Government Organisation/s	
NHA	National Health Accounts	
NHLS	National Health Laboratory Service	http://www.nhls.gov.za

NICD	National Institute for Curriculum Development	
NIV	National Institute for Virology	
NP	Northern Province	http://www.tourismboard.org.za/
NPA	National Programme of Action	
NPF	National Planning Framework	
NQF	National Qualifications Framework	
NTCP	National Tuberculosis Control Programme	
NW	North West	http://www.tourismnorthwest. co.za/
OBE	Outcome-Based Education	
OP	Outpatients	
OPD	Outpatients Department	
ORS	Oral Rehydration Solution	
OTC	Over-the-Counter	
PAHO	Pan American Health Organisation	http://www.paho.org/
PBL	Problem-Based Learning	
PCP	Pneumocystis Carinii Pneumonia	
PDE/s	Patient Day Equivalent/s	
PE	Port Elizabeth	http://www.pecc.gov.za/
PERSAL	Department of Public Service and Administration Personnel and Establishment System database	
PFMA	Public Finance Management Act	http://www.polity.org.za/govdocs/ legislation/1999/act1.pdf
PHA	Provincial Health Authority	
PHC	Primary Health Care	
PHCN/s	Primary Health Care Nurse/s	
PHRC	Provincial Health Restructuring Committee	
PMA	Pharmaceutical Manufacturers Association	
PMB	Prescribed Minimum Benefits	
PPASA	Planned Parenthood Association of South Africa	http://www.ppasa.org.za/
PPP/s	Public-Private Partnership/s	
PSCBC	Public Sector Central Bargaining Chamber	
PSNP	Primary School Nutrition Programme	
PSSA	Pharmaceutical Society of South Africa	http://www.pssa.co.za

PWA		
	People living With HIV/AIDS	
PWV	Pretoria-Witwatersrand-Vaal	
R&D	Research and Development	
RAMS (now BHF)	Representative Association of Medical Schemes	
RBM	Roll Back Malaria	
RHRU	Reproductive Health Research Unit	http://www.rhru.co.za/
RPL	Recognition of Prior Learning	
RWOPS	Remunerative Work Outside the Public Sector	
SA	South Africa / South African	http://www.southafrica.co.za/
SAA	South African Airways	http://www.saa.co.za/
SAAPSA	South African Alliance for the Prevention of Substance Abuse	
SACENDU	South African Community Epidemiology Network on Drug Use	http://www.mrc.ac.za/urban/ sacendu.htm
SADC	Southern African Development Community	
SADHS	South African Demographic and Health Survey	
SAIMR	South African Institute for Medical Research	http://www.wits.ac.za/fac/med/ immunology/imm1.html
SAMC	Southern African Malaria Control	
SAMHS	South African Military Health Services	
SAMMDRA	South African Medicines and Medical Devices Regulatory Authority Act, No 132 of 1998	
SAMMDRA SAMS	South African Medicines and Medical Devices Regulatory Authority Act, No 132 of 1998 South African Medical Services	
SAMMDRA SAMS SANAC	South African Medicines and Medical Devices Regulatory Authority Act, No 132 of 1998 South African Medical Services South African National AIDS Council	
SAMMDRA SAMS SANAC SANAS	South African Medicines and Medical Devices Regulatory Authority Act, No 132 of 1998 South African Medical Services South African National AIDS Council South African National Accreditation Standards	
SAMMDRA SAMS SANAC SANAS SANC	South African Medicines and Medical Devices Regulatory Authority Act, No 132 of 1998 South African Medical Services South African National AIDS Council South African National Accreditation Standards South African Nursing Council	http://www.sanc.co.za
SAMMDRA SAMS SANAC SANAS SANC SANCA	South African Medicines and Medical Devices Regulatory Authority Act, No 132 of 1998 South African Medical Services South African National AIDS Council South African National Accreditation Standards South African Nursing Council South African National Council on Alcoholism and Drug Dependence	http://www.sanc.co.za http://www.sn.apc.org/sanca/
SAMMDRA SAMS SANAC SANAS SANC SANCA	South African Medicines and Medical Devices Regulatory Authority Act, No 132 of 1998 South African Medical Services South African National AIDS Council South African National Accreditation Standards South African Nursing Council South African National Council on Alcoholism and Drug Dependence South African National Council for Child and Family Welfare	http://www.sanc.co.za http://www.sn.apc.org/sanca/
SAMMDRA SAMS SANAC SANAS SANC SANCA SANCCFW SAQA	South African Medicines and Medical Devices Regulatory Authority Act, No 132 of 1998 South African Medical Services South African National AlDS Council South African National Accreditation Standards South African Nursing Council South African National Council on Alcoholism and Drug Dependence South African National Council for Child and Family Welfare South African Qualifications Authority	http://www.sanc.co.za http://www.sn.apc.org/sanca/ http://www.saqa.org.za/
SAMMDRA SAMS SANAC SANAS SANCA SANCA SANCCFW SAQA SARPCCO	South African Medicines and Medical Devices Regulatory Authority Act, No 132 of 1998 South African Medical Services South African National AIDS Council South African National Accreditation Standards South African Nursing Council South African Nursing Council on Alcoholism and Drug Dependence South African National Council for Child and Family Welfare South African Qualifications Authority Southern African Regional Police Chiefs Co-operation Organisation	http://www.sanc.co.za http://www.sn.apc.org/sanca/ http://www.saqa.org.za/
SAMMDRA SAMS SANAC SANAS SANCA SANCA SANCCFW SAQA SARPCCO	South African Medicines and Medical Devices Regulatory Authority Act, No 132 of 1998 South African Medical Services South African National AIDS Council South African National Accreditation Standards South African Nursing Council South African Nursing Council on Alcoholism and Drug Dependence South African National Council for Child and Family Welfare South African Qualifications Authority South African Regional Police Chiefs Co-operation Organisation South African Tuberculosis Control Initiative	http://www.sanc.co.za http://www.sn.apc.org/sanca/ http://www.saqa.org.za/
SAMMDRA SAMS SANAC SANAS SANCA SANCA SANCCFW SAACA SARPCCO SATCI SAVACG	South African Medicines and Medical Devices Regulatory Authority Act, No 132 of 1998 South African Medical Services South African National AlDS Council South African National Accreditation Standards South African Nursing Council South African Nursing Council on Alcoholism and Drug Dependence South African National Council for Child and Family Welfare South African Qualifications Authority South African Regional Police Chiefs Co-operation Organisation South African Tuberculosis Control Initiative South African Vitamin A Consulting Group	http://www.sanc.co.za http://www.sn.apc.org/sanca/ http://www.saqa.org.za/
SAMMDRA SAMS SANAC SANAS SANC SANCA SANCA SANCCFW SAAQA SARPCCO SATCI SAVACG SAVP	South African Medicines and Medical Devices Regulatory Authority Act, No 132 of 1998 South African Medical Services South African National AIDS Council South African National Accreditation Standards South African Nursing Council South African Nursing Council on Alcoholism and Drug Dependence South African National Council for Child and Family Welfare South African Qualifications Authority South African Regional Police Chiefs Co-operation Organisation South African Tuberculosis Control Initiative South African Vitamin A Consulting Group South African Vaccine Producers (Pty) Ltd	http://www.sanc.co.za http://www.sn.apc.org/sanca/ http://www.saqa.org.za/

SHI	Social Health Insurance	
SP	Sulphadoxine Pyrimethamine	
STD	Sexually Transmitted Disease	
TAC	Treatment Action Campaign	
TADSA	TB Alliance DOTS Support Association	
TASO	AIDS Support Organisation	
ТВ	Tuberculosis	
TFR	Total Fertility Rate	
TOP (CTOP)	Termination of Pregnancy (Choice on Termination of Pregnancy), Act 92 of 1996	http://www.polity.org.za/govdocs/ legislation/1996/act96-092.html
ΤΩΜ	Total Quality Management	
TRIPS	Trade-Related Aspects of Intellectual Property Rights World Trade Organisation agreement	http://www.wto.org/wto/intellec /intellec.htm
TTT	Transformation Task Team	
TVBC	Transkei-Venda-Bophuthatswana-Ciskei	
UCT	University of Cape Town	http://www.uct.ac.za
UK	United Kingdom	http://travel.yahoo.com/t/Europe/ United_Kingdom/
UNAIDS	Joint United Nations Programme on HIV/AIDS	http://www.unaids.org
UNAIDS UNCRC	Joint United Nations Programme on HIV/AIDS United Nations' Convention on the Rights of the Child	http://www.unaids.org
UNAIDS UNCRC UNDP	Joint United Nations Programme on HIV/AIDS United Nations' Convention on the Rights of the Child United Nations' Development Programme	http://www.unaids.org http://www.undp.org
UNAIDS UNCRC UNDP UNFPA	Joint United Nations Programme on HIV/AIDSUnited Nations' Convention on the Rights of the ChildUnited Nations' Development ProgrammeUnited Nations' Population Fund	http://www.unaids.org http://www.undp.org http://www.unfpa.org
UNAIDS UNCRC UNDP UNFPA UNICEF	Joint United Nations Programme on HIV/AIDSUnited Nations' Convention on the Rights of the ChildUnited Nations' Development ProgrammeUnited Nations' Population FundUnited Nations' Children's Fund	http://www.unaids.org http://www.undp.org http://www.unfpa.org http://www.unicef.org
UNAIDS UNCRC UNDP UNFPA UNICEF UPFS	Joint United Nations Programme on HIV/AIDSUnited Nations' Convention on the Rights of the ChildUnited Nations' Development ProgrammeUnited Nations' Population FundUnited Nations' Children's FundUniversal/Uniform Patient Fee Schedule	http://www.unaids.org http://www.undp.org http://www.unfpa.org http://www.unicef.org
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