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REFERENCES
MEMBERS OF THE DRAFTING TEAM

Di McIntyre
Health Economics Unit
Department of Community Health
University of Cape Town
Cape Town

Jane Doherty
Centre for Health Policy
Department of Community Health
University of Witwatersrand
Johannesburg

Gerald Bloom
Institute of Development Studies
University of Sussex
Brighton
England

Prem Brijlal
Department of Economics
University of Durban-Westville
Durban
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### ABBREVIATIONS USED IN THIS REPORT

<table>
<thead>
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<th>Abbreviation</th>
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<tr>
<td>CEAS</td>
<td>Central Economic Advisory Service</td>
</tr>
<tr>
<td>CPI</td>
<td>Consumer Price Index</td>
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<tr>
<td>CSS</td>
<td>Central Statistical Service</td>
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<tr>
<td>DNHPD</td>
<td>Department of National Health and Population Development (now the national Department of Health)</td>
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<tr>
<td>E. Cape</td>
<td>Eastern Cape</td>
</tr>
<tr>
<td>E. Tvl</td>
<td>Eastern Transvaal</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GNP</td>
<td>Gross National Product</td>
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<td>HER</td>
<td>Health Expenditure Review</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>HMO</td>
<td>Health Maintenance Organisation</td>
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<td>HSL</td>
<td>Household Subsistence Level</td>
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<td>IDT</td>
<td>Independent Development Trust</td>
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<td>IMR</td>
<td>Infant Mortality Rate</td>
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<tr>
<td>IPA</td>
<td>Independent Practitioner Association</td>
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<tr>
<td>MMR</td>
<td>Maternal Mortality Rate</td>
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<tr>
<td>MPI</td>
<td>Medical Price Index</td>
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<tr>
<td>N. Cape</td>
<td>Northern Cape</td>
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<tr>
<td>NGO</td>
<td>Non Governmental Organisation</td>
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<td>N. Tvl</td>
<td>Northern Transvaal</td>
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<tr>
<td>N-West</td>
<td>North-West Province</td>
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<td>ODA</td>
<td>Overseas Development Administration</td>
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<td>OFS</td>
<td>Orange Free State</td>
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<td>PDL</td>
<td>Poverty Datum Line</td>
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<td>PHC</td>
<td>Primary Health Care</td>
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<td>PYLL</td>
<td>Potential Years of Life Lost</td>
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<td>R</td>
<td>Rands</td>
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<td>RAMS</td>
<td>Representative Association of Medical Schemes</td>
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<td>RDP</td>
<td>Reconstruction and Development Programme</td>
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<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>ReHMIS</td>
<td>Regional Health Management Information System</td>
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<td>SAMDC</td>
<td>South African Medical and Dental Council</td>
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<td>SARB</td>
<td>South African Reserve Bank</td>
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<td>SHI</td>
<td>Social Health Insurance</td>
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<td>TBVC states</td>
<td>The former ‘independent’ states of Transkei, Bophuthatswana, Venda and Ciskei</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
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<td>VAT</td>
<td>Value Added Tax</td>
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<td>W. Cape</td>
<td>Western Cape</td>
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<tr>
<td>WHO</td>
<td>World Health Organisation</td>
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<tr>
<td>KZ-N</td>
<td>KwaZulu-Natal</td>
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South Africa spent over 30 billion rands on health services in 1992/93. This amounted to 8.5 percent of its Gross Domestic Product (GDP). Its numbers of hospital beds and health personnel relative to population are average or only slightly below average for a country with its GDP per capita. However, the accessibility and quality of health services vary enormously across the country, with the poor, most of whom are African, receiving vastly inferior care.

The government has announced its intention to restructure the health services. The aim of this report is to provide the information on health finance and expenditure that it requires to manage the process of structural change. It is not a planning document, nor does it attempt to make policy recommendations. The report focuses largely on public sector health services, and in particular on the needs of the poor.

**The private sector**

In spite of the fact that only 17 percent of the population are members of a medical scheme and only 23 percent use private sector health services on a regular basis, the private sector has a substantial share of total health care resources. Almost three-fifths of total health expenditure is on private sector services. Approximately 62 percent of general doctors, 66 percent of specialists, 93 percent of dentists and 89 percent of pharmacists practice in the private sector.

Nearly two-thirds of private sector health care spending was funded through medical schemes in 1992/93. Direct payments by households to health service providers accounted for a further 23 percent of private sector expenditure. This included cash payments to general practitioners and the purchase of over-the-counter medicines.

Over the past decade, expenditure by medical schemes increased faster than the rate of inflation. Spending on medicines and private hospitals rose particularly rapidly over this period. A related finding is that the number of beds in private for-profit hospitals nearly doubled between 1988 and 1993. Members of medical aid schemes used health services costing approximately 15 times as much per person as public services in the poorest fifth of magisterial districts. While medical scheme contributions were equivalent to 7 percent of average salaries in 1982, they had increased to 15 percent of salaries by 1992.

The major challenges facing the private health sector are to contain the rapid cost spiral and extend access to private sector resources to a larger proportion of the population.

**The public sector**
The public health services are financed almost entirely out of general tax revenue. However,
there are severe constraints on increasing tax-funded health care spending. This is related to the low rate of economic growth, the need to repay government debts, the pressure to reduce government spending, and the competing claims for public resources by other social services.

The public health services are biased towards curative, hospital-based care. Acute care hospitals spent over 76 percent of total recurrent public health expenditure in 1992/93. Academic and other tertiary hospitals alone accounted for 44 percent of total recurrent public health expenditure, while non-hospital primary care services accounted for only 11 percent.

Public health care resources are not distributed equitably between provinces or between regions within the provinces. For example, the public sector in the richest magisterial districts employs 4.5 times more general doctors, 2.4 times more registered nurses, and 6.1 times more health inspectors than in the poorest districts. Average public expenditure per person on health services in the richest districts is 3.6 times more than in the poorest districts. These data under-state the differences since a significant proportion of the residents of rich districts depend upon private sector providers.

South Africa’s population suffers from high levels of morbidity and premature death. This burden of illness could be substantially diminished at relatively low cost by strengthening preventive programmes, and providing access to effective curative care to those in greatest need. Spending on these activities is internationally regarded as an important investment in human capital, and a key component of a poverty reduction programme.

**The costs of reorienting the public health service**

This report estimates that an additional 1.5 - 2.5 billion rands will have to be spent annually on public sector primary care services in order to ensure full coverage by a number of key preventive programmes, and extend access to basic health services to everyone who needs them.

Additional resources will also be required for other aspects of public health sector restructuring and service extension. Although not quantified in this report, these potential costs include:

- the capital costs of building new primary care facilities;
- the capital and recurrent costs of building additional community hospitals in areas which have poor or no access to such facilities;
- the recurrent costs of developing specialist services in currently under-resourced provinces;
- the costs associated with integrating and decentralising public health administration and services in terms of training, the development of management procedures, and increased personnel costs because of the integration of authorities with different salary structures; and
the costs related to increased demand for care in public sector facilities as a result of population increases, the impact of the HIV/AIDS epidemic, higher numbers of referrals to hospitals as more people get access to primary care, and a general rise in expectations.

Potential sources of finance for meeting government commitments to provide additional public health services are considered in the following sections.

**Improving value for money in public hospitals**
A substantial proportion of the cost of expanding primary care services will have to be financed out of savings on hospital services. In particular, academic and other tertiary hospitals are likely to face increasing budgetary constraints and will have to reassess their role. Particular considerations for academic and tertiary hospitals include:

- the potential savings from restricting outpatient visits to referrals for specialist care;
- the downgrading of some facilities so they provide less expensive care to general patients; and
- more aggressive competition with the private sector for patients.

Improvements in management could lead to efficiency savings within public hospitals. A prerequisite would be to give hospital managers more decision-making powers, with associated technical support. It will take a considerable effort to make substantial savings as they would have to come largely from decreases in staffing levels and/or increases in productivity. It is important to distinguish between increases in efficiency which enable a hospital to provide the same services for less money, and budgetary cuts which could lead to a fall in quality.

Other options should also be considered for reducing overall public sector spending on hospitals including:

- closing facilities which have very low occupancy rates;
- sale or leasing of a facility or part of it to the private sector; and
- competing with private hospitals for patients.

**User fees**
Another option for financing increases in public health services is to generate more revenue from charges to patients. There is limited scope for increasing fees in facilities which primarily serve the poor, without jeopardising access to care. However, it may be possible to increase the revenue generated from private patients, particularly in the tertiary and academic hospitals. This would require negotiation with the Department of Finance to ensure that health budgets would not be decreased in line with increases in revenue. It would also be necessary to implement measures to ensure that hospitals continue to provide public patients with specialist care when they require it.

One factor which may limit the ability of public hospitals to increase cost recovery is the
competition from private facilities. There may be a greater potential in the longer term if some form of hospitalisation insurance is established. This would make possible substantial reductions in government allocations to tertiary and academic hospitals without reducing service provision.

**Government support** Given that it may take some time to establish the additional sources of finance outlined above, the key immediate source of additional recurrent expenditure is the national government. Increases in budgetary allocations could be regarded as short-term "gap-funding". Some of this gap could be bridged with Reconstruction and Development Programme (RDP) funds. In future years, provincial health departments will have to identify alternative sources of finance, or decrease the size of their health service, unless economic growth is faster than currently projected.

Some growth in the health budget could be financed out of savings on government funding for private sector health services. These include tax exemptions for company contributions to medical aid schemes and subsidised training for health workers. The public sector makes substantial payments to the private sector through contributions to medical aid schemes on behalf of government employees (1.8 billion rands in 1992/93). Measures need to be taken to set limits on the cost of this coverage.

Other options available to national, provincial or local governments for financing increases in health services include:

- supplementation of the budgetary allocations out of local taxes, utility sales and rates;
- special taxes on goods which adversely affect health, such as tobacco or alcohol;
- the establishment of social health insurance to cover primary care services; and
- the development of hospitalisation insurance (and competition by public sector hospitals for patients).

**Donor funding**
Donors are an additional source of finance during the transition period. Their support will be particularly important for development of infrastructure and funding some of the costs of transition. However, care will have to be taken to ensure that the recurrent costs of expanded services can be funded out of local resources.

**Planning for change**
One of the major conclusions of this report is that the reprioritisation of public health services and the process of structural change needs to be carefully planned and managed. Otherwise, the poorer areas may miss a window of opportunity for the establishment of effective services, and poorly managed budget cuts in the rich areas could result in serious disruption of services, low staff morale, strike action, dissatisfaction among health service users and damage to the long term future of the services. This planning process should occur largely at the provincial and district levels and should include the following aspects:
proposals for the construction of new facilities, including estimates of the recurrent cost implications to prevent the construction of more facilities than the health services can afford;

- a strategy for improving and expanding primary care services rapidly, such as through providing additional staffing, improved drug supplies, and extending the hours of opening in existing public sector facilities, or by means of contracts with private sector providers; and

- a strategy for improving resource use by existing facilities, especially within hospitals.

Considerable investment will be required to manage the transition process effectively. This will include resources for strategic analyses of the options for change, training of personnel for primary care service delivery and administration, the development of information and management systems, and the monitoring and evaluation of progress.

Summary
There are substantial resources available for meeting the health needs of South Africans. However, there are gross inequalities in the distribution of these resources between the public and private sectors, between levels of care, and between geographic areas. A major redistribution is required, but this will have to be managed in order to minimise disruption. In the longer term, it should be possible to make additional resources available for meeting the needs of the under-served through efficiency savings, improved cost-effectiveness of all health services, and increased cost-recovery at hospitals. However, some additional enabling funds will be required from government budgets and donors to ensure that primary care services are substantially improved within the next few years. In the longer term, there is likely to be an increase in demand for the more sophisticated services, as part of the general development of the economy. It is impossible, at present, to anticipate the relative roles of the public and private sectors in financing and providing these services.
There is widespread agreement among members of the Government of National Unity and other role players in South Africa’s health sector that they need a comprehensive and accurate picture of financial flows in the health sector in order to assess the alternatives for providing and financing health services. A number of key stakeholders attended a meeting in July 1993 to discuss how to provide that information. They decided that a health expenditure review (HER) should be prepared.

It was agreed that the principal audience for the report should be senior public sector officials in the Ministries of Health, Finance and the Reconstruction and Development Programme (RDP), other stakeholders in South Africa’s health sector and members of the international donor and lending community. The decisions of that meeting have been published by the Health Systems Trust (1993) and are summarised below.

The objectives of the HER should be to determine total expenditure on health care and quantify its distribution by type of service, geographic area, and input category, and its sources of finance. It should provide information on all public and private sector sources of finance and providers of services, but not on other health-related activities, such as water supply and sanitation. It should not make policy recommendations.

The following process was followed in the production of the report:

- contracts for the collection of data were awarded to a number of South African academic institutions, health service providers and private consultancy groups;
- the World Bank and selected international consultants provided technical assistance;
- The Health Systems Trust managed the project and a reference group was established to ensure the technical quality of the data; and
- a drafting team was appointed to prepare the final report

Sources of data
The principal source of data on public sector health care expenditure was the Regional Health Management Information System (ReHMIS), developed by Dr Kobus Herbst of the Medical University of South Africa (MEDUNSA). A large number of health personnel collected information on equipment, personnel and expenditure, from every public sector health care facility. These data were entered into the ReHMIS database. A preliminary report on some of the ReHMIS data was published by Kistnasamy and Herbst (1994). The drafting team worked closely with Dr Herbst to validate the ReHMIS data and design the
analyses to be performed (Appendices A and B provide detailed information about the methodologies employed). The tables in this report illustrate the kinds of analyses that can be performed. These data are available to planners at national and provincial levels.

Technical reports were commissioned on the following issues with regard to the public sector: expenditure on health services by other central government departments such as the Departments of Defence, Police and Prisons; research expenditure (Blecher and McIntyre 1994); expenditure on the training of health personnel (Bunting 1994); proposed capital projects (Deloitte and Touche 1994a); and historical trends in hospital expenditure (Price and Broekmann 1994). A review of the international literature on the distribution of health expenditure between levels of care was also commissioned (Doherty 1994). Each report describes the methodology it employed and the sources of data.

An extensive survey of the private health sector was undertaken (Valentine and McIntyre 1994). Information was collected from the following sources: the larger medical schemes, scheme administrators, insurance companies offering health cover products, the Chamber of Mines and other industry-based sources, pharmaceutical manufacturers and wholesalers, market research groups, and published and unpublished surveys with information on household ‘out-of-pocket’ expenditure on health. A further technical report documented expenditure on health care projects funded by donor organisations (Deloitte and Touche 1994b).

An extensive peer-review process was undertaken on all aspects of the Health Expenditure Review. All technical reports were read by at least one independent reviewer, and the final draft of this report was reviewed by 21 individuals working in the public and private health sectors, the Department of Finance and State Expenditure, academic and research institutions, and the World Bank. In addition, meetings were held with senior officials from the national Department of Health and the Departments of Finance and State Expenditure, at which the contents of the final report were discussed.

The conclusions presented in this report should not be regarded as reflecting the views of the individuals who reviewed it, nor the organisations who provided financial support for this project. Any errors and omissions remain the responsibility of the drafting team.
CHAPTER 1

INTRODUCTION

1.1 THE PURPOSE OF THIS REPORT

South Africa spends a great deal of money on its health services and yet its population suffers from a large amount of preventable illness and premature death. This is due, in part, to factors outside the health sector such as the widespread prevalence of severe poverty and the poor quality of basic services in many parts of the country. However, international experience has shown that good health services can contribute to improvements in health.

The Government of National Unity has stated in its Reconstruction and Development Programme (RDP) that one of its aims is to improve the population’s health. In this way it hopes to reduce the burden of preventable illness and death substantially by providing everyone with access to at least a minimum package of essential preventive and curative health services. This report particularly focuses on the needs of those living in poverty, who constitute almost half of the population and suffer the most serious health problems. It assesses the current shortfall in the provision of basic services to the poor and estimates the cost of making this shortfall up.

The report provides much less analysis of the health services used by those who are not poor. That does not mean that these services do not face serious problems. On the contrary, their cost has risen dramatically in recent years and they have tended to overemphasise sophisticated curative care and neglect prevention. Organisations that represent the users of these services are pressing for change. An additional study is required which focuses specifically on these problems.

The Minister of Health has established a Committee of Inquiry into a National Health Insurance System to review the relative roles of the private and public sectors in the provision of primary care services and to assess the potential for social health insurance as a source of additional health finance. The Committee is undertaking a major exercise in data collection as part of that review. As a result, it will be able to provide more detailed analysis of the private sector than this report.

South Africa’s health services are embarking on a process of structural change. Given that the health sector represents a twelfth of the South African economy, the restructuring of this sector represents a major challenge for policy makers. This report is not a detailed planning document in itself, nor does it attempt to be policy prescriptive. The aim of this report is rather to provide those involved in the restructuring process with an understanding of the health sector they have inherited. This kind of understanding is essential in order to
1.2 OUTLINE OF THE REPORT

The report begins in Chapter 2 with an overview of South Africa’s economic and social structure. The aim is to describe the context within which the problems of the health sector must be understood. This chapter also identifies the vulnerable groups most in need of basic health services.

Chapter 3 introduces South Africa's health sector summarising the major health problems, outlining the structure of the health sector and providing an overview of the size and relative roles of the public and private sectors.

Chapters 4 and 5 describe the private and public sectors, respectively, presenting data on the sources of finance and the pattern of expenditure, and identifying the major challenges which both the private and public sectors face.

Chapters 6 and 7 discuss specific components of the public sector in more detail. Chapter 6 focuses on the potential for savings on hospital expenditure through better distribution of resources between levels of care, improvements in operational efficiency and increased collection of user fees. Chapter 7 quantifies the shortfalls in expenditure on primary health care in the poorer parts of the country and estimates how much it would cost to provide a package of essential services to the population.

Chapter 8 briefly highlights some of the strategies for health sector restructuring, arising from this report, that need to be developed at provincial level.
CHAPTER 2

THE ECONOMIC AND SOCIAL STRUCTURE OF SOUTH AFRICA

2.1 INTRODUCTION TO SOUTH AFRICA

South Africa is a large country with a surface area of just over 1.2 million square kilometres situated at the southern tip of Africa. Its population is approximately 40 million and is growing at a rate of 2.5 percent a year (Du Toit and Falkena 1994).

South Africa is an upper-middle income country with a gross national product of US$2,560 per person in 1991 (World Bank 1993). Its economic structure reflects its level of development with agriculture and mining accounting for only 13.8 percent of its gross domestic product (GDP), manufacturing and construction accounting for 32 percent and services accounting for 54.1 percent (Du Toit and Falkena 1994). According to the 1991 census, 56 percent of the population live in cities or large towns, 1 percent live in small towns or villages and 43 percent live in the rural areas (CSS 1993c).

In spite of having a level of output per person higher than every other country in sub-Saharan Africa except Botswana and Gabon, South Africa faces economic problems. Since the early 1980s its GDP increased by less than 1.5 percent a year while its population grew by 2.5 percent (Table 2.1). Its gross domestic income, which takes into account changes in the exchange rate, did not grow at all, and its gross domestic income per capita fell substantially.

Table 2.1 - Indicators of South Africa's economic performance, 1981 - 1992

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP Growth (%)</th>
<th>Population Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>1.5</td>
<td>2.5</td>
</tr>
<tr>
<td>1985</td>
<td>1.3</td>
<td>2.5</td>
</tr>
<tr>
<td>1992</td>
<td>1.4</td>
<td>2.5</td>
</tr>
</tbody>
</table>

One consequence of this slow growth is that very few new jobs have been created. Between 1981 and 1985 formal sector employment hardly grew at all and between 1986 and 1992 it decreased. It is extremely difficult for new entrants to the labour market to find work. An increasing number of people earn their living in the so-called ‘informal sector’.

There are great income inequalities in South Africa. 51 percent of annual income goes to the richest 10 percent of households while under 4 percent goes to the poorest 40 percent (World Bank 1994). The degree of inequality in a country is expressed by the Gini coefficient: the greater the inequality the closer it is to 1. Estimates of the Gini coefficient for South Africa in 1994 range from 0.54, calculated on the basis of expenditure per adult equivalent by Donaldson and Malan (1994), to 0.65, calculated on the basis of income per adult equivalent by Whiteford and McGrath (1994). Income-based coefficients for other upper middle income countries range between 0.45 and 0.63, making South Africa one of...
the most unequal of societies (Fallon and da Silva 1994). The segmented structure of South African society, mainly along racial lines, is discussed in more detail in section 2.4.

South Africa’s rapid rate of population growth will continue to put pressure on its stock of housing and its educational, health and social services. If the population continues to grow according to present trends it will double within 55 years; however, much of that increase is expected to take place in the next few years (Bos et al 1994).

The Government of National Unity has committed itself, in its Reconstruction and Development Programme (RDP), to addressing the issues of slow economic growth and poverty alleviation. It will take time to overcome the structural constraints on change. The remainder of this chapter highlights the characteristics of South Africa’s economy and political and administrative system which are of greatest relevance to the health of its people and the future development of the health sector.

2.2 THE ECONOMIC AND ADMINISTRATIVE GEOGRAPHY OF SOUTH AFRICA

2.2.1 Patterns of settlement

Prior to 1994 South Africa’s political and administrative system was structured along racial lines. The apartheid policy, which fostered the separate development of each racial group, worked to the advantage of Whites (who constitute 13.2 percent of the population) and to the disadvantage of Coloureds, Asians and Africans (who make up 8.6, 2.6 and 75.6 percent of the population respectively). The patterns of population distribution and economic development have been strongly influenced by apartheid. South Africa is organised in three distinct economic regions: the economic core, the inner periphery, and the outer periphery (Table 2.2).

The economic core consists of Pretoria-Witwatersrand-Vereeniging (PWV), Durban-Inanda-Pinetown (DIP), the Cape Peninsula and Port Elizabeth-Uitenhage, as well as the metropolitan areas of East London, Pietermaritzburg, Bloemfontein and Orange Free State Goldfields. 35 percent of South Africa’s population lives in the economic core. Most of the Whites, Coloureds and Asians live in this region.

Until 1986 the movement of Africans to the metropolitan centres was contained by influx-control legislation. In that year the controls were abolished and the movement of Africans to the cities accelerated. In 1991, approximately half of the population of the economic core was African.

The Urban Foundation predicts that the population in the metropolitan areas will grow by 4 percent a year between 1995 and 2000. If this happens, they will contain half of South Africa’s people by the end of the decade. There is already a serious shortage of housing and serviced land in the cities and many people live in informal squatter settlements. The establishment of an adequate infrastructure for this rapidly growing
The urban population will be an important task for the government during the next few years.

The *inner periphery* consists of the areas previously allocated to the White, Asian and Coloured populations under the apartheid ‘Group Areas’ policy. It is organised into towns and commercial farms. Over 8 million people, two thirds of them African, live in this area. A large proportion of the population of the inner periphery work as agricultural labourers. The provision of public services to the African population is very poor in most of this area.

The *outer periphery* is made up of the ex-‘black homelands’, comprised of the so-called ‘independent states’ and ‘self-governing territories’. 44 percent of South Africa’s population lives in this area. The principal economic activity in the outer periphery is subsistence agriculture. Many men migrate to the urban areas to find work and there is a disproportionate number of women, young children and the aged in these areas.

| Table 2.2 - Distribution of the population between economic regions, 1991 |

2.2.2 Political and administrative structure

Prior to 1994, South Africa was divided along racial lines into four ‘independent states’, six ‘self-governing territories’, and four provinces of ‘White’ South Africa (Box 2.1 and Map 2.1). It is now organised into a single, multiracial country with an elected National Parliament and an executive headed by a President. There are nine provinces, each with an elected legislature and an executive headed by a Premier (Map 2.2).

**Box 2.1 - Previous and present political and administrative divisions**

South Africa is establishing a system of government in which the provinces will have a considerable amount of power. The provinces will probably be responsible for agriculture, cultural affairs, education, environment, health, housing and other services.

Almost all taxes currently accrue to the national government which transfers funds to the provincial governments. The government has not decided on the future distribution of tax authority between levels of government, nor has it defined the criteria for determining the size of inter-provincial fiscal transfers.

Until recently there were approximately 800 local government authorities. Their roles varied a great deal between localities previously designated as ‘White’ or ‘African’ and between urban and rural areas. The present process of consolidation will yield approximately 300 local authorities.
The functions of local authorities in formerly White urban centres include the provision of water, sanitation, transportation, electricity, preventive and promotive primary health care services, housing and security (Development Bank of Southern Africa 1994). These services are financed through a combination of grants from the national government and local revenue generated from property taxes, levies, fees and other taxes.

The responsibilities of authorities in formerly African urban localities are similar to those in White municipalities. However, local governments in these areas have not been able to discharge them adequately. One reason, among many, is that they have a limited tax base which has been further weakened by boycotts of rents and taxes organised against administrations which lacked political legitimacy.

The rural areas have weak political and administrative structures and virtually all services are organised at the provincial level.

The new national government intends to consolidate authorities previously separated along racial lines into unified local governments. This will establish, in some areas, municipal governments with the capacity to finance their own basic services. In other parts of the country local governments will depend on fiscal transfers from provincial and national levels to a greater extent.

The government plans to establish district health services. It is not yet clear how the health districts will relate to the proposed local government structures. While the relative roles of national and provincial governments are quite clear, the roles of these and local governments in financing and providing primary health care services have not been decided.

2.3 THE PROVINCES OF SOUTH AFRICA

There are considerable differences between South Africa’s nine provinces: Northern Cape covers the largest territory and Gauteng the smallest; their populations vary from less than 1 million in Northern Cape to over 8 million in KwaZulu-Natal (Table 2.3).

Table 2.3 Basic data on South Africa's provinces

The provinces differ considerably in their level of development. Gauteng and Western Cape account for half of South Africa’s GDP, in spite of containing only a quarter of its population. On the other hand, Northern Transvaal produces only 3 percent of the GDP and has over 12 percent of the population. These differences are reflected in the average personal income per capita which ranges from 4,992 rands in Gauteng to 725 rands in Northern Transvaal.
The substantial movements of people between provinces in search of work is illustrated by the differences in the dependency ratio. It is very low in Gauteng, where many people travel in search of jobs, and it is high in provinces which include the former homelands, such as Northern Transvaal, Eastern Cape, KwaZulu-Natal and Eastern Transvaal. The areas with high dependency ratios have a high proportion of children and old people, who tend to have a greater need for health services.

The differences in the quality of life between provinces is reflected in the human development index which is composed of a number of indicators of health status, education and income. The index varies from over 0.7 in the better off provinces of the Western Cape, Northern Cape and Gauteng to under 0.5 in Eastern Cape and Northern Transvaal.

2.4 INEQUALITY IN SOUTH AFRICA

2.4.1 Inequality between racial groups

One of the dominant characteristics of the South African economy is the inequality between racial groups. Fallon and da Silva (1994) estimate that, in 1987 Whites earned 9.5 times more per person than Africans. In addition, the racially defined governments spent much more per person on services in White areas than in African ones. The majority of Whites live in cities which have a modern infrastructure and are served by well-funded schools and modern hospitals. Most African urban localities have much poorer services and large numbers of people live in shanty towns. The rural African population has poor access to public services.

2.4.2 The three broad income groups

It is possible to segment South Africa’s population into three broad categories on the basis of their household income.

High income earners, which includes the majority of Whites, enjoy a style of life similar to that of people in advanced industrialised countries. Most live in their own home or rented accommodation in well-serviced parts of the cities. They possess a number of household goods and pay regularly into a pension plan. This group obtains most of its medical care from the private sector and the majority are members of medical aid schemes. Approximately 6.7 million people are members of these schemes or purchased private health insurance (Chapter 4). The number of people in the high income group is between 7 and 8 million or between 17 and 20 percent of the population.

The low to middle income group includes approximately a third of the population. Large numbers of this group live in badly serviced urban localities. An important characteristic of this group has been the growth of unionisation since the legalisation of African unions in 1979. In 1990 approximately 30 percent of African employees
were registered union members (Fallon and da Silva 1994). One result of the increasing organisation of the African workforce has been a rise in real wages despite the recession of the 1980s. Another result has been the development of institutionalised social benefits such as pensions and low-cost medical benefit schemes. Approximately 2.3 million people belong to medical benefit and "exempted" schemes or have access to on-site industry-specific services (Chapter 4).

The government defines households as poor if their annual income is below the poverty datum line (also called the minimum living level, or household subsistence level). This was approximately 9,500 rands per household in 1993 (Potgieter 1993). Du Toit and Falkena (1994) estimate that almost half of South Africa’s population is poor by this definition. The highest concentrations of poverty are in the inner and outer periphery where over 60 percent of the population have incomes below the household subsistence level, and where the population is mostly African. The conditions of life in these areas are similar to poor areas in other parts of Southern Africa, where people find it difficult to obtain clean water, there is inadequate disposal of human wastes, literacy levels are low and a large proportion of children are malnourished.

The rapid migration of Africans to the metropolitan centres has led to a growing problem of urban poverty. Most of the housing in lower-income urban communities is overcrowded and squatter settlements have sprung up. A study by the Urban Foundation estimates that the number of squatter shacks increased by 60 percent per annum between 1985 and 1991 (Jordaan 1991). It is difficult to estimate accurately how many urban dwellers have incomes below the household subsistence level, particularly because many of them supplement their earnings through work in the informal sector.

A new source of information on the poor is a household survey conducted in 1993/94 by the Project for Statistics on Living Standards and Development (1994). A preliminary analysis of its data by Klasen and Doherty (1995) found that 23.7 million South Africans have incomes of less than 301 rands per adult equivalent per month. Table 2.4 summarises some of the more striking characteristics of these members of the poorest 40 percent of households, and contrasts their situation with that of the members of the richest 20 percent of households.

Table 2.4 - A profile of the poor in South Africa, 1993/94
2.4.3 Classification of magisterial districts by average income

A major objective of this report is to assess the degree to which the health service needs of poor households are being met. The provinces are too large to provide much information in this regard. The strategy most commonly employed in South Africa is to analyse data by racial group. However, racial categories are also too large to provide enough detail for planning, and obscure the fact that there is a wide variation in the economic situation of members of each racial group. In addition, limited information is available at a national level linking race with the provision and use of health services.

The unit of analysis which this study employs is therefore the magisterial district. South Africa organises its census data into 377 of these districts. These districts do not necessarily cover the same area as the new administrative districts which the government intends to establish. The main purpose of organising data in this way is to illustrate geographic inequalities in the provision of public health services. Internationally, such analysis is undertaken by linking service delivery data to socio-economic data obtained through the census. This study sorts magisterial districts into quintiles (or fifths) on the basis of their average income per capita in 1985 (van Wyk 1989) (Table 2.5). In other words the poorest fifth of districts are grouped together in Q1 and the richest fifth are in Q5. It is unlikely that the ranking of districts has changed very much since 1985.

Table 2.5 - Classification of magisterial district by levels of average income

The poorest 150 magisterial districts (quintiles 1 and 2) contain almost half of South Africa’s population (see map 2.3), including the entire 15.2 million residents of the outer periphery, 1.3 million residents of the inner periphery and 3.3 million residents of the inner core. Almost the entire population of these districts is African. A high percentage of households have incomes below the household subsistence level. There are more females than males, reflecting the migration of men to metropolitan areas in search of work.

This report returns to these districts in Chapter 3 which explores the health problems of their populations, and in Chapters 5 and 7 which discuss the provision of public health services in them. As stated earlier, the aim of this report is to focus on the situation of the poor. One flaw in this approach is that it misses poor communities in districts with a high average income per capita, particularly in the inner periphery and the metropolitan areas. The problems of these populations need to be identified as part of the government district planning exercises which will take place during 1995. Similarly, while income and race are closely related in the poorest quintiles, racial differences in access and utilisation in richer districts need to be explored.

2.5 GOVERNMENT EXPENDITURE
2.5.1 Trends in government expenditure

Government expenditure has risen over recent years, in spite of slow economic growth (Table 2.6). Since the mid-1980s government expenditure has grown more quickly than total revenue. According to the 1994 budget review, the budget deficit was 27.4 billion rands in 1992/93, or 7.8 percent of GDP (Department of Finance 1994). The servicing of the debt was expected to cost 5.6 percent of GDP in 1994/95, or 17.5 percent of government expenditure. It will be difficult to increase government expenditure further unless there is substantial economic growth.

Table 2.6 - Real annual rates of growth of government revenue, expenditure and GDP (constant 1985 prices)

2.5.2 Prospects for the immediate future

While a upswing in the economy is expected, South Africa’s GDP is unlikely to grow by much more than 3 percent a year in real terms over the next few years, according to projections based on the macro-economic model developed by the World Bank. This suggests that, given a population growth of more than 2 percent, growth in per capita income is likely to be small.

The government has stated its intention to decrease the size of its deficit relative to the GDP through measures to increase revenue and control growth in expenditure. Given that an increasing share of public sector spending will be needed to service the government’s debt, it appears likely that public sector spending on other items will grow very slowly in real terms.

Within these tight parameters, health will have to compete for budget increases with housing, welfare, education and other services for which there is a great backlog of unmet need. This suggests that it would be unrealistic to expect much increase in the government health budget relative to population growth. Potential alternative sources of finance, such as dedicated payroll taxes, are currently being examined by health sector policy makers. In addition, there is considerable duplication of government services and it could be argued that there is potential for savings within the health sector which could be used to finance more services for the poor. However, the cost of transition is likely to be high. In sum, while there is a need to extend health services to the poor, this will have to take place in an environment of tight financial constraint.
CHAPTER THREE

HEALTH AND HEALTH CARE IN SOUTH AFRICA

3.1 INTRODUCTION

This chapter introduces South Africa's health sector. Section 3.2 describes the health problems of the population; section 3.3 outlines the size and structure of the health sector; and section 3.4 summarises the data on the inequalities in the provision of health services between social groups. In order to put the situation of South Africa into an international context, indicators of its health status and provision of health services are compared with those for countries with similar GDPs per capita and with the weighted averages for middle income countries, other countries in sub-Saharan Africa and the established market economies.

3.2 THE HEALTH OF SOUTH AFRICA’S PEOPLE

A number of questions have been raised about the accuracy of South African health statistics. In the first place, most data exclude the former homelands in which over 40 percent of the population lives. Furthermore, as many as 40 percent of deaths in African communities are not registered and census data are poor. In addition, the cause of death is recorded simply as ‘natural causes’ for a large proportion of cases, particularly in rural areas. In spite of these difficulties, it is possible to get an idea of the kinds of health problems the population faces. However, the statistics presented in this chapter probably underestimate substantially the levels of ill health and premature death.

This section makes considerable use of surveys of the literature prepared by Rispel and Behr (1992) and the Kaiser Foundation (1991), which provide a rough idea of the health situation of the different population groups. It also draws upon an analysis of mortality data for 1990 which was carried out by David Bourne (1994) for the Health Expenditure Review.

3.2.1 Deaths

The number of babies who die before reaching one year of age for every 1,000 live births is called the infant mortality rate (IMR). South Africa’s IMR was 49 in 1992 (DNHPD 1994). This was higher than the weighted average for middle income countries (Table 3.1). Botswana, a country with a similar income per capita to South Africa’s, had an IMR of 36.
There are considerable differences between the IMRs of South Africa's racial groups. In 1992 Whites and Asians had IMRs of 7 and 10, levels similar to the average of 8 for established market economies. The IMRs of Coloureds and Africans, on the other hand, were 36 and 54. These may be underestimates because of the problems with data outlined above. A large proportion of the excess deaths of children were caused by gastro-enteritis and respiratory infections, which are largely related to bad living conditions and a lack of adequate primary health care services (Rispel and Behr 1992).

Table 3.1 Data on health status in South Africa, countries with similar GDPs per capita and weighted average for countries organised into income groups

The maternal mortality rates (MMRs), that is, the number of deaths due to complications of pregnancy and childbirth per 100,000 live births, are also high. The Department of Health (previously the Department of National Health and Population Development or DNHPD) reported an average MMR of 32 in 1991. According to Klugman and Weiner (1992), the real rate was higher because many deaths were unregistered. They estimate that the MMR for Africans was 43 in 1990. Neither the official estimate nor the revised one include data from the ex-homelands, where MMRs were probably higher than the national average.

For South Africa, the average life expectancy at birth was 63 in 1991. This is several years shorter than in other countries at similar levels of development (Table 3.1). The racial groups have quite different life expectancies at birth. The life expectancy for Whites was 69 for males and 77 for females between 1985 and 1990; the values for Africans were 61 and 67, respectively.

Figure 3.1 summarises the analysis by Bourne (1994) of the major causes of potential years of life lost (PYLL) in 1990. The PYLL is calculated from the age-specific death rates, by subtracting the age at death from 65 years. A death of a 1 year old is counted as 64 years lost and of a 5 year old as 60 years. Deaths over 65 do not count towards the PYLL.

The largest single cause of loss of potential years of life was accidents, poisoning and violence, which accounted for 22 percent of the total. Infectious diseases, many of which could have been prevented or effectively treated, accounted for a further 14 percent. A third major source of excess deaths were perinatal causes, which are often related to inadequate primary care services. These findings should be treated with caution because many deaths are not registered and 14 percent of potential years of life were lost due to ill-defined causes. The unreported and unclassified deaths probably included a high proportion of the preventable causes prevalent among the poor.

The poor quality of the data means that it is impossible to quantify accurately the differences in health status between the quintiles of magisterial districts sorted by average income per capita. The poorest quintile contains many districts in the ex-homelands, for which few data are available on health. Furthermore, it is likely that the proportion of unreported deaths is higher in the poorer districts. One indication of the differences in health between the different population groups is the higher percentage of deaths due to infectious and parasitic
illnesses or ill-defined causes in the poorer quintiles. These causes accounted for 65 percent of deaths in the poorest and second poorest quintiles. On the other hand, they accounted for under 30 percent in the other three quintiles (Bourne 1994).

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### 3.2.2 Morbidity

Premature death is only one of the effects of a high burden of poor health. Other effects include personal suffering, high levels of disability and disruption to normal activities. There are no routine statistics on general levels of poor health in South Africa. In order to provide some idea of the kinds of health problems which exist, this sub-section has selected a few on which information is available. In some cases it is because the disease is legally notifiable. The selection does not imply that these are the most important causes of morbidity in South Africa.

Tuberculosis is a very large public health problem, accounting for 80 percent of disease notifications. Its incidence is much higher than in other countries with similar GDPs per capita (Table 3.1). Van Rensburg, Fourie and Pretorius (1992) estimate that it costs 200 million rands per year to care for tuberculosis patients. The known case load was over 82,000 in 1992 and there were more than 2,000 reported deaths. It is estimated that between a third and half of all cases went unreported (Radloff and Webb 1994). Tuberculosis is most prevalent in the Western Cape, where it has increased considerably since the early 1970s. The notification rate is 35 times higher for Coloureds than for Whites. The prevalence of tuberculosis is expected to increase because many people live in over-crowded urban areas and because the HIV virus is spreading.

**Table 3.2** Evidence of excess mortality and morbidity

Measles is the second most commonly notified disease in South Africa. It causes deaths and disabilities which could be prevented by an effective immunisation programme. In 1990, 63 percent of South Africa’s children, excluding those in the ex-homelands, were fully immunised against measles. Immunisation levels ranged from 46 percent in Lebowa to 72 percent in the former Western Cape (Eggers and van Wyk 1993). A national campaign was launched in 1991 and coverage increased to 71 percent. There was an epidemic in 1992 which affected all population groups.

A report by the Committee for the Development of a Food and Nutrition Policy for Southern Africa (DNHPD 1990) stated that 2.3 million children and pregnant or lactating women were malnourished in 1989. 87 percent of the malnourished were Africans and only 1.7 percent were Whites. A recent survey found that 857,000 children between 7 and 60 months were stunted in 1993/94 (Project for Statistics on Living Standards and Development 1994). One of the first measures taken by the government of national unity was to provide free food supplements to school children. There are no data yet available on the success of this measure in decreasing levels of malnutrition and improving school performance.
Accidents, poisoning and violence are the largest single cause of excess deaths. They are also a major cause of injuries which require emergency treatment and which may result in permanent disability.

The HIV/AIDS epidemic reached South Africa relatively late but it is now spreading rapidly. A national survey of antenatal clinics found that 4.3 percent of attendees were infected with HIV in 1993 (Swanevelder 1994). In the absence of a change in behaviour, it is estimated that by the first decade of the next century between 18 and 27 percent of adults will be infected. This could put a great deal of pressure on the public health services. Doyle et al (1991) estimate that HIV/AIDS cases could account for between 34 and 75 percent of total health expenditure, if current methods of treatment continue to be practised.

It is difficult to estimate the degree to which South Africans suffer from mental illness. Freeman (1989) estimates that over 5 million people require treatment for a mental illness, of which 300,000 suffer from an incapacitating disorder. He further suggests that the prevalence of problems may be high because of the high levels of violence and social disruption.

3.2.3 Excess sickness and premature death in South Africa

The data on differences in health status between population groups presented in Table 3.2 indicate that there are high levels of preventable death and morbidity in South Africa. Whites have a pattern of disease and rates of death similar to those found in advanced industrialised nations. The other population groups are sicker and die at a younger age due to causes that are relatively easy to prevent.

In addition to causing unnecessary suffering, high levels of morbidity jeopardise efforts to diminish poverty. When someone falls ill they may be unable to work or go to school. If sickness persists or is not treated early enough, it may result in disability and a permanent fall in productivity. An episode of illness puts pressure on an entire family. Someone, usually a woman, may have to divert time from work to care for the sick family member. At the same time it may be necessary to pay for treatment or the purchase of drugs. Serious illness can tip a family into a vicious circle of poverty (World Bank 1993). It is for these reasons that the provision of access to basic preventive and curative health services is considered an essential component of a strategy for poverty reduction.

The burden of excess suffering and premature death in South Africa could be substantially diminished at relatively low cost. Measures to improve living conditions, increase coverage by preventive programmes and provide access to basic medical care could greatly diminish the high levels of infant and maternal mortality. The government has stated in the RDP that it intends to decrease excess mortality and morbidity in South Africa. The remainder of this chapter, and the subsequent ones, describe the health sector which has an important role to play if this goal is to be achieved.
3.3 SOUTH AFRICA’S HEALTH SECTOR

3.3.1 Overview of health sector resources

This section presents data on health expenditure and the number of health facilities and health workers in South Africa. National averages are crude measures of the level of resources in the health sector and do not provide information on the quality of facilities or the skill of health workers. None the less, they provide some idea of South Africa’s position compared with other countries (Table 3.3).

Table 3.3 Data on health service provision in South Africa, other countries with similar GDPs, established market economies and sub-Saharan Africa

South Africa spent 30.15 billion rands on health services in 1992/93, equivalent to 8.5 percent of GDP (Table 3.3). Health expenditure per person was 740 rands or US$247. The established market economies spent a similar proportion of their GDP on health to South Africa, but countries with GDPs per capita comparable to South Africa’s spent a lower proportion (Table 3.3). For example, the percentage of GDP spent on health was 6.0 in Hungary, 3.0 in Malaysia, 3.6 in Venezuela and 4.7 in Chile. One reason for this disparity is that the data on South Africa were collected by a special study and reflect private health expenditure more fully than most routine data. South African health expenditure is therefore overstated relative to many other countries which are unlikely to have undertaken such extensive health expenditure reviews. In spite of this, there is little doubt that South Africa spends a high percentage of its GDP on health services by international standards. However, a substantial proportion of this spending is on private health care for a minority of the population and on expensive government referral hospitals.

South Africa has 162,000 hospital beds, which is equivalent to 4.0 per 1,000 population (Chetty 1994). This ratio of beds to population is typical for a country with South Africa’s income (Table 3.3). For example, a survey carried out by Barnum and Kutzin (1993) found a mean number of beds per 1,000 population of 4.1 in 78 middle income countries.

It is difficult to assess the availability of primary level facilities, relative to the World Health Organisation’s recommendation of one clinic for every 10,000 people (WHO 1981). This is because South Africa has a large number of private general practitioners in addition to its public sector clinics and outpatient departments. Chapter 7 assesses the availability of primary care facilities, particularly in the poorer districts.

In 1992 South Africa had 24,500 doctors, 171,500 nurses and 9,000 pharmacists, according to the Development Bank of Southern Africa (1994). This is the number of personnel on the register of the South African Medical and Dental Council (SAMDC) which includes those who are no longer in active practice in South Africa. The ratios calculated on the basis of these figures may over-estimate the availability of personnel in the country.
South Africa is reasonably well supplied with doctors, with 1,661 people per physician (Table 3.3). The weighted averages of the number of people per doctor in 1990 were 420 in the established market economies, 2,060 in middle income countries and 9,000 in the rest of sub-Saharan Africa.

It is difficult to obtain data with which to compare South Africa’s ratio of 237 people per nurse. The only upper-middle income countries for which the World Development Report provides data on the number of people per nurse are: Yugoslavia, 110; Venezuela, 330; Oman, 400; and Saudi Arabia, 420 (World Bank 1993). This suggests that South Africa has a reasonably good supply of nurses.

Table 3.4 Distribution of facilities and health personnel between provinces (1992/93)

3.3.2 Distribution of health resources between provinces

The national averages mask considerable differences between provinces (Table 3.4). The number of hospital beds varies from 6.0 per 1000 in Gauteng to 2.1 in Eastern Transvaal. There are also substantial differences in the number of health workers relative to population. The Western Cape has 9.3 times more doctors and 2.6 times more nurses on the SAMDC register than the most under-resourced provinces (the Northern and Eastern Transvaal respectively). Similarly, Gauteng has 14.1 times more pharmacists than the Northern Transvaal.

3.3.3 The public and private health sectors

South Africa has well developed private and public health sectors which are discussed in detail in Chapters 4 -7. Table 3.5 summarises the information on the sources of finance for the health sector (see Appendix C for more detailed data). The government and local authorities provided 38.7 percent of the total. This included the budgetary allocations to the Department of Health, net of fee revenue, health-related expenditure of other government departments and local government contributions to their health services. The private sector provided 60.8 percent in contributions to medical schemes and medical insurance, direct funding of industrial health services, and out-of-pocket payments by users of health services. The remainder came from donors.

Figure 3.2 shows how the health sector allocated its expenditure in 1992/93 (see Appendix C for details). While Table 3.5 addresses the question of where the money for health care comes from, Figure 3.2 indicates what activities health care funds are spent on. These alternative methods of presenting financing and expenditure data account for differences in the public/private mix estimates.
Capital projects funded from public sector and donor sources accounted for 1.3 percent of total health expenditure in 1992/93, health personnel training for 0.8 percent, and research for 1 percent. Expenditure on training is likely to be underestimated. The remainder was divided between public and private health service providers.

Table 3.5 Sources of finance for the health sector (1992/93)

The public health services spent 11.6 billion rands, or 38.6 percent of the total. This included all health service provision by the central, former provincial and former homeland health departments and local authorities. It also included health care by the Departments of Defence, Correctional Services and Police. Only 26.8 percent of the public sector health budget was spent directly on the poorest 40 percent of magisterial districts, which contain approximately 49 percent of the population and are inhabited mainly by Africans. In contrast, 61.4 percent was spent on the richest 20 percent of districts, which contain approximately 37 percent of the population and are inhabited mainly by Whites. The public health services are characterised by:

- an emphasis on curative, hospital-based care with relative underdevelopment of community-based primary care services;
- the fragmentation of preventive, promotive, curative and rehabilitative care; and
- racial inequalities in access to health services which are the legacy of the previous apartheid system of organisation of public sector services.

South Africa has a substantial private health sector which accounted for 58.2 percent of total health expenditure in 1992/93. This included expenditure on services provided by private sector providers during that year, the costs of administering medical schemes and health insurance organisations, as well as the contributions received by these financial intermediaries in 1992/93 which were retained as surpluses, either in the form of profits or investments for future health service expense claims. A higher proportion of the most highly trained health workers work in the private sector, with the exception of nurses (Figure 3.3). For example 59 percent of doctors, 93 percent of dentists and 89 percent of pharmacists work in the private sector. However, only 23 percent of South Africans have some degree of access to private sector health care on a regular basis (Chapter 4).

A little under a third of hospital beds are in private facilities (Chetty 1994). These are discussed in detail in Chapter 5. There is a large pharmaceutical industry comprising manufacturers, distributors and retailers. There has been increasing concern, in recent years, about the rapid rise in the cost of drugs in the private sector.

The private sector largely serves the more affluent social groups. It is generally biased towards curative care. The cost of private medical care has risen sharply in recent years and there are increasing questions about whether the private sector provides good value for money.
3.4 INEQUALITIES IN ACCESS TO HEALTH RESOURCES

The three population groups defined in Chapter 2 use quite different health services:

- people with high incomes depend largely on the private sector, using public sector hospitals for highly specialised services and for long-term treatment of chronic illness;
- people with low to middle incomes use both public and private primary care providers and rely heavily on the public sector for inpatient care; and
- the poor depend largely on public sector health services.

Figure 3.4 provides an idea of the cost of health services per person for people with high incomes and for the poor. It is not possible to estimate the cost of health services for people with low to middle incomes on the basis of the available data. This underlines the need for further study of the health services used by this population group.

Expenditure on health services per person for the high income group was assumed to be the average contribution per medical aid beneficiary, which was 1,800 rands in 1992/93 (Table 4.2). This underestimates total spending on health by members of this group because it does not include co-payments and other cash payments to supplement medical aid.

It was not possible to estimate average health expenditure on all people living below the household subsistence level. However, it was possible to calculate average public health expenditure in the poorest quintile of magisterial districts (Table 2.5). Average public health expenditure in these districts was 122 rands per person (see Table 7.5). This under-estimates total expenditure because it does not include spending by households in these districts on private health services. However, according to a preliminary analysis of the data from the Project for Statistics on Living Standards and Development (1994), health accounted for 1 percent of total spending by the poorest quintile of households, whose average expenditure was less than 118 rands per person per month. Some of the health expenditure was for fees for public services, so average cash payment per person on private health services was low.

The ratio of spending on health services for members of medical aid schemes to the average spending by the public health services in the poorest 75 districts was almost 15:1. The ratio was even higher for the 7.2 million residents of districts in which spending on public health services was less than 100 rands per person (see Table 7.6). Chapter 7 shows that levels of public health expenditure in these districts were insufficient to fund a minimum package of preventive and curative health services, at existing unit costs. This illustrates the magnitude of the inequalities which exist in South Africa’s health sector.
3.5 CONCLUSIONS

South Africa's health sector reflects the society which it serves. It provides different kinds of services to the different social groups. For the most affluent segment of the population, comprised mainly of Whites, there is a highly developed private sector which provides the style of medical care found in the established market economies. The public sector spends a large percentage of its budget on a relatively small number of expensive hospitals in the metropolitan centres, many of which are linked to medical schools. On the other hand, a large proportion of the population does not have good access to health services. The majority of Black people fall into this category.

The coexistence of large numbers of people who do not have access to basic health services with others who spend a great deal of money on medical care explains in part why South Africa has so much excess sickness and premature death despite the fact that it spends 8.5 percent of its GDP on health. The remainder of this report focuses on the options available to the government for addressing these health problems, given the resource constraints and the structure of the health service inherited from the past.
CHAPTER FOUR
THE PRIVATE HEALTH SECTOR

4.1 INTRODUCTION

The topic of this chapter is the private sector. It begins with an overview of the major sources of private health care finance (section 4.2); it then describes the population groups that utilise private health services (section 4.3); it outlines the different private sector health care providers (section 4.4); it discusses the rapid increase in private sector health expenditure in recent years (section 4.5); and it concludes with a discussion of government financial support to the private sector (section 4.6) and an outline of major policy challenges for the future (section 4.7).

4.2 PRIVATE SOURCES OF FINANCE

Private sources spent more than 18 billion rands on health care in 1992/93. The major sources are summarised in Table 4.1. Medical schemes are the principal financial intermediaries in the private sector, accounting for nearly two-thirds of total private sector health care funding. There is some debate about whether the contributions of the state towards civil servants' medical scheme subscriptions should be considered a private source of finance. In this report they are viewed as fringe benefits to employees similar to those provided by private employers, and therefore as private. However, the size of the contributions is of concern to the government since they substantially increase the cost of public sector employment.

Medical schemes are non-profit associations funded primarily out of contributions from employers and employees. Generally, the size of contributions depends on the member's income and number of dependants. There are three major categories of schemes: medical aid, medical benefit and exempted schemes. Although the Medical Schemes Amendment Act (Act No. 23 of 1993) has dispensed with these categories, this report uses them because the differences between schemes in structure and benefit coverage persist. The key characteristics of these types of schemes are summarised in Table 4.2. A number of medical schemes are not required to report to the Registrar of Medical Schemes. Their contribution levels and benefits packages tend to be similar to those of medical aid or benefit schemes, but they are governed by other legislation than the Medical Schemes Act (Act No. 72 of 1967). They include schemes covering the police, prisons and defence force, as well as schemes which existed before the Medical Schemes Bill was enacted in 1967.
Health expenditure funded from private sources (1992/93)

There were approximately 6 million beneficiaries of the three types of medical scheme described in Table 4.2. The Registrar of Medical Schemes (1993) estimates that there are a further 852,661 beneficiaries of schemes which do not report to him.

The membership of medical schemes has grown over the past decade (Table 4.3). This has largely been due to an increase in the number of African members of over 1 million. Although there has been a low rate of growth in formal sector employment for Africans, earning levels of Africans in employment have increased more rapidly than for other population groups (Fallon and da Silva 1994). This relative increase in income levels has enabled an increasing proportion of employed Africans to become medical scheme members. The changing racial composition of medical schemes is also a reflection of the increased unionisation of African workers and the growing pressure by unionised workers for employers to provide medical cover.

Table 4.2 Characters of different types of medical schemes

The upward trend in membership of medical schemes reporting to the Registrar of Medical Schemes seems to have halted in 1991, and membership decreased by nearly 4 percent between 1991 and 1992. Section 4.5 discusses possible reasons for this decrease.

Direct out-of-pocket payments by households are the second largest source of private health care finance, accounting for 23 percent of the total (Table 4.1). This category includes: "schemes gap" payments, representing the difference between the fees charged by private health service providers and the amount reimbursed by medical schemes; payment by non-scheme members for consultations with private doctors and for the purchase of prescribed drugs; user fees at public sector hospitals; and spending on over-the-counter medicines by all categories of patients. The study by Valentine and McIntyre (1994) could not fully quantify cash spending on items such as the services of medical specialists, dental practitioners, homeopaths, chiropractors, psychologists and traditional healers. While direct household expenditure on services provided by some of these providers is likely to be minimal, expenditure on providers such as traditional healers and dentists is likely to be significant. The figure for direct household payments used in Table 4.1 is therefore an underestimate.

Table 4.3 Changes in membership of medical schemes to the registrar of Medical Schemes (total beneficiaries), 1982-1991

Health insurance is a small (5.1 percent) but rapidly growing component of private health financing in South Africa. It is offered by both life and short-term insurance companies. Most policies provide indemnity cover for major surgical and hospitalisation costs, which means that the insurer pays a predetermined amount of money on claims for clearly specified contingencies, rather than reimbursing the actual medical expenses incurred, as in the case
of medical schemes. Health insurance organisations do not fall under the Medical Schemes Act, but are regulated through the Insurance Act and overall insurance industry mechanisms, which relate primarily to monitoring the financial viability of insurance companies.

Many young, healthy adults elect to purchase only health insurance cover due to the attractive premiums relative to medical schemes’ contribution rates. The lower health insurance contribution levels are possible because there is careful risk screening for these policies and because they cover a more restricted benefits package than medical schemes. However, certain medical scheme members purchase "top-up" health insurance products to cover the difference between the cost of health services and the amount reimbursed by schemes. Health insurance products thus compete with medical schemes as well as complement them.

Industry contributes 5.7 percent of total private sector health care resources for the funding of industry-specific health services and services funded through the Workmen's Compensation mechanism. Industry-specific services range from limited workplace health services to comprehensive care at mining hospitals.

Table 4.4 Total beneficiaries of medical schemes and health insurance, or employees in industry with access to on-site health services (1992)

This expenditure is in addition to private sector employers’ portion of medical scheme contributions.

Donor funding of NGOs is not covered in this chapter due to a dearth of accurate information. The data available on donor funding are presented in Chapter 5.

4.3 POPULATION SERVED BY THE PRIVATE SECTOR

High income earners are the major users of the private sector. They tend to be members of medical aid schemes and/or holders of medical insurance policies. They utilise private sector services for all their health needs, except for highly specialised services such as dialysis and cancer treatment which are not available and/or affordable in the private sector, and for long-term treatment of chronic illnesses which are not fully covered by medical aid.

Low to middle income earners also use private health services. Some are members of medical benefit or exempted schemes which cover limited ambulatory care by private providers. Some employees have access to health services provided by employers at their place of work. Others pay out-of-pocket to utilise private sector providers, but this tends to be restricted to general practitioner services and the purchase of drugs. The majority depend on public hospitals for inpatient treatment, except for those entitled to care in a company hospital.
Poor households make less use of private health services. However, there is evidence that even the poorest families are prepared to pay for the services of traditional healers.

Table 4.5 Health personnel practising in the private sector (1989/90)

Table 4.4 estimates that almost 23 percent of South Africans have some degree of access to private sector health care on a regular basis. There is an element of double-counting in these estimates as certain medical scheme members also purchase health insurance cover. The extent of this dual medical cover is unknown. An unknown proportion of the population utilises private practitioners on a direct payment basis, but this access is variable and depends on the availability of financial resources when care is needed.

4.4 PRIVATE PROVIDERS OF HEALTH SERVICES
4.4.1 Private practitioners

Table 4.5 provides data on the main categories of health personnel in the private sector. These personnel include general and specialist medical practitioners, and dental practitioners; other personnel registered with the South African Medical and Dental Council (SAMDC), or other relevant professional councils, such as chiropractors, homeopaths, naturopaths, osteopaths, dental technicians, dieticians, occupational therapists, physiotherapists, speech therapists, psychologists, optometrists, and pharmacists; as well as a diverse group of personnel not registered with the SAMDC such as hypnotherapists and aromatherapists. In addition there are between 350,000 and 500,000 traditional healers.

More than half of all major categories of health workers, except nurses, work in the private sector. Most private sector nurses are employed by private hospitals, most pharmacists work in the 2,876 retail pharmacies in the country (Pharasi 1992) and the other categories of personnel tend to practise on a fee-for-service basis. A minority of each category work in industry-specific health services and provide services through medical benefit funds and exempted schemes.

There are few restrictions on the right of health care professionals to work in private practice. They only have to be registered with the SAMDC, or other relevant professional councils, and must be registered as a dispensing practitioner if they wish to dispense medicines. In addition, a practitioner must obtain a practice number from the Representative Association of Medical Schemes in order to submit claims to medical schemes. Certain personnel, such as oral hygienists, cannot work independently and are required to work in a group practice setting with a dental practitioner. The scope of nurse practitioners, particularly in relation to prescribing medicines, has until recently been severely limited by the Nursing Act and the Medicines and Related Substances Control Act.
4.4.2 Private hospitals

There is a range of hospitals within the private sector including for-profit facilities which provide care on a fee-for-service basis, non-profit hospitals run by charitable or welfare organisations, and industry-specific hospitals. Contractor hospitals which provide care primarily for long-term psychiatric and tuberculosis patients, and in a few instances general acute hospital care, on a per diem payment contract with the state have traditionally been classified as private hospitals. However, as these hospitals are essentially state funded and the facilities are in certain instances owned by the state, there is a strong argument for classifying them as public hospitals (Personal communication with Dr Jonathan Broomberg). They are included in this section as the public sector database (ReHMIS) did not provide information on contractor hospitals. A further category of hospitals frequently classified as private sector is that of province-aided hospitals. They have been combined with public sector hospitals in this report since they receive substantial subsidies from provincial administrations for services provided to non-private patients (Chapter 5).

There were 46,611 beds in private hospitals in 1993 (Chetty 1994). There has been a particularly rapid growth in private for-profit hospitals since 1988 as indicated in Table 4.6.

Most private for-profit hospitals are located in metropolitan areas, where high income earners live. There is a trend towards small-scale day clinics and unattached operating theatres which provide ambulatory surgical services. Thirteen percent of for-profit hospitals have 10 or fewer beds (Valentine and McIntyre 1994).

The private for-profit hospital industry is dominated by a few hospital groups. The three largest groups (Clinic Holdings, Afrox and Medi-Clinic) owned over 42 percent of all private for-profit hospital beds in 1993 (Engelhardt 1994) However, there has been an increase in the number of facilities owned by groups of private medical practitioners in recent years. A number of industrial concerns, primarily in the mining industry, provide hospital services exclusively for their employees. In 1993, there were 53 mine hospitals with 6,898 beds, serving approximately 450,000 mine workers (Valentine and McIntyre 1994). The mining industry is currently investigating mechanisms to provide health care to the approximately 1 million dependants of mine workers.

4.4.3 Non-governmental organisations

There has been a proliferation of NGOs in recent years. These range from charitable and welfare organisations providing services such as first-aid training, drug counselling, and hospice care, to others which are largely involved in the development of community-based primary care programmes. The growth in the latter group of organisations is partially due to the former government’s inability and/or unwillingness to meet the socio-economic needs of the population. The international community supported NGOs as a means of assisting South Africa’s people without supporting a government which upheld apartheid policies
Deloitte and Touche 1994b). In certain instances, such as for HIV/AIDS services, NGOs play an important service delivery role.

Table 4.6 Distribution of private hospital beds by ownership category (1988 and 1993)

Many NGOs are facing financial difficulties because international donors are now providing support directly to the government. The relative roles of NGOs and the public health service, and the relationship between them, have not yet been clearly defined.

4.5 TRENDS IN PRIVATE HEALTH CARE EXPENDITURE

The only source of routine data on private health care is the South African Reserve Bank’s (SARB) estimate of private consumption expenditure on medical goods and services. According to this source, private health care expenditure increased from approximately 2.24 billion rands in 1983/84 to 10.66 billion rands in 1992/93 (South African Reserve Bank 1991 and 1994). The 1992/93 expenditure estimate expressed in real terms is 3.07 billion rands if deflated by the CPI and 2.54 billion rands if deflated by the MPI. The SARB estimates therefore reflect very little real increase in total private health care expenditure in the past decade.

The data presented in Table 4.1, which is based on the review of private sector health care expenditure (Valentine and McIntyre 1994), indicates that the SARB underestimated total expenditure by 70 percent in 1992/93. It is thus possible that private sector health care expenditure increased more rapidly than the official estimates suggest. This highlights the need to improve the quality of routine private sector health care expenditure data collection.

As the majority of medical schemes are legally required to submit information to the Registrar of Medical Schemes on an annual basis and as they account for the vast majority of total private sector health care expenditure (see Table 4.1), medical schemes data are analysed in detail below to demonstrate likely trends in overall private sector health care expenditure. It can be speculated that direct out-of-pocket payments have increased at a similar rate over the past decade, as almost half of these payments are in the form of expenditure by medical scheme members to cover expenses not reimbursed by schemes (Valentine and McIntyre 1994). Co-payments by medical scheme members have in fact increased over this period so the assumed trend in direct expenditure is likely to be conservative.

4.5.1 Trends in expenditure by medical schemes

Medical schemes that reported to the Registrar increased their spending from 1.1 billion rands in 1983/84 to 9.3 billion rands in 1992/93 (note that this figure differs from that presented in Table 4.1 as certain medical schemes for private sector employees and for civil
servants do not report to the Registrar of Medical Schemes). Figure 4.1 illustrates that spending on each of the major items of expenditure by these schemes rose by more than the rate of inflation during that period.

Figure 4.1, Medical scheme expenditure per beneficiary at constant (1983/84) prices*, 1983/84 - 1992/93

The distribution of medical schemes expenditure by category of health service provider in 1992/93 is presented in Table 4.7. Average expenditure per beneficiary was 490 rands for drugs, 274 rands for medical specialists and 270 rands for private hospitals in 1992/93. Expenditure by medical schemes on these items rose particularly quickly between 1983/84 and 1992/93 (Figure 4.1). Although per capita expenditure on general practitioner consultations was only 177 rands in 1992/93, key informants in the pharmaceutical industry estimate that 80 percent of drug expenditure in the private health sector is associated with general practitioner services in the form of dispensed or prescribed medicines (Personal communication with Dr Jonathan Broomberg). As indicated in Figure 4.1, there have been different rates of increase in expenditure on various services over the past decade. Consequently, the proportion of total medical scheme expenditure on general practitioner consultations has declined from 16.9 percent in 1983/84 to 11.5 percent in 1992/93, while that on specialists and dentists has declined from 20 to 17.8 percent and from 12.7 to 9.7 percent, respectively. In contrast, expenditure on hospitals has increased from 17.9 percent of medical scheme expenditure in 1983/84 to 21.8 percent in 1992/93, and that on medicine from 25.9 to 31.8 percent.

Table 4.7 Expenditure by medical schemes reporting to the Registrar of Medical Schemes by service category (1992/93)

The contributions to medical schemes have also risen rapidly, since schemes must finance the benefit payments out of contributions. The rate of contribution increases has not kept up with increases in expenditure on benefits. For example, spending on benefits increased by 30.5 percent between 1988/89 and 1989/90 while subscriptions increased by 25.6 percent. Between 1989/90 and 1990/91, the increases were 34.6 and 30.7 percent respectively (McIntyre 1993). Many medical schemes thus face serious financial problems. The Melamet Commission (South Africa 1994) highlighted solvency difficulties within medical schemes. For example, of the 240 medical schemes in 1990, nine were declared insolvent and a further 88 schemes traded at a loss (Dr Coen Slabber, quoted in The Argus, 26 November 1991). The intention of the Medical Schemes Amendment Act (1993) was to assist schemes in addressing these problems (see Appendix D). The effect of these amendments has not yet been documented.

The rise in expenditure on benefits is due to increases in both unit costs and utilisation levels. The schemes have been reasonably successful in controlling reimbursement rates for medical consultations and the daily charge for a hospital bed. However, they have not been able to prevent rises in drug prices or utilisation increases. The fee-for-service method of payment of hospitals and private practitioners has contributed to the rise in utilisation
since earnings are directly related to volume of work. A recent South African study found that medical scheme patients visited their doctors 33 percent more often than members of a health maintenance organisation (HMO) which employed salaried staff. Doctors caring for medical scheme beneficiaries ordered 133 percent more radiological procedures and 14 percent more pathological investigations than HMO personnel (Broomberg and Price 1990). The fact that doctors have a stake in the financial performance of some hospitals through share ownership or another form of relationship, such as rent-free or subsidised consulting rooms within hospitals, may also have encouraged higher levels of hospitalisation and/or longer periods of admission.

Many health service providers benefit financially from selling medicines. This is clearly the case for hospitals which sell medicines at retail prices. It also applies to the 8,316 general and specialist medical practitioners who were registered to dispense medicines in 1992 (Registrar of Medical Schemes 1993). The number of dispensing practitioners has nearly doubled since 1988 when 4,400 doctors were registered for dispensing purposes (Grobicki 1991). One medical scheme reported that expenditure per member on medicine dispensed by general practitioners increased from 85 rands in 1985 to 233 in 1990 (Medscheme 1991). The 1990 expenditure is equivalent to 114 rands when inflation between 1985 and 1990 has been taken into account. At the beginning of 1994 the Representative Association of Medical Schemes (RAMS) offered medical practitioners increased consultation fees in return for reducing expenditure on doctor and pharmacy dispensed medicines, as well as on hospitalisation. This project resulted in savings on pharmacy dispensed medicines while there was little apparent impact on doctor dispensed medicines or hospital costs (Personal communication with Mr Reg Magennis, Representative Association of Medical Schemes).

The increase in the proportion of elderly scheme members has also contributed to the increase in the value of claims (Fourie and Marx 1993). The percentage of medical scheme beneficiaries who are pensioners or widows increased from 5.3 to 7.2 percent between 1986 and 1992 (Valentine and McIntyre 1994). The young and healthy members of schemes have to support the rising number of people whose contributions are low, but whose average claims are high. The recent Medical Schemes Amendment Act (1993) has reduced this cross subsidisation burden in that medical schemes are now permitted to charge high risk members higher contributions, based on their previous medical claims or on pre-existing conditions (see Appendix D for details of the Amendment Act). In this way, certain schemes may become increasingly unaffordable for the elderly and chronically ill who will rely more heavily on public sector health services, but will be able to compete more effectively with health insurance products for younger, healthy members.

Table 4.8 Growth in annual medical scheme expenditure and contributions per principal member, 1982-1992 (rands) (expressed in real terms, deflated by the CPI, in brackets)

Table 4.8 illustrates the extent to which contributions to medical schemes have increased, relative to salaries, over the past decade. While salaries have not increased much in real terms during this period, increases in scheme contributions have far exceeded the inflation rate. Medical scheme contributions were equivalent to 7.1 percent of average formal sector
salaries in 1982. Ten years later, in 1992, they amounted to 15.2 percent of average salaries. The rapid increase in costs has prompted some members to seek alternatives, such as risk-rated medical insurance, which is relatively inexpensive for the young and healthy. These trends coupled with increasing unemployment may explain the decline in medical scheme membership between 1991 and 1992.

Given the extent of contribution increases, the rate of defection from schemes is surprisingly low. This is largely because membership of a medical scheme is frequently a condition of employment. In most instances, employees are required to become members of the medical scheme which their company has selected. This has certain benefits for schemes as they can enlist a large number of members by contracting with one employer rather than having to compete for individual members. There are also disadvantages for schemes as they generally cannot exclude employees with high risk profiles from membership. Since the 1993 amendments to the legislation, most schemes offer a range of options with different benefit packages and contribution levels to allow more choice for members.

The medical schemes have been slow to respond to the financial crisis. Their initial reaction was to increase contribution levels more rapidly than the general rate of inflation and restrict the benefits covered. They have also sought help from government in the form of changes in legislation. They have only recently become more pro-active and energetic in cost containment, for example by implementing utilisation review. These efforts have been aided by the implementation of the Medical Schemes Amendment Act (1993) in January 1994. For example, the Act no longer enforces statutory scales of benefits, thus allowing individual schemes to negotiate and set their own levels for reimbursing providers and for member co-payments. In addition, the requirement for direct guaranteed payment to providers who charge at the scale of benefits level has been abolished. This strengthens the position of medical schemes in dealing with over-utilisation by members and over-provision by providers, in that schemes can refuse to settle accounts where they consider services provided either unnecessary or excessive. This is applied particularly to the evaluation of doctors’ dispensing and prescribing patterns, as well as to assessing hospital admission and length of stay (see Appendix D for details of the Amendment Act).

There has not been a concerted effort by interested parties, such as trade unions and employer groups, to engage medical schemes in planning and implementing cost containment measures. This also applies to the government, which spent nearly 1.8 billion rands of general tax revenue on contributions to medical schemes on behalf of civil servants in 1992/93 (note that the 2.6 billion rands in Table 4.1 includes contributions by civil servants themselves).

The rate of increase in medical scheme costs is relevant to current debates about the possible establishment of a social health insurance (SHI) scheme. The exact nature of a potential SHI in terms of population coverage and the composition of the benefits package is still unclear at present. However, a SHI would at least include compulsory membership for all formal sector employees. Additional members for a SHI (i.e. those who are currently not covered by a medical scheme) will largely be low income earners and will tend to have a
higher average number of dependants. Their inclusion in a SHI will therefore require cross-subsidisation from higher income earners, no matter how limited the benefits package.

In 1992, the contribution rate per principal member of a medical scheme was 4,558 rands for medical aids, 3,699 rands for benefit funds and 1,388 rands for exempted schemes (see Table 4.2 for description of different types of schemes). Medical schemes which contract directly with providers and reimburse on a capitated or salaried basis, such as exempted schemes, appear to offer a more affordable model for a SHI. There is a need for more study of existing schemes and for support of experiments with alternative low cost models of health care provision.

highlights the danger that a newly established SHI could rapidly face financial problems, particularly if based on a fee-for-service reimbursement mechanism. In such a situation there could be pressure on the government to provide financial support out of tax revenues. This could jeopardise the funding of essential services for the poor. Workable models of service delivery need to be developed and effective systems of monitoring and cost control established in order to avoid this problem. The future role of medical schemes in relation to a SHI is not clear. The schemes are likely to favour the German model where individual sick funds are the financial intermediaries for the SHI. However, in light of the rapid cost spiral in the past, it is critical that medical schemes develop strategies for controlling costs if they are to play an effective role in a future SHI.

4.5.2 Other emerging trends in the private sector

A number of issues relating to private sector health care provision and financing warrant specific comment. Firstly, there is a significant concentration taking place in the health sector. A few large groups dominate the private hospital industry (see section 4.4.2). In addition, there has been a trend towards vertical integration and certain hospital groups have interests in financial intermediaries and pharmaceutical companies.

There has also been a growth in the role of marketing agencies and brokers. Brokers of health care products offered by short-term insurers receive a monthly commission for the duration of the policy at a rate of approximately 20 percent over the life of the policy.

Life insurer brokers receive a commission of 3.5 percent of the value of the policy, 85 percent of which is paid out in a lump sum at the time of concluding the policy (Valentine and McIntyre 1994). These all add to the cost of health care. Furthermore, brokers are now also operating in the medical scheme market. Employers contract with these brokers to negotiate cover for their employees. Several schemes have indicated that brokers move members away from a particular scheme if they do not receive "commission payments" from the scheme.

A third trend is the growth of managed care initiatives. These range from staff model health maintenance organisations (HMOs) to independent practitioner associations (IPAs). With
the rapid increase in the costs of medical scheme cover, alternative schemes which have an active cost-containment component and an element of merging the roles of health care financiers and providers, or at least increasing the contractual contact between the two groups, are emerging.

4.6 GOVERNMENT FINANCIAL SUPPORT TO THE PRIVATE SECTOR

The government supports the private health sector in a number of ways. The most widely discussed is the tax concession on employer contributions to medical schemes. Individual taxpayers have more restrictive tax concessions on medical expenses. Taxpayers under the age of 65 can only claim contributions and other medical expenses which exceed 1,000 rands or 5 percent of taxable income, depending on which is the greater amount. The first 500 rands are not tax deductible in the case of handicapped people, while people over the age of 65 can claim all scheme contributions and other medical expenses. A recent study estimated that the loss of tax revenue through tax deductibility of medical scheme contributions by employers was between 1.5 and 2.6 billion rands in 1994 (Price et al 1994). The greatest beneficiaries of this subsidy are high income earners who belong to the most expensive schemes and have the highest marginal tax rates. Providers of expensive private health care also benefit through an increase in the demand for their services.

Some have argued for an end to all tax concessions on medical scheme contributions. Others argue that the public sector benefits from the contributions made to medical schemes, because it does not need to provide care for scheme members. They argue that the subsidy provides an incentive for companies to cover their employees and that the concern should be to design a more appropriate package of exemptions which gives more weight to the needs of low to middle income earners (Price et al 1994). For example, there are much stronger grounds for tax exemptions for contributions to schemes which finance low cost care such as that provided by exempted medical schemes, than for those options which fund treatment in very expensive private hospitals. However, the removal of subsidies will decrease net salaries for employees and/or increase the cost of labour for employers. Thus, the impact on the economy should be carefully assessed before reform of these subsidies is considered.

Another way in which the state supports the private health sector is by subsidising health worker training. A recent study estimated that the average cost of training a university medical graduate was 66,500 rands in 1992 and that the net government subsidy was 40,200 rands (Bunting 1994). This refers only to the Department of Education’s subsidy to universities, and does not include the substantial indirect medical training costs which are borne by the academic hospitals. The training of all other health personnel is similarly subsidised. There has been a great deal of debate about how to recoup some of the training subsidy of professionals who work in the private sector. Recommendations include providing people with a choice between a period of compulsory public sector service prior to registration for private practice or the full repayment of training costs, possibly through licensing fees.
By way of contrast, revenue does flow from private providers to the state in the form of pharmaceutical and private hospital company taxation, and value-added taxation (VAT) on medical services. It was estimated that VAT receipts from the private health sector could have been as high as R1.35 billion in 1992/93 (Valentine and McIntyre 1994). This is likely to be an overestimate as certain private practitioners may not have declared the "cash practice" component of their income. Private practitioner organisations have lobbied for the removal of VAT. There may be arguments for exempting certain medical goods and services from VAT, particularly those used by low to middle income earners.

The above paragraphs illustrate the complex inter-relationship between the public and private sectors. There is a need for a comprehensive review of the current system of taxation and the size of financial flows to the private sector.

4.7 CONCLUSIONS

The major challenges facing the private health sector are to control costs and address the financial crisis facing medical schemes. Employers and trade unions have an interest in the success of these efforts because health care costs are becoming a significant financial burden. The government, as a major contributor to medical schemes, also has a direct financial stake in the solution to the current problems.

The degree to which medical schemes meet the current cost-containment challenge will strongly influence the development of social health insurance. In order for such an endeavour to succeed, it will be necessary to develop cost-effective models of service delivery and to establish mechanisms for monitoring and controlling costs.

While it is not possible at this stage to adequately evaluate the impact of the recent amendments to the Medical Schemes Act (see Appendix D), there are concerns that some of the changes may threaten the financial viability of poorly managed schemes, and are likely to increase the financial burden on the public sector (through greater experience and risk-rating by schemes). The changing nature of medical schemes should be closely monitored and the need for further legislative changes evaluated.

This report was able to collect only some basic data about the private sector, and it has raised more questions than answers. There is a need for additional work on the functioning of the private sector to clarify the options for the future relationship between the public and private sectors.
CHAPTER FIVE
PUBLIC SECTOR HEALTH SERVICES

5.1 INTRODUCTION
This chapter introduces the public health sector. It begins in section 5.2 with a description of the complex administrative structure inherited from the past and of the current plans for restructuring; section 5.3 discusses the sources of finance for the public sector; section 5.4 presents data on trends in expenditure by the public health services; section 5.5 discusses the distribution of resources by level of care and between geographical areas; section 5.6 presents information on the plans for investment in new buildings; section 5.7 discusses strategies for allocating government funds more equitably between provinces; and section 5.8 concludes with an overview of the process of structural change which needs to be carried out.

5.2 INTRODUCTION TO THE PUBLIC HEALTH SECTOR
Previously the public sector was fragmented into a large number of overlapping administrative systems: each racial group had its own national department of health; every homeland and provincial administration had a department of health; and 400 or so local authorities also had health departments. This chapter describes the health services which resulted from this process of development. It focuses particularly on the high share of total expenditure going to hospitals and on the very large inequities in resource distribution.

Box 5.1 the present structure of public sector health services in South Africa

The government is currently restructuring the public health service. Box 5.1 summarises the situation in early 1995. The national Department of Health formulates policy, determines provincial health budgets, co-ordinates services and provides other support functions. The Provincial Health Departments determine subsidies to local authorities and provide preventive health and hospital services, primary level care and comprehensive services in the former homelands. Local authorities are responsible for preventive and promotive primary care, with a particular emphasis on communicable disease control and environmental health. The National and Provincial Departments of Health plan to establish a new tier of district health services. It is anticipated that there will be an average of 20 districts per province. The districts will be responsible for non-specialist hospitals and comprehensive primary care services. However, the exact demarcation of functions between provinces and districts has not been determined.
The relationship between health districts and the planned local government structures, described in Chapter 2, needs to be clarified. For example, it is not certain whether the two structures will share the same boundaries. It is also unclear whether the district health authorities will be under the provinces or whether they will be integrated into local government.

Some local authorities use different salary scales than the Department of Health. This has made it possible for better-financed localities to attract personnel from the public sector. It has also made it difficult for personnel working for different levels of government to cooperate. The government has not yet decided whether it will change this arrangement in future. The constitutional framework for South Africa has not been finalised and the exact powers and relative responsibilities of the central, provincial and local governments still need to be defined precisely. Decisions with regard to these issues will greatly influence the structure of the public health services.

5.3 SOURCES OF FINANCE FOR THE PUBLIC SECTOR

There are three major sources of recurrent funding for public sector health services: general tax revenue; local rates, utility sales and taxes; and user fees (Figure 5.1). Until recently, capital expenditure was fully funded by government. Now, donor agencies have become willing to fund government services.

Figure 5.1 Sources of recurrent finance for public health services (1992/93)

5.3.1 General tax revenue

Centrally collected general tax revenue finances 94 percent of public health recurrent expenditure (Figure 5.1). Prior to 1994, taxes collected in the former provinces were placed in the State Revenue Account and taxes collected in the former homelands were placed in homeland revenue accounts. The former homelands received substantial budgetary transfers from the State Revenue Account. All taxes are now credited to a consolidated National Revenue Account.

The national Department of Health is responsible for the use of central government health funds. The Function Committee for Health, whose members include representatives from the National and Provincial Health Departments, the Central Economic Advisory Service (CEAS), the Department of Finance and the Department of State Expenditure, advise it on resource allocation. The details of the budgeting process are presented in Appendix E.

Box 5.2 Uniform fee structure for health services in South Africa
Until recently, budget allocations were based largely on the previous year’s budget. The Department of Health plans to reduce historically determined regional inequalities in funding rapidly. These plans are discussed in Section 5.6. The present centralised system of budgeting may change if the new constitutional arrangements lead to a substantial devolution to provincial or local governments of authority over the collection and use of tax revenue.

All of the health departments described in Box 5.1 can initiate capital projects. In recent years, non-governmental organisations, such as the Independent Development Trust (IDT), have become involved in the development of health infrastructure. A recent study by Deloitte and Touche (1994a) found that there was little co-ordination between agencies and that it was difficult to obtain information on all of their building plans. Development expenditure is discussed in more detail in section 5.5.

5.3.2 Local rates, utility sales and taxes

A relatively small amount of health service funding (1.5 percent) is derived from local rates and taxes. This source funds between a third and a half of the recurrent health care expenditure by local authorities, according to different sources (ReHMIS data, Central Statistical Service 1993b). Local authorities in large metropolitan areas fund a higher proportion of expenditure from their own sources than those in smaller towns or rural areas. The provincial departments of health fund the balance of expenditure by local authorities in the form of subsidies (subsidies were previously funded by the national Department of Health). The future role of this source of finance depends a great deal on the final distribution of tax authority between government levels under the new constitution.

5.3.3 User charges

The public health service generated the equivalent of 4.5 percent of recurrent expenditure from user charges (Figure 5.1). The health departments of the former provincial administrations introduced a uniform fee structure several years ago, but the ex-homelands still have their own fee policies. The level of fees in the uniform fee structure depends on the sophistication of the health facility and on the declared income of the patient (Box 5.2). Certain patients and services are totally exempt from fees (Box 5.3).

There are several reasons why so little revenue is generated from user fees. Fee levels are low, except for private patients. However, until recently private patients were not supposed to use public hospitals unless they did not have easy access to a private facility. In addition, all fee revenue is effectively returned to the Provincial Revenue Account, since each department’s health budget is reduced by the amount of fees it collects. In consequence, facilities have little incentive to collect fees. The present and potential future role of user fees is discussed in more detail in Chapters 6 and 7.
5.3.4 Donor funding

Deloitte and Touche (1994b) carried out a questionnaire survey of donors for the health expenditure review. They established that donors spent at least 145 million rands on health sector projects.

However, there were many data deficiencies, partially due to a low response rate, and they concluded that this figure is probably only a fraction of total donor funding of the health sector. Their findings should be interpreted with caution.

Box 5.3 Patients and services exempted from user fees

Nearly 20 percent of donor funding was by South African institutions (large corporations or independent trusts), less than 2 percent was by national embassies, and over 78 percent was by international organisations. The largest single contributors were the W.K. Kellogg Foundation and the United Nations Development Programme (UNDP).

Donor support is increasing rapidly. The new donor projects primarily support infrastructure development and the strengthening of basic health services through training and technical assistance, but they also support specific programmes such as HIV/AIDS.

Table 5.1 Changes in public recurrent health expenditure (1983/84 - 1992/93)

5.4 PUBLIC SECTOR HEALTH CARE EXPENDITURE

In 1992/93, recurrent public health expenditure was approximately 11.1 billion rands or 273 rands per capita and capital expenditure was 386 million rands. The proportion of total government spending allocated to health (recurrent and capital health budgets) fell from 11 percent in 1991/92 to 10.2 percent in 1994/95 (McIntyre and Owen 1994).

Public recurrent health expenditure was equivalent to 3.3 percent of GDP in 1992/93 (Table 5.1). These percentages are reasonably high compared with other middle and upper-middle income countries. It should be recognised that GDP in South Africa has grown very slowly in recent years which also contributes to the relatively higher proportion of GDP devoted to public health care expenditure. Many of the established market economies spend a higher percentage of government expenditure on health and their public health expenditures averaged 5.6 percent of GDP.

Recurrent expenditure on public health services increased at an annual rate of 18.3 percent a year between 1983/84 and 1992/93, from R2.5 billion to R11.1 billion (Table 5.1). However, this was largely due to inflation and the yearly increase was 3 percent in real
terms. This was equivalent to an annual increase in health expenditure of 0.5 percent per capita.

The government compiles a medical price index (MPI) which indicates that the increase in the price of medical care has been faster than the rate of inflation. However, this index reflects changes in prices of private medical services and is not an appropriate deflator for measuring real health services in the public sector. An index of health care costs is required which takes into account trends in public sector wages and the prices of drugs and other specialised inputs to the health sector.

During the same period, recurrent public health expenditure grew as a proportion of GDP from 2.6 to 3.2 percent. This was due to the combination of a real increase in health care expenditure and a real fall in GDP (Chapter 2).

**Figure 5.2** breaks recurrent public health care expenditure down into major inputs. South Africa’s public sector health services spent 67.6 percent of recurrent expenditure on personnel in 1992/93 (equivalent to 65 percent of total health expenditure, including the investment programme). This was a high proportion to spend on salaries compared, for example, to 12 Asian countries included in a recent study by Griffin (1992). Their public health services spent 43 percent on salaries, 38 percent on non-salary expenditure and 19 percent on capital. While the salaries of public health personnel are not high in comparison with other salaries in South Africa, overall salary levels in South Africa are high relative to developing countries. It is thus difficult to make international comparisons when there are significant wage differentials between countries. In addition, recent financial constraints have squeezed investment and spending on non-salary inputs. There is limited scope for additional savings on non-salary expenditure.

Medicines for public sector health services are obtained through a national tendering system at prices well below those in the private retail sector. The Minister of Health established a committee, shortly after the democratic elections, to develop an Essential Drugs List and to prepare treatment guidelines for health personnel, to promote more rational and cost-effective medicines use in public sector health care facilities.

### 5.5 DISTRIBUTION OF PUBLIC HEALTH CARE RESOURCES

Sections 5.5.1 and 5.5.2 present data from the ReHMIS survey on the distribution of public sector facilities, personnel and expenditure by level of care and geographic area, respectively.

**Figure 5.2** Distribution of recurrent public sector health expenditure by inputs (1992/93)

#### 5.5.1 Distribution by level of care
Table 5.2 provides data on the different categories of health facility in the public sector. The hospitals are classified into the following levels of care (Appendix A provides details on the definition of the levels of care and on the relationship between these categories and those used by the previous Department of Health and Welfare):

- Academic hospitals are linked to medical schools/academic complexes;
- Tertiary hospitals have the four basic specialties obstetricians/gynaecologists, some higher specialties and an intensive care unit;
- Secondary hospitals have more than two of the basic specialties and an intensive care unit;
- Community hospitals are acute hospitals not included in the above categories; and
- Chronic hospitals include psychiatric facilities, hospitals for the care of tuberculosis and other communicable diseases, and long-term care facilities.

Over half of the acute care hospital beds in the public sector are in facilities with specialist services and 38 percent are in tertiary and academic hospitals.

Non-hospital primary care services are largely provided through fixed and mobile clinics and community health centres. Some facilities are comprehensive and some provide only preventive or curative services. The other services included under the category of primary health care in the ReHMIS survey include district surgeons, district pharmacist services, community nursing services, environmental health services and school health services (Chapter 7). The hospital outpatient departments are also important providers of primary care services. The definition of primary care services used in this report thus essentially relates to the format in which data were available rather than a specific package of health services and service providers.

Table 5.3 provides an overview of the distribution of health personnel between levels of care in the public sector. It highlights the concentration of health care human resources in the hospitals. In particular, the 49 academic and tertiary hospitals employed 61 percent of public sector general doctors, 82 percent of specialist doctors, 36 percent of nurses and 51 percent of pharmacists. On the other hand, the primary health care services employed only 10 percent of general doctors, 17 percent of nurses and 11 percent of pharmacists.

As Figure 5.3 shows, recurrent expenditure was also concentrated on hospitals; approximately 76 percent of the total was spent on acute care hospitals, 5 percent on chronic hospitals, 11 percent on non-hospital primary health care and 8 percent on other services, including emergency and dental services and the former DNHPD’s head office administration costs. Tertiary and academic hospitals, alone, accounted for 44 percent of the total.

Table 5.2 Public sector health facilities by level of care (1992/93)
According to a literature review carried out by Doherty (1994), the percentage of public health expenditure allocated to hospitals varies between 35 and 70 percent in developed countries and between 40 and 80 percent in developing ones. It is difficult to make international comparisons because of differences in definition, poor data quality and other methodological problems. None the less, it can safely be stated that South Africa's public health services allocate a high proportion of their resources to hospitals, compared with other countries. The cost-effectiveness of this pattern of resource distribution in addressing the major causes of excess morbidity and mortality is discussed in more detail in later chapters.

5.5.2 Geographic distribution of resources

There are very large disparities in the distribution of public sector health resources between regions (Klopper and Taylor 1987, Dorrington and Zwarenstein 1988, McIntyre 1990, McIntyre 1994b). This section reviews the ReHMIS data on the distribution of public sector resources (attributable to all central, provincial, former homeland, and local authority health departments) between provinces and between rich and poor magisterial districts.

Table 5.3 Distribution of public sector health care personnel by level of care (1992/93)

One difficulty in making inter-regional comparisons is that the richer areas have a larger proportion of high income earners who make little use of the public health services.

Figure 5.3 Distribution of public sector health care expenditure by level of care (1992/93)

These areas have many more private hospitals and private health practitioners than poor ones. The very large differences between provinces in the total number of hospital beds and health personnel (i.e. both the public and private sectors) relative to population are illustrated in Table 3.4.

One way of correcting for the tendency to understate the inequalities between rich and poor regions would be to exclude members of medical aid schemes from the target population for the public health services. This would provide a better estimate of the relationship between available resources and the number of people who depend on them. Unfortunately there are no precise data on the regional distribution of medical scheme members. This information needs to be obtained in order to assess more accurately the allocation of public health resources relative to need.

Table 5.4 Public sector health care facilities in magisterial districts sorted by income per capita (1992/93)

The number of acute care beds (including bassinets for new-born babies) in public sector hospitals per 1,000 population varied from under 2 in Eastern Transvaal to over 3 in
Northern Cape. There were similar differences in the population per clinic which varied from 23 thousand in KwaZulu-Natal to 6 thousand in Northern Cape. These figures provide only a crude indication of the physical accessibility of facilities. For example, Northern Cape has a very low population density, which means that many small clinics must be provided in order to ensure that people live within reach of a facility (Development Bank of Southern Africa 1994).

Table 5.4 demonstrates the geographic distribution of health facilities between quintiles of magisterial districts sorted by income per capita, as described in Chapter 2. The population of the poorest districts, who are mainly Africans and have the greatest health problems (Chapter 3), have the least access to both hospitals and clinics.

There are only 1.8 beds in public acute care hospitals per 1,000 in the poorest quintile, compared with 3.0 in the richest one. A further indication of the inequality of access to public sector hospitals is that a fifth of the population (8.2 million) live in magisterial districts that have no public hospital beds at all, and a third (13.5 million) live in districts with either no beds or less than 1 bed per 1,000. The boundaries of the new health districts may not be the same as the existing magisterial districts. However, these data suggest that a number of the new districts will not have a hospital. The differences in the availability of clinics are discussed in Chapter 7.

Every district does not need to have the same number of acute beds per 1,000 since a large hospital may serve the needs of a relatively large area. Nonetheless, the substantial differences between districts suggest that some areas may not have adequate access to public hospitals. This issue needs to be addressed as part of an overall assessment by provincial health departments of their hospital network (Chapter 6).

There are substantial differences between provinces in the availability of public sector personnel. Table 5.5 compares the ratio of personnel to population in the worst and best staffed provinces. The Western Cape had the highest ratios of health personnel to population for all categories, while the Eastern Transvaal, Eastern Cape and Northern Cape had the lowest ratios for different categories of staff.

Table 5.6 summarises the distribution of public health personnel between quintiles of magisterial districts, sorted by income per capita. The greatest difference between Q1 and Q5 was for specialist doctors (there were 35 times more specialists in Q5 than in Q1), reflecting the concentration of referral hospitals in the more affluent urban districts. The differences between these two quintiles in the availability of general doctors (4.6 times), health inspectors (5.9 times), and pharmacists (10.8 times) are of greater concern, because of their importance to the delivery of the package of basic services (Chapter 7). There was a less unequal distribution of registered and other nurses, with differentials of 2.4 and 1.7 respectively. The relatively high numbers of doctors and nurses in Q3 can be attributed to the fact that two very large referral hospitals are located in this quintile.
Table 5.5 Public sector health personnel* per 100,000 population by province (1992/93)

Table 5.7 presents information on public sector health expenditure per capita. It was below 200 rands in the Eastern Transvaal, Northern Transvaal and North-West, and above 300 rands in Gauteng and the Western Cape. The Western Cape spent over three times as much per person as the Eastern Transvaal. This underestimates the difference because many more people are members of medical aid schemes in Western Cape than in Eastern Transvaal. The disparities in the distribution of per capita expenditure between the quintiles of magisterial districts are discussed in the context of primary care provision in Chapter 7.

Table 5.6 Health workers per 100,000 population in the magisterial districts sorted by per capital income (1992/93)

5.6 CAPITAL EXPENDITURE AND INVESTMENT COMMITMENTS

According to the ReHMIS survey, public sector health departments spent 386 million rands, or 3.4 percent of total public health expenditure, on building projects in 1992/93. This may be an underestimate, as some ex-homelands reported no capital expenditure at all. In addition, the IDT’s clinic building programme expenditure was not included in this total because it was classified as a non-governmental organisation (NGO).

Deloitte and Touche (1994a) documented all public health development projects planned for the period between 1993/94 and 1995/96. They collected information from all four former provincial administrations, three of the ex-homelands, the IDT and the CEAS. The results are summarised in Table 5.8.

Table 5.7 Public health care expenditure per capita in each province (1992/93)

The planned investment was allocated as follows: 89 percent on hospitals, 9 percent on primary care facilities, and 2 percent on other health-related facilities (Table 5.8). The two largest projects were a new 493 million rands academic hospital in KwaZulu-Natal and a 417 million rands upgrading and extension of the facilities at HF Verwoerd teaching hospital in Pretoria. The National Health Forum, a consultative body created in 1993 to oversee the transition to an elected Government, recommended that all major capital projects be suspended and reviewed for their consistency with the new government’s priorities. It was particularly concerned to avoid commitments to major projects which would increase recurrent expenditure by tertiary and academic hospitals. The future of these and other capital projects is not yet known.

Table 5.7 Public health care expenditure per capita in each province (1992/93)

The additional annual recurrent expenditure associated with the projects listed in Table 5.8 was estimated to total 212.6 million rands. This is less than 10 percent of the value of the
investment, which is very low for health projects. Deloitte and Touche (1994a) express doubts about the accuracy of this estimate. In view of the lack of reliable information on either the capital projects which are underway or the recurrent costs of running the completed facilities, this report does not attempt to estimate the additional costs which the public sector health budget will have to bear as a result of its investment programme.

Deloitte and Touche (1994a) make a number of criticisms of health facility planning in the public sector. They point out that there is little information available on the existing capital stock or on planned projects. They also conclude that infrastructure development is not planned systematically. The Treasury has instituted the following procedures:

- projects costing less than 300,000 rands do not need approval from central government;
- projects costing between 300,000 rands and 5,000,000 rands require approval from the Department of Health; and
- projects costing more than 5,000,000 rands must be submitted to the Treasury Committee on Building Norms and Cost Limits.

However, there are no clear guidelines on how to assess the degree to which a proposal for a new facility is consistent with health sector development priorities. In consequence, these priorities are not necessarily taken into account in the design and project approval process.

Table 5.8 Reported estimated costs of planned projects for the development of public health sector capital, 1993/94 - 1995/96

The planning and management of the public sector health investment programme should be improved: the repair and replacement of existing facilities needs to be well programmed; clear criteria must be established for defining the need for a new facility; Provincial Health Departments should formulate investment plans based on clear definitions of need; and the recurrent cost implications of a project must be taken into account when it is evaluated.

5.7 REDUCTION IN THE INEQUALITIES BETWEEN PROVINCIAL HEALTH BUDGETS

The goal of the national Department of Health is to eliminate inequalities between provinces in the levels of public sector expenditure. It has set targets for provincial expenditure which are based on population size, weighted for provincial per capita income, with an allowance for the additional costs of academic hospitals (see Appendix E for the details of the allocation formula). It hopes to achieve these targets in five years.

The allocation targets will need to be revised in future in order to reflect a province’s need for public sector health finance more fully (Appendix E). For example, the allocation formula does not take into account inter-provincial differences in population density and utilisation of private sector services, or the implications of rapid urbanisation. The refinement of the
allocation targets will be facilitated by improvements in the quality of routinely available data.

Given the substantial disparities in public sector health care resources that currently exist between provinces and the goal of achieving equity in weighted per capita expenditure within five years, annual budgetary changes within provinces are sizeable (as much as 20 percent in some provinces). In implementing such a rapid process of change, care will have to be taken to ensure that the additional funds are used well in the provinces whose budgets are increased and to avoid substantially disrupting services in the provinces whose budgets are reduced. This underlines the need to develop clear strategies for the implementation of these changes.

5.8 A STRATEGY FOR STRUCTURAL CHANGE

The major objective of the health sector over the next few years will be to decrease substantially the levels of excess sickness and premature death by ensuring that everyone has access to at least a minimum package of preventive programmes and essential curative services which includes both ambulatory and inpatient care.

It may be possible to finance some expanded services in under-resourced areas out of additional budgetary allocations to the health sector but it will also be necessary to make better use of the available resources. Therefore, additional objectives will be to decrease the share of public finance spent on the tertiary and academic hospitals and improve the efficiency of all levels within the health service while minimising the disruption of services to the public. It may also be possible to identify sources of additional finance to complement the budgetary allocations out of general tax revenue. Depending upon the outcome of current policy discussions these could include increased user charges, increased funding out of rates or local taxes, and new earmarked taxes, such as social health insurance.

The achievement of these objectives will constitute a major structural change in the public health sector. The implementation of a process of rapid change in the levels of funding for health services will have to be managed to maximise the benefits in areas where services are expanded and minimise the problems in areas where budgets have to be cut.

The next stage in the development of a strategy for change would be for each province to prepare a health service development plan with clearly defined targets for improving access and resource use. Such a plan would have to include proposals for strengthening service delivery, constructing new facilities and improving the use of available resources. Health status, and indicators of service quality and cost, will have to be monitored to ensure that the expanded services are cost-effective and to monitor the impact of decreased expenditure in the better resourced provinces. Without such a plan, there is a danger that under-resourced provinces will spend additional funds on expanding hospital rather than primary care services, and the over-resourced provinces will continue to finance very large specialist hospital services.
The implementation of structural change in a sector which accounts for 8.5 percent of the economy is a major task. Strategies will have to be developed on the basis of an analysis of the likely impact of the available options. It will be necessary to monitor progress and re-evaluate strategies on the basis of experience. An important future constraint which this report has been unable to quantify is the emerging AIDS epidemic. The costs of caring for HIV/AIDS patients will undoubtedly be large, and will necessitate a re-evaluation of modes of delivery of care, as well as a re-prioritisation of existing health resources.
CHAPTER SIX

PUBLIC SECTOR HOSPITALS

6.1 INTRODUCTION

Public sector acute care hospitals spent 8.59 billion rands in 1992/93, or 76 percent of total recurrent public health expenditure (Chapter 5). This chapter analyses how they used this money. Sections 6.2 and 6.3 present information on the allocation of hospital resources between provinces and between levels of care; section 6.4 compares hospital unit costs to assess efficiency; section 6.5 presents data on recent trends in hospital expenditure; and section 6.6 explores the potential for increased cost recovery. Because hospitals account for such a high proportion of total health expenditure, a relatively small increase or decrease in their spending has a major impact on the availability of finance for other purposes, such as an expansion of primary care services.

6.2 GEOGRAPHIC DISTRIBUTION OF PUBLIC SECTOR HOSPITALS

There are 2.43 public hospital beds per 1,000 population in South Africa (Table 6.1). If medical aid beneficiaries are excluded from the population denominator, the ratio rises to 2.75 beds per 1,000. Thus, although South Africa has an overall hospital bed to population ratio which is comparable to countries with a similar income level (4 per 1,000 population as detailed in Chapter 3), the ratio of public sector hospital beds to the population dependent on these facilities is relatively low by international standards.

There are considerable differences between provinces in the availability of public sector hospitals (Table 6.1). Eastern Transvaal has the lowest and Northern Cape the highest ratio of acute beds to population. There are also differences in the levels of utilisation of hospital services. Public sector hospitals in Eastern Transvaal, North-West and Northern Transvaal provided less than 500 inpatient days per 1,000 population, while KwaZulu-Natal and Western Cape provided over 700 days. There were even larger differences in the number of acute admissions relative to the population. The differences in admissions and patient days relative to the population served is to some extent related to the supply of acute hospital facilities. However, utilisation levels are also likely to be influenced by the physical access of the population to these facilities, epidemiological differences, variations in admission, treatment and discharge policies, and other related factors. Such factors could also explain inter-provincial differences in the average length of stay in acute hospitals.

There are also differences in the mix of public sector acute care hospitals (Table 6.2). Over
half of the beds in Gauteng and the Western Cape are in academic or tertiary facilities. On the other hand, the Eastern Transvaal and Northern Cape have virtually no tertiary beds at all. The Western Cape also has a large number of chronic hospital beds per 1,000 (Table 6.1), which is linked to its high incidence of pulmonary tuberculosis.

Table 6.1 Indicators of availability and utilisation of public sector hospitals between provinces (1992/93)

Residents of relatively under-resourced provinces use tertiary facilities in neighbouring provinces. However, as Gauteng and the Western Cape suffer budget cuts, their referral hospitals may become more reluctant to treat patients from other provinces. There are already reports that some out-of-province patients have had difficulty in gaining admission to tertiary and academic hospitals. However, the Department of Health’s resource allocation formula (see Appendix E) includes a special allowance for provinces with academic hospitals which is intended to compensate such hospitals for indirect training costs as well as service provision to patients from other provinces.

It will be necessary to address the disparities in the availability of hospitals. In areas with a relative over-supply it may be possible to reduce the number of public sector beds and/or downgrade some facilities to secondary hospitals. On the other hand, under-served areas, such as the large number of magisterial districts with less than 1 bed per 1,000 (see section 5.5.2), may need additional beds; and areas where there are enough hospitals beds may require specialist services in their hospitals. Given that a large proportion of public sector hospital resources are already located in academic and tertiary hospitals (38 percent of beds and 58 percent of acute hospital expenditure), the development of additional tertiary facilities should be evaluated with caution. Alternative mechanisms for under-resourced provinces to ensure that their residents have adequate access to tertiary care, such as by negotiating contracts with tertiary and/or academic hospitals in another province, should be seriously considered. This may not be necessary if the resource allocation formula provides adequately for the costs of service provision to patients from other provinces (see Appendix E).

The unequal distribution of hospital beds and bed utilisation demonstrates why it is important that provinces plan the development of their hospital services. They need to define the needs of their population relative to clearly defined targets for the provision of general and specialist services. This will enable them to formulate strategies for addressing these needs. The provinces will have to estimate the capital and recurrent costs of any additional hospital services to ensure that their plans are realistic and do not jeopardise plans to expand the provision of primary care. The sections which follow outline some of the issues which provincial health departments will need to address in formulating hospital service development plans.

6.3 DISTRIBUTION OF PUBLIC SECTOR HOSPITAL RESOURCES BETWEEN LEVELS
OF CARE

The academic and tertiary hospitals had 38 percent of the beds but accounted for 58 percent of total acute care hospital expenditure in 1992/93 (Table 6.3). This reflects the higher running costs of these facilities: a bed in an academic hospital cost more than twice as much as a bed in a tertiary hospital and more than three times as much as a bed in a community hospital.

The largest item of expenditure by acute care hospitals, accounting for 68 percent of the total, was payment of staff. There were substantial differences in staffing between the different kinds of hospitals (Figure 6.1). The community and secondary hospitals had similar numbers of doctors and nurses per bed. However, compared with community hospitals, academic facilities had 5 times the number of doctors per bed and 1.7 times the number of nurses; and tertiary hospitals had 2.7 times the number of doctors and 1.4 times the number of nurses. Academic hospitals had 1.8 times more doctors and 1.3 times more nurses per bed than tertiary facilities.

Cost per bed is not a good measure of the relationship between hospital spending and benefits, because it does not take into account the quantity of in- and outpatient services provided, or patient case-mix and severity of illness differences. One reason for the higher cost per bed in academic facilities was their higher levels of activity. For example, the average occupancy rates of academic and community hospitals were 82 and 68 percent, respectively (Table 6.4).

An indicator which gives a more accurate reflection of hospital activity levels is that of the ‘patient day’. It is a composite measure of the provision of hospital services, and is defined as: the number of inpatient days plus a third of the number of outpatient visits. This ratio is based on the assumption that an inpatient day costs three times as much as an outpatient visit. While there has been debate about the size of the cost differential between inpatient and outpatient services, the 3:1 ratio has been historically used within South Africa.

A study by Lombard et al (1991) found quite different ratios between the cost of an outpatient visit and an inpatient day in hospitals in the former Cape Provincial Administration. The cost of an outpatient visit was 43 percent of an inpatient day in small hospitals and 70 percent in specialist and academic ones. Another recent study of Cape hospitals produced similar findings (73 percent in academic hospitals, and between 45 and 50 percent in other categories of hospitals) (McMurchy 1995). A study of hospitals in Gauteng found that the ratio of inpatient to outpatient costs varied between 1.68 and 7.63% in academic hospitals, between 1.75 and 3.12% in regional hospitals, and between 3.41 and 11.00% in community hospitals (Brown and van den Heever 1994).

The estimates of the cost per patient day using the Lombard ratios are presented in the note to Table 6.5. As there is a higher outpatient workload relative to the number of inpatients at the larger urban hospitals, the greater weighting of outpatient visits using the ratios from Lombard’s study results in smaller differences in unit costs between levels of care. This
highlights the need to treat the estimates of unit costs provided in this chapter with caution. 

Table 6.5 presents data on the average cost per patient day in the different categories of hospitals. Unit costs in academic hospitals were more than twice those in secondary and community ones. This difference was due, in part, to the different functions of general and specialist facilities. Patients at academic hospitals are drawn from a wide catchment area, they tend to be sicker and they are provided with expensive specialist services. However, the academic facilities also provide basic inpatient and ambulatory care to large numbers of patients who live nearby at considerable cost. (Chapter 7 indicates that the average cost of an outpatient department visit is 120 rands at academic hospitals and 76 rands at tertiary hospitals compared with an average cost of 30 rands per visit at a clinic). Basic ambulatory services could be provided more cost-effectively, and with improved access for patients, by increasing the proportion of total expenditure devoted to preventive programmes and simpler, community-based health facilities (see Chapter 7).

The provincial hospital development plans will need to include a strategy for achieving an appropriate balance between specialist and general hospital services. This report will not attempt to estimate either the additional costs of providing more hospital services to under-resourced areas or the potential savings in the provinces whose hospitals cost the most. This will have to be done when provincial plans are prepared.

6.4 EFFICIENCY WITHIN PUBLIC SECTOR HOSPITALS

Table 6.6 provides information on the range of unit costs at public sector hospitals. A patient day cost less than 133 rands in a quarter of the facilities for which data were available and more than 261 rands for another quarter of the facilities. Some of the variation was due to differences between the four categories of acute care hospital in the sophistication of services they provided. However, there was considerable variation in unit costs for each category of hospital. For example, 85 community and secondary hospitals cost less than 133 rands per patient day and 62 of them cost more than 261 rands per patient day.

Some of these differences were due to variations between facilities in the health problems of their patients or the quality of service provided. In particular, the continued effect of historical differences in resource availability and quality of care in hospitals that served African patients relative to those that served White patients, prior to the desegregation of public sector facilities, requires further investigation. In addition, there may be significant differences in the quality of cost and service data available at different hospitals. For example, some hospitals include maintenance and transport costs in their total expenditure, while in other hospitals these costs are borne by other provincial departments such as the Department of Works. None the less, these data suggest that some facilities could decrease costs without adversely affecting the quality of the services they provide.

The factors which influence unit costs within hospitals, including the role of hospital
management, requires detailed investigation. Hospitals are complex institutions and a number of factors can influence their efficiency (Barnum and Kutzin 1993). This report does not discuss these factors in detail. A considerable amount of additional work is needed to identify clearly the major management problems in South Africa’s public sector hospitals. The potential value of this kind of study is illustrated by Table 6.7, which summarises the impact of one factor, the occupancy rate, on unit costs.

Hospitals are usually designed to operate most efficiently at an occupancy of 85-90 percent; at lower levels of activity their unit costs rise and at occupancy rates above 100 percent the quality of their services fall (Barnum and Kutzin 1993). The ReHMIS survey identified 39 acute care hospitals with occupancy rates less than 40 percent (Table 6.7 note). These had much higher costs per patient day than other facilities in their category. This analysis suggests two options for facilities with very low occupancy rates: a considerable amount of money could be saved by closing these facilities, or by reducing their bed numbers with an associated proportional reduction in staff; or they could treat more patients at relatively low additional cost.

A rough estimate was made of the magnitude of the potential efficiency savings. It was calculated that if every hospital that currently spends more on staff salaries and drugs than the mean expenditure on these items per patient day for their level of care, were to reduce their spending to the mean level, the savings could be almost 1 billion rands. These estimates are no more than an illustration of the need to take efficiency improvements seriously. Some hospitals will need to spend considerably above the mean because they have a different case mix and/or are treating sicker patients. In contrast, certain other hospitals which are already spending below the mean may be able to achieve efficiency gains. Detailed studies need to be carried out in both low cost and high cost hospitals in order to develop a more accurate picture of the potential for improvement. Such studies should also investigate ways of improving control over pharmaceutical and other medical consumables. The Steinmetz Commission indicated that shrinkage of these items could amount to 500 million rands per annum (South Africa 1993).

It may be possible to achieve some savings in expenditure without substantial disruptions to service provision, such as in areas with duplicate facilities as a result of apartheid policies. It will be more difficult to achieve more extensive and sustained savings. This is partly related to the rigidity in cost structures within hospitals, particularly in relation to staffing. It will be necessary to overcome resistance, for example, to the redeployment of staff from facilities with high unit costs. Changes in entrenched working practices to improve staff productivity are also required. The extent to which efficiency gains are achieved is dependent on improved management capacity within public sector hospitals.

A substantial effort will be required to improve information systems, train more hospital managers and develop appropriate hospital management procedures. In particular, there should be greater decentralisation of control to hospital level, as well as to cost-centres within hospitals. Hospital managers should be given greater authority and autonomy to make innovative changes required in order to achieve efficiency gains.
6.5 RECENT TRENDS IN HOSPITAL EXPENDITURE

The Health Expenditure Review Reference group commissioned Price and Broekmann (1994) to prepare a report on recent trends in spending by hospitals in the four former provinces. While they indicated that it was difficult to draw conclusions because of problems with data, they prepared the analyses summarised in Table 6.8.

The provincial hospitals more than doubled their total expenditure between 1984/85 and 1990/91. However, this was equivalent to a real decrease of 8.4 percent, taking inflation into account. This trend was not uniform between provinces. Hospital spending rose more quickly than the rate of inflation in the former provinces of Natal and the Orange Free State and fell, in real terms, by 3 percent in Transvaal and 21 percent in the Cape Province. This is partly attributable to attempts to reduce geographical disparities in per capita expenditure between the former provinces.

An earlier commentary indicated that the real decrease in public sector health care expenditure since the mid-1980's reflected important developments in government policy (McIntyre 1991). Since the presentation of the White Paper on Privatisation and Deregulation in 1987, the government has been investigating every possible means of reducing the level of public expenditure (South Africa 1987). One of the areas specifically targeted in this regard was the health budget. As indicated in section 2.5.2, overall government expenditure will be tightly controlled in future, and it is thus likely that real decreases in public hospital expenditure will continue.

There was a marginal increase in the total provision of hospital services in the four provinces, despite the fall in real expenditure. However, service provision fell by 17.4 percent in the Cape Province. The average cost per patient day rose more slowly than the rate of inflation so that there was a net fall of 9 percent in the real unit cost of services.

The experience of the four provinces since the mid 1980s illustrates that hospital spending can be controlled. However, it is not possible with routinely available data to assess the degree to which the availability and quality of services has been affected, particularly in the Cape Province which experienced the largest decrease in real expenditure. The major question for policy-makers with regard to the public sector hospitals is whether real expenditure at these facilities can be reduced further, without seriously disrupting services for the public.

6.6 USER CHARGES IN PUBLIC HOSPITALS

6.6.1 Current levels of cost recovery
Public sector hospitals collected approximately 9 percent of their total expenditure from charging fees to patients (Table 6.9). The contribution of fees varied from over 13 percent for secondary hospitals to a little over 6 percent for academic facilities. The levels of fees depend on the category of facility and the patient’s declared income (Box 5.2). Hospitals have little incentive to collect fees because all revenue is effectively returned to the treasury in that their budgetary allocation is calculated net of projected fee revenue. There are indications of substantial amounts of uncollected patient fees.

This section explores the potential for increasing the revenue generated from fees for inpatient care. Chapter 7 discusses charges by outpatient departments.

Hospitals find it difficult to charge high fees for inpatient care because most patients cannot afford more than a small proportion of total costs. For example, an average admission to an academic hospital costs over a quarter of the annual income of a household living below the poverty line (an academic hospital admission cost 2,700 rands in 1992/93). This is the reason why fees were kept to 120 rands or less per admission for families earning under 31,000 rands a year in 1992/93 (Table 6.10). There is only a limited potential for raising more revenue from these patients unless more of them are covered by some form of health insurance.

6.6.2 Private and insurance patients in public hospitals

Medical scheme members and people whose family income was more than 31,000 rands a year (1992/93 income categories) are classified as private patients. They pay a daily fee plus additional charges. The average charge per patient day in tertiary and academic hospitals in 1992/93 was 234 rands and patients paid an average of 16 rands per day for laboratory and diagnostic services and drugs (Table 6.10). Based on these fee levels, it can be estimated that private patients paid an average of 250 rands per day in both kinds of facility. According to the ReHMIS survey, tertiary hospitals spent 227 rands per patient day and academic hospital spent 360 rands (Table 6.5). This suggests that tertiary hospitals charged private patients the full cost of services but that academic hospitals did not.

The preliminary results of a recent survey of public sector health care facilities indicate that more than 70 percent of their revenue comes from members of medical schemes. The importance of private patients is illustrated by one hospital which generated fee revenue equivalent to 43 percent of its recurrent expenditure, this being largely derived from the 38 percent of its patients that were private. In contrast, another hospital at which 1 percent of the patients were private, only generated revenue equivalent to 2 percent of its recurrent expenditure (McIntyre 1994a). Several factors have depressed the generation of revenue from private patients. In the first place, the government fee policy states that private patients should only be treated at public hospitals in certain instances, such as when there are no readily accessible private facilities (South Africa 1993). Secondly, hospitals determine a patient’s income by interview and they have little incentive to categorise a patient as private,
since they do not retain any of the revenue. Thirdly, members of medical aid schemes, who should be classified as private, do not have an incentive to inform the hospital, since private and public patients receive the same services.

It should be possible to increase revenue generation substantially if the present policy of discouraging public hospitals from competing for private patients were changed. Options such as negotiated contracts between academic or other tertiary facilities and medical schemes to provide specified hospital services to their members could be investigated. If fees to private patients exceeded cost recovery levels, it should be possible for provinces to decrease their budgetary support to specialist hospitals without causing major disruption to their functioning. This should, in turn, release additional funds for the expansion of hospital services in under-resourced areas and for primary care services. The following paragraphs outline the issues which would have to be addressed as part of a reform of cost recovery.

The fees charged by public sector facilities appear to be competitive with private facilities. Academic hospitals may be charging less than the cost of providing services. Regional and academic hospitals charged slightly lower ward and theatre fees than the private hospitals with intensive care units in 1992/93 and they charged considerably less for laboratory and diagnostic services and drugs (Table 6.11). Unlike private hospitals, most public sector hospitals did not charge professional fees in addition to ward, theatre and other inpatient fees in 1992/93. However, since the introduction of limited private practice, hospitals allow doctors to charge for services. There may be benefits in moving from the current mandatory uniform fee structure to greater decentralisation in determining cost-recovery charges, particularly in hospitals which have adequate cost information systems.

Although price competition is important, patients do not choose their hospital simply on the basis of price. It is possible that many private patients prefer the better ‘hotel’ services in the private hospitals. Public hospitals may have to open amenity wards to attract substantial numbers of private patients. An undesirable consequence of this is that it would formalise the demarcation between public and private patients. Measures would have to be taken to ensure that all patients had a similar quality of medical care.

At present only 14 percent of the population is covered by medical aid schemes (i.e. excluding medical benefit and exempted schemes which do not include many hospital benefits) and a large number of private hospitals cater to their needs. Some of these facilities are operating substantially below optimum occupancy rates. The competition for private patients is likely to be intense in the immediate future. In the longer term, the number of insured patients could grow if some form of SHI is introduced for lower paid workers (Chapter 5). However, improved user fee revenue generation through this mechanism would depend on hospital care being included in the SHI benefits package. One reason for the low levels of cost recovery is that hospitals do not benefit from collecting revenue. These facilities will have to be allowed to retain a portion of the revenue they collect. However, this means that only part of the additional revenue will be available to spend on meeting the needs of the under-served. The rest will be used by hospitals, for example to improve facilities for patients or for the replacement of equipment and maintenance of
facilities.

The major objective in trying to increase the number of private patients in the specialist hospitals is to release funds for use in services that make a greater impact on the health of the poor (World Bank 1993). However, care must be taken to ensure that hospitals do not neglect the needs of their public patients. Once hospital managers are allowed to retain a share of their revenue, they will try to attract as many private patients as possible. Measures will be required to ensure that public patients have adequate access to specialist care. This could be linked to improved provision of non-specialist care to public patients in outpatient clinics and general hospitals and the implementation of adequate referral systems.

To summarise, there is little scope for substantial increases in the level of fees for inpatient care to those with low income. However, public hospitals could generate substantially more revenue from people with high income or those covered by hospital insurance. Provincial health departments may wish to include a strategy for attracting more patients to specialist hospitals, particularly in provinces with a high proportion of acute hospital beds in tertiary and academic facilities. The negotiation of contracts with medical schemes to provide specialist hospital care for their members should be investigated. This strategy will have to address the issues discussed above in considerably more detail.

6.7 SUMMARY AND CONCLUSIONS

South Africa spent nearly 8.5 billion rand on its public sector acute hospitals in 1992/93. This was equivalent to approximately 200 rand per person in that year (236 rand per person if medical aid members are excluded from the population assumed to be dependent on public hospital services). In spite of this it only has 2.43 public sector beds per 1,000 population and many magisterial districts have no hospital at all. Table 6.12 summarises the major requirements for increased hospital expenditure and the potential sources of savings by public hospitals. A major aim of provincial planning exercises should be to quantify these items.

The data presented in this chapter are not sufficiently detailed to propose solutions. Instead, they highlight the further analysis of the hospital sector required to support efforts to address allocation and efficiency issues. Such analysis should include the following aspects:

- Assessing the need for various levels of hospital care within each province;
- Analysing the determinants of utilisation of hospital services including epidemiological factors, current geographical and financial access, and other related factors;
Identifying the key determinants of efficiency and inefficiency within hospitals with a particular focus on differences in staffing levels, skill levels of clinical staff, and productivity of staff. This should be evaluated by type of hospital, geographical location (i.e. by province and rural versus urban), and by type of staff. Quality of care should be taken into account in this evaluation;

- Evaluating existing management systems and regulation mechanisms and investigating alternatives, such as giving greater autonomy and authority to hospital managers;
- Evaluating current management capacity and additional requirements, including the need for improved information systems and labour relations expertise;
- Investigating ways of improving the management of supplies to reduce levels of shrinkage of pharmaceutical and other medical supplies;
- Evaluating the possibility of contracting with other organisations for management and logistical services; and
- Evaluating the potential for reallocating hospital-based resources to community-based primary care services. This will include considering the possibility of closing wards or entire hospitals which are currently under-utilised, or selling or leasing them to the private sector, with associated shifting of personnel. An important aspect of these investigations will be negotiation with the public service commission, professional organisations and health worker trade unions.
CHAPTER SEVEN

PRIMARY HEALTH CARE IN THE PUBLIC SECTOR

7.1 THE PRIMARY HEALTH CARE APPROACH

There are many reasons for the high levels of sickness and premature death in South Africa, including inadequate health services, poor nutrition, bad housing, exposure to environmental risks, unavailability of clean water, low levels of education and the problem of violence. The government’s strategy for addressing these problems is outlined in the Reconstruction and Development Programme (African National Congress 1994). This chapter focuses on the main component of this strategy in the health sector, namely the provision of primary care. Primary care services are defined in this chapter in terms of the format in which data were available rather than in terms of a package of health and health-related services. Thus, the emphasis is on services provided at public sector fixed and mobile clinics, and by district surgeons and other personnel providing primary care services such as community nursing and school health services.

The RDP gives priority in the health sector to prevention and the provision of essential curative care to all. There is widespread international agreement that this is the most cost-effective approach for decreasing the levels of excess sickness and premature death which are found in South Africa (World Bank 1993 and 1994). The government has not yet defined in detail the services to which everyone should have access. However, the package is certain to include:

- programmes to educate the population about how to take responsibility for their health and change dangerous behaviour, such as smoking, excessive use of alcohol and unprotected sexual activity;
- activities aimed at preventing diseases through environmental improvement or preventive programmes;
- provision of easy access to basic medical care to prevent the development of serious and costly complications of illnesses; and
- measures to help the disabled to be more self-sufficient and productive.

The potential components of a basic package of health services should be carefully evaluated for cost-effectiveness and overall efficacy in achieving improvements in health status.
7.2 WHO USES THE DIFFERENT PROVIDERS OF PRIMARY CARE SERVICES?

The three income groups described in Chapter 2 obtain primary care services from different providers. This is illustrated by Table 7.1 which is derived from the report of the Project for Statistics on Living Standards and Development (1994). It presents information on the health service providers that people in different income groups visit when they are ill.

High income earners make relatively little use of government outpatient services. They obtain most of their care from private doctors, dentists and other health workers, and they purchase drugs from pharmacies or dispensing doctors.

Low to middle income earners use both public and private sector providers, attending public clinics and hospital outpatient departments, consulting private practitioners and purchasing drugs from pharmacies or dispensing doctors.

The poor depend to a large extent on publicly funded services provided at government health facilities, although they also make considerable use of private doctors and traditional healers and purchase some drugs from private pharmacies or shops.

This chapter concentrates on the public sector because it is the principal funder and provider of services for the poor. The Department of Health is reassessing the relative roles of hospital outpatient departments, public sector clinics and private general practitioners as providers of primary care services to public patients. The strategy adopted for the development and finance of primary care services will be influenced by the outcome of this review. The principal aim of this chapter is to present the problems which the strategy will have to address.

7.3 PRIMARY HEALTH CARE IN THE PUBLIC SECTOR

7.3.1 Organisation of primary health care

The public sector provides a wide range of personal and public health services organised in a complex system of overlapping administrations. These services were previously split along racial lines and between preventive and curative care. Box 7.1 summarises the responsibilities of the different administrative authorities and Box 7.2 shows how health services in one area were organised as a consequence of this complex situation. Care must be taken in interpreting these summaries, because in many cases the services listed are not fully provided, in practice.

The fragmentation of the public health services increased their cost because of the duplication of services and management bodies (for example some places have a facility for each of the racial groups). It also made it difficult to develop strong preventive programmes, to establish an effective referral system and, indeed, to apply the primary health care
approach. The government intends to integrate the existing authorities into unified provincial and district health authorities. Although this will save money in the long run, the process of transition could be costly. It will require a substantial effort of training and management support and, if authorities with different pay scales are integrated, the salary bill may increase significantly (Makan and Bachmann 1994).

7.3.2 Public primary care services in the nine provinces

According to the ReHMIS survey there are 3,141 general primary care clinics and 365 outpatient departments in the public sector (Table 7.2). This is equivalent to 11.6 thousand people per facility (Table 7.3). However, in a number of cases, preventive and curative care is provided at different clinics which are located close together. Therefore this ratio overstates the number of localities which have a facility.

In addition to the fixed public facilities there are 343 district surgeons (mainly part-time) and 1,053 mobile clinics which provide services to communities on a weekly, monthly or six-weekly basis. Because district surgeons provide a limited range of services and mobile clinics provide services episodically, they are not included in the analysis of the availability of facilities. There are also 2,825 maternity beds in public sector clinics.

The government spent 1.2 billion rands, or 10.5 percent of its recurrent health expenditure, on non-hospital primary health services in 1992/93 (Chapter 5). This was equivalent to 28.7 rands per person. The public sector also spent 2.5 billion rands on hospital outpatient departments. This study did not attempt to determine the proportion of hospital expenditure which was allocated to primary-level outpatient visits or maternity care.

There were 72.8 million ambulatory visits to government clinics and hospital outpatient departments during 1992/93 (Table 7.3).

The data for Northern Cape and KwaZulu-Natal illustrate the problems in using simple indicators of access to primary care. Northern Cape had the largest number of outpatient facilities relative to its population but it had less than one outpatient visit per capita. This may be related to its extremely low population density which means that many people have to travel a long way to reach a clinic. KwaZulu-Natal, in contrast, had over 20 thousand people per facility at which there were 2.4 outpatient visits per capita. It is possible that some facilities were overcrowded, but it is also possible that KwaZulu-Natal has large community health centres and that its hospital outpatient departments see large numbers of patients. Provincial means do not provide much information on the degree to which some areas are under-served. The data on differences between districts provide a better indication of this.

7.4 SHORTFALL IN PUBLIC PRIMARY CARE SERVICES
This section uses data from the ReHMIS survey to assess the coverage of public primary care services in rich and poor magisterial districts. It uses the following indicators of the availability of services: population per outpatient facility, the number of outpatient visits per capita, population per health worker, and public sector health expenditure per person. The survey did not collect information on the effectiveness of preventive programmes or the quality of curative care.

The analysis focuses on the two poorest quintiles of magisterial districts. Since the 19.7 million people who live there depend heavily on the public sector, the ReHMIS survey provides a reasonable picture of the population’s access to basic health services. This is not the case in the richer districts, where the lack of data on the private sector is more serious.

The use of the district as the unit of analysis obscures the problems of under-served communities living in richer areas (Chapter 2). The needs of these communities can only be established through district planning exercises, such as a recent one carried out in Soweto (Centre for Health Policy 1994).

7.4.1 Availability of health facilities

This sub-section compares the population per public sector health facility against a commonly used benchmark of one facility per 10 thousand people. A recent analysis of national data by Chetty (1994) estimates that an additional 1,087 facilities would be required to ensure that each province had one clinic per 10 thousand people. The ReHMIS survey found that there were over 14 thousand people per public sector facility (clinic and hospital outpatient department) in both Q1 and Q2 (Table 7.4). These districts are inhabited by the African poor. On the other hand, there were considerably fewer than 10 thousand people per facility in Q3 and Q4 and only slightly more than that number in Q5.

The major shortfall in primary care facilities was in Q1 and Q2, where an additional 626 clinics would be required in order to provide a facility for every 10 thousand people. It is difficult to assess the needs of under-served communities in Q3, Q4 and Q5 on the basis of this data because their population received much of their primary level care at large health centres and hospital outpatient departments (often with relatively sophisticated services) or from private practitioners.

There are a number of weaknesses in this methodology for estimating the need for more facilities. In the first place, a large hospital outpatient department, a community health clinic with over 100 staff and a small rural clinic with 3 workers are all counted as a single facility. A more useful measure of differences in the capacity of outpatient facilities is the concept of the “functional unit”, developed by the Council for Scientific and Industrial Research. The ReHMIS survey was unable to collect sufficiently accurate information on the number of consultation rooms in clinics and outpatient departments to permit detailed analysis of the availability of functional units.
A second problem is that the Department of Health is reassessing the relative roles of hospital outpatient departments, public sector clinics and private general practitioner practices in the provision of primary care services. The number of new facilities needed and the proportion of them that are public sector clinics will depend a great deal on the decisions it makes with regard to this issue. For example, fewer new clinics will be required if more use is made of private practitioners.

The estimates also do not take into account factors that will influence a district’s need for new facilities over the next few years such as the growth of its population, the present duplication of facilities providing preventive and curative care to the same community, and the physical degradation of the existing stock of clinics.

On the basis of the available data, it is not possible to go beyond a crude estimate that between 600 and 1000 additional primary level facilities are required. It is possible that the real need is quite different and it will not be possible to estimate the requirements for additional facilities accurately until detailed district planning exercises have been completed which assess the proportion of the population living within easy reach of a facility. An investment programme that is not based on such an exercise could result in the construction of facilities which do not meet priority needs.

7.4.2 Utilisation of public sector health facilities

There are reasons, other than the lack of facilities, why the population does not have adequate access to public health services. These include staff shortages, inconvenient opening hours, poor service quality and an inability to pay fees or transportation costs. This sub-section uses the number of outpatient visits to public health facilities per capita as an indication of the accessibility of services. It compares utilisation levels for 1992/93 with the target of 3.66 visits per capita used by the Council for Industrial and Scientific Research in assessing the need for new facilities (Abbot 1992). This ratio is an achievable target in Southern Africa, as illustrated by Botswana, where almost every district reports at least 4 visits per year to public sector facilities per capita (Bloom and Lenneiye 1989).

The average of 1.8 outpatient visits to South Africa’s public health facilities per capita is low (Table 7.4). One reason for this is the important role of private practitioners in the richer parts of the country. However, there was only 1.0 visit per capita in Q1 and 1.4 visits per capita in Q2, where people depend largely on the public sector. The total number of visits to public sector facilities would have to increase from 23.1 million to 72.0 million, in order to reach the target of 3.66 visits per person in these districts. This indicates the inadequacy of their population’s access to basic health services. According to Table 7.1, almost one third of visits by poor households are to private doctors. There is a need for more information on the reasons why the poor use private doctors and on the impact of high levels of medical care expenditure on poor households.
The RDP emphasises the need for pregnant women to have adequate health care. There are no national data on the number of women who attend antenatal clinics sufficiently early and often during a pregnancy, and who deliver in a health facility. Local studies suggest that many women attend clinics only once, late in their pregnancy. Surveys in the rural areas have found that between 31 and 66 percent of women give birth at home (Klugman and Weiner 1992). Van den Heever and Price (1994) estimate that rural facilities would have to provide another 66,000 deliveries in order to raise the proportion of births in facilities to 80 percent.

7.4.3 Availability of public sector health workers

There are great differences between regions in the number of public sector health workers per 100,000 population (Table 5.6). The ReHMIS survey found a national average of 14.1 general doctors per 100,000 population, but in Q1 there were only 5.1. There were also fewer registered and other nurses relative to the population in the poorer districts. The numbers of health inspectors (1.1) and pharmacists (0.5) per 100,000 were particularly low in Q1. These professions play key roles in the provision of primary level health services.

7.4.4 Public sector health spending

Public sector health expenditure is lower in the poorer districts, averaging 122 rands in Q1 and 175 rands in Q2, compared with 437 rands in Q5 (Table 7.5). Spending on clinics is also lower in Q1 and Q2 than in the other quintiles. Since large numbers of people in the richer districts do not use public sector clinics, this suggests that average spending on clinic services per public patient is considerably higher in the richer districts.

One can get an idea of the consequences for access to health services of the low levels of expenditure by estimating the cost of providing 3.66 outpatient visits per capita. If, as van den Heever and Price (1994) suggest, a visit to a rural facility costs 20 rands, it would cost over 70 rands per person per annum to finance basic outpatient services in rural areas. However, according to Table 7.6, total public health expenditure was between 50 and 100 rands per person in 20 of the 150 poorest districts (which include some of the ex-homelands) and under 50 rands per person in a further 46. This strongly indicates that spending will have to rise in order to provide universal access to outpatient services.

7.4.5 Environmental health services

The Project for Statistics on Living Standards and Development (1994) found that a substantial number of households do not have access to clean water or adequate disposal of human wastes. This exposes them to a considerable risk of illness. In the rural areas 22.6 percent of African households live more than 500 metres from a source of water and 25.4 percent do not have a flush toilet, bucket toilet or a pit latrine. There are only 1.1 health
inspectors per 100,000 in Q1, which indicates the size of the shortfall in the environmental health services in the poor rural areas.

The same study also found problems in the urban areas where the percentage of African households without a flush toilet, bucket toilet or pit latrine is 28.8 in the smaller centres and 10.1 in metropolitan areas.

7.5 THE ADDITIONAL COST OF PROVIDING ESSENTIAL PRIMARY CARE SERVICES

The RDP commits the government to address the priority health needs of the population through the extension of primary care services. It is difficult to calculate how much it will cost to achieve this goal; firstly because there is not enough information available on existing services, and secondly because there is no nationally accepted model for organising primary care. This section summarises the available estimates of the increases in expenditure on primary level services which will probably be necessary over the next few years.

The number of clinics is a major determinant of the cost of primary care. Van den Heever and Price (1994) estimate that if an additional 1,060 facilities are required, as estimated by Chetty (1994), the capital cost would be 1.2 billion rands and the additional annual recurrent cost would be 536 million rands, at 1994 prices. This is a rough estimate, based on arbitrary assumptions that the new facilities will include a mixture of small and relatively large facilities. If all of the clinics are the type which the IDT proposes for a population of 10,000 people, the total cost would be 400 million rands. The problems with the estimate of the number of clinics required were discussed above.

A second method for estimating the additional services required is to calculate the shortfall in outpatient visits below the target of 3.66 per capita. According to section 7.4.2, an additional 48.9 million visits would be required in Q1 and Q2. If a visit costs 20 rands, the increase in spending would be 1 billion rands. This methodology may overestimate the cost of increasing the delivery of services, since it may not be necessary to increase operating costs in proportion to the increase in activity. In addition, it does not take into account the role of private doctors in poor areas. This methodology does not include the cost of meeting the needs of under-served populations in the richer districts, which cannot be estimated using district-level data.

The above estimates are based on simple measures of the availability of facilities and the number of outpatient visits. They do not take into account the need to strengthen preventive programmes and environmental services and improve the quality of care. Estimates which look at primary care packages in more detail are described below. A recent paper by van den Heever and Price (1994) estimated that the annual public sector recurrent health budget would have to increase by 1.5 billion rands over the next five years in order to meet the following RDP service delivery targets:
provision of full coverage by child health and maternity services;
running an additional 1,060 clinics;
extending emergency services to all areas;
immunising the population against Hepatitis B and strengthening the AIDS and mental health programme; and
improving rural health services through in-service training and providing salary increments.

Van den Heever and Price (1994) argue that 1.5 billion rands is an under-estimate of the necessary increase in recurrent spending because their calculations do not take into account the need to provide services, other than those identified in the RDP, such as: “expanding access for adults, treatment of sexually transmitted diseases, detection of TB, reduction of deafness through treatment of ear infections and... [so forth]”. They also do not include environmental services. On the other hand, they caution that there may be some double counting, since the running cost of the new facilities will include the cost of child health and maternity services. They also use another method for estimating future expenditure requirements. Assuming that public per capita health care expenditure as a percentage of per capita GDP should be 5 percent in a developing country, they estimate that an additional 2.6 billion rands is required.

An unpublished paper by Zwarenstein et al (1994) defines a package of basic health services and uses unit costs derived from published studies to estimate the cost of providing the package of services to everyone who is not a member of a medical aid scheme. The authors estimate that 4.6 billion rands would be required, at 1993 prices. Of this total, 1 billion will come from the current primary care budget and a substantial amount could be derived from the budgets of hospital outpatient departments. It is difficult to estimate how much additional finance will be required to finance the full package adequately.

Finally, Beattie and van den Heever (1995) estimate that the recurrent cost of funding the gap in public sector primary care services is at least 2.7 billion rands (1992/93 prices). This estimate is based on detailed costing of services at a number of primary care facilities in South Africa. These costs were applied to the estimated population dependent on public sector health services (i.e. excluding both medical scheme members and those using private sector services on a cash basis). The target of an average of 3.5 primary care visits per person per annum was assumed in their calculations.

The different measures of the additional resources required to meet priority needs for primary care services vary because they are based on different assumptions. A comparison between them raises the following policy issues.

There is a need to define the contents of the package of essential services. This should be based on a rational framework which assesses the cost-effectiveness of the potential components of an essential service package. As Box 7.2 illustrates, the facilities in the Johannesburg area, in which some of the major costing studies have been carried out, provide a wide range of services, even if some of them are deficient. It is not clear whether it
is realistic to aim to provide this range to the entire country within five years.

Existing services are expensive. One of the major sources of data on unit costs is the study by Broomberg et al (1992) of Diepkloof Clinic in Soweto. They estimated the average cost per visit (including the cost of diagnostic tests and drugs) to be 34 rands in 1990, which is equivalent to 49 rands at 1993 prices. The authors found evidence of substantial inefficiencies, such as health workers who only saw patients during the morning. It is possible that a package of basic services could be provided at a lower cost than in the estimates by Zwarenstein et al. More work is needed to develop models of service delivery appropriate to the poorer parts of the country.

It is instructive to compare the estimates of the cost of primary care services in South Africa with those made in other countries in Africa. The World Bank (1994) estimates that a package of basic primary level and (community) hospital services in low income countries in Africa should cost approximately US$13 per person and US$16 in higher income countries, such as Zimbabwe. This is considerably below the 70 rands (US$23) estimate in sub-section 7.4.4 of the cost of primary care services in South Africa. It is necessary to be very cautious in making this kind of comparison. The World Bank (1994) points out that the principal reasons for differences in costs between countries are salary levels (in US dollars) and provision of housing for staff. Another difference, in the case of South Africa, is probably the sophistication and breadth of the services provided. None the less, the co-existence of relatively high levels of expenditure and the delivery of an inadequate volume of services highlights the need for more work to define the appropriate basic health services to be provided and their cost.

It is difficult to estimate how much additional expenditure primary care services will require. In the poorer districts of Q1 and Q2 public sector expenditure will have to increase substantially in order to provide the population with a package of essential primary care services. This will not be the case in the richer districts where hospital outpatient departments are important providers of ambulatory care and where many low to middle income earners consult private practitioners. The rich areas will have to spend more on primary care in the poorer communities and over time they will also have to move primary care services into community clinics. However, they should be able to finance much of the additional costs of clinic-based services out of savings by the hospital outpatient departments.

Discussions about essential primary care services refer principally to the services required to decrease the excess burden of sickness and premature deaths among poor households (Chapter 2). Low and middle income earners are unlikely to be satisfied with a package of basic services. They already make considerable use of private doctors, many of them through their membership of a work-related medical scheme. It is unlikely that it will be possible to finance access to this kind of service out of the existing health budget and alternative financing mechanisms need to be identified. Two possibilities are an extension of medical schemes similar to those organised by industrial councils or the establishment of a social health insurance scheme (Chapter 4). The Department of Health has established a
committee to assess the feasibility of the latter option. Whatever the findings of that committee, it is important that the needs of the poor for basic health services are given top priority in the allocation of resources and of scarce management skills over the next few years.

High income earners depend mainly on the private sector for primary care services and the major issue of public policy with regard to this group is the financial crisis of the medical aid schemes which was discussed in Chapter 4.

Although more information is needed in order to calculate the cost of providing universal access to primary care services, it is possible to provide a rough estimate of the additional resources required. It has been estimated that it will cost 1 billion rands to meet minimum service delivery targets in the poorest 150 districts, and it has also been estimated that it will cost 1.5 billion rands to meet RDP programme targets. The first estimate does not take into account the quality of services or the existence of unmet needs in the richer districts, and the second estimate does not take into account the health service needs of adults. Neither estimate takes into account the effect of population growth or the transitional costs of the reorganisation of primary care services. These estimates suggest that recurrent spending on non-hospital primary level services will have to increase by at least 1.5 billion rands, and possibly by as much as 2.5 billion rands, in order to meet priority health needs. This will have to be funded out of savings on other public health services, an increase in public health finance, or a combination of the two.

7.6 POTENTIAL FOR LIMITING THE ADDITIONAL COST OF PROVIDING ESSENTIAL PRIMARY CARE SERVICES

7.6.1 Potential savings on ambulatory care

The government spent at least 3.6 billion rands on ambulatory care during 1992/93 (Table 7.7). Half of this was spent by the outpatient departments of the tertiary and academic hospitals. The average cost of a visit to an academic hospital was more than four times as high as a visit to a clinic. This expense may have been justified for patients referred for a specialist consultation. However, a large percentage of patients at these facilities could have been treated at a clinic. It may be possible to release resources for more cost-effective services in the future by closing outpatient departments in academic and tertiary hospitals to unreferred patients, or by requiring these patients to pay the full cost of their care. However, it will be necessary to provide adequate ambulatory care, in clinics or with private doctors, as an alternative.

The study of Diepkloof Clinic cited above, and the data presented in Chapter 6, suggest that there is considerable potential for decreasing the cost of providing ambulatory care. This issue requires additional study as part of a wider effort to develop cost-effective primary care. Support will need to be given to pilot schemes to test different models for the
organisation of these services.

7.6.2 User charges for primary health care services

Patients are expected to pay for primary care services unless they qualify for exemption (Boxes 5.2 and 5.3). The schedule of fees presented in Table 7.8 was used by facilities in most areas except the ex-homelands in 1994/95. Fees do not cover the full cost of services at many facilities, even for private patients. For example, the study by Broomberg et al (1992a) found that the cost per clinic visit in Diepkloof was approximately 49 rands, in 1993 prices, and it is estimated from the ReHMIS data that the cost per visit was 75.5 rands at tertiary hospitals and 119.8 rands at academic hospitals. Fees constituted a smaller proportion of the cost of the most expensive outpatient departments. This enabled patients to ignore cost when deciding where to seek health care.

Primary care clinics collected only 7 percent of their total expenditure in fees in 1992/93. This is not surprising since most visits were to nurses for which the charge has varied between 2 and 4 rands in recent years. Furthermore these facilities had little incentive to collect fees, since they did not retain any of the money. The administrative costs of fee collection are also high in terms of nurses’ time, management of the money, accounting and auditing requirements and investigations into losses.

There is limited scope for increasing revenue generation by clinics in poor areas without creating problems of access for the poor. A recent household survey found that almost a fifth of its sample had been refused medical treatment because they could not afford to pay and a similar number had not bought prescribed medicines because they could not afford them (CASE 1994). A preliminary analysis of data from the survey by the Project for Statistics on Living Standards and Development (1994) confirms that charges for health care already constitute a financial burden for poor families. Members of the poorest 40 percent of households reported lower levels of sickness during the previous 2 weeks than members of richer households. Nonetheless, during over a fifth of illness episodes they did not consult a health worker, and in over 60 percent of cases that was because fees and/or transportation were too expensive.

Early in 1994 the government decided to exempt children and pregnant women who are not members of medical aid schemes from charges at public facilities. The impact of these changes on utilisation of health services needs to be assessed. This will provide important information on the degree to which fees constitute a barrier to access to care.

There is greater scope for increased revenue generation from primary care services in the richer districts. It would be possible to charge higher fees for unreferred patients attending outpatient departments of tertiary and academic hospitals. This would have to be linked to a strengthening of the network of clinics. It might also be possible to charge more for clinic visits, since facilities in the metropolitan centres tend to be more sophisticated than those in the rural areas. However, measures would have to be taken to ensure access by the poor
either by charging lower fees in facilities in poor communities or by establishing an effective exemption scheme.

7.7 POTENTIAL ROLES FOR PRIVATE SECTOR PROVIDERS

The public sector has contracts with 343 district surgeons. Serious questions have been raised about the cost-effectiveness of the services they provide. Additional research is required to determine how future contracting arrangements with private practitioners could be made to work better. This is particularly important because one option for rapidly increasing the availability of doctors in under-served areas might be to attract young private practitioners out of the cities by offering them a new kind of contract.

Several proposals have been made for greater utilisation of general practitioners by the public sector. The most common suggestion is that some form of insurance scheme be established which would pay doctors on a capitation basis and encourage them to make greater use of nurses and other para-medical personnel. The medical benefit and industrial council or “exempted” schemes have already established models for the organisation of primary level care. The data on these new organisational forms should be studied when options for meeting the health service requirements of low to middle income earners are being assessed.

7.8 INVESTMENT IN PRIMARY CARE FACILITIES The review of capital expenditure carried out by Deloitte & Touche (1994a) identified at least four agencies involved in clinic construction: a small unit in the Chief Directorate of Primary Health Care of the national Department of Health responsible for the establishment of clinics funded by the Central Economic Advisory Service (CEAS); the Independent Development Trust (IDT); the provinces; and the local authorities. At the time their report was completed total commitments for the construction or upgrading of primary care facilities amounted to 193 million rands. It is not clear how many of these facilities have been subsequently completed. Since the above report was completed, the RDP has allocated additional funds for clinic construction.

The report by Deloitte and Touch (1994a) underlines a number of problems in the planning of clinic building which lead to doubts that facilities are always sited in the areas of greatest need. This is indicated by Table 7.9, which breaks down by province the commitments for clinic construction made by IDT in 1993 and CEAS in 1991. Because the two programmes were defined in different years, the amounts are not directly comparable. The largest commitments were made to the Eastern Cape, KwaZulu-Natal and the Northern Transvaal, each of which has fewer than the target of 1 clinic per 10 thousand people. However, a relatively low proportion of funds was committed to Eastern Transvaal, in spite of the fact that it was the fourth worst region in terms of the population/clinic ratio. Deloitte & Touche (1994a) report finding no evaluations of the siting of clinics within provinces.
Both the IDT and the CEAS depend on requests from communities to identify clinic building projects. The danger with such a “demand driven” strategy is that it rewards areas with strong local leaders, but may not channel funds to the most needy communities. The pressure to commit funds rapidly means that the central management has little time to evaluate proposals and assess priorities. There is often little opportunity for proper consultation with communities and between authorities concerning priorities. These problems need to be addressed in the design of the RDP investment programme. Otherwise there is a danger that it will not meet priority needs.

Once a clinic has been completed the cost of running it becomes the responsibility of the government health service. Deloitte & Touche (1994a) did not find evidence that this is taken into account in planning future budgets. In fact, a recent study by McIntyre and Strachan (1993) found that, in recent years, some authorities responsible for administering newly completed clinics had received real decreases in their government subsidy. If the investment programme is substantially expanded without taking into account the need to fund the operating costs of the new facilities, there is a danger that clinics will not be able to function effectively and that they will quickly become run down. This has happened in a number of countries.

A more systematic approach is needed for planning investment in clinic construction:

- districts need to evaluate their population’s access to facilities (they may wish to make use of ReHMIS to draw maps which show the proportion of the population within a defined distance of a health facility);
- the need for new facilities should be defined on the basis of the findings on access to services and on a physical evaluation of the existing facilities, and sites should be graded in order of priority;
- the capital costs of the proposed building programme should be estimated; and
- the cost of running and maintaining the new and existing facilities should be estimated and a strategy formulated to ensure that these funds are made available.

The building programme needs to be included in a broader plan for the development of a district’s primary care services.

7.9 SUMMARY AND CONCLUSIONS

The most cost-effective approach for decreasing the burden of excess sickness and premature death in South Africa is to provide access to effective preventive programmes and basic curative care to everyone who needs it. The ReHMIS data demonstrate that public sector health services lack facilities, personnel and financial resources in the poorer districts. One sign of the lack of access to basic services is the small average number of outpatient contacts per person at public health facilities in poor areas, which are inhabited mainly by Africans. The district level data provide less information on under-served
communities in the richer parts of the country.

The Government has set a number of targets for the provision of basic services in its Reconstruction and Development Programme. In order to meet these targets it will probably be necessary to increase recurrent expenditure on non-hospital primary care services by between 1.5 and 2.5 billion rands a year within five years. This gap will have to be financed out of a combination of savings on other health services and generation of additional resources for the health sector.

Additional money, on its own, will not lead to great improvements in health unless measures are taken to ensure that it is spent on services which address priority health needs. Provinces and districts will have to formulate and implement strategies for strengthening their primary care services which include: the construction and operation of facilities in under-served areas; measures to strengthen basic services; measures to improve resource use by decreasing dependence on expensive hospitals; and proposals to make better use of private providers. It will then be necessary to support a sustained effort to implement these strategies.
CHAPTER EIGHT

THE WAY FORWARD

There is general agreement on the need to provide South Africa’s population with access to a package of essential services which include a number of preventive programmes and both outpatient and inpatient care. In order to meet this target, health services will have to expand in areas which were previously under-served. This will have to take place during a period of tight public expenditure constraints. There is general consensus that a strategy for achieving this will include measures to:

- develop effective and affordable primary care services;
- ensure a more equitable distribution of public sector health finance between provinces and between localities within each province;
- reduce the share of the public health budget spent on tertiary and academic hospitals (by reducing expenditure and/or increasing revenue generation);
- improve the efficiency of public health services without reducing the quality of care; and
- make resources currently located in the private sector accessible to a greater proportion of the population.

The next step is for provinces to formulate strategies for achieving these objectives. The provincial strategies will have to be based on an analysis of the existing situation, identification of constraints to change, and an assessment of the options for overcoming these constraints. One purpose of this report is to highlight the questions which the provincial teams will have to address.

The major focus of this report is on the public sector. This is partly because it concentrates on the problems of the poor, who largely depend upon public health services. It is also because much less information is available on the private sector. The review which the Committee of Inquiry into a National Health Insurance System is presently making of the potential role of the private sector in the provision of primary care will make up this deficiency to some extent.

The restructuring of a sector which represents over one-twelfth of the economy is a major undertaking. It must involve the active and informed participation of the major stakeholders. That is the reason why this report was commissioned and it explains why so many people have invested so much time and effort to ensure that it reflects reality as clearly as possible within the constraints of data availability.
It is impossible to predict the impact of different policy decisions. That is why it is essential that strategies are continually re-assessed on the basis of experience. This report should be regarded as the first of a series of studies in support of the process of structural change.
Table 2.1
Indicators of South Africa's economic performance, 1981 - 1992

<table>
<thead>
<tr>
<th>Indicator</th>
<th>1981-85 (%)</th>
<th>1986-92 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual rate of growth of gross domestic product at constant (1985) prices</td>
<td>1.36</td>
<td>1.03</td>
</tr>
<tr>
<td>Annual rate of growth of gross domestic income at constant (1985) prices</td>
<td>0.03</td>
<td>0.27</td>
</tr>
<tr>
<td>Annual rate of growth in formal sector employment</td>
<td>0.07</td>
<td>-0.23</td>
</tr>
<tr>
<td>Annual rate of population growth</td>
<td>2.5</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Table 2.2

Distribution of the population between economic regions, 1991

<table>
<thead>
<tr>
<th></th>
<th>Whites (%)</th>
<th>Coloureds (%)</th>
<th>Asians (%)</th>
<th>Africans (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic core (%)</td>
<td>9.4</td>
<td>5.2</td>
<td>2.1</td>
<td>18.2</td>
<td>35.1</td>
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<td>Inner periphery (%)</td>
<td>3.7</td>
<td>3.4</td>
<td>0.3</td>
<td>13.8</td>
<td>21.5</td>
</tr>
<tr>
<td>Outer periphery (%)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>44.0</td>
<td>44.2</td>
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<tr>
<td>Total (%)</td>
<td>13.3</td>
<td>8.6</td>
<td>2.6</td>
<td>76.2</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Urban Foundation (1991)
### Box 2.1

**Previous and present political and administrative divisions**

<table>
<thead>
<tr>
<th>Previous Divisions</th>
<th>Present Provinces</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>'Independent' States</strong></td>
<td>Eastern Cape (E. Cape)</td>
</tr>
<tr>
<td>Transkei, Bophuthatswana, Venda, Ciskei (TBVC states)</td>
<td>Eastern Transvaal (E. Tvl.)</td>
</tr>
<tr>
<td><strong>Self-Governing Territories</strong></td>
<td>Gauteng</td>
</tr>
<tr>
<td>KwaZulu, KaNgwane, QwaQwa, Lebowa, Gazankulu, KwaNdebele</td>
<td>KwaZulu-Natal (KZ-N)</td>
</tr>
<tr>
<td><strong>'White' South Africa</strong></td>
<td>Northern Cape (N. Cape)</td>
</tr>
<tr>
<td>Cape, Natal Orange Free State, Transvaal</td>
<td>Northern Transvaal (N. Tvl)</td>
</tr>
<tr>
<td></td>
<td>North-West (N-West)</td>
</tr>
<tr>
<td></td>
<td>Orange Free State (OFS)</td>
</tr>
<tr>
<td></td>
<td>Western Cape (W. Cape)</td>
</tr>
</tbody>
</table>
Table 2.3
Basic data on South Africa's provinces

<table>
<thead>
<tr>
<th>Province</th>
<th>Area (km²)</th>
<th>Population 1993 (million)</th>
<th>Contribution to GDP (%)</th>
<th>Income per Capita (rands)</th>
<th>Dependency ratio</th>
<th>Human Development Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. Cape</td>
<td>170,616</td>
<td>6.7</td>
<td>7.5</td>
<td>1,358</td>
<td>3.7</td>
<td>0.48</td>
</tr>
<tr>
<td>E. Tvl</td>
<td>81,816</td>
<td>2.8</td>
<td>8.3</td>
<td>2,164</td>
<td>2.1</td>
<td>0.61</td>
</tr>
<tr>
<td>Gauteng</td>
<td>18,760</td>
<td>6.8</td>
<td>36.9</td>
<td>4,992</td>
<td>0.9</td>
<td>0.71</td>
</tr>
<tr>
<td>KZ-N</td>
<td>91,481</td>
<td>8.5</td>
<td>14.7</td>
<td>1,910</td>
<td>2.3</td>
<td>0.58</td>
</tr>
<tr>
<td>N. Cape</td>
<td>363,389</td>
<td>0.7</td>
<td>2.2</td>
<td>2,865</td>
<td>1.6</td>
<td>0.73</td>
</tr>
<tr>
<td>N. West</td>
<td>118,710</td>
<td>3.5</td>
<td>6.9</td>
<td>1,789</td>
<td>1.6</td>
<td>0.57</td>
</tr>
<tr>
<td>OFS</td>
<td>129,437</td>
<td>2.8</td>
<td>7.1</td>
<td>2,419</td>
<td>1.4</td>
<td>0.66</td>
</tr>
<tr>
<td>W. Cape</td>
<td>129,386</td>
<td>3.6</td>
<td>13.2</td>
<td>4,188</td>
<td>1.2</td>
<td>0.76</td>
</tr>
<tr>
<td>Total</td>
<td>1,223,201</td>
<td>40.7</td>
<td>100.0</td>
<td>2,566</td>
<td>1.9</td>
<td>0.69</td>
</tr>
</tbody>
</table>

Source: Development Bank of Southern Africa (1994)
Table 2.4
A profile of the poor in South Africa, 1993/94

Where are the poor?
- Northern Transvaal has 10.6 percent of the total population but 18.7 percent of the poor
- Gauteng has almost 21.6 percent of the total population but 6.6 percent of the poor
- rural areas have 47.2 percent of the population but 68 percent of the poor
- metropolitan areas have 30.6 percent of the population but 10.1 percent of the poor

What is the burden of poverty?
- almost 24 million people have incomes per adult equivalent to less than 301 rands per month
- over 6 million people between the ages of 16 and 64 are unemployed (excluding those who are home-makers, child-rearers, in formal education, ill or disabled)
- 25.4 percent of children between 7 and 60 months are chronically malnourished
- over 10 percent of dwellings are shacks
- over 2 million households use wood for cooking
- over 600 thousand households have to travel more than 500 metres to obtain water
- 1.4 million households do not have a flush toilet, bucket toilet or pit latrine

What are the differences between the rich and the poor?
- on average, there are 3 people in a rich metropolitan home and 6 in a poor rural home
- all rich households have a flush toilet, but only 13 percent of African rural households have one
- 99 percent of rich households have electricity but the proportion of poor households with electricity is 54 percent in metropolitan areas and 14 percent in rural areas

Sources: Klasen and Doherty (1995), and Project for Statistics on Living Standards and Development (1994)
## Table 2.5
Classification of magisterial district by levels of average income

<table>
<thead>
<tr>
<th>Quintiles of magisterial districts</th>
<th>Distribution of population in 1993</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area Total (million)</td>
<td>Inner core (million)</td>
<td>Inner periphery (million)</td>
<td>Outer periphery (million)</td>
<td>Female to male ratio</td>
<td>Percent African (%)</td>
</tr>
<tr>
<td>Q1 (lowest income)</td>
<td>11.2</td>
<td>0.6</td>
<td>0</td>
<td>10.6</td>
<td>1.3</td>
<td>99.9</td>
</tr>
<tr>
<td>Q2</td>
<td>8.5*</td>
<td>2.7</td>
<td>1.3</td>
<td>4.6</td>
<td>1.1</td>
<td>98.4</td>
</tr>
<tr>
<td>Q3</td>
<td>2.9</td>
<td>1.1</td>
<td>1.8</td>
<td>0</td>
<td>1.0</td>
<td>85.7</td>
</tr>
<tr>
<td>Q4</td>
<td>3.0</td>
<td>0.3</td>
<td>2.7</td>
<td>0</td>
<td>0.9</td>
<td>53.1</td>
</tr>
<tr>
<td>Q5 (highest income)</td>
<td>15.0</td>
<td>12.0</td>
<td>3.0</td>
<td>0</td>
<td>0.9</td>
<td>49.1</td>
</tr>
<tr>
<td>Total</td>
<td>40.7</td>
<td>16.7</td>
<td>8.8*</td>
<td>15.2</td>
<td>1.0</td>
<td>76.4</td>
</tr>
</tbody>
</table>

*The differences in the totals are due to rounding

### Table 2.6
Real annual rates of growth of government revenue, expenditure and GDP (constant 1985 prices)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total revenue</td>
<td>4.0</td>
<td>2.2</td>
<td>2.0</td>
<td>-2.2</td>
<td>-3.0</td>
<td>-3.2</td>
</tr>
<tr>
<td>Total expenditure</td>
<td>2.2</td>
<td>2.9</td>
<td>3.5</td>
<td>8.4</td>
<td>0.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Gross domestic product</td>
<td>4.0</td>
<td>0.3</td>
<td>0.7</td>
<td>-0.7</td>
<td>-0.4</td>
<td>-2.7</td>
</tr>
</tbody>
</table>

Sources: Fallon and da Silva (1994)
Table 3.1
Data on health status in South Africa, countries with similar GDPS per capita and weighted average for countries organised into income groups

<table>
<thead>
<tr>
<th>Sub-Saharan Africa excluding South Africa</th>
<th>Infant mortality rate* (per 1,000)</th>
<th>Life expectancy at birth 1991 (years)</th>
<th>Annual incidence of tuberculosis 1990 (per 100,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa excluding South Africa</td>
<td>104</td>
<td>male 49 female 52</td>
<td>not available</td>
</tr>
<tr>
<td>Middle income countries</td>
<td>38</td>
<td>68</td>
<td>not available</td>
</tr>
<tr>
<td>South Africa</td>
<td>&gt;49</td>
<td>&lt;63</td>
<td>250</td>
</tr>
<tr>
<td>Botswana</td>
<td>36</td>
<td>68</td>
<td>not available</td>
</tr>
<tr>
<td>Hungary</td>
<td>16</td>
<td>70</td>
<td>38</td>
</tr>
<tr>
<td>Malaysia</td>
<td>15</td>
<td>71</td>
<td>67</td>
</tr>
<tr>
<td>Venezuela</td>
<td>34</td>
<td>70</td>
<td>44</td>
</tr>
<tr>
<td>Chile</td>
<td>17</td>
<td>72</td>
<td>67</td>
</tr>
<tr>
<td>Established market economies</td>
<td>8</td>
<td>77</td>
<td>20</td>
</tr>
</tbody>
</table>

*Data on the infant mortality rate are for 1992 in South Africa and 1991 in the other countries
Table 3.2  
Evidence of excess mortality and morbidity

<table>
<thead>
<tr>
<th>Health status indicator</th>
<th>Difference between population groups</th>
</tr>
</thead>
</table>
| Infant mortality rate (1992)            | 7 times greater in Africans than Whites  
                                          | 2.5 times greater in Transkei than Venda  
                                          | 2.6 times greater in rural than urban Africans                                                     |
| Life expectancy at birth (1985-1990)    | 8-10 years shorter for Africans than Whites  
                                          | 11 years shorter for Coloureds than Whites                                                          |
| Tuberculosis notification rate (1992)   | 35 times greater in Coloureds than Whites  
                                          | 3 times greater than the national average in the former Western Cape                                 |
| Malnutrition (1990)                     | 3.5-5 times greater for Coloureds and Africans than Whites in children between 6 months and 5 years  
                                          | 4-5 times greater for Coloureds and Africans than Whites for children between 6 and 12 years       
                                          | 7-8 times greater for Coloureds and Africans than Whites for pregnant and lactating women          |

Sources: DNHPD (1990 and 1994)
### Table 3.3
Data on health service provision in South Africa, other countries with similar GDPs, established market economies and sub-Saharan Africa

<table>
<thead>
<tr>
<th></th>
<th>Health expenditure as percentage of GDP in 1990 (%)</th>
<th>Hospital beds 1985-90 per 1,000 population</th>
<th>Population per physician in 1991</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sub-Saharan Africa excluding South Africa</strong></td>
<td>4.5</td>
<td>1.1</td>
<td>9,000</td>
</tr>
<tr>
<td><strong>Middle income countries</strong></td>
<td>not available</td>
<td>4.1</td>
<td>2,060</td>
</tr>
<tr>
<td>South Africa (1992/93)</td>
<td>8.5</td>
<td>4.0</td>
<td>1,661</td>
</tr>
<tr>
<td>Botswana</td>
<td>3.3</td>
<td>2.4</td>
<td>5,150</td>
</tr>
<tr>
<td>Hungary</td>
<td>6.0</td>
<td>10.1</td>
<td>340</td>
</tr>
<tr>
<td>Malaysia</td>
<td>15</td>
<td>71</td>
<td>67</td>
</tr>
<tr>
<td>Venezuela</td>
<td>3.6</td>
<td>2.9</td>
<td>630</td>
</tr>
<tr>
<td>Chile</td>
<td>4.7</td>
<td>4.7</td>
<td>2,150</td>
</tr>
<tr>
<td><strong>Established market economies</strong></td>
<td>9.2</td>
<td>8.3</td>
<td>420</td>
</tr>
</tbody>
</table>

### Table 3.4
Distribution of facilities and health personnel between provinces (1992/93)

<table>
<thead>
<tr>
<th>Province</th>
<th>Hospital beds per 1,000 population</th>
<th>Doctors per 100,000 population</th>
<th>Nurses per 100,000 population</th>
<th>Pharmacists per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Cape</td>
<td>3.5</td>
<td>30.7</td>
<td>321.3</td>
<td>20.1</td>
</tr>
<tr>
<td>Eastern Transvaal</td>
<td>2.1</td>
<td>28.3</td>
<td>265.8</td>
<td>23.1</td>
</tr>
<tr>
<td>Gauteng</td>
<td>6.0</td>
<td>127.4</td>
<td>618.4</td>
<td>109.8</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>3.8</td>
<td>53.5</td>
<td>431.9</td>
<td>28.7</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>4.0</td>
<td>37.6</td>
<td>432.3</td>
<td>28.5</td>
</tr>
<tr>
<td>Northern Transvaal</td>
<td>2.5</td>
<td>15.5</td>
<td>293.2</td>
<td>7.8</td>
</tr>
<tr>
<td>North-West</td>
<td>3.3</td>
<td>22.7</td>
<td>273.5</td>
<td>22.8</td>
</tr>
<tr>
<td>Orange Free State</td>
<td>4.1</td>
<td>46.5</td>
<td>382.3</td>
<td>38.8</td>
</tr>
<tr>
<td>Western Cape</td>
<td>5.4</td>
<td>143.8</td>
<td>686.3</td>
<td>79.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4.0</strong></td>
<td><strong>60.2</strong></td>
<td><strong>421.5</strong></td>
<td><strong>42.6</strong></td>
</tr>
</tbody>
</table>

**Sources:** Chetty (1994) and Development Bank of Southern Africa (1994)
Table 3.5
Sources of finance for the health sector (1992/93)

<table>
<thead>
<tr>
<th>Source of finance</th>
<th>Expenditure (million rands)</th>
<th>Percentage contribution (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General tax revenue (1)</td>
<td>11,447</td>
<td>38.0</td>
</tr>
<tr>
<td>Local authorities</td>
<td>225</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Total public sector resources</strong></td>
<td><strong>11,672</strong></td>
<td><strong>38.7</strong></td>
</tr>
<tr>
<td>Medical schemes (2)</td>
<td>12,064</td>
<td>40.0</td>
</tr>
<tr>
<td>Medical insurance</td>
<td>923</td>
<td>3.1</td>
</tr>
<tr>
<td>Industry</td>
<td>1,162</td>
<td>3.8</td>
</tr>
<tr>
<td>Out-of-pocket</td>
<td>4,184</td>
<td>13.9</td>
</tr>
<tr>
<td><strong>Total private sector sources</strong></td>
<td><strong>18,333</strong></td>
<td><strong>60.8</strong></td>
</tr>
<tr>
<td>Donor funding</td>
<td>145</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total (3)</strong></td>
<td><strong>30,150</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

(1) Net of revenue from fees
(2) Includes the government contribution to the civil servants' medical scheme (if these payments are classified as public funding, 45.2 percent of the total health care expenditure came from public sources)
(3) This figure is an underestimate as expenditure on the education and training of health personnel, donor-funded health sector expenditure, and out-of-pocket expenditure on the services of private practitioners is known to be under-reported (Appendix C and Chapters 4 and 5)

Sources: ReHMIS data; Blecher and McIntyre (1994); Bunting (1994); Deloitte and Touche (1994b); Valentine and McIntyre (1994); personal communication with Dr. B. Kistnasamy (for Departments of Defence, Correctional Services and Police data)
### Table 4.1
Health expenditure funded from private resources (1992/93)

<table>
<thead>
<tr>
<th>Source of finance</th>
<th>Expenditure (thousand rands)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical schemes (1) - private sector employees</td>
<td>9,492,077</td>
<td>52.1</td>
</tr>
<tr>
<td>Medical schemes (1) - civil servants (2)</td>
<td>2,572,402</td>
<td>14.1</td>
</tr>
<tr>
<td>Medical insurance</td>
<td>922,810</td>
<td>5.1</td>
</tr>
<tr>
<td>Industry (3)</td>
<td>1,041,452</td>
<td>5.7</td>
</tr>
<tr>
<td>Direct household payments</td>
<td>4,184,254</td>
<td>23.0</td>
</tr>
<tr>
<td>Total</td>
<td>18,212,995</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Note that expenditure by medical schemes includes both those schemes who report to the Registrar of Medical Schemes and those that do not. Although most schemes report expenditure in terms of calendar years, the 1992/93 financial year equivalent has been calculated to ensure comparability with public sector data.
(2) This includes medical schemes for local authority employees
(3) This is slightly lower than the amount presented in Table 3.5, as industry's expenditure on medical research is not included here.

Source: Valentine and McIntyre (1994)
### Table 4.2
Characters of different types of medical schemes

<table>
<thead>
<tr>
<th>Characteristics of beneficiaries</th>
<th>Medical aid</th>
<th>Medical benefit</th>
<th>Exempted schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Higher income formal sector employees and their dependents</td>
<td>Lower income formal sector employees and frequently their dependents</td>
<td>Very low income employees; mainly those organised in terms of industrial councils; seldom cover dependents</td>
</tr>
<tr>
<td>Number of beneficiaries (1992)</td>
<td>4,764,732</td>
<td>757,655</td>
<td>531,580</td>
</tr>
<tr>
<td>Kinds of benefits</td>
<td>relatively comprehensive benefits; free choice of provider; provider paid on fee-for-service basis</td>
<td>Focus on primary care level but have limited hospital benefits; benefit funds contract with special providers (&quot;panel doctors&quot;) who are paid a capitation fee; or employ personnel as in staff model HMOs</td>
<td>Lowest benefit coverage; largely restricted to primary care services; capitated contracts with panel doctors or salaried employment of health personnel</td>
</tr>
<tr>
<td>Annual contributions per beneficiary (2) (1992/93)</td>
<td>R1,800</td>
<td>1,408</td>
<td>R713</td>
</tr>
</tbody>
</table>

(1) These schemes are exempted from complying with certain specified conditions of the Medical Schemes Act (1967).
(2) This reflects the total contributions by employers and employees divided by the number of beneficiaries, i.e. principal members and their dependents.
Source: Valentine and McIntyre (1994)
Table 4.3
Changes in membership of medical schemes reporting to the Registrar of Medical Schemes (total beneficiaries), 1982-1991

<table>
<thead>
<tr>
<th>Group</th>
<th>1982</th>
<th>% of total</th>
<th>1991 (1)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africans</td>
<td>484,898</td>
<td>9.98</td>
<td>1,523,702</td>
<td>24.22</td>
</tr>
<tr>
<td>Coloureds</td>
<td>672,833</td>
<td>13.84</td>
<td>948,164</td>
<td>15.07</td>
</tr>
<tr>
<td>Asians</td>
<td>229,394</td>
<td>4.72</td>
<td>329,488</td>
<td>5.24</td>
</tr>
<tr>
<td>Whites</td>
<td>3,473,742</td>
<td>71.46</td>
<td>3,490,001</td>
<td>55.47</td>
</tr>
<tr>
<td>Total</td>
<td>4,860,867</td>
<td>100</td>
<td>6,291,355</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) The decade ending 1991 was selected because the Registrar did not report the racial breakdown of membership in 1992.

Source: Development Bank of Southern Africa (1994)
Table 4.4
Total beneficiaries of medical schemes and health insurance, or employees in industry with access to on-site health services (1992)

<table>
<thead>
<tr>
<th>Type of cover</th>
<th>Total beneficiaries</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medical schemes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Medical aid</td>
<td>4,764,732</td>
<td>52.7</td>
</tr>
<tr>
<td>-Medical benefit</td>
<td>757,655</td>
<td>8.4</td>
</tr>
<tr>
<td>-<em>&quot;Exempted schemes</em></td>
<td>531,580</td>
<td>5.9</td>
</tr>
<tr>
<td>-Schemes not reporting to the Registrar of Medical Schemes</td>
<td>852,661</td>
<td>9.4</td>
</tr>
<tr>
<td><strong>Insurance (3)</strong></td>
<td>1,100,000</td>
<td>12.1</td>
</tr>
<tr>
<td><strong>Industry</strong></td>
<td>1,041,110</td>
<td>11.5</td>
</tr>
<tr>
<td>-Mines</td>
<td>450,000</td>
<td>5.0</td>
</tr>
<tr>
<td>-Other</td>
<td>591,110</td>
<td>6.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>9,047,738</td>
<td>100</td>
</tr>
<tr>
<td>Percentage of population covered (%)</td>
<td>22.8</td>
<td></td>
</tr>
</tbody>
</table>

(1) As certain health insurance policy holders are also members of medical schemes, there is an element of double-counting in these data.
Source: Valentine and McIntyre (1994)
Table 4.5
Health personnel practising in the private sector (1989/90)

<table>
<thead>
<tr>
<th>Category of personnel</th>
<th>Number of personnel</th>
<th>Proportion of each category of health personnel in private sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>General doctors</td>
<td>7,947</td>
<td>62% (1)</td>
</tr>
<tr>
<td>Specialist doctors</td>
<td>3,703</td>
<td>66% (1)</td>
</tr>
<tr>
<td>Dentists</td>
<td>2,883</td>
<td>93%</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>7,350</td>
<td>89%</td>
</tr>
<tr>
<td>Supplementary health professions</td>
<td>6,374</td>
<td>60%</td>
</tr>
<tr>
<td>Nurses</td>
<td>22,940</td>
<td>21%</td>
</tr>
</tbody>
</table>

(1) In total, 59 percent of doctors work in the private sector (see Figure 3.3). The reason for this proportion being lower than the proportion of general and specialist doctors in private practice is that there are 1,252 doctors working in the public sector who are categorised as superintendents and interns, in addition to the 4,942 general doctors and 1,891 specialists employed in the public sector.

Sources: Rispel and Behr (1992)
Table 4.6
Distribution of private hospital beds by ownership category (1988 and 1993)

<table>
<thead>
<tr>
<th>Type of hospital</th>
<th>No. of beds 1988</th>
<th>No. of beds 1993</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>For-profit</td>
<td>9,825</td>
<td>18,432</td>
<td>87.6</td>
</tr>
<tr>
<td>Industrial</td>
<td>9,789</td>
<td>7,091</td>
<td>-27.6</td>
</tr>
<tr>
<td>Contractors</td>
<td>13,962</td>
<td>14,272</td>
<td>2.2</td>
</tr>
<tr>
<td>SANTA (1)</td>
<td>5,335</td>
<td>5,287</td>
<td>-0.9</td>
</tr>
<tr>
<td>Other (2)</td>
<td>923</td>
<td>1,529</td>
<td>65.7</td>
</tr>
<tr>
<td>Total</td>
<td>39,834</td>
<td>46,611</td>
<td>17.0</td>
</tr>
</tbody>
</table>

(1) SANTA is a charitable organisation which provides long-term inpatient care for tuberculosis patients
(2) This category includes hospitals provided by religious and welfare organisations.
Source: Chetty (1994)
Table 4.7
Expenditure by medical schemes reporting to the Registrar of Medical Schemes by service category (1992/93)

<table>
<thead>
<tr>
<th>Service category</th>
<th>Expenditure (Rands)</th>
<th>% of total expenditure</th>
<th>Expenditure per beneficiary (Rands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Practitioners</td>
<td>1,073,387</td>
<td>11.5</td>
<td>177.30</td>
</tr>
<tr>
<td>Medical specialists</td>
<td>1,661,417</td>
<td>17.8</td>
<td>274.43</td>
</tr>
<tr>
<td>Dentists</td>
<td>905,378</td>
<td>9.7</td>
<td>149.55</td>
</tr>
<tr>
<td>Provincial hospitals</td>
<td>401,354</td>
<td>4.3</td>
<td>66.3</td>
</tr>
<tr>
<td>Private hospitals</td>
<td>1,633,416</td>
<td>17.5</td>
<td>269.81</td>
</tr>
<tr>
<td>Medicine</td>
<td>2,968,159</td>
<td>31.8</td>
<td>490.28</td>
</tr>
<tr>
<td>Other benefits</td>
<td>653,366</td>
<td>7.0</td>
<td>107.92</td>
</tr>
<tr>
<td>Ex-gratia payments</td>
<td>28,001</td>
<td>0.3</td>
<td>4.63</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9,324,478</strong></td>
<td><strong>100</strong></td>
<td><strong>1,540.22</strong></td>
</tr>
</tbody>
</table>

Source: Valentine and McIntyre (1994)
### Table 4.8
Growth in annual medical scheme expenditure and contributions per principal member, 1982-1992 (rands)
(espessed in real terms, deflated by the CPI, in brackets)

<table>
<thead>
<tr>
<th></th>
<th>1982</th>
<th>1987</th>
<th>1992</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure (including administration costs)</td>
<td>462 (462)</td>
<td>1,247 (622)</td>
<td>4.039 (1,037)</td>
</tr>
<tr>
<td>Contributions</td>
<td>442 (442)</td>
<td>1,294 (645)</td>
<td>4,099 (1,052)</td>
</tr>
<tr>
<td>Average annual salary</td>
<td>6,192 (6,192)</td>
<td>12,036 (6,000)</td>
<td>27,048 (6,943)</td>
</tr>
<tr>
<td>Contributions as a percent of average salary</td>
<td>7.1</td>
<td>10.8</td>
<td>15.2</td>
</tr>
</tbody>
</table>

**Sources:** Registrar of Medical Schemes (1993) and Central Statistical Service (1993a)
### Box 5.1
The present structure of public sector health services in South Africa

<table>
<thead>
<tr>
<th>Level of government</th>
<th>Department(s)</th>
<th>Responsibilities/Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>Department of Health</td>
<td>- health policy formulation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- determination of provincial budgets including component for local authority subsidies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- co-ordination of services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- line functions such as dental, forensic, national laboratory and so forth</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- other support functions</td>
</tr>
<tr>
<td>Provincial</td>
<td>Provincial health departments</td>
<td>- determination of local authority budgets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- hospital-based services and mental health</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- primary level curative and rehabilitation services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- comprehensive primary care services in former homelands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- ambulance services in conjunction with local authorities</td>
</tr>
<tr>
<td>Local (including municipalities and Regional Services Councils)</td>
<td>Local authority health departments</td>
<td>- preventive, promotive and rehabilitative primary care services with particular emphasis on communicable disease control and environmental health</td>
</tr>
<tr>
<td>Other (non-health) departments</td>
<td>Departments of Defence, Police and Correctional Services</td>
<td>- provision of health services for staff, their dependants and prisoners</td>
</tr>
</tbody>
</table>

**Note:** Some of the service provision responsibilities described above have been delegated to other health authorities; for example ambulance services are frequently provided by local authorities although they are the responsibility of provincial administrations.
Box 5.2
Uniform fee structure for health services in South Africa

The uniform fee structure divides patients into four income-related categories: H1, H2, H3 and private. Patients are defined as private if their income is above specified income level or they are a member of a medical aid scheme. It is important to note that, although patients are supposed to provide documentation of their income status, it is often determined on the basis of an interview. The income categories are revised on an annual basis. The categories for the 1994/95 financial year are as follows:

<table>
<thead>
<tr>
<th>ANNUAL INCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
</tr>
<tr>
<td>H1</td>
</tr>
<tr>
<td>H2</td>
</tr>
<tr>
<td>H3</td>
</tr>
<tr>
<td>Private Patients</td>
</tr>
</tbody>
</table>

Fees are differentiated in terms of these income categories as well as in terms of the level of care. For example, H1 patients pay R8 per outpatient department visit at a community hospital and R13 at a regional or academic hospital, whereas a private patient pays R31 at the former and R51 plus additional charges for tests and drugs at the latter. H1 patients pay R26 per admission for inpatient care in a regional or academic hospital, this being an all-inclusive care, diagnostic tests, prescription medicines and theatre time (see McIntyre 1994a for full details of fee structures).
Box 5.3
Patients and services exempted from user fees

The current uniform fee structure exempts the following groups of patients and services from fees:

- Immunisation and other measures to combat notifiable infectious diseases;
- Treatment of communicable diseases including pulmonary tuberculosis, leprosy, cholera, diphtheria, plague, typhoid and paratyphoid, haemorrhagic fever, meningococcal meningitis and venereal diseases;
- Outpatient family planning services and inpatient sterilisation services;
- Examination of rape survivors and assault victims;
- Persons donating organs, blood, milk and human tissue; and
- Public sector health personnel who are injured or exposed to radioactive substances while on duty.

Some of the former homelands had more extensive fee exemptions such as the treatment of malnutrition, psychiatric care, geriatric care and treatment for certain chronic illnesses.

Shortly after the elections in April 1994, it was announced that children under the age of six years and pregnant women who are not members of a medical aid scheme will be exempted from fees at all public sector health facilities.
Table 5.1

<table>
<thead>
<tr>
<th>Indicator</th>
<th>1983/84</th>
<th>1992/93</th>
<th>Average annual increase or decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal expenditure (rands)</td>
<td>2,453,585,129</td>
<td>11,114,894,737</td>
<td>18.3%</td>
</tr>
<tr>
<td>Real expenditure (1983/84 prices (1)) (rands)</td>
<td>2,453,585,129</td>
<td>3,199,870,686</td>
<td>3.0%</td>
</tr>
<tr>
<td>Nominal expenditure per capita (rands)</td>
<td>76</td>
<td>273</td>
<td>15.4%</td>
</tr>
<tr>
<td>Real expenditure per capita (1) (rands)</td>
<td>76</td>
<td>79</td>
<td>0.5%</td>
</tr>
<tr>
<td>Expenditure as % GDP</td>
<td>2.6%</td>
<td>3.3%</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

(1) The consumer price index (CPI) was used as a deflator.
Sources: McIntyre (1993) and ReHMIS survey
Table 5.3
Distribution of public sector health care personnel by level of care (1992/93)

<table>
<thead>
<tr>
<th>Facility type</th>
<th>General doctors No.</th>
<th>General doctors (%)</th>
<th>Specialist doctors No.</th>
<th>Specialist doctors (%)</th>
<th>Nurses No.</th>
<th>Nurses (%)</th>
<th>Pharmacists No.</th>
<th>Pharmacists (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic hospitals</td>
<td>2,164</td>
<td>38.0</td>
<td>1,367</td>
<td>63.1</td>
<td>21,288</td>
<td>19.5</td>
<td>289</td>
<td>28.2</td>
</tr>
<tr>
<td>Tertiary hospitals</td>
<td>1,287</td>
<td>22.6</td>
<td>419</td>
<td>19.3</td>
<td>17,694</td>
<td>16.2</td>
<td>233</td>
<td>22.7</td>
</tr>
<tr>
<td>Secondary hospitals</td>
<td>404</td>
<td>7.1</td>
<td>122</td>
<td>5.6</td>
<td>13,733</td>
<td>12.6</td>
<td>132</td>
<td>12.9</td>
</tr>
<tr>
<td>Community hospitals</td>
<td>1,146</td>
<td>20.2</td>
<td>89</td>
<td>4.1</td>
<td>29,049</td>
<td>26.7</td>
<td>220</td>
<td>21.5</td>
</tr>
<tr>
<td>Chronic hospitals</td>
<td>114</td>
<td>2.0</td>
<td>91</td>
<td>4.2</td>
<td>8,665</td>
<td>7.9</td>
<td>44</td>
<td>4.3</td>
</tr>
<tr>
<td>Primary care services (1)</td>
<td>575</td>
<td>10.1</td>
<td>80</td>
<td>3.7</td>
<td>18,627</td>
<td>17.0</td>
<td>108</td>
<td>10.5</td>
</tr>
<tr>
<td>All acute hospitals</td>
<td>5,001</td>
<td>87.9</td>
<td>1,997</td>
<td>92.1</td>
<td>81,764</td>
<td>75.0</td>
<td>874</td>
<td>85.2</td>
</tr>
<tr>
<td>Total</td>
<td>5,690</td>
<td>100</td>
<td>2,168</td>
<td>100</td>
<td>109,056</td>
<td>100</td>
<td>1,026</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Includes staff working at clinics, district surgeons, and personnel providing other primary care services such as school health services. As some health personnel work on a part-time basis, the "full-time equivalent" value is used, with the exception of district surgeons where "full-time equivalent" data were not available.

Source: ReHMIS survey
Table 5.4
Public sector health care facilities in magisterial districts sorted by income per capita (1992/93)

<table>
<thead>
<tr>
<th>Quintiles of magisterial districts sorted by income per capita</th>
<th>Acute hospital beds/1,000 population</th>
<th>All public hospital beds/1,000 population</th>
<th>Population fixed clinic (thousand)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 (lowest income)</td>
<td>1.8</td>
<td>2.1</td>
<td>16.3</td>
</tr>
<tr>
<td>Q2</td>
<td>2.2</td>
<td>2.5</td>
<td>16.3</td>
</tr>
<tr>
<td>Q3</td>
<td>2.4</td>
<td>2.8</td>
<td>9.6</td>
</tr>
<tr>
<td>Q4</td>
<td>2.8</td>
<td>3.6</td>
<td>7.2</td>
</tr>
<tr>
<td>Q5 (highest income)</td>
<td>3.0</td>
<td>3.8</td>
<td>12.4</td>
</tr>
<tr>
<td>Total</td>
<td>2.4</td>
<td>3.0</td>
<td>13.0</td>
</tr>
</tbody>
</table>

Source: ReHMIS survey
### Table 5.5
**Public sector health personnel* per 100,000 population by province (1992/93)**

<table>
<thead>
<tr>
<th></th>
<th>General doctors</th>
<th>Specialist doctors</th>
<th>Registered nurses</th>
<th>Other nurses</th>
<th>Health inspectors</th>
<th>Pharmacists</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lowest ratio</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Province</td>
<td>E. Tvl</td>
<td>E. Tvl</td>
<td>E. Tvl</td>
<td>E. Tvl</td>
<td>E. Cape</td>
<td>E. Cape</td>
</tr>
<tr>
<td>Ratio</td>
<td>6.48</td>
<td>0.48</td>
<td>67.63</td>
<td>87.57</td>
<td>1.74</td>
<td>1.36</td>
</tr>
<tr>
<td><strong>Highest ratio</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Province</td>
<td>W. Cape</td>
<td>W. Cape</td>
<td>W. Cape</td>
<td>W. Cape</td>
<td>W. Cape</td>
<td>W. Cape</td>
</tr>
<tr>
<td>Ratio</td>
<td>30.63</td>
<td>23.71</td>
<td>200.46</td>
<td>224.54</td>
<td>8.06</td>
<td>6.69</td>
</tr>
</tbody>
</table>

* Includes personnel working in local authority health departments.

Source: ReHMIS survey
Table 5.6
Health workers per 100,000 population in the magisterial districts sorted by per capita income (1992/93)

<table>
<thead>
<tr>
<th>Quintiles of magisterial districts sorted by income per capita</th>
<th>General doctors</th>
<th>Specialist doctors</th>
<th>Registered nurses</th>
<th>Other nurses</th>
<th>Health inspectors</th>
<th>Pharmacists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 (lowest income)</td>
<td>5.1</td>
<td>0.4</td>
<td>78.7</td>
<td>109.4</td>
<td>1.1</td>
<td>0.5</td>
</tr>
<tr>
<td>Q2</td>
<td>9.4</td>
<td>1.8</td>
<td>90.9</td>
<td>119.2</td>
<td>2.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Q3</td>
<td>15.8</td>
<td>3.2</td>
<td>128.4</td>
<td>137.1</td>
<td>4.3</td>
<td>2.5</td>
</tr>
<tr>
<td>Q4</td>
<td>13.5</td>
<td>1.8</td>
<td>128.2</td>
<td>131.5</td>
<td>7.6</td>
<td>4.0</td>
</tr>
<tr>
<td>Q5 (highest income)</td>
<td>23.3</td>
<td>12.3</td>
<td>189.9</td>
<td>185.4</td>
<td>6.7</td>
<td>5.4</td>
</tr>
<tr>
<td>Total</td>
<td>14.1</td>
<td>5.4</td>
<td>129.5</td>
<td>143.1</td>
<td>4.1</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Source: ReHMIS survey
Table 5.7
Public health care expenditure per capita in each province (1992/93)

<table>
<thead>
<tr>
<th>Province</th>
<th>Total health expenditure per capita (rands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Cape</td>
<td>226.98</td>
</tr>
<tr>
<td>Eastern Transvaal</td>
<td>136.60*</td>
</tr>
<tr>
<td>Gauteng</td>
<td>381.66</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>236.88</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>221.15</td>
</tr>
<tr>
<td>Northern Transvaal</td>
<td>164.07</td>
</tr>
<tr>
<td>North-West</td>
<td>178.91</td>
</tr>
<tr>
<td>Orange Free State</td>
<td>266.49</td>
</tr>
<tr>
<td>Western Cape</td>
<td>491.13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>262.61**</td>
</tr>
</tbody>
</table>

* Expenditure data for the Eastern Transvaal is slightly underestimated as data on expenditure at KwaNdebele clinics were not available in the ReHMIS database
** Does not include 411 million rands of Department of Health Head Office expenditure, but does, include transfer payment, from the Department to other health authorities.
Source: ReHMIS survey
Table 5.8
Reported estimated costs of planned projects for the development of public health sector capital, 1993/94 - 1995/96

<table>
<thead>
<tr>
<th>Facility type</th>
<th>Number of projects</th>
<th>Estimated capital cost (million rands)</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td></td>
<td>2,007.1</td>
<td>89</td>
</tr>
<tr>
<td>New</td>
<td>4</td>
<td>562.9</td>
<td></td>
</tr>
<tr>
<td>Upgrade/extension</td>
<td>211</td>
<td>1,444.2</td>
<td></td>
</tr>
<tr>
<td>Clinics</td>
<td></td>
<td>198.1</td>
<td>9</td>
</tr>
<tr>
<td>New (Health departments)</td>
<td>29</td>
<td>86.4</td>
<td></td>
</tr>
<tr>
<td>Upgrade/extension (Health Depts)</td>
<td>21</td>
<td>35.1</td>
<td></td>
</tr>
<tr>
<td>IDT programme</td>
<td></td>
<td>37.9</td>
<td></td>
</tr>
<tr>
<td>CEAS programme</td>
<td></td>
<td>38.7</td>
<td></td>
</tr>
<tr>
<td>Other*</td>
<td>24</td>
<td>52.2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2,257.4</td>
<td>100</td>
</tr>
</tbody>
</table>

* "Other"=facilities not part of hospitals or clinics, such as laundries, pharmacy depots, nursing colleges and staff accommodation.
Source: Deloitte and Touche (1994a) (data analysed by Dr. Max Bachmann)
# Table 6.1
Indicators of availability and utilisation of public sector hospitals between provinces (1992/93)

<table>
<thead>
<tr>
<th>Province</th>
<th>Acute beds/1,000 population</th>
<th>Chronic beds/1,000 population</th>
<th>Acute inpatient days/1,000 population</th>
<th>Acute admissions/1,000 population</th>
<th>Average length of stay (acute)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Cape</td>
<td>2.29</td>
<td>0.68</td>
<td>647</td>
<td>70</td>
<td>9.5</td>
</tr>
<tr>
<td>Eastern Transvaal</td>
<td>1.73</td>
<td>0.05</td>
<td>404</td>
<td>73</td>
<td>5.7</td>
</tr>
<tr>
<td>Gauteng</td>
<td>2.48</td>
<td>0.29</td>
<td>664</td>
<td>111</td>
<td>6.1</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>2.92</td>
<td>0.54</td>
<td>748</td>
<td>89</td>
<td>8.8</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>3.21</td>
<td>0.79</td>
<td>672</td>
<td>140</td>
<td>5.0</td>
</tr>
<tr>
<td>Northern Transvaal</td>
<td>2.22</td>
<td>0.42</td>
<td>462</td>
<td>78</td>
<td>6.7</td>
</tr>
<tr>
<td>North-West</td>
<td>2.14</td>
<td>0.35</td>
<td>480</td>
<td>64</td>
<td>8.8</td>
</tr>
<tr>
<td>Orange Free State</td>
<td>2.22</td>
<td>0.45</td>
<td>550</td>
<td>96</td>
<td>5.8</td>
</tr>
<tr>
<td>Western Cape</td>
<td>2.59</td>
<td>1.30</td>
<td>855</td>
<td>115</td>
<td>6.5</td>
</tr>
<tr>
<td>Total</td>
<td>2.43</td>
<td>0.52</td>
<td>628</td>
<td>88</td>
<td>7.3</td>
</tr>
</tbody>
</table>

Source: ReHMIS survey
Table 6.2
Percentage of beds in the different categories of acute care hospitals in each province (1992/93)

<table>
<thead>
<tr>
<th>Province</th>
<th>Academic hospitals (%)</th>
<th>Tertiary hospitals (%)</th>
<th>Secondary hospitals</th>
<th>Community hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Cape</td>
<td>6.8</td>
<td>22.0</td>
<td>12.6</td>
<td>58.6</td>
</tr>
<tr>
<td>Eastern Transvaal</td>
<td>-</td>
<td>5.5</td>
<td>38.4</td>
<td>56.1</td>
</tr>
<tr>
<td>Gauteng</td>
<td>57.6</td>
<td>9.2</td>
<td>19.8</td>
<td>13.4</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>8.2</td>
<td>30.7</td>
<td>20.9</td>
<td>40.2</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>-</td>
<td>-</td>
<td>44.4</td>
<td>55.6</td>
</tr>
<tr>
<td>Northern Transvaal</td>
<td>-</td>
<td>29.2</td>
<td>5.2</td>
<td>65.6</td>
</tr>
<tr>
<td>North-West</td>
<td>-</td>
<td>19.4</td>
<td>17.9</td>
<td>62.7</td>
</tr>
<tr>
<td>Orange Free State</td>
<td>31.0</td>
<td>9.6</td>
<td>17.5</td>
<td>41.9</td>
</tr>
<tr>
<td>Western Cape</td>
<td>37.5</td>
<td>14.5</td>
<td>18.1</td>
<td>29.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18.5</strong></td>
<td><strong>19.7</strong></td>
<td><strong>18.4</strong></td>
<td><strong>43.4</strong></td>
</tr>
</tbody>
</table>

Source: ReHMIS survey
Table 6.3
Distribution of public sector expenditure in acute care hospitals by level of care (1992/93)

<table>
<thead>
<tr>
<th>Level of care/type of hospital</th>
<th>Total expenditure (rands)</th>
<th>Percentage of total expenditure (%)</th>
<th>Annual expenditure per bed (rands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic hospitals</td>
<td>3,319,652,651</td>
<td>39</td>
<td>181,739</td>
</tr>
<tr>
<td>Tertiary hospitals</td>
<td>1,584,755,524</td>
<td>19</td>
<td>81,103</td>
</tr>
<tr>
<td>Secondary hospitals</td>
<td>1,230,657,103</td>
<td>15</td>
<td>67,723</td>
</tr>
<tr>
<td>Community hospitals</td>
<td>2,326,989,059</td>
<td>27</td>
<td>54,261</td>
</tr>
</tbody>
</table>

Source: ReHMIS survey
## Table 6.4
Indicators of acute public sector hospital utilisation by level of care, 1992/93
(Average for all hospitals in category)

<table>
<thead>
<tr>
<th>Level of care</th>
<th>Bed occupancy (%)</th>
<th>Average length of stay (days)</th>
<th>Bed turnover rate*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic hospitals</td>
<td>82</td>
<td>7.4</td>
<td>39.9</td>
</tr>
<tr>
<td>Tertiary hospitals</td>
<td>74</td>
<td>8.5</td>
<td>31.8</td>
</tr>
<tr>
<td>Secondary hospitals</td>
<td>74</td>
<td>7.0</td>
<td>38.7</td>
</tr>
<tr>
<td>Community hospitals</td>
<td>68</td>
<td>6.9</td>
<td>36.4</td>
</tr>
<tr>
<td>Chronic hospitals</td>
<td>80</td>
<td>54.4</td>
<td>5.4</td>
</tr>
</tbody>
</table>

*Bed turnover rate is an indicator of the average number of admissions per bed in a year.
Source: ReHMIS survey
Table 6.5
Average cost of public hospital care per patient day by level of care (1992/93)

<table>
<thead>
<tr>
<th>Level of care</th>
<th>Cost per patient per day*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic hospitals</td>
<td>360</td>
</tr>
<tr>
<td>Tertiary hospitals</td>
<td>227</td>
</tr>
<tr>
<td>Secondary hospitals</td>
<td>171</td>
</tr>
<tr>
<td>Community hospitals</td>
<td>166</td>
</tr>
<tr>
<td>Chronic hospitals</td>
<td>101</td>
</tr>
</tbody>
</table>

* This index was calculated on the assumption that the cost of an outpatient visit was equivalent to a third of the cost of an inpatient day. This is the most commonly used ratio. However, a study by Lombard et al (1991) found that the cost of an outpatient visit was 43 percent of an inpatient day in small hospitals and 70 percent in large ones. When these ratios are used, the estimates of cost per inpatient day are: academic hospitals (R247), tertiary hospitals (R173), secondary hospitals (R156), and community hospitals (R156).

Source: ReHMIS survey
<table>
<thead>
<tr>
<th>Ranges of hospital</th>
<th>Academic costs per day</th>
<th>Tertiary hospitals</th>
<th>Secondary hospitals</th>
<th>Community hospitals</th>
<th>Total hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;133</td>
<td>-</td>
<td>2</td>
<td>11</td>
<td>74</td>
<td>87</td>
</tr>
<tr>
<td>133 - 185</td>
<td>-</td>
<td>6</td>
<td>10</td>
<td>72</td>
<td>88</td>
</tr>
<tr>
<td>186 - 261</td>
<td>2</td>
<td>12</td>
<td>14</td>
<td>60</td>
<td>88</td>
</tr>
<tr>
<td>&gt;261</td>
<td>14</td>
<td>12</td>
<td>11</td>
<td>51</td>
<td>88</td>
</tr>
</tbody>
</table>

Source: ReHMIS survey
Table 6.7
Average cost per patient per day (1) for different categories of facilities and different occupancy rates (1992/93)

<table>
<thead>
<tr>
<th>Level of care</th>
<th>Occupancy rate</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;40% (2)</td>
<td>41% - 100%</td>
<td>101% - 130%</td>
<td>&gt;130%</td>
</tr>
<tr>
<td>Academic hospitals</td>
<td>458</td>
<td>402</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Tertiary hospitals</td>
<td>439</td>
<td>281</td>
<td>172</td>
<td>-</td>
</tr>
<tr>
<td>Secondary hospitals</td>
<td>303</td>
<td>210</td>
<td>127</td>
<td>-</td>
</tr>
<tr>
<td>Community hospitals</td>
<td>311</td>
<td>181</td>
<td>139</td>
<td>125</td>
</tr>
<tr>
<td>Chronic hospitals</td>
<td>251</td>
<td>104</td>
<td>70</td>
<td>59</td>
</tr>
</tbody>
</table>

(1) This table reflects the mean of the average patient day costs within each occupancy rate and level of care category.
(2) The number of facilities with occupancy rates below 40 percent were as follows: 1 academic hospital, 3 tertiary hospitals, 3 secondary hospitals, 32 community hospitals, and 5 chronic hospitals.
Source: ReHMIS survey
Table 6.8
Trends in provincial hospital expenditure
1984/85 - 1990/91

<table>
<thead>
<tr>
<th></th>
<th>1984/85</th>
<th>1990/91</th>
<th>Percentage change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure (million rands)</td>
<td>2,018</td>
<td>5,001</td>
<td>147.9</td>
</tr>
<tr>
<td>Expenditure at constant (1984) prices (million rands)</td>
<td>2,018</td>
<td>1,849</td>
<td>-8.4</td>
</tr>
<tr>
<td>Total provision of services million patient days*)</td>
<td>20.9</td>
<td>21.2</td>
<td>0.8</td>
</tr>
<tr>
<td>Expenditure per patient day at constant (1984) prices (rands)</td>
<td>96.33</td>
<td>87.58</td>
<td>-9.1</td>
</tr>
</tbody>
</table>

* Defined as the number of inpatient day plus one-third of the number of outpatient visits

Source: Price and Broekmann (1994)
### Table 6.9
Fee revenue as a proportion of recurrent expenditure at public sector hospitals by level of care (1992/93)

<table>
<thead>
<tr>
<th>Level of care</th>
<th>Fee revenue as % of recurrent expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic hospitals</td>
<td>6.1</td>
</tr>
<tr>
<td>Tertiary hospitals</td>
<td>11.3</td>
</tr>
<tr>
<td>Secondary hospitals</td>
<td>13.3</td>
</tr>
<tr>
<td>Community hospitals</td>
<td>11.1</td>
</tr>
<tr>
<td>Chronic hospitals</td>
<td>4.4</td>
</tr>
<tr>
<td>Total</td>
<td>9.2</td>
</tr>
</tbody>
</table>

*Source: ReHMIS survey*
### Table 6.10
Fees for inpatient services in government facilities in 1992/93*

<table>
<thead>
<tr>
<th>Service</th>
<th>Annual family income</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R0 - R16,000</td>
</tr>
<tr>
<td>Community and secondary hospitals</td>
<td>R19 per admission</td>
</tr>
<tr>
<td>Regional and academic hospitals</td>
<td>R24 per admission</td>
</tr>
</tbody>
</table>

*Source: South Africa (1993)*
### Table 6.11
Fees for private patients at private hospitals and at academic and regional public sector hospitals (1992/93)

<table>
<thead>
<tr>
<th>Service</th>
<th>Private hospital No ICU</th>
<th>Private hospital with ICU</th>
<th>Tertiary and academic public hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ward charge per day</td>
<td>R202</td>
<td>R257</td>
<td>R234</td>
</tr>
<tr>
<td>Laboratory services</td>
<td>Charges for each procedure</td>
<td>Charges for each procedure</td>
<td>R46 per admission</td>
</tr>
<tr>
<td>Diagnostic services</td>
<td>Charges for each procedure</td>
<td>Charges for each procedure</td>
<td>R46 per admission</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>Per item dispensed at retail rates</td>
<td>Per item dispensed at retail rates</td>
<td>R92 per admission</td>
</tr>
<tr>
<td>Theatre - basic charge</td>
<td>R144</td>
<td>R144</td>
<td>R131</td>
</tr>
<tr>
<td>Theatre - 1-60 minutes</td>
<td>R6.00 per minute</td>
<td>R7.50 per minute</td>
<td>R6.82 per minute</td>
</tr>
<tr>
<td>Theatre - +60 minutes</td>
<td>R8.15 per minute</td>
<td>R10.00 per minute</td>
<td>R9.10 per minute</td>
</tr>
</tbody>
</table>

Source: Private sector data obtained from RAMS Scale of Benefits; public sector data obtained from South Africa (1993).
Table 7.1
Health service provider used during a reported episode of illness by households sorted into quintiles on the basis of the average income per adult equivalent, 1993/94 ¹

<table>
<thead>
<tr>
<th>Service provider</th>
<th>Quintiles of households sorted on the basis of adult equivalent monthly income ² in rands</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>less than 150</td>
</tr>
<tr>
<td>Private doctor (%)</td>
<td>31.3</td>
</tr>
<tr>
<td>Traditional healer (%)</td>
<td>4.7</td>
</tr>
<tr>
<td>Health centre/clinic (%)</td>
<td>24.0</td>
</tr>
<tr>
<td>Hospital (%)</td>
<td>37.1</td>
</tr>
<tr>
<td>Other ³</td>
<td>2.8</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) This table reports the provider used by people reporting an episode of illness during the 2 weeks prior to the survey; it does not include the people who did not visit a provider.
(2) Methodology for calculation of the average expenditure per adult equivalent is presented in Project for Statistics on Living Standards and Development (1994). The number of people in a quintile decreases as the average income rises, partly because households with more dependants tend to have a lower income per person and partly because the poor tend to have larger households.
(3) Includes visits to other primary care workers, pharmacies, shops and private nurses.
Source: Preliminary analysis of data from the Project for Statistics on Living Standards and Development.
### Box 7.1
Authors responsible for the provision and financing of public primary care services at the time of the election of a democratic government

<table>
<thead>
<tr>
<th>Administrative Authority</th>
<th>Services Provided</th>
<th>Facilities</th>
<th>Area Served</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local government, including local authorities, management committees and boards, and regional services councils</td>
<td>preventative and health promotion, environmental health, curative services related to communicable disease control, some rehabilitative care</td>
<td>fixed and mobile clinics, curative care, ambulance services (generally provided on an agency basis by local government bodies), medico-legal services in urban and rural areas, curative care for the indigent where there are no clinics in urban areas</td>
<td>urban areas</td>
</tr>
</tbody>
</table>
| Provincial administrations in formerly "White South Africa" | fixed and mobile clinics, usually mobile clinics | | }
most service responsibilities including communicable disease control, family planning and prevention of malnutrition are delegated on an agency basis to provincial administrations and local governments.

Self-governing and ex-homeland governments

Department of Education and Training
Department of Public Works

Departments of Defence, Police and Correctional Service

DNHPD

combined preventive and curative clinics in health wards linked to a base hospital

school health services (usually delegated to health authorities)

building and maintenance of facilities

preventive and curative services

(1) Until 1993, there were also “Own Affairs” health departments which provided comprehensive primary care to Whites, Coloureds and Asians in urban areas. These services are now provided by provincial administrations.

Source: Preliminary analysis of data from the Project for Statistics on Living Standards and Development
### Box 7.2
Public health authorities involved in primary care provision in Greater Soweto, 1993

<table>
<thead>
<tr>
<th>Public primary health care authorities</th>
<th>Services offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNHPD, Regional office</td>
<td>services delegated to city Health Departments</td>
</tr>
<tr>
<td></td>
<td>subsidise City Health Departments</td>
</tr>
<tr>
<td></td>
<td>administer CEAS money for satellite clinics</td>
</tr>
<tr>
<td>Central Witwatersrand Regional Council</td>
<td>fund capital expenditure</td>
</tr>
<tr>
<td>Provincial Administration: Hospital Services</td>
<td>family planning</td>
</tr>
<tr>
<td>Soweto Community Health Centres:</td>
<td>ante-natal care</td>
</tr>
<tr>
<td>12 clinics in Greater Soweto and 1 clinic in Orange Farm</td>
<td>diagnosis and treatment of illness</td>
</tr>
<tr>
<td>Baragwanath Hospital outpatient/casualty</td>
<td>trauma</td>
</tr>
<tr>
<td></td>
<td>health education</td>
</tr>
<tr>
<td></td>
<td>the following services are not delivered at every clinic: maternity services, photo therapy, x-ray services, rehabilitation, psychology</td>
</tr>
<tr>
<td>Provincial Administration: Community Services</td>
<td>school health</td>
</tr>
<tr>
<td>services at some clinics</td>
<td>psychiatry</td>
</tr>
<tr>
<td>school health team</td>
<td>oral health</td>
</tr>
<tr>
<td>1 container clinic in Doornkop</td>
<td>family planning</td>
</tr>
<tr>
<td></td>
<td>health education</td>
</tr>
<tr>
<td></td>
<td>primary health care outside urban areas</td>
</tr>
<tr>
<td>Diepmeadow City Health Department - 2 clinics</td>
<td>child health</td>
</tr>
<tr>
<td>Dobsonville City Health Department - 1 clinic</td>
<td>school immunisation</td>
</tr>
<tr>
<td>Soweto City Health Department - 10 clinics</td>
<td>family planning</td>
</tr>
<tr>
<td></td>
<td>health education</td>
</tr>
<tr>
<td></td>
<td>follow-up treatment for tuberculosis, sexually transmitted diseases and rheumatic heart disease</td>
</tr>
</tbody>
</table>
| District Surgeon Services | medical examination of cases referred by the State  
|                          | examination of clients for disability grants  
|                          | examination for mental illness  
|                          | examination of cases of rape, child abuse, assault and drunken driving |

**Source:** Centre for Health Policy (1994)
Table 7.2  
Provincial distribution of primary health care facilities 1992/93

<table>
<thead>
<tr>
<th>Province</th>
<th>Clinics</th>
<th>Hospital OPDs</th>
<th>District Surgeons</th>
<th>Mobile clinics</th>
<th>Maternity beds in clinics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Cape</td>
<td>584</td>
<td>69</td>
<td>47</td>
<td>143</td>
<td>554</td>
</tr>
<tr>
<td>Eastern Transvaal</td>
<td>2092</td>
<td>24</td>
<td>39</td>
<td>158</td>
<td>149</td>
</tr>
<tr>
<td>Gauteng</td>
<td>460</td>
<td>33</td>
<td>27</td>
<td>228</td>
<td>252</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>367</td>
<td>52</td>
<td>45</td>
<td>24</td>
<td>637</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>124</td>
<td>32</td>
<td>13</td>
<td>69</td>
<td>84</td>
</tr>
<tr>
<td>Northern Transvaal</td>
<td>355</td>
<td>42</td>
<td>21</td>
<td>111</td>
<td>550</td>
</tr>
<tr>
<td>North-West</td>
<td>319</td>
<td>32</td>
<td>27</td>
<td>72</td>
<td>337</td>
</tr>
<tr>
<td>Orange Free State</td>
<td>259</td>
<td>31</td>
<td>70</td>
<td>120</td>
<td>97</td>
</tr>
<tr>
<td>Western Cape</td>
<td>464</td>
<td>50</td>
<td>54</td>
<td>123</td>
<td>165</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,141</td>
<td>365</td>
<td>343</td>
<td>1,053</td>
<td>2,825</td>
</tr>
</tbody>
</table>

(1) This refers to the number of vehicles and not the number of stopping points by mobile clinics.
(2) The number of clinics in the Eastern Transvaal is slightly underestimated as data on KwaNdebele clinics (34 clinics) were not available in the ReHMIS database.

Source: ReHMIS survey
Table 7.3
Availability of public primary care services in the nine provinces in 1992/93

<table>
<thead>
<tr>
<th>Province</th>
<th>Population per outpatient facility ('000)</th>
<th>Outpatient visits per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Cape</td>
<td>10.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Eastern Transvaal (1)</td>
<td>12.5</td>
<td>1.1</td>
</tr>
<tr>
<td>Gauteng</td>
<td>13.9</td>
<td>2.5</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>20.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>4.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Northern Transvaal</td>
<td>12.9</td>
<td>1.2</td>
</tr>
<tr>
<td>North-West</td>
<td>9.8</td>
<td>1.9</td>
</tr>
<tr>
<td>Orange Free State</td>
<td>9.7</td>
<td>0.8</td>
</tr>
<tr>
<td>Western Cape</td>
<td>7.0</td>
<td>2.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11.6</strong></td>
<td><strong>1.8</strong></td>
</tr>
</tbody>
</table>

(1) Data for the Eastern Transvaal are slightly underestimated as data on KwaNdebele clinics were not available in the ReHMIS database. This does not alter the results significantly. For example, if the 34 KwaNdebele clinics are included, the population per outpatient facility is approximately 12,000.

Source: ReHMIS survey
Table 7.4
Availability of public primary care services in magisterial districts sorted by income per capita in 1992/93

<table>
<thead>
<tr>
<th>Quintiles of districts sorted by income per capita</th>
<th>Population per PHC facility ('000)</th>
<th>Outpatient visits per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 (lowest income)</td>
<td>14.7</td>
<td>1.0</td>
</tr>
<tr>
<td>Q2</td>
<td>14.6</td>
<td>1.4</td>
</tr>
<tr>
<td>Q3</td>
<td>8.3</td>
<td>1.8</td>
</tr>
<tr>
<td>Q4</td>
<td>6.1</td>
<td>2.0</td>
</tr>
<tr>
<td>Q5 (highest income)</td>
<td>11.4</td>
<td>2.6</td>
</tr>
<tr>
<td>Total</td>
<td>11.6</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Source: ReHMIS survey
**Table 7.5**
Public sector health expenditure in 1992/93 in magisterial districts sorted by income per capita

<table>
<thead>
<tr>
<th>Quintiles of districts sorted by income per capita</th>
<th>Total public health expenditure per capita (rands)</th>
<th>Clinic expenditure per capita (1) (rands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 (lowest income)</td>
<td>122</td>
<td>12.1</td>
</tr>
<tr>
<td>Q2</td>
<td>175</td>
<td>21.4</td>
</tr>
<tr>
<td>Q3</td>
<td>213</td>
<td>25.3</td>
</tr>
<tr>
<td>Q4</td>
<td>212</td>
<td>21.7</td>
</tr>
<tr>
<td>Q5 (highest income)</td>
<td>437</td>
<td>26.2</td>
</tr>
<tr>
<td>Total</td>
<td>263</td>
<td>23.4</td>
</tr>
</tbody>
</table>

(1) Spending on clinics by ex-homelands was estimated using the methodology described in Appendix B
Source: ReHMIS survey
Table 7.6
Average spending per person during 1992/93 on public sector health services in the poorest 150 magisterial districts

<table>
<thead>
<tr>
<th>Spending per person (rands)</th>
<th>Number of districts</th>
<th>Population (million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;50</td>
<td>46</td>
<td>4.7</td>
</tr>
<tr>
<td>50 - 100</td>
<td>20</td>
<td>2.5</td>
</tr>
<tr>
<td>100 - 150</td>
<td>41</td>
<td>5.8</td>
</tr>
<tr>
<td>150 - 200</td>
<td>15</td>
<td>2.6</td>
</tr>
<tr>
<td>200+</td>
<td>28</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Source: ReHMIS survey
Table 7.7
Outpatient visits and their cost at government facilities

<table>
<thead>
<tr>
<th></th>
<th>Total visits (million)</th>
<th>Total cost (R million)</th>
<th>Cost per visit (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-clinic primary visits ¹</td>
<td>7.4</td>
<td>not available</td>
<td>not available</td>
</tr>
<tr>
<td>Clinics ²</td>
<td>31.7</td>
<td>951.1</td>
<td>30.0</td>
</tr>
<tr>
<td>Community hospitals ³</td>
<td>9.0</td>
<td>498.5</td>
<td>55.4</td>
</tr>
<tr>
<td>Secondary hospitals ³</td>
<td>7.0</td>
<td>398.2</td>
<td>56.9</td>
</tr>
<tr>
<td>Tertiary hospitals ³</td>
<td>5.8</td>
<td>441.5</td>
<td>119.8</td>
</tr>
<tr>
<td>Teaching hospitals ³</td>
<td>11.5</td>
<td>1,374.3</td>
<td>119.8</td>
</tr>
<tr>
<td>Chronic care hospitals ³</td>
<td>0.4</td>
<td>13.1</td>
<td>33.0</td>
</tr>
<tr>
<td>Totals</td>
<td>72.8</td>
<td>3,676.7+</td>
<td></td>
</tr>
</tbody>
</table>

(1) Primary care visits not at clinics (e.g. visits to district surgeons
(2) Costs directly attributable to clinics but not other costs for preventive programmes and administrative support
(3) Estimated on the assumption that an outpatient visit is one third the cost of an inpatient day
Source: ReHMIS database
Table 7.8
Fees for primary health care services in government facilities in 1994/95

<table>
<thead>
<tr>
<th>Service</th>
<th>Annual family income</th>
<th>R0 - R20,000</th>
<th>R20,001 - R29,000</th>
<th>R29,001 - R39,000</th>
<th>&gt;R39,000 or member of medical aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>seen by doctor</td>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>31</td>
</tr>
<tr>
<td>seen by nurse</td>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>31</td>
</tr>
<tr>
<td>mobile clinic</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>31</td>
</tr>
<tr>
<td>Hospital OPD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>community hospital</td>
<td></td>
<td>8</td>
<td>16</td>
<td>24</td>
<td>31</td>
</tr>
<tr>
<td>tertiary or academic hospital</td>
<td></td>
<td>13</td>
<td>26</td>
<td>39</td>
<td>51</td>
</tr>
<tr>
<td>Laboratory and diagnostic (per request) and pharmaceuticals (per prescription)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>community hospital</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>31</td>
</tr>
<tr>
<td>tertiary or academic hospital</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>51</td>
</tr>
</tbody>
</table>

Source: McIntyre (1994a)
Table 7.9
Inter-provincial distribution of IDT and CEAS commitments for primary care infrastructure

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(rands)</td>
<td>(%)</td>
</tr>
<tr>
<td>Eastern Cape</td>
<td>7,123,600</td>
<td>17.1</td>
</tr>
<tr>
<td>Eastern Transvaal</td>
<td>4,554,000</td>
<td>10.9</td>
</tr>
<tr>
<td>Gauteng</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>7,404,870</td>
<td>17.7</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Northern Transvaal</td>
<td>16,581,235</td>
<td>39.7</td>
</tr>
<tr>
<td>North-West</td>
<td>4,048,000</td>
<td>9.7</td>
</tr>
<tr>
<td>Orange Free State</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Western Cape</td>
<td>2,015,750</td>
<td>4.8</td>
</tr>
<tr>
<td>Total</td>
<td>41,727,455</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) The IDT is building a number of small structures which can be used as visiting points for mobile clinics or teams of health personnel
Source: Deloitte & Touche (1994a)
## Table C.1
Sources of finance for the health sector (1992/93)

<table>
<thead>
<tr>
<th>Source of finance</th>
<th>Expenditure (million rands)</th>
<th>Expenditure (million rands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General tax revenue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health departments (DNHPD), Provincial and Homelands expenditure less fee revenue</td>
<td>10,535</td>
<td></td>
</tr>
<tr>
<td>Education department (Subsidy to universities and technikons for training of health science students)</td>
<td>191</td>
<td></td>
</tr>
<tr>
<td>Research expenditure (By government departments other than health, and MRC expenditure less subsidy received from DNHPD)</td>
<td>139</td>
<td></td>
</tr>
<tr>
<td>Departments of Defence, Police and Prisons expenditure on health services</td>
<td>583</td>
<td></td>
</tr>
<tr>
<td>Local authorities revenue (Expenditure of local authority health departments less DNHPD subsidy)</td>
<td>225</td>
<td></td>
</tr>
<tr>
<td><strong>Total public sector resources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical schemes (Total contributions received)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health insurance (Total contributions received)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct expenditure on industry-specific services</td>
<td>472</td>
<td></td>
</tr>
<tr>
<td>Portion of contributions to Workmen's Compensation (WCC) spent on health services</td>
<td>569</td>
<td></td>
</tr>
<tr>
<td>Research expenditure by pharmaceutical and other companies</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td><strong>Out-of-pocket</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Schemes gap&quot;, &quot;Over the counter&quot; medicines and GP cash practice expenditure</td>
<td>3,894</td>
<td></td>
</tr>
<tr>
<td>User fees less expenditure by medical schemes and WCC at public sector hospitals</td>
<td>290</td>
<td></td>
</tr>
<tr>
<td><strong>Total private sector sources</strong></td>
<td></td>
<td>18,333</td>
</tr>
<tr>
<td>Donors</td>
<td></td>
<td>145</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>30,151</td>
</tr>
</tbody>
</table>
Sources: ReHMIS data; Blecher and McIntyre (1994); Bunting (1994); Deloitte and Touche (1994b); Valentine and McIntyre (1994); personal communication with Dr. B. Kistnasamy (for Departments of Defence, correctional Services and Police data.)
### Table C.2
Distribution of total health expenditure (1992/93)

<table>
<thead>
<tr>
<th>Category of expenditure</th>
<th>Expenditure (million rands)</th>
<th>Expenditure (million rands) (% in brackets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditure on capital projects by governments for health sector</td>
<td>386</td>
<td></td>
</tr>
<tr>
<td>Donor funded capital projects</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td><strong>Education and Training</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education department (subsidy to universities and technikons for training of health students)</td>
<td>191</td>
<td></td>
</tr>
<tr>
<td>Donor funded education and training projects</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td><strong>Research</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publics sector (Health and other government departments, MRC and other parastatals and tertiary education institutions)</td>
<td>190</td>
<td></td>
</tr>
<tr>
<td>Private (Pharmaceutical and other companies non-profit organisations)</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Donor</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Public sector service provision and administration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All expenditure on service provision and administration by health departments (DNHPD, Provincial Administrations, Homelands and Local authorities less DNHPD subsidies) funded by general and local tax revenue and patient fee revenue, but excluding expenditure on research and capital</td>
<td>11,064</td>
<td>11,647 (38.6)</td>
</tr>
<tr>
<td>Expenditure on health services by Department of Defence, Police and Prisons</td>
<td>583</td>
<td></td>
</tr>
<tr>
<td><strong>Private sector service provision and administration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total payments to medical schemes (which were spent on payments to private health care providers, administration costs and a small retained surplus) less payment to public hospitals.</td>
<td>11,614</td>
<td>17,541 (58.2)</td>
</tr>
</tbody>
</table>
Total payments towards health insurance policies (which were spent on claims payouts, brokers commission, administration costs and a substantial retained surplus/investment portion.)

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>All expenditure on industry-specific services and that portion of WCC contributions spent on private health services and administration</td>
<td>1,042</td>
</tr>
<tr>
<td>Out-of-pocket expenditure on &quot;schemes-gap&quot;, &quot;over-the-counter&quot; medicines and GP cash practice</td>
<td>3,894</td>
</tr>
<tr>
<td>Donor expenditure on service provision</td>
<td>68</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>30,151 (100)</strong></td>
</tr>
</tbody>
</table>

Sources: ReHMIS data; Blecher and McIntyre (1994); Bunting (1994); Deloitte and Touche (1994b); Valentine and McIntyre (1994); personal communication with Dr. B. Kistnasamy (for Departments of Defence, Correctional Services and Police data)
APPENDIX A

METHODOLOGICAL DETAILS

A.1 PUBLIC SECTOR EXPENDITURE REVIEW

A large proportion of the data used to determine public sector health care expenditure was derived from the Regional Health Management Information System (ReHMIS). Certain gaps in this data set were identified and filled from other data sources.

A.1.1 The ReHMIS database and its analysis

ReHMIS was developed by Dr Kobus Herbst of the Department of Community Health at MEDUNSA (Medical University of South Africa) in 1991. It was designed in consultation with public sector health care managers in what is now known as the Northern Transvaal province, and has been implemented on a national basis. The primary purpose of ReHMIS is to provide information on the distribution of health facilities in a geographical region, thereby providing a basis for evaluation of the adequacy of health service provision and planning of structural changes in the provision of health services. It is potentially an important input to the development of provincial health plans.

ReHMIS includes data on each public sector health care facility in South Africa. A list of all local authority clinics was obtained from the former Department of National Health and Population Development (now known as the Department of Health). Every local authority is required to provide such a list in order to obtain a subsidy towards recurrent costs. Each former provincial administration health department was requested to provide a list of all hospitals and curative primary care facilities under its jurisdiction. This included both hospitals that are fully funded by provincial administrations and those that are partially subsidised, such as province-aided hospitals. This information was crosschecked with the Hospital and Nursing Year Book (Engelhardt 1994). In the former homelands, details of all health wards were obtained. The chief administrator in each of the health wards was requested to compile a list of hospitals and clinics. In addition, details of mobile services were obtained.

Each facility in the former provinces was visited by health personnel who had been trained to collect information for the ReHMIS database. In the former homelands, the “mother” hospital in each health ward was visited as it retains information for its satellite clinics. The following information was collected:

Information on functional units (including: acute, obstetric, delivery, chronic, and intensive care bed numbers; operating, dispensing, examination, and treatment area information; etc.);
A very detailed breakdown of clinical, administrative, and support staff;

Details of equipment;

Information on service provision (e.g. number of admissions, in-patient days, and outpatient visits for a variety of services; promotive and preventive services such as number of immunisations; patient transport, etc.);

Details of referrals to other hospitals; and

Financial data including capital and recurrent expenditure, and patient fee and other income.

Different data collection forms were used for hospitals, clinics, offices and outreach services. In addition to the numerical data provided by ReHMIS, a geographical information system (called Mapinfo) is used to present ReHMIS data spatially.

The collection and computerisation of ReHMIS data was only completed once the drafting of the Health Expenditure Review (HER) report had begun. At that time, no data validation had been undertaken. The HER drafting team therefore initiated a limited data validation process. Each of the former provincial administrations and homelands was requested to provide information from head office records on certain key data fields including total expenditure, bed numbers and workload statistics per facility. In addition, comprehensiveness and accuracy of the database were checked against two other recently compiled databases, namely a facility (hospitals, bed numbers and clinics) database compiled by Dr Kamy Chetty of the University of Cape Town’s Department of Community Health, and a database of all health personnel in South Africa compiled by Bupendra Makan of the University of Cape Town’s Health Economics Unit. Where discrepancies in the data were identified, a research assistant contacted the relevant facility to determine the reason for the disparity and where necessary collected revised information for key data fields relevant to the HER.

The ReHMIS database was assessed to be comprehensive in that comparisons with other sources indicated that the vast majority of public sector health facilities were included in the original data base. In those instances where data had not been collected directly from the facility, data obtained from the relevant head office was included. The major omission in the ReHMIS database relates to clinics in KwaNdebele. Total health care expenditure in KwaNdebele was obtained from other sources and included in the analysis presented in this report. However, clinic-specific data could not be included in this report. Thus, primary care expenditure, population to clinic ratios and personnel figures in the Eastern Transvaal (the province into which KwaNdebele has been incorporated) are slightly understated in this report. This is footnoted in all relevant tables in the body of the report.

The comparison of ReHMIS personnel data with the Makan database indicated that there
was a relative undercount of total public sector health personnel in ReHMIS. However, these discrepancies were not significant in relation to the key clinical personnel analysed in this HER report.

There were discrepancies between facility collected data and that provided by the respective head offices in relation to bed numbers and expenditure. Bed number disparities were largely attributable to three factors. Firstly, there was some confusion between “authorised” beds (original number designed for that hospital) and “active” beds (beds currently available for inpatient care). Secondly, some head office records excluded bassinets whereas the ReHMIS database included these in the bed count. Thirdly, data provided by the head offices was for the year 1992/93, while facility provided data reflected the current situation. Disparities therefore frequently related to actual changes since 1992/93. All these factors could be clarified by interviewing administrators at the various facilities. It was decided that facility-provided data should be used in the HER analysis as they were the best indicator of current bed availability. With regard to disparities in expenditure data, many facilities provided information in terms of the most recent year for which they had financial statistics. In this instance it was decided to use data provided by the respective head offices to ensure that expenditure was consistently expressed in terms of the 1992/93 financial year.

There were two specific difficulties with expenditure data collected in the former homelands areas. Firstly, Transkei was unable to provide any facility-specific expenditure information as separate budgets were not allocated to each facility but controlled centrally. As personnel account for the majority of health sector expenditure, personnel numbers at each facility were used to estimate the relative distribution of expenditure. Secondly, health services in the former homelands are structured in terms of “health wards” which consist of a hospital and satellite clinics. Once again, health ward expenditure was allocated between the hospital and clinics in terms of personnel numbers at the respective facilities. These estimation procedures are unlikely to affect the HER analysis significantly as most data are presented in aggregated form. It was necessary to undertake this modelling in order to estimate the distribution of expenditure between hospitals and primary care facilities to conduct the analyses presented in Chapters 6 and 7. A more detailed description of the methodology appears in Appendix B.

To analyse the distribution of resources between levels of care, an algorithm was developed with which to categorise facilities into clinics and various types of hospitals (see Figure A.1). The classification of hospitals differed somewhat from that previously used by the Department of Health (1984), which only differentiated between three categories of hospitals, namely academic, regional and community hospitals. According to their definition, academic hospitals are large, highly specialised hospitals where the training of doctors and other paramedical staff occurs, which is similar to the definition used in this report. Regional hospitals refer to large hospitals which offer at least the four basic specialist services. The Department of Health specified that community hospitals should not exceed 350 beds and only provide general practitioner care. This is similar to the meaning given to community hospital in this report, but no limit on bed numbers has been specified. For the purposes of
In this report, it was felt that there needed to be an additional category of hospitals, namely secondary hospitals, to represent those hospitals which tend to be larger than community hospitals and have some specialist personnel and services. The term regional hospital is not used in this report; it is replaced by the term tertiary hospital, and is applied to hospitals with the four basic specialities and some higher specialities.

It was necessary to build additional checks into the algorithm to ensure correct classification of facilities due to certain anomalies. For example, with the recent budgetary cuts, many posts are “frozen” when a staff member resigns. Therefore, at the point of data collection, certain tertiary hospitals may not have had all posts for the four basic specialities filled and would not have been classified as tertiary. It was therefore presumed that if more than one of the higher specialities were present in the hospital, it could be assumed that it was a tertiary hospital. Similar assumptions in relation to the presence of basic specialities and intensive care facilities were made for the classification of secondary hospitals.

Although the medical school at the University of the Transkei trains relatively few medical students at present, and the facilities available at Umtata hospital (the teaching hospital associated with this medical school) differ to those available at most other academic hospitals in South Africa, Umtata hospital has been included in the “academic hospital” category in this report.

The data on primary care services are particularly difficult to interpret. The methodologies employed are described in Appendix B.

Figure A.1, ReHMIS Facility Classification Algorithm V2.1

Audits were performed on the ReHMIS database to determine the proportion of facilities where data had not been obtained for specific data fields of importance to the HER analysis. It was found that relatively complete data had been obtained in most instances (i.e. in the key data fields, 100 percent of facilities had provided the information requested) with a few exceptions. Data for chronic hospitals were poor in terms of the recording of certain data fields (doctors and examination units), incomplete data were available for emergency (i.e. ambulance) services, and in most categories of hospitals, less than 80 percent had provided information on patient fee revenue. These factors were taken into account in the HER analysis wherever possible: for example, when calculating fee revenue as a proportion of recurrent expenditure, all hospitals which did not have both sets of data were excluded. In addition, a few hospitals classified as community hospitals according to the HER algorithm did not provide complete workload data (i.e. either admissions, inpatient days and/or outpatient visits). Again, these hospitals were not included in the calculation of average patient day costs.

In summary, there remain some deficiencies in the ReHMIS database. However, it is the most comprehensive single database of public sector health care facilities available at present, and the preliminary validation team were unable to detect major inconsistencies in data fields of relevance to the HER that would alter the conclusions drawn in this report.
With more extensive data validation this database will undoubtedly be a valuable resource in the development of detailed health plans at a provincial level.

A.1.2 Other public sector data collection and analysis

As indicated above, there were certain gaps in the ReHMIS database (such as expenditure on health related research and training activities) which were filled through commissioned research. The detailed methodology for each research project is described in the respective technical reports published under the auspices of the HER (Doherty 1994; Deloitte and Touche 1994a and 1994b; Kistnasamy and Herbst 1994; Blecher and McIntyre 1994; Bunting 1994; Price and Broekmann 1994). The drafting team requested that each of these technical reports undergo peer review. Major criticisms of these reports arising from the peer review process are noted in the body of this report.

A.2 PRIVATE SECTOR EXPENDITURE REVIEW

Methodological details of the private sector health expenditure review are documented extensively in the relevant HER technical report (Valentine and McIntyre 1994).

Very few data on private sector health care expenditure are routinely collected and there are difficulties in obtaining access to information from primary sources due to its competitive value. Therefore, certain expenditure figures had to be estimated drawing on a range of different sources. Sensitivity analyses were performed to evaluate the variability of the estimates with changed assumptions, and the final estimates used in the analysis were regarded as erring on the conservative side.

Certain expenditure in the private health sector could not be estimated within the time frame of this project. For example, out-of-pocket payments to non-general practitioner health service providers (such as specialist medical practitioners, dental practitioners, psychologists, homeopaths and chiropractors) were not included. The total estimated expenditure in the private sector should therefore be regarded as still being an underestimate of the true situation.

A.3 OTHER DATA

The most recent population data which has been adjusted for undercounts in the official census, is that provided by the Development Bank of Southern Africa (1994). This was obtained on a magisterial district basis to enable analysis of the distribution of health care resources relative to the population served in each district.
Consumer Price Index (CPI) data was obtained from the Central Statistical Service (1993a) while Gross Domestic Product (GDP) data was obtained from the South African Reserve Bank (1991 and 1993).

Mortality data was provided in an analysed form by David Bourne of the University of Cape Town’s Department of Community Health. He has developed an extensive database of mortality in South Africa, by magisterial district, based on death registration information provided by the Central Statistical Service. It is known that there is significant under- and mis-reporting of deaths at present, particularly in rural areas and among the African population. Consequently, most of the previous analysis of mortality and other health indicators in South Africa has focused on the “non-African” section of the population. The indicator of poor health status which appears most stable to these biases is the percentage of deaths, for each geographical area, due to infectious diseases combined with those ascribed to ill-defined causes. Hence it is this indicator which is used to analyse the relationship between the distribution of health care resources and health status in this report.
APPENDIX B

METHODOLOGY FOR THE CALCULATION OF NATIONAL EXPENDITURE ON NON-HOSPITAL PRIMARY CARE

B.1 INTRODUCTION

It is particularly difficult to estimate expenditure on primary care in South Africa because of the number of authorities involved in the delivery of primary care. Several of these authorities are also responsible for other services but do not account for these services separately. An important example is the ex-homelands, where budgets are generally available for the health ward as a whole and are not broken down into expenditure on the hospital, clinics and ambulance services within the ward.

The methodology described below applies a number of assumptions to the available data on expenditure in order to provide a best estimate of expenditure on non-hospital primary care by district or ex-homeland health ward. It is not possible to estimate expenditure on primary care within hospitals (such as outpatient and uncomplicated obstetric care) without special studies.

B.2 THE ALLOCATION OF PRIMARY CARE COSTS OUTSIDE THE HOMELANDS¹

Budgets for individual clinics were readily available, and did not need to be manipulated. Administrative costs, and the costs of vertical programmes (including environmental health services) which are not based at clinics, were seldom available by district. The following process was followed in adding these costs to estimates of primary care expenditure:

- The total expenditure by each local authority office was divided between districts in proportion to the expenditure by the local authority on clinics in each district.
- Expenditure by offices of the former provinces was allocated to each district in the following fashion:
  - the total expenditure by each regional office was divided between districts in proportion to the provincial expenditure on clinics in each district;
  - head office expenditure corresponding to the proportion of the total provincial budget spent on clinics (as opposed to other services such as hospitals) was allocated to districts in proportion to the provincial expenditure on clinics in each district.
The total expenditure by each of those Regional Services Councils (RSCs) which provide primary care services (that is, the RSCs of the Western Cape, Orange Free State and Natal) was divided between districts in proportion to the expenditure by the RSC on clinics in each district.

Total expenditure by regional offices of the Department of National Health and Population Development was divided between districts in proportion to the expenditure on clinics in each district.

The clinic and other costs allocated to each district were totalled to achieve an estimate of total expenditure on non-hospital primary care in each district outside the homelands.

B.3 THE ALLOCATION OF PRIMARY CARE COSTS INSIDE THE HOMELANDS

Most homelands allocate a budget to each health ward. This budget is used to provide all the health care in the ward and the different services are not accounted for separately. The process followed to estimate primary care expenditure in each ward was as follows:

Expenditure on ambulance services was first deducted from the ward budget. As the real cost of ambulance services is generally not known, the running cost per functional ambulance was derived from a study in the homeland KaNgwane and expressed in 1993 prices (Price 1994). For each health ward this cost was multiplied by the number of functional ambulances in that ward. The total cost of ambulances was then deducted from the total budget of each health ward.

The remaining ward expenditure was then divided between clinic and hospital care by means of a formula which combined information from the KaNgwane study and another study in the Ciskei (Broomberg et al 1994). This formula assumes that the proportion of nursing personnel (excluding student nurses) working in primary clinics is the most important determinant of the proportion of the ward budget which is spent on clinics. The proportion of clinic-based nurses, and the proportion of the budget spent on primary care, in the KaNgwane and Ciskei studies were plotted on a graph. A straight line was drawn between the points for the two homelands, and the gradient of the line and its intersection with the y-axis were determined. The resultant formula is: The proportion of total district recurrent expenditure allocated to community based services = 0.883 (the proportion of registered nurses working in community services) - 0.0123 (This formula was calculated by Dr Max Price from the KaNgwane and Ciskei studies - Price et al (1995).)

The application of this formula obviously yields a very crude estimate of primary care expenditure in each homeland. However, no better accuracy was possible given the available data.
Homeland head office costs which include costs for vertical preventive programmes, were then allocated to primary care in each ward through the following process:

- If the homeland is in a malaria area, 25 percent of the head office costs was deducted for environmental health services (this figure was derived from the KaNgwane study). This amount was divided between the health wards in proportion to the expenditure by the homeland on clinic services in each ward.
- After deduction of expenditure on environmental health services, the remaining amount was divided between the wards in proportion to the expenditure on clinics in each ward.
- If the head office budget had included expenditure on medicines and supplies, the proportion of the ward allocation accounted for by medicines and supplies was divided between the hospital and clinics in that ward in proportion to the other expenditure on the hospital and clinics.
- Lastly, the remaining amount of the ward allocation was divided between the hospital, ambulance and clinic services relative to the proportion of the ward budget they consumed.

The ward and head office costs were totalled to achieve an estimate of primary expenditure in each ward.

For the Transkei and Qwa-Qwa no expenditure information was available at a ward level, as the total health budget is managed by the head office. The following approach was adopted to allocate expenditure to individual health wards:

- The percentage of the total budget allocated to each ward corresponded to the percentage of the homeland nurses working in each ward.
- Ambulance expenditure was deducted from the total ward expenditure in the manner described above.
- Finally, ward expenditure was divided between hospital and non-hospital services in proportion to the number of nursing staff working in each sector.
APPENDIX C

DETAILS OF EXPENDITURE CALCULATIONS

The purpose of this appendix is to provide more detailed explanations of how aggregate expenditure estimates presented in chapter 3 were arrived at. This will facilitate reproduction of these calculations by future researchers. In addition, more information on research and training expenditure estimates is provided.

C.1 CALCULATION OF EXPENDITURE BY SOURCE OF FINANCE (Table 3.5)

Table C.1 provides more detailed information of how expenditure by source of finance, as presented in Table 3.5, was calculated. Readers should refer to the relevant Health Expenditure Review Technical Reports for a detailed description of the methodology and assumptions underlying these data.

Table C.1 Sources of finance for the health sector (1992/93)

C.2 DISTRIBUTION OF HEALTH SECTOR EXPENDITURE CALCULATIONS (Figure 3.2)

Table C.2 details how the distribution of health sector expenditure, as presented in Figure 3.2, was calculated.

Table C.2 Distribution of total health expenditure (1992/93)

C.3 EXPENDITURE ON HEALTH RESEARCH

A study carried out by Blecher and McIntyre (1994) for the health expenditure review found that 272 million rands were spent on health research in 1991/92 (310 million rands in terms of the 1992/93 financial year). This figure was higher than the estimate of 199 million rands made by the Research and Development Survey published by the Department of National Education, because it identified a substantially higher level of spending by pharmaceutical companies than the government survey did.

C.4 EXPENDITURE ON THE EDUCATION AND TRAINING OF MEDICAL PERSONNEL

The direct expenditure by universities and technikons on the training of health care and health science students (for example, medicine and surgery, dentistry, physiotherapy, occupational therapy, pharmacy, and degree nursing students) was 291.7 million rands in
1992 (Bunting 1994). This estimate does not include indirect costs such as administration and building maintenance. The Department of National Education provided 186 million rands (191 million rands in 1992/93 financial year terms) in the form of subsidies and the remaining 105.7 million rands came from student tuition fees, investment income, Department of National Education subsidy income diverted from other programmes, grants and contracts from research agencies and payments from the Provincial Health Departments responsible for academic complexes. According to Bunting (1994), most of these funds come from the Provincial Health Departments. The estimate of the training budget in Figure 3.2 is an underestimate because it only includes the Department of National Education subsidy.

Provincial health budgets include additional costs of training health personnel such as the proportion of time of clinical staff in academic hospitals devoted to teaching activities, the longer admissions of some patients for teaching purposes and the costs of some nursing colleges. This report does not attempt to quantify these indirect training costs, but any future training strategy will have to take them into account. These costs are however included in total expenditure estimates presented in Figure 3.2, but are included under the service category of academic hospitals.

It should be noted that various commentators have indicated that these data are likely to significantly underestimate the costs of health personnel training. More extensive research into this issue is urgently required.
APPENDIX D

OVERVIEW OF THE MEDICAL SCHEMES AMENDMENT ACT

The Medical Schemes Amendment Act (Act No 23 of 1993), was implemented on 1 January 1994. The amendments to the principal Act (Medical Schemes Act, No. 72 of 1967) were the result of pressure by medical schemes themselves for legislative change. Of particular concern was that the Medical Schemes Act prescribed minimum and maximum benefits to be offered by schemes. There was thus little flexibility in designing packages which would allow schemes to extend their market to low income earners, or to compete with health insurance companies which offer “catastrophic cover” packages (usually covering major hospitalisation and “dread disease” expenses). In addition, it was felt that the Medical Schemes Act did not allow schemes to address cost containment issues effectively. The most important changes introduced by the Amendment Act are as follows:

- A married woman can now become a member of a medical scheme in her own right. Married couples can therefore choose which partner should be the principal member of a scheme and who should be registered as a dependant. While this amendment was welcomed by many for removing gender discrimination, it has financial implications for medical schemes. Women tend to receive lower incomes and as scheme contributions are differentiated in terms of income levels, overall scheme contributions could decrease as a result of this amendment.
- The definitional distinction between medical aid, benefit and exempted schemes was removed (see Table 4.2).
- Statutory scales of benefits and direct payment of accounts to health care providers were abolished. Previously, scales of benefits were published in the Government Gazette on an annual basis and formed the official “price list” for medical schemes. If a service provider charged the scale of benefit rate, schemes were legally obliged to pay them directly. While the Representative Association of Medical Schemes (RAMS) continues to publish scale of benefits tables, these are merely guidelines to schemes and are not legally enforceable. Individual schemes can now negotiate prices directly with providers. In addition, they can determine the co-payments to be made by scheme members which play a role in reducing over-utilisation of services. The converse of this is that if schemes wish to offer a very comprehensive benefits package, they are no longer restricted in terms of a maximum price list.

The removal of direct guaranteed payment to service providers has two major effects. Firstly, if scheme members are required to settle accounts with providers and then claim reimbursement from their medical scheme, a greater awareness of the cost of
health care is created which could reduce over-utilisation. Secondly, it allows more effective utilisation review by schemes as there is a degree of discretion in settling of accounts where schemes assess services to have been unnecessary or excessive (for example, excessive diagnostic investigations, medicine prescriptions, or periods of hospital admission in excess of average lengths of stay for a particular medical condition or surgical procedure).

Prescribed benefit levels were abolished, thus allowing greater flexibility in the design of packages. This will facilitate the extension of the medical scheme market, particularly to low income earners. These changes also enable schemes to compete more effectively with health insurance organisations as schemes can now also offer packages which only cover major expenses. In addition, provision was made for schemes to provide additional cover for their members by means of underwriting, insurance or re-insurance, which will promote competition with health insurance organisations for “top-up” cover business.

There is now expanded scope for schemes to own or contract with health care facilities, and to enter into employment or other contractual arrangements with health care providers. In this way, managed care options can be more actively pursued by schemes.

As the amendments to the Medical Schemes Act were only implemented a year ago, it is not possible to evaluate accurately the effects of these changes. However, there has been some debate about the implications of the greater flexibility of benefits packages offered by schemes. While this change will facilitate the extension of the medical scheme market, the following concerns have been raised:

- It has become difficult for consumers to evaluate which of the myriad of alternative packages offer the best value for money;
- The marketing and administration costs of schemes have increased;
- There is greater uncertainty for health service providers in that it is difficult for them to determine which services are covered by a patient’s medical scheme; and
- There is concern that the extent of diversification of benefits packages may increase the level of financial risk for schemes. In the absence of adequate actuarial expertise, it is difficult for schemes to accurately estimate the likely expenditure levels for different packages.

Another fundamental change in the operation of medical schemes which preceded the Medical Schemes Amendment Act was the move from community-rating to experience or risk-rating in determining contribution levels. Previously, contributions for a defined package of services were only differentiated in terms of a member’s income level and number of dependants. Risk-rating entails the differentiation of an individual's contribution on the basis of his or her age, existing medical conditions, claims experience, and other factors relating to clinical risk. This has reduced the level of cross-subsidisation and risk-sharing within schemes and has resulted in scheme membership becoming unaffordable for the elderly and chronically ill. This provides a means for schemes to address the financial difficulties associated with the changing demographic composition of schemes, namely an increasing proportion of high-claiming, low-contributing elderly members. This will facilitate schemes’ ability to recruit new members, particularly in the lower income categories. However, there
are concerns that the elderly and chronically ill are being “dumped” on the public sector after contributing to schemes during their working life.

Given that the nature of medical schemes is changing substantially, there is a need to monitor the effects of the recent amendments to the Medical Schemes Act closely and to evaluate whether further legislative changes are required.
APPENDIX E

THE PROCESS OF BUDGETING PUBLIC HEALTH EXPENDITURE

A number of government departments are involved in the budgeting process. These include:

- The Department of State Expenditure which is responsible for preparing the government’s expenditure budget, evaluating the management plans of other state departments with regard to their expenditure and for determining unauthorised and other deviations from expenditure plans and reporting on such irregularities to the Auditor-General;
- The Department of Finance which is responsible for rendering policy advice on state finances and the overall utilisation of government funds, for funding the exchequer and for making funds available to state departments and other state institutions;
- The Central Economic Advisory Service (CEAS) which conducts research and provides overall policy advice on macro-economic matters;
- The Reconstruction and Development Programme (RDP) Office;
- The national Department of Health, which is responsible for determining the distribution of the health budget between the national level and the provincial health departments; and
- The provincial Departments of Health.

The budgeting process is described below with the usual time frame for this process being illustrated in terms of the development of the 1995/96 budget. The actual timing of these activities differed this year due to the change of government.

The first step in the budgeting process is the development of guideline allocations. The national and provincial health departments are requested to prepare five expenditure options for the following three years. Guidelines are set for the preparation of these options, for example, departments were asked to consider plans for the following real expenditure scenarios in developing the 1995/96 budgets:

Option 1: 2 percent (real growth)
Option 2: 0 percent (no real growth)  
Option 3: -2 percent (real decrease)  
Option 4: -4 percent (real decrease)  
Option 5: -6 percent (real decrease)  

The Function Committee on Health meets to discuss these expenditure scenarios, to begin its debates on the division of the global health budget between the national level and the provincial health departments and to discuss whether any extraordinary expenditure allowance should be requested. Each of the health departments are represented on the Function Committee, in addition to the Department of Finance, the Department of State Expenditure, CEAS, the RDP Office, the Joint Standing Parliamentary Committee on Health, the Financial and Fiscal Commission, and the National Economic, Development and Labour Council (NEDLAC - a newly formed statutory body with representation from the government, business sector and trade unions, which will consider all labour legislation and all significant changes to socioeconomic policy). The function committee is chaired by the national Department of Health.

The Department of State Expenditure determines the guideline allocations (April 1994) after receiving inputs from CEAS, the Function Committees and individual health departments. The formula for calculating the guideline allocations is:

- Current budget less non-recurring expenditure, less extraordinary expenditure = adjusted current year;
- Adjusted current year plus real growth, plus inflator, plus extraordinary expenditure = guideline allocation.

Requests from the different functions (for example, education, health, welfare, and housing) are considered by the Department of State Expenditure, the Budget Committee, the Treasury Committee and the Cabinet. Draft estimates are compiled (September 1994) based on the guideline allocations and submitted to the Treasury for consideration in relation to anticipated available revenue. The fiscal and monetary policy implications of the draft estimates are evaluated.

The Function Committee continues meeting during this process to debate the division of the global health allocation between the various health departments. The ultimate responsibility for determining these allocations rests with the national health department at present.

Departments are informed of their final allocations (December 1994) to enable them to plan for downscaling activities if their budget is to be reduced, or for development of additional services if their budget is to be increased.

The Estimates of Expenditure are produced and tabled in parliament (March 1995).

Three times during a financial year (August 1995, October 1995 and January 1996), a report is made on state expenditure. These reports form the basis for determination of the
Adjustments Budget, which is tabled in parliament (February 1996). The Adjustments Budget relates to the shifting of funds between functions, the re-appropriation of funds carried over, additional appropriations (for extraordinary activities or to cover departments’ overexpenditure), and to deal with a number of technical budgetary adjustments.

After the end of the financial year (March 1996), the accounts of the respective departments are closed and reviewed by the Auditor General.

The above description of the budgeting process indicates the range of departments and committees which influence the determination of the global health budget. The allocation of this budget between the various health departments is influenced by the Function Committee on Health, but ultimate responsibility rests with the national Department of Health.

As indicated in Chapter 4 of this report, there is a concerted effort to redistribute the 1995/96 health budget to redress historical geographic resource disparities. An allocation “formula” has been developed by the national Department of Health in consultation with the provincial Health Departments. This “formula” can be summarised as follows (Health Policy Coordinating Unit 1994):

- the base-line proportional allocations between the national and nine provincial health departments were based on projected actual expenditure for the 1994/95 financial year;
- in those provinces containing academic hospitals, 25 percent of their respective anticipated expenditure was excluded from the inter-provincial reallocation process on the basis that such hospitals serve a national rather than a provincial function;
- the central health department’s projected expenditure was also excluded from this reallocation process for a similar reason;
- the expenditure remaining after these exclusions was assumed to represent the funds available for redistribution;
- target allocations for each province were calculated based on a weighted proportional population distribution (population within each province weighted by the inverse of the provincial per capita income; income is given a 0.25 weight);
- budgets are to reach target proportional distributions calculated in this way within 5 years; and
- 30 percent of the shift towards these target allocations is to occur within the 1995/96 financial year.

The effects of this reallocation formula on the budgets of the respective provincial health departments should be evaluated when the budget has been presented to parliament. However, a number of points can be made about the formula based on present information.

Given the significant existing disparities in per capita public sector health care expenditure and the goal of achieving equity in per capita allocations within 5 years, substantial changes in provincial budgets will be required on an annual basis. For example, the budgets of
certain provinces could change by as much as 20 percent, in real terms, between 1994/95 and 1995/96 (personal communication with national Department of Health). In other countries, the rate of change has been slower. The British Resource Allocation Working Party (RAWP) recommended a ceiling of 5 percent real growth over the previous year’s allocation and a floor of 2.5 percent reduction in real budgets (DHSS 1976).

Policy-makers in South Africa are faced with the difficult task of balancing the need to take bold steps to break the inertia inherent in historical budgeting mechanisms, with the need to minimise the potentially detrimental effects to existing health services of sudden large budgetary cuts. This must be accomplished within the context of a constrained global health budget. This once again highlights the need for detailed provincial planning. Provinces who will gain from the reallocation process need sufficient time to develop additional health service infrastructure before increased recurrent budgets can be adequately absorbed. Conversely, provinces faced with budgetary cuts require time to plan for the downscaling of health services. In recognition of the latter problem, a special allowance (over and above the global health budget) has been negotiated for the Western Cape, Gauteng and the Orange Free State for 1995/96. While these provinces will still receive an overall budgetary cut, it will not be as great as that determined by the resource allocation formula. This allowance will not become part of future health budget calculations, but has been specifically provided to assist these provinces in managing the downscaling of service provision. Care will have to be taken to ensure that the additional allocation is phased out.

Once the reallocation process has been initiated, there will be a need to refine the formula to determine the relative need for public sector health care funding more accurately. This will be facilitated by improvements in the quality of routinely available data. The issues relating to the current resource allocation formula that require further investigation and possible refinement include the following:

- While per capita income reflects socio-economic differences between provinces, it would be preferable to use indicators of health status (morbidity and/or mortality) to weight provincial populations. Socio-economic differences do not translate directly into differences in need for health services. For example, an area with relatively better socio-economic status may have a greater need for health services because of endemic conditions (e.g. malaria). Another example is that of KwaZulu-Natal which has higher per capita income than certain other provinces but has the highest incidence of HIV/AIDS. The indicators selected to weight provincial populations should reflect differential need for health services as closely as possible. This refinement is clearly dependent on data availability.
The effect of the global assumption that 25 percent of expenditure in provinces which have academic hospitals should be deducted from the base-line provincial expenditure, to account for expenditure on training of health personnel and the provision of highly specialised services to residents of other provinces, requires further investigation. In certain provinces, a considerably higher proportion of provincial health budgets are devoted to academic hospitals at present. In particular, this aspect of the formula seriously disadvantages provinces like Gauteng, which contains three academic complexes and the Western Cape which has two academic complexes, and favours provinces like KwaZulu-Natal and the Eastern Cape which have a relatively low concentration of resources in academic hospitals. This reflects a conscious attempt to redistribute academic hospital resources between provinces containing academic complexes. However, the degree to which 25 percent of provincial expenditure adequately compensates provinces for providing a national resource in terms of health personnel training as well as the provision of highly specialised services to patients from other provinces requires detailed evaluation.

The formula does not take account of likely future migration patterns between provinces. As South Africa is undergoing a process of rapid urbanisation, population migration patterns and differential birth and death rates should be considered (McIntyre 1994b). The Urban Foundation has estimated that the metropolitan areas in the Western Cape, Gauteng, Eastern Cape and KwaZulu-Natal will be most significantly affected by inward urban migration (Urban Foundation 1990). These four provinces face large budgetary decreases in terms of the current formula. While the target allocations will be calculated on an annual basis, the population figures used in the formula are based on census data which are not updated on an annual basis. As resource disparities between provinces are reduced, it will be particularly important to have a longer time perspective in the formula in relation to population size. This is necessary to ensure that resources are not shifted from a province with associated decreases in service provision, only to require additional funds in the same province for service expansion a few years later.

The substantial differences in population density, do not appear to have been adequately taken into account. For example, the Northern Cape, which has a population density of 2.1 people per km², will require more resources to ensure adequate access to health services for the resident population than a province such as Gauteng which has a population density of 365 people per km² (McIntyre 1994b). The Department of Health has indicated that this factor was taken into account in determining the Northern Cape’s budget. However, the relationship between costs of service provision and population density require further investigation and this factor should be applied consistently to all provinces which have relatively low population densities.
Inter-provincial differences in access to and utilisation of private sector health services should also be taken into account in the formula. In particular, beneficiaries of medical aid schemes are almost entirely catered for by private sector providers. It would be preferable to exclude medical aid beneficiaries from the provincial population so that public sector health care expenditure is more equitably distributed between the population dependent on public services (McIntyre 1994b). Unfortunately, the provincial distribution of medical aid members is not known at present. It is feasible that schemes could be required to include such information in their annual reports which are submitted to the Registrar of Medical Schemes. The proposal to exclude medical scheme members from the base population will need to be re-evaluated in the light of possible future implementation of some form of Social Health Insurance, which may make private sector services accessible to more South Africans.

In summary, there is an urgent need to redistribute public sector health care resources on a geographic basis to redress historical disparities. It has been demonstrated internationally that the use of a reallocation formula is an effective mechanism for overcoming the inertia inherent in historical budgeting. However, as resource disparities are reduced, it will be necessary to refine the current formula to include a range of factors which will influence the differential need for health care resources between provinces and to improve the quality of the data used in calculating target budgetary allocations. Most importantly, there is an urgent need to improve health sector planning and to integrate the planning and budgeting processes. This is particularly critical at a time when the public health sector is confronted with an overall real budgetary decrease. If attempts to redistribute financial resources occur in conjunction with careful planning, especially in relation to infrastructural development, the potential problem of replacing inequity with inefficiency will not arise in the South African context.
REFERENCES


Brown M, van den Heever A (1994). Report by the consultants on the existing expenditure trends and functional costs to support the function analysis and rationalisation programme in terms of the National Health Plan and the RDP. Unpublished report prepared for the PWV Strategic Management Team.


Centre for Health Policy (1994). Planning For Health Facility Development at the Primary Level: The Case of Greater Soweto. Johannesburg: Centre for Health Policy, University of the Witwatersrand.


Figure A.1
ReHMIS Facility Classification Algorithm V2.1
Figure 3.2

Distribution of total health sector expenditure (1992/93)

- Public & donor funded capital projects 1.3%
- Research & training 1.8%
- Public health services & administration 38.6%
- Private health services, administration & surplus 58.2%
Figure 3.3
Distribution of health personnel between the public and private sectors in South Africa, excluding the homelands (1989/90)
Figure 3.4

Health expenditure per person on members of medical aid schemes and residents of the 75 poorest magisterial districts 1992/93
Figure 4.1
Medical scheme expenditure per beneficiary at constant (1983/84) prices*, 1983/84 - 1992/93
Figure 5.1

Sources of recurrent finance for public health services (1992/93)

- General tax revenue 94%
- Local rates, utility sales and taxes 1.5%
- User fees 4.5%
Figure 5.2

Distribution of recurrent public sector health expenditure by inputs (1992/93)

- Personnel: 6.76%
- Pharmaceuticals: 12.5%
- Other supplies: 5.6%
- Equipment lease, maintenance: 3.7%
- Other: 10.6%
### Table 5.2
Public sector health facilities by level of care (1992/93)

<table>
<thead>
<tr>
<th>Level of care</th>
<th>Number of facilities</th>
<th>Number of beds</th>
<th>Percentage of total acute public sector hospital beds (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic hospitals</td>
<td>16</td>
<td>18,266</td>
<td>18.5</td>
</tr>
<tr>
<td>Tertiary hospitals</td>
<td>33</td>
<td>19,540</td>
<td>19.8</td>
</tr>
<tr>
<td>Secondary hospitals</td>
<td>47</td>
<td>18,172</td>
<td>18.4</td>
</tr>
<tr>
<td>Community hospitals</td>
<td>269</td>
<td>42,885</td>
<td>43.4</td>
</tr>
<tr>
<td><strong>All acute hospitals (1)</strong></td>
<td>365</td>
<td>98,863</td>
<td>100</td>
</tr>
<tr>
<td>Chronic hospitals</td>
<td>54</td>
<td>21,158</td>
<td></td>
</tr>
<tr>
<td>Fixed clinics</td>
<td>3,141</td>
<td>6,303</td>
<td></td>
</tr>
<tr>
<td>Mobile clinics (2)</td>
<td>1,053</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Province-aided private hospitals are included in the following analyses because they treat public patients and receive funds from the Provincial Departments of Health and Hospital Services. This explains why this report’s estimates of the numbers of public sector hospitals and beds are different from Chetty’s (1994). The expenditure data only include the public subsidies to these facilities.

(2) This refers to the number of vehicles rather than the number of stopping points.

Source: ReHMIS survey
Figure 5.3

Distribution of public sector health care expenditure by level of care (1992/93)
Figure 6.1

Differences in the numbers of nurses and doctors per bed in different categories of public sector hospitals (1992/93)

Source: ReHMIS survey
Table 6.12
POTENTIAL SOURCES OF INCREASED EXPENDITURE AND SAVINGS BY PUBLIC SECTOR HOSPITALS

<table>
<thead>
<tr>
<th>Increased Source Requirements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New general hospitals in under-served areas</td>
<td>This cannot be established before provinces have determined their needs</td>
</tr>
<tr>
<td>Addition of specialist services in under-served areas</td>
<td>This cannot be established before provinces have determined their needs</td>
</tr>
<tr>
<td>Increases in need and demand due to population increases, increased expectation</td>
<td>In the short term there may be an increase in demand, but over time it may be diminished due to improved preventive measures and an easing of the pressure on hospital outpatient departments (Chapter 7). However, greater access to primary care services is likely to result in additional referrals to hospitals.</td>
</tr>
<tr>
<td>Recurrent costs of hospitals currently under construction</td>
<td>This cannot be established until the Department of Health has documented the projects which will go ahead and accurate estimates are made of the running costs of the new and upgraded facilities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Potential Budgetary savings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Closure of wards and/or hospitals which are currently under-utilised</td>
<td>This must be assessed in the provincial hospital service development plans.</td>
</tr>
<tr>
<td>Downgrading of some specialist service facilities.</td>
<td>This must be estimated in the provincial hospital plans, based on accurate needs assessment.</td>
</tr>
<tr>
<td>Improvements in hospital efficiency</td>
<td>A crude estimate of 1 billion rands, but there are many constraints to be overcome</td>
</tr>
<tr>
<td>Increased cost recovery from private patients</td>
<td>Must be determined on the basis of an assessment of the market</td>
</tr>
</tbody>
</table>