Health and Related Indicators

17

Candy Day[i] and Andy Gray[ii]
[i]Health Systems Trust
[ii]Dept of Experimental and Clinical Pharmacology
University of Natal

Introduction

The objective of this section of the Health Review is to present the best available data on a wide range of health and related indicators. Where possible data from multiple years are presented. However, caution should be used when attempting comparisons across time and especially between different sources. Not all sources are comparable. However, particular attention has been paid to detailed listings of the definitions used and the sources for each piece of data presented in this section.

Data quality varies considerably between sources. Where possible, the necessary cautions about poor or unreliable data have been included. Notwithstanding such concerns, the range and depth of data available is improving year by year.

Where possible the means to access the raw and complete data electronically has been identified. It should however be noted that specific Universal Resource Locators (URLs) are not always available for the exact document sought. In such cases, the location of the issuing authority's web site has been provided (e.g. Statistics SA can be accessed at http://www.statssa.gov.za). Increasingly, though, in-depth data is not made available for free.

Where previous Health Reviews tried to represent the selected indicators broken down by provincial and population groups, future editions will try to include district level data as far as possible.

For demographic data, the most important sources used this year were the Statistics SA products, such as the 1996 Census, the mid-year population estimates and the October Household Surveys. A census was completed in late 2001, but results will take some time to emerge. The latest October Household Survey (OHS) was completed in 1999. Increasingly, competing models of the impact of AIDS on the South African population post-1996 are being issued. Extensive use was made of the reports issued by the Actuarial Society of South Africa, Metropolitan Life and the Institute for Futures

Research. Additional socio-economic data were obtained from the South African Demographic and Health Surveys, the most recent report available being that for the 1998 survey. This was also the key source for health status indicators. In some areas, older data remain the only source, such as the 1994 Development Bank of South Africa report on the (then) new nine provinces. More recent sources include the 1999 CASE Disability Survey, the Confidential Enquiries into Maternal Deaths, the 2000 survey on perinatal care, the 1999 National Food Consumption Survey, the 2000 iodine deficiency disorder survey and the publication of the Reproductive Rights Alliance on termination of pregnancy. Regular sources include the annual antenatal HIV prevalence survey and the infectious diseases data issued by the Department of Health. Initial data from the District Health Information Systems database, albeit aggregated to provincial level, have also been included where possible.

Since the last edition of the Health Review there has been some progress made with the National Health Accounts project, with reports now available for both public and private sectors. Some financial information has also been added from the 2001 Intergovernmental Fiscal Review. The private sector remains under-reported in many ways, but the reports of the Council for Medical Schemes carry increasingly accessible data. Public sector personnel data continue to be difficult to access, with the Personnel Administration system (PERSAL) the only source. A new addition to the Department of Health's electronic capacity is the Pharmaceutical Management Information System (PharMIS). Limited data from that source have been collated.

One further extension this year is the inclusion of international comparative data for a selection of middle-income countries with comparable gross national incomes per capita. International comparative data is available from a range of sources, including the World Health Organisation, World Bank and the United Nations Development Programme. Selected data from the Human Development Report 2001 and its South African equivalent have been used. The World Population Data Sheet issued by the Population Reference Bureau is also useful.

Organisation of Health Indicator Data in this Health Review:

- Major sections (including Demographic Indicators, Socio-Economic Indicators, Health Status Indicators and Health Service Indicators) are presented by province and where possible by population group
- Some limited data on drug management and supply in the public sector
- International data for a set of selected indicators.

The indicators presented in the Health Review represent an output from an ongoing project. An electronic repository of such data has been created and will be maintained by the Health Systems Trust. Additional information, notes and details on sources can be accessed on that site (http://www.hst.org.za/indic/).

General Indicator-related definitions

Proportion: The relation of a subgroup to the entire group; that is the subgroup divided by the entire group. Often proportions are actually expressed as percentages, by multiplying by 100.

Rate: The frequency of events in a population during a specified time period (usually a year) divided by the population 'at risk' of the event occurring during that time period. Rates tell how common it is for a given event to occur. Rates are often expressed per 1000 population. Crude rates are computed for an entire population, while specific rates may be computed for subgroups such as certain age groups.

Ratio: The relation of one population subgroup to the total population or to another subgroup; that is, one subgroup divided by another.

Incidence: the number of new cases arising in a given period in a specified population.

Prevalence: the number of cases in a defined population at a specified point in time.

Demographic Indicators

The primary source of in-country data is the Census. Although the population figures quoted in this section are derived from the 1996 Census, Statistics SA issues exponential growth and adjustment factors that allow for estimates for later years to be calculated. What must be borne in mind when using any population figures, is that they involve a high degree of uncertainty.

In the face of such uncertainty, some might consider it prudent to make no projections at all, but, as Lutz *et al* argue: "in the face of the overwhelming humanitarian, social and economic challenges facing South Africa, (population) projections are more urgently needed for planning than in many countries having more accurate data and less discontinuous trends" [SA Uncertain Demographics].[a] This section has drawn on a number of models that have sought to accommodate these uncertainties:

- The StatsSA mid-year estimates from 2000 include scenarios that ignore the impact of HIV/AIDS ('Without AIDS') or attempt to take into account the additional deaths that might have occurred due to HIV/AIDS ('With AIDS'). These estimates are based on the translation of the antenatal sero-prevalence data to 'additional deaths due to HIV/AIDS', using several assumptions outlined in the 2000 P0302 Statistical Release.
- The Actuarial Society of South Africa (ASSA) has developed a series of models - this section has used outputs from the ASSA2000 model.

a The full reference for short references given in square brackets are at the end of the chapter

This model is able to produce output scenarios for differing levels of change, particularly with respect to HIV risk behaviour and intervention. The change scenario is included not so much because this is a likely scenario but in order to break away from the tradition of only showing what is expected to happen if nothing is done. It comprises the following assumptions:

- no antiretroviral therapy
- mother-to-child-transmission intervention (phased in from 40% of births in the year starting 1 July 2001 to 90% in five years time, and assumed to 50% effective)
- treatment of sexually transmitted diseases (STDs) such that these are reduced by 15% phased in over the five years starting 1 July 2001
- a doubling in condom usage over the next five years
- a decrease in the number of new sexual partners by 15% over the next five years.

◆ Another model, referred to as the Metropolitan Life/Doyle model, is sometimes quoted.

◆ The Institute for Futures Research at the University of Stellenbosch has provided projections in the form of high, medium and low scenarios.

- High population projections: The demographic impact of HIV/AIDS is not incorporated, therefore life expectancy at birth increases throughout the projection period; fertility rates decline steadily; and a high degree of in-migration (200 000 per annum) is assumed.
- Medium population projections: The impact of the HIV/AIDS epidemic is incorporated from 2011 onwards; fertility rates in black/African and coloured women decline more rapidly than in the high projections; and a medium degree of in-migration (150 000 per annum) is assumed.
- Low population projections: The impact of the HIV/AIDS epidemic is incorporated from 1996 onwards; fertility rates are similar to those of the medium projections; and a low degree of in-migration (100 000 per annum) is assumed.

Data from the controversial MRC report on the impact of the HIV/AIDS on mortality were not included since the ASSA2000 data provides more up-to-date projections than the ASSA600 model used in the MRC report. However the other sources of population projections show general agreement with the findings reported by the MRC.

The three basic input variables for population projections are fertility, mortality and migration. The first of these, fertility, is theoretically linked with socio-economic development - fertility is assumed to decline faster in

conditions of higher economic growth, urbanisation and improved status of women in society. South Africa has a fertility rate that is markedly lower than that for other countries in Southern and East Africa. However, uncertainty surrounds the local figure, with some experts claiming an under-estimate of fertility and others suggesting a decline in fertility due to HIV. Population distribution in South Africa reflects the impact of past policies - with large differences in population density between provinces combined with large intra-provincial variability. Population densities are relatively high in former homeland areas. Such areas are also largely underserved, with low levels of infrastructure and employment, and consequent high levels of poverty and vulnerability [SA Pop Report 2000].

Public sector dependent populations have been quantified in order to provide explicit provincial denominators for many of the indicators in other sections that reflect public health services delivered by the State. The way in which the public sector dependent population has been estimated ignores the very real degree to which indigent patients purchase health-related goods and services in the private sector.

Population

Definitions:

Annual Population Growth Rate: The rate at which the population is increasing or decreasing in a given year expressed as a percentage of the base population size. It takes into consideration all the components of population growth, namely births, deaths and migration.

Average Household Size: Average number of people living in each household where household is defined as a person, or a group of persons, who occupy a common dwelling (or part of it) for at least four days a week and who provide themselves jointly with food and other essentials for living. In other words, they live together as a unit. People who occupy the same dwelling, but who do not share food or other essentials, are enumerated as separate households.

Crude Death Rate: Number of deaths in a year/population at mid-year per 1000 population.

Public Sector Dependent Population: This is an adjustment of the total population to the number assumed to be dependent on services in the public health sector based on medical scheme (health insurance) coverage. It is calculated by subtracting the number of people with medical scheme cover (determined from medical scheme membership reports, or surveys indicating percentage of population on medical schemes) from the total population to obtain a population assumed to be dependent on the public sector.

Total Fertility Rate: The average number of children that a woman gives birth to in her lifetime, assuming that the prevailing rates remain unchanged.

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Annual Population Growth Rate										
1993[1]	2.6	1.5	1.3	2.8	3.0	0.8	4.0	3.1	1.7	2.4
Average Household Size										
1990[2]	5.2	3.9	3.5	5.7	4.6	4.3	5.2	3.8	3.9	4.5
1996[3]	4.6	4.1	3.7	5.0	4.6	4.3	4.9	4.6	3.9	4.4
Crude Death Rate										
1994[4]	5.7	5.8	6.1	3.5	3.2	8.5	2.6	5.7	6.8	4.9
2001 low estimate[5]	13.0	12.0	10.7	11.5	11.8	10.6	12.8	12.5	9.8	11.7
Population										
1996[6]	6 302 525	2 633 504	7 348 423	8 417 021	2 800 711	840 321	4 929 368	3 354 825	3 956 875	40 583 573
1998[6]	6 519 300	2 724 600	7 627 600	8 726 300	2 924 400	861 400	5 178 700	3 481 200	4 086 900	42 130 500
1999[6]	6 658 670	2 714 654	7 807 273	8 924 643	3 003 327	875 222	5 337 267	3 562 280	4 170 971	43 054 306
2000 With AIDS[6]	6 811 373	2 760 558	7 780 631	8 857 615	3 004 916	869 248	5 495 679	3 532 824	4 178 598	43 291 441
2000 Without AIDS[6]	6 847 162	2 790 733	7 873 205	8 986 857	3 042 637	872 866	5 514 807	3 566 777	4 190 656	43 685 699
2001 With AIDS[6]	6 978 387	2 817 076	7 966 712	9 070 458	3 090 946	879 675	5 671 050	3 604 472	4 249 547	44 328 322
2001 Without AIDS[6]	7 001 260	2 834 519	8 020 408	9 146 297	3 111 069	881 818	5 683 605	3 625 924	4 255 743	44 560 644
2002 With AIDS[7]	7 130 427	2 857 519	8 641 635	9 215 201	3 537 365	961 353	5 424 585	3 085 164	4 314 196	45 167 445
2000 ASSA2000 change/no change[8]	-	-	-	-	-	-	-	-	-	45 078 805
2005 ASSA2000 change[8]	-	-	-	-	-	-	-	-	-	47 516 461
2005 ASSA2000 no change[8]	-	-	-	-	-	-	-	-	-	47 485 369
2015 ASSA2000 change[8]	-	-	-	-	-	-	-	-	-	47 311 669
2015 ASSA2000 no change[8]	-	-	-	-	-	-	-	-	-	46 599 840
2000 Metropolitan[9]	-	-	-	-	-	-	-	-	-	43 324 080
2005 Metropolitan[9]	-	-	-	-	-	-	-	-	-	44 721 605
2020 Metropolitan[9]	-	-	-	-	-	-	-	-	-	42 800 799
2006 high estimate[5]	7 811 127	3 340 271	9 551 552	10 762 197	3 819 661	966 296	6 500 835	4 244 008	4 691 292	51 692 700
2006 low estimate[5]	7 321 958	3 087 389	8 658 883	10 006 973	3 436 345	927 353	5 965 006	3 927 744	4 447 797	47 781 800
2031 high estimate[5]	11 446 802	4 784 260	13 915 443	15 945 622	6 297 653	1 200 907	10 589 740	6 166 726	6 048 177	76 414 300
2031 medium estimate[5]	-	-	-	-	-	-	-	-	-	67 706 800
2031 low estimate[5]	8 431 788	3 418 842	9 639 595	11 608 682	4 235 578	995 043	7 377 072	4 404 705	4 853 241	54 965 400
Population % by Province										
1996[3]	15.5	6.5	18.1	20.7	6.9	2.1	12.1	8.3	9.7	100.0
1999[6]	15.5	6.3	18.1	20.7	7.0	2.0	12.4	8.3	9.7	100.0
2000 With AIDS[6]	15.7	6.4	18.0	20.5	6.9	2.0	12.6	8.2	9.7	100.0
2001 With AIDS[6]	15.7	6.4	18.0	20.5	7.0	2.0	12.8	8.1	9.6	100.0

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Public Sector Dependent Population										
1998[10]	5 952 174	2 216 772	4 526 042	7 517 110	2 472 521	681 468	4 655 349	2 961 703	2 924 544	33 907 683
1998 NHA[11]	6 060 194	2 257 550	4 629 085	7 676 044	2 548 324	685 783	4 836 889	3 027 929	2 972 027	34 693 825
1998 non med scheme[12]	-	-	-	-	-	-	-	-	-	35 138 989
1999 non med scheme[13]	-	-	-	-	-	-	-	-	-	36 065 167
2000 non med scheme[13]	-	-	-	-	-	-	-	-	-	36 271 218
2001 With AIDS[14]	6 266 592	2 400 149	5 823 666	7 918 510	2 652 032	711 657	5 177 669	3 135 891	3 000 180	37 058 477
Total Fertility Rate										
1991[15]	4.6	3.7	3.0	4.3	4.3	2.9	5.8	4.5	2.7	3.3
1998[16]	3.5	2.2	2.3	3.3	3.1	2.7	3.9	2.4	2.3	2.9
2011 high estimate[17]	2.9	2.9	2.7	2.9	3.0	2.3	3.0	3.0	2.2	2.6
2011 low estimate[17]	2.6	2.5	2.4	2.5	2.6	2.1	2.6	2.6	2.0	2.2

	African	Coloured	Indian/Asian	White	Other/ Unstated	All groups
Average Household Size						
1990[2]	4.8	4.7	4.4	3.0	-	4.5
1996[3]	4.7	4.7	4.3	2.9	-	4.4
Crude Death Rate						
2001 low estimate[5]	12.6	9.0	5.6	9.0	-	11.7
Population						
1996[6]	31 127 631	3 600 446	1 045 596	4 434 697	375 204	40 583 573
1998[6]	32 449 200	3 721 000	1 074 900	4 500 400	385 100	42 130 500
1999[6]	33 329 879	3 792 631	1 092 254	4 538 727	390 815	43 054 306
2000 Without AIDS[6]	33 879 852	3 796 858	1 092 522	4 521 664	394 803	43 685 699
2001 Without AIDS[6]	34 668 864	3 869 035	1 109 122	4 533 091	380 532	44 560 644
2006 high estimate[5]	41 741 400	4 119 800	1 190 500	4 641 000	-	51 692 700
2006 low estimate[5]	37 950 300	4 000 000	1 190 500	4 641 000	-	47 781 800
2031 high estimate[5]	65 628 900	4 889 700	1 344 300	4 551 500	-	76 414 300
2031 low estimate[5]	44 765 200	4 304 300	1 344 300	4 551 500	-	54 965 400
Population % by ethnic group						
1996[6]	76.7	8.9	2.6	10.9	0.9	100.0
1998[6]	77.0	8.8	2.6	10.7	0.9	100.0
1999[6]	77.2	8.8	2.5	10.5	0.9	100.0
2000 Without AIDS[6]	77.6	8.7	2.5	10.4	0.9	100.0
2001 Without AIDS[6]	77.8	8.7	2.5	10.2	0.9	100.0

	African	Coloured	Indian/Asian	White	Other/ Unstated	All groups
Public Sector Dependent Population						
2001 Without AIDS[14]	31 756 679	3 044 931	788 586	1 459 655	202 847	37 252 698
Total Fertility Rate						
1998[16]	3.1	2.5	-	1.9	-	2.9
2011 high estimate[17]	2.8	1.8	1.7	1.5	-	2.6
2011 low estimate[17]	2.4	1.8	1.7	1.5	-	2.2

1. Note: For 1985-1993
   Ref: Development Bank 1994 (Table 1: Annexure A pg 81)
2. Ref: SAHR 1995 Ch1 (Table 1.6)
3. Ref: Census 96
4. Ref: Bradshaw 1995
5. Ref: IFR Projections 1999 (Table 2.7 pg 29, Table 3.7 pg 99, Fig 4.5 pg 165, Table 4.7 pg 169)
6. Note: Figures may not add up due to rounding at source. StatsSA do not provide projections 'With AIDS' by population group, therefore this data is only available 'Without AIDS'.
   Ref: StatsSA Mid-Year Estimates
7. Ref: StatsSA Mid-Year Est. Hedberg (Calculated from data.)
8. Note: Data for 2000 represents the starting point for projections from this model, and therefore there is not yet any difference between the change and no change scenarios.
   Ref: ASSA 2000
9. Ref: Metropolitan 2001
10. Ref: SAHR 1999 Ch16 (pg 214. Also based on information in Chapter 13 of South African Health Review 1998)
11. Ref: NHA Public 2000 (Annex 4: Population Estimates)
12. Note: Calculated from total number of beneficiaries (registered and exempt schemes) subtracted from the total population.
    1998 - Beneficiaries: 6 991 511 Population: 42 130 500
    Ref: Medical Schemes 1999
13. Note: Calculated from total number of beneficiaries (registered and exempt schemes) subtracted from the total population.
    1999 - Beneficiaries: 6 989 139 Population: 43 054 306
    2000 - Beneficiaries: 7 020 223 Population: 43 291 441
    Ref: Medical Schemes 2000
14. Note: Calculated using provincial medical schemes coverage (quoting October Household Survey 1999) and StatsSA population estimates for 2001 (with AIDS), and using racial medical schemes coverage (quoting October Household Survey 1999) and StatsSA population estimates for 2001 (without AIDS – no racial population projections available with AIDS from StatsSA).
    Ref: Fiscal Review 2001
15. Ref: Development Bank 1994 (Table 24: Annexure A pg 90)
16. Note: The 1998 national TFR is considered to be an under-estimate. The real figure is considered to be about 3.2 (Udjo EO, Lestrade-Jefferis J. Fertility and mortality in South Africa. (on request from StatsSA))
    Ref: SADHS 1998 (Table 11 pg 19)
17. Note: Estimate for 2011-2016
    Ref: IFR Projections 1999 (Table 2.7 pg 29, Fig 4.7 pg 167)

Distribution

Definitions:

Non-Urban Percentage: Proportion of population living in a non-urban environment. Non-urban, or rural areas include commercial farms, small settlements, rural villages and other areas that are further away from towns and cities. The definition includes semi-urban areas that are not part of a legally proclaimed urban area, but adjoin it.

Urban Percentage: Proportion of population living in urban environment. An urban area is one that has been legally proclaimed as being urban e.g. towns, cities and metropolitan areas.

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Area (square km)										
1996[1]	169 580	129 480	17 010	92 100	79 490	361 830	123 910	116 320	129 370	1 219 090
Area as a % of total area of South Africa										
1996[1]	13.9	10.6	1.4	7.6	6.5	29.7	10.2	9.5	10.6	100.0
Non-Urban Percentage										
1996[1]	63.4	31.4	3.0	56.9	60.9	29.9	89.0	65.1	11.1	46.3
Urban Percentage										
1996[1]	36.6	68.6	97.0	43.1	39.1	70.1	11.0	34.9	88.9	53.7
Population density (people per km²)										
1996[1]	38.4	21.0	448.4	95.1	36.7	2.3	41.7	29.9	31.5	34.4

1. Ref: Census 96 (Table 1.1, Table 2.4)

Socio-Economic Indicators

The basic indicators of low socio-economic development are illiteracy, unemployment and lower education. Measured at the national level, this can be expressed by the gross domestic product (GDP) per capita. However, comparison between countries requires that incomes first be converted to a common currency. International practice is to do so using 'purchasing power parities' (PPPs) rather than exchange rates. A summary measure of human development is the Human Development Index (HDI) - this measures achievements in three basic areas: longevity, knowledge and income [HDR 2001].

A South African version of the Human Development Report has also been produced [HDR 2000 SA]. It seeks to track progress in the transformation of South African society, to one characterised by 'substantive democracy and people-centred development'. The relevance of the socio-economic indicators reflected here can be seen in their use as the goals of overall government economic policy, which include:

- Creating productive employment opportunities for all citizens at a living wage
- Alleviating poverty, low wages and extreme inequalities in wages and wealth
- Meeting basic needs and ensuring that every citizen enjoys a decent living standard and economic security.

However, even though the indicators reveal considerable inter-provincial differences (e.g. in HDI), the fact that these conceal even greater inequities should be remembered. As South Africa's Human Development Report notes (drawing on the Poverty and Inequality Report), "although South Africa is an upper-middle-income country in per capita terms, most households experience outright poverty or vulnerability to poverty".

Definitions:

General Socio-Economic:

GDP per capita (PPP US$): Gross Domestic Product (GDP) - the total output of goods and services for final use produced by an economy, by both residents and non-residents, regardless of the allocation to domestic and foreign claims. It does not include deductions for depreciation of physical capital or depletion and degradation of natural resources.

Purchasing Power Parity (PPP) - A rate of exchange that accounts for price differences across countries allowing international comparisons of real output and incomes. At the PPP US$ rate, PPP US$1 has the same purchasing power in the domestic economy as $1 has in the United States.

Human Development Index: The HDI is a summary measure of human development. It measures the average achievements in a country in three

basic dimensions of human development:

- A long and healthy life, as measured by life expectancy at birth
- Knowledge, as measured by the adult literacy rate (with two-thirds weight) and the combined primary, secondary and tertiary gross enrolment ratio (with one-third weight).
- A decent standard of living, as measured by GDP per capita (PPP US$).

The HDI may range from 0 (very poor) to 1 (excellent). Calculation of the HDI is an evolving methodology, and comparisons should not be made between years (when methods might have varied) but can be made between countries, as issued by the same source.

Education:

Adult literacy rate: Percentage age 15 and above who are literate.

Education Level: Percentage of people in a given age group who have received a particular level of education.

Employment:

Age dependency ratio: The ratio of the combined child population (0-14 years) and the aged population (65 years and over) - persons in the 'dependent' ages - to every 100 people of the intermediate age population (15-65 years) - 'economically active' ages.

Where more detailed data are lacking, the age-dependency ratio is often used as an indicator of the economic burden the productive portion of a population must carry - even though some persons defined as 'dependent' are producers and some persons in the 'productive' ages are economically dependent.

Unemployment rate (expanded and official definitions): The official definition of the unemployed is that they are those people within the economically active population who (a) did not work during the 7 days prior to the interview, (b) want to work and are available to work within a week of the interview, and (c) have taken active steps to look for work or to start some form of self-employment in the 4 weeks prior to the interview. The expanded definition excludes criterion (c). It therefore includes discouraged work seekers who have failed to take active steps to obtain employment in the 4 weeks prior to the interview.

Household Facilities:

Percentage households with telephone: Includes households with a telephone in the dwelling or a cellular telephone.

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
GDP per capita (PPP US$)										
1996[1]	2 856	5 185	11 862	4 563	6 105	6 513	2 019	3 509	9 381	5 916
1996 Rural[1]	-	-	-	-	-	-	-	-	-	2 314
1996 Urban[1]	-	-	-	-	-	-	-	-	-	9 023
Human Development Index										
1996[1]	0.643	0.671	0.771	0.658	0.657	0.679	0.629	0.608	0.762	0.688
1996 Rural[1]	-	-	-	-	-	-	-	-	-	0.618
1996 Urban[1]	-	-	-	-	-	-	-	-	-	0.731
2010 With AIDS[2]	0.493	0.548	0.621	0.498	0.522	0.567	0.431	0.527	0.659	0.542
2010 Without AIDS[2]	0.608	0.662	0.722	0.614	0.640	0.644	0.544	0.642	0.714	0.654
Adult literacy rate										
1996[1]	76.5	88.8	98.1	89.2	79.4	83.8	77.7	73.2	95.8	85.9
1996 Rural[1]	-	-	-	-	-	-	-	-	-	76.4
1996 Urban[1]	-	-	-	-	-	-	-	-	-	94.5
Education Level										
1991 No schooling[3]	9.4	9.7	8.7	11.3	8.5	7.3	8.6	13.7	6.4	9.6
1996 No schooling[4]	20.9	16.1	9.5	22.9	29.4	21.7	36.9	22.7	6.7	19.3
Age dependency ratio										
1996[5]	83.5	56.4	42.0	68.2	68.3	62.3	92.4	63.5	52.4	64.4
2002[6]	83.4	56.4	42.9	68.2	71.7	63.1	91.7	64.1	52.4	64.6
2011 high estimate[7]	61.8	58.7	52.4	59.7	57.5	48.6	61.8	59.5	46.6	57.2
2011 low estimate[7]	52.9	49.7	44.5	51.1	49.3	42.9	52.9	50.2	41.8	49.0
Unemployment rate (expanded definition)										
1998[8]	51.9	31.6	32.6	42.7	34.9	29.8	49.2	41.3	20.9	37.5
1999[8]	46.7	34.0	32.5	37.8	37.0	29.1	50.2	42.1	18.9	36.2
Unemployment rate (official definition)										
1998[8]	36.9	21.3	23.1	27.2	25.0	17.9	35.7	26.5	13.5	25.2
1999[8]	29.8	23.3	20.6	25.9	24.4	18.1	34.0	23.5	13.7	23.3
Percentage households using electricity for cooking										
1996[9]	23.2	42.0	72.9	45.8	35.6	52.4	19.5	33.8	76.5	47.1
1999[10]	-	-	-	-	-	-	-	-	-	52.7
Percentage households with no toilet										
1996[9]	29.1	8.8	2.5	15.2	8.7	10.7	21.1	6.3	5.4	12.4
1999[10]	25.1	5.3	0.8	12.7	3.5	10.7	18.8	5.7	3.8	9.4
Percentage households with piped water inside										
1996[9]	24.7	40.6	67.7	39.8	37.3	50.0	17.8	30.6	76.4	44.7
1999[10]	23.4	29.9	58.8	34.6	27.6	48.1	12.1	21.6	76.7	38.7
Percentage households with telephone										
1996[9]	15.6	22.9	45.3	26.9	18.2	30.8	7.4	16.8	55.2	28.6
1999[10]	-	-	-	-	-	-	-	-	-	33.7

	African	Coloured	Indian/Asian	White	All groups
GDP per capita (PPP US$)					
1996[1]	2 713	4 680	10 382	27 942	5 916
Human Development Index					
1996[1]	0.630	0.698	0.778	0.858	0.688
Adult literacy rate					
1996[1]	83.0	91.4	95.6	99.3	85.9
Education Level					
1996 No schooling[4]	24.3	10.2	6.5	1.2	19.3
Age dependency ratio					
2011 high estimate[7]	60.8	41.4	43.3	44.1	57.2
2011 low estimate[7]	51.1	37.7	43.3	44.1	49.0
Unemployment rate (expanded definition)					
1998[8]	46.0	23.8	19.4	6.4	37.5
1999[8]	44.0	23.6	20.2	6.8	36.2
Unemployment rate (official definition)					
1998[8]	32.0	15.8	14.7	4.4	25.2
1999[8]	29.2	15.2	15.6	4.7	23.3
Percentage households using electricity for cooking					
1996[9]	30.4	75.5	97.7	97.2	47.1
1999[10]	39.3	78.2	96.6	97.8	52.7
Percentage households with no toilet					
1996[9]	16.4	5.1	0.2	0.1	12.4
1999[10]	12.1	4.8	0.0	0.0	9.4
Percentage households with piped water inside					
1996[9]	27.3	72.4	96.4	97.6	44.7
1999[10]	21.1	73.6	95.9	97.1	38.7
Percentage households with telephone					
1996[9]	11.3	43.4	76.9	88.5	28.6
1999[10]	19.4	50.2	82.5	87.5	33.7

1. Ref: StatsSA HDI 2001 (Tables 1, 2 and 3)
2. Note: Estimates of HDI with and without HIV/AIDS
   Ref: HDR 2000 SA (Appendix 1 pg 204)
3. Note: Percentage of children aged 6-14 years not attending school
   Ref: Development Bank 1994 (Table 24: Annexure A pg 90)
4. Note: Percentage of those aged 20 years or older who have received no schooling
   Ref: Census 96 (Table 2.25)
5. Ref: Census 96
6. Ref: StatsSA Mid-Year Est. Hedberg (Calculated from data.)
7. Ref: IFR Projections 1999 (Table 2.7 pg 29, Table 4.7 pg 169)
8. Ref: StatsSA OHS (Table 5.1 [population groups] and Tables 2.1.1 and 2.2.1 [provinces] OHS 1998, OHS 1999)
9. Ref: Census 96 (Calculated from Table 3.6, Tables 3.12 and 3.13, Tables 3.8 and 3.9 and figures on pg 78,79, Tables 3.10 and 3.11)
10. Ref: StatsSA OHS (Table 6.7, Table 6.10.1, Table 6.4, Table 6.12 OHS 1999)

Mortality

Uncertainty is inherent in any modelling exercise. There are assumptions underlying any model, and empirical data is open to interpretation. Given the need to focus planning and operational attention on HIV, data beyond the usual antenatal prevalence figures were sought.

The end of 2001 saw considerable attention being paid to a new report from the Medical Research Council, entitled 'The impact of HIV/AIDS on adult mortality in South Africa' [MRC AIDS Report]. As was explained in the section on Demographic Indicators, the population projections provided were drawn from the ASSA2000 model, among others. The MRC report was based on the older ASSA600 model, which was not able accommodate changes in the response to HIV. Nonetheless, the MRC report is a crucial piece of data, for it showed that 'the pattern of mortality from natural causes in South Africa has shifted from the old to the young over the last decade particularly for young women'. It estimated that '40% of the adult deaths aged 15-49 that occurred in the year 2000 were due to HIV/AIDS and that about 20% of all adult deaths in that year were due to AIDS'. If these were combined with the excess deaths noted in childhood, then AIDS was considered to be responsible for 25% of all deaths in 2000 and to have become 'the single biggest cause of death'.

In addition to the 1998 South African Demographic and Health Survey, material was obtained from two other reports - the Confidential Enquiries into Maternal Deaths [Maternal Deaths 1998, 1999] and the perinatal care survey [Saving Babies]. It should be noted that the methodology of confidential enquiries make them a poor public health tool for estimating maternal mortality ratios, primarily because reporting is health institution based and often under-reported. For 1998, the only provinces where there is a fair degree of confidence that the vast majority of deaths were recorded were the Free State, Gauteng and Western Cape.

Definitions:

Infant Mortality Rate: The number of children less than one year old who die in a year, per 1000 live births during that year.

Life expectancy at birth: The average number of additional years a person could expect to live if current mortality trends were to continue for the rest of that person's life.

Maternal mortality ratio: The number of women who die as a result of childbearing or within 42 days of termination of pregnancy in one year, per 100 000 live births during that year.

Perinatal Mortality Rate: The number of perinatal deaths per 1000 births. The perinatal period starts as the beginning of foetal viability (28 weeks

gestation or 1000g) and ends at the end of the 7th day after delivery. Perinatal deaths are the sum of stillbirths plus early neonatal deaths.
The current WHO definition of PNMR is the number of deaths from 24 weeks gestation/500g to 28 days neonatal life.
The PNMR is the most sensitive indicator of obstetric care. For developed countries the rate for babies over 1000g is usually less than 6/1000 births, whereas for developing countries PNMR ranges from 30-200.

Under 5 mortality rate: The number of children under 5 years old who die in a year, per 1000 live births during the year.

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Infant Mortality Rate										
1998[1]	61.2	53.0	36.3	52.1	47.3	41.8	37.2	42.0	30.0	45.0
1998 Rural[2]	-	-	-	-	-	-	-	-	-	52.2
1998 Urban[2]	-	-	-	-	-	-	-	-	-	32.6
Life expectancy at birth										
1996[3]	60.4	52.8	59.6	53.0	53.5	55.6	60.1	53.3	60.8	57.0
1996 Rural[3]	-	-	-	-	-	-	-	-	-	58.0
1996 Urban[3]	-	-	-	-	-	-	-	-	-	56.2
2000 ASSA2000 change/no change[4]	-	-	-	-	-	-	-	-	-	56.0
2005 ASSA2000 change[4]	-	-	-	-	-	-	-	-	-	47.0
2005 ASSA2000 no change[4]	-	-	-	-	-	-	-	-	-	46.0
2015 ASSA2000 change[4]	-	-	-	-	-	-	-	-	-	46.0
2015 ASSA2000 no change[4]	-	-	-	-	-	-	-	-	-	41.0
2011 high estimate[5]	67.6	68.1	68.9	68.1	67.8	68.7	67.7	67.7	69.4	69.4
2011 low estimate[5]	46.3	47.1	50.0	47.7	46.4	53.0	45.1	46.0	55.6	50.3
Maternal mortality ratio										
1998[6,7]	-	135	67	-	-	-	-	-	50	150
Perinatal Mortality Rate										
2000 Public sector[8]	-	-	32.1	-	-	-	-	-	18.4	40.0
Under 5 mortality rate										
1998[1]	80.5	72.0	45.3	74.5	63.7	55.5	52.3	56.0	39.0	61.0
1998 Rural[2]	-	-	-	-	-	-	-	-	-	71.2
1998 Urban[2]	-	-	-	-	-	-	-	-	-	43.2

	African	Coloured	Indian/Asian	White	All groups
Infant Mortality Rate					
1998[2]	47.0	18.8	-	11.4	45.0
Life expectancy at birth					
1996[3]	55.5	58.6	61.5	65.5	57.0
2011 high estimate[5]	68.5	70.2	74.3	75.7	69.4
2011 low estimate[5]	47.2	58.7	74.3	75.7	50.3
Under 5 mortality rate					
1998[2,9]	63.6	28.2	-	15.3	61.0

1. Note: Comparison of the provincial estimates from different sources revealed that the SADHS 1998 estimates for three provinces required some adjustment.
   Ref: SAHR 2000 Ch4 (Table4 pg 99)
2. Ref: SADHS 1998
3. Ref: StatsSA HDI 2001 (Tables 1, 2 and 3)
4. Ref: ASSA 2000
5. Note: Estimate for 2011-2016
   Ref: IFR Projections 1999 (Fig 2.8 pg 28, Fig 4.8 pg 168)
6. Ref: Maternal Deaths 1998 (Table 2.2)
7. Note: The 'big five' causes of maternal deaths in 1998 were complications of hypertensive conditions in pregnancy (23.2%), AIDS (14.5%), obstetric haemorrhage (13.3%), pregnancy related sepsis (11.9%) and pre-existing medical conditions, mainly pre-existing cardiac disease (10.4%). These five causes of deaths accounted for 73.3% of all the maternal deaths reported.
   Ref: SADHS 1998
8. Note: Data only available for perinatal care in public sector institutions. There is insufficient data to accurately calculate the national PNMR, however from existing data it is estimated that the rate is in the order of 40/1000 births.
   Ref: Saving Babies
9. Note: Figures for the White population group are based on an inadequate sample of only 250-500 cases.

Disability

The two sources of data for this section were the Census 1996 and the CASE Disability Survey of 10 000 households. Similar methodologies were used in each study.

In the census questionnaire, respondents were asked to indicate whether or not there were any people with serious visual, hearing, physical or mental disabilities in the household. The seriousness of the disability was not clearly defined. Rather, the respondent's perceptions of seriousness were relied on. In the CASE Disability Survey people reported moderate to severe disability, where disability was defined as a limitation in one or more activities of daily living (seeing, hearing, communication, moving, getting around, daily life activities, learning, intellectual and emotional). Neither source therefore is a count of the number of people in South Africa who have an impairment or handicap as defined by the World Health Organisation.

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Prevalence of disability (percentage)										
1996[1]	7.3	9.8	6.2	6.0	7.6	5.6	6.0	8.3	3.7	6.5
1998[2]	8.9	5.8	5.2	6.7	4.5	4.5	6.3	3.1	3.8	5.9
Prevalence of hearing disability (percentage)										
1996[1]	1.1	1.3	0.8	0.9	1.2	0.8	1.1	1.6	0.5	1.0
Prevalence of mental illness (percentage)										
1996[1]	0.7	5.4	0.3	0.5	0.5	0.5	0.4	0.7	0.4	0.5
Prevalence of physical disability (percentage)										
1996[1]	1.9	1.6	1.0	1.6	1.1	1.2	1.5	1.8	0.9	1.4
Prevalence of sight disability (percentage)										
1996[1]	2.6	5.2	2.9	2.2	3.6	2.3	2.3	3.4	3.8	2.7

	African	Coloured	Indian/Asian	White	All groups
Prevalence of disability (percentage)					
1996[1]	7.5	3.6	4.1	3.3	6.5
1998[2]	6.1	4.5	4.8	5.3	5.9
Prevalence of hearing disability (percentage)					
1996[1]	1.1	0.4	0.5	0.6	1.0
Prevalence of mental illness (percentage)					
1996[1]	0.5	0.4	0.4	0.3	0.5
Prevalence of physical disability (percentage)					
1996[1]	1.6	0.9	0.9	0.6	1.4
Prevalence of sight disability (percentage)					
1996[1]	3.2	1.0	1.5	0.7	2.7

1. Ref: Census 96 (Tables 2.22 and 2.23)
2. Note: National survey of nearly 10 000 households. In the Northern Province, Eastern Cape and North West Province, Whites had a higher prevalence rate than other races. No other race differences were found.
   Ref: CASE Disability Survey

Infectious Disease

The main source of infectious disease prevalence data is the Department of Health Notifiable Disease Reporting System. The latest published data on notifiable diseases are from Statistical Notes January 2001, and are only available at national level. To date it has not been possible to obtain data by provinces from the Department of Health. As other sources and information systems for some conditions are developed, major differences in the data are emerging. However all sources should be viewed with some caution.

In the TBSYS national TB register system for example, reporting rates in some areas are far from complete and this may influence the values quite significantly. The TBSYS national reporting rate for 2000 was 82.7%. Figures for the notifiable disease reporting system are consistently lower than those from TBSYS. TBSYS is considered to be much more accurate, and can be corrected for the degree of under-reporting. It also provides additional data such as cure rates.

The cholera figure for 2000 represents only the beginning of an epidemic, which affected the country since August 2000 and is ongoing. Reports on this epidemic continue to be posted on the Departments of Health web sites. See http://www.doh.gov.za/issues/ and http://www.kznhealth.gov.za/cholera.htm.

Syphilis prevalence rates by age in the different provinces reflect a different trend from HIV infection. A steady and significant decline in prevalence rates among pregnant women in all age groups was recorded at national level for the past three years. At national level, the syphilis infection rate is estimated to be 4.9% in 2000 compared to 6.5% in 1999 and 10.8% in 1998. However, provincial syphilis prevalence trends across the nine provinces showed less consistency than the age group estimates [Antenatal Survey 2000]. There also appear to be some problems with the provincial data supplied by the Department of Health when compared to data supplied for the same time period in previous years, and compared to data reported by some individual provinces based on the same survey. To date, it has not been possible to obtain clarification on this issue.

Definitions:

Reported cases: Number of cases of the condition reported to the Department of Health per 100 000 population (for the year). Population denominators are from StatsSA mid-year population estimates for the relevant year. Where available estimates 'With AIDS' have been used.

Case Fatality Rate: Number of deaths due to the condition divided by the number of cases expressed as a percentage.

New smear +ve cases cured (%): Percentage of new smear positive pulmonary tuberculosis cases cured.

Syphilis prevalence rate (%) (antenatal): Percentage of women surveyed testing positive for syphilis.

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Reported cases of cholera (per 100 000)										
2000[1]	-	-	-	-	-	-	-	-	-	23.5
Case Fatality Rate: cholera										
2000[1]	-	-	-	-	-	-	-	-	-	0.8
Reported cases of malaria (per 100 000)										
1998[2]	0.1	0.9	2.0	153.0	200.0	0.9	65.0	5.6	0.7	160.0
1999[3]	-	-	-	305.2	390.9	-	212.5	-	-	119.7
2000[3]	-	-	-	471.8	412.3	-	141.2	-	-	143.1
Case Fatality Rate: malaria										
1999[3]	-	-	-	0.8	0.6	-	1.0	-	-	0.8
2000[3]	-	-	-	0.8	0.4	-	0.5	-	-	0.7

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Reported cases of measles (per 100 000)										
1998[2]	1.3	3.5	1.5	1.6	2.7	1.2	5.6	0.7	2.3	1.9
1999[1]	-	-	-	-	-	-	-	-	-	0.2
2000[1]	-	-	-	-	-	-	-	-	-	0.1
Reported cases of TB (per 100 000)										
1998 Notification[2]	201.0	245.0	123.0	110.0	106.0	300.0	40.0	160.0	464.0	169.0
1999[4]	565.1	327.3	223.5	386.4	174.0	536.8	109.1	253.8	756.8	359.6
1999 Notification[5]	-	-	-	-	-	-	-	-	-	134.9
2000[6]	424.5	341.0	319.5	316.6	177.7	448.2	86.2	345.1	810.0	349.4
2000 Notification[7]	-	-	-	-	-	-	-	-	-	94.1
Case Fatality Rate: TB (all types)										
1999[1]	-	-	-	-	-	-	-	-	-	4.4
2000[1]	-	-	-	-	-	-	-	-	-	5.8
New smear +ve cases cured (%)										
1998[8]	64.8	62.0	64.3	46.1	51.4	63.3	56.6	54.3	69.2	60.1
1999[8]	59.9	66.6	63.1	38.2	57.5	63.8	63.4	66.7	67.8	60.2
Reported cases of typhoid (per 100 000)										
1998[2]	2.6	0.0	0.1	0.4	1.5	0.3	1.7	0.0	0.2	0.3
Reported cases of viral hepatitis (total) (per 100 000)										
1998[2]	0.9	1.4	2.7	2.3	1.7	3.2	2.7	0.5	7.8	2.6
1999[1]	-	-	-	-	-	-	-	-	-	2.0
2000[1]	-	-	-	-	-	-	-	-	-	0.4
Case Fatality Rate: viral hepatitis (total)										
1999[1]	-	-	-	-	-	-	-	-	-	1.6
2000[1]	-	-	-	-	-	-	-	-	-	5.1
Syphilis prevalence rate (%) (antenatal)										
1998[9]	9.6	4.4	3.8	15.8	8.6	3.8	5.6	9.1	4.4	10.8
1999[9]	15.8	3.8	4.4	4.4	3.8	5.6	9.1	9.6	8.6	6.5
2000[9]	3.3	4.8	9.6	2.6	3.7	5.1	4.2	3.6	5.1	4.9

1. Note: Cholera - Between 16 August 2000 and 5 April 2001, 81 265 cases were treated, of which 99% were in KwaZulu-Natal. By 15 January 2002 a total of 109 645 cases had been reported in KZN since August 2000. The case fatality rate for this entire period was 0.21%.
   Ref: Stats Notes Jan 2001
2. Ref: DOH Notification
3. Note:
   1999 - Number of cases: 51 535. Note that 1214 cases occurred in provinces other than KZN, MP and NP - but details are not given.
   2000 - Number of cases: 61 934
   1999 - Number of deaths: 402. Note that 3 deaths occurred in provinces other than KZN, MP or NP.
   2000 - Number of deaths: 423
   Ref: DOH Malaria 2001
4. Note: Number of cases: 154 804. The TBSYS national reporting rate for 1999 was 78.2% (ranging from 53% in KZN to 100% in NC, not given for MP and NW).
   Ref: DOH TB

5. Note: Number of cases: 58 081.
   Ref: Stats Notes Jan 2001
6. Note: Number of cases: 151 239. The TBSYS national reporting rate for 2000 was 82.7% (ranging from 40.2% in KZN to 98.8% in WC, not given for MP and NW).
   Ref: DOH TB
7. Note: Number of cases: 40 734.
   Ref: Stats Notes Jan 2001
8. Ref: DOH TB
9. Note: Personal communication DoH. Data from the annual antenatal surveys.
   Ref: DOH Notification

HIV/AIDS

The major starting point for all work in this field is the data collected in the national anonymous survey of HIV prevalence among women attending public antenatal clinics, performed annually by the Department of Health. This survey involves data collection at sentinel sites, selected on the basis of systematic random sampling with weighting by the probability proportional to size (PPS) technique. The following comments from the South African Health Review 2000 (Chapter 15) remain pertinent:

- 'HIV infection levels in the general community in South Africa are thought to be lower than in the public sector antenatal clinic attendee population. Children and the elderly, who are at substantially lower risk of HIV, are not captured by antenatal surveys. Even among adults in sexually active age groups, the antenatal survey prevalence figures do not reflect the lower overall risk of men, people who are less sexually active, and communities using the private sector. On the other hand, recent studies indicate that fertility among HIV positive women is substantially lower than among uninfected women, and this suggests that antenatal data may in fact underestimate HIV prevalence in women of reproductive age in many communities.'

- 'While these data give some sense of the different risk profiles in the population, additional surveys serve to remind us that the majority of the population is at risk of HIV infection and that certain sectors of the population are at much higher risk of infection than the general population. Provincial estimates from these data mask large differences between regions and HIV impacts on specific communities within any region may differ markedly.'

This section has therefore included a variety of projections from mathematical simulation models, which are calibrated to antenatal data. These include estimates of HIV prevalence in the total population, of the number of persons with symptomatic AIDS, as well as of the number of AIDS orphans. That these projections vary should not be surprising. This does not however detract from their general usefulness as planning tools.

Despite the scale and importance of the HIV/AIDS epidemic, there are still relatively few data available at a provincial or national level, or by population group.

Definitions:

AIDS Orphans: Number children under 15 years whose mothers have died of HIV/AIDS.

AIDS sick: Number of people estimated to be living with AIDS defining conditions.

HIV prevalence (%) (antenatal): Percentage of women surveyed testing positive for HIV.

HIV prevalence (%) (total population): Percentage of population estimated to be HIV positive. Population used as denominator is generally the projected population calculated from the given model. Note: this is equivalent to indicators called 'People living with HIV/AIDS'.

Percentage of deaths due to AIDS: Percentage of total deaths attributed to AIDS related causes.

Figure 1: Projected number of AIDS orphans[1]

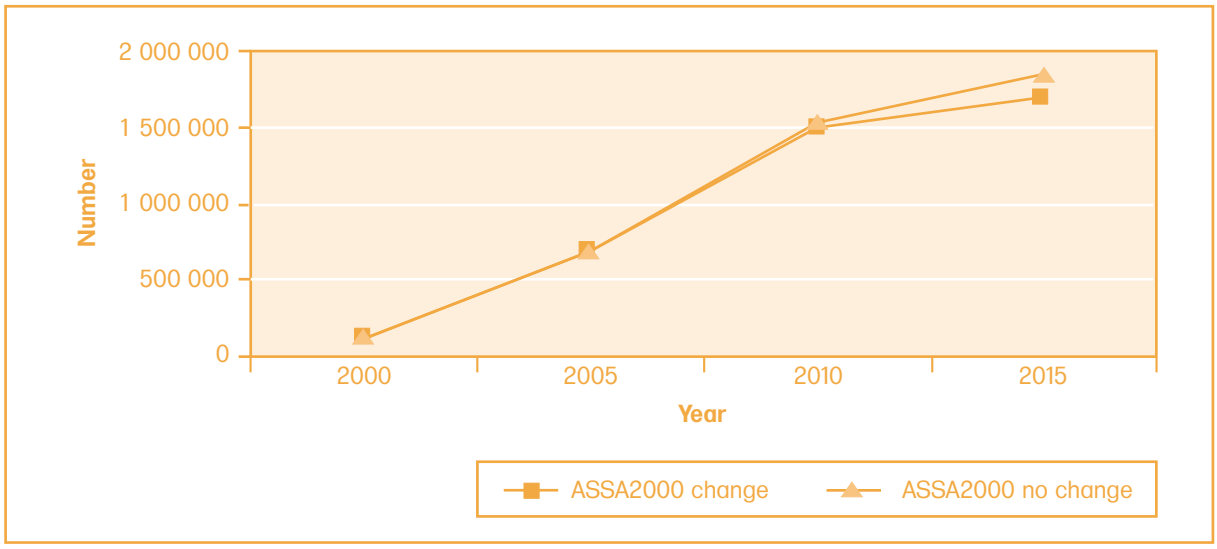


Figure 2: Projected number of AIDS sick[1,2]

Figure 3: HIV prevalence (total population)[1,2,3]

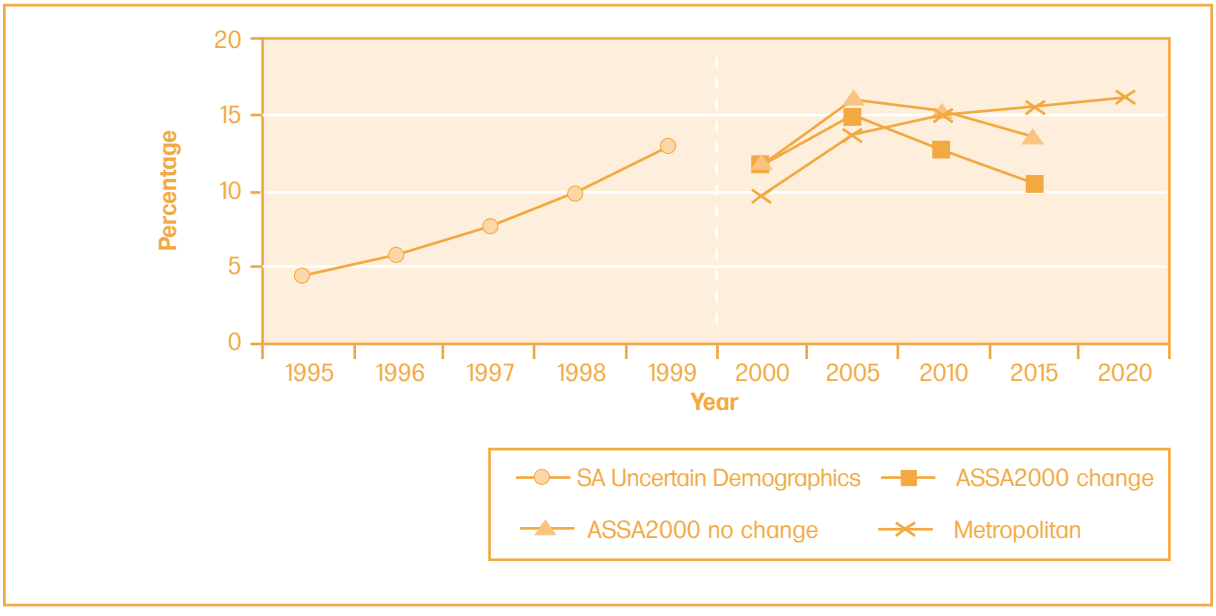
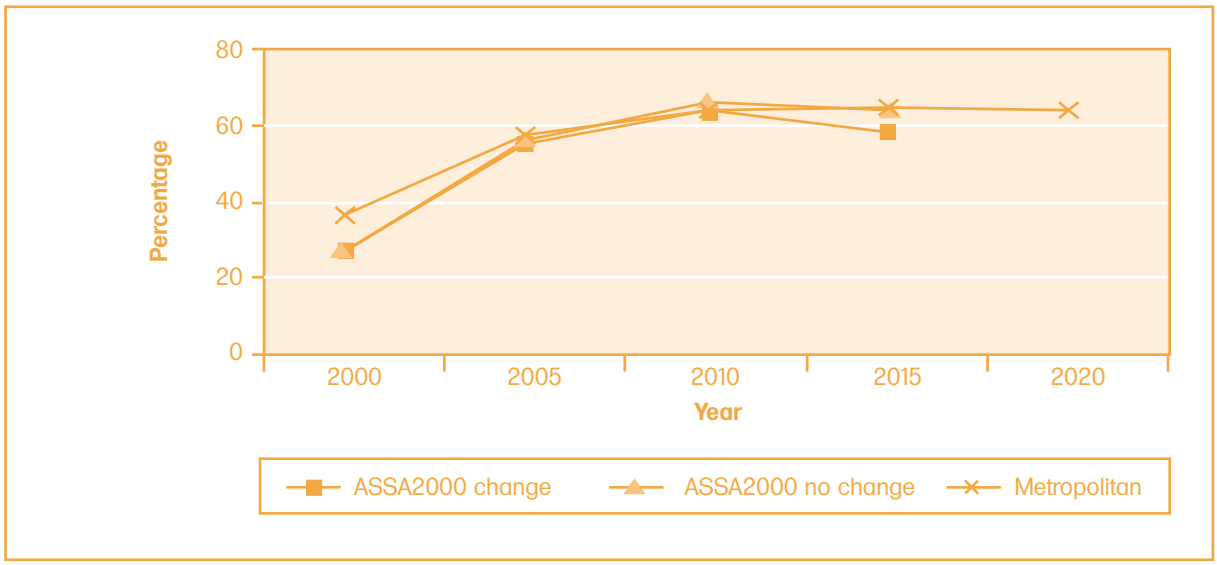


Figure 4: Percentage of deaths due to AIDS[1,2]



	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
HIV prevalence (%) (antenatal)										
1998[4]	15.9	22.8	22.5	32.5	30.0	9.9	11.5	21.3	5.2	22.8
1999[4]	18.0	27.9	23.9	32.5	27.3	10.1	11.4	23.0	7.1	22.4
2000[4]	20.2	27.9	29.4	36.2	29.7	11.2	13.2	22.9	8.7	24.5
HIV prevalence (%) (total population)										
1995[3]	2.40	4.40	4.80	7.30	6.50	2.10	1.90	3.30	0.70	4.50
1996[3]	3.30	5.80	6.10	9.20	8.20	2.70	2.70	4.50	1.20	5.80
1997[3]	4.50	7.60	7.70	11.60	10.40	3.50	3.70	6.20	1.90	7.60
1998[3]	6.20	10.00	9.50	14.50	13.10	4.60	5.10	8.60	3.10	9.90
1999[3]	8.60	13.30	11.70	17.80	15.80	6.00	7.10	12.00	4.30	12.90

1. Ref: ASSA 2000
2. Ref: Metropolitan 2001
3. Note: Based on Marais (2000), Kipps and Gouws (1998) and Dorrington (1999).
   Ref: SA Uncertain Demographics (Table 3 pg 6)
4. Ref: Antenatal Survey 1998, 1999, 2000

Maternal care:

The indicator 'Percentage pregnant women who received antenatal care' in the SADHS 1998 is based on women who reported receiving antenatal care from a nurse, midwife or doctor. While antenatal care coverage reported by the SADHS is high among all groups of women, the type of provider varies considerably - e.g. in Eastern Cape and Northern Province almost all care is obtained from nurses, while in Gauteng, Western Cape and Northern Cape more than 40% of care is provided by doctors. Similar trends are observed for women receiving medical assistance at delivery.

Although DHIS data for the number of ANC visits per client show that all provinces have average values over the national target of 3 visits per client, substantial numbers of clients may not receive this minimum. Also, such averages hide intra-provincial differences. Risk pregnancies (possibly 15-25% of the total) normally have many more visits.

Very little data is available about the caesarian section rate, although this information is important in mother-to-child-transmission of HIV, and is starting to be collected in some sites as part of the prevention of mother-to-child-transmission project.

Sexually Transmitted Infections (STIs):

Male urethral discharge (MUD) incidence rate is often used as a direct proxy for sexually transmitted infections since such cases are invariably STIs. This is the best indicator available for Sexually Transmitted Disease incidence, since practically all cases are sexually transmitted. DHIS data on MUD is based on the numbers seeking treatment at PHC facilities and is not directly comparable with the SADHS figures of men reporting symptoms, since not all cases experienced may seek care in the public sector.

Data for the indicator STI incidence may be over-reported as some cases treated as STIs may be other genito-urinary tract infections, particularly in women.

Terminations of Pregnancy (TOPs):

Data on TOP have been published by the Department of Health [DOH TOP] and Reproductive Rights Alliance [RRA Barometer Aug 2001]. There are some small differences in the two data sources. However, since the RRA data provide a more detailed breakdown by maternal and gestational age, these data have been used in this chapter. Figures have been calculated from monthly provincial totals.

For comparison purposes, the following indicators may need to be calculated from the raw number of TOPs [PRB Handbook]:

Abortion rate: the number of abortions per 1000 women of reproductive age in a given year.

Abortion ratio: the number of abortions per 1000 live births in a given year.

Definitions:

Antenatal visits per client: Total number of ANC visits divided by the number of 1st antenatal client (ANC) visits. This indicator is a measure of the quality of maternal care.

Percentage pregnant women who received antenatal care: Percentage pregnant women who received antenatal care from a nurse, midwife or doctor.

Percentage women with medical assistance at delivery: Percentage of women who gave birth in the 5 years preceding the survey who received medical assistance at delivery from either a doctor, a nurse or a midwife.

Caesarean Section rate: Percentage of births that are by caesarian section.

Percentage women 15-49 who use a modern contraceptive method: Percentage of surveyed women aged 15-49 who are currently using a modern contraceptive method (including Pill, IUD, Injections, Diaphragm/Foam/Jelly, condom, Female/Male sterilisation). The SADHS considered women who were sexually active in the last 4 weeks.

Teenage Pregnancy: Percentage of women aged 15-19 who are mothers or who have ever been pregnant. The percentage who are mothers at the time of the survey is a more restrictive definition of this indicator.

Male urethral discharge incidence: Number of cases of male urethral discharge per 1000 male population age ≥ 15 years.

Percentage men with painful urination, genital symptoms: Percentage of men 15+ years with painful urination, penile discharge or genital sores in the last 3 months.

STI incidence: Cases treated as sexually transmitted infections (STI) per 1000 population age ≥ 15 years.

Terminations of Pregnancy (TOPs): The number of terminations of pregnancy.

TOPs by gestational age (%): Percentage of total terminations of pregnancy for various gestational ages.

TOPs by maternal age (%): Percentage of total terminations of pregnancy for various maternal ages.

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Antenatal visits per client										
2000[1]	3.4	4.1	3.5	4.2	3.3	4.1	3.5	3.9	4.2	3.8
Percentage pregnant women who received antenatal care										
1998[2]	94.7	94.8	94.8	94.4	94.0	93.3	94.1	94.1	91.7	94.2
Percentage of pregnant women who received tetanus toxoid vaccine										
1998[2]	57.4	75.8	37.6	74.9	61.8	53.4	80.8	56.3	17.8	58.8
Percentage women with medical assistance at delivery										
1998[2]	74.6	88.0	94.0	82.6	76.0	90.3	78.5	88.3	96.1	84.4
Caesarean Section rate										
2000 Public sector[3]	-	-	15.0	-	-	-	-	-	-	-
Percentage women 15-49 who use a modern contraceptive method										
1998 sexually active[2]	59.9	67.9	60.9	57.1	53.2	65.9	53.3	69.6	73.7	61.2
Teenage Pregnancy										
1991[4]	13.1	14.9	12.9	15.3	13.5	12.8	16.4	12.6	11.8	14.6
1998 ever pregnant[2]	18.2	12.6	9.5	16.7	25.2	18.0	20.0	13.4	16.4	16.4
1998 ever pregnant rural[2]	-	-	-	-	-	-	-	-	-	20.9
1998 ever pregnant urban[2]	-	-	-	-	-	-	-	-	-	12.5
1998 mothers[2]	14.8	8.4	8.9	13.8	18.8	15.2	14.9	11.0	13.7	13.2
Male urethral discharge incidence										
2000[1]	45.9	35.0	28.7	45.4	32.4	13.5	56.6	45.6	24.6	38.4
Percentage men with painful urination, genital symptoms										
1998[2]	15.1	15.2	5.5	18.9	20.1	6.7	11.5	8.4	5.6	11.9
STI incidence										
2000[1]	63.7	58.1	59.5	96.7	58.4	32.9	90.0	80.5	40.2	69.9
Terminations of Pregnancy (TOPs)										
1997[5]	2 670	2 527	13 497	1 259	1 489	429	570	218	3 796	26 455
1998[5]	2 938	4 107	19 005	5 167	1 857	552	823	455	5 008	39 912
1999[5]	3 109	4 062	19 195	5 766	2 269	642	1 288	2 166	5 741	44 238
2000[5]	3 264	6 919	15 172	11 592	3 697	583	1 962	2 286	6 697	52 172
TOPs by gestational age (%)										
1997 >12 wks[5]	42.2	47.7	35.0	30.7	25.1	44.3	8.4	23.9	20.1	33.5
1998 >12 wks[5]	24.0	58.5	28.2	24.9	25.8	41.5	42.0	18.9	20.4	29.9
1999 >12 wks[5]	15.7	50.8	23.2	15.8	32.3	33.2	48.4	4.0	23.0	24.6
2000 >12 wks[5]	13.2	38.8	29.1	18.5	39.2	24.5	40.7	9.1	23.3	26.5
TOPs by maternal age (%)										
1997 <18 yrs[5]	13.9	14.3	0.0	6.6	12.2	38.5	5.6	10.1	21.9	7.7
1998 <18 yrs[5]	8.2	16.9	0.0	12.0	12.6	28.3	14.9	12.1	17.2	7.5
1999 <18 yrs[5]	8.1	12.7	0.0	5.3	12.2	19.9	14.8	8.6	14.9	6.1
2000 <18 yrs[5]	5.8	6.6	0.0	4.8	11.5	20.8	16.0	15.4	15.6	6.6

	African	Coloured	Indian/Asian	White	All groups
Percentage pregnant women who received antenatal care					
1998[2]	94.8	91.8	93.4	88.4	94.2
Percentage of pregnant women who received tetanus toxoid vaccine					
1998[2]	65.3	31.0	34.4	11.3	58.8
Percentage women with medical assistance at delivery					
1998[2]	82.1	94.8	99.1	99.0	84.4
Percentage women 15-49 who use a modern contraceptive method					
1998 sexually active[2]	57.6	68.4	80.1	74.9	61.2
Teenage Pregnancy					
1998 ever pregnant[2]	17.8	19.3	4.3	2.2	16.4
1998 mothers[2]	14.2	15.7	2.9	2.2	13.2
Percentage men with painful urination, genital symptoms					
1998[2]	12.1	5.6	3.8	1.7	11.9

1. Ref: DHIS Dec 2001
2. Ref: SADHS 1998
3. Note: Data only available for perinatal care in public sector institutions.
   Ref: Saving Babies
4. Note: Definition according to this source is: Percentage of all live births during a specific year, to women younger than 20 years of age irrespective of their marital status.
   Ref: Development Bank 1994 (Table 24: Annexure A pg 90)
5. Note: Caution should be exercised in interpreting the percentage of TOPs by maternal age, due to the high proportion of unknown data. In particular, the province providing the most TOPs, Gauteng, does not supply any data by maternal age, which therefore also distorts the national average.
   Ref: RRA Barometer Aug 2001

Nutrition

Iodine deficiency disorders (IDDs) result in a spectrum of ill health, such as mental and psychomotor impairment, and cretinism in severe cases. Past surveys have identified widespread iodine deficiency, evidenced by a high goitre prevalence, resulting in government regulations to enforce a minimum iodate concentration in all salt. The IDD Survey 2000 found just over 10% of schools whose pupils had low median iodine concentrations, indicating a degree of dietary iodine deficiency. Over 25% of salt samples had <10mg/kg iodine, suggesting that there may be several iodine deficient communities. Despite these areas of concern, the iodate fortification policy has improved the proportion of the population who are iodine replete.

The recent National Food Consumption Survey has shown little improvement in the nutritional status of young children when compared to the 1994/5 SAVACG survey. One out of 10 children aged 1-9 years was underweight and just more than one in five was stunted – mostly in rural areas, and linked to poor maternal education. By contrast one out of 13 children was overweight

in urban areas, with a higher prevalence among children of well-educated mothers.

The SADHS also reflects a growing problem of obesity, particularly amongst urban African women where over 35% are obese. Since obesity has been found to predispose towards the development of hypertension and diabetes, interventions to reduce obesity are important to reduce these important causes of morbidity in adults.

Definitions:

Iodine Deficiency: Indicator may be reported using a number of definitions:
Iodine deficient school (narrow definition) = median urinary iodine concentration < 100mcg/litre
or
Iodine deficient school (comprehensive definition) = median urinary iodine concentration < 100mcg/litre or ≥ 20% with urinary iodine < 50mcg/litre
Iodine deficient child = urinary iodine concentration < 100mcg/litre
Indicator reported as proportion of schools or proportion of children as appropriate.
Note: The WHO definition of adequate iodine intake is a median urinary iodine concentration of ≥ 100mcg/litre and a goitre prevalence of less than 5%.
Since goitre prevalence was not related to urinary iodine levels in any school surveyed, this South African survey used an adapted definition.

Iodised salt consumption: Proportion of households' salt samples with specified iodine concentrations. The legal concentration at packaging is 40-60mg/kg. A concentration <10mg/kg is probably insufficient to prevent iodine deficiency disorder.

Obesity (%): A body mass index (BMI) (body mass in kg divided by the square of the height in m) equal to or more than 30kg/m^2.

Overweight (%): Proportion of children with weight for height over 2 standard deviations from the norm (reference population median).

Stunting (%): Proportion of children with height for age under 2 standard deviations from the norm (reference population median).

Underweight (%): Proportion of children with weight for age under 2 standard deviations from the norm (reference population median).

Wasting (%): Proportion of children with weight for height under 2 standard deviations from the norm (reference population median).

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Iodine Deficiency										
1998 children <100mcg/l rural[1]	29.8	42.1	19.7	20.8	44.7	7.4	36.7	13.1	22.5	-
1998 children <100mcg/l urban[1]	9.2	18.9	24.9	6.4	50.5	10.8	11.7	30.2	35.0	-
1998 children <50mcg/l rural[1]	15.0	17.0	5.0	8.0	24.0	3.0	22.0	15.0	10.0	-
1998 children <50mcg/l urban[1]	3.0	10.0	8.0	3.0	27.0	0.3	3.0	7.0	5.0	-
1998 schools (comprehensive)[1]	19.0	25.0	18.8	4.2	58.3	0.0	25.0	28.6	7.7	16.2
1998 schools (narrow)[1]	9.5	16.7	6.3	4.2	41.7	0.0	25.0	0.0	3.8	10.6
Iodised salt consumption										
1998 <10mg/kg[1]	24.0	29.0	30.0	24.0	25.0	15.0	31.0	46.0	16.0	25.5
Obesity (%)										
1998 Men[2]	9.8	8.0	9.8	10.2	7.2	7.5	6.1	5.4	12.8	9.1
1998 Women[2]	28.9	29.1	34.7	34.2	25.4	24.5	19.4	18.8	30.8	29.4
Overweight (%)										
1999 Age 1-9 years[3]	7.9	6.4	5.6	6.5	16.7	4.4	3.7	0.9	5.2	6.0
Stunting (%)										
1994 Age 6-71 months[4]	28.8	28.7	11.5	15.6	20.4	22.8	34.2	24.7	11.6	22.9
1999 Age 12-71 months[3]	-	-	-	-	-	-	-	-	-	23.8
1999 Age 1-9 years[3]	20.5	29.6	20.4	18.5	26.4	29.6	23.1	24.9	14.5	21.6
Underweight (%)										
1994 Age 6-71 months[4]	-	-	-	-	-	-	-	-	-	9.3
1999 Age 12-71 months[3]	-	-	-	-	-	-	-	-	-	11.1
1999 Age 1-9 years[3]	7.1	14.3	8.8	6.0	4.2	23.7	15.0	15.3	8.3	10.3
Wasting (%)										
1994 Age 6-71 months[4]	3.2	4.5	1.2	0.7	2.5	1.7	3.8	4.5	1.3	2.6
1999 Age 12-71 months[3]	-	-	-	-	-	-	-	-	-	3.6
1999 Age 1-9 years[3]	1.8	3.4	1.2	4.3	2.8	9.6	7.5	5.7	0.9	3.7
1999 Age 1-9 years rural[3]	-	-	-	-	-	-	-	-	-	4.9
1999 Age 1-9 years urban[3]	-	-	-	-	-	-	-	-	-	2.4

	African	Coloured	Indian/Asian	White	All groups
Obesity (%)					
1998 Men[2]	7.7	9.1	8.7	19.8	9.1
1998 Women[2]	30.5	28.3	20.2	24.3	29.4

1. Ref: Iodine Deficiency 2000 (Table 6.1.4, Table 6.1.5, Table 6.3.1)
2. Ref: SADHS 1998
3. Ref: Food Consumption Survey (Table 4.14, Table 4.31)
4. Ref: SAVACG Survey

Child Health

The incidence of diarrhoea is used to determine the health status of children and identify potential environmental hazards (e.g. contamination of water sources). Diarrhoeal disease is one of the leading causes of infant mortality, and is closely related to both socio-economic situation and environmental health issues like access to clean water.

Immunisation indicators are used to assist with operational planning for full immunisation coverage.

Health care for children is a high priority issue, that is also linked to general development, since many preventable diseases can be addressed by improving basic health conditions such as water and sanitation and access to health resources. Leading causes of child death are injuries (19%), intestinal infections (14%) and respiratory infections (11.5%) [Children in 2001, End Decade Report on Children]. HIV/AIDS is also affecting children in many ways, ultimately increasing child mortality and the number of orphans – see sections on Mortality and HIV/AIDS. Data are not yet available on the recently implemented prevention of mother-to-child-transmission programme.

Definitions:

Diarrhoea Incidence <5 per 1000: The number of children under 5 years with diarrhoea per 1 000 children under 5 years in the target population. Diarrhoea is formally defined as 3 or more watery stools in 24 hours, but any episode diagnosed and/or treated as diarrhoea after an interview with the adult accompanying the child should be counted.

Immunisation coverage of children <1 year: Calculated from the number of children fully immunised (defined as first visit where all required vaccinations are completed) divided by the population <1 year.
The primary course of immunisation includes BCG, OPV 1,2 & 3, DTP-Hib 1,2 & 3, HepB 1,2 & 3, and 1st measles at 9 months.

Immunisation coverage of children 12-23 months (%): Percentage of children aged 12 to 23 months who had received BCG, 3 doses of DTP and polio, and Measles vaccine, but not necessarily Hepatitis B.

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Diarrhoea Incidence < 5 per 1000										
1998[1]	275.6	197.5	204.0	386.3	351.5	225.7	316.8	264.7	214.8	286.4
2000[2]	145.7	84.2	67.7	292.2	107.2	135.5	217.6	241.3	99.7	174.3
Immunisation coverage of children <1 year										
2000[3]	62.5	80.1	75.4	82.6	64.5	75.9	73.1	85.2	85.9	75.8
Immunisation coverage of children 12-23 months (%)										
1998[4]	52.6	67.8	72.4	49.5	67.2	80.8	74.9	60.6	64.2	63.4

1. Note: Data calculated from percentage of children with diarrhoea in previous 2 weeks reported in SADHS 1998 to approximate an annual incidence.
   Ref: DHIS Dec 2001
2. Note: This refers to the number of children seeking treatment for diarrhoea from PHC facilities. This is about half the number of cases expected based on the number of cases reported in the SADHS 1998 survey to have experienced diarrhoea in the 2 weeks prior to the survey.
   Ref: DHIS Dec 2001
3. Note: Gross errors for this indicator have occurred in nearly all provinces e.g. children being counted more than once as having completed all immunisations.
   Ref: DHIS Dec 2001
4. Note: Percentage with health cards seen by interviewer and percentage who have received each vaccine by the time of the survey.
   Ref: SADHS 1998

Other Morbidity and Risk Behaviour

Definitions:

Hypertension prevalence measured (%): Measured hypertension refers to those with blood pressures greater than or equal to 160/95 mm Hg and those who are taking hypertension medication.

Percentage adults experienced work related illness/injuries: Proportion of working adults (adults = 15+ years) who reported suffering from a work-related illness or injury.

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Hypertension prevalence measured (%)										
1998 Men[1]	12.5	14.5	11.7	11.1	6.2	14.2	6.4	11.8	10.9	11.0
1998 Women[1]	14.2	15.5	13.1	14.7	8.5	17.0	6.6	16.2	14.2	13.2
Percentage adults experienced work related illness/injuries										
1998[1]	6.3	5.1	8.0	9.0	7.1	7.4	8.2	2.8	8.2	7.3
Prevalence of smoking (%)										
1998[1]	-	-	-	-	-	-	-	-	-	24
1998 Men[1]	46	44	42	38	40	58	29	45	49	42
1998 Women[1]	11	11	12	5	6	-	2	8	29	11

	African	Coloured	Indian/Asian	White	All groups
Hypertension prevalence measured (%)					
1998 Men[1]	10.3	12.4	9.9	15.2	11.0
1998 Women[1]	13.0	17.1	9.3	12.0	13.2
Percentage adults experienced work related illness/injuries					
1998[1]	6.6	8.6	6.3	8.9	7.3

1. Ref: SADHS 1998

Health Facilities

The number and type of health facilities in the country is undergoing constant change. However, additional data have become available in the National Health Accounts projects and are reflected in the Intergovernmental Fiscal Review. One particular area of continued confusion is the number of beds in each category in the public sector. While hospitals have generally been designated as either district, regional or central in nature, they may include 'beds' of a combination of types. For instance, a regional hospital may continue to provide some district-level services and have wards allocated accordingly. The only source for the private sector remains the Hospital Association of South Africa (HASA) [Health Annals 2001]. Since virtually all private sector hospitals with inpatient facilities are members of HASA, their figures are taken as a reasonably accurate reflection of the sector. However, not all day clinics and stand-alone operating facilities may be included.

While the number of facilities and their distribution are an indicator of access, their level of equipment is an indicator of quality. Clearly, much more data will be needed in the future to allow comparisons between districts and to track progress towards equity.

Utilisation may depend on many things like accessibility, acceptability and appropriateness of services, as well as the legacy of apartheid with its gross inequity in resources and personnel. National PHC models generally calculate a need for 3-3.5 visits per capita per year. The DHIS figure is therefore roughly half the expected value for the full range of PHC services. Some inaccuracy may result from confusion about the definition of headcount and procedures for calculating it, especially in provinces that use multiple categories to determine headcount (such as age breakdown, gender breakdown).

At the primary level, the results of the biennial Facilities Survey remain the major source of data. The Eastern Cape have also produced a useful collation of primary health care data, although most of the data are organised by old health districts and regions, so were not included in this chapter [PHC in EC 1997-2000].

Definitions:

Utilisation Rate PHC: Number of visits per person to PHC health facilities per year. Calculated from PHC headcount divided by total population [Census 96 population estimates for the appropriate year].

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Number of Health Facilities										
1998 Provincial-aided hosp[1]	-	-	-	-	-	-	-	-	-	43
1998 Public CHC[1]	-	-	-	-	-	-	-	-	-	101
1998 Public clinics[1]	-	-	-	-	-	-	-	-	-	2 604
1998 Public hosp total[1]	-	-	-	-	-	-	-	-	-	343
1998 Private total[2]	14	7	66	27	5	4	2	10	27	162
1999 Private total[3]	18	11	85	28	8	3	2	9	36	200
2001 District Hospitals[4]	63	24	7	40	18	21	32	15	27	247
2001 National Central Hosp[4]	0	1	4	2	0	0	0	0	3	10
2001 Provincial Tertiary Hosp[4]	1	1	0	1	1	0	2	0	0	6
2001 Regional Hospitals[4]	8	6	12	9	5	1	5	4	10	60
2001 Specialised Hospitals[4]	11	1	5	8	1	3	3	2	18	52
2001 Public hosp total[4]	83	33	28	60	25	25	42	21	58	375
Number of beds										
1998 Private sector[2]	1 207	827	10 049	3 371	627	288	273	928	3 338	20 908
1998 Public sector[1]	-	-	-	-	-	-	-	-	-	107 634
1999 Private sector[5]	1 224	937	10 605	4 974	804	297	273	795	3 797	23 706
1999 Public sector[5]	-	-	-	-	-	-	-	-	-	105 441
2000 National Central Hosp[4]	-	630	6 532	1 952	-	-	-	-	2 662	11 776
Percentage PHC facilities where HIV testing is made available										
1998[6]	39.0	79.0	75.0	48.0	79.0	100.0	20.0	46.0	97.0	56.0
2000[7]	44.0	87.5	100.0	40.0	57.1	100.0	14.6	53.1	100.0	56.2
Percentage PHC facilities where condoms are freely available										
1998[6]	76.0	79.0	100.0	97.0	91.0	89.0	57.0	65.0	84.0	79.0
2000[7]	86.2	84.0	100.0	92.5	78.6	91.7	85.4	90.6	74.1	86.9
Percentage clinics with EPI services every week day										
1998[6]	76.0	79.0	69.0	52.0	42.0	67.0	93.0	54.0	44.0	67.0
2000[7]	89.0	72.0	50.0	85.0	32.1	66.7	97.9	71.9	40.0	73.7
Percentage clinics with STD services every week day										
1998[6]	100.0	93.0	94.0	94.0	92.0	100.0	100.0	93.0	78.0	94.0
2000[7]	97.8	100.0	89.3	95.0	82.1	83.3	100.0	100.0	90.0	94.9
Percentage clinics with TB services every week day										
1998[6]	85.0	82.0	94.0	65.0	79.0	82.0	82.0	89.0	84.0	82.0
2000[7]	94.5	100.0	89.3	57.5	60.7	83.3	81.3	93.8	86.7	84.1
Percentage clinics with antenatal services every week day										
1998[6]	59.0	71.0	25.0	26.0	33.0	33.0	91.0	39.0	22.0	50.0
2000[7]	78.0	44.0	32.1	70.0	21.4	50.0	95.8	56.3	10.0	59.3
Percentage clinics with emergency response < 1 hour										
1998[6]	37.0	61.0	79.0	29.0	65.0	71.0	65.0	27.0	77.0	55.0
2000[7]	40.0	54.0	71.4	55.3	65.3	91.7	52.1	60.0	76.7	57.7

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Percentage clinics with family planning services every week day										
1998[6]	94.0	96.0	81.0	58.0	58.0	89.0	100.0	79.0	72.0	83.0
2000[7]	96.7	96.0	82.1	95.0	46.4	87.5	100.0	87.5	70.0	87.1
Utilisation Rate PHC										
2000[8]	2.1	1.8	1.4	1.7	1.3	2.2	2.0	2.3	2.7	1.9

1. Note: Provincial-aided hospitals are also referred to as Private sector not-for-profit hospitals.
   CHC = Community Health Centres or day hospitals
   Ref: SAHR 1999 Ch9 (Figure 1 pg 104)
2. Ref: SAHR 1998 Ch13 (Table 5 pg 148)
3. Note: Hospitals and Day Clinics
   Ref: NHA Private 2001 (Table 2.2 pg 8)
4. Note: Public sector health facilities. National Central Hosp includes Universities, Chris Hani Baragwanath, Ga Rankuwa, Johannesburg, Pretoria Academic, King Edward VIII, Wentworth, Groote Schuur, Red Cross and Tygerberg.
   Ref: Fiscal Review 2001 (Table 4.14 pg 54)
5. Ref: NHA Private 2001 (Table 2.2 pg 8)
6. Ref: Facilities Survey 1998
7. Ref: Facilities Survey 2000
8. Ref: DHIS Dec 2001

Health Personnel

Together with the data on the number and type of health facilities, these data are an indicator of physical access. It should be noted that the measure of the number of personnel may differ between the public and private sectors. Where the ratio is presented as per sector, the population denominator used was that considered to be dependent on the sector in question. The private sector dependent population was approximated by the population covered by medical aid, with the balance assumed to be public-sector dependent (as shown in the section on Demographic Indicators). PERSAL remains the major source of public sector data, but the figures provided are open to some question. It remains possible to appoint a person from one professional group against a post initially funded for another group - for example, pharmacist interns may be employed against unfilled pharmacist posts in some provinces. Specifically, it should be noted that vacancy rates for the individual professions could not be obtained, and that only the overall public sector rate for each provincial Department of Health and the national total could be portrayed. The South African public sector figures given are the totals for all the provinces, and do not include the relatively small numbers of health professionals employed by the National Department of Health.

As with the facility data, provincial averages hide all manner of regional and sub-regional differences. In time, as district data becomes available, more meaningful comparisons will be possible.

Also provided are the numbers of health workers (medical practitioners, dentists, and pharmacists) performing community service in each province. Additional community service posts have not been created, so the percentage of current filled posts accounted for by such workers can be substantial, especially where total numbers of posts for that professional group are low. In 2001, community service medical officers made up between 7.5% (GT) and 25.4% (NW) of the total available, and 16.2% nationally. For dentists, the percentages were higher, ranging from 5.3% (GT) to 61.5% (KZN), with 25.9% nationally. For pharmacists, it was striking that some provinces managed to attract far more than others - reflecting an ongoing inequitable distribution of available posts. Community service pharmacists constituted between 22.7% (NC) and 53.4% (FS) of all available pharmacists in the State sector, and 31.2% of the national total.

Definitions:

Total number of health sector posts: Total number of health sector posts including dental, medical, nursing, pharmacy, occupational therapy, physiotherapy, radiography and psychology professions.

Percentage of health sector posts vacant: Percentage of all public health sector posts that are vacant. Note that data is not available by occupational category, so there is no way of knowing in which occupations the greatest shortages exist.

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Dental										
Number of Dental Practitioners										
2000 Public sector[1]	47	25	225	61	45	11	30	41	112	597
2001 Public sector[2]	54	31	226	52	50	14	46	50	111	634
Number of Dental Specialists										
2000 Public sector[1]	0	1	34	4	2	0	0	0	12	53
2001 Public sector[2]	0	0	31	3	2	0	0	0	9	45
Number of Dental Therapists										
2000 Public sector[1]	3	1	28	31	8	2	22	15	2	112
2001 Public sector[2]	3	2	29	27	9	1	31	16	2	120
Dental practitioners per 100 000 population										
2000 Public sector[1]	0.80	1.10	4.90	0.80	1.80	1.60	0.60	1.40	3.80	1.70
2001 Public sector[2]	0.90	1.29	3.88	0.66	1.89	1.97	0.89	1.59	3.70	1.71

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Dental specialists per 100 000 population										
2000 Public sector[1]	0.00	0.00	0.70	0.10	0.10	0.00	0.00	0.00	0.40	0.20
2001 Public sector[2]	0.00	0.00	0.53	0.04	0.08	0.00	0.00	0.00	0.30	0.12
Dental therapists per 100 000 population										
2000 Public sector[1]	0.00	0.00	0.60	0.40	0.30	0.30	0.50	0.50	0.10	0.30
2001 Public sector[2]	0.05	0.10	0.50	0.34	0.34	0.14	0.60	0.51	0.07	0.32
Nursing										
Number of Enrolled Nurses										
2000 Public sector[1]	3 586	815	2 159	6 521	1 087	302	3 077	1 397	1 782	20 726
2001 Public sector[2]	3 282	731	2 285	6 740	1 224	291	2 981	1 323	1 833	20 691
Number of Nursing Assistants										
2000 Public sector[1]	4 381	2 131	5 010	5 508	1 519	564	2 786	2 395	3 900	28 194
2001 Public sector[2]	4 096	2 170	5 434	5 816	1 366	558	2 658	2 488	4 060	28 646
Number of Professional Nurses										
2000 Public sector[1]	6 429	2 909	7 984	9 195	2 306	839	5 058	2 855	4 159	41 734
2001 Public sector[2]	5 713	3 004	8 078	9 058	2 359	852	5 264	3 002	4 125	41 460
Number of Student Nurses										
2000 Public sector[1]	1 282	501	2 005	1 420	377	89	715	326	794	7 509
2001 Public sector[2]	1 309	289	1 836	1 256	405	89	639	435	749	7 007
Enrolled nurses per 100 000 population										
2000 Public sector[1]	59.2	36.1	46.6	85.0	42.7	44.0	63.6	46.1	60.0	59.7
2001 Public sector[2]	52.4	30.5	39.2	85.1	46.1	40.9	57.6	42.2	61.1	55.8
Nursing Assistants per 100 000 population										
2000 Public sector[1]	72.3	94.4	108.2	71.8	59.6	82.2	57.6	79.1	131.2	81.3
2001 Public sector[2]	65.4	90.4	93.3	73.5	51.5	78.4	51.3	79.3	135.3	77.3
Professional nurses per 100 000 population										
2000 Public sector[1]	106.1	128.9	172.5	119.8	90.5	122.3	104.6	94.3	139.9	120.3
2001 Public sector[2]	91.2	125.2	138.7	114.4	89.0	119.7	101.7	95.7	137.5	111.9
Student Nurses per 100 000 population										
2000 Public sector[1]	21.2	22.2	43.3	18.5	14.8	13.0	14.8	10.8	26.7	21.6
2001 Public sector[2]	20.9	12.0	31.5	15.9	15.3	12.5	12.3	13.9	25.0	18.9
Doctors										
Number of Medical Practitioners										
2000 Public sector[1]	745	548	1 693	1 842	419	198	604	361	1 181	7 591
2001 Public sector[2]	765	532	1 670	1 764	434	187	634	382	976	7 352
Number of Medical Specialists										
2000 Public sector[1]	160	247	1 500	566	31	14	48	46	1 269	3 881
2001 Public sector[2]	165	223	1 434	514	17	17	43	52	1 336	3 812

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Medical Practitioners per 100 000 population										
2000 Public sector[1]	12.3	24.3	36.6	24.0	16.4	28.9	12.5	11.9	39.7	21.9
2001 Public sector[2]	12.2	22.2	28.7	22.3	16.4	26.3	12.2	12.2	32.5	19.8
Medical Specialists per 100 000 population										
2000 Public sector[1]	2.6	10.9	32.4	7.4	1.2	2.0	1.0	1.5	42.7	11.2
2001 Public sector[2]	2.6	9.3	24.6	6.5	0.6	2.4	0.8	1.7	44.5	10.3
Other health professions										
Number of Occupational Therapists										
2000 Public sector[1]	14	32	115	69	21	5	54	18	86	414
2001 Public sector[2]	10	34	119	57	15	6	57	16	87	402
Number of Pharmacists										
2000 Public sector[1]	141	52	238	253	58	16	97	48	182	1 085
2001 Public sector[2]	115	73	268	279	82	22	116	75	219	1 260
Number of Physiotherapists										
2000 Public sector[1]	37	27	120	115	13	4	42	11	85	454
2001 Public sector[2]	28	33	116	111	9	5	42	14	101	459
Number of Psychologists										
2000 Public sector[1]	23	11	97	35	2	1	5	10	54	238
2001 Public sector[2]	25	10	107	38	1	2	14	12	49	259
Number of Radiographers										
2000 Public sector[1]	237	192	634	361	44	21	81	63	483	2 116
2001 Public sector[2]	233	166	606	343	41	23	90	61	496	2 061
Occupational Therapists per 100 000 population										
2000 Public sector[1]	0.2	1.4	2.5	0.9	0.8	0.7	1.1	0.6	2.9	1.2
2001 Public sector[2]	0.2	1.4	2.0	0.7	0.6	0.8	1.1	0.5	2.9	1.1
Pharmacists per 100 000 population										
2000 Public sector[1]	2.3	2.3	5.1	3.3	2.3	2.3	2.0	1.6	6.1	3.1
2001 Public sector[2]	1.8	3.0	4.6	3.5	3.1	3.1	2.2	2.4	7.3	3.4
Physiotherapists per 100 000 population										
2000 Public sector[1]	0.60	1.20	2.60	1.50	0.50	0.60	0.90	0.40	2.90	1.30
2001 Public sector[2]	0.45	1.37	1.99	1.40	0.34	0.70	0.81	0.45	3.37	1.24
Psychologists per 100 000 population										
2000 Public sector[1]	0.40	0.50	2.10	0.50	0.10	0.10	0.10	0.30	1.80	0.70
2001 Public sector[2]	0.40	0.42	1.84	0.48	0.04	0.28	0.27	0.38	1.63	0.70
Radiographers per 100 000 population										
2000 Public sector[1]	3.9	8.5	13.7	4.7	1.7	3.1	1.7	2.1	16.3	6.1
2001 Public sector[2]	3.7	6.9	10.4	4.3	1.6	3.2	1.7	1.9	16.5	5.6
Total number of health sector posts										
2001 Public sector[3]	97 929	14 103	42 899	39 591	9 472	3 820	22 603	15 570	21 659	268 122

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Percentage of health sector posts vacant										
2001 Public sector[3]	-	48.1	48.1	34.2	36.5	45.9	44.2	49.1	34.3	57.3
Number of CSP Dentists										
2001[4]	15	10	12	32	25	8	15	26	10	164
Number of CSP Doctors										
2001[4]	149	79	126	271	107	34	150	97	141	1 194
Number of CSP Pharmacists										
2001[4]	33	39	68	82	39	5	33	31	48	406

	African	Coloured	Indian/ Asian	White	All groups
Number of Dental Practitioners					
2001 Public sector[2]	172	45	125	292	634
Number of Dental Specialists					
2001 Public sector[2]	4	0	9	32	45
Number of Dental Therapists					
2001 Public sector[2]	102	0	14	4	120
Number of Enrolled Nurses					
2001 Public sector[2]	17 227	2 375	278	811	20 691
Number of Nursing Assistants					
2001 Public sector[2]	21 711	4 920	409	1 606	28 646
Number of Professional Nurses					
2001 Public sector[2]	32 747	4 360	892	3 461	41 460
Number of Student Nurses					
2001 Public sector[2]	5 063	775	300	869	7 007
Number of Medical Practitioners					
2001 Public sector[2]	2 042	267	1 365	3 678	7 352
Number of Medical Specialists					
2001 Public sector[2]	474	131	509	2 698	3 812
Number of Occupational Therapists					
2001 Public sector[2]	136	49	50	167	402
Number of Pharmacists					
2001 Public sector[2]	290	74	290	606	1 260
Number of Physiotherapists					
2001 Public sector[2]	191	62	74	132	459

	African	Coloured	Indian/Asian	White	All groups
Number of Psychologists					
2001 Public sector[2]	69	17	27	146	259
Number of Radiographers					
2001 Public sector[2]	884	427	160	590	2 061

1. Note: Enrolled nurses includes pupils.
   Ref: PERSAL (Extracted 2000-12-14)
2. Note: Enrolled nurses includes pupils.
   Ref: PERSAL (Extracted 2001-11-30)
3. Note: Note that this total includes 153 727 vacant posts across the various professions. Total for South Africa is the total of all the provincial figures, and does not include 476 posts within the National Department of Health (of which 379 are vacant).
   Ref: PERSAL (Extracted 2001-11-30)
4. Note: Community Service Professional (CSP) Posts are allocated against existing (vacant) posts, therefore these health professionals form part of the figure reported by PERSAL for the relevant profession. The national figure also includes CSPs allocated to SA Military Health Services (SAMHS) and the Department of Correctional Services (DCS) and is therefore greater than the sum of provincial figures.
   Ref: DOH Annual Report 2000/2001

Health Financing

Data from the National Health Accounts (NHA) and the Intergovernmental Fiscal Review provide insight into the degree of efficiency of the health system. Data from the NHA are presented using 'Full' public health expenditure where 'Full' is defined as direct expenditure by the provincial and national Departments of Health (Narrow) plus by Departments of Works and Local Authorities (which is then defined as Core) plus expenditure by other national departments and institutions e.g. Defence, Road Accident Fund. The Narrow expenditure may be 25% smaller than the Full definition.

The section also provides various indications of the degree to which South Africans are covered by medical aids. There is uncertainty as to whether the sharp declines in medical scheme coverage recorded in the October Household Survey are accurate or reflect sample errors. This is important to clarify, given its potentially large influence on the equitable share formula and evaluation of equity issues [Fiscal Review 2001, pg 42].

In this regard, and also in respect of the allocation of the private sector 'spend' to various line items, the reports of the Medical Schemes Council are increasingly useful. An attempt has been made to allow some tentative comparisons of economic efficiency between the sectors. The indicators of interest are those that show the percentage of recurrent expenditure used for personnel, medicine and hospitals. Careful attention needs to be paid to the exact definitions used in each case. These are provided as notes to each line of data.

Definitions:

Health Expenditure % of GDP: Percentage of national Gross Domestic Product that is spent on health care.

Health as percentage of total expenditure: Percentage of total (government) expenditure on health.

Data are often reported for financial years, which may not correspond to calendar years. The year reported is the one with the most months in the given reporting period.
Note that provinces with central hospitals have a higher share.

Medical Aid Coverage: Proportion of population covered by medical schemes.

Line item expenditure as percentage of recurrent health expenditure: Percentage of health expenditure on each category of item, e.g. medicines, personnel. Excludes capital expenditure.

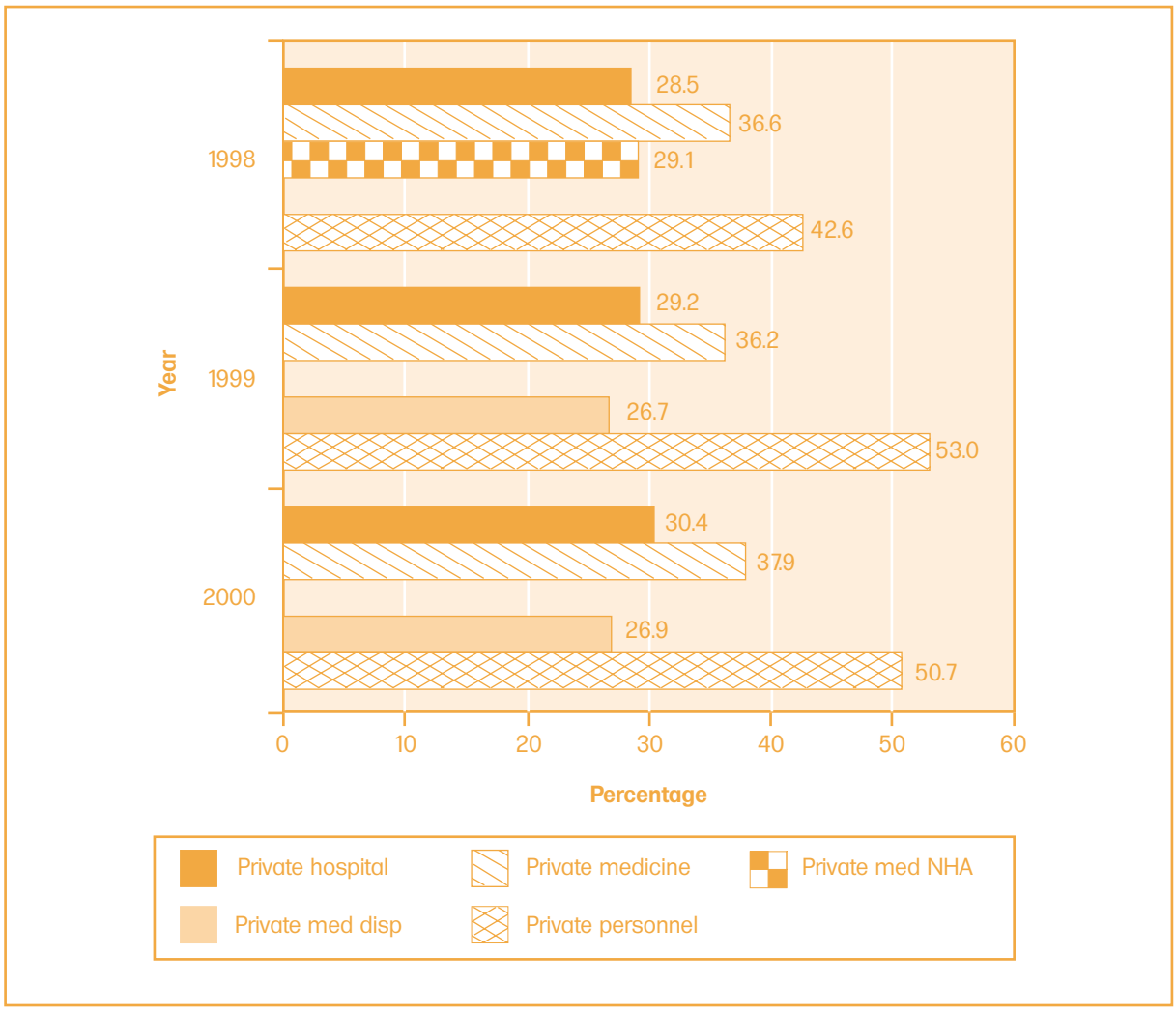
Per Capita health expenditure: Amount spent on health per person (in Rands) For the public sector, this is often calculated for the population without medical aid coverage.

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Health Expenditure % of GDP										
1998 Public sector NHA[1]	-	-	-	-	-	-	-	-	-	4.1
Health as percentage of total expenditure										
1997 Actual[2]	18.8	24.2	34.0	25.0	17.4	15.9	17.0	17.8	27.7	23.4
1998 Actual[2]	19.7	24.0	33.8	26.5	17.4	16.4	17.3	17.3	28.8	24.0
1999 Actual[2]	21.5	23.9	33.3	26.6	17.6	17.4	17.5	16.9	29.1	24.2
2000 Estimated[2]	20.9	24.2	32.7	26.7	15.9	16.7	17.8	17.0	30.0	24.0
2001 Medium term est.[2]	19.6	22.8	33.3	26.7	17.4	17.4	17.1	17.6	29.5	23.9
2002 Medium term est.[2]	19.0	22.6	32.8	26.0	17.1	17.2	17.1	17.7	28.7	23.4
2003 Medium term est.[2]	19.4	22.5	32.4	25.0	18.0	17.5	17.1	18.0	28.9	23.3
Medical Aid Coverage										
1995 OHS[3]	8.1	17.7	40.3	13.1	14.0	20.9	7.6	13.6	28.5	18.1
1996 OHS[4]	-	-	-	-	-	-	-	-	-	18.1
1998[5]	-	-	-	-	-	-	-	-	-	16.6
1998 OHS[4]	-	-	-	-	-	-	-	-	-	14.1
1999[5]	-	-	-	-	-	-	-	-	-	16.2
1999 OHS[3]	10.2	14.8	26.9	12.7	14.2	19.1	8.7	13.0	29.4	16.4
2000[5]	-	-	-	-	-	-	-	-	-	16.2

	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpumalanga	Northern Cape	Northern Province	North West	Western Cape	South Africa
Line item expenditure as percentage of recurrent health expenditure										
1998 Private medicine[6]	-	-	-	-	-	-	-	-	-	36.6
1998 Private personnel[6]	-	-	-	-	-	-	-	-	-	42.6
1998 Public medicine[7]	8.7	11.3	15.1	11.9	6.2	12.9	6.6	11.8	13.1	11.7
1998 Public personnel[7]	68.9	70.9	65.0	77.7	75.8	60.1	81.1	74.4	70.2	71.7
Per Capita health expenditure										
1996 Public (narrow)[8]	510	562	703	618	313	477	489	506	606	532
1997 Public narrow)[8]	510	596	724	657	360	539	458	595	600	560
1998 Public (narrow)[8]	474	579	714	606	282	467	412	660	598	533
1996 Public PHC[9]	-	-	-	-	-	-	-	-	-	176
1997 Public PHC[9]	-	-	-	-	-	-	-	-	-	202
1998 Public PHC[9]	-	-	-	-	-	-	-	-	-	186
1998 Public medicine[7]	44	86	186	71	18	58	28	78	134	79
1998 Public personnel[7]	349	541	802	465	226	273	341	490	719	480
1998 Public total[10]	506	762	1234	598	298	453	420	659	1024	670
2000 Excl. grants[11]	666	658	735	711	455	610	565	527	786	654
2000 Public sector[11]	670	792	1 107	786	465	644	570	535	1 235	779

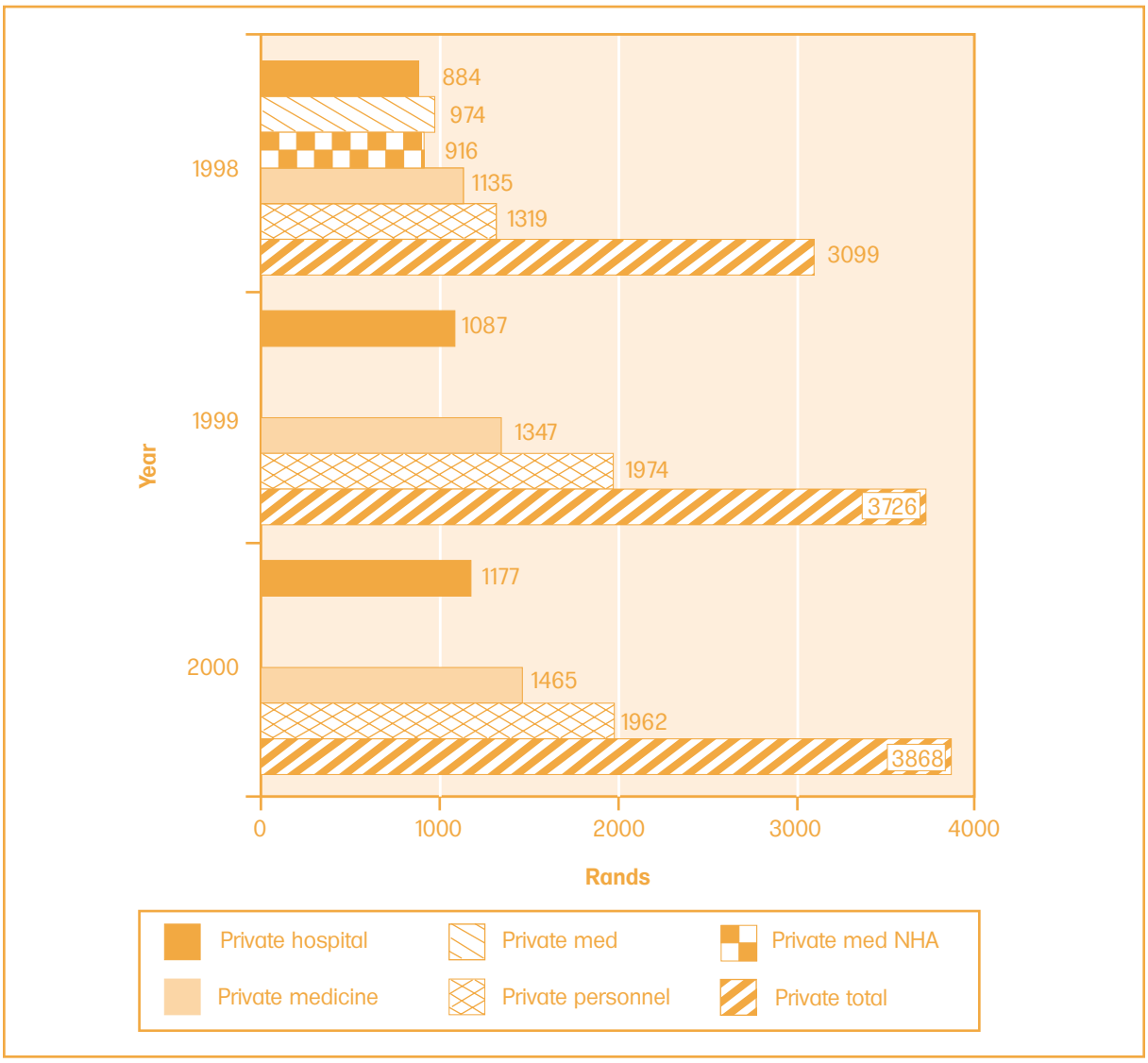
	African	Coloured	Indian/Asian	White	All groups
Medical Aid Coverage					
1996 OHS[4]	10.0	21.7	29.5	68.8	18.1
1998 OHS[4]	6.3	19.7	24.0	63.3	14.1
1999 OHS[3]	8.4	21.3	28.9	67.8	16.4

Figure 5: Line item expenditure as percentage of total recurrent expenditure[6,12]



1. Ref: NHA Public 2000 (Table 3.1 pg 23)
2. Ref: Fiscal Review 2001 (Table 4.6 pg 46)
3. Ref: Fiscal Review 2001 (Quoting October Household Surveys 1995 and 1999)
4. Ref: StatsSA OHS 1995-9 (Quoting October Household Survey 1996, October Household Survey 1998)
5. Note: Calculated from total number of beneficiaries (registered and exempt schemes) divided by total population.
   1998 - Beneficiaries: 6 991 511 Population: 42 130 500
   1999 - Beneficiaries: 6 989 139 Population: 43 054 306
   2000 - Beneficiaries: 7 020 223 Population: 43 291 441
   Ref: Medical Schemes 1999, Medical Schemes 2000
6. Note: For the private healthcare sector.
   'hosp' - Includes ward and theatre fees, global per diem fees, hospital medicines and consumables.
   'medicine' - Includes medicines and medical consumables, issued by hospitals, pharmacies and dispensing practitioners.
   'personnel' for private sector data is defined as the total of all professional fees paid to all categories of health personnel (including medical, dental, support and allied).
   'med disp' - Includes medicines issued by pharmacies and dispensing practitioners.
   'med' - Includes medicines only issued by hospitals, pharmacies and dispensing practitioners (and not medical consumables).
   Ref: Medical Schemes 1999, Medical Schemes 2000
7. Note: For the public healthcare sector.
   Calculated from Line Item expenditures divided by total recurrent expenditure in each province (Table A7).
   'medicine' - Medicine expenditure includes medicines and vaccines, and other medical consumables.
   'personnel' - Personnel expenditure includes direct personnel costs (i.e. Provincial DOH employees) and other personnel costs (e.g. professional fees paid to district surgeons).
   Ref: NHA Public 2000

Figure 6: Per capita health expenditure[6,13,14]



8. Note: Figures in 99/00 Rands. Calculated using public sector dependent population. Narrow health expenditure is defined as direct expenditure by the Provincial and National Departments of Health.
   Ref: NHA Public 2000 (Table 5.1a pg 58)

9. Note: Figures in 99/00 Rands for Primary Health Care. Calculated using public sector dependent population.
   Ref: SAHR 2000 Ch5 (Table 6 pg 136)

10. Note: Calculated from Line Item expenditures in each province (Table A7) and public sector dependent population (Annex 4). Figures in 99/00 Rands. Figures are for total recurrent expenditure (excludes capital expenditure) and includes expenditure on personnel, medicine, transport, laboratory services, maintenance and other recurrent costs.
    Ref: NHA Public 2000

11. Note: Calculated for the public sector dependent population (using the October Household Survey medical aid coverage to estimate population). Note that the calculated populations used by this source are lower than those calculated using the StatsSA mid-year estimate for 2000, but data across provinces will still be comparable.
    'Excl. grants' = Excluding central hospital and training grants (conditional grants).
    Ref: Fiscal Review 2001 (Table 4.7 pg 46)

12. Note: For the private healthcare sector.
    'med NHA' - Percentage of total benefits attributable to medicine (including hospital medicine) for all medical schemes.
    Ref: NHA Private 2001 (Table 4.30 pg 52)

13. Note: Medical Schemes Medicines Benefits paid: Percentage of total benefits attributable to medicine (including hospital medicine) (Table 4.30) multiplied by total benefits (Table 4.27) divided by total beneficiaries (Table 4.4) for all medical schemes.
    Ref: NHA Private 2001

14. Note: Calculated from all benefits paid divided by total beneficiaries (all types of medical schemes).
    Ref: Medical Schemes 1999, Medical Schemes 2000

Drug Expenditure Data

A large percentage of recurrent expenditure in the public sector is on medicines. A significant development in drug management has been the launch of the Pharmaceutical Management Information System (PharMIS), a data warehousing project involving the national and provincial departments and the central procurement committee (COMED).

One of the tools employed by PharMIS is the Pareto or ABC analysis. This is a priority-setting tool that identifies the major cost-drivers per provincial depot and nationally. By multiplying volumes and costs per item, the amount of money expended on a single line item (a medicine in a particular formulation, strength and pack size) can be determined, and then the relative proportion that this constitutes of the total medicines expenditure calculated. The results are then ranked, identifying the items that account for the largest proportion of the drug budget. Such items can then be targeted for intervention, if necessary. A selection of data for the period 1 January 2001 to 30 June 2001, provided on 19 November 2001, has been depicted. Expenditure totals have been annualized, assuming a continued smooth off-take from the respective depots. It can be seen that only 25 items account for nearly one quarter (23.43%) of all drug expenditure.

The data must however be interpreted with great care. The system cannot, at present, combine the contributions of different pack sizes of the same product (e.g. carbamazepine 200mg tablets packed in 84s and 500s). If such an item appears more than once in the upper section of the ABC listing, then the combined value may be even greater, and the item a more important target for intervention than at first apparent.

The table below shows the proportion of the national expenditure accounted for by the individual provinces. If it appears that a province does not use a particular item, this might in fact be because of the vagaries of the supply system. Where an item appears not to be used at all - such as erythromycin 250mg 500s in many provinces – it might well be because a different pack size (e.g. patient-ready packs of 20) is procured instead. For example, although the Western Cape appears to buy no reserpine 28s (item 12), it buys 100% of the patient-ready prepack that has been allocated a different stock code number. In addition, in the Western Cape, vaccines and medicines for family planning are not supplied through the pharmaceutical depot, and therefore do not appear on the ABC data set. The same applies to large volume bulky items that are delivered directly to hospitals, such as intravenous fluids, which are supplied directly to hospitals in KwaZulu-Natal and the Northern Province. In Gauteng more than 12% of purchases bypass the depot. It should also be noted that data from the Northern Cape is not yet included, as the system used there is unable, at present, to communicate with the data warehousing software.

Despite these problems, the selection of the top 25 drugs from the ABC analysis presented does make it possible to identify the predominant cost drivers. The predominant therapeutic groups represented were for chronic conditions (such as hypertension, epilepsy, asthma and diabetes – 10 products), infectious diseases (such as tuberculosis and sexually transmissible infections – 8 products), family planning (4 products), and vaccination (2 products). In comparison, a similar exercise in Australia showed that of the top 10 drugs for 2000/1 by cost to government, almost all were for chronic conditions, many associated with an aging population - three were for high cholesterol, two for ulcers and one for inflammatory conditions. (http://www.australianprescriber.com/magazines/vol24no6/top_drugs.htm)

In time, more sophisticated measures of drug consumption will be needed, such as the number of defined daily doses (DDD) of each drug issued per 100 000 population. However, if sufficient care is taken not to misinterpret the data, several important lessons may be drawn. One striking example is how the use of a new and relatively expensive, but nonetheless necessary, item in only one province can account for a significant expenditure. Resistant malaria in KZN has necessitated the introduction of the artemesinin product, which now ranks 15 in national expenditure, costing in excess of R5.6 million per annum. Expenditure on chronic conditions is also very high, with close to R36 million spent on just one of the wide range of hypertension drugs available (perindopril). Other agents for the same condition feature at numbers 10, 11 and 12, costing a further R22.8 million at least (excluding some provinces).

Private sector data on drug expenditure are also almost impossible to gather at a population level or per province as yet.

Top 25 items of ABC Analysis for Public Sector drug expenditure 1/1/2001-30/6/2001

ABC Rank	Drug Name	Annualised RSA expenditure (Rand)	% of RSA expenditure	Provincial share of national expenditure									
				Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Mpuma-langa	Northern Cape	Northern Province	North West	Western Cape	South Africa
1	Perindopril 4mg tab 28s	35 943 693	3.75	15.40	9.93	37.13	20.56	0.55	N/A	3.52	4.39	8.52	100.00
2	Ethambutol, Rifampicin, Isoniazid, Pyrazinamide 225/120/60/300mg tab 100s	18 667 248	1.95	10.18	3.74	0.00	71.59	0.30	N/A	0.00	7.68	6.51	100.00
3	Norethisterone inj	15 263 944	1.59	17.71	6.87	27.74	10.56	2.05	N/A	21.63	13.44	0.00	100.00
4	Ciprofloxacin 500mg tab 10s	14 625 822	1.53	17.25	7.49	20.32	37.89	0.02	N/A	9.10	0.00	7.93	100.00
5	Medroxyprogesterone inj	14 477 310	1.51	17.43	11.44	19.34	27.84	0.46	N/A	9.34	14.15	0.00	100.00
6	Biphasic insulin 10ml	10 749 533	1.12	15.31	10.44	22.91	24.70	0.10	N/A	7.49	9.10	9.95	100.00
7	Haemophilus, DPT vaccine	10 328 635	1.08	4.44	7.48	22.80	12.61	0.00	N/A	29.22	23.45	0.00	100.00
8	Salbutamol inhaler	9 282 269	0.97	0.85	7.14	19.98	37.93	0.42	N/A	8.57	5.29	19.82	100.00
9	Rifampicin, Isoniazid 300/150mg tab 20s	8 771 631	0.92	27.72	10.38	0.00	40.75	0.59	N/A	0.06	8.89	11.62	100.00
10	Hydrochlorothiazide 25mg tab 28s	7 911 875	0.83	16.22	19.68	0.00	36.99	0.42	N/A	10.53	16.16	0.00	100.00
11	Amlodipine 5mg tab 30s	7 531 861	0.79	0.00	0.00	50.81	35.60	0.03	N/A	0.00	0.10	13.46	100.00
12	Reserpine 0.25mg tab 28s	7 406 977	0.77	11.04	44.98	0.00	35.30	0.00	N/A	4.00	4.69	0.00	100.00
13	Triphasic combined oral contraceptive 28s	6 834 581	0.71	10.57	8.04	36.00	23.87	1.22	N/A	9.66	10.64	0.00	100.00
14	Biphasic insulin prefilled syringe	5 692 015	0.59	0.38	5.17	36.76	29.65	0.05	N/A	3.12	4.96	19.91	100.00
15	Artemether, Lumefantrine 20/120mg tab 24s	5 639 304	0.59	0.00	0.00	0.00	100.00	0.00	N/A	0.00	0.00	0.00	100.00
16	Hepatitis B vaccine	5 290 326	0.55	18.68	7.67	4.30	40.48	2.06	N/A	17.68	9.14	0.00	100.00
17	Carbamazepine 200mg tab 84s	5 251 481	0.55	24.93	14.25	32.38	19.25	0.02	N/A	9.17	0.00	0.00	100.00
18	Ceftriaxone 1g inj	4 603 174	0.48	2.68	0.74	0.00	33.37	2.01	N/A	36.68	17.64	6.89	100.00
19	Erythromycin 250mg tab 500s	4 467 572	0.47	0.00	0.00	9.44	90.54	0.02	N/A	0.00	0.00	0.00	100.00
20	Carbamazepine 200mg tab 500s	4 430 732	0.46	5.78	0.00	0.00	38.09	0.03	N/A	1.87	22.91	31.33	100.00
21	Omeprazole 20mg cap 28s	4 347 147	0.45	4.73	0.00	64.41	10.33	0.42	N/A	0.92	3.84	15.36	100.00
22	Cefuroxime 750mg inj	4 345 752	0.45	0.00	0.00	58.10	37.30	0.00	N/A	0.00	4.60	0.00	100.00
23	Paracetamol Elixir 50ml	4 322 020	0.45	18.09	4.49	13.27	19.50	0.28	N/A	15.23	24.52	4.61	100.00
24	Rifampicin, Isoniazid 150/100mg tab 20s	4 179 328	0.44	33.33	12.97	0.00	29.29	0.77	N/A	0.30	12.34	11.00	100.00
25	Valproate 200mg tab 100s	4 095 152	0.43	3.31	0.00	43.76	22.40	0.03	N/A	6.09	5.48	18.92	100.00
Total of RSA expenditure			**23.43**										

International Indicators

Another new addition to the Health and Related Indicators section is a selection of international comparative data. The World Health Report 2000 attempted, for the first time, to make summary comparisons of health systems performance and the attainment of health systems goals [World Health Report 2000]. This report was roundly criticised by many Ministries of Health as unrepresentative of their true performance, and a panel is investigating its methodology. In that report, while South Africa was ranked 57th in terms of per capita expenditure on health, it was ranked a lowly 151st in terms of health goal attainment and 175th out of 191 in terms of overall systems performance.

Perhaps an easier way of comparing performance is to look at the traditional indicators of health status (such as the total fertility rate, life expectancy at birth, infant and under 5 mortality rates, HIV prevalence). Such data are made available in the United Nations Development Programme's Human Development Reports. This report also provides the summary statistic on quality of life – the human development index (HDI). It was therefore decided to provide comparative data from a selection of countries chosen as follows:

- middle-income countries with human development indices in the middle order. Those selected were from different parts of the globe, but included were countries with which South Africa is sometimes compared or contrasted in terms of health policy approaches – Algeria, Ghana, Kenya, Thailand, Brazil, Mexico, Venezuela, Turkey
- a selection of South Africa's immediate neighbours – Botswana, Lesotho, Namibia, Zimbabwe
- as an indicator of the upper extremes of each measure, the country with the highest human development index – Norway.

In addition to the health status indicators, selected demographic and socio-economic variables were also listed (populations, adult literacy rates, HDIs, GDP per capita). The availability of health human resources was also listed for each (where available). In order to maintain consistency, the figures quoted in the same sources for South Africa were also provided. It should be noted however that these figures might vary slightly from those quoted in other parts of the Health and Related Indicators section. Nonetheless, this section should not only provide contextual detail for all those that precede it, but should stimulate thought and debate on the relationships between health inputs, outputs and outcomes, and between health and economic factors.

Definitions:

See definitions earlier in this chapter under the relevant sections.

	Algeria	Botswana	Brazil	Ghana	Kenya	Lesotho	Mexico	Namibia	Norway	South Africa	Thailand	Turkey	Venezuela	Zimbabwe	Global
Human Development Index (HDI) Rank															
1999[1]	100	114	69	119	123	120	51	111	1	94	66	82	61	117	-
Adult literacy rate															
1999[2]	66.6	76.4	84.9	70.3	81.5	82.9	91.1	81.4	[1]99.0	84.9	95.3	84.6	92.3	88.0	-
GDP per capita (PPP US$)															
1999[1]	5 063	6 872	7 037	1 881	1 022	1 854	8 297	5 468	28 433	8 908	6 132	6 380	5 495	2 876	6 980
Health Expenditure % of GDP															
1998 Public sector[3]	2.6	2.5	2.9	1.8	2.4	-	-	4.1	-	3.3	1.9	-	2.6	-	-
HIV prevalence (%) (total population)															
1999 age 15-49[4]	0.07	35.80	0.57	3.60	13.95	23.57	0.29	19.54	0.07	19.94	2.15	0.01	0.49	25.06	1.10
Human Development Index															
1999[1]	0.693	0.577	0.750	0.542	0.514	0.541	0.790	0.601	0.939	0.702	0.757	0.735	0.765	0.554	0.716
Infant Mortality Rate															
1999[5]	36.0	46.0	34.0	63.0	76.0	93.0	27.0	56.0	4.0	54.0	26.0	40.0	20.0	60.0	56.0
Life expectancy at birth															
1999[1]	69.3	41.9	67.5	56.6	51.3	47.9	72.4	44.9	78.4	53.9	69.9	69.5	72.7	42.9	66.7
Medical Practitioners per 100 000 population															
1998[6]	84.6	23.8	127.2	6.2	13.2	5.4	186.4	29.5	413.0	56.3	24.0	121.0	236.3	13.9	-
Nurses per 100 000 population															
1998[6]	297.8	219.1	41.3	72.0	90.1	60.1	86.5	168.0	1 840.0	471.8	87.0	109.0	64.4	128.7	-
Population (millions)															
2001[7]	31.0	1.6	171.8	19.9	29.8	2.2	99.6	1.8	4.5	43.6	62.4	66.3	24.6	11.4	6137
Total Fertility Rate															
2000[8]	3.3	4.4	2.3	4.6	4.6	4.8	2.8	5.3	1.8	3.1	2.1	2.7	3.0	5.0	2.8
Under 5 mortality rate															
1999[5]	41.0	59.0	40.0	101.0	118.0	134.0	33.0	70.0	4.0	69.0	30.0	48.0	23.0	90.0	80.0

1. Ref: HDR 2001 (1: Human Development Index pg 142)
2. Note: Adult literacy rates for Norway were not measured but were assumed for HDI calculation purposes
   Ref: HDR 2001 (1: Human Development Index pg 142)
3. Ref: HDR 2001 (16: Priorities in Public Spending pg 196)
4. Ref: HDR 2001 (7: Leading Global Health Crises and Challenges pg 163)
5. Ref: HDR 2001 (8: Survival: Progress and Setbacks pg 167)
6. Note: Not all country data are for 1998 exactly, but most are around 1998. Data presumably include both public and private sector personnel. Occupational categories are not defined and therefore may not be entirely comparable with other data sources. This data is for "Physicians" and "Nurses".
   Ref: WHOSIS
7. Ref: PRB Pop Data Sheet 2001
8. Ref: HDR 2001 (5: Demographic Trends pg 155)

References

Abt Indicators Handbook

Knowles JC, Leighton C, Stinson W. Measuring Results of Health Sector Reform for System Performance: A Handbook of Indicators. Partnerships for Health Reform, Abt Associates Inc. Bethesda MD; 1997.
URL: http://www.phrproject.com/publicat/si/smths.htm

Antenatal Survey 1998

1998 National HIV sero-prevalence survey of women attending public antenatal clinics in South Africa. Pretoria: Department of Health; 1999.

Antenatal Survey 1999

Makubalo LE, Levin J, Mulumba R. Survey of HIV prevalence among women attending antenatal clinics in South Africa - 1999. Pretoria: Department of Health; 1999.

Details: In the 1999 survey a total of 16 841 women participated from 487 sentinel sites (clinics) throughout the nine provinces. Sentinel sites were selected on the basis of a systematic random sampling in which weighting is conducted using the probability proportional to size (PPS) technique. Blood specimens were tested using the ELISA test. In the last three years modifications have been made to the methodology to incorporate more stringent quality control measures and therefore achieve greater reliability with respect to laboratory quality procedures, data entry and analysis. Data were analysed using the STATA and EPI INFO statistical packages.

Antenatal Survey 2000

National HIV and Syphilis sero-prevalence survey of women attending public antenatal clinics in South Africa 2000. Pretoria: Department of Health; 2001.
URL: http://www.doh.gov.za/docs/reports/2000/hivreport.html






ASSA 2000

Actuarial Projection of the Epidemic: Summary Statistics. AIDS Committee of Actuarial Society of South Africa. Downloaded 31/10/2001.
URL: http://www.assa.org.za/committees/aids/summarystats.htm
Details: The change scenario is included not so much because this is a likely scenario but in order to break away from the tradition of only showing what is expected to happen if nothing is done. It comprises the following assumptions: * no antiretroviral therapy * mother-to-child-transmission intervention (phased in from 40% of births in the year starting 1 July 2001 to 90% in five years time, and assumed to 50% effective) * treatment of sexually transmitted diseases (STDs) such that these are reduced by 15% phased in over the five years starting 1 July 2001 * a doubling in condom usage over the next five years * a decrease in the number of new sexual partners by 15% over the next five years.

Bradshaw 1995

Bradshaw D *et al*. Estimated cause of death profiles for the nine new provinces based on 1990 data. Medical Research Council; 1995.

CASE Disability Survey

"We also count!" The Extent of moderate and severe reported disability and the nature of the disability experience in South Africa. Department of Health; 1999.
URL: http://www.doh.gov.za/facts/1997/case.pdf
Details: Also available from http://www.case.org.za/htm/wecount2.htm

Census 96

Statistics South Africa: Census in Brief. The people of South Africa population census 1996. Pretoria: Statistics South Africa; 1998.
URL: http://www.statssa.gov.za/

Children in 2001

Children in 2001. A Report on the State of the Nation's Children. Pretoria: National Programme of Action for Children in South Africa; 2001.
URL: http://www.children.gov.za
Details: Available from: Office on the Rights of the Child Tel: +27-12-3375216 jabu@po.gov.za

Demarcation Board

Municipal Demarcation Board
URL: http://www.demarcation.org.za/

Development Bank 1994

Erasmus J (ed). South Africa's nine provinces: A human development profile. Midrand: Development Bank of Southern Africa; 1994.

DHIS Dec 2001

District Health Information System (DHIS) database. Data extracted by Calle Hedberg Dec 2001.
Details: Data is for the 2000/2001 financial year. Data input coverage for this period is estimated at around 95%.

DOH Annual Report 2000/2001

Department of Health. Department of Health Annual Report April 2000 - March 2001. Pretoria: Department of Health; 2001.
URL: http://www.doh.gov.za/docs/annrep-f.html

DOH Malaria 2001

Malaria Cases per Year. Department of Health. Downloaded 2002-01-07.
URL: http://www.doh.gov.za/facts/malaria/99_01.pdf

DOH Notification

Department of Health (Directorate: Health Systems Research and Epidemiology). Notification System, Pretoria.

DOH TB

Department of Health (TB section). Pretoria.

DOH TOP

Termination of Pregnancy Update. Department of Health. May 2001.
URL: http://www.doh.gov.za/facts/abortion0524-01.pdf

EC DHS Newsletter

ISDS. What's going on with the District Health System and Local Government? Eastern Cape Department of Health. Health Systems Trust; 2001.
URL: http://www.hst.org.za/isds/dhslgnews.htm

End Decade Report on Children

End Decade Report on Children - South Africa. Pretoria: National Programme of Action for Children in South Africa; 2001.
URL: http://www.children.gov.za
Details: Available from: Office on the Rights of the Child Tel: +27-12-3375216 jabu@po.gov.za

Facilities Survey 1998

Measuring quality of care in South African Clinics and Hospitals; Technical Report to Chapter 14 of the South African Health Review 1998. Durban: Health Systems Trust; 1998.
URL: http://www.hst.org.za/sahr/98/Care/

Facilities Survey 2000

Viljoen R, Heunis C, van Rensburg EJ *et al*. The National Primary Health Care Facilities Survey 2000. Durban: Health Systems Trust; 2000.
URL: http://www.hst.org.za/pubs/nphc.htm

Fiscal Review 2001

Intergovernmental Fiscal Review 2001. Pretoria: National Treasury Republic of South Africa; October 2001.
URL: http://www.treasury.gov.za

Food Consumption Survey

Labadarios, D (ed). The National Food Consumption Survey (NFCS): Children aged 1-9 years, South Africa, 1999. Pretoria: Department of Health; 2000.
URL: http://www.sahealthinfo.org/Modules/Nutrition/foodconsumption/foodconsumption.html

HDR 2000 SA

Taylor, V. UNDP South Africa Human Development Report 2000. United Nations Development Programme; 2000.
URL: http://www.undp.org.za/sahdr2000/sahdr20002.html

HDR 2001

Human Development Report 2001: Making new technologies work for human development. New York: United Nations Development Programme; 2001
URL: http://www.undp.org/hdr2001/

Health Annals 2001

Van der Merwe A (ed). Health Annals 2001. Johannesburg: Hospital Association of South Africa (HASA); 2001.

IFR Projections 1999

Haldenwang BB. High, Medium and Low Projections of the South African Population, 1996-2031. Cape Town: Institute for Futures Research; 1999.
URL: http://www.ifr.sun.ac.za/
Details: High population projections: The demographic impact of HIV/AIDS is not incorporated, therefore life expectancy at birth increases throughout the projection period; fertility rates decline steadily; and a high degree of in-migration (200 000 per annum) is assumed. Medium population projections: The impact of the HIV/AIDS epidemic is incorporated from 2011 onwards; fertility rates in black/African and coloured women decline more rapidly than in the high projections; and a medium degree of in-migration (150 000 per annum) is assumed. Low population projections: The impact of HIV/AIDS epidemic is incorporated from 1996 onwards; fertility rates are similar to those of the medium projections; and a low degree of in-migration (100 000 per annum) is assumed.

Iodine Deficiency 2000

Report of the South African Institute for Medical Research on the Iodine Deficiency Disorder (IDD) Survey of Primary School Learners for the Department of Health, South Africa. Pretoria: SAIMR; 2000.

Maternal Deaths 1998

Pattinson RC (ed). Saving Mothers: Report on Confidential Enquiries into Maternal Deaths in South Africa 1998. October 1999.
URL: http://www.doh.gov.za/docs/reports/mothers/contents.html
Details: Note that the methodology of confidential enquiries make them not an ideal public health tool for estimating maternal mortality ratios, primarily because reporting is health institution based and often under-reported. For 1998, the only provinces where there is a fair degree of confidence that the vast majority of deaths were recorded were Free State, Gauteng and Western Cape.

Maternal Deaths 1999

National Committee for Confidential Enquiries into Maternal Deaths. Second Interim Report on Confidential Enquiries into Maternal Deaths in South Africa: Maternal Deaths for 1999. Pretoria: Department of Health; 2000.
URL: http://www.doh.gov.za/docs/reports/1999/interim-rep.pdf

Medical Schemes 1999

Report of the Registrar of Medical Schemes 1999. Pretoria: Council for Medical Schemes; 2000.
URL: http://www.medicalschemes.com






Medical Schemes 2000

Report of the Registrar of Medical Schemes 2000. Pretoria: Council for Medical Schemes; 2002.
URL: http://www.medicalschemes.com

Metropolitan 2001

Kramer S. Mortality & Population: The Doyle Model. Metropolitan. 2001. (PowerPoint presentation and spreadsheet)
Details: skramer@metropolitan.co.za

MRC AIDS Report

Dorrington R, Bourne D, Bradshaw D, Laubscher R, Timaeus IM. The impact of HIV/AIDS on adult mortality in South Africa. Medical Research Council; Sep 2001.
URL: http://www.mrc.ac.za/bod/

NHA Private 2001

Cornell J, Goudge J, McIntyre D, Mbatsha S. National Health Accounts. The Private Sector Report. Pretoria: Department of Health; March 2001.

NHA Public 2000

Thomas S, Muirhead D. National Health Accounts Project: The Public Sector Report. Pretoria: Department of Health; November 2000.

PERSAL

PERSAL Personnel Administration System.

PharMIS

Pharmaceutical Management Information System (PharMIS). Department of Health.
URL: http://pharmis.pwv.gov.za

PHC in EC 1997-2000

Mahlalela X, Rohde J, Meidany F, Hutchinson P, Bennett J. Primary Health Care in the Eastern Cape Province 1997-2000. East London: The EQUITY Project; 2001.
URL: http://www.equityproject.co.za/Documents/PHC.htm

PRB Handbook

Haupt A, Kane TK. Population Reference Bureau's Population Handbook. 4th International Ed. Washington DC: Population Reference Bureau; 2000.
URL: http://www.prb.org

PRB Pop Data Sheet 2001

2001 World Population Data Sheet. Washington DC: Population Reference Bureau; May 2001.
URL: http://www.prb.org/Content/NavigationMenu/Other_reports/2000-2002/2001_World_Population_Data_Sheet.htm






RRA Barometer Aug 2001

Braam, T (ed). Barometer (7). Johannesburg: Reproductive Rights Alliance; August 2001.

URL: http://www.hst.org.za/rra/

Details: rracoord@sn.apc.org

Note that there are some discrepancies between the TOP data presented by RRA and the data published by the Department of Health. However the RRA data provides a more detailed breakdown by maternal and gestational age, although there are some problems with these breakdowns, where for example the number of TOPs at <12 weeks and >12 weeks is more than the total reported TOPs.

SA Pop Report 2000

National Population Unit. The State of South Africa's Population Report 2000. Pretoria: Department of Social Development; 2000.

URL: http://www.gov.za/reports/2000/population/

SA Uncertain Demographics

Lutz W, Scherbov S, van Aardt C. South Africa's Uncertain Demographic Present and Future. Austria: International Institute for Applied Systems Analysis; 2001.

URL: http://www.iiasa.ac.at

SADHS 1998

Department of Health, Medical Research Council, Macro International. South Africa Demographic and Health Survey 1998. Preliminary Report. Department of Health; 1999.

URL: http://www.healthnet.org.za/Publications/DemographicSurvey/demographicsurvey.htm

SAHR 1995 Ch1

Chimere-Dan O. Demographic Patterns in South Africa. In Harrison D, Nielson M (eds). South African Health Review 1995. Durban: Health Systems Trust and Henry J. Kaiser Foundation; 1995.

URL: http://www.hst.org.za/sahr/chap1.htm

SAHR 1998 Ch13

Soderlund N, Schierhout G, van den Heever A. Private Health Sector Care. In Ntuli A (ed). South African Health Review 1998. Durban: Health Systems Trust; 1998.

URL: http://www.hst.org.za/sahr/98/chap13.htm

SAHR 1999 Ch16

Van Rensburg D, van Rensburg N. Distribution of human resources. In Crisp N, Ntuli A (eds). South African Health Review 1999. Durban: Health Systems Trust; 1999.

URL: http://www.hst.org.za/sahr/99/chap16.htm

SAHR 1999 Ch20

Mathee A, Swanepoel F, Swart A. Environmental health services. In Crisp N, Ntuli A (eds). South African Health Review 1999. Durban: Health Systems Trust; 1999.

SAHR 1999 Ch9

Kawonga M, Knight S. State-aided Hospitals. In Crisp N, Ntuli A (eds). South African Health Review 1999. Durban: Health Systems Trust; 1999.
URL: http://www.hst.org.za/sahr/99/chap9.htm

SAHR 2000 Ch5

Thomas S, Muirhead D, Doherty J, Muheki C. Public Sector Financing in Ntuli A, Crisp N, Clarke E, Barron P (eds). South African Health Review 2000. Durban: Health Systems Trust; 2000.
URL: http://www.hst.org.za/sahr/2000/chapter5.htm

SAVACG Survey

Children aged 6-71 months in South Africa 1994: their anthropometric, vitamin A, iron and immunisation coverage and status. The South African Vitamin A Consulting Group (SAVACG); 1995.

Saving Babies

Pattinson, RC (ed). Saving Babies: A perinatal care survey of South Africa 2000. South Africa: Medical Research Council; 2000.
URL: http://www.hst.org.za/doh/saving_babies.htm

Stats Notes Jan 2001

Chief Directorate: Health Monitoring and Evaluation. Statistical Notes 3(1). Pretoria: Department of Health; January 2001.
URL: http://www.doh.gov.za/
Details: Also available from http://www.doh.gov.za/facts/stats-notes/2000/oct00-notify.pdf

StatsSA HDI 2001

Human Development Index. Pretoria: Statistics South Africa; June 2001.
URL: http://www.statssa.gov.za/
Details: Under Statistical Releases.

StatsSA Mid-Year Est. Hedberg

Hedberg, C. Calculated Population Estimates bases on published StatsSA model.
URL: http://hst.org.za/local/docs/popdata.htm

StatsSA Mid-Year Estimates

Statistics South Africa: Statistics release P0302; Mid-year estimates. (various years)
URL: http://www.statssa.gov.za/
Details: A new feature of the 2000 mid year estimates was that two population estimates were provided, one taking into account the estimated additional deaths that might have occurred due to HIV/AIDS (With AIDS) and one that does not attempt to model the impact of AIDS (Without AIDS). The assumptions that underpinned these estimates are outlined in the relevant P0302 Statistical release.

StatsSA OHS

Statistics South Africa. October Household Survey, Statistical Release PO317. Pretoria. (various years)

URL: http://www.statssa.gov.za

Details: The 1999 OHS survey gathered detailed information on approximately 140 000 people living in 30 000 households. The survey covers a range of development and poverty indicators, including unemployment rates. The OHS of 1999 was drawn from a master sample, in which households from the same primary sampling until will be visited for a variety of surveys. This was the first time that a master sample was used to select households to be interviewed. Altogether 3000 EAs were drawn in 1999. The 1999 OHS, in common with the 1997 and 1998 OHS, was weighted to reflect estimates of the population size based on the population census of 1996.

StatsSA OHS 1995-9

Hirschowitz R, Sekwati W, Budlender D. South Africa in transition: Selected findings from the October household survey of 1999 and changes that have occurred between 1995 and 1999. Pretoria: Statistics South Africa; 2001. Available from www.statssa.gov.za

URL: http://www.gov.za/reports/2001/survey.pdf

WHOSIS

WHO Estimates of Health Personnel.

URL: http://www-nt.who.int/whosis/statistics/menu.cfm

Details: Link to Health Personnel

World Health Report 2000

World Health Organisation. The World Health Report 2000. Health Systems: Improving Performance. Geneva: World Health Organisation; 2000.

URL: http://www.who.int/health-systems-performance/whr2000.htm

Details: As at January 2002, how to proceed with subsequent inter-country comparisons of health systems performance is still being debated by the World Health Organisation. Report of the working group was submitted to the WHO Executive Board - see http://www.who.int/gb/EB_WHA/PDF/EB109/eeb1096.pdf