

Major Applied
Research 3
Working Paper 3

**Equity of Health
Sector Revenue
Generation and
Allocation: A South
African Case Study**

August 1998

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Partnerships
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Funded by:

U.S. Agency for International Development



Mission

The Partnerships for Health Reform (PHR) Project seeks to improve people's health in low- and middle-income countries by supporting health sector reforms that ensure equitable access to efficient, sustainable, quality health care services. In partnership with local stakeholders, PHR promotes an integrated approach to health reform and builds capacity in the following key areas:

- ▲ *better informed and more participatory policy processes in health sector reform;*
- ▲ *more equitable and sustainable health financing systems;*
- ▲ *improved incentives within health systems to encourage agents to use and deliver efficient and quality health services; and*
- ▲ *enhanced organization and management of health care systems and institutions to support specific health sector reforms.*

PHR advances knowledge and methodologies to develop, implement, and monitor health reforms and their impact, and promotes the exchange of information on critical health reform issues.

August 1998

Recommended Citation

McIntyre, Di, Lucy Gilson, Nicole Valentine and Neil Söderlund. August 1998. *Equity of Health Sector Revenue Generation and Allocation: A South African Case Study*. Major Applied Research 3, Working Paper 3. Bethesda, MD: Partnerships for Health Reform Project, Abt Associates Inc.

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Contract No.: HRN-C-00-95-00024

Project No.: 936-5974.13

Submitted to: Robert Emrey, COTR
Policy and Sector Reform Division
Office of Health and Nutrition
Center for Population, Health and Nutrition
Bureau for Global Programs, Field Support and Research
United States Agency for International Development

Abstract

This report is a case study of the Partnerships for Health Reform Project's empirical work on equity in health care financing in South Africa. The study uses government-supplied data on health spending and household survey information to analyze private and public sector health care delivery. This paper will contribute to the larger equity study which will provide more in-depth analysis. Section 2 of the paper presents an overview of the health sector in South Africa; Section 3 provides basic information on government health care financing in the country; Section 4 describes the household survey used in the analysis; and Section 5 presents the results and implications for policy. Despite substantial economic resources relative to other African countries, South Africa suffers substantial inequalities of health care spending and delivery and has relatively high poverty levels. Approximately 60 percent of health care expenditure is attributable to the private sector, however only 23 percent of the population have regular access to private sector health care in terms of coverage by a third-party payer mechanism. Closing the gap in health care spending and access will require policy innovations that reallocate financial and human resources, improve access to care, especially for residents of rural area; and improve quality of primary, maternal and pre-natal care. To make informed decisions, a more detailed analysis of the public/private health sector mix, health sector revenue allocation, and service delivery reform is recommended.

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Acronyms

CASE	Community Agency for Social Enquiry
CESD	Census Enumerator Sub-Districts
CSS	Central Statistical Service
DNHPD	Department of National Health and Population Development
GDP	Gross Domestic Product
GNP	Gross National Product
LPP	Limited Private Practice
LSDS	Living Standards And Development Survey
MHC	Managed Healthcare
NGO	Non-Governmental Organisation
NMDC	National Medical and Dental Council
OHS	October Household Survey
PHR	Partnerships for Health Reform
TBA	Traditional Birth Attendant
VAT	Value Added Tax

Foreword

Part of the mission of the Partnerships in Health Reform Project (PHR) is to advance “knowledge and methodologies to develop, implement, and monitor health reforms and their impact.” This goal is addressed not only through PHR’s technical assistance work but also through its Applied Research program, designed to complement and support technical assistance activities. The program comprises Major Applied Research studies and Small Applied Research grants.

The Major Applied Research topics that PHR is pursuing are those in which there is substantial interest on the part of policymakers, but only limited hard empirical evidence to guide policymakers and policy implementors. Currently researchers are investigating six main areas:

- ▲ Analysis of the process of health financing reform
- ▲ The impact of alternative provider payment systems
- ▲ Expanded coverage of priority services through the private sector
- ▲ Equity of health sector revenue generation and allocation patterns
- ▲ Impact of health sector reform on public sector health worker motivation
- ▲ Decentralization: local level priority setting and allocation

Each Major Applied Research Area yields working papers and technical papers. Working papers reflect the first phase of the research process. The papers are varied; they include literature reviews, conceptual papers, single-country case studies, and document reviews. None of the papers is a polished final product; rather, they are intended to further the research process—shedding further light on what seemed to be a promising avenue for research or exploring the literature around a particular issue. While they are written primarily to help guide the research team, they are also likely to be of interest to other researchers, or policymakers interested in particular issues or countries.

Ultimately, the working papers will contribute to more final and thorough pieces of research work, such as multi-country studies and reports presenting methodological developments or policy relevant conclusions. These more polished pieces will be published as technical papers.

All reports will be disseminated by the PHR Resource Center and via the PHR website.

Sara Bennett, Ph.D.
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1. Background to Research

This research was undertaken as part of a larger study coordinated by Partnerships for Health Reform (PHR). A number of similar case studies have been conducted in other countries under this PHR initiative. The inspiration for the PHR study was the “ECuity” research programme which evaluated the equity of health financing and expenditure in a number of European Community (now called European Union) countries and the United States (Van Doorslaer, Wagstaff and Rutten 1993). The “ECuity” study applied statistical techniques to household survey data to analyse the degree of progressivity of alternative financing mechanisms and to estimate the incidence of health care expenditure. Another study that analysed household survey data in a number of middle and low income countries was Baker and van der Gaag (1993), included in the final “ECuity” report (Van Doorslaer, Wagstaff and Rutten 1993); it addressed similar issues to those of the “ECuity” study but was more descriptive in nature.

The Baker and van der Gaag study was used as a template for the country case studies commissioned by PHR. There were three main components to the guidelines provided by PHR:

- ▲ A description of the health financing and delivery in the country under study (contained in section 2 below);
- ▲ An overview of the distribution of government revenue between different sources (and information on tax incidence where available) and of the distribution of government expenditure (see section 3); and
- ▲ An analysis of household survey data, divided into income quintiles and geographic (urban and rural) areas, to determine reported illness, health service utilisation and expenditure on health services (see section 4).

Initial reports were prepared by each country case-study team, and were discussed in detail at a meeting of the collaborating researchers in March 1998. Refinements in the analyses and presentation of results were agreed by the researchers at this meeting and have been incorporated into this final report.

It is hoped that further research, to apply the more sophisticated statistical analysis techniques employed in the “ECuity” study, will be undertaken at a later stage. This would provide a basis for addressing some of the questions that remain unanswered in this current research phase, such as the degree of progressivity of the different health care financing mechanisms in the countries under study.

2. Descriptive Overview of the South African Health Sector

2.1 Introduction

South Africa is a large country with a surface area of just over 1.2 million square kilometres situated at the southern tip of Africa. It has a population of approximately 38 million, with 55 percent residing in urban areas. Prior to 1994, South Africa was divided along racial lines into ten 'homelands'¹ and four provinces of the former 'White' South Africa. Since the first democratic elections in April 1994, it is organised into a single, multiracial country with an elected National Parliament and an executive headed by a president. There are now nine provinces (most of which incorporate former 'homeland' areas), each with an elected legislature and an executive headed by a premier. The provinces have considerable powers in terms of the recently finalised Constitution.

South Africa is classified as an upper-middle income country (in terms of the World Bank classification). It had a gross national product (GNP) per capita of US\$3,160 in 1995 (World Bank 1997). Since the early 1980s, it has experienced slow economic growth, with annual gross domestic product (GDP) growth averaging about 1.5 percent during the 1980s and declining even further to 0.5 percent between 1990 and 1994 (Fallon and da Silva 1994; de Bruyn et al. 1998). During this period, population growth averaged about 2.5 percent per annum. This has translated into a substantial decline in real GDP per capita 1981. By 1994 real per capita GDP had declined to levels that existed in the mid-1960s (de Bruyn et al. 1998). Per capita GDP (in nominal terms) declined by about -0.67 percent per annum between 1980 and 1996.

South Africa is one of the most unequal societies (Fallon and da Silva 1994). Approximately 51 percent of annual income is attributable to the richest 10 percent of households (approximately 5.8 percent of the population) while less than 4 percent goes to the poorest 40 percent of households (approximately 53 percent of the population) (World Bank 1994). The Gini coefficient, calculated on the basis of income per adult equivalent, was recently estimated to be 0.65 for South Africa (Whiteford and McGrath 1994).

A recent study estimated that slightly more than half of the South African population can be defined as poor (based on a range of poverty measures such as the proportion of the population below the household subsistence and minimum per capita caloric intake levels) (Reconstruction and Development Programme 1995). Poverty in South Africa has a strong racial² dimension with 95 percent of the poor being African, and a geographic bias with 75 percent of the poor living in rural areas, particularly the former 'homelands'.

¹ In terms of the 1913 'Natives Land Act', Africans were confined to living in ten 'homelands', which were highly fragmented geographic areas scattered throughout South Africa, and established along 'tribal' lines. These 'homelands' comprised less than 14 percent of the total surface area of South Africa. These 'homelands' have recently been reincorporated within the nine newly formed provinces.

² The use of the terms 'African', 'Indian', 'Coloured' and 'White' indicates a statutory stratification of the South African population in terms of the former Population Registration Act. The use of these terms does not imply the legitimacy of this racist terminology, but is necessary for highlighting the impact of former apartheid policies on the South African system.

The apartheid era has thus left a legacy of poverty and inequality in South Africa. There are substantial differences in access to social services between different social groups. This is largely due to 'apartheid' policies, which advocated the provision of different services to each racial group. Since the 1994 election, the government has been under enormous pressure to diminish disparities in income and access to services.

South Africa has a complex, well-developed health sector. Health care expenditure accounts for approximately 8.5 percent of GDP (McIntyre et al. 1995). Despite this relatively high level of health care expenditure, South Africa has poor health status indicators (e.g., an infant mortality rate in excess of 49 per 1,000 live births and a maternal mortality rate of 250 per 100,000 live births for African women). Much of the morbidity and mortality in South Africa is attributable to potentially preventable diseases (McIntyre et al. 1995). Table 2.1 indicates that South Africa spends a similar proportion of its GDP on health services to the established market economies, but a significantly higher proportion than most other middle income countries for which comprehensive health expenditure data are available. Mexico has a similar per capita income level to that of South Africa (both countries fall into the upper-middle income category), while Colombia and the Philippines are classified as lower-middle income countries.

Table 2.1: Data on Health Care Expenditure and Health Status in South Africa, and Countries That Have Comprehensive Health Expenditure Data

	Health expenditure as % of GDP*	Infant mortality rate** (per 1,000)	Life expectancy at birth 1991 (years)	Annual incidence of tuberculosis 1990 (per 100,000)
Middle-income countries				
South Africa	8.5	>49	<63	250
Colombia	7.3	23	69	67
Mexico	4.8	36	70	110
Philippines	2.4	41	65	280
Established market economies	9.2	8	77	20

Sources: Expenditure data derived from McIntyre et al. (1995) and Berman (1996); health indicator data derived from McIntyre et al. (1995) and World Bank (1993) Tables 1, 28, A.7 and A.9.

*Data for South Africa are 1992/93, 1993 for Colombia, 1992 for Mexico, 1991 for the Philippines, and 1990/91 for established market economies.

**Data on the infant mortality rate are for 1992 in South Africa and 1991 in the other countries.

South Africa has a large and expanding private sector. In 1992/93, nearly 39 percent of health care expenditure was funded from public sources and nearly 61 percent from private sources (McIntyre et al. 1995). Less than 0.5 percent of total health care expenditure was attributable to donor funding.

2.2 Private Sector

2.2.1 Private Sources of Health Finance

Medical schemes are the principal financial intermediaries (or financing agents) within the private health sector. There are presently more than 200 medical schemes in South Africa with nearly 7 million beneficiaries, approximately 18 percent of the population. Membership of these schemes is voluntary (in the sense that insurance coverage for the employed it is not a statutory requirement), but scheme membership is often a condition of employment. They are non-profit associations (although the large companies who administer these funds are profit-making enterprises) funded primarily by employer and employee contributions. Generally, contribution levels are related to members' income, the number of dependants and the benefits package. Contributions are supposed to be 'community-rated', although there is increasingly an element of indirect risk rating through the creation of different benefit packages with different contribution levels (i.e., there is no individualised risk-rating in medical schemes). Medical schemes operate on a cash-flow basis in that annual contribution income approximates annual benefit payments, with schemes maintaining limited reserves.

There is great variability in benefits packages between schemes, ranging from comprehensive packages in medical *aid* schemes to medical *benefit* funds that are largely restricted to basic primary care services. The more comprehensive schemes reimburse (part of) the costs of general and specialist medical and dental services, inpatient hospital care, dispensed medicines as well as other services (such as optometry, psychology, physiotherapy, etc.). Reimbursements are based on specified rates, which are often lower than the charges levied by providers. In these instances, members are required to pay the difference. While schemes allow members to use either public or private hospital services, most members elect to use private facilities. The vast majority of medical schemes do not cover services provided by traditional healers.

A recent trend in the private health sector is the growth of managed health care (MHC) initiatives. MHC options range from schemes where the financial intermediary negotiates lower fees (or sometimes capitation rates) with a group of 'preferred providers', to staff model Health Maintenance Organisations.

Direct out-of-pocket payments by households are the second largest source of private health care finance. This category includes: 'schemes gap' payments, which refers to the difference between the fees charged by private health service providers and the amount reimbursed by medical schemes, and 'co-payments' which are required for particular services such as a levy per prescription; payments by non-scheme members for consultations with private practitioners and for the purchase of prescribed drugs; user fees at public sector hospitals; and spending on over-the-counter medicines by all categories of patients.

Commercial health insurance is a small but rapidly growing component of private health care financing in South Africa. It is offered by both life and short-term insurance companies on a for-profit basis. Commercial health insurance is primarily marketed to individuals, although some employers are now considering providing health insurance cover for their employees instead of medical scheme cover. Most policies provide non-indemnity cover for major surgical and hospitalisation costs, i.e., the insurer pays a predetermined amount of money on claims for clearly specified contingencies, rather than reimbursing the actual medical expenses incurred, as in the case of medical schemes. Many young, healthy adults elect to purchase only health insurance cover due to

the attractive premiums relative to medical schemes' contribution rates. The lower health insurance contribution levels are possible because these policies are individually risk-rated and because they cover a more restricted benefits package than medical schemes. However, certain medical scheme members purchase 'top-up' health insurance products to cover the difference between the cost of health services (for major surgical and hospitalisation costs) and the amount reimbursed by schemes. Health insurance products thus compete with medical schemes as well as complement them.

Industry contributes to total private health care resources with the funding of industry-specific health services (see next section for more details), services funded through the Workmen's Compensation mechanism, and the funding of health related research (both their own proprietary research and contract research undertaken by non-industry research organisations). This expenditure is in addition to private sector employers' portion of medical scheme contributions.

The final category of private finance for health services is that of donor funding for non-governmental organisations (NGOs) and welfare or charitable organisations.

At the public/private sector interface, general tax revenue funding is directed to certain private sector health care providers such as contractor hospitals. General tax revenue also filters into medical schemes via employer (government) contributions to medical schemes on behalf of civil servants. The government also effectively subsidises the medical scheme contributions of private companies, which are fully tax deductible. Individual taxpayers have more restrictive tax concessions on medical expenses.

2.2.2 Private Health Care Delivery

There is a range of health personnel who are either in solo or group practice, within the private sector. This category includes: general and specialist medical and dental practitioners; other personnel registered with the National Medical and Dental Council (NMDC) or other relevant professional councils, such as chiropractors, homeopaths, dental technicians, dieticians, occupational therapists, physiotherapists, speech therapists, psychologists, optometrists and pharmacists; as well as a diverse group of personnel who are not registered with the NMDC or other professional councils, such as hypnotherapists and aromatherapists. In addition, diviners, herbalists, and faith healers constitute a significant group of service providers. It is estimated that there are between 350,000 and 500,000 traditional healers in South Africa.

The majority of the most highly trained health personnel work in the private sector, with the exception of nurses. For example, 62 percent of general doctors, 66 percent of specialists, 93 percent of dentists, 89 percent of pharmacists, and 60 percent of supplementary health professionals work in the private sector (Rispel and Behr 1992). Most private sector nurses are employed by private hospitals, most pharmacists work in the 2,876 retail pharmacies in the country (Pharasi 1992), and the other categories of personnel tend to work in solo or group practices. A minority of each category work in industry-specific health services or provide services through medical benefit funds and exempted schemes.

There is a range of hospitals within the private sector including for-profit facilities, non-profit hospitals run by charitable or welfare organisations, and industry-specific hospitals (the latter category only serve employees). Another category of privately administered hospitals is that of contractor hospitals, which provide care primarily for long-term psychiatric and tuberculosis patients, and in a few instances general acute hospital care, on a contract basis for the state. There were

46,611 beds in private hospitals in 1993 (Chetty 1995), which represented nearly 28 percent of all acute and chronic hospital beds in South Africa. There has been a particularly rapid growth in private for-profit hospitals in recent years, with the number of beds in these hospitals increasing by nearly 88 percent between 1988 and 1993. Most private for-profit hospitals are located in metropolitan areas, where high income earners and the majority of medical scheme members live.

A number of industrial concerns, primarily in the mining industry, provide hospital services exclusively for their employees. In 1993, there were 53 mine hospitals with 6,898 beds, serving approximately 450,000 mine workers (Valentine and McIntyre 1994). Industries also provide non-hospital health services for their employees, ranging from limited occupational health services to the provision of more comprehensive primary care services at the workplace. In large industries, health personnel are employed on a full-time basis to work in the industry-specific facilities. Smaller industries tend to employ only an occupational health nurse and contract with a private doctor to provide referral services.

There was a proliferation of health-related NGOs in the late 1980s and early 1990s. These range from charitable and welfare organisations providing services such as first-aid training, drug counselling, and hospice care, to others which are largely involved in the development of community-based primary care programmes. The growth in the latter group of organisations is partially due to the former government's inability and/or unwillingness to meet the socio-economic needs of the population. The international community supported NGOs as a means of assisting South Africa's people without supporting a government that upheld apartheid policies. In certain instances, such as for HIV/AIDS services, NGOs play an important service delivery role. Since the 1994 elections, many NGOs have begun to face financial difficulties, because international donors are now providing support directly to the government.

At the public/private sector interface, certain public sector employees 'moonlight' to supplement their income by working after-hours in the private sector. The extent of such activities is currently unknown. The introduction of limited private practice (LPP) in 1991 has increased the scope for public sector health personnel to provide services funded from private sources. This policy permits state employed clinicians to devote some of their time to treating private patients at public sector facilities. The clinician receives most of the fees paid by these patients, while the rest of the revenue is paid to the facility for the use of its resources. The major motivation for introducing LPP was to enable clinicians to increase their incomes, which, it was argued, would improve the retention of highly skilled staff within the public sector.

2.2.3 Private Sector Coverage

It has been estimated that almost 23 percent of South Africans have some degree of access to private sector health care on a regular basis (through coverage by some form of private third party payer) (Valentine and McIntyre 1994). The extent of such access is not uniform as members of certain medical schemes are covered for a very restricted range of services. There is similar variation in industry-funded health services at the workplace. An unknown proportion of the population utilises private practitioners on a direct payment basis, but this access is variable and depends on the availability of financial resources when care is needed. Out-of-pocket payments tend to be restricted to primary care providers, the most important in this regard being general practitioners, dentists, homeopaths, and traditional healers. Very few South Africans are able to utilise private specialists or hospital services on a direct payment basis. The rest of the population is dependent on the state for health services.

2.3 Public Sector

2.3.1 Public Sources of Health Finance

There are three tiers of government in South Africa, namely national, provincial and local. At present, the national level holds the primary responsibility for government revenue generation. It levies personal and company income tax, certain property taxes (e.g., estate duties and marketable security taxes), taxes on goods and services (e.g., Value Added Tax [VAT], excise taxes and fuel levies) and custom duties and import surcharges. The Department of Finance, Budget Council and Cabinet determine the national budget, which includes allocations to individual national level government departments, global allocations to each province³, and transfers to local government. The majority (about 95 percent) of provincial level government activities are funded from these budgetary transfers from the National Revenue Fund. They are supplemented by relatively small provincial revenues (such as vehicle registration fees and user fees at health facilities). National allocations and provincial revenue are combined in the provincial budget, and provincial legislatures determine the allocation of these resources among individual functions (e.g., health and education). A similar process occurs at the local government level, whereby transfers from the National Revenue Fund are combined with local government 'own revenue' to fund services provided by local governments. The main sources of revenue for local governments are property rates revenue, minor payroll levies (on local industries), and surpluses on utility sales (e.g., sale of water and electricity supplies). While provincial and local governments have the authority to determine the allocation of resources between different functions (e.g., health and housing), this is guided by the Constitution, which specifies the service provision responsibilities of each level of government (see section 2.3.2). The possibility of increasing the revenue generating authority of provincial governments is currently under discussion.

The vast majority of public sector health care funding is derived from nationally generated general tax revenue, with the remainder being derived from provincial and local government 'own revenue'. General tax revenue is in turn derived from income tax (including individual and company tax receipts), VAT, excise duties and other smaller revenue sources (Department of Finance 1996). Since the mid-1980s, government expenditure has increased more rapidly than total revenue and thus the use of deficit financing has increased significantly. For example, the budget deficit increased from 0.6 percent of GDP in 1989/90 to 10.2 percent in 1993/94. More information on government revenue and expenditure is provided in section 3.

At the public/private sector interface, public sector health services also receive money from private sources through user fees. Income-related fees are levied for in- and outpatient care at public sector hospitals and, until very recently, at curative primary care facilities (all public primary care services have been provided free of charge since April 1996). 'Indigent' patients (not explicitly defined), children under six years of age, and pregnant women receive free care at all public sector health facilities. In addition, certain services with public good characteristics are exempted from user fees. While user fees are referred to here as a source of health care finance, all fee revenue is effectively returned to provincial treasuries at present. There is thus no net *direct* benefit to the health sector from these payments.

³The allocation of nationally generated revenue between the provinces is based on a 'needs-based' formula, in an effort to address historical interprovincial inequities.

2.3.2 Organisation of the Public Health Sector

Until recently, the public sector health system in South Africa has been highly fragmented. There were 14 departments of health at the central government level, namely the Department of National Health and Population Development (DNHPD), the three 'own affairs' or 'tricameral'⁴ departments of health, and the health departments of the ten former 'homelands'. In addition, there was a health department in each of the four former provinces (Cape, Orange Free State, Natal and Transvaal), and approximately 400 local authorities had health departments. The effect of this fragmentation has been, not surprisingly, a gross lack of coordination in the development of health service infrastructure and inadequate health system planning at the national level.

The government is currently restructuring the public health service. Many of these changes are integrally linked to broader political and constitutional changes. In particular, the former 'homelands' have been 'reincorporated' into South Africa and the country has been divided into nine provinces. These provinces have a large degree of autonomy from central government in the provision of health and other social services. Table 2.2 summarises the structure of public sector health services at the time of writing. The DNHPD formulates policy, coordinates services and provides other support functions. Although it cannot directly influence the allocation of the health budget among services within provinces, it has the authority to develop 'norms and standards'. If such 'norms and standards' are developed at some stage in the future, this will indirectly influence the allocation of provincial health budgets, as provinces will be expected to provide the types and quantities of services specified by the DNHPD. The provincial health departments determine subsidies to local authorities and provide hospital services, curative primary level care and more comprehensive health services in the former 'homeland' areas. The provincial departments have the authority to determine the allocation of the health budget among different services. Local authorities have historically been responsible for preventive and promotive primary care, with a particular emphasis on communicable disease control and environmental health. Increasingly, local authorities are providing comprehensive primary care services.

The national and provincial departments of health are in the process of establishing a new tier of district health services. The development of a district health system represents a core strand of health sector decentralisation in South Africa, and is seen as the critical foundation for the effective development of primary health care within the country.

It is anticipated that there will be an average of 20 districts per province. The districts will be responsible for non-specialist hospitals and comprehensive primary care services. The relationship between health districts and local government structures has yet to be finalised. However, it has been recommended that the two structures should have coterminous boundaries wherever possible. While the ultimate goal is for health districts to be part of local government, in the interim a phased approach to the establishment of district health authorities is being adopted, depending on the capacity and infrastructure existing at local government level.

⁴ In 1983, a new Constitution was enacted, which introduced three separate chambers of parliament, namely the House of Assembly for 'Whites', the House of Delegates for 'Indians' and the House of Representatives for 'Coloureds'. Each of these chambers were responsible for the administration of the 'own affairs' of their particular 'racial group'. No structure was created for 'Africans', whose needs were regarded as 'general affairs'.

Table 2.2: The Structure of Public Sector Health Services in South Africa

Level of government	Department(s)	Responsibilities/Activities*
Central	Department of Health	<ul style="list-style-type: none"> ▲ health policy formulation ▲ development of norms and standards for health services for quality assurance purposes ▲ overall coordination of service planning ▲ provision of services which cannot be cost-effectively delivered elsewhere such as specialised laboratory services ▲ other support functions such as developing coordinated information systems, and coordination of pharmaceutical procurement and distribution
Provincial	Provincial Departments of Health	<ul style="list-style-type: none"> ▲ provision of health services in academic health centres**, and in specialist, non-specialist and chronic disease hospitals ▲ primary level curative and rehabilitation services ▲ comprehensive primary care services in former "homelands" areas ▲ certain other health services such as forensic and medico-legal services ▲ ambulance services in conjunction with local authorities ▲ determination of health service subsidies to local authorities
Local	Local government health departments	<ul style="list-style-type: none"> ▲ preventive, promotive and rehabilitative primary care services with particular emphasis on communicable disease control and environmental health ▲ ambulance services
Other (non-health) departments	Departments of Defence, Police, and Correctional Services	<ul style="list-style-type: none"> ▲ provision of health services for staff, their dependants and prisoners

Source: Adapted from McIntyre et al (1995)

*Some of the service provision responsibilities described above have been delegated to other health authorities: for example ambulance services are frequently *provided* by local authorities although they are the *responsibility* of provincial administrations.

**There is currently discussion that academic hospitals will become the responsibility of the Department of National Health

2.3.3 Public Sector Health Care Delivery

In 1992/93, there were 365 acute public sector hospitals containing 98,863 beds. In addition, there were 54 chronic hospitals with 21,158 beds (McIntyre et al. 1995). There were thus approximately 2.93 acute hospital beds per thousand population dependent on public sector services (i.e., excluding the population who receive care in the private sector) (McIntyre 1997). Over half of the acute care hospital beds in the public sector are in facilities with specialist services, while tertiary and academic hospitals alone account for 38 percent of acute care beds.

Non-hospital primary care services are largely provided through fixed and mobile clinics and community health centres. Some facilities are comprehensive while others provide only preventive or curative services. There were also 3,141 fixed clinics in 1992/93, which translates into approximately

10,756 people per clinic (based on the population who are dependent on public sector services). The other services included under the category of primary care include district surgeons (i.e., private general practitioners contracted to provide services to 'state' patients), district pharmacist services, community nursing services, environmental health services, and school health services.

For the population dependent on public sector services, there were approximately 17 generalist doctors, 6.5 specialist doctors and 326.6 nurses per 100,000 population in 1992/93 (McIntyre 1997). However, these health care human resources are concentrated in hospitals. In particular, the 49 academic and tertiary hospitals employed 61 percent of public sector general doctors, 82 percent of specialist doctors, 36 percent of nurses and 51 percent of pharmacists. In contrast, primary care services employed only 10 percent of general doctors, 17 percent of nurses, and 11 percent of pharmacists.

There is thus a bias towards curative, hospital-based health services in the public sector. There are also disparities in the distribution of these resources between geographic areas. For example, the population per clinic ratio ranges from 5,136 in one province to 20,127 in another province. Similarly, the most well resourced province employs 5.8 times more generalist doctors, 3.3 times more nurses and 6.2 times more pharmacists than the least well resourced province, relative to the population within these provinces who are dependent on public sector services.

2.4 Summary

South Africa devotes a considerable amount of its economic resources to health care. The level of health care expenditure, which totaled 8.5 percent of GDP in 1992/93, is high by international standards. However, a substantial proportion of this spending (approximately 60 percent) is on private health care that serves a minority of the population. Within the public sector, on which the poor are heavily dependent, there is a heavy concentration of resources within hospitals, particularly academic and other tertiary hospitals. In addition, the accessibility and quality of health services vary enormously between provinces and between districts within provinces. The poor, most of whom are African, receive vastly inferior care. Due to these disparities in the distribution of health care resources between the public and private sectors, between levels of care and on a geographic basis, health services in South Africa currently do not adequately address the health needs of the population.

South African health services are currently undergoing major restructuring. The government elected during the first democratic elections in April 1994, has committed itself to achieving greater equity in access to health services for all South Africans, especially in relation to primary care services. A particular concern of the government is to ensure that the poor, who are heavily reliant on publicly funded and provided health services, have adequate access to essential health care.

3. Government Revenue and Expenditure Data

3.1 Government Revenue in South Africa

A description of the revenue sources for national, provincial and local governments was provided in section 2.3.1. Table 3.1 shows the distribution of national government revenue between different sources. In 1995/96, nearly 55 percent of receipts to the National Revenue Fund were derived from personal and corporate income taxes, nearly 39 percent from sales taxes and only 6 percent from other sources. The single largest source of general tax revenue is that of personal income taxes (41 percent), followed by VAT (26 percent).

Table 3.1: Sources of General Tax Revenue Collected at National Level (millions of Rands)

Revenue	1994/95 (Actual)	1995/96 (Actual)	1995/96 (%)	1996/97 (Revised budget)*
Income Taxes	61,004.7	68,883.8	54.76	82,024.0
personal	44,972.8	51,179.3	40.68	57,640.0
corporate	16,031.9	17,704.5	14.07	24,384.0
Sales Taxes	43,880	48,682.8	38.70	53,985.1
VAT	29,288.4	32,768.2	26.05	36,150.0
excise	14,155.7	15,403.3	12.24	17,295.6
other	435.9	511.3	0.41	539.5
Net International	2,357.6	2,279.5	1.81	2,633.3
International tax	5,606.4	6,169.6		6,996.0
Less CUA**	(3,248.8)	(3,890.1)		(4,362.7)
Other Taxes	3,017.6	3,258.7	2.59	3,568.0
property taxes	2,074.7	2,233.9	1.78	2,353.0
stamp duties etc.	942.9	1,024.8	0.81	1,215.0
Total Tax Revenue	110,259.9	123,104.8	97.86	142,210.4
Non-tax Revenue	1,912.8	2,698.1	2.14	3,313.4
Total Current Revenue***†	112,172.7	125,802.9	100.00	145,523.8

Source: Department of Finance (1997)

*Actual figures were not available for this year. However, an indication of the relative accuracy of budget estimates is that the revised estimate for total current revenue was only 0.07% lower than actual revenue for 1995/96.

** CUA: Custom Union Agreements

***Total current revenue for the National Revenue Fund is not the same as total current revenue for consolidated government as presented in Table 2.2. While the National Revenue Fund only reflects revenue collected by the national government, consolidated government revenue also includes revenue collected by provincial and local governments.

†The nominal Rand/U.S. dollar exchange rate was as follows: 1994 - R3.55; 1995 - R3.62; 1996 - R4.29

Nationally collected revenues (placed in the National Revenue Fund) account for over 80 percent of total government revenue. Table 3.2 provides an overview of the sources of consolidated government revenue (i.e., revenue collected by national, provincial, and local governments). Less than 5 percent of total government revenue is collected by provincial governments, while local governments contribute slightly more than 10 percent. Extra-budgetary institutions and social security funds account for the remainder of the government revenue generated.

**Table 3.2: Composition of Consolidated General Government Revenue, including Local, Provincial and National Levels of Government and Extra-budgetary Institutions
(% of total revenue)**

	1994/95 (Actual)	1995/96 (Actual)	1996/97 (Revised budget)
Total Current Revenue (Rand billion)	138.00	156.40	178.00
Tax Revenue	86.52	86.32	86.30
Main*	77.39	79.48	79.89
Extra-budgetary Institutions	0.07	0.06	0.06
Social Security Funds**	1.45	1.41	1.35
Provincial Governments	2.75	0.64	0.62
Local Authorities	4.86	4.73	4.38
Non-tax Revenue	13.48	13.68	13.70
Main*	2.46	1.85	1.85
Extra-budgetary Institutions	3.26	3.26	4.66
Social Security Funds	0.29	0.26	0.28
Provincial Governments	2.17	2.75	2.25
Local Authorities	5.30	5.56	4.66
Total	100.00	100.00	100.00

Source: Department of Finance (1997)

* Main: Revenues raised by the national government and placed in the National Revenue Fund.

**Social security funds relate primarily to the Unemployment Insurance Fund. There is currently no earmarked social security funding for health services.

Tax incidence data are extremely limited in South Africa. As indicated previously, the two major sources of tax revenue (contributing for 67 percent of the total) are personal income tax and VAT. Table 3.3 indicates tax payments as a percentage of personal income by decile. This table shows that South Africa has a progressive income tax structure. However, it should be noted that these data refer only to registered taxpayers and not the whole population. It was recently estimated that while the top decile of the population account for nearly half of household income, they account for nearly three-quarters of personal income tax (Republic of South Africa 1995).

Table 3.3: Tax Incidence for Personal Income Tax by Income Bracket, Divided into Deciles (1994/95)*

Decile	Tax paid as a % of income
1	3.74
2	7.34
3	11.57
4	16.17
5	21.82
6	24.49
7	27.04
8	29.46
9	33.06
10	36.90
All	28.59

Source: Internal Revenue Service Database, January 1998

* This table reflects data in respect of 78 % of all registered taxpayers.

Table 3.4 provides some insights into the incidence of VAT. It indicates that VAT is regressive in South Africa. VAT is levied at a flat rate of 14 percent on all goods and services, with the exception of certain basic foodstuffs. The following foodstuffs are 'zero rated': brown bread, maize meal, samp, mealie rice, dried mealies, dried beans, lentils, tinned sardines and pilchards, rice, fresh vegetables, milk powder, fresh fruit, milk and cultured mild, brown wheat meal, eggs, and edible legumes.

Table 3.4: Estimated VAT Paid by Five Income Groups for 1994/95

Income Group*	Estimated annual income (Rand)	Percent of household income spent on VAT
1	8,500	8.8
2	24,500	7.0
3	65,000	7.0
4	149,000	6.6
5	307,000	4.9

Source: Republic of South Africa (1994).

* The amount of VAT paid per income group was estimated for five out of nine income groups. The way that these income groups were derived was not clearly documented.

It should be noted that the South African government has adopted a policy of reducing the personal income tax burden and placing a greater emphasis on indirect taxes such as VAT (Department of Finance 1996). The relative contribution of direct taxes (mainly personal and company income tax) has fallen from approximately 70 percent in the early 1980s to 55 percent for the 1995/96 financial year (see Table 3.1). In contrast, there has been an increase in the contribution of indirect taxes (initially General Sales Tax [GST] and more recently VAT). GST contributed less

than 20 percent of total tax revenue in the early 1980s, whereas VAT is now contributing over a quarter of tax receipts (see Table 3.1).

The regressivity of VAT to some extent offsets the progressivity of personal income tax in South Africa. While the top decile of the population accounts for half of household income and approximately three-quarters of *personal* income tax, it accounts for approximately half of *overall* tax revenue (Republic of South Africa 1995). As total tax revenue also includes company tax revenue and certain other revenue not directly linked with households, the overall taxation of households is still progressive (McIntyre 1997).

However, with the gradual reduction in personal income tax rates and the expressed preference for generating additional revenue from VAT, South Africa appears to be moving away from a progressive tax system. Even with a progressive personal income tax structure, if the VAT rate is further increased, a situation may arise where low and middle income earners pay a similar proportion of their incomes in tax (personal income plus VAT) to high income earners (i.e., a proportional tax system). In the worst case scenario, low and middle income earners may pay a higher proportion of their incomes in tax than high income earners (i.e., a regressive system). This would be in line with international evidence that if there is a sufficiently strong emphasis on indirect taxes, the overall tax burden can be regressive (Van Doorslaer and Wagstaff 1993).

3.2 Government Health Expenditure in South Africa

As indicated in section 2.3.1, expenditure on health activities at the national level are funded entirely from the National Revenue Fund. At the provincial level, 95 percent of expenditure is funded by transfers from the National Revenue Fund. Revenue generated by provincial governments is relatively small. None of the provincial 'own revenue' is earmarked for health. Thus, user fee revenue from health facilities is deposited into the respective provincial revenue funds, along with other provincially generated revenue and transfers from the National Revenue Fund. Allocations to different functions are then made from the provincial revenue fund. Local government health services are somewhat differently funded. The provincial departments of health pay local governments for certain health services provided by on an agency basis (e.g., ambulance services). In addition, as the majority of local government 'own revenue' is used for services other than medical care (such as water provision, sanitation and refuse removal), provincial departments of health pay subsidies to local government health departments. The remainder of local government health departments' activities are funded through local government 'own revenue'.

Table 3.5 indicates that nearly R19.6 billion was spent on health services in South Africa in 1995/96. This represents about 10.5 percent of total government expenditure (R186.2 billion) in that year. As provincial departments of health are the main providers of health services (see Table 2.2), they account for nearly 91 percent of total health expenditure in South Africa.

Table 3.5: Summary of Actual Government Expenditure on Health Care by Level of Government: National, Provincial and Local (1995/96)

Level of Government	Expenditure (millions of Rand)	Percentage
National	1,290,853	6.59
Provincial*	17,780,844	90.77
Local**†	516,720	2.64
Total	19,588,417	100.00

Sources: Republic of South Africa (1997); Central Statistical Services (1997); Financial and Fiscal Commission (1998); Province of Mpumalanga (1995); Province of the Northern Province (1995)

*Provincial expenditure reflects total actual provincial health expenditure for all the provinces, except for the Northern and Mpumalanga provinces where these data were not available. For these two provinces, budget figures were used.

**This figure includes expenditure on clinical health care services and ambulance services. Data on this expenditure was only available for the local government financial year ending 30 June 1995. Expenditure for the national government year ending 31 March 1996 was therefore estimated as follows: health care expenditure for the period January to June 1995 was estimated to be half of the total expenditure from 1 July 1994 to 30 June 1995, adjusted by inflation for 1995 of 8.7% (R253,667,212). This figure was doubled to obtain expenditure for the 1995 calendar year (R507,334,424). Expenditure for the 1996 calendar year was estimated as 1995 expenditure adjusted for inflation in 1996 of 7.4% (R544,877,171). Expenditure for the government financial year ending 31 March 1996 was calculated by taking three-quarters of 1995 expenditure (R380,500,818) and one-quarter of 1996 expenditure (R136,219,293).

†Economists at the Financial and Fiscal Commission estimate that 85% of total local government expenditure (i.e., not specifically that for health) is funded through 'own revenue' (e.g., surpluses on the sale of utilities and property rates).

3.3 Summary

At present, health service expenditure in South Africa accounts for more than 10 percent of total government expenditure. This expenditure is primarily funded by nationally collected general tax revenue, with relatively small contributions from provincial and local government 'own revenue' sources. The majority of general tax revenue is attributable to personal income tax, which is a progressive revenue source, and VAT, which is a regressive source. Overall, government revenue is currently progressive, but as the share of total revenue attributable to VAT is increasing, South Africa appears to be moving towards a proportional system, or potentially a regressive system. More detailed household level data are required to conclusively evaluate the tax incidence in South Africa.

4. Analysis of Household Survey Data on Illness/Injury and Health Care Expenditure

4.1 Introduction and Brief Overview of Household Surveys

A number of household surveys that include health-related data have been conducted in recent years in South Africa. For the purposes of this study, the Project for Statistics on Living Standards and Development Survey (LSDS) was used. Data from other household surveys are presented to supplement that of the LSDS where necessary. The various surveys are briefly described in this section. The LSDS methods are described in greater detail due to the primary focus on its findings in this paper. Thereafter, details of calculation techniques and the results are presented.

The Project for Statistics on Living Standards and Development was coordinated by the South African Labour and Development Research Unit (SALDRU) at the University of Cape Town, with technical support from the World Bank. This survey covered 8,848 households and 40,284 individuals, and was conducted during 1993. Given a population size of less than 40 million, this represented a sample size of under 0.1 percent. A two-stage representative sample was drawn. The first stage was to sample 360 micro-geographic areas (census enumerator sub-districts [CESD]) throughout the country. To ensure that the sample reflected the racial and geographic distribution of the population, regional stratification was used. CESDs were listed according to their statistical regions (i.e., geographic location) and separated into urban and rural areas. Thereafter, they were ordered on the basis of the percentage of Africans within each CESD. Systematic sampling, with a random starting point, was used to select the CESDs. In the second stage, households were sampled. Fieldworkers developed lists of all households within each sampled CESD, and 25 households in each CESD were selected using systematic sampling. Of the 360 CESDs selected, two could not be surveyed due to political unrest. Although the sample was originally designed to be 'self-weighting', the exclusion of the two CESDs and other fieldwork difficulties necessitated the weighting of the results. This was based on geographic areas and racial categories. The survey data were extrapolated up to the provincial level, and the total number and racial composition of each province's population were compared with the 1991 Census results. Weights were then calculated to equate the survey data with Census results.

The LSDS questionnaire included information on the following aspects: demographic profile of household members; access to services (housing, water, sanitation, and energy); consumption patterns and expenditure on food; spending on items other than food; education enrolment patterns; income levels including remittances from migrant household members; land access; employment status; and health service utilisation and expenditure using a two-week recall period. (See Annex B for health component of LSDS). While this survey has very detailed documentation of income and consumption expenditure, there were some deficiencies in the health questions (e.g., insufficiently refined definition of different health service providers, omission of questions on medical scheme membership, etc.).

The “National Household Survey of Health Inequalities in South Africa” was coordinated by the Community Agency for Social Enquiry (CASE) (Hirschowitz and Orkin 1995). Approximately 4,000 households were sampled, and data were collected between October 1994 and February 1995. The questionnaire included information on the following aspects: demographic composition of households; access to services; immunisation and nutrition status of children; perceived health status of main respondents; incidence of chronic illness and disability; past utilisation of health services (no recall period specified); and assessment of health service accessibility and quality. While this database has some very useful information on illness and service utilisation, it has a relatively small sample size, particularly given that detailed health information were not collected for all members of the household (only a sample of children, adults and the elderly). The major problem with this survey is that the questionnaire requested information on the last health service used, without any specified recall. (See Annex C for aspects of the CASE questionnaire used in this paper).

The “October Household Survey” (OHS) was initiated as an annual survey in 1993 and is conducted by the Central Statistical Service (CSS) (Central Statistical Service 1995). This is a very extensive survey, with 29,700 households and 130,787 individuals being sampled in the 1995 survey (about 0.3 percent of the population). The questionnaire includes the following aspects: demographic composition of households; employment status; monthly income; access to services (housing, water, sanitation, and energy); education levels; perceived quality of life (e.g., feeling of safety in neighbourhood); health service utilisation within a month recall period; and vital statistics (births and deaths in past year). (See Annex D for the health component of the OHS questionnaire). This survey has the greatest potential for analysing health service utilisation patterns in South Africa, given the large sample size, the inclusion of income and medical scheme membership status information, and the reasonable recall period for health service utilisation. However, it does not include comprehensive information on health expenditure or on some of the other variables requested in the PHR terms of reference. The most recent version of the OHS publicly available is that conducted in 1995. This version was used for certain components of this study.

4.2 Household Survey Calculation Methods and Results

4.2.1 Introduction

The following section presents the results of the household survey analysis. Information is provided on the methods used to calculate the data presented. The data presented relate to the LSDS, unless stated otherwise. Graphical presentation is used for most results. Annex A contains the tabular format of these data. Wherever possible, the statistical significance of the difference between quintiles one and five and between rural and urban areas was calculated. This was always calculated at the 5 percent level of type I error.

4.2.2 Distribution and Socio-demographic Composition of the Population

The South African team first divided the entire database into income quintiles, and then separated these into rural and urban areas. This means that rural and urban ‘quintiles’ do not each contain 20 percent of the rural and urban population respectively. The distribution of the weighted sample between quintiles is given in the following table.

**Table 4.1: Distribution of the Weighted Sample between Quintiles
(% of rural, urban, and total population in brackets)**

	Rural		Urban		Total	
Quintile 1	6,259	(31%)	1,366	(8%)	7,625	(20%)
Quintile 2	5,609	(28%)	1,999	(11%)	7,608	(20%)
Quintile 3	4,511	(22%)	3,094	(17%)	7,605	(20%)
Quintile 4	2,797	(14%)	4,832	(27%)	7,629	(20%)
Quintile 5	1,159	(6%)	6,492	(37%)	7,651	(20%)
Total	20,335	(100%)	17,783	(100%)	38,118	(100%)

Figure 4.1 shows that the mean household size varies from 8.4 in quintile 1 to 3.7 in quintile 5. The mean household size is 7.1 in rural areas but 5.6 in urban areas.

Figure 4.1: Mean Household Size

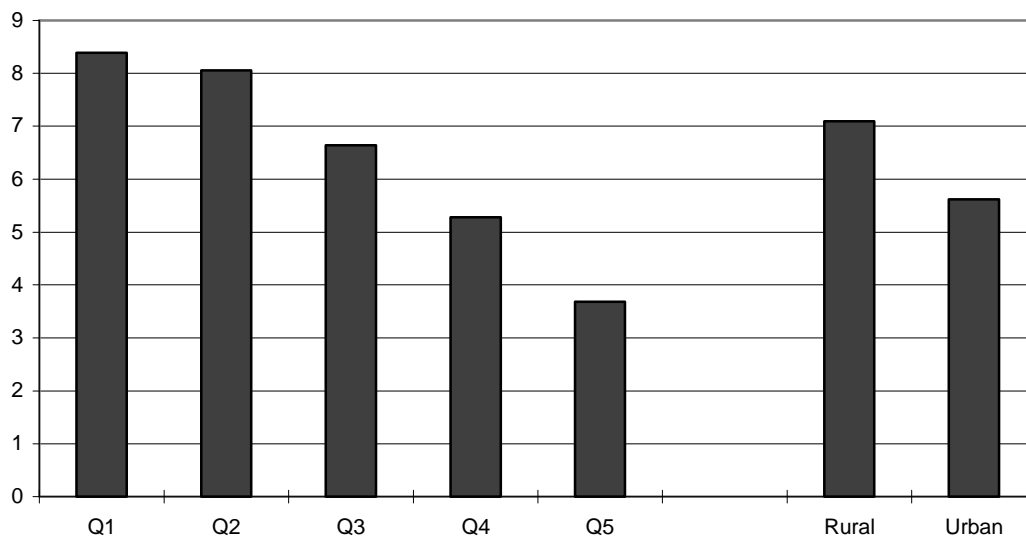


Figure 4.2 presents the distribution of average per capita consumption expenditure between income quintiles and between rural and urban areas. It indicates that income disparities are greater between income quintiles than between rural and urban areas.

Figure 4.2: Average Per Capita Consumption Expenditure (US\$)

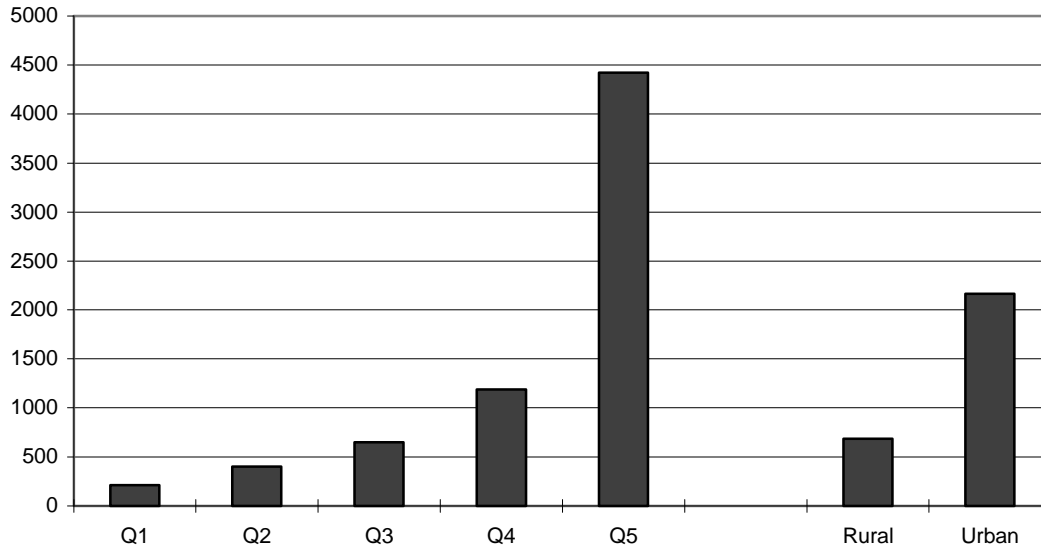


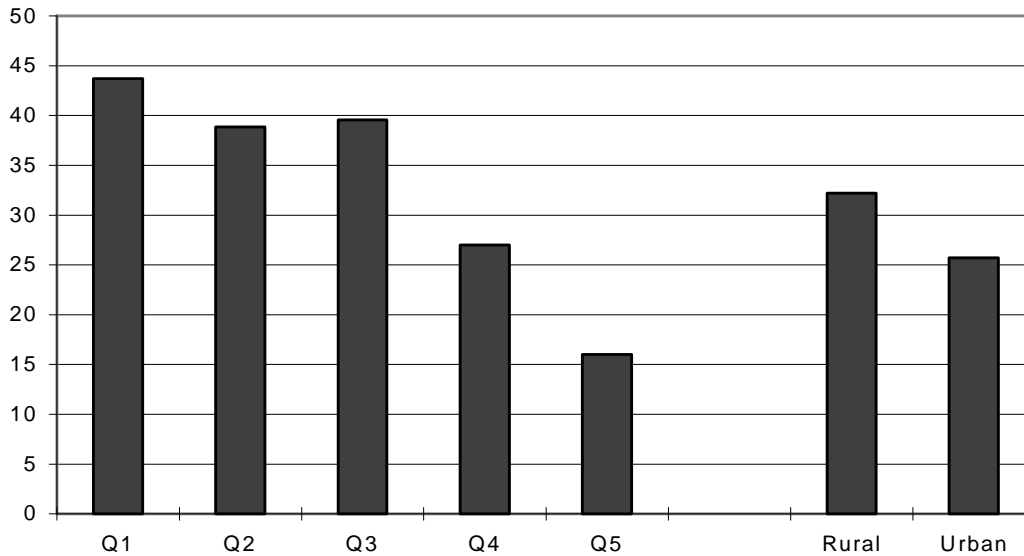
Table 4.2 shows the distribution of total consumption expenditure between quintiles within rural and urban areas as well as for the whole population. It indicates that the poorest 20 percent of households accounted for about 3 percent of consumption expenditure. In contrast, the richest 20 percent of households accounted for over 64 percent of expenditure. Although rural dwellers account for 53 percent of the population, they account for slightly less than 31 percent of consumption expenditure.

Table 4.2: Percentage Of Total Consumption Expenditure By Quintile

	Rural	Urban	Total
Quintile 1	9.37	0.78	3.07
Quintile 2	16.04	2.11	5.82
Quintile 3	20.93	5.27	9.44
Quintile 4	22.69	15.26	17.24
Quintile 5	30.98	76.58	64.43

One measure of potential vulnerability is the percentage of female-headed households. Figure C.3 indicates that, while 43.7 percent of households in quintile 1 are headed by a woman, only 16 percent of households in quintile 5 are female headed. There are smaller differences between rural areas (32.2 percent) and urban areas (25.7 percent).

Figure 4.3: Percentage of Female-Headed Households



From a health perspective, important indicators of potential vulnerability are access to potable water and adequate sanitation. Figure 4.4 indicates that differences in ready access to tap water are slightly greater between rural and urban areas (44.5 percent compared with 99.3) than the differences between income quintiles (45 percent in quintile 1 compared with 96.9 percent in quintile 5).

Figure 4.4: Access to Piped Water (% with tap in house or yard)

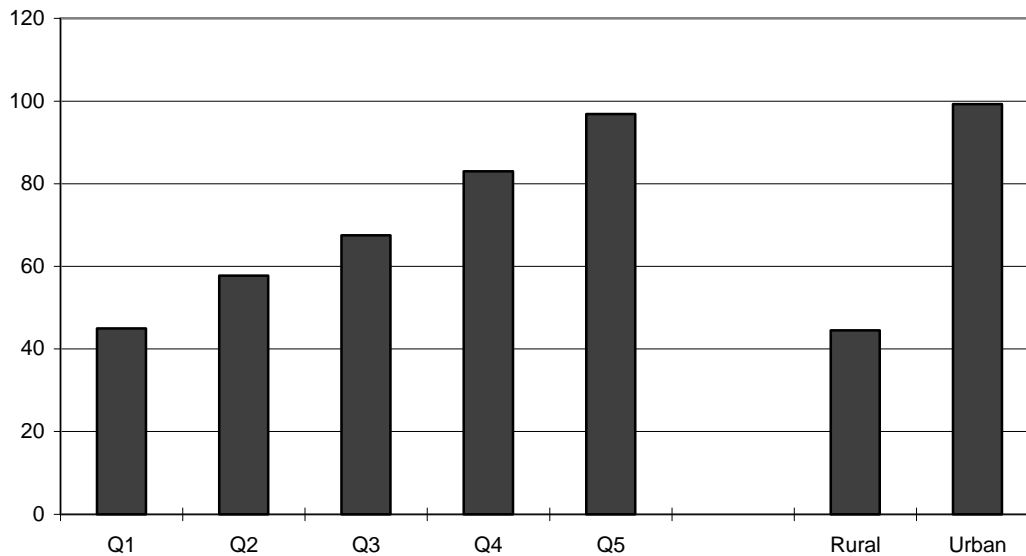
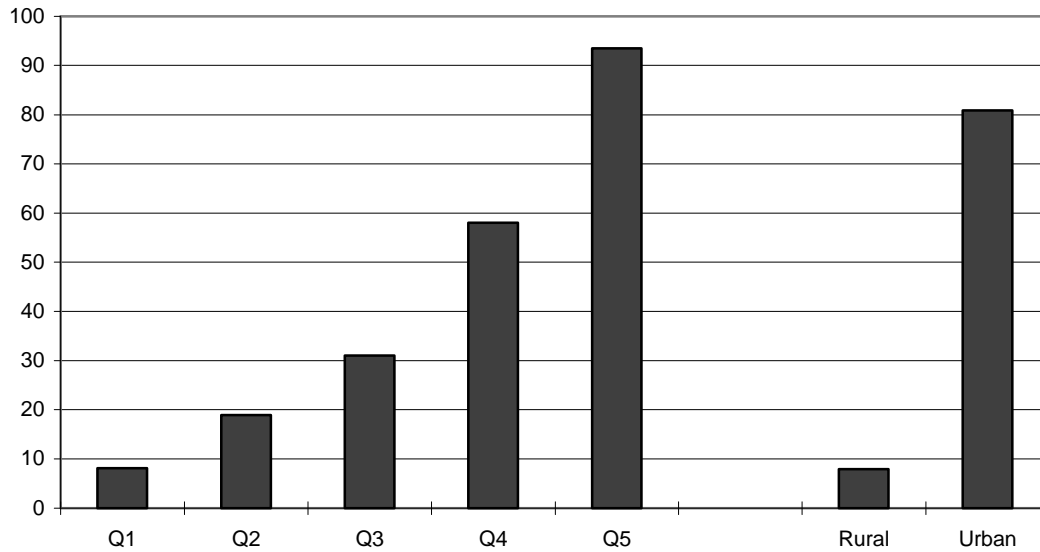


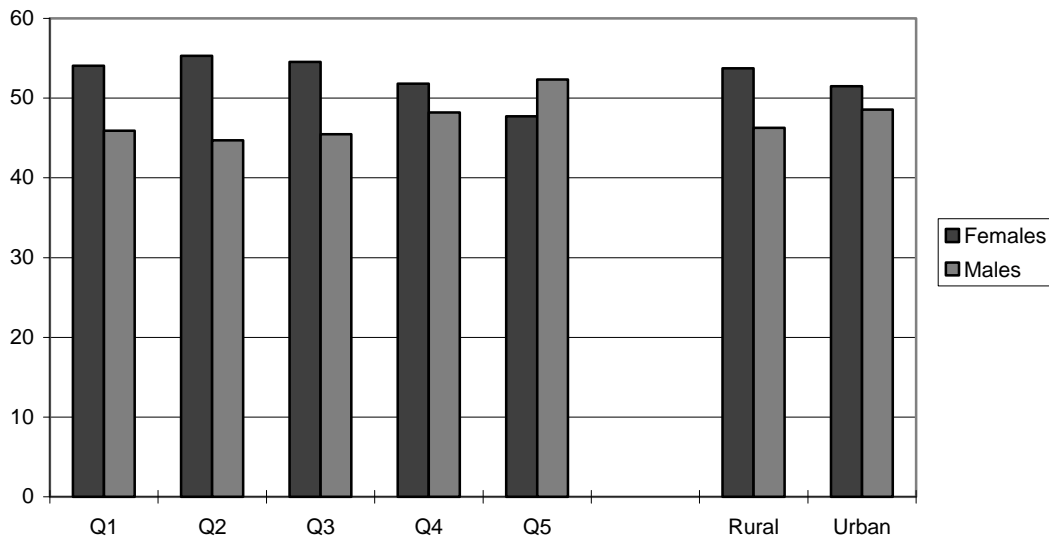
Figure 4.5 highlights the substantial differences in access to water-borne sewerage both between rural and urban areas (7.9 percent and 80.9 percent respectively) and between income quintiles (8.1 percent in quintile 1 and 93.5 percent in quintile 5).

Figure 4.5: Percentage with Access to Water-borne Sewerage



It is also useful to consider the demographic composition of the households in each income quintile and within rural and urban areas. Figure 4.6 shows that there are more females in South Africa than males (females comprise 52.7 percent of the population). Males are only in the majority in quintile 5.

Figure 4.6: Sex Distribution (% females and males)



There is a relative concentration of children under the age of 15 in the lowest income quintiles and in rural areas (see Figure 4.7). Conversely, working age adults predominate in the higher income quintiles and in urban areas. The elderly appear to be relatively evenly distributed between income quintiles and geographic areas.

Figure 4.7: Age Distribution (% within each age group)

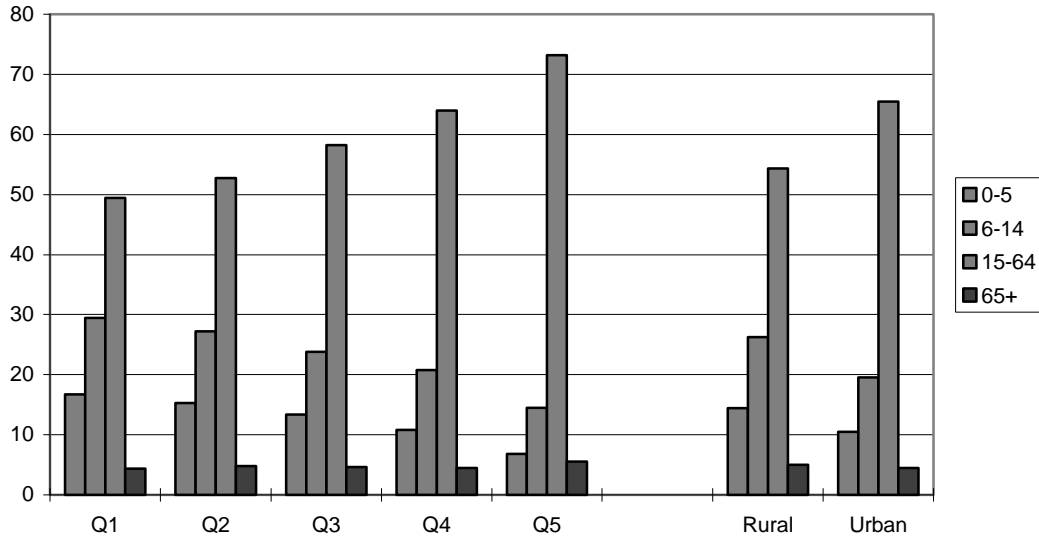
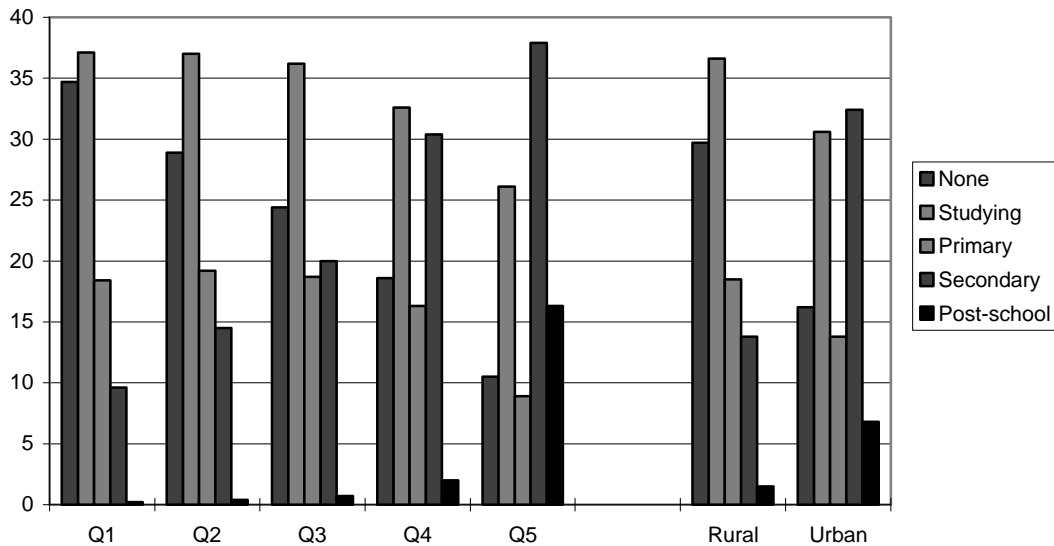


Figure 4.8 shows that between a quarter and a third of people are currently studying. Of those who are not currently studying, there are significant disparities between income quintiles and geographic areas. While 53 percent of those in quintile 1 either had no education or primary education only (84 percent if those currently studying are excluded from the analysis), 54 percent of those in quintile 5 had secondary or higher levels of education (73 percent excluding those currently studying). Similar, but less substantial, differences are evident between rural and urban areas.

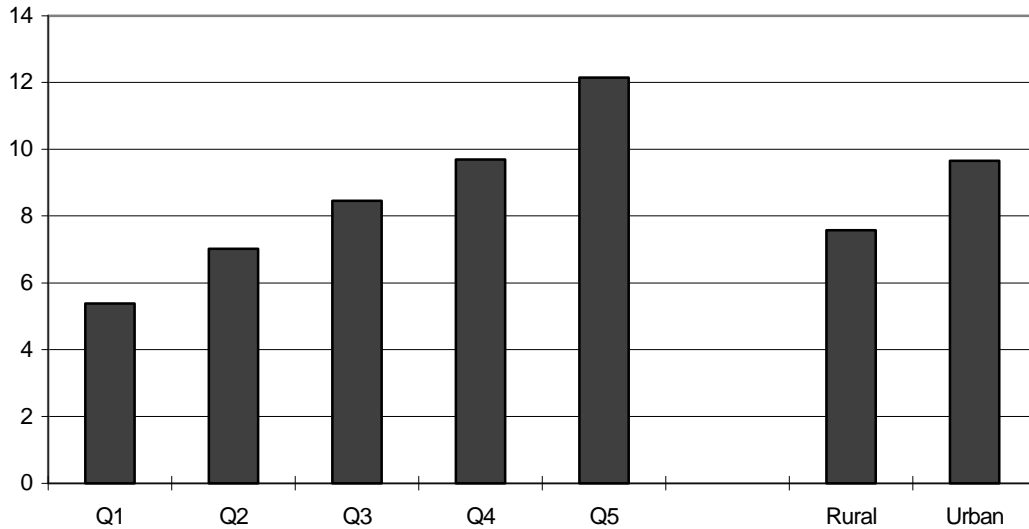
Figure 4.8: Education



4.2.3 Reported Illness and Injury and Severity of Illness

Figure 4.9 presents the percentage of the sample who were ill or injured in the *previous two weeks* (the recall period used in the LSDS). While 5.4 percent of respondents in quintile 1 reported that they had been ill or injured during this period, 12.2 percent of respondents in quintile 5 reported illness or injury. There were also differences between rural and urban areas, with 7.6 percent and 9.7 percent of respondents reporting illness respectively.

Figure 4.9: Percentage Ill or Injured in Previous Two Weeks

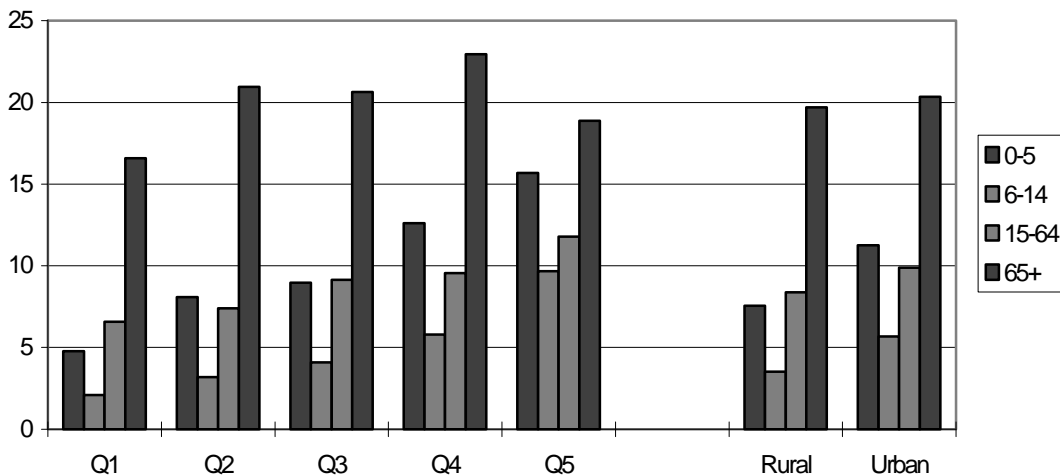


* The difference between quintiles is significant ($p=0.000$)

* The difference between urban and rural areas is significant ($p=0.000$)

Figure 4.10 shows the age breakdown of respondents who were ill or injured in the previous two weeks. As expected, the elderly consistently had the highest levels of reported illness/injury. In general, children under 6 years had the second highest level of reported illness, but in some cases, working age adults exceeded these levels.

Figure 4.10: Age Breakdown of Illness/Injury (% reporting illness/injury in previous two weeks)



* The difference between quintiles is significant for all age groups ($p=0.000$) except 65 years and above ($p=0.232$)

* The difference between urban and rural areas is significant for all age groups ($p=0.000$) except 65 and above ($p=0.735$)

An indicator of the severity of the illness is the number of days inactive due to illness. Figure 4.11 indicates that those in the lower income quintiles and in rural areas were inactive for more days when they reported having an illness (suggesting that the illness was more severe).

Figure 4.11: Number of Days Inactive Due to Illness in Previous Two Weeks (for those ill or injured)

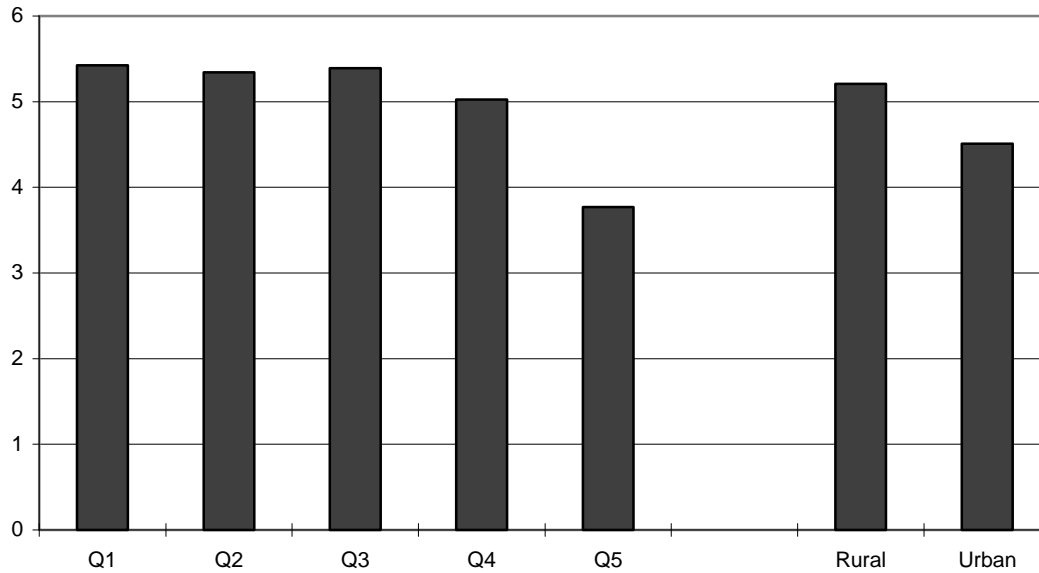
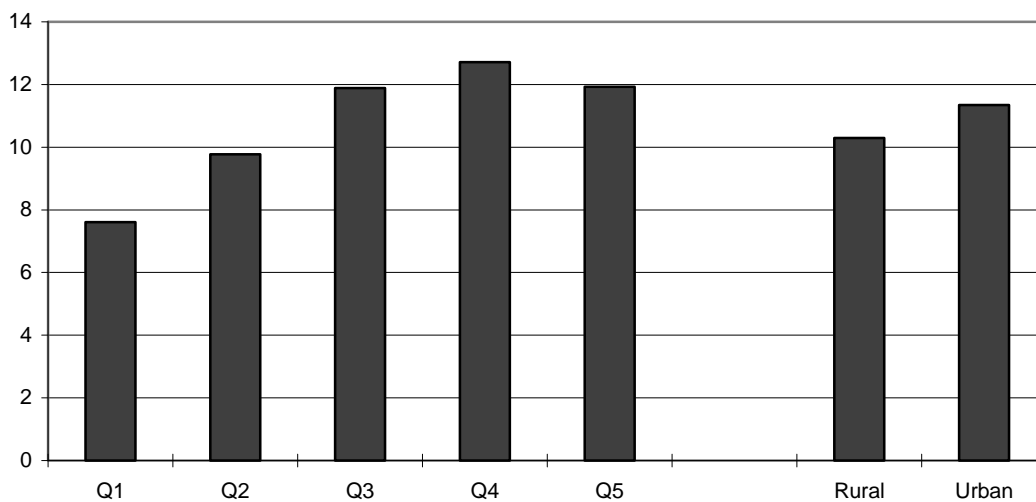


Figure 4.12 combines information on the incidence of reported illness and the severity of illness. It shows that although respondents in lower income quintiles and rural areas reported being inactive for longer, their lower reported incidence of illness translates into fewer days inactive per person per year than for respondents in higher income quintiles and in urban areas.

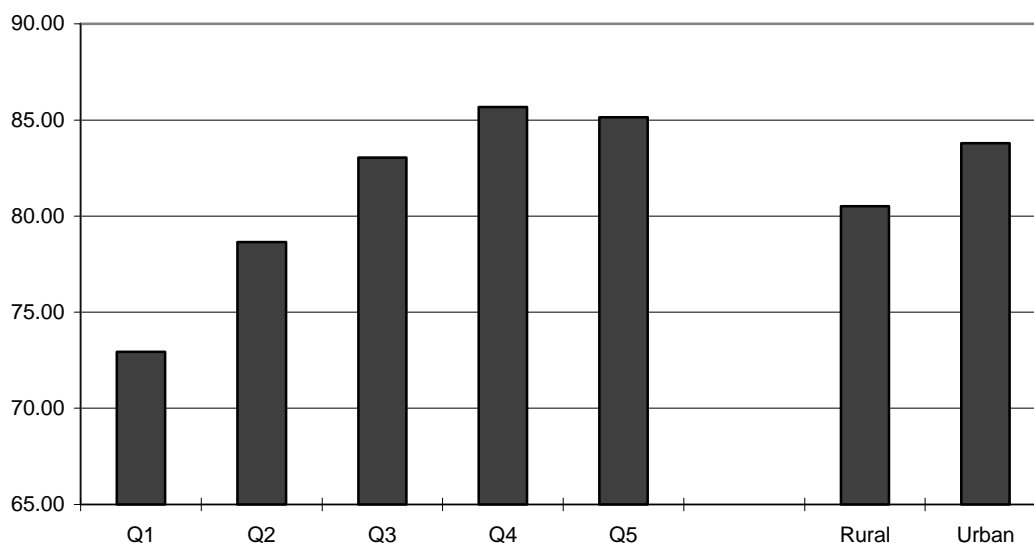
Figure 4.12: Average Number of Days Inactive Due to Illness per Person in Past Year



4.2.4 Care Seeking Behaviour

Figure 4.13 indicates that there are quite substantial differences in the proportion of respondents who were ill or injured seeking care between income quintiles. The differences between rural and urban areas were less dramatic.

Figure 4.13: Percentage of Those Ill or Injured Seeking Care

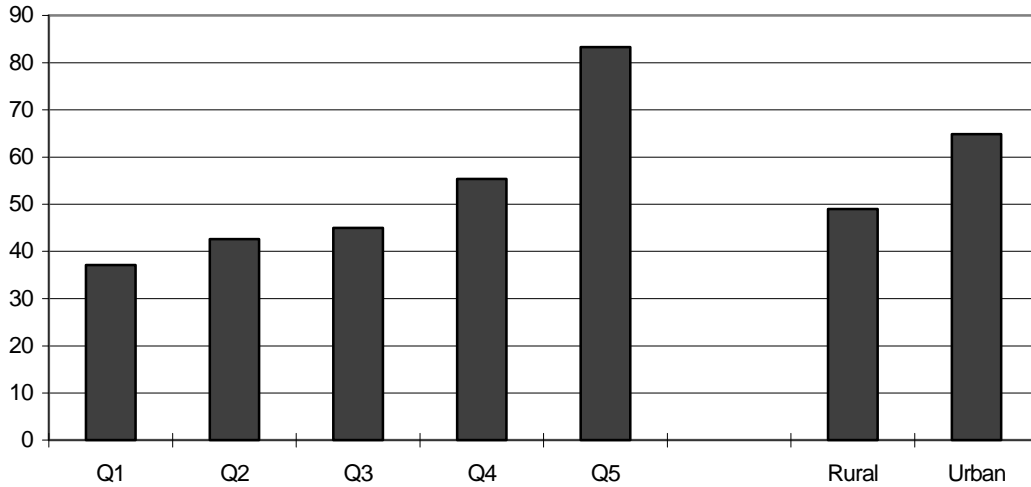


* The difference between quintiles is significant ($p=0.000$)

* The difference between urban and rural areas is significant ($p=0.000$)

Figure 4.14 suggests that a relatively high proportion (58 percent) of respondents who sought care for their illness or injury used private sector services. However, there were certain problems with the LSDS questionnaire which may have resulted in the levels of private sector utilisation being overestimated. The OHS reports much lower levels of utilisation of private services (39 percent overall) than the LSDS, particularly for rural areas. The major reason for this discrepancy is likely to relate to the inadequacy of the provider categories used in the LSDS questionnaire. In particular, the LSDS did not distinguish between private doctors' cash paying and district surgeony practices. If someone had been to see a part-time district surgeon (i.e., a private doctor providing services for state patients on a contract basis), respondents are most likely to indicate that they saw a private doctor (as opposed to visiting a clinic or hospital). This is because the vast majority of district surgeony work is provided from private doctors' own surgeries, as opposed to being provided from a public clinic or hospital. As the state pays for district surgeon services, these services should not be classified as private services. Despite these problems, the LSDS does indicated substantially higher use of private sector services by respondents in the higher income quintiles and in urban areas.

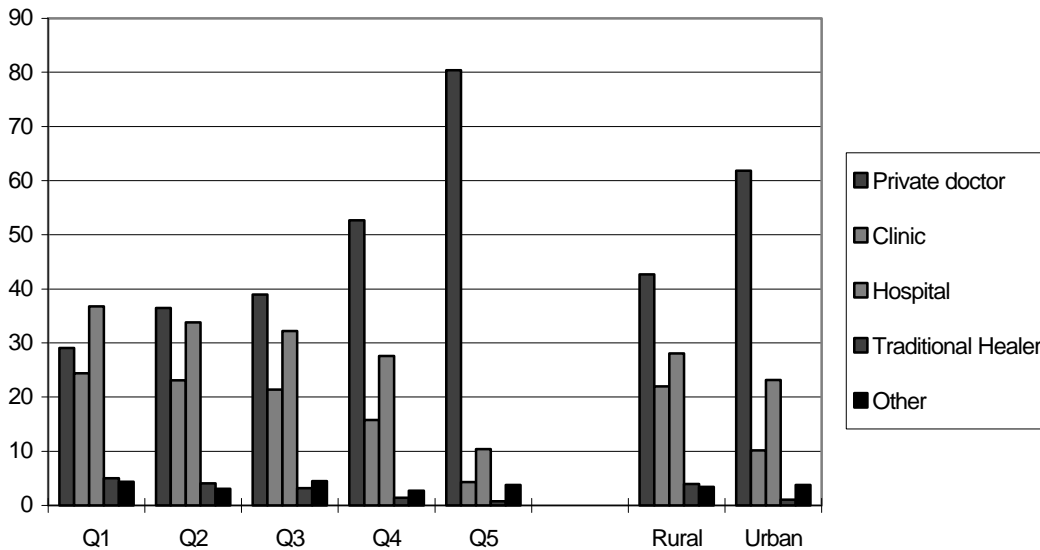
Figure 4.14: Percentage of Ill/Injured Respondents Seeking Care Who Used Private Sector Services



* The difference between quintiles is significant ($p=0.000$)
 * The difference between urban and rural areas is significant ($p=0.000$)

While respondents in quintile 1 most frequently attended a hospital for care, a private doctor was the main service provider for respondents in quintile 5 (see Figure 4.15). There were smaller differences in source of care between rural and urban areas. In both cases, private doctors were most frequently used, with hospitals and clinics being the second and third most frequent source of care in both rural and urban areas.

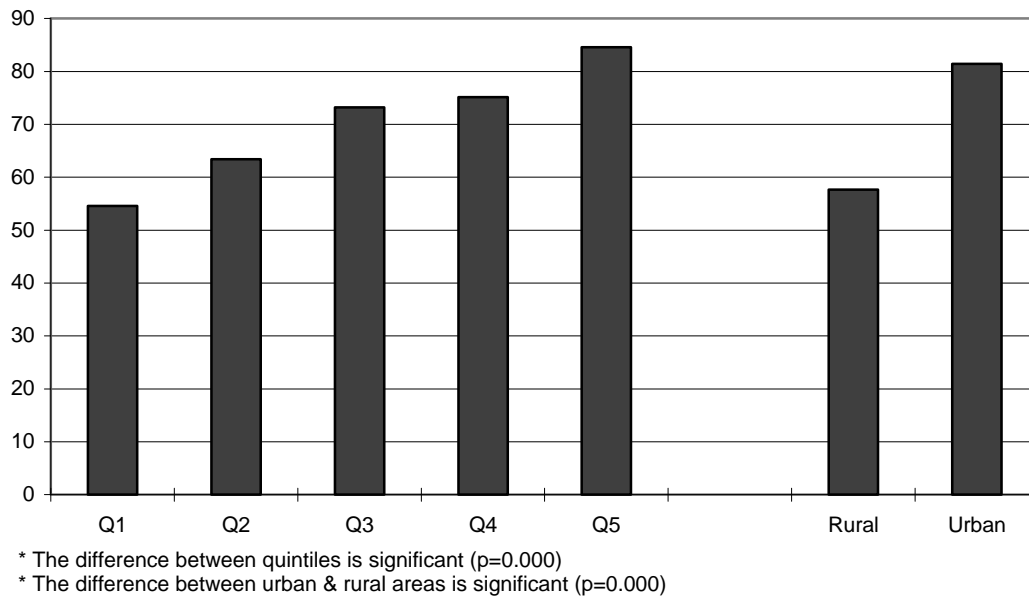
Figure 4.15: Source of Care for Those Who Were Ill/Injured Seeking Care



* The difference between quintiles is significant for all providers ($p=0.000$) except for 'other providers' ($p=0.672$)
 * The difference between urban and rural areas is significant for private doctors, clinics, traditional healers ($p=0.000$) and hospitals ($p=0.003$) but not for 'other providers' ($p=0.552$)

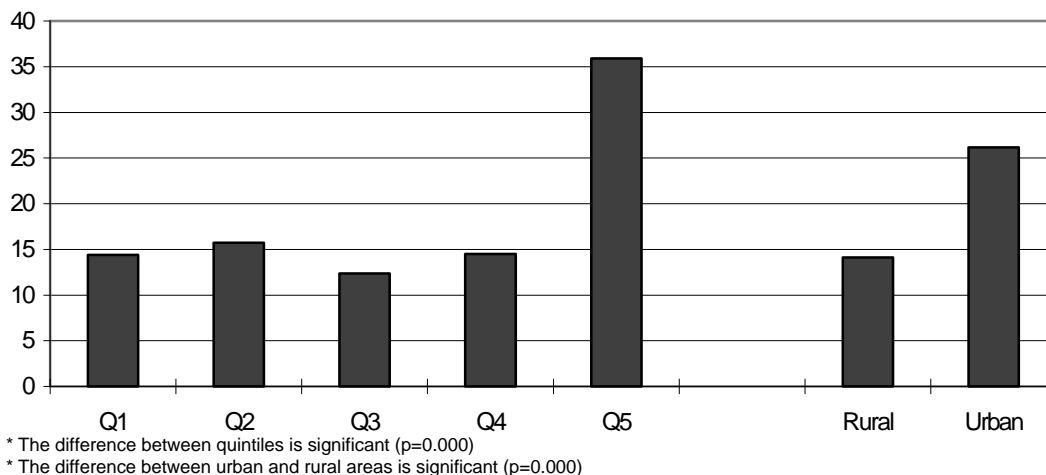
The OHS provides data on the percentage of respondents who sought care (either in the public or private sector) who were seen by a doctor. Figure 4.16 indicates that while nearly 58 percent of rural residents who sought care for illness or injury were seen by a doctor, nearly 82 percent of urban residents were seen by a doctor. There were even greater differentials between income quintiles, with 55 percent and 85 percent of respondents in quintiles 1 and 5 respectively being seen by a doctor when seeking care.

Figure 4.16: Percentage of Ill/Injured Respondents Seeking Care Who Were Seen by a Doctor



None of the databases had data on the number of people who received medicines at the facility where they received treatment. However, the LSDS requested information on the cost of medicines. Figure 4.17 reflects the percentage of those who sought care and who “bought medicine”, but it is likely to significantly underestimate the percentage who actually received medicine. There was a more than two-fold difference in the purchase of medicines between quintiles 1 and 5, and a slightly smaller differential between the rural and urban areas.

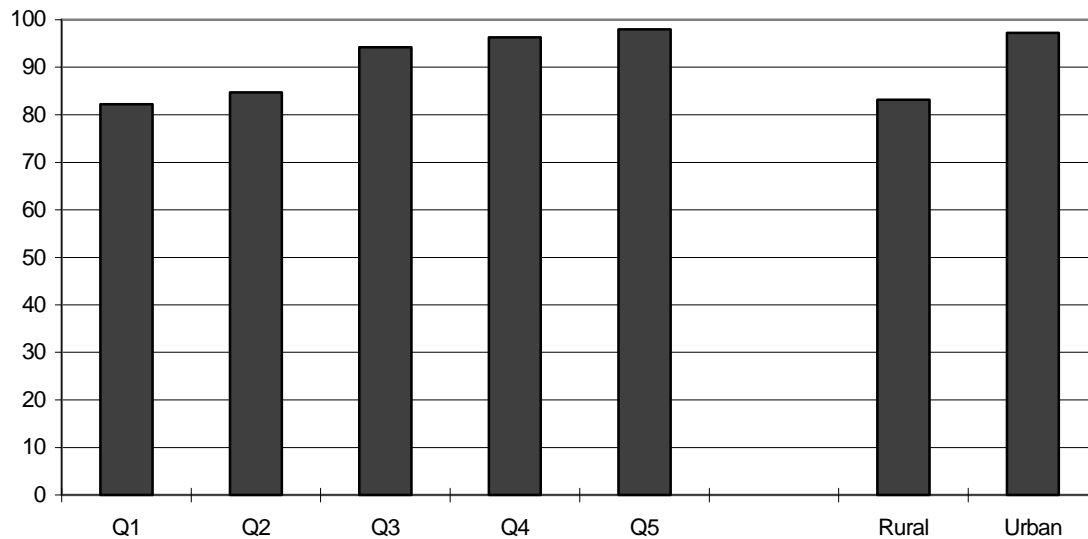
Figure 4.17: Percentage of Those Who Were Ill or Injured and Sought Care Who Bought Medicines



4.2.5 Health Service Use by Pregnant Women

The LSDS does not contain any information on the use of health services by pregnant women. Figure 4.18 contains data derived from the OHS and shows the percent of children who were born in the previous year (i.e., all children who were 1 year old or younger) who were delivered in a hospital or other health facility. While 82 percent of children falling within quintile 1 were delivered at a health facility, nearly 98 percent of children within quintile 5 were delivered at a health facility. There were similar differences between rural and urban areas.

Figure 4.18: Percent of Deliveries in Hospital or Other Facility

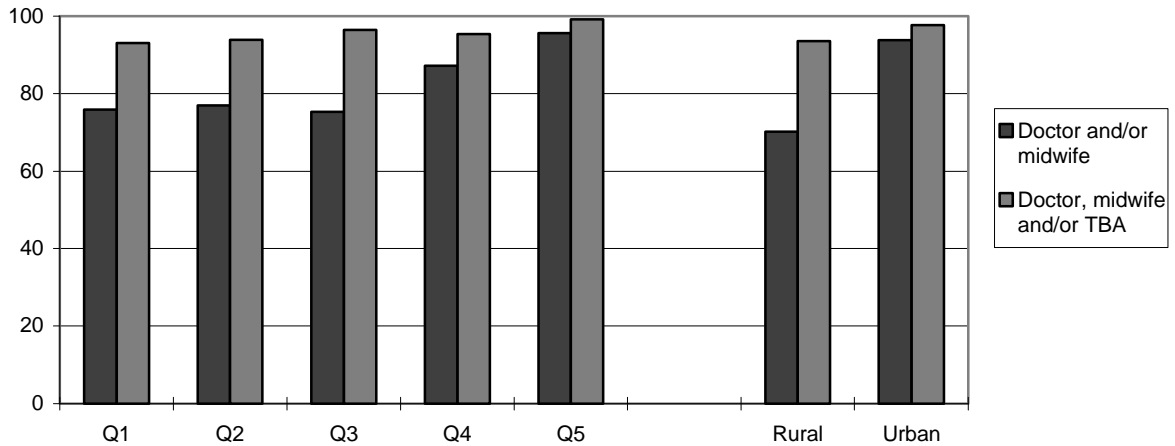


* The difference between quintiles is significant ($p=0.000$)

* The difference between urban and rural areas is significant ($p=0.000$)

Figure 4.19 indicates the percentage of deliveries that were attended by a trained health worker (the first column indicating whether it was attended by a doctor and/or midwife, while the second also includes traditional birth attendants [TBA]), irrespective of the place of delivery. This figure is based on data derived from the CASE survey. It highlights that the vast majority of births are attended by a trained health worker, and that TBAs play a particularly important role in the rural areas and among poorer communities.

Figure 4.19: Percentage of Births Attended by a Health Worker

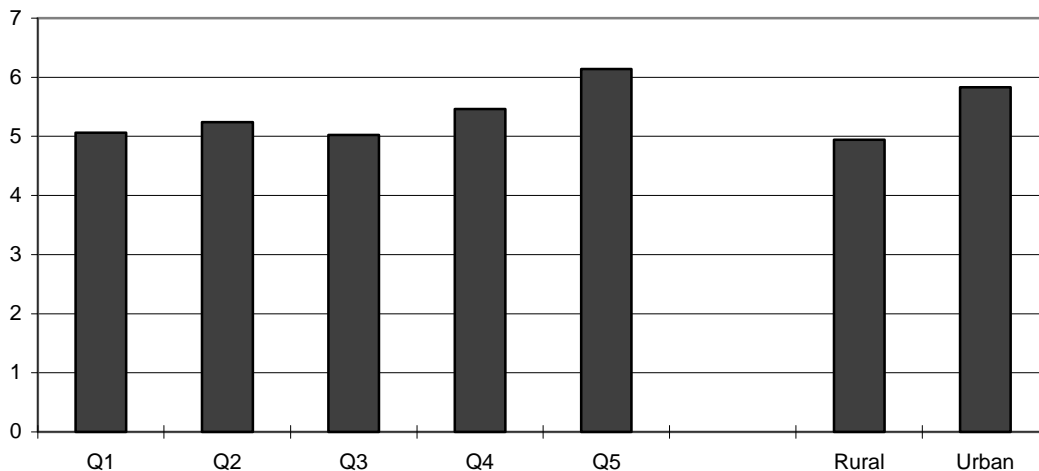


* The difference between quintiles is significant for both categories of health worker ($p=0.000$)

* The difference between urban and rural areas is significant for both categories of health worker ($p=0.000$)

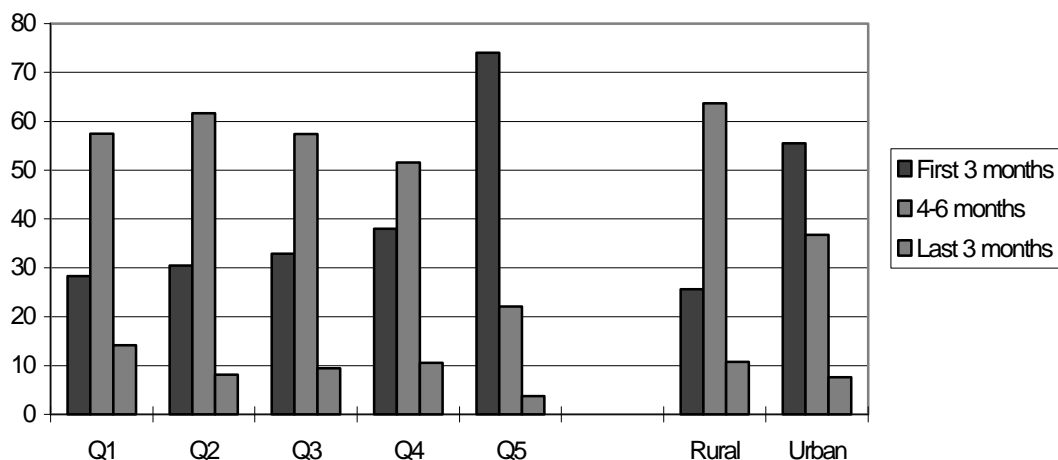
Prenatal utilisation by pregnant women could be estimated from the CASE database. This survey recorded the number of prenatal visits during a pregnancy in terms of the following categories: 1-2 visits, 3-5 visits, 6-8 visits, and 9 visits. The midpoint of these categories (i.e., 1.5, 4, 7) was used as the basis of estimating per capita utilisation (see Figure 4.20). There were marginal differences between income quintiles and geographic areas in the proportion of pregnant women who received prenatal care. (See Annex A for more details.)

Figure 4.20: Per Capita Utilisation of Prenatal Care by Pregnant Women



The CASE survey also provided information on the timing of the first prenatal visit (see Figure 4.21). While the vast majority of pregnant women in quintile 5 received prenatal care in the first three months of their pregnancy, the majority of women in all other quintiles first received prenatal care in the fourth to sixth month of their pregnancy. A similar trend is evident between rural and urban dwellers.

Figure 4.21: Timing of First Prenatal Visit (percentage of pregnant women)

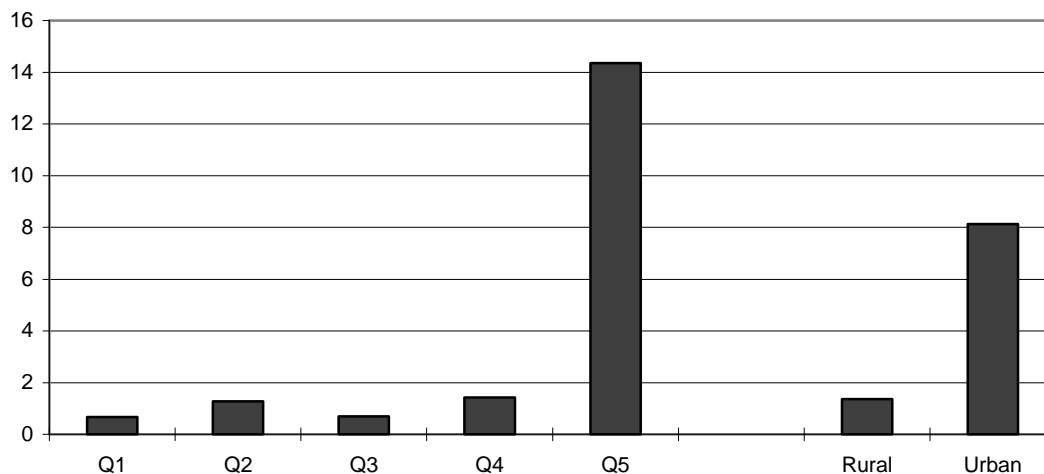


* The difference between quintiles is significant for all three timing categories ($p=0.000$)
 * The difference between urban and rural areas is significant ($p=0.000$ for 'first 3 months' and '4-6 months' and $p=0.015$ for 'last 3 months')

4.2.6 Expenditure on Health Care

Figure 4.22 reflects the average expenditure on medicines by those who sought care according to the LSDS. Expenditure on medicines ranged from less than US\$1 in quintile 1 to over US\$14 in quintile 5. The range between rural areas (US\$1.4) and urban areas (US\$8.1) was smaller.

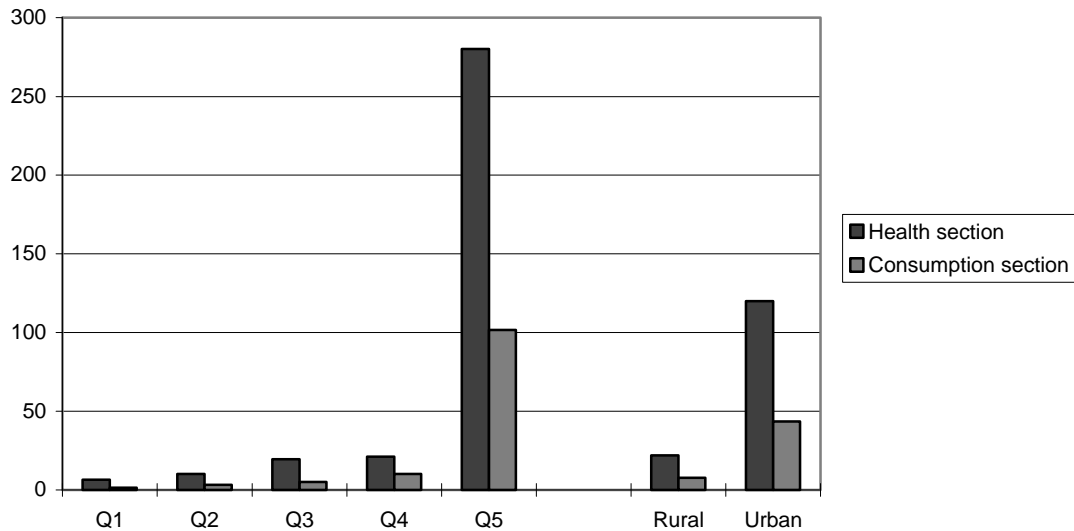
Figure 4.22: Average Expenditure on Medicine by Those Who Sought Care (US\$)



The LSDS has two sections that collate data on health expenditure: the 'health' section asks "How much was charged in total [for the health service used]"; and the 'occasional non-food spending' section asks "In the past year, about how much was spent by the household on health care (excluding payments to medical schemes)". Figure 4.23 shows annual per capita expenditure estimates based on both the 'health' section of the questionnaire (first column) and the 'occasional non-food spending' section (second column). As expected, the expenditure levels from the 'health' section (with a two-week recall period) are about 2.8 times higher than the expenditure levels from

the ‘occasional non-food spending’ section (with a year-long recall period). There are substantial differences between per capita expenditure in quintile 1 (US\$6.5) and quintile 5 (US\$280). The differences between rural areas (US\$21.7) and urban areas (US\$120) are considerably smaller.

Figure 4.23: Per Capita Annual Spending on Health Care (US\$)



4.3 Analysis of Household Survey Results

This section provides brief comments on the findings from the various household surveys.

4.3.1 Income Distribution

The LSDS indicates that residents of urban areas on average have more than 3.15 times greater consumption expenditure levels than residents of rural areas. With respect to income quintile differences, those within quintile 5 on average have consumption expenditure levels that are nearly 21 times higher than those in quintile 1. The major disparities relate to income differentials between income groups (quintiles), although rural/urban disparities are also quite high. The disparities in South Africa are greater than those evident in any of the countries reviewed in Baker and van der Gaag (1993).

4.3.2 Reported Illness/Injury

The LSDS indicates higher levels of reported illness/injury in urban areas than in rural areas (1.3 times higher). There are more substantial differences between income groups, with individuals in quintile 5 reporting illness/injury about 2.3 times more frequently than individuals in quintile 1. This reflects a similar trend to that found in the Baker and van der Gaag study, where there were higher levels of self-reported illness/injury in quintile 5 than in quintile 1 (with the exception of Côte d’Ivoire). Intuitively, one would have expected the reverse given the higher morbidity and mortality rates for low income groups. These findings suggest lower ‘recognition’ of illness/injury for low income groups than for higher income groups. This could be partially explained by the fact that poor

rural dwellers cannot ‘afford’ to be ill (either in terms of the opportunity cost of lost work time or due to poor health service access), while high income urban dwellers are likely to have relatively good access to health services as well as sick leave benefits in their formal sector jobs.

In relation to the age distribution of reported illness/injury, as expected, the 65 year and above age group has the highest levels. The 0-5 year and 15-64 year age groups have very similar utilisation levels, which are the next highest after the 65 year and above age group. The 6-14 year age group had the lowest levels of reported illness/injury. The elderly report more than twice as much illness/injury as the 0-5 year and 15-64 year age groups, and 4.5 times more illness/injury than the 6-14 year age groups.

4.3.3 Average Number of Days Inactive Due to Illness/Injury

The reverse trend is evident in terms of days inactive than that for reported illness/injury. Residents of rural areas reported 1.15 times more days inactive in the previous two weeks due to illness/injury than residents of urban areas. Individuals in quintile 1 reported 1.44 times more days inactive than individuals in quintile 5. Thus, although there are relatively lower levels of reported illness in rural areas and by individuals in the lowest income quintiles, they appear to be more severely ill. This supports the earlier statement that the rural poor are less able to ‘afford’ to be ill and thus do not ‘recognise’ or acknowledge illness until it is more serious.

These findings are similar to those in the Baker and van der Gaag study, where it was concluded that episodes of illness in rural areas were more severe than those in urban areas, although self-reported illness was higher in urban areas.

The age breakdown of the number of days inactive shows that the elderly (65 years and above age group) reported the highest number of days inactive in the previous two weeks. Working age adults (15-64 years age group) had the second highest number of days inactive, while children under 6 and between 6 and 14 years had the lowest (and very similar) reported days of inactivity.

The table presenting the average number of days inactive due to illness in the past year combines the reported illness and reported days of inactivity. Thus, although poor rural dwellers are inactive for more days per illness episode than rich urban dwellers, they on average have fewer days inactive during the year as a result of the rural poor’s relatively lower reported illness episodes per person. This table highlights that the differential for reported illness is greater than the differential for days inactive. It also supports the previous suggestion that poor rural dwellers are more reluctant to ‘recognise’ illness and take time off from their normal activities (unless seriously ill) than rich urban dwellers who have the privilege of paid sick leave if in formal sector employment.

4.3.4 Care Seeking Behaviour of the Ill and Injured

The LSIDS reflects very high levels of health care use by those who report illness or injury. There is a small differential between geographic areas, with relatively higher use in the urban areas (nearly 84 percent sought care in urban areas compared with 80 percent in rural areas). This is very likely to be attributable to greater geographic accessibility of health services in the urban areas. However, there is a much greater differential in use of services between income quintiles (while about 73 percent of the ill in quintile 1 sought care, 85 percent of the ill in quintile 5 sought care).

The percentage of the ill and injured who sought care is considerably higher in South Africa than in any of the countries included in the Baker and van der Gaag study. This reflects the much better access to health care providers in South Africa (e.g., higher health facility and health personnel to population ratios in South Africa). However, given the very low levels of reported illness/injury in South Africa, there may be relatively lower ‘recognition’ of illness within South Africa. This highlights the difficulty of using self-assessed health status as the denominator in comparative studies.

4.3.5 Use of Private Sector Services

A number of the preceding analyses suggested significantly higher levels of private sector utilisation by urban dwellers and, more especially, by high income groups. This is supported by the survey data. For the reasons highlighted earlier, the OHS is regarded as the most reliable source of information on private sector utilisation. Based on the OHS data (see Annex A), residents of urban areas who were ill or injured were 2.2 times more likely to use private sector services than residents of rural areas (the geographic differential is 2 if ‘those who sought care’ is used as the denominator). Once again, income groups differentials were higher, with individuals in quintile 5 being 3.2 times more likely to use private sector services than individuals in quintile 1 (the income group differential is 2.7 if ‘those who sought care’ is used as the denominator). The reason is the relatively greater geographic access to private providers in urban areas and the relatively greater financial access for higher income groups. It should be noted that South Africa does not have a large not-for-profit private sector (e.g., missions and non-governmental organisations), which is likely to be an important source of care for rural dwellers and low income groups in many other developing countries. Thus, although international data are not currently available for comparison purposes, it is likely that the private sector utilisation differentials are quite high in South Africa.

4.3.6 Use of Hospital-based Services

There are relatively high levels of hospital utilisation by those who are ill/injured in South Africa (relative to those reported in the Baker and van der Gaag study). This particularly applies to rural areas. In contrast to the trend in the Baker and van der Gaag study, residents of rural areas in South Africa are more likely (1.2 times) to use hospital-based services than residents of urban areas. There are three particularly important potential reasons for the higher use of hospital services in the rural areas. Firstly, rural dwellers are likely to prefer to use hospitals due to the presence of doctors and the better routine availability of medicines at rural hospitals (compared to public clinics). Secondly, there are fewer alternative sources of health care, particularly in terms of private medical practitioners, in rural areas. Thirdly, the greater use of hospitals may also be related to the fact that rural dwellers appear to be more seriously ill when they ‘recognise’ being ill (see the section on the number of days inactive).

There are also differences between income groups. The LSDS suggests that individuals in quintile 1 are 3.5 times more likely to seek care at a hospital than individuals in quintile 5. There is particularly low use by urban dwellers falling into the fifth income quintile. The reasons for these differences are similar to those for geographic areas (i.e., preference for hospital-based care due to the presence of doctors and good supplies of medicines and more serious illness for lower income groups). In addition, the particularly low use of hospital services by high income urban dwellers is likely to be attributable to their apparent preference for using private medical practitioner services (see the relatively high levels of doctor use in urban quintile 5).

4.3.7 Use of Doctor-provided Services

South Africans have relatively good access to doctor-provided services. In urban areas, consultations with doctors in South Africa were considerably higher than in Côte d'Ivoire and Ghana, similar to Peru, but lower than in Jamaica and Bolivia. However, in rural areas, consultations with doctors were higher in South Africa than in all of the countries included in the Baker and van der Gaag study, with the exception of Jamaica.

Geographic and income group differences are both striking. Residents of urban areas are about 1.4 times more likely to consult a doctor than residents of rural areas. Individuals in quintile 5 are nearly 1.6 times more likely to consult a doctor than individuals in quintile 1. These findings reflect both the geographic distribution of doctors (with a particularly heavy concentration of private medical practitioners in the urban areas) and the preference of high income groups for consulting a doctor.

4.3.8 Purchase of Medicine

Urban residents are nearly twice as likely to purchase medicines as rural residents (using those who were ill or injured as the denominator). There were even greater differentials between income groups, with individuals in quintile 5 being three times more likely to purchase medicines than individuals in quintile 1. The research team in fact anticipated that income differentials would be even greater, expecting that the vast majority of urban residents in quintile 5 would purchase medicine. It should be noted that the data may underestimate actual medicine purchases because it was based on whether or not respondents indicated how much had been spent on medicine (as opposed to whether or not they purchased medicine). This distinction is important for two reasons relevant to the South African health system. The first reason is that a high percentage (approximately 70 percent) of private medical practitioners dispenses medicines. Thus, patients pay a total amount which includes consultation fees and medicine costs (and would thus not specify a separate amount for the cost of medicines). The second reason is that members of medical schemes frequently do not have to pay directly for services received (including medicines dispensed by a doctor or pharmacist). The account is sent to the medical scheme who reimburses the provider on their behalf. Thus, medical scheme members are seldom aware of the cost of health services (particularly if the recall period is a month or less as they will not have seen the summary statement prepared by the medical scheme after providers are paid).

Relative to the Baker and van der Gaag study, South Africa has relatively low medicine purchasing levels. As indicated above, this may be partially attributable to under-reporting of medicine purchase in the private sector. However, it also suggests that there is relatively good access to medicines in the public sector. Public sector users either receive these medicines free of charge or pay a flat user fee for a health care consultation (whether or not medicines are dispensed).

4.3.9 Location of Deliveries and Attendance by a Trained Health Worker

A high percentage of deliveries occur within a hospital or other health facility in South Africa (nearly 90 percent on average). Over 97 percent of deliveries in urban areas take place within a health facility, whereas an average of 83 percent occurs in health facilities in rural areas. There are slightly higher differentials between income groups, with 82 percent of deliveries in quintile 1 and nearly 98 percent of deliveries in quintile 5 occurring in health facilities.

While there is relatively less access to hospitals and other health facilities for deliveries in rural areas and for lower income groups, the role of traditional birth attendants in serving these groups should be recognised. The CASE survey indicates that while an average of 83 percent of deliveries were attended by a doctor and/or nurse/midwife, this increased to nearly 96 percent when TBAs were taken into account. The inclusion of TBAs made a particularly dramatic impact on the percentage of deliveries attended by a trained health worker in rural areas and the lower income quintiles in urban areas.

South Africa has a relatively high maternal mortality rate (e.g., approximately 250 per 100,000 live births for African women (Fawcus et al. 1996)), and the high levels of deliveries attended by a trained health worker are thus somewhat surprising. However, it should be noted that the CASE survey was conducted after the introduction of the 'Free care for children under 6 and pregnant women' policy. Thus, the proportion of deliveries attended by a health worker may be higher after the policy was introduced.

4.3.10 Utilisation of Prenatal Services

There were relatively high levels of prenatal service utilisation, with an average of nearly 90 percent of pregnant women receiving prenatal services. Once again, this may be partially attributable to the introduction of the 'Free care for children under 6 and pregnant women' policy. There are relatively small geographic and income group differentials. It is very surprising that the percentage of pregnant women who received prenatal care is lower in the higher income quintiles in urban areas. The reason for this is unclear, but may be attributable to high income groups seeking 'alternative' pregnancy-related services (e.g., natural birth counsellors).

However, there are more substantial differences in the timing of the first prenatal service attendance. Whereas 77 percent of pregnant women in the urban quintile 5 group used prenatal services in the first three months of their pregnancy, only 23-25 percent of pregnant women in rural areas who fell within quintiles 1 and 2 attended prenatal services at such an early stage of their pregnancy. However, over 90 percent of all pregnant women had used prenatal services by the sixth month of their pregnancy.

4.3.11 Expenditure on Medicines

Residents of urban areas in South Africa on average spend about 4-6 times more (depending on what variable is used as the denominator) on medicines than residents of rural areas. The differential between income groups is even higher, with individuals in quintile 5 spending on average between 21 and 25 times more (depending on what variable is used as the denominator) than individuals in quintile 1. Once again, it should be noted that the level of expenditure on medicines (particularly by high income groups) is likely to be underestimated. The results do indicate the relatively good access to medicines (either free of charge or included in the flat user charge) in the public sector. This seems to be particularly important for low income groups and residents of the rural areas.

4.3.12 Spending on Health Services

As indicated previously, estimated annual per capita health service expenditure is significantly higher using the two-week recall period data than using the year recall period. There are quite

striking differences in health service expenditure between geographic areas and income groups using the per capita annual expenditure estimates which were based on the two-week recall period. On average, urban dwellers spend 5.5 times more on health services than rural dwellers. Income group differentials are considerable, with individuals in quintile 5 spending on average 43 times more than individuals in quintile 1. These differentials are largely attributable to differences in the relative utilisation of public and private sector services. Whereas there are very low user fees for public sector services, with some services being provided free and certain categories of patients being exempted from fees, private sector care is relatively costly (particularly given the third-party payer, fee-for-service financing mechanism which predominates in the private sector).

5. Conclusions and Policy Implications

South Africa has substantial economic resources relative to other countries in Sub-Saharan Africa. Only Gabon has a higher GNP per capita than South Africa, according to World Bank data. However, South Africa has experienced declining real per capita GDP since the early 1980s. In addition, despite having high income levels by African standards, its human development indicators are relatively poor. Thus, South Africa ranks lower on the inter-country Human Development Index (HDI) comparison than it does in the World Bank's per capita GNP rankings (UNDP 1996).

This is largely due to the substantial inequalities in the distribution of income and social services. Apartheid policies were in no small measure responsible for these differences. Thus, there is a great need for the government, which came to power during the first democratic elections in 1994, to redress these inequalities. South Africa also has relatively high poverty levels. In order to promote human development, government spending on social services (particularly education and health) should receive a high priority (UNDP 1996).

Within the health sector, South Africa also has relatively high levels of resources. South Africa has one of the highest levels of health expenditure as a percent of GDP among middle income countries. However, South African health status indicators do not compare well with other middle income countries. Part of the explanation for this apparent anomaly is that health care resources in South Africa are maldistributed between the public and private sectors, on a geographic basis and between levels of care. The significant income distribution inequities in South Africa are clearly another major contributory factor.

The public/private sector mix is an area that requires serious consideration by policymakers. Approximately 60 percent of health care expenditure in South Africa is attributable to the private sector, where the majority of the most highly trained health professionals work. However, about 23 percent of the South African population have regular access to private sector health care in terms of coverage by a third-party payer mechanism. Few South Africans who are not covered in this way can afford to use private sector health services. Direct household payments to private providers tend to be restricted to the primary care level. Household survey data suggest that only about 31 percent of all South Africans use private sector services when they are ill (see OHS results in section 3 of Appendix A).

Thus, innovative ways of making resources (particularly human resources) currently located in the private sector accessible to a greater proportion of the South African population is a key policy challenge. In particular, given that approximately 60 percent of doctors work in the private sector, which currently only serves in the range of 30 percent of the population, ways of drawing on this important human resource should be explored. For example, private general practitioners could be offered sessional appointments in government facilities in areas where there are no (or too few) publicly employed doctors. Another alternative, as proposed by one government committee, is the establishment of accredited private practitioner groups who could provide comprehensive primary care services on a contract basis for the state (Republic of South Africa 1995).

Public sector health services are primarily funded from general tax revenue collected by the national government. Revenue generated by provincial and local governments contributes a relatively

small proportion to public health expenditure. Although user fees are levied at all non-primary level health facilities, fee revenue is not retained within the health sector (it is paid into the respective Provincial Revenue Funds). User fees currently generate revenue which is equivalent to between 5 and 6 percent of total public sector health care expenditure.

Public sector health services are thus heavily dependent on general tax revenue. General tax revenue is currently a progressive financing mechanism, largely due to the high proportion contributed by personal income tax revenue. However, the share of general tax revenue attributable to VAT is increasing, and the regressivity of this financing source to some extent offsets the more progressive income tax component. More detailed tax incidence data are required to fully evaluate the degree of progressivity of general tax revenue. Given the changing composition of general tax revenue, the degree of progressivity should be carefully monitored on a routine basis. In addition, a benefit-incidence analysis of public health resources is required.

Although the reliance on general tax funding for public sector services has its advantages, not least of all that it is currently a progressive financing mechanism, there are also disadvantages. In particular, there are growing constraints on government consumption expenditure. Despite slow rates of economic growth over the past decade and a half, government expenditure has increased more rapidly than total revenue since the mid-1980s. Deficit financing grew during this period, and by 1995/96, the total government debt was equivalent to 56 percent of GDP (Department of Finance 1996). The servicing of debt currently accounts for nearly 20 percent of government expenditure. As a result of this considerable debt burden, the government has committed itself to reducing the overall budget deficit, while at the same time avoiding increases in the overall tax burden. This requires a reduction in non-interest government consumption expenditure. In 1996, the government announced a new macro-economic policy, called the Growth, Employment and Redistribution (GEAR) policy which set extremely ambitious budget reduction targets. Thus, given the prevailing economic and fiscal environment, there are likely to be serious constraints on the government health budget.

Household survey data suggest that there is relatively good access to health services in South Africa, with more than 80 percent of those reporting illness or injury seeking care. However, there does appear to be lower access in rural areas, particularly for individuals in the lowest income quintiles. What is of even greater concern is the relatively low levels of 'recognition' of illness in low income households and rural dwellers in general. For example, individuals in the rural quintile 1 group are 2.3 times less likely than individuals in the urban quintile 5 group to report suffering from an illness. This is contrary to morbidity and mortality trends that suggest higher levels of ill health and premature mortality among low income groups, particularly in the rural areas. The result of this is that poor rural dwellers appear to be more seriously ill before they can 'afford' to recognise being ill and hence seek care (see section 4.3.3 for differential number of days inactive). As suggested earlier, it is possible that this may be attributable to lower levels of health service access in rural areas and to the relatively high opportunity costs of taking time off from normal activities to seek care. Additional research is required to determine whether this is the case, or whether cultural perceptions and/or differences in information about health services play a role.

The role of good geographic and financial access in encouraging the use of health services at an early stage in an illness has been recognised by various authors (Berman et al. 1987; Gilson 1988; Weaver 1995). If low income households are deterred from seeking care until an illness is severe, poverty could be aggravated. This relates to the fact that more advanced illnesses tend to require more expensive treatment and have a more significant adverse effect on ability to work and generate income (Berman et al. 1987; Gilson 1988; Huber 1993). This could lead to long-term impoverishment if debts are accumulated or assets are sold to cover health care expenses.

Thus, the household survey data suggest that improved access to health services in rural areas, particularly in areas with high poverty levels, should be a policy priority. In particular, improved access to high quality primary care services should be prioritised. There are relatively high levels of hospital service use in rural areas. This relates partially to primary care service access problems in terms of the number and distribution of facilities and the perceived quality of care provided at these facilities (particularly the availability of doctors and essential medicines). However, it may also be a reflection of the fact that rural dwellers are on average more severely ill for each reported episode of illness (see section 4.3.3 for differential number of days inactive).

If geographic access and quality of care were improved at the primary care level, low income dwellers may be more likely to seek care at an earlier stage of an illness. Improved geographic access to primary care facilities will also improve financial access to health services. This relates to the introduction of free primary care services in 1996. However, many rural dwellers do not derive benefit from this as they have to travel considerable distances to use primary care services. If they avoid using a service until they are more seriously ill, they will be forced to use a hospital where they will have to pay relatively high user fees (as there is a penalty fee for those who have ‘bypassed’ primary care facilities).

Given the greater severity of illness for rural dwellers per reported illness episode, the significant disparities in doctor consultations between rural and urban areas is also a concern. There is a serious geographic maldistribution of health care personnel, particularly doctors, in South Africa. Addressing this maldistribution is thus another area that should receive priority in policy considerations.

Household survey data also indicate that similar problems apply to the poor living in urban areas. For example, there is relatively low ‘recognition’ of illness, use of health services when ill, greater severity of illness per illness episode and relatively high hospital utilisation levels. The only difference is greater access to doctor-provided services. These findings suggest that improved access to high quality primary care services in urban areas containing low income groups should also receive policy priority.

Given the current economic and fiscal constraints, improvements in access to high quality primary care services in rural and urban areas for low income groups will largely have to be achieved through a redistribution of resources within the public health sector. The maldistribution of resources between levels of care, particularly the concentration of resources in hospitals, has been recognised as an area that requires policy intervention. The fact that nearly 50 percent of South Africans use a hospital when ill is of considerable concern. It is likely that a high proportion of these episodes of illness could have been treated at primary care facilities if they are accessible and perceived to be of high quality. Instead, more costly hospital-based services are being used. Thus, a relative redistribution of resources (particularly financial and human resources) towards primary care services is urgently required.

The household surveys also provide insights into maternal health services. Given the relatively high levels of infant and maternal mortality in South Africa (see section 2.1), maternal and child health has been prioritised in the Department of National Health’s policy guidelines. Currently, a high proportion of deliveries occur in a hospital or other health facility. Irrespective of whether a delivery occurs in a health facility or at home, nearly all births are attended by a trained health worker. This is a significant accomplishment and is likely to contribute to reducing the maternal mortality rate.

Another health service that could contribute to a reduction in maternal mortality is that of prenatal services. The overall utilisation of prenatal services is better than the 'norm' recommended within South Africa (the norm is an average of 4.64 visits per pregnancy, based on a recommended four visits for multigravidae and six visits for primigravidae and high-risk pregnancies) (Rispel et al. 1996). However, although coverage is relatively high, it is currently below the recommended 100 percent. Of particular concern is the relatively low proportion of pregnant women who received prenatal care during the first three months of their pregnancy (particularly rural and low income urban dwellers). There is thus scope for improvement of prenatal services. It would be important to undertake research into the reasons for the late initiation of prenatal care. The findings could assist with service improvements, for example, if lack of information about prenatal care is identified as a problem, increased health promotion activities may be required.

In summary, South Africa has relatively high levels of health sector resources and comparatively good health service access. The major policy challenges are to address the relative maldistribution of resources between public and private sectors (relative to the population that uses each sector), and to redistribute existing public sector health resources between geographic areas and levels of care. These steps will contribute to reducing the relatively high levels of preventable ill health and premature mortality. However, policy interventions to reduce the vast socio-economic inequities are also required if human development is to be promoted in South Africa.

6. Areas for Further Research

While this study has produced valuable findings that have important health policy implications, it has also highlighted areas that require further investigation. There are two categories of such research:

- ▲ Research to further explain certain findings in this study; and
- ▲ Research to extend the scope and techniques of this study.

With regard to the first category of research, this study indicates that there are relatively low levels of ‘recognition’ of illness in low income households and among rural dwellers, which is contrary to other data on the distribution of ‘ill-health’. It was postulated that this may be attributable to lower levels of health service access in rural areas and to the relatively high opportunity costs of seeking care. However, further research is required to determine whether this is the case, or whether cultural perceptions and/or differences in information about health services play a role. There are also other questions about care seeking behaviour (such as reasons for late initiation of prenatal care) that could be better understood with additional research. Findings from such research could suggest ways in which services could be improved and/or identify demand-side issues that need to be addressed.

In relation to the second category of research, this study specifically focused on the analysis of health service utilisation and expenditure. It would be useful to extend this analysis, particularly through the use of the more sophisticated statistical analysis techniques employed in the “ECuity” study. Of even greater importance is the analysis of health care financing in South Africa, which was not the primary focus of the current research project. As the South African health system is currently undergoing extensive restructuring, including health financing reforms, insights into the relative progressivity of alternative financing mechanisms will be of critical importance.

The feasibility of extending this research project into a second phase, to address the above and other issues, is currently being explored.

Annex A: Tabular Presentation of Results

Distribution And Socio-Demographic Composition Of The Population

Mean Household Size

	Rural	Urban	Total
Quintile 1	8.38	8.44	8.39
Quintile 2	7.98	8.28	8.06
Quintile 3	6.33	7.09	6.64
Quintile 4	5.23	5.31	5.28
Quintile 5	3.36	3.74	3.68
Total	7.09	5.62	6.41

Average Per Capita Consumption (SA Rand And US\$)

	SA Rand			US\$*		
	Rural	Urban	Total	Rural	Urban	Total
Quintile 1	732.53	771.79	739.56	209.29	220.51	211.30
Quintile 2	1,399.39	1,422.02	1,405.34	399.83	406.29	401.52
Quintile 3	2,270.71	2,295.71	2,280.88	648.78	655.92	651.68
Quintile 4	3,970.56	4,258.79	4,153.11	1,134.45	1,216.80	1,186.60
Quintile 5	13,080.61	15,901.98	15,474.59	3,737.32	4,543.42	4,421.31
Total	2,406.85	7,581.05	4,820.75	687.67	2,166.02	1,377.36

* Exchange rate used to convert expenditure into US\$ was South African Rand 3.5 = US\$1.

Water Access (% with tap in house or yard)

	Rural	Urban	Total
Quintile 1	33.90	95.90	45.00
Quintile 2	42.70	99.90	57.70
Quintile 3	46.20	98.70	67.50
Quintile 4	54.40	99.60	83.00
Quintile 5	80.40	99.90	96.90
Total	44.50	99.30	70.10

Access to Water Borne Sewerage (% with flush toilet)

	Rural	Urban	Total
Quintile 1	1.00	40.40	8.10
Quintile 2	2.10	65.90	18.90
Quintile 3	5.60	68.10	31.00
Quintile 4	12.00	84.50	58.00
Quintile 5	71.20	97.50	93.50
Total	7.90	80.90	41.90

Age Distribution (% distribution)

	0-5 years	6-14 years	15-64 years	65+ years
Quintile 1	16.72	29.44	49.47	4.35
Quintile 2	15.29	27.18	52.76	4.77
Quintile 3	13.35	23.79	58.21	4.65
Quintile 4	10.81	20.75	63.99	4.46
Quintile 5	6.84	14.46	73.17	5.54
Rural	14.42	26.23	54.33	5.02
Urban	10.51	19.56	65.48	4.45

Education

	None	Studying	Primary	Secondary	Post-school
Quintile1	34.7	37.1	18.4	9.6	0.2
Quintile2	28.9	37.0	19.2	14.5	0.4
Quintile3	24.4	36.2	18.7	20.0	0.7
Quintile4	18.6	32.6	16.3	30.4	2.0
Quintile5	10.5	26.1	8.9	37.9	16.3
Rural	29.7	36.6	18.5	13.8	1.5
Urban	16.2	30.6	13.8	32.4	6.8

Reported Illness and Injury and Severity of Illness

Percentage Ill or Injured In Previous Two Weeks

	Rural	Urban	Total
Quintile 1	5.26	5.93	5.38
Quintile 2	7.01	7.05	7.02
Quintile 3	8.93	7.76	8.45
Quintile 4	10.15	9.44	9.70
Quintile 5	11.30	12.29	12.14
Total	7.57	9.65	8.54

An alternative indicator of incidence of reported illness/injury, which allows for adjustment for different recall periods between surveys, is the average number of illness episodes per person per annum. This indicator was calculated in the following way: (Number of people who were ill or injured in the previous 2 weeks/Total number of people in sample)/14 days x 365 days.

Average Number Of Illness Episodes Per Person P.A.

	Rural	Urban	Total
Quintile 1	1.37	1.55	1.40
Quintile 2	1.83	1.84	1.83
Quintile 3	2.33	2.02	2.20
Quintile 4	2.65	2.46	2.53
Quintile 5	2.95	3.20	3.17
Total	1.97	2.52	2.23

Age Breakdown of Illness/Injury

0-5 years						
	% ill/injured in previous two weeks			Ave. no. of illness episodes p.c. p.a.		
	Rural	Urban	Total	Rural	Urban	Total
Quintile 1	4.51	6.35	4.78	1.18	1.66	1.25
Quintile 2	8.73	5.93	8.08	2.28	1.54	2.11
Quintile 3	8.85	9.13	8.97	2.31	2.38	2.34
Quintile 4	12.54	12.64	12.61	3.27	3.30	3.29
Quintile 5	8.96	16.67	15.68	2.33	4.35	4.09
Total	7.57	11.24	9.00	1.97	2.93	2.35
6-14 years						
	% ill/injured in previous two weeks			Ave. no. of illness episodes p.c. p.a.		
	Rural	Urban	Total	Rural	Urban	Total
Quintile 1	2.28	1.11	2.09	0.60	0.29	0.55
Quintile 2	3.39	2.58	3.19	0.88	0.67	0.83
Quintile 3	4.46	3.49	4.09	1.16	0.91	1.07
Quintile 4	4.78	6.49	5.81	1.25	1.69	1.52
Quintile 5	9.56	9.69	9.67	2.49	2.53	2.52
Total	3.54	5.66	4.38	0.92	1.48	1.14
15-64 years						
	% ill/injured in previous two weeks			Ave. no. of illness episodes p.c. p.a.		
	Rural	Urban	Total	Rural	Urban	Total
Quintile1	6.38	7.36	6.57	1.66	1.92	1.71
Quintile2	6.96	8.49	7.40	1.82	2.21	1.93
Quintile3	9.50	8.67	9.15	2.48	2.26	2.39
Quintile4	10.87	8.86	9.57	2.83	2.31	2.49
Quintile5	11.65	11.82	11.79	3.04	3.08	3.07
Total	8.38	9.88	9.15	2.19	2.58	2.39

65+ years						
	% ill/injured in previous two weeks			Ave. no. of illness episodes p.c. p.a.		
	Rural	Urban	Total	Rural	Urban	Total
Quintile 1	16.61	16.36	16.57	4.33	4.27	4.32
Quintile 2	21.79	18.07	20.94	5.68	4.71	5.46
Quintile 3	22.83	15.00	20.62	5.95	3.91	5.38
Quintile 4	18.90	26.70	22.94	4.93	6.96	5.98
Quintile 5	10.87	19.84	18.87	2.83	5.17	4.92
Total	19.69	20.33	19.97	5.13	5.30	5.21

The following table presents data calculated as follows: Total number of days inactive in the previous two weeks/Number who were ill or injured.

**Number of Days Inactive Due to Illness in Previous Two Weeks
(for those ill or injured)**

	Rural	Urban	Total
Quintile 1	5.27	6.05	5.42
Quintile 2	5.18	5.81	5.34
Quintile 3	5.66	4.93	5.39
Quintile 4	5.46	4.76	5.03
Quintile 5	3.24	3.85	3.77
Total	5.21	4.51	4.84

The following table presents data calculated in the following way: (Total number of days inactive in the previous two weeks/ Total number of people in sample)/14 days x 365 days.

Average Number of Days Inactive Due to Illness Per Person In Past Year

	Rural	Urban	Total
Quintile 1	7.22	9.35	7.60
Quintile 2	9.45	10.68	9.78
Quintile 3	13.19	9.98	11.88
Quintile 4	14.47	11.70	12.72
Quintile 5	9.56	12.35	11.93
Total	10.29	11.34	10.78

Age breakdown of average number of days inactive due to illness

0-5 years						
	No. of days inactive due to illness in previous 2 weeks (for those ill or injured)			Average no. of days inactive due to illness per person in past year		
	Rural	Urban	Total	Rural	Urban	Total
Quintile 1	5.41	4.75	5.28	6.36	7.86	6.58
Quintile 2	4.28	5.00	4.40	9.75	7.72	9.28
Quintile 3	3.58	3.97	3.75	8.27	9.46	8.76
Quintile 4	4.14	3.63	3.81	13.54	11.97	12.51
Quintile 5	1.83	3.11	3.01	4.28	13.49	12.31
Total	4.27	3.67	3.98	8.44	10.75	9.34
6-14 years						
	No. of days inactive due to illness in previous 2 weeks (for those ill or injured)			Average no. of days inactive due to illness per person in past year		
	Rural	Urban	Total	Rural	Urban	Total
Quintile 1	3.91	6.00	4.09	2.32	1.73	2.23
Quintile 2	4.58	4.69	4.61	4.05	3.16	3.83
Quintile 3	4.20	3.04	3.82	4.88	2.77	4.08
Quintile 4	5.17	4.11	4.46	6.45	6.95	6.75
Quintile 5	5.46	2.91	3.22	13.61	7.36	8.13
Total	4.48	3.49	3.97	4.14	5.15	4.54
15-64 years						
	No. of days inactive due to illness in previous 2 weeks (for those ill or injured)			Average no. of days inactive due to illness per person in past year		
	Rural	Urban	Total	Rural	Urban	Total
Quintile 1	5.61	6.23	5.75	9.33	11.96	9.86
Quintile 2	5.30	5.99	5.53	9.62	13.26	10.66
Quintile 3	6.27	5.23	5.85	15.53	11.83	13.95
Quintile 4	5.65	4.78	5.13	16.02	11.03	12.79
Quintile 5	2.88	3.87	3.71	8.74	11.93	11.41
Total	5.41	4.58	4.95	11.82	11.80	11.81
65+ years						
	No. of days inactive due to illness in previous 2 weeks (for those ill or injured)			Average no. of days inactive due to illness per person in past year		
	Rural	Urban	Total	Rural	Urban	Total
Quintile 1	4.85	6.67	5.15	20.99	28.44	22.22
Quintile 2	6.51	6.40	6.49	36.97	30.15	35.41
Quintile 3	6.40	6.87	6.49	38.08	26.85	34.91
Quintile 4	6.16	7.02	6.68	30.36	48.88	39.95
Quintile 5	7.60	5.60	5.73	21.54	28.97	28.16
Total	6.07	6.27	6.16	31.15	33.21	32.05

Care Seeking Behaviour

Percentage of Those Ill or Injured Seeking Care

	Rural	Urban	Total
Quintile 1	72.04	76.54	72.93
Quintile 2	79.13	77.30	78.65
Quintile 3	83.13	82.92	83.05
Quintile 4	85.56	85.75	85.68
Quintile 5	87.02	84.84	85.15
Total	80.52	83.80	82.25

Percentage of Ill or Injured Who Used Private Services (LSDS data)

	Rural	Urban	Total
Quintile 1	27.96	23.46	27.07
Quintile 2	35.37	28.37	33.52
Quintile 3	38.46	35.42	37.33
Quintile 4	47.89	47.15	47.43
Quintile 5	64.89	71.93	70.94
Total	39.42	54.37	47.30

Percentage of Those Who Sought Care Who Used Private Services (LSDS data)

	Rural	Urban	Total
Quintile 1	38.82	30.65	37.12
Quintile 2	44.69	36.70	42.62
Quintile 3	46.27	42.71	44.94
Quintile 4	55.97	54.99	55.36
Quintile 5	74.56	84.79	83.31
Total	48.95	64.88	57.51

Percentage of Ill or Injured Who Used Private Services (OHS data)

	Rural	Urban	Total
Quintile 1	13.15	24.84	16.51
Quintile 2	18.50	24.04	20.72
Quintile 3	17.46	29.90	24.20
Quintile 4	20.84	37.27	32.15
Quintile 5	35.93	55.37	52.97
Total	18.41	40.15	31.21

Percentage of Those Who Sought Care Who Used Private Services (OHS data)

	Rural	Urban	Total
Quintile 1	18.20	32.66	22.51
Quintile 2	23.18	30.57	26.11
Quintile 3	22.45	35.70	29.88
Quintile 4	26.88	43.81	38.86
Quintile 5	43.30	64.55	61.99
Total	23.89	48.03	38.58

Percentage of Ill or Injured Who Sought Care Who Were Seen By a Doctor*

	Rural	Urban	Total
Quintile 1	46.38	73.96	54.60
Quintile 2	57.31	72.63	63.39
Quintile 3	63.85	80.61	73.24
Quintile 4	61.95	80.62	75.17
Quintile 5	71.10	86.48	84.63
Total	57.62	81.48	72.13

* Data derived from the OHS

Distribution of Source of Care for Ill or Injured Respondents Who Sought Care

	Rural	Urban	Total
	Private doctor		
Quintile 1	30.38	24.19	29.10
Quintile 2	38.59	30.28	36.43
Quintile 3	39.10	38.69	38.95
Quintile 4	51.44	53.45	52.68
Quintile 5	71.05	81.98	80.40
Total	42.66	61.82	52.95
	Clinic		
Quintile 1	24.89	22.58	24.41
Quintile 2	26.05	14.68	23.10
Quintile 3	23.58	17.59	21.35
Quintile 4	19.34	13.55	15.77
Quintile 5	5.26	4.14	4.30
Total	21.94	10.15	15.61
	Hospital		
Quintile 1	34.18	46.77	36.79
Quintile 2	29.26	46.79	33.81
Quintile 3	28.36	38.69	32.21

	Rural	Urban	Total
Quintile 4	24.69	29.41	27.60
Quintile 5	18.42	9.01	10.37
Total	28.06	23.16	25.43
	Traditional healer		
Quintile 1	5.49	3.23	5.02
Quintile 2	4.50	2.75	4.05
Quintile 3	3.88	2.01	3.18
Quintile 4	2.88	0.51	1.42
Quintile 5	1.75	0.59	0.76
Total	3.95	1.04	2.39
	Other provider		
Quintile 1	4.64	3.23	4.35
Quintile 2	2.25	5.50	3.10
Quintile 3	5.07	3.52	4.49
Quintile 4	1.65	3.32	2.68
Quintile 5	2.63	3.99	3.79
Total	3.39	3.82	3.62

Percentage of Ill or Injured Who Bought Medicine

	Rural	Urban	Total
Quintile 1	10.33	11.11	10.49
Quintile 2	10.69	17.02	12.36
Quintile 3	9.93	10.83	10.26
Quintile 4	14.79	10.96	12.43
Quintile 5	12.98	33.46	30.57
Total	11.36	21.91	16.92

Percentage Who Sought Care Who Bought Medicine

	Rural	Urban	Total
Quintile 1	14.35	14.52	14.38
Quintile 2	13.50	22.02	15.71
Quintile 3	11.94	13.07	12.36
Quintile 4	17.28	12.79	14.51
Quintile 5	14.91	39.44	35.90
Total	14.11	26.15	20.58

Health Service Utilisation By Pregnant Women

Percent of Deliveries in Hospital or Other Facility*

	Rural	Urban	Total
Quintile 1	79.28	93.92	82.22
Quintile 2	77.59	97.26	84.68
Quintile 3	91.53	97.07	94.22
Quintile 4	92.82	97.95	96.31
Quintile 5	100.00	97.79	97.96
Total	83.11	97.19	89.91

* Data derived from the OHS

Percentage of Deliveries Attended By a Trained Health Worker (only doctor and/or nurse/midwife)*

	Rural	Urban	Total
Quintile 1	68.53	91.06	75.94
Quintile 2	70.82	90.60	77.01
Quintile 3	65.40	88.11	75.36
Quintile 4	76.33	93.14	87.16
Quintile 5	76.27	98.18	95.58
Total	70.20	93.76	83.06

* Data derived from CASE survey

Percent of Deliveries Attended By a Trained Health Worker (doctor and/or nurse/midwife and/or traditional birth attendant)*

	Rural	Urban	Total
Quintile 1	92.03	95.12	93.05
Quintile 2	92.61	96.58	93.85
Quintile 3	96.62	96.22	96.45
Quintile 4	91.72	97.39	95.37
Quintile 5	96.61	99.54	99.20
Total	93.53	97.69	95.80

* Data derived from CASE survey

Per Capita Utilisation of Prenatal Care By Pregnant Women*

	Rural	Urban	Total
Quintile 1	4.82	5.56	5.06
Quintile 2	5.01	5.76	5.24
Quintile 3	4.84	5.25	5.02
Quintile 4	5.01	5.71	5.46
Quintile 5	5.30	6.26	6.14
Total	4.94	5.83	5.42

* Data derived from CASE survey

Percent of Pregnant Women Who Received Prenatal Care*

	Rural	Urban	Total
Quintile 1	88.84	94.31	90.64
Quintile 2	86.38	93.16	88.50
Quintile 3	87.34	93.51	90.05
Quintile 4	92.90	91.50	92.00
Quintile 5	89.83	86.10	86.55
Total	88.59	90.26	89.50

* Data derived from CASE survey

Percent of Those Who Received Prenatal Care Whose First Visit Was During the First 3 Months of the Pregnancy*

	Rural	Urban	Total
Quintile 1	23.32	37.93	28.32
Quintile 2	25.68	40.37	30.51
Quintile 3	25.12	42.20	32.89
Quintile 4	22.29	46.79	37.99
Quintile 5	47.17	77.78	74.01
Total	25.64	55.49	42.08

* Data derived from CASE survey

Percent of Those Who Received Prenatal Care Whose First Visit Was During the 4-6 Months of the Pregnancy*

	Rural	Urban	Total
Quintile 1	63.23	46.55	57.52
Quintile 2	66.22	52.29	61.63
Quintile 3	62.80	50.87	57.37
Quintile 4	66.88	42.86	51.49
Quintile 5	49.06	18.25	22.04
Total	63.69	36.74	48.85

* Data derived from CASE survey

Percent of Those Who Received Prenatal Care Whose First Visit Was During the Last 3 Months of the Pregnancy*

	Rural	Urban	Total
Quintile 1	13.90	14.66	14.16
Quintile 2	8.11	8.26	8.16
Quintile 3	12.08	6.36	9.47
Quintile 4	10.83	10.36	10.53
Quintile 5	3.77	3.70	3.71
Total	10.79	7.58	9.02

* Data derived from CASE survey

Health Care Expenditure

Average Expenditure on Medicine by Those Ill or Injured

	SA Rand			US\$		
	Rural	Urban	Total	Rural	Urban	Total
Quintile 1	1.77	1.46	1.71	0.51	0.42	0.49
Quintile 2	3.91	2.38	3.51	1.12	0.68	1.00
Quintile 3	2.04	2.01	2.03	0.58	0.57	0.58
Quintile 4	4.04	4.41	4.27	1.15	1.26	1.22
Quintile 5	13.89	47.51	42.77	3.97	13.57	12.22
Total	3.84	23.81	14.36	1.10	6.80	4.10

Average Expenditure on Medicine by Those Who Sought Care

	SA Rand			US\$		
	Rural	Urban	Total	Rural	Urban	Total
Quintile 1	2.46	1.90	2.34	0.70	0.54	0.67
Quintile 2	4.94	3.08	4.46	1.41	0.88	1.27
Quintile 3	2.46	2.42	2.44	0.70	0.69	0.70
Quintile 4	4.72	5.15	4.99	1.35	1.47	1.42
Quintile 5	15.96	56.00	50.23	4.56	16.00	14.35
Total	4.77	28.42	17.46	1.36	8.12	4.99

A number of different approaches were adopted for addressing the issue of total health expenditure. The LSDS has two sections which collates data on health expenditure: the 'health' section asks "How much was charged in total [for the health service used]"; and the 'occasional non-food spending' section asks "In the past year, about how much was spent by the household on health care (excluding payments to medical schemes)". The first table uses the data from the 'health' section, using 'those who sought care' as the denominator (i.e., total expenditure on health services used/ number of people who sought care). The second table attempts to extrapolate the data from the 'health' section of the questionnaire to the whole year (i.e., (total expenditure on health services

used/total number of people in the sample)/14 days x 365 days). The final table presents data from the 'occasional non-food spending' section. As expected, the expenditure levels from the 'health' section (with a 2 week recall period) are about 2.8 times higher than the expenditure levels from the 'occasional non-food spending' section (with a year-long recall period).

Average Spending on Health Services by Those Seeking Care

	SA Rand			US\$		
	Rural	Urban	Total	Rural	Urban	Total
Quintile 1	22.65	20.10	22.12	6.47	5.74	6.32
Quintile 2	27.10	18.42	24.85	7.74	5.26	7.10
Quintile 3	40.98	29.98	36.88	11.71	8.57	10.54
Quintile 4	35.23	32.95	33.82	10.06	9.41	9.66
Quintile 5	203.95	390.64	363.73	58.27	111.61	103.92
Total	47.85	199.28	129.16	13.67	56.94	36.90

Per Capita Annual Spending on Health Services

	SA Rand			US\$		
	Rural	Urban	Total	Rural	Urban	Total
Quintile 1	22.36	23.78	22.61	6.39	6.79	6.46
Quintile 2	39.18	26.19	35.77	11.19	7.48	10.22
Quintile 3	79.35	50.28	67.52	22.67	14.37	19.29
Quintile 4	79.79	69.51	73.28	22.80	19.86	20.94
Quintile 5	523.00	1,062.07	980.41	149.43	303.45	280.12
Total	76.07	420.13	236.59	21.74	120.04	67.60

Per Capita Spending on Health Services (consumption expenditure estimate)

	SA Rand			US\$		
	Rural	Urban	Total	Rural	Urban	Total
Quintile 1	4.44	5.92	4.71	1.27	1.69	1.34
Quintile 2	12.90	7.83	11.57	3.69	2.24	3.31
Quintile 3	18.09	17.19	17.73	5.17	4.91	5.06
Quintile 4	31.59	37.55	35.37	9.03	10.73	10.11
Quintile 5	240.92	376.27	355.77	68.84	107.51	101.65
Total	27.02	151.90	85.28	7.72	43.40	24.36

Annex B: Relevant Extracts from the “Living Standards And Development Survey” (LSDS)

Section 10: Health

10.1 Health Spending/Incidence Expense

Think about the last two weeks: Has any member of the household been sick or injured during the past two weeks? This includes people who have some form of permanent injury, disability or ailment.

Yes	-1	
No	-2	→ Go to Section 10.2

Interviewer: If YES, ask: Please name each person who has been sick or injured during the past two weeks or any person who is disabled. (Prompt fully by asking: Anybody else? Write down the person’s name and code of each person mentioned).

Text: Do all the questions for each person listed before going on to the next person.

Note: For **Question 5**: if there is not a second illness, code as “00.”

After **Question 6**: Circle all individuals that are still sick at the time of the interview.

For **Question 9c**: record the actual total cost to the household for consultation, accommodation at hospitals or clinics, medicines, etc.

For **Question 9d**: record the actual cost to the household of medicines only.

For **Question 10**: Ask only if the answer in Question 8 is “No one.” Otherwise move to the next person

2.	3.	4.	5.	6.	7.	8.	9a.	9b.	9c.	9d.	10.
Name of Person Injured, Disabled or Sick		What was the nature of the main illness, injury, disability or ailment?	What was the nature of the second illness, injury, disability or ailment, if any?	How many of the past 14 has ___ been sick or injured?	How many of the past 14 days has ___ not been able to do what he/she normally does because of illness or injury Days	Who, if anyone, has been consulted to deal with illness or injury? IF Code=1, go to Q.10	How long did it take to get there?	How long did ___ have to wait to get treatment?	How much was charged in total?	What was the cost of medicines?	If “no one” in Q8, Why did ___ not want to consult/see someone or go somewhere for treatment?
Name	Code	Code	Code	Days	Days	Code	Minutes	Minutes	Rand	Rand	Code

Codes for Question 4 and Question 5	Codes for Question 8	Codes for Question 10
01=Tuberculosis	01=No one	01=Did not want or need to
02=Asthma	02=Too expensive	02=Too expensive
03=Malaria	03=Private Doctor	03=Insufficient money for transport
04=Rheumatic heart disease	04=Traditional Healer	04=Did not know where to go
05=High blood pressure	05=Health centre or Clinic	05=Knew where to go, but did not know how to get there
06=Measles	06=Hospital	06=Hours were not convenient
07=Hepatitis B	07=Visit by Primary Health Worker	07=Would lose pay from work
08=Kidney problems	08=Pharmacy	08=Did not speak respondent’s language
09=Stroke	09=Shop/Supermarket	09=Too many people waiting to be seen
10=Cirrhosis of the liver	10=Private Nurse	10=Other (Specify)
11=Diarrhoea/gastroenteritis	11=Other (specify)	
12=Flu		
13=Fever		
14=Injury		
15=Violence-related injury		
16=Illness related to pregnancy		
17=Cancer		
18=Allergies		
19=Diabetes		
20=HIV infection		
21=Physical disability (specify)		
22=Mental disability		

Annex C: Relevant Extracts from the “National Household Survey Of Health Inequalities” (CASE)

Health Requirement Survey	
Males go to Q.D79	
Ask Female respondent only:	
D70	Let us know talk about pregnancy and childbirth. Have you ever been pregnant?
	Yes 29-1
	No -2
D71	Have you ever given birth?
	Yes 30-1
	No -2
If YES in Q.D71, ask:	
D73	Where did you go for this care?
	Doctor/nurse/health worker in a :
	Hospital/nursing home Public: 32-1
	Private: -2
	Don't Know -3
	Doctor/nurse/health worker in a
	Clinic/ (day hospital) Public (incl. municipal) -4
	Private -5
	Don't Know -6
	Private doctor/family doctor or specialist in consulting rooms -7
	Pharmacist in chemist shop (excl. hospital/clinic) -8
	Psychiatrist/Psychologist/Social Worker/Counsellor
	Public 33-1
	Private -2
	Other -3
	Traditional healer (Sangoma/Nyanga) -4
	Faith Healer -5
	Other (please state) -6
If YES in Q.D72, ask:	
QD74	When during this pregnancy did you go for your first visit?
	READ OUT
	In the first three months of pregnancy 34-1
	Between the fourth and sixth month of pregnancy -2
	In the last three months of pregnancy -3

D75	<p>If YES in Q.D72, ask:</p> <p>How many times during the pregnancy did you altogether go for ante-natal care?</p> <p>READ OUT</p> <p>Once or twice</p> <p>3 to 5 times</p> <p>6 to 8 times</p> <p>9 times or more</p>	<p>35-1</p> <p>-2</p> <p>-3</p> <p>-4</p>
	<p>If YES in Q.D71, ask</p> <p>Now let us focus on the actual birth of your last child. Did you give birth at home or in a hospital or clinic or a medical centre or somewhere else?</p> <p>Home</p> <p>Hospital/clinic/medical centre</p> <p>Somewhere else</p>	<p>36-1</p> <p>-2</p> <p>-3</p>
D77	<p>If YES in Q.D71, ask:</p> <p>Was there a doctor or nurse/midwife present when you gave birth?</p> <p>Doctor</p> <p>Nurse/midwife</p> <p>Both</p> <p>Neither</p>	<p>37-1</p> <p>-2</p> <p>-3</p> <p>-4</p>
D78	<p>If YES in Q.D71, ask:</p> <p>Was there a traditional birth attendant (that is a special person of your culture who helps with childbirth) present?</p> <p>Yes</p> <p>No</p>	<p>38-1</p> <p>-2</p>

Annex D: Relevant Extracts from the “October Household Survey” (OHS)

Has ___ been ill during the last month?		
1=Yes	1	1
2=No	2	2
Has ___ been injured during the last month?		
1=Yes	1	1
2=No	2	2
Has ___ been discharged from the hospital during the last month?		
1=Yes	1	1
2=No	2	2

1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2

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