Nelson Mandela/HSRC Study of HIV/AIDS
South African National HIV Prevalence, Behavioural Risks and Mass Media
Household Survey 2002
Executive Summary

Principal Investigator: Olive Shisana, Sc.D
Project Director: Leickness Simbayi, D. Phil

A collaborative effort of
The Human Sciences Research Council (HSRC)
Medical Research Council
Centre for AIDS Development Research and Evaluation
Agence Nationale de Recherches sur le Sida (ANRS)

This report is funded by
The Nelson Mandela Foundation
The Nelson Mandela Children's Fund
Swiss Agency for Development and Cooperation
The Human Sciences Research Council (HSRC)
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We at the Nelson Mandela Foundation and the Nelson Mandela Children’s Fund identified the need for a national HIV/AIDS survey after realising that one of the major constraints we face in dealing with the epidemic is our lack of information in a changing environment.

We have to manage the disease, or the disease will manage us. The key ingredient to managing the disease successfully is current and accurate information covering the full cultural and demographic spectrum of South Africa.

Consequently, we joined hands with the Human Sciences Research Council to undertake the first national community-based study on behavioural and socio-cultural determinants contributing to vulnerability to HIV/AIDS as well as the testing of HIV antibodies in individuals. The study also focused on the impact of the mass media on knowledge, attitudes and prevention.

It forms part of the Nelson Mandela Foundation’s HIV/AIDS strategy for care and destigmatisation.

I would like to thank all the individuals who gave up their time to provide us with the necessary information as well as the researchers for undertaking this massive task, and the fieldworkers for collecting the information. Without their tireless commitment this study would not have been successful.

The information gained marks a watershed in our fight against HIV/AIDS – to effectively contain the spread of the disease, care for those afflicted and ameliorate the impact of this epidemic. I am proud to say we now have the data to tackle the epidemic more vigorously.

Nelson R. Mandela
December 2002
Preface

In the last decade in South Africa, the number of deaths from AIDS each year has risen to hundreds of thousands. The burden of care and loss falls hardest upon the poor, making the development challenges of our nation difficult and costly.

In this context, the pioneering study presented in this report – the first systematically sampled, nationwide community-based survey of the prevalence of HIV in South Africa – assumes great importance.

Its findings open three windows of opportunity for concerted interventions in South Africa. Firstly, we now have information for different race, gender and age groups in urban and rural areas, thus allowing programme planners to develop targeted interventions. Secondly, we have a clearer understanding of the positive relationship between communication and risk reduction, as well as of information needs. Thirdly, because the findings are representative, they will enable reliable modelling for the first time, giving a solid basis for optimising and extending programmes of prevention, care, treatment and support.

It is essential that the impact of these efforts be monitored as they unfold. The HSRC is committed to repeating this study at regular intervals.

We are deeply grateful to the Nelson Mandela Foundation and the Nelson Mandela Children’s Fund for championing and helping to fund the project as well as to our other donor, the Swiss Development Co-operation and to the many partners acknowledged elsewhere. We salute Dr Olive Shisana and her research team for their mighty effort. Millions of people depend upon the translation of these findings into policies and programmes that will meet the very real needs in this country.

Dr F.M. Orkin
CEO: Human Sciences Research Council
December 2002
Acknowledgements

This research study was a collaborative endeavour involving many people from beginning to end. Although not an exhaustive list, we wish to thank the following people and organisations for their participation in one way or another in this study.

- The friendly people of South Africa without whose generosity, this survey would not have been possible. In particular, we wish to thank the families in all corners of the country for letting us intrude into their homes and their private lives by participating in this study. Their participation is a testimony that if we all pull our energies together we can provide information necessary to tackle the epidemic that confronts us all.

- The participants who attended the planning meeting organised by the Nelson Mandela Foundation and the Nelson Mandela Children’s Fund that led to the conception of this study. This meeting included those involved in mass media on HIV/AIDS, non-governmental organisations dealing with HIV/AIDS, the Department of Health, and the Department of Social Development, and other research organisations, notably the Medical Research Council.

- The members of the Steering Committee and the HSRC Technical Team who guided the project especially during its formative stages.

- The members of staff of various research programmes in the HSRC including Social Aspects of HIV/AIDS and Health (SAHA), Child, Youth and Family Development (CYFD), and Surveys, Analyses, Modelling & Mapping (SAMM). In particular, we wish to thank Ms Efua Dorkenoo, OBE of SAHA for her assistance during the early stages of the study; Prof Linda Richter, the Executive Director of CYFD and her colleague Dr Heather Brookes for their contribution to conceptualisation of the child methodology component of the study as well as editorial assistance; Dr Udesh Pillay, the Executive Director and Mr Craig Schwabe, the Director of GIS, both of SAMM, for their assistance with the creation of the Master Sample; Mr Johan van Zyl of Integrated Rural and Regional Development (IRRD) for sharing his enormous experience in surveys especially on questionnaire design and executing fieldwork, and finally, but not least, Mrs Monica Peret for leading the team who did the day-to-day data management for this study.

- Geospace International for creating the Master Sample and providing the technical team, which included 15 surveyors used during Phase I of this study, and Mr Francois Bezuidenhout and Mr Thabo Phalatse during both phases of this study.

- Prof David Stoker, the statistical consultant. His expertise proved most invaluable at all stages of the study.

- Dr Jacques Pietersen, formerly of the HSRC and now with Port Elizabeth Technikon, for statistical advice both at the beginning and at the end of the study.

- The MRC team led by Dr Mark Colvin who helped with their expertise on HIV testing and epidemiology.
The CADRE team led by Mr Warren Parker and Dr Kevin Kelly who contributed their expertise in mass media and HIV/AIDS communication.

Ms Jeanette Bloem, a consultant from Family Health International with extensive experience in conducting behavioural surveys in various African countries, for helping us as the Fieldwork Supervisor.

Dr Thomas Rehle, previously with Family Health International, for reviewing the final report for technical soundness.

The members of the Fieldwork Team which met weekly and in particular Mrs Marizane Rousseau-Maree of SAHA for the day-to-day running of the project.

The Department of Virology at the University of Natal, Durban, the Department of Medical Microbiology at Medunsa, the Wits Health Consortium (Pty) Ltd. and the National Health Laboratory Service for testing the specimens for HIV status.

The social epidemiological and data analysis management section of the French ANRS, (National Agency for AIDS Research) especially Prof Jean Paul Moatti, Prof Bertrand Auvert, Dr Sylvia Males, Dr Dieudonné Anderson Loundou and Mr Julien Chauveau for providing technical support during the analysis and interpretation of the results.

The Ministry of Social Development, whose staff contributed to reviewing the report and identifying areas necessary for policy and planning.

The field workers and supervisors for both Phases 1 and 2 of the study, the community-entry facilitators, the coding assistants and the data capturers.

The Expert Panel under the Chairpersonship of Prof Helen Rees, for commenting on the technical soundness of the draft report. Their efforts are greatly appreciated.

Mr Sean Jooste for editing the references.

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The Nelson Mandela Foundation and the Nelson Mandela Children’s Fund for the funding which made this study possible and also for their active participation in facilitating the conduct of the study. The support of Mr John Samuel and Ms Bridgette Prince as well as Mrs Bongi Mkhabela has made conducting this study a great pleasure.

Mr Nelson Mandela for his encouragement to undertake research to inform public campaigns aimed at preventing HIV/AIDS, to help care for those afflicted and mitigate the impact of this epidemic.

The whole UNAIDS team who provided technical assistance; Mr Bunmi Makinwa, Dr Catherine Sozi, Ms Miriam Maluwa and Dr Collins Airhihenbuwa (UNAIDS consultant). The financial contribution of UNAIDS is appreciated.
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Finally, we both would like to thank our families for the support they gave us while we undertook this study. Olive could always count on her husband William and their son Fumani to tolerate her absence from many dinners they had alone. Leickness also wishes to thank his wife Ruth and two children Veronica and Kennedy for bearing his many absences from home during the entire study.

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## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
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<tr>
<td>ANRS</td>
<td>Agence National de Recherche sur la Sida</td>
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<tr>
<td>ARV</td>
<td>Anti-retroviral</td>
</tr>
<tr>
<td>CADRE</td>
<td>Centre for Development, Research and Evaluation</td>
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<tr>
<td>CI</td>
<td>Confidence interval</td>
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<tr>
<td>CLS</td>
<td>Contract Laboratory Services</td>
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<tr>
<td>CYFD</td>
<td>Child, Youth and Family Development</td>
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<td>DEFF</td>
<td>Design effect</td>
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<tr>
<td>DU</td>
<td>Dwelling unit</td>
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<tr>
<td>EA</td>
<td>Enumerator area</td>
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<tr>
<td>EC</td>
<td>Eastern Cape Province</td>
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<tr>
<td>ETAPSUD</td>
<td>Programme on Evaluation of access to HIV care in developing countries</td>
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<tr>
<td>FHI</td>
<td>Family Health International</td>
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<tr>
<td>FS</td>
<td>Free State Province</td>
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<tr>
<td>GIS</td>
<td>Geographical Information System</td>
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<td>GP</td>
<td>Gauteng Province</td>
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<tr>
<td>GPS</td>
<td>Global Positioning System</td>
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<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HSRC</td>
<td>Human Sciences Research Council</td>
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<tr>
<td>KZN</td>
<td>KwaZulu-Natal Province</td>
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<tr>
<td>LP</td>
<td>Limpopo Province</td>
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<tr>
<td>MEDUNSA</td>
<td>Medical University of South Africa</td>
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<tr>
<td>MOS</td>
<td>Measure of size</td>
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<td>MP</td>
<td>Mpumalanga Province</td>
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<tr>
<td>MRC</td>
<td>Medical Research Council</td>
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<tr>
<td>MS</td>
<td>Master sample</td>
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<tr>
<td>NGO</td>
<td>Non-governmental organisation</td>
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<tr>
<td>NC</td>
<td>Northern Cape Province</td>
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<tr>
<td>NCMF</td>
<td>The Nelson Mandela Children's Fund</td>
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<tr>
<td>NMF</td>
<td>The Nelson Mandela Foundation</td>
</tr>
<tr>
<td>NS</td>
<td>Not significant</td>
</tr>
<tr>
<td>NW</td>
<td>North West Province</td>
</tr>
<tr>
<td>OVC</td>
<td>Orphans and vulnerable children</td>
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<tr>
<td>PLWA</td>
<td>People living with HIV/AIDS</td>
</tr>
<tr>
<td>PMTCT</td>
<td>Preventing mother to child transmission</td>
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<tr>
<td>PSU</td>
<td>Primary Sampling Unit</td>
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<tr>
<td>QC</td>
<td>Quality control</td>
</tr>
<tr>
<td>SA</td>
<td>South Africa</td>
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<tr>
<td>SAHA</td>
<td>Social Aspects of HIV/AIDS and Health</td>
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<tr>
<td>SAMM</td>
<td>Surveys, Analyses, Modelling &amp; Mapping</td>
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<tr>
<td>SAS</td>
<td>Survey Analysis Software</td>
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<tr>
<td>SD</td>
<td>Standard deviation</td>
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<tr>
<td>SSU</td>
<td>Secondary sampling unit</td>
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<tr>
<td>Stats SA</td>
<td>Statistics South Africa</td>
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<tr>
<td>STI</td>
<td>Sexually transmitted infection</td>
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<tr>
<td>UNAID</td>
<td>Joint United Nations Programme on HIV/AIDS</td>
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<tr>
<td>USAIDS</td>
<td>United States Agency for International Development</td>
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<tr>
<td>USU</td>
<td>Ultimate sampling unit</td>
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<tr>
<td>VCT</td>
<td>Voluntary counselling and testing</td>
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<tr>
<td>VP</td>
<td>Visiting point</td>
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<tr>
<td>VPQ</td>
<td>Visiting point questionnaire</td>
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<tr>
<td>WC</td>
<td>Western Cape Province</td>
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<tr>
<td>WHO</td>
<td>World Health Organisation</td>
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1. INTRODUCTION

South Africa has a serious HIV/AIDS (Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome) epidemic, with millions of its people living with the disease. For the country to respond effectively to prevent new infections and provide care and treatment to those who are already living with HIV/AIDS, it is vital to have accurate data and a comprehensive understanding of the epidemic.

Over the past decade, HIV prevalence estimates in South Africa have been largely derived from an annual survey of pregnant women attending antenatal clinics, supplemented by additional estimates from workplace and other studies. International consensus remains that antenatal surveys are a useful tool to assess HIV prevalence in areas with high prevalence of HIV and provide trend data. This study augments the Department of Health’s (DOH) annual antenatal survey of pregnant women, through a population-based sample of South Africans including men, women, children, all races and ethnic groups, people living in urban areas, rural areas and farms, as well as people living in hostels.

To deal effectively with HIV/AIDS it is crucial to understand the social, cultural, political and economic context that contributes to vulnerability to HIV infection. There have been numerous studies examining factors that contribute to this vulnerability in South Africa and internationally. These studies have utilised different methodologies, different measures and indicators, and sample sizes have been limited.

In recognition of this need, the Nelson Mandela Children’s Fund (NMCF) and the Nelson Mandela Foundation (NMF) commissioned the Human Sciences Research Council (HSRC) to conduct a study to:

- determine the HIV prevalence in the general population
- identify risk factors that increase vulnerability of South Africans to HIV infection
- identify the contexts within which sexual behaviour occurs and the obstacles to risk reduction
- determine the level of exposure of all sectors of society – especially the most vulnerable - to current prevention, education and awareness programmes and campaigns
- establish whether, and by whom, media messages are understood and accepted.

This is the first systematically sampled national community-based survey of the prevalence of HIV in South Africa. In addition, it considers issues of risk, risk reduction, HIV/AIDS knowledge and communication, psycho-social and socio-cultural aspects of HIV/AIDS, providing important baseline data for programme development.

1.1 SURVEY METHOD

1.1.1 Sample

Among the 13,518 individuals who were selected and contacted for the survey, 9,963 (73.7%) persons agreed to be interviewed. Of the 9,963, 8,840 (65.4%) agreed to also give a specimen for an HIV test. However, the HIV prevalence results are based on 8,428 (62.3%) persons whose specimens were usable.
1.1.2 Sampling methods

The target population for this study was all people living in households in South Africa excluding persons in so-called special institutions (eg. hospitals, military camps, old age homes, schools and university hostels). Figure 1 provides a graphical representation of the steps taken in designing the sample for this study.

![Diagram of sample design](image)

**Figure 1: Steps in the sample design**

The country is divided into over 80 000 small units called census enumerator areas (EAs). One thousand of these areas were selected for inclusion in the study to ensure that the diverse nature of the South African population was captured (Figure 2). Whites and Indians were over-sampled, as were people living in the Northern Cape to ensure adequate representation and to measure HIV prevalence. Children under two years of age were excluded, as well as those who did not live in homes or non-institutionalised hostels.

![Diagram of drawing sample](image)

**Figure 2: Steps in the drawing of the sample**

The sample was weighted using the 1996 population census results, adjusting for any change in the socio-demographics since the time of the last census. The outcome of the sample selection is presented in Figure 3. A few of the selected EAs could not be covered (realised). The unrealised EAs for this survey are shown in Figure 4.

---

1 This was achieved using weights calculated from the Census 2001 preliminary household count, which was updated using fieldwork in this study.
Figure 3: Location of master sample PSUs in South Africa

Figure 4: Location of unrealised EAs in the survey
1.2 **BEHAVIOURAL INSTRUMENTS**

Four questionnaires were developed:

- A questionnaire for adults aged 25 years and older;
- A questionnaire for youth aged 15–24 years;
- A questionnaire for caregivers of children aged 2–11 years; and
- A questionnaire for children aged 12–14 years.

The development of the questionnaires was informed by existing literature, and for youth and adults, by a qualitative study that preceded this study. Questions focused on:

- Demographic characteristics including poverty levels, education level, religious affiliation, parental mortality/orphan status;
- Knowledge and communication about sex and HIV/AIDS in families, communities and the media;
- Sexual experience and behaviour including use of condoms, number of partners etc.;
- Traditional practices and experiences, eg. circumcision; and
- General health status.

1.3 **HIV TESTING**

The *OraSure*® *HIV-1 Oral Specimen Collection Device* was used. All laboratories were prepared to use the required *Vironostika* test kits and the testing was conducted according to manufacturer guidelines. Standard operating procedures were customised and specifically designed for the purposes of this study.

1.4 **DATA COLLECTION AND MANAGEMENT**

Data was collected in two phases. The first phase involved the creation of the master sample and pre-notification of households for the study. The second phase involved administering questionnaires and collecting oral mucosa transudate (oral fluid) specimens.

Quality assurance was carried out in all aspects of the survey. During both Phases I and II, data collection, data management and analysis were controlled for quality.
2. **RESULTS**

2.1 **NATIONAL PREVALENCE**

HIV is a generalised epidemic in South Africa that extends to all age groups, geographic areas and race groups.

The present survey estimates that the HIV prevalence in the population of South Africa is 11.4% (Confidence Interval (CI): 10.0%–12.7%) This study also observed that 15.2% (CI: 13.9%–17.5%) of persons in the 15–49 age group were HIV positive.

This survey did not assess the following groups: children younger than two years old who may have been infected through mother to child transmission (estimated at 83 500), as well as persons living in institutions such as prisons, military barracks and boarding schools.

2.2 **PROVINCIAL PREVALENCE**

Based on antenatal survey findings, KwaZulu-Natal has been believed to have the highest provincial HIV prevalence rate. In the 2001 antenatal survey, the highest provincial prevalence rate was recorded in KwaZulu-Natal 33.5% (CI: 30.6-36.4%), followed by Gauteng 29.2% (CI25.6-32.8%), Mpumalanga 29.2% (CI: 25.6-32.8%) and the lowest prevalence rate was recorded in the Western Cape, 8.6% (CI: 5.8-1.5%).

![Figure 5: HIV Prevalence by province, South Africa 2002](image_url)

Data from the present study, however, suggest a somewhat different provincial prevalence picture (see Figure 5). Figure 5 shows that Gauteng, Free State and Mpumalanga have the highest prevalence rates, whilst all other provinces have prevalence rates that are about or below 10%. KwaZulu-Natal ranks fourth and the Eastern Cape has the lowest prevalence.

Figure 6 compares females aged 15–49 years with the results of the 2001 DOH antenatal survey. The observed HIV prevalence for women aged 15–49 years old in the Western Cape of 18.5% is much higher than that observed from the antenatal data. This is the only province where the HIV prevalence derived from the household survey is much higher than that derived from the antenatal data.
2.3 Locality-Type Prevalence

The study gathered important new information based on locality type, using the following categories used by the national census: tribal areas, farms, urban formal settlements and urban informal settlements. Figure 7 shows information for the 15–49 year age group. There is clear evidence of higher vulnerability to HIV of people living in urban informal settlements and urban formal settlements, compared with those living in tribal areas and farms.
The HIV prevalence by urban informal locality-type is an important factor contributing to the vulnerability of Africans living near urban areas.

There are several possible reasons for the discrepancies in provincial prevalence rates. In KwaZulu-Natal for example, many of the antenatal sentinel sites are found along national or main roads, and transport routes are known to contribute to higher levels of HIV prevalence. This study sampled respondents from rural and urban areas throughout KwaZulu-Natal.

The three provinces with the highest HIV prevalence, Mpumalanga, Gauteng and Free State, have the highest proportion of people living in informal urban settlements. Gauteng and Free State have a high proportion of such locality-types. By comparison, KwaZulu-Natal is largely rural, and this survey has found lower prevalence in rural areas.

The Western Cape, which has higher prevalence of HIV based on household survey, also has a large percentage of its population living in informal areas, which may explain its higher ranking. Reasons for provincial differences will be further explored in forthcoming studies and analyses.

### 2.4 Age Group Prevalence

According to existing data from the 2001 antenatal survey, the age group with the highest prevalence was age 25–29. This survey confirms high prevalence in the 25–29 age group (28.0%), followed by the 30-34 age group (24%) and reducing in other age groups (see Figure 8).

![Figure 8: Prevalence of HIV by age, South Africa 2002](image)

The estimated HIV prevalence among children aged 2–14 years of 5.6% (CI: 3.7-7.4%) was higher than expected. A record review was undertaken to determine how many children aged 2–11 could have been infected through vertical transmission. An analysis of parent-child pairs revealed that of the 86 HIV positive children aged 2–14, 27 could be matched with a biological parent, and 20 of the parents selected in the study had an HIV test result. Of these 20, only 5 (25%) were HIV positive. It remains unclear as to how these children could have been infected and further investigation will consider sexual abuse and exposure to unsterilised needles, amongst other factors.
2.5 SEX, RACE AND HIV PREVALENCE

This study provides new data on prevalence rates based on sex and race. Figure 9 depicts the HIV prevalence among adults by sex. It shows that women are more at risk than men.

![Figure 9: HIV Prevalence among adults (15–49 years) by sex, South Africa 2002](image)

Although all races are at risk of HIV infection, there is substantial variation in prevalence among different race groups with respective prevalence rates highest for Africans, lower and the same for whites and coloureds, and least for Indians (see Figure 10). These differences are even more marked in the 15–49 year age group.

![Figure 10: HIV Prevalence among Adult (15–49 years) by race, South Africa 2002](image)
The finding that Africans have a higher estimated HIV prevalence than other race groups reflects the history of this country. Vulnerability to HIV is highest in informal areas, and factors contributing to vulnerability in these areas include labour migration, mobility, and relocation.

The age and sex distribution of HIV infection follows the pattern found in other studies. Figure 11 illustrates that prevalence levels rise more quickly in women and then decrease with age, whereas with men the peak prevalence levels occur at an older age.

![Figure 11: Prevalence of HIV by sex and age, South Africa 2002](image_url)

### 2.6 HIV PREVALENCE AND SOCIO-ECONOMIC STATUS

This study examined the relationship between HIV prevalence and race, taking into account socio-economic status. Although it found no significant difference in HIV prevalence between persons who were employed (14.2%) or unemployed (12.1%), but an increase in the socio-economic status of a home was accompanied by a decrease in HIV prevalence when all participants were considered. This trend was however not seen when African and coloured race groups were analysed separately.

This study used a personal rating of availability, or lack of disposable income in the home. The study found that the relationship between perceived socio-economic status and HIV infection indicates that all strata of society are at risk and not only poorer persons. In particular, wealthy Africans were found to have similar levels of risk to less wealthy Africans. However, in other race groups, poorer persons are more vulnerable to HIV.
2.7 THE LINK BETWEEN SEXUALLY TRANSMITTED INFECTIONS (STIs) AND HIV

A strong link between STIs and HIV was confirmed in this study. Although only 2.6% of participants said that they had been diagnosed with an STI during the last three months, 38.9% of these were found to be HIV positive, compared with 13.2% amongst those who had not been diagnosed with an STI in the last three months.

STIs are a co-factor for HIV transmission. Research has shown that the presence of genital ulcer disease and of some non-ulcerative STIs enhances the transmission of HIV. Given the strong association between STI and HIV infection, the control and prevention of STIs is critical in the prevention of HIV.

This study showed that the availability of STI treatment services was known by 79% of respondents. About 10% of respondents who knew of the services had used them, and 92.7% of this group indicated that they were satisfied or very satisfied with the service provided.

2.8 AWARENESS OF HIV SEROSTATUS

Among respondents aged 15 years or more in this study, 18.9% said that they had previously had an HIV test and were aware of their HIV serostatus. Among those who were HIV positive and aware of their status, a majority underwent HIV testing for personal reasons, followed by pregnancy, external requests (for example, insurance and banks), and other circumstances (Figure 12).

Awareness of serostatus among both HIV positive and HIV negative respondents was associated with better knowledge about the fact that HIV causes AIDS and improved exchange of information about HIV and HIV serostatus with partner. It must be noted that among the HIV positive respondents who were sexually active in the previous year, awareness of serostatus was significantly associated with condom use at last intercourse, but a strong relationship to condom use was not observed amongst HIV negative respondents.

When respondents who had not had an HIV test were asked if they would consider going for testing, 59.4% reported that they would consider a test if confidentiality was maintained, whilst 28.5% would be motivated by the accessibility, cost and quality of services.

Amongst those who would not consider going for an HIV test, 71.7% reported that the reason was that they felt that they were at low risk of being infected. This suggests that reasons for undergoing VCT are more closely related to negative perceptions of services and low perceived risk than to the problem of availability of services.

VCT services are perceived to be accessible by the majority of South Africans (61.4%). However, in tribal areas, perceived accessibility was low at 48.1%. When analysed by province, respondents in Mpumalanga (44.3%) and in Limpopo (45.0%) also had lower levels of perceived accessibility of VCT than in other provinces.
2.9 ORPHANS AND CHILD-HEADED HOUSEHOLDS

It was found that 13.0% of children aged 2–14 years had lost a mother, father, or both parents. The percentage of children who had lost a mother was 3.0%. In addition, 3.0% of households were determined to be child-headed (by a person aged 12–18). The rate was 3.1% in urban formal areas, 4.2% in urban informal areas, 2.8% in tribal areas and 1.9% in farms.

2.10 PERCEPTIONS ABOUT POLITICAL LEADERSHIP, RESOURCE ALLOCATION AND ANTIRETROVIRAL (ARV) THERAPY

It was found that 63.8% of South Africans aged 15 years and older believed that political leaders were committed to controlling HIV/AIDS. Positive perceptions were highest amongst Africans and lowest amongst whites. However, when asked whether sufficient resources were being allocated, only 47.5% of South Africans agreed.
Nearly all South Africans (96.5%) agreed that ARV therapy should be provided for Parent Mother to Child Transmission (PMTCT), and 95% agreed that ARV therapy should be provided for those living with HIV/AIDS related illnesses.

2.11 BEHAVIOURAL RISKS

2.11.1 Sexual activity, frequency and partner turnover

Only a few children in the 12–14 year age group reported having had sex while just over half of youth aged 15–24 had had sex before (see Figure 14). As expected, almost all adults above 25 had had sex before.

In both 15–24 and 25–49 year age groups, similar proportions of males and females had had sex before. Sexual experience amongst 15–24 year olds was noted to be significantly higher in informal urban areas, and special emphasis should be placed on these areas for prevention interventions.

Sexual frequency amongst sexually active youth is quite low, with 70% of youth having sex four or less times a month, and 29% having no sex at all. This suggests that opportunities for sexual activity are limited amongst youth. Lower levels of sexual frequency reduce the risk of HIV infection, and it would be interesting to explore potentials for messaging in this regard.

Figure 13: Public perceptions of commitment to dealing with AIDS and resource allocation by race, South Africa, 2002
1.1%  
55.6%  
1.6%  
57.9%  
0%  
10%  
20%  
30%  
40%  
50%  
60%  
70%  

12-14  
15-24  

Figure 14: Proportion of males and females who had sex before

It is a promising finding that partner turnover amongst youth and adults does not appear to be high, with 84.7% of youth and 93.5% of adults reporting that they have had only one partner in the past year.

2.1.1.2 Secondary abstinence

Secondary abstinence – having previously had sex, but not having had sex in the previous 12 months – was 23.1% in the 15–24 year age group. This is a promising finding as it has important implications for risk reduction. Secondary abstinence may be linked to lack of opportunity or to personal choice, amongst other factors. Further research into this phenomenon is suggested.

2.1.1.3 Condom access and use

Condom distribution systems in South Africa are clearly highly sophisticated, and perceptions of ease of access to condoms was over 90% for both youth and adult age groups. Public sector clinics and hospitals were the most likely source of condoms (Figure 15). This demonstrates the high levels of effectiveness of the free condom distribution system that has been a cornerstone of the Department of Health’s policy since the mid-1990s.

Figure 15: Primary sources of condoms, South Africa, 2002
Condom use at last sexual intercourse was high, with 57.1% of males and 46.1% of females aged 15–24 reporting they had used condoms. Condom use at last sexual intercourse was higher amongst Africans than other race groups. Higher levels of condom use was also associated with higher levels of risk activity, and persons with more than one partner in the past year were more likely to use a condom than those with only one partner.

The high levels of condom use amongst male and female youth are encouraging. The levels are considerably higher than those in the Department of Health’s (DOH) South African Demographic and Health Survey (SADHS) which was conducted during 1998, and which found condom use during the last sexual intercourse amongst women to be 19.5% for 15–19 year olds and 7.6% for 20–24 year olds.

Condom use for sexually active persons in South Africa has been shown to be high in other recent studies. This study confirms these trends, as do the findings on condom access discussed above. Condom use rates in South Africa compare favourably with Brazil, Senegal and Uganda, and are much higher than the rates reported for Cambodia, Thailand and Zambia.

Condom use amongst married couples was higher than expected – 13.2% for traditionally married adults 25–49 years, and 15.8% for those in civil marriages.

Overall high levels of last intercourse condom use demonstrate the effectiveness of mass media communication campaigns, which show highest levels of recall of condom messaging, and which have clearly been supported by highly effective condom distribution systems.

2.11.4 Self-reported behaviour change

When asked whether they had changed their sexual behaviour in the past few years in response to HIV/AIDS, 46.8% of male and 38% of female youth and adult respondents reported having done so. The main behavioural strategies reported were having one partner and/or being faithful, followed by always using condoms, sexual abstinence and reducing the number of sexual partners (see Figure 16 including sex differences).

![Figure 16: Strategies of sexual behaviour change in the face of the AIDS threat by sex (15 years and older), South Africa, 2002](image-url)
These results, especially regarding condom use, are partly consistent with the results from the last HSRC survey during 1999 in which 44% of the sample reported that they were using condoms because of HIV/AIDS, 67% of the sample reported that HIV/AIDS had made them think of changing their behaviour, and 69% indicated that HIV/AIDS encouraged them to use condoms.

2.12 SOCIO-CULTURAL CONTEXT

Various socio-cultural practices such as polygamy, dry sex, anal sex, rites of death of spouse for widows and consultation with traditional and alternative healers during the last 12 months which, according to the literature review are believed to be widespread in South Africa, were found to be uncommon in this study. However, circumcision and payment of lobola or dowry are fairly widespread as expected. The relationship of these latter factors to HIV infection will be addressed in a separate analysis.

2.13 KNOWLEDGE AND ATTITUDES

In general, there was good knowledge of key aspects of HIV/AIDS information, and most respondents indicated correctly, for example, that ‘HIV/AIDS could not be cured by sex with a virgin’, that ‘HIV/AIDS was not caused by witchcraft’ and that ‘HIV cannot be transmitted by touch’. However, there were relatively high levels of uncertainty amongst 23% of children aged 12–14 and 8.3% of youth aged 15–24 of the virgin cure myth. In addition, 24.3% of respondents 15 and older answered incorrectly or were uncertain when asked whether HIV causes AIDS.

Correct knowledge that HIV causes AIDS, that HIV is not transmitted by touch or by kissing, was strongly associated with self-reported behaviour change over the past few years, as well as condom use at last sex and discussing HIV prevention with a partner.

Better knowledge of HIV transmission has been shown to have a positive relationship with both prevention behaviours and positive attitudes to people with HIV/AIDS. This does not imply that knowledge is a sufficient condition for behaviour change and positive attitudes, but it is a necessary condition. The results show that the majority of the South African population express attitudes of acceptance of People Living With HIV/AIDS (PLWAs) (see Figure 17).

Therefore, fear of stigmatisation should not be used as a rationale for inaction on the part of public and private policy and decision makers with regard to prevention and access to care for PLWAs. However, whilst stigma towards people is not widespread in the general population, there should still be concern about the minority who do have a clear tendency to stigmatisation. Even a small percentage is significant and will have a strong impact on the lives of people living with HIV/AIDS.
2.14 Mass Media and Communication

Exposure to mass media is not uniform throughout South Africa. In the study, it was found that people 15 years and older, living in poorer households and people living in rural areas, have low exposure to broadcast and print media. Exposure to television a few days a week or more for each locality type is shown in Figure 18. Exposure was highest in urban formal areas than elsewhere. Exposure to newspapers and magazines was 20.3% or less in all areas other than urban formal areas.
Although many mass media campaigns make use of multiple media channels, radio (77.0%) and television (67.6%) were considered to be most informative for HIV/AIDS information, followed by newspapers (42.6%) and magazines (39.9%).

Respondents were asked what they had seen in their communities carrying HIV/AIDS information. Figure 19 displays the results. The red ribbon was most widely noted, followed by leaflets, posters and billboards/signs/murals.

![Figure 19: Sources of AIDS information in the community, South Africa, 2002](image)

The main sources of interpersonal HIV/AIDS information were health personnel in health facilities, followed by schools and parents (for young people aged 12–24 years). Faith-based organisations were an important source of HIV/AIDS information and rated higher than AIDS organisations, youth groups and sports clubs.

Telephone helplines are an important source of information for people who have specific questions about HIV/AIDS. The Department of Health’s toll free AIDS help-line was the most well-known service and was noted by 60% of all respondents. This was followed by local clinic and hospital numbers (37.4%) and ThethaJunction (33.1%).

Condom promotion has been an important cornerstone of national HIV/AIDS campaigns and when respondents were asked which HIV/AIDS slogans or messages they recalled, condom use messages were the most prominent. ‘AIDS kills’ was also mentioned frequently, although this has not been a message used directly in campaigns. Messages about faithfulness and abstinence also rated highly, but partner reduction, PLWA rights, care for PLWA and religious or cultural values were less well noted.

Although key HIV/AIDS messages were generally well understood, the vast majority of respondents indicated that they needed further information about the disease, including additional information in relation to sexual abuse, condom negotiation, STIs, blood donation, VCT, counselling, HIV/AIDS symptoms and treatment, caring for PLWA and orphans, and rights.

Overall mass media campaigns have contributed to key HIV/AIDS behaviours – mainly condom use, but also self-reported behaviour change including strategies such as abstinence, faithfulness, reduction in number of partners and HIV testing.

The South African HIV/AIDS and communication environment is complex and there are literally thousands of purposive and non-purposive communication activities that take place at...
national, provincial and local level. It is complex to reduce behaviour, attitudes or knowledge to specific interventions – whether they are mass media, community level communication or interpersonal communication. It is clear however, that risk reducing behaviours and practices described elsewhere in this study are the net product of HIV/AIDS communication of one kind or another, led by national campaigns, but also the result of impacts of smaller scale campaigns, information in the news, entertainment media, and interpersonal communication.

It is of concern that regular exposure to broadcast media is low in rural areas and poorer households. For this reason additional communication approaches for reaching these vulnerable population need to be emphasised.

Print media is clearly less accessible and consequently less useful as a medium for conveying HIV/AIDS information to rural communities and poorer households. Print media is constrained by being less adaptable for multilingual communication, and those with an African home language found print media less useful for HIV/AIDS information.

Multilingual access to information is of concern and Afrikaans, Sotho, Tshivenda and Xitsonga speakers are marginalised considerably in relation to HIV/AIDS information received via mass media channels. Although English is the dominant language used in many mass media campaigns, it is a matter of concern that only 0.8% of Africans have English as a home language.
3. CONCLUSIONS AND RECOMMENDATIONS

South Africa has a serious and widespread HIV/AIDS epidemic. For the country to respond effectively, preventing new infections and providing care and treatment to those already living with HIV/AIDS, it is vital to have accurate data and a comprehensive understanding of the epidemic. To overcome the challenge of HIV/AIDS requires that the recommendations listed below be considered seriously.

This study is the first systematically sampled national survey of the prevalence of HIV and behavioural risk, coupled with the impact of mass media and communication in South Africa. The findings provide important insights into understanding HIV risk and risk reduction as well as informing a continuum of intervention and policy in relation to prevention, care and support. The findings also provide clearer guidelines in relation to prevention of new infections, and care and treatment for people living with HIV/AIDS. The study also provides information necessary for ameliorating the impact of HIV.

This study confirms many of the findings of smaller scale, and sectoral studies of HIV prevalence and provides insight into the interpretation of antenatal HIV prevalence data. The study also confirms findings made in other studies that have examined behaviour, communication and service provision, and it has contributed new knowledge in a number of areas.

In the following recommendations, reference is made to the findings in relation to: HIV prevalence; gender; HIV/AIDS communication; knowledge and awareness; prevention; treatment, care and support; and implications for research, monitoring and evaluation.

3.1 HIV PREVALENCE

It was found that HIV/AIDS affects all race groups in South Africa. The differences are largely due to social, economic and behavioural determinants, such as living in informal settlements, being poor, having access to information and education necessary for prevention, knowing people who have HIV/AIDS or died due to AIDS, having multiple partnerships, as well as having STIs. Although HIV prevalence amongst race groups differs, as does prevalence among males and females and prevalence in various types of locations, curbing the impact of the epidemic requires intensification of prevention and care efforts across the board. This includes committing funds to employ more health personnel, ensuring capacity building for activities in key response areas and expanding service provision. The South African Cabinet’s Statement of April 17 2002 that ‘the total budget…R350 million in 2001/02…has been increased to R1 billion in this financial year and….to R1.8 billion in 04/05’, gives hope that financial resource allocation is taken seriously. Allocation of these resources equitably and appropriately along the continuum of prevention, treatment, care, support and rights is critical.

HIV prevalence among persons aged 2–14 years was much higher than expected. This could not be adequately explained by heterosexual or by vertical transmission and the finding requires further investigation. It is recommended that a detailed study be undertaken to explore the role of sexual abuse and no socomial infection (health service acquired infections), amongst other factors. No socomial infection was alluded to recently by the World Health Organisation which estimates that at least 5% of all HIV infections are due to unsterile needles and that in developing countries this percent may be larger.
3.2 GENDER

This study has demonstrated that women have higher HIV prevalence than men. There are biological and social reasons for this difference. Women’s reproductive systems make it easier for them to be infected with HIV, and men are more effective at transmitting the human immunodeficiency virus. Men’s semen is more infectious than vaginal fluids because of its cellular content. Furthermore, women are more likely to have undetected sexually transmitted infections. Biology alone, however, does not explain the imbalances in prevalence between men and women. We have to consider the interaction between gender and biological factors to understand how women and men may be at increased risk because of gender construction. Among these are: the deep-seated encouragement of multiple sexual partners for men; male control over barrier methods; and women’s economic situation which make them and their families dependent on men. It is recommended that a short-term strategy of gender mainstreaming be considered first. For example, the current PMTCT programmes should be made more gender sensitive through encouraging partner counselling and testing. Secondly, a medium- and long-term strategy would be to emphasise the economic and social empowerment of women in relation to exercising their sexual rights. It is recommended that consideration of gender issues including gender-related vulnerability to HIV infection, as well as vulnerabilities and imbalances that exist for female PLWAs be integrated into HIV programming.

3.3 HIV/AIDS COMMUNICATION, KNOWLEDGE AND AWARENESS

Overall levels of awareness and knowledge of key aspects of HIV/AIDS are good in South Africa. There are however important areas of concern that need to be addressed. These include:

- Purposive campaigns utilising mass media, as well as responses to HIV/AIDS in the news media, should be oriented towards understanding and addressing HIV/AIDS information needs correctly and directly. This requires regular monitoring of research, addressing myths and misconceptions, and building linkages with HIV/AIDS service providers and organisations working at community level. Steps should be taken to address areas of poor and incorrect knowledge – for example, uncertainty with regard to the virgin myth, the causal relationship between HIV and AIDS, HIV transmission and kissing, amongst others.

- Telephone helplines in particular, provide opportunities to increase understanding of information needs, and it is recommended that resources be committed to monitoring, analysing and evaluating telephone helpline services.

- Lower levels of access to mass media channels in rural communities and poorer households should be noted. Addressing these limitations necessitates investment in community-level communications approaches which build on the resources of local health services as well as fostering linkages and partnerships with faith-based organisations, HIV/AIDS organisations and sectoral organisations. There is a need to support communication systems that allow for interactive communication, and community-based health services, HIV/AIDS organisations and sectoral organisations are best positioned to provide such support. It is recommended that interactive communication approaches and community level organisations be supported.
• Noting the relative marginalisation of African languages and Afrikaans, it is recommended that closer attention and emphasis be given to multilingual approaches – specifically communicating in the home language of intended audiences. Given that media is a powerful influence that makes people take HIV/AIDS seriously, television, radio, billboards and leaflets should be presented in the home languages of intended audiences to ensure they are understood.

• The red ribbon symbol is widely noted as an important reminder of HIV/AIDS and it is recommended that the red ribbon continue to be integrated into all HIV/AIDS campaigns.

• Given that South Africans experience HIV/AIDS along a continuum of prevention, care, support and rights, it is recommended that campaigns emphasise all aspects of the epidemic, including, for example, voluntary counselling and testing, nutrition, treatment, home-based care, laws and rights.

3.4 PREVENTION

The current South African national HIV/AIDS strategy includes emphasis on:
• Promoting safe and healthy sexual behaviour;
• Improving the management and control of STIs;
• Providing voluntary counselling and testing (VCT);
• Addressing issues related to blood transfusion and HIV;
• Reducing parent mother-to-child HIV transmission (PMTCT);
• Providing appropriate post-exposure services.

A comparison of the present household study with findings in the DOH’s 1998 SADHS provides important insights into behavioural shifts over time.

• Important trends identified when comparing behavioural responses of women aged 15–49 years include a greater proportion of women in 2002 having no sexual partner in the past 12 months; and greater proportions of women in 2002 having used a condom at last sexual intercourse (28.6% vs 8%).

• Sexual activity amongst young people should continue to be given attention, although it is promising that only a small proportion of young people aged 12-14 years report sexual activity, and only a quarter of 15–17 year olds are sexually active. When examining HIV status of youth however, infection levels are high, and urgent further research is necessary to explore child sexual abuse, statutory rape, sexual coercion, and age differentials between partners.

• Overall behavioural trends in terms of condom access and use indicate important progress in this regard. The national condom promotion and distribution system should continue to be resourced. Specific attention should be given to some provinces where condom use and access is lower.

• The observation that people (15-49 years) living in informal settlements have the highest HIV prevalence (28.4%) compared with those who live in urban formal areas (15.8%) and those in rural areas (12.4%), leads to the recommendation that HIV/AIDS prevention programmes be intensified for people living in informal settlements. Apart from solving structural problems (i.e. poor housing conditions), it is critical that prevention programmes in these areas focus on reduction of multiple...
partnerships, which are often associated with the transient nature of life within informal settlements. The rate of multiple partnership is higher among those living in urban informal areas (23.5%) than among those who live in tribal areas (19.2%) and urban formal areas (10.2%).

- Awareness of STI services is good and service provision is well regarded. The finding that there is a strong relationship between HIV and STIs is worth noting. Both public and private health care facilities should be encouraged to adhere strictly to all the requirements of the syndromic management approach for the treatment of STIs as is endorsed by the national Department of Health.

- Awareness of VCT services is relatively low, and although there are one in five South Africans who had had an HIV test, this was mainly as a result of testing in the context of insurance or of pregnancy. Promotion of personal motivation for VCT should be prioritised. VCT service promotion should emphasise confidentiality. Concern also exists in relation to promotion of VCT services in relation to disclosure of HIV status to partners, family members and communities. Further research is recommended in this area. It is recommended that partner counselling and provision of training and resources to post-test clubs, such as those pioneered in Uganda, be considered.

- It is recommended that: (a) prevention campaigns should include a drive to encourage VCT, noting that such promotion has benefits in terms of prevention, as well as care and support for persons who are HIV positive; (b) counsellors should be trained to impart knowledge to those living with HIV/AIDS including issues related to prevention, treatment, partner counselling and relationships; (c) in addition to treatment of opportunistic infections, provision of nutritional education and supplementation coupled with healthy living. Given that a large percentage of South Africans are living with HIV/AIDS, it is crucial that this comprehensive care package be made available as a matter of routine to those for whom it is medically indicated.

- It is further recommended: (a) there should be a dramatic expansion of VCT services, especially in those provinces such as Eastern Cape where there are currently only a few sites available; (b) urgent consideration should also be given to accreditation of VCT training programmes for both health professionals as well as lay counsellors.

- It is further recommended that VCT services be improved to focus also on those people who are living with HIV/AIDS. This study found that only 33% of those who were sexually active in the last 12 months, were HIV positive and aware of their serostatus, used a condom in the last sex act. In other studies it has been shown that people who are HIV positive and know their HIV status do not always use a condom. For this reason, it is critical that the HIV/AIDS campaign also focuses on those who are currently living with HIV/AIDS to ensure that they do not get reinfected with different strains of the virus and do not also infect their partners. More HIV positive persons could be encouraged to take up VCT if ARV therapy is offered.

- It is recommended that campaigns on reducing stigma and encouraging care for PLWAs should be directed at community leaders such as traditional leaders, non-governmental organisations (NGOs), faith-based organisations (FBOs) and so on, to create a framework of support necessary for such disclosure to occur. Direct
support should be given to development of support systems for HIV disclosure within relationships, the family and communities, but this should only be encouraged in contexts where support systems are in place, and where steps have been taken to ensure that violence does not occur in response to HIV/AIDS disclosure.

- Issues related to transmission of HIV via blood, PMTCT, and post-exposure prophylaxis were not closely assessed in this study. However, knowledge of HIV transmission via breastfeeding was poor and this should be emphasised in relation to PMTCT interventions, and further research is recommended in this area.

3.5 TREATMENT, CARE AND SUPPORT

The national strategy includes emphasis on:

- Providing treatment, care and support services in health facilities. This includes improving treatment, care and support for people living with HIV/AIDS; improving prevention and treatment of tuberculosis and other opportunistic infections; establishing poverty alleviation projects to address the root causes of HIV/AIDS, STIs and TB.

- Providing adequate treatment, care and support services in communities. This includes developing and implementing models of home and community-based care; increasing knowledge in communities regarding care and support.

- Developing and expanding the provision of care to children and orphans. This includes developing and implementing programmes to support the health and social needs of children affected by HIV/AIDS.

Many aspects of treatment, care and support were not directly addressed in this study. Attention is however drawn to the high levels of public support for provision of ARV therapy and PMTCT. Current efforts of the Department of Health and Treasury to cost the provision of antiretroviral therapy need to be fast-tracked and funds allocated to prolong the lives of those who are living with HIV/AIDS. The Cabinet’s statement of April 17 that antiretroviral therapy ‘could help improve the conditions of PLWAs if administered at certain stages in the progression of the condition, in accordance with international standards’, and noting their concern with regard to cost, was welcomed by the public and community. It is crucial that the government uses the gains it made in winning the case against pharmaceutical companies to produce generic versions of antiretroviral drugs. South Africa has the capacity to produce drugs to treat its people and even export them to the neighbouring countries with high HIV prevalence. It is important that the government remove value added tax from medicines to increase the affordability of these medicines. Such moves that include increased financial and human resources and access to affordable medicines, will go a long way to convince South Africans, who in this study have indicated that the government has commitment to deal with HIV/AIDS but perceive that it is not allocating sufficient resources to tackle the epidemic.

- Given the widespread support for the government to provide ARV therapy to PLWAs found in the present study, it is recommended that the government should roll out an ARV therapy programme for both PMTCT and all PLWAs as soon as possible. Promotion of basic treatment, including treatment of opportunistic infections, is also vital. In addition, health providers should be trained and resourced to provide the necessary support to PLWAs. Such steps would lie at the heart of a successful national response to the HIV/AIDS epidemic and are in line with recent
Cabinet statements on the issue in April and October 2002. Such a bold decision would have a ripple effect on other aspects of the comprehensive HIV/AIDS/STIs prevention, treatment, and care programmes currently run by the national Department of Health, especially non-discrimination of PLWAs and affected families, as well as risk reduction programmes.

- Data gathered in relation to HIV/AIDS and the social conditions of children is not presented in detail in this report. These findings will be presented in 2003. However, the finding that 13% of children had lost a mother or father from all causes of death and that 3.3% of households are headed by children in South Africa, leads to the recommendation that the government and NGOs need to galvanise support for orphaned and vulnerable children. This could include helping orphans and vulnerable children to obtain child care grants, encouraging people to foster these children and helping them to retain assets and to remain in school after death of parents.

### 3.6 Research, Monitoring and Evaluation

This study has demonstrated that it is possible to undertake a national household survey to determine the HIV prevalence in different race, sex, age, geographical location and provinces. This experience demonstrates the viability for continued regular surveys of this kind and it is recommended that such studies be carried out at least biennially for both policy and planning purposes and for carefully tracking the epidemic. This will allow interventions to be directed towards the specific segments of the population that most need them. The following main indicators should be used to track the national response: (a) the proportion of the population by age, sex, race, location type and province with recent HIV infections; (b) HIV prevalence by these five demographic variables; (c) for those sexually active in the past year, condom use during the last sexual act; (d) condom use during the last sex with non-regular partner; (e) the proportion of the population with more than one concurrent partner; (f) the proportion of the population that underwent voluntary counselling and testing and are aware of their HIV status, coupled and related to their condom use; (g) the proportion of the population that is HIV positive and have dependent children under 15 years; (h) the proportion of orphans and child-headed household; and (i) the proportion of the population that has taken AIDS seriously as a result of specific events, such as exposure to media information on HIV/AIDS, death of PLWA or knowing someone with AIDS.