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Situation Analysis

HIV in sub-Saharan Africa constitutes some 64% of the global total of 39.5 million people living with HIV¹. Levels of infection vary throughout the region with countries in the north and west having adult (15-49) prevalence levels of between 1% and 5%, while those in southern Africa have prevalence in the region of 10% to 20%, with some countries (Botswana, Zimbabwe, Lesotho and Swaziland) even higher. HIV prevalence has declined in some African countries, starting with Uganda in the early and late 1990s followed by Zimbabwe and urban areas of Ethiopia, Kenya and Malawi². These declines appear to be linked to a combination of factors including changes in key sexual behaviour: delayed sexual debut amongst young people, declines in partner turnover and increased condom use with casual sexual partners.

Southern Africa remains the most affected region, and the HIV epidemic in South Africa is interlinked with epidemics occurring in neighbouring countries. South Africa, Swaziland, Lesotho and Botswana reported the highest antenatal HIV prevalence levels in the world in 2006³. HIV prevalence is relatively low in neighbouring Mozambique, although increasing rapidly along transport routes⁴ and there is some evidence that prevalence may have peaked in Botswana⁵.

The severity of the epidemic is closely linked to the region's poverty, women's relative lack of empowerment, high rates of male worker migration, and other social and cultural factors. Even with knowledge of how to protect oneself from infection, such information may not always be usable in daily situations of economic and social disadvantage that characterise the lives of many young people and women in poor countries.

3.1 The epidemiology of HIV and AIDS in South Africa

A clear understanding of the nature, dynamics and character of an epidemic is critical in informing strategies that should be reviewed and adapted to fit local conditions.

UNAIDS and WHO description of the HIV and AIDS epidemics is based on prevalence rates and population affected. These organisations assert that HIV and AIDS is not the same everywhere. Given the dynamic nature of an epidemic, one country may move from one category to another.

Even within a country there may be a series of multiple, changing and overlapping microepidemics, each with its own character (the populations most affected), dynamics (patterns of change over time) and characteristics (severity of impact). By this definition, the South African HIV and AIDS epidemic is generalised. It is firmly established in the general population and sexual networking in the population is sufficient to sustain the epidemic independent of sub-populations at higher risk of infection. A numerical proxy of HIV prevalence consistently more than 1% in pregnant women has been used to qualify a generalised epidemic (World Bank and WHO use more than 5%). By this definition alone therefore, South Africa has a generalised epidemic.

HIV prevalence has been consistently monitored in South Africa including through antenatal HIV and syphilis prevalence surveys, which have been conducted since 1990, and two national population-based surveys which were conducted in 2002 and 2005⁶. A national prevalence survey of youth was also conducted in 2003/4. *Figure 1* illustrates antenatal HIV trends from 1990 to 2005⁷, and *Figure 2* illustrates HIV prevalence by sex and age group in 2005 in the general population.

Figure 1: National HIV prevalence trends among antenatal clinic attendees: 1990 – 2005⁸

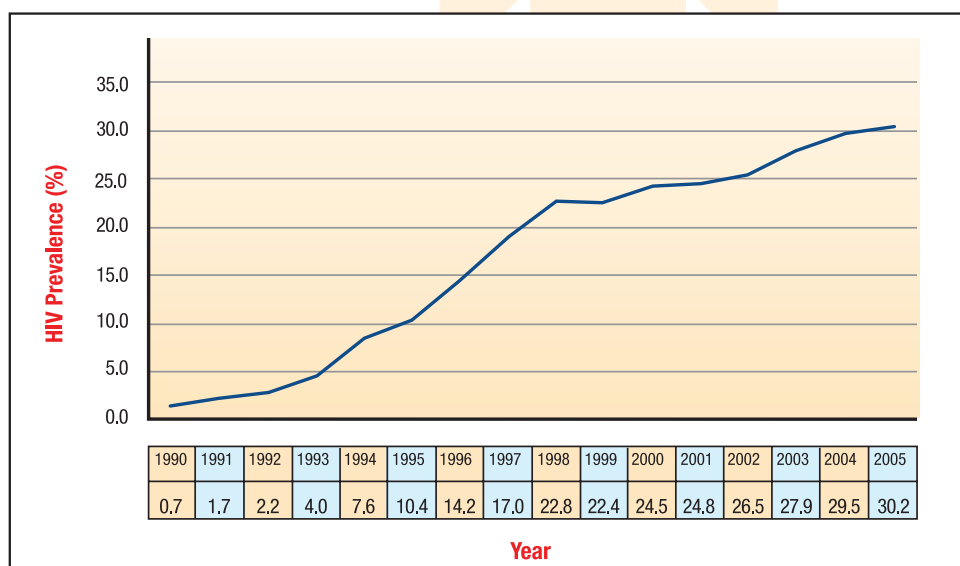
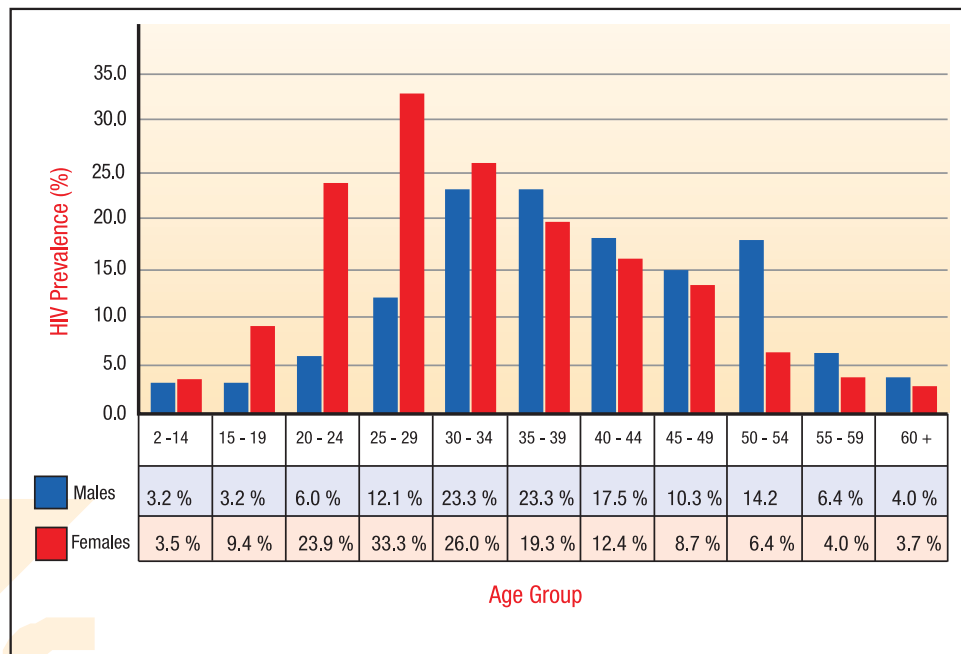


Figure 2: National prevalence by age and sex: 2005⁹

A number of other national and sub-national studies have been conducted including employees, the military, health workers, educators¹⁰, health care workers and hospital patients¹¹, amongst children attending health care facilities¹², and in various other communities and sectors. Not all, of these data are available in the public domain, and thus it has not been possible to paint a comprehensive picture of the epidemic in different sectors in South Africa.

However, the reasonably comprehensive data that is available has allowed HIV prevalence, incidence and AIDS mortality to be estimated using demographic modelling as shown in *Table 1* (page 24), showing an estimated 5.4 million people living with HIV in South Africa in 2006, of which a total of 294 000 were children aged 0-14¹³. These estimates are consistent with those of the Department of Health and UNAIDS of 5.5 million people living with HIV or AIDS of which 235 000 are children for 2005. The annual number of new HIV infections in South Africa peaked in the late 1990s^{13,14}. National antenatal HIV prevalence has continued to increase in females over 20, although prevalence levels have remained relatively stable amongst young females aged 15-19 and begun to stabilise in the 20-24 age group over the 2001 to 2005 period¹⁵. *Figure 3* illustrates antenatal HIV prevalence patterns by age group since 1991. There was a sharp increase in HIV prevalence in most age groups until about 2000 when the increase slowed down.

In recent years there has been, however, a discernable increase in HIV prevalence in older age groups.

Figure 3: HIV prevalence of antenatal clinic attendees by age group: 1991 – 2005

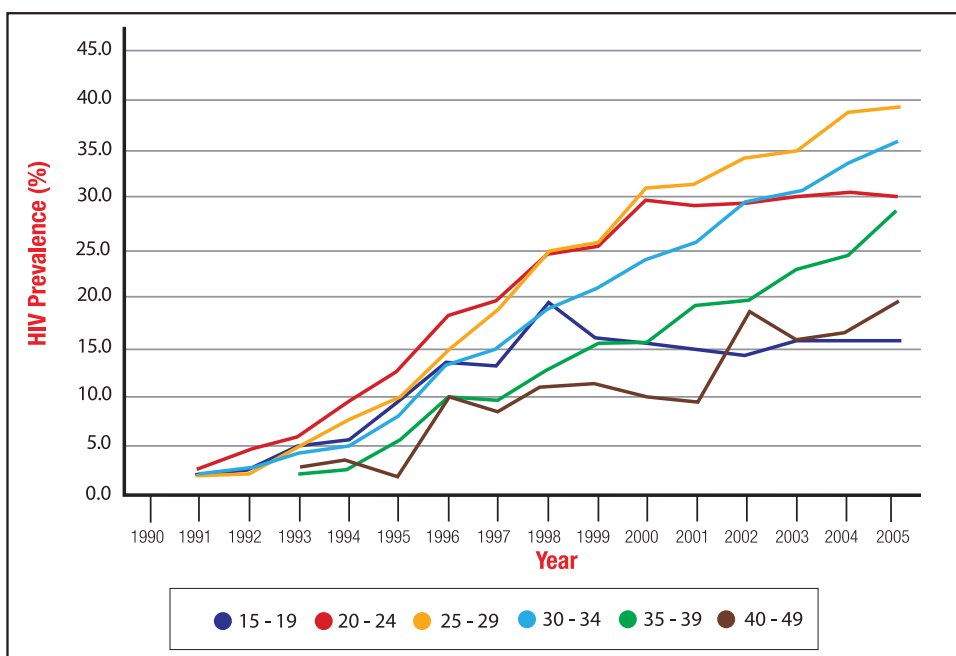


Table 1: HIV and AIDS Indicators at mid-2006¹⁶

Births	
Uninfected births (over calendar year)	1 057 000
HIV+ births (over calendar year)	38 000
Infected through breastfeeding	26 000

People living with HIV/AIDS	
Total HIV infected	5 372 000
Adults (20-64)	4 880 000
Adult men (20-64)	2 179 000
Adult women (20-64)	2 702 000
Adults (15-49)	4 756 000
Adult men (15-49)	1 946 000
Adult women (15-49)	2 810 000
Youth (15-24)	1 012 000
Male youth (15-24)	181 000
Female youth (15-24)	831 000
Children (0-14)	294 000
New infections	527 000

Prevalence	
Total HIV infected	11.2%
Adults (20-64)	19.2%
Adult men (20-64)	17.8%
Adult women (20-64)	20.4%
Adults (15-49)	18.3%
Adult men (15-49)	15.4%
Adult women (15-49)	21.2%
Youth (15-24)	10.4%
Male youth (15-24)	3.7%
Female youth (15-24)	16.9%
Children (0-14)	1.9%

Incidence	
Total population	1.3%
Adults (20-64)	1.7%
Adult men (20-64)	1.9%
Adult women (20-64)	1.5%
At or before birth (of births)	3.5%
Breastfeeding (no. infected through breastfeeding in year/uninfected births in that year)	2.4%

Number adults (14+) infected by stage	
Stage 1	1 451 000
Stage 2	1 084 000
Stage 3	1 813 000
Stage 4 (not on treatment)	511 000
Receiving antiretroviral treatment	200 000
Discontinued antiretroviral treatment	18 900

Number children (<14) infected by stage	
Pre-AIDS	240 000
Stage 4 (not on treatment)	27 000
Receiving antiretroviral treatment	25 300
Discontinued antiretroviral treatment	1 500

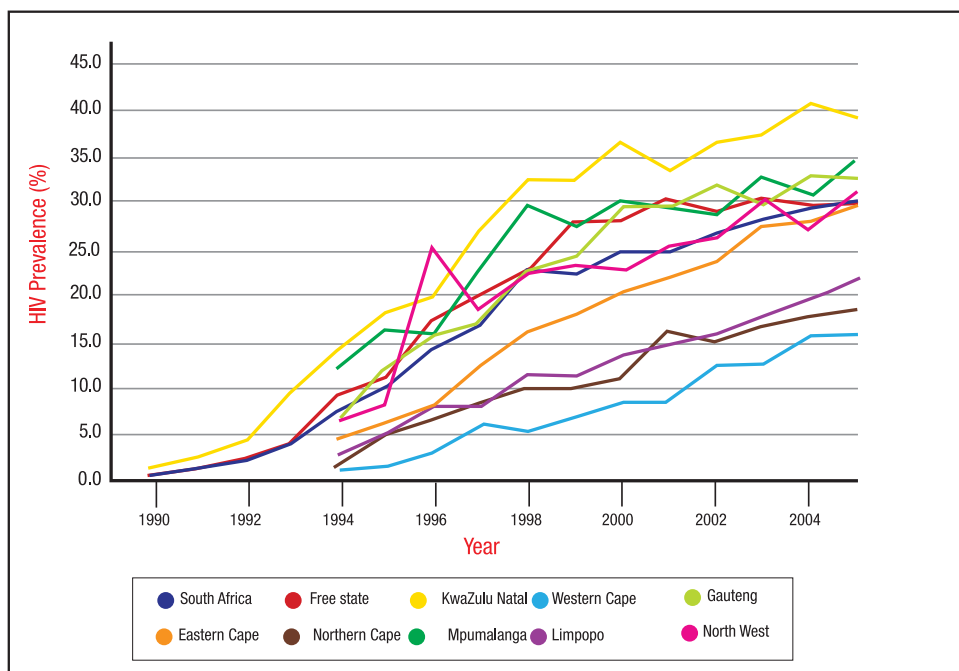
AIDS sick	
New AIDS sick during 2006	479 000
Total AIDS sick mid-year	599 000

Source: Dorrington, Bradshaw, Johnson and Daniel (2006)

Heterogeneity of the South African epidemic

HIV prevalence varies considerably throughout South Africa. Some provinces are more severely affected than others, with the highest antenatal prevalence in 2005 being in KwaZulu-Natal (39.1%) and the lowest in the Western Cape (15.7%).

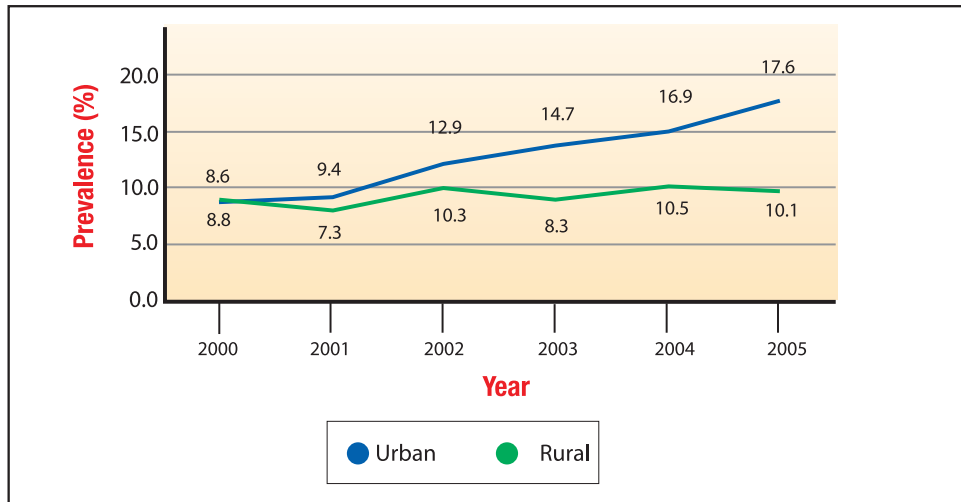
Figure 4: HIV prevalence of antenatal attendees by province: 1990 – 2005



Prevalence also varies sub-provincially by genotype of residence with population-level HIV prevalence (for persons two years and older) in informal urban areas being nearly twice as high as in formal urban areas (17.6% vs 9.1%) in 2005. Levels in informal rural areas were 11.6% and in formal rural areas, 9.9%¹⁷.

An analysis of sub-provincial antenatal data in the Western Cape has illustrated a high degree of heterogeneity within the province, but also varying growth patterns in the various districts. Districts comprising predominantly informal urban areas have highest overall prevalence¹⁸.

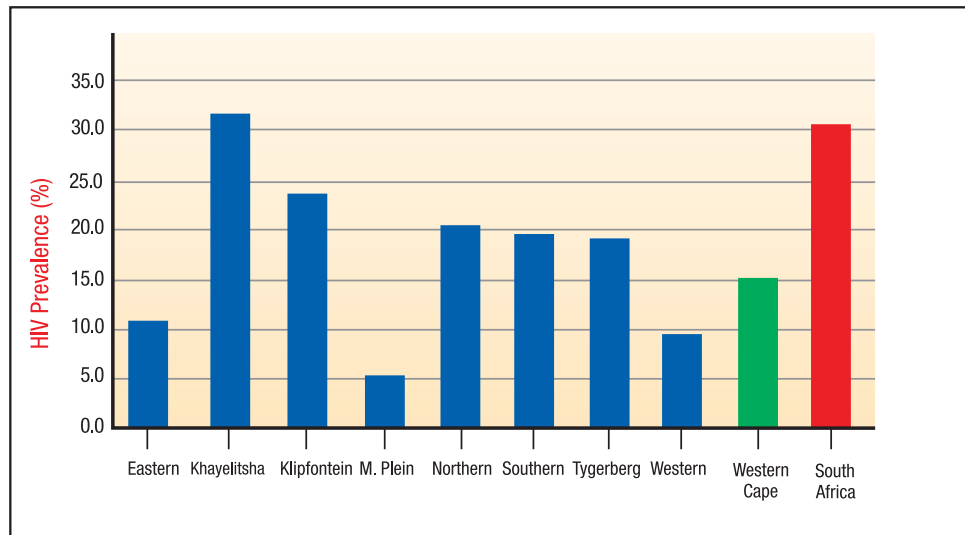
Figure 5: HIV Prevalence By Urban/Rural: Western Cape 2000 – 2005.



The reasons for the variable growth of the epidemic are not clear and a combination of factors is attributed to the variation. It is argued that geographical heterogeneity in HIV trends reflect the degree of urbanization, in addition to other factors such as sexual risk behaviours, sexual networks, population demographics, unemployment, social deprivation, migration, high population density, unemployment and unstable communities.

In the case of the Western Cape, there has been rapid urbanization and migration from rural areas to towns or from other provinces.

Figure 6: HIV Prevalence by Area in the Cape Metropole District versus the Western Cape and South Africa: 2005



National-level HIV prevalence also varies markedly by population group, sex and age group. In 2005, Black Africans were found to be most affected (of the order of six to seven times higher than non-Africans), whilst females aged 15-29 were three to four times more likely to be HIV positive than males in the same age group. HIV was around 3% amongst children aged 2-14, much higher in those aged 15-59 and nearly 4% for people in their sixties¹⁹.

Women bear the brunt of the epidemic of HIV and AIDS. Women account for 55%. This phenomenon is more pronounced in the age groups 20-24 and 25-29 years where the HIV prevalence rates are 23.9% for women to 6.0% for men and 33.3% for women to 12.1% for men, respectively 20. The peak age for HIV infection in women is 25-29 years while for men it is the 30-35 years age group.

There is no single HIV epidemic in South Africa. In addition to the pronounced gender dimension, there are other wide variations. These relate to the different new infection, illness and death epidemics. There is clear correlation between poverty and high HIV prevalence, with communities in informal settlements who often are the poor being most vulnerable. These communities are often also the most underdeveloped, with poor access to social services including HIV and AIDS prevention, treatment, nutrition and care programmes. The vast majority of the population in informal rural and urban settlements are Black African.

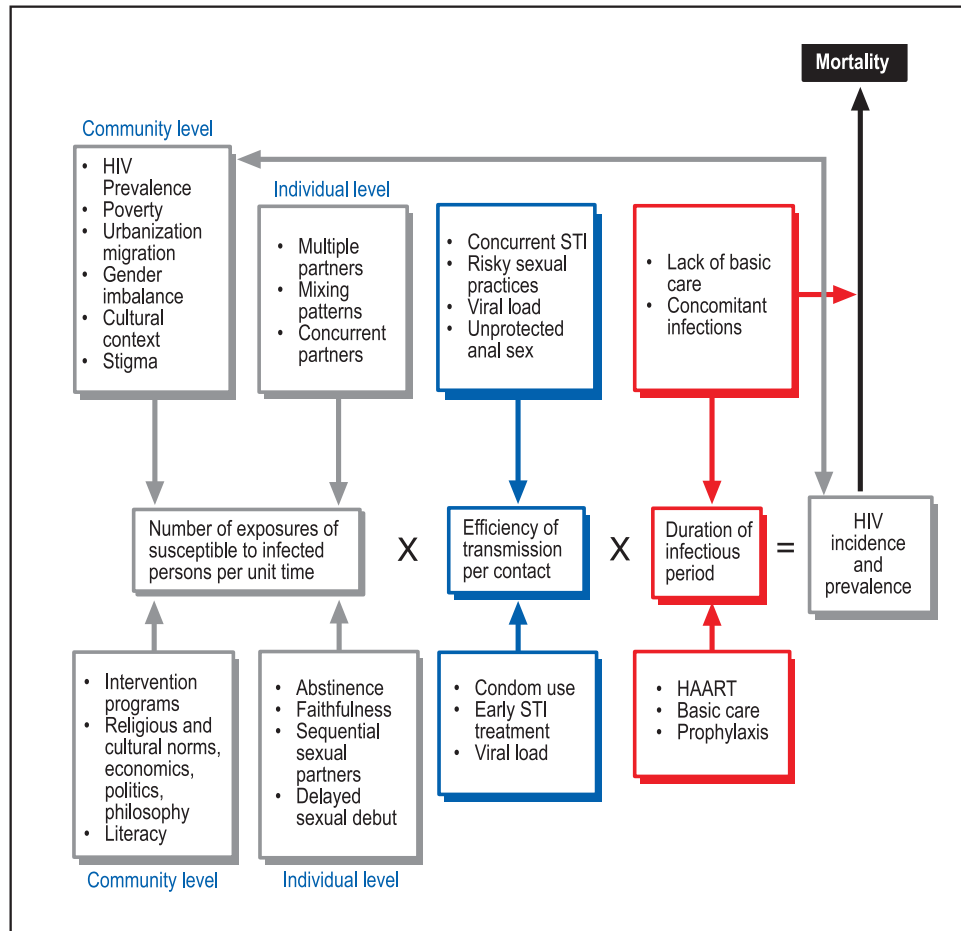
The HRSC data also show that children have a high HIV prevalence. In the 2-4 age group, 4.9% of boys and 5.3% of girls are HIV positive, translating into an estimated 129 621 children. In the slightly older age group of 5-9, 4.2% of boys and 4.8% of girls have HIV - an estimated 214 102 children, and in the 10-14 age group, this figure drops to 1.6% among boys and 1.8% among girls²¹.

3.2 Major causes and determinants of the epidemic in South Africa

The context of the national social and sexual networks is that of a newly democratic society emerging from a history of social disruption and racial and gender discrimination associated with inequitable distribution of resources as a result of apartheid. The inequitable distribution of resources massively disadvantaged the majority of the population. Poverty related diseases including HIV and AIDS, TB and malaria affect mainly the previously disadvantaged sections of the population.

Many factors influence the heterogeneity and overall high levels of HIV prevalence in South Africa as illustrated in *Figure 7*²². These include biological, individual and social/contextual factors.

Figure 7: Factors influencing the reproductive rate of HIV transmission



Source: adapted from Rehle et al, 2004

Whilst HIV is spread predominantly through unprotected sexual intercourse, other modes of infection remain important and are summarised below:

- **Mother-to-child HIV transmission:** HIV is transmitted to approximately one third of babies of HIV-positive mothers if there is no medical intervention. Use of antiretroviral drugs, obstetric practices including caesarean delivery, and safe infant feeding practices can reduce transmission to very low levels²³.
- **Blood transfusion:** The risk of HIV transmission via infected donor blood is high. However, donor and biological screening procedures allow for risk of HIV transmission through blood donation to be contained. Such procedures are followed rigorously in South Africa and risk is estimated to be very low – 1:400 000²⁴.
- **Exposure to blood:** In healthcare settings HIV can be transmitted between patients and health care workers in both directions via blood on sharp instruments, and may also be transmitted between patients through re-use of contaminated instruments. A number of

studies have highlighted the importance of infection control measures in such settings as well as post-exposure prophylaxis in the case of sharp instrument injuries²⁵. Exposure to blood can also occur in a wide range of institutional settings and in emergency situations where people are injured. Not much is known about the extent of the risk in informal health care settings and with traditional practices. Universal precaution practices including use of gloves and other protective measures are recommended.

- **Injecting drug use (IDU):** IDU has long been recognised as a high risk practice for HIV transmission, as needles and syringes may be shared between users. The extent of intravenous drug use in South Africa is under-researched, mainly because of the legal environment and stigma associated with this behaviour. In regions where HIV occurs amongst injecting drug users, prevalence is very high²⁶.

Contextual Factors

(a) Poverty

Poverty operates through a variety of mechanisms as a risk factor for infection with HIV and AIDS. Its effect needs to be understood within a socio-epidemiological context. It works through a myriad of interrelations, including unequal income distribution²⁷, economic inequalities between men and women which promote transactional sex²⁸, relatively poor public health education and inadequate public health system²⁹. Poverty-related stressors arising from aspects of poverty in townships such as poor and dense housing, and inadequate transportation, sanitation and food, unemployment, poor education, violence, and crime, have also been shown to be associated with increased risk of HIV transmission³⁰.

(b) Gender and Gender-based violence

South Africa has one of the highest rates of violence against women, with over 53 000 rapes reported to police in 2000, translating into a rape reporting rate of 123 women per 100 000 population³¹. Sexual violence is linked with a culture of violence involving negative attitudes (e.g. deliberate intention to spread HIV) and reduced capacity to make positive decisions or to respond appropriately to HIV-prevention campaigns. More significantly, the experience of sexual assault has also been linked to risks for HIV infection³². Equally interesting, two recent studies conducted among men in a township community and in an STI clinic both showed that men with a history of sexual assault were also at significantly higher risk for HIV transmission than their counterparts without such a history³³. In South Africa, the gender system fosters power imbalances that facilitate women's risks for sexual assault and sexually transmitted infections (STIs)³⁴. South African men, like men in most societies, possess greater control and power in their sexual relationships³⁵.

Women with the least power in their relationships are at the highest risk for both sexual assault and HIV infection, both stemming from the inability of women to control the actions of their sex partners³⁶. Men who have limited resources and lack the opportunity for social advancement often resort to exerting power and control over women³⁷. Importantly, sexist beliefs and negative attitudes toward women are held by men who have not been sexually violent as well as men who have a history of sexual violence. In fact, negative attitudes toward women are so pervasive there is evidence that they are



often held by women themselves³⁸. Power and control disparities in relationships create a context for men to have multiple concurrent partners and fuel their reluctance to use condoms. Unfortunately, men's attitudes toward women impede HIV preventive actions and can culminate in the acceptance of violence against women. Qualitative studies in South Africa consistently show that men believe they are more powerful than women and that men are expected to control women in their relationships. There is also evidence that men often hold attitudes that accept violence against women including beliefs that women should be held responsible for being raped. One in three men receiving STI clinic services endorsed the belief that women are raped because of things that they say and do and half of men believed that rape mainly happens when a woman sends a man 'sexual signals'³⁹.

(c) Cultural Attitudes and Practices

The relationship between culture and HIV is under-researched. There is some evidence that cultural attitudes and practices expose South Africans to HIV infections. First, gender inequalities inherent in most patriarchal cultures where women are accorded a lower status than men impact significantly on the choices that women can make in their lives especially with regards to when, with whom and how sexual intercourse takes place⁴⁰. Such decisions are frequently constrained by coercion and violence in the women's relationships with men. In particular, male partners either have sex with sex workers or engage in multiple relationships, and their female partners or spouses are unable to insist on the use of condoms during sexual intercourse for fear of losing their main source of livelihood.

Second, there are several sex-related cultural beliefs and behavioural practices such as rites of passage to adulthood especially among male youth, rites of marriage such as premarital sex, virginity testing, fertility and virility testing, early or arranged marriages, fertility obligations, polygamy, prohibition of post-partum sex and also during breastfeeding, and rites related to death such as levirate (or spouse inheritance) and sororate (a widower or sometimes a husband of a barren woman marries his wife's sister) are also believed to spread HIV infection⁴¹.

HIV infection is also believed to occur during some of the traditional health practices conducted by traditional healers when they use unsterilised sharp instruments such as knives, blades, spears, animal horns and thorns during some of the healing practices and/or recommend sex with a virgin as part of their treatment of patients.

(d) Stigma, denial, exclusion and discrimination

HIV and AIDS is perhaps one of the most stigmatised medical conditions in the world. Stigma interferes with HIV prevention, diagnosis, and treatment and can become internalized by people living with HIV and AIDS⁴². In the UNGASS declaration, governments committed themselves, among other things, to confront stigma, denial and eliminate discrimination by 2003. Although still prevalent, AIDS stigma appears to be declining in South Africa as shown by the findings of the 2005 national HIV and AIDS household survey, when compared to the 2002 survey⁴³.

A recent large survey conducted among 1 054 people living with HIV (PLHIV) in Cape Town found high levels of internalised stigma⁴⁴. This is mostly due to the fact that HIV infection, as with other STIs, is widely perceived as an outcome of sexual excess and low moral character, with a consequent strong culture of silence by PLHIV because of fear of rejection and isolation by close relatives and the community at large. Stigma appears to be more severe for women than for men⁴⁵.

One of the consequences of the problem of stigma, exclusion and discrimination of people living with HIV and AIDS is that it forces people who are infected to hide their condition and to continue engaging in high-risk behaviour⁴⁶. Another consequence is denial. Both silence and denial about HIV and AIDS are lethal because they prevent people from accurately assessing their own personal infection risk as well as accessing the broad range of available services in this regard.

(e) Mobility and labour migration

Poverty and unemployment are linked to economic disempowerment and this affects sexual choice-making and exposure to wider sexual networks. Over and above gender vulnerability that flows from economic disempowerment, individuals who engage in work-seeking, mobile forms of work or migrant labour are at increased vulnerability to HIV as a product of higher likelihood to have multiple sexual partners, higher exposure to sex for exchange of money, amongst other risk factors⁴⁷. Mobile individuals include informal traders, sex workers, domestic workers, cross-border mobility, seasonal agriculture workers, migrant workers (e.g. mine-workers, construction workers, and soldiers), long-distance truck, bus and taxi drivers, travelling sales persons and business travellers⁴⁸. These forms of mobility are pervasive in southern Africa. Various studies have illustrated the higher likelihood of mobile groups to be HIV positive⁴⁹. Migration patterns in South Africa have shifted from being predominantly male migration, to a trend towards increasing mobility and migration by women. Mobility and migration not only increase vulnerability to HIV of mobile individuals, but also sending and receiving communities⁵⁰.

(f) Informal settlement

Informal settlement is associated with higher levels of HIV prevalence in South Africa, with HIV prevalence for people aged 15-49 in urban informal areas being nearly twice that of prevalence in urban formal areas (25.8% vs 13.9%). There is often social fragmentation within informal settlements that may increase the likelihood of exposure to unsafe sex. In addition, there is a greater likelihood that individuals at higher risk of HIV, including work-seekers, temporary workers, and labour migrants, are resident in these areas. Informal settlements frequently lack adequate housing, sanitation and health service access, and these exacerbate overall health risks⁵¹.

3.3 Populations at higher risk

(a) Women

Women, especially black women, have been on the bottom rung of the ladder in terms of participation in the economic, social, and political life of the country. For many years black women have experienced triple oppression - discriminated against on the basis of their class, race and gender. Some practical challenges facing women because of these three forms of oppression relate to violence against and abuse of women, poverty and poor health status in general.

Acknowledging the fact that gender inequality hinders social and economic development, the current government has made great strides towards empowerment of women, and gender equality is one of the critical elements of the transformation agenda in the country. Women are beginning to regain their appropriate place in society and are taking responsibility for their lives. Patriarchal attitudes are changing, with men participating in efforts to address challenges such as violence against women. Gender transformation is part of a broader transformation agenda that also seeks to reduce the gap between rich and poor and between historically disadvantaged black communities and white communities with many more resources. However, the high levels of gender-based violence in the country indicate that a lot still needs to be done in this area.

Notwithstanding the abovementioned achievements, women remain one of the most important vulnerable groups in the country. The difference between men and women is more pronounced in the age groups 20-29 years but particularly striking in the age group 25-29 where the HIV prevalence in the same survey were 33.3% for women compared to 12.2% men⁵². A youth study by the Reproductive Health Research Unit (RHRU, 2002) found that among the 10% of youth who HIV positive, 77% are women. In addition to biological, economic, social and other cultural vulnerabilities, women are more likely to experience sexual abuse, violence (in particular domestic violence) and rape.

They take the brunt of caring for sick family members and are the soldiers at the forefront of community-based HIV and AIDS activities. The HIV epidemic and AIDS is clearly feminized, pointing to gender vulnerability that demands urgent attention as part of the broader women empowerment and protection. In view of the high prevalence and incidence of HIV amongst women, it is critical that their strong involvement in and benefiting from the HIV and AIDS response becomes a priority. Teenage females have been underemphasized as a target group, even though pregnancy levels are high in this age group. The fact that the burden of the epidemic falls more on women and girls than on men and boys remains a central challenge to the national response.

(b) Adolescents and young adults (15-24 years)

The United Nations General Assembly Special Session on HIV and AIDS (UNGASS) identified young people aged 15-24 as a priority group in reducing new HIV infections and set a global target of reducing incidence of HIV in this group by 20% by 2015⁵³.

Data from a decade or more of extensive national antenatal surveys in South Africa show that HIV prevalence among adolescent girls and young women in this age group may be stabilizing; albeit at very high rates. Prevalence in the age group 15-19 has remained at around 16% for the past five years, while in the 20-24 years it has risen only slightly (28%-30%) over the same period. Although current HIV prevention programmes in South Africa have invested significantly in this age group, they are yet to demonstrate the desired impact. Continued investment in and expansion of carefully targeted evidence-based programmes and services focusing on this age group remain as critical as ever. Young people represent the main focus for altering the course of this epidemic. UNAIDS data on the experience of several countries including South Africa, confirm that positive behaviour change is more likely in this group than in older ages.



The greatest increase in pregnancy and HIV infection is associated with school-leaving. School-leaving is a time of insecurity for young people, the aspirations that existed in school of getting a job and earning an income are often dashed and personal motivation to achieve and the psychological rewards of school achievement are no longer there, and there are family pressures to contribute to household income or to leave. In the absence of career opportunities, many young women find fulfilment and affirmation in being a mother – by definition requiring unprotected sex.

(c) Children 0 – 14 years

Children under the age of 18 comprise 40% of the population of South Africa. In 2004, it was estimated that there were 2.2 million orphaned children (meaning 13% of all children under 18 have lost either a mother or father); nearly half of all orphans were estimated to have lost parents as a result of AIDS⁵⁴. Some of the worst affected children – those in deeply impoverished households – may experience various forms of physical, material and psychosocial deprivation and assaults on their health as a result of poverty and/or a lack of parental care and nurturing environment. Often these children are separated from caregivers and siblings and sent to stay with other relatives or other carers or social networks.

A significant number of children in South Africa are living with HIV and AIDS. According to the 2005 HSRC survey, there is an estimated 129 621 children aged 2-4 years and 214 102 children aged 5-9 in 2005 living with HIV or AIDS⁵⁵. HIV is thought to have contributed to an increase of 42% in under-five mortality in this country in 2004⁵⁶. Also, there is evidence to suggest that 60% of hospital deaths were HIV-related in 2005. Children usually do not have sufficient access to AIDS treatment and care because available services are mostly designed for adults. Serious challenges around the skills of health workers and capacity to manage and treat children with AIDS, including lack of appropriate ART formulations for treating children, remain.

Children are vulnerable to HIV infection through child sexual abuse. Whilst little is known as to the extent of child sexual abuse in South Africa anecdotal estimates suggest that it is quite extensive and thus is a risk that needs to be monitored⁵⁷.

(d) People with disabilities

People with disabilities constitute a significant part of the population (12%). Yet, this group has been particularly neglected in the AIDS response. There are often erroneous perceptions that people with disability are asexual. To date the national response has not addressed the special needs of the various categories of people with disability in terms of prevention, treatment, care and support programmes. People with disability suffer double stigma arising from discrimination as result of their disability status and their HIV status.

Increasingly AIDS is a cause of disabilities and the more people's lives are prolonged while infected so this will become a significant issue and it will be necessary to provide for care, support and treatment. This sector is actively involved in ensuring that people with disabilities respond to the HIV and AIDS challenges that facing the often with little support. The special needs of people with disabilities demand conscious efforts to ensure equitable access to information and services.

(e) People in prisons

Incarceration is a risk factor for HIV and is correlated with unprotected sex and injecting drug use in correctional facilities, but may also include risk of blood exposure as a product of violence and other factors. Interventions for risk reduction include provision of voluntary testing and counselling, condom provision, addressing rape, and addressing intravenous drug use⁵⁸. Male prisoners are predominantly vulnerable but risks extend to female prisoners. Little is known about the extent of HIV in South African correctional services, nor the relationship between known risk factors and HIV acquisition in South Africa. However, a small study in Westville medium security prison near Durban in 2002 found an HIV prevalence of 29.6% amongst male prisoners⁵⁹.

(f) Men who have sex with men (MSM)

Whilst HIV infection amongst MSM was a focus in the early phases of the epidemic in South Africa, there is very little currently known about the HIV epidemic amongst MSM in the country. MSM have also not been considered to any great extent in national HIV and AIDS interventions. Biologically, MSM who practise receptive anal intercourse have an elevated risk for HIV infection. MSM practices are also more likely to occur in particular institutional settings such as prisons, often underpinned by coercion and violence. MSM behaviours and sexualities are wide-ranging and include bisexuality, and the HIV epidemic amongst MSM and the heterosexual HIV epidemic are thus interconnected⁶⁰.

(g) Sex workers

Sex work is not readily defined but includes a wide range of informal and formal activities that relate to the exchange of sex for material benefit. Key characteristics include frequent and repeated exchange of sex with multiple sexual partners usually for monetary gain. Sex workers are predominantly female. Sex workers are at high risk of HIV infection and are vulnerable as a product of high partner turnover and a limited capacity to ensure safe sex during each and every sexual encounter. Very little is known about HIV prevalence amongst sex workers or their clients in South Africa, but both groups are linked to sexual networks that overlap with the broader epidemic.

(h) Mobile, casual and atypical forms of work

Truck driving, military service and other uniformed services such as security service provision may require regular and sustained travel and may in turn increase the likelihood of multiple sexual partnerships. Such activities have been linked to increased risk of HIV infection⁶¹. Whilst very little is known about prevalence in these sectors in South Africa, it is likely that risk of infection is higher, and these groups also overlap with the broader epidemic as a product of linked sexual networks.

(i) Refugees

The disruption of services and support systems caused by conflict or unrest in their home countries means that many refugees have limited information about HIV and AIDS, and they are often not familiar with local services or systems in South Africa. In addition, while their legal status guarantees the right to access HIV-related information and services on the same level as South Africans, barriers such as language, cultural traditions and xenophobia often preclude their ability to access these services. Therefore targeted programmes are necessary to ensure that refugees and asylum seekers have access to information and services – including prevention, care, support and treatment – as an integrated component of the national response to HIV and AIDS.

(j) Injecting drug use

South Africa is a conduit country and market for drugs including injecting drugs such as heroin. Needle and syringe sharing is a common practice amongst injecting drug users, and is a highly efficient mechanism for transferring HIV. Intravenous heroin use in South Africa is presently very low, but has the potential to escalate. There are heroin detoxification programmes available in the country, but no formal needle exchange programmes exist⁶².

(k) Sexual HIV transmission and biological risk

The likelihood that an individual will become infected with HIV through sexual contact depends on the mechanism of sexual contact, the viral load of the HIV-positive person and the susceptibility of the individual⁶³. Whilst the probability of HIV transmission through a single coital act is relatively low, risk increases through repeat exposure and higher risk is strongly associated with higher viral load in the infected partner, coinfection with sexually transmitted infection(s), genital ulceration, genital maturity and anal sex, amongst other factors.

Prevalence data and various studies have illustrated the higher biological vulnerability of women and younger women and girls in particular. Biological factors include underdevelopment of the genital tract in young women and girls, a greater surface contact area within the vagina, retention of fluids for a longer period, and the higher possibility of undetected STIs. Both males and females are biologically more vulnerable in the case of receptive anal intercourse, and uncircumcised males are also more vulnerable. Concurrent sexual partnerships increase the likelihood of exposure of sexual partners to high viral load and consequently, higher likelihood of infection⁶⁴. High viral load in the late phases of HIV is reduced through antiretroviral therapy⁶⁵.

(l) Sexual HIV transmission and individual risk factors*Early sexual debut*

Earlier sexual debut is significantly associated with increased risk of HIV infection. Risks of earlier sexual debut also include higher likelihood of having multiple partners, lower likelihood of condom use at first sex and higher overall numbers of sexual partners, not to mention higher biological susceptibility to infection of adolescent and young girls⁶⁶. Orphanhood, which increases as a result of deaths of parents from AIDS, has been found to increase the likelihood of earlier sexual debut⁶⁷. Shifts towards later sexual debut have been correlated with prevalence declines in a number of African countries⁶⁸.

Older sexual partners amongst youth

For young people, particularly girls under 20, having older partners is a significant risk factor for HIV infection as it exposes them to a pool of higher HIV prevalence. Both young males and females are more likely to be HIV positive if they have sexual partners five or more years older than themselves⁶⁹.

Transactional sex

Transactional sex involves the exchange of sex for material gain. Transactional sex involves disempowerment which may include a reduced ability to negotiate safer sex – particularly condom use⁷⁰. In a study in South Africa, transactional sex amongst females with a non-primary male partner was associated with lifetime experience of partner violence, problematic alcohol and drug use, and substandard housing, amongst other factors⁷¹.

Partner turnover and concurrent sexual partnerships

Having a higher overall number of sexual partners, having a high turnover of sexual partners and having concurrent sexual partners (or having a partner who has concurrent sexual partners) are all risk factors for HIV infection⁷². People settle into permanent sexual relationships and marry at relatively older ages in South Africa. This results in a higher likelihood of having numerous life-time sexual partners. The length of the period of risky sexual activity prior to marriage has been shown to be closely correlated with HIV prevalence in a country⁷³, and declines in HIV prevalence have been associated with declines in number of sexual partners in the past year⁷⁴. In South Africa, 27.5% of males and 6.0% of females aged 15-24 had two or more partners in the past year. In older age groups the proportions were 14.4% for males and 1.8% for females aged 25-49, and also high for males aged 50 years and older at 9.8%⁷⁵. Higher proportions of having multiple partners amongst youth aged 15-24 were also reported in a national survey in 2004 – 44% for males and 12% for females⁷⁶.

Condom use

When used consistently and correctly, male and female condoms prevent HIV infection and other STIs. Consistent, but not necessarily correct condom use is estimated to provide 80% protection in comparison to non-use⁷⁷, whilst inconsistent use is not significantly protective⁷⁸. Male latex condoms are widely distributed in South Africa including via the public sector, social marketing programmes and commercial sales. Quality control and

related logistics for public sector condoms is managed by the Department of Health and over 350 million condoms annually have been distributed on a demand basis in recent years. Public sector distribution includes hospitals and clinics as primary distribution sites, with secondary distribution extending to non-governmental organisations, workplaces, and other locations. Female condoms are distributed to selected sites. Access to male condoms is perceived to be high⁷⁹.

Reported levels of male condom use at last sex are high in South Africa, particularly amongst youth at 72.8% for males and 55.7% for females aged 15-24, and over 30% for males and females aged 25-49. However, high levels of reported use have not translated into reductions in antenatal HIV prevalence over the past five years⁸⁰. Increases in condom use with non-regular partners have however been associated with prevalence declines in other African countries⁸¹.

Male circumcision

Epidemiological analyses have demonstrated correlations between circumcision and HIV prevalence⁸², and protective effects have been shown in a randomised controlled trial in South Africa⁸³ and elsewhere⁸⁴. Although male circumcision reduces the risk of HIV infection of males through female-to-male transmission⁸⁵, it is not clear whether it reduces male-to-female transmission, although there are likely to be long-term epidemiological benefits⁸⁶. It remains necessary for men to practise consistent condom use, as well as adopting or maintaining other HIV prevention strategies such as limiting numbers of sexual partners, whether or not they are circumcised.

Substance use

Alcohol and drug use have a disinhibiting effect on safer sex as a product of diminishing rational decision-making. Alcohol use has been associated with higher risk of HIV infection, with heavy alcohol consumption being linked to higher likelihoods of having unprotected sex with a non-monogamous partner, having multiple sexual partners, and paying for or selling sex⁸⁷.

Knowledge of HIV status

Knowledge of HIV status appears not to lead to increased adoption of HIV prevention practices amongst people who tested HIV negative, but has been linked to increased prevention behaviours amongst those who test HIV positive⁸⁸. Interventions focusing on people living with HIV who know their status – sometimes referred to as positive prevention – have also shown increases in the adoption of preventive practices⁸⁹.

Around 30% of those aged 15 years and older report ever having tested for HIV in 2005, with a significant proportion having tested for HIV in the past year (eg. 49.5% of 15-24 year olds)⁹⁰.



3.4 Impacts

Demographic

The demographic impact of HIV and AIDS on the South African population is apparent in statistics such as the under-5 mortality rate, which has increased from 65 deaths per 1000 births in 1990 to 75 deaths per 1000 births in 2006. Mortality rates in 1990 suggested that a 15-year old had a 29% chance of dying before the age of 60, but mortality rates in 2006 suggest that 15-year olds have a 56% chance of dying before they reach 60. Other estimates provided by the Actuarial Society of South Africa for 2006 include:

- 1.8 million AIDS deaths had occurred in South Africa, since the start of the epidemic.
- Around 740 000 deaths occurred in 2006, of which 350 000 were due to AIDS (approximately 950 AIDS-related deaths per day).
- 71% of all deaths in the 15-49 age group were due to AIDS.
- Approximately 230 000 HIV-infected individuals were receiving antiretroviral treatment, and a further 540 000 were sick with AIDS but not receiving antiretroviral treatment.
- 300 000 children under the age of 18 experienced the death of their mother.
- 1.5 million children under the age of 18 were maternal or double orphans (i.e. had lost a mother or both parents), and 66% of these children had been orphaned as a result of HIV and AIDS.

The economy

The ILO demonstrated in 2004, and again with more recent data in 2006, that the rate of economic growth in countries heavily affected by HIV and AIDS has been reduced by the epidemic's effects on labour supply, productivity and investment over the last decade or more. According to this assessment, 3.7 million labour force participants aged 15 to 64 years were living with HIV or AIDS in South Africa⁹¹. However, there is currently no clear evidence of the actual economic impact of HIV and AIDS in South Africa.

Families and communities

Households experience the immediate impact of HIV and AIDS, because families are the main caregivers for the sick and suffer AIDS-related financial hardships. During the long period of illness caused by AIDS, the loss of income and cost of caring for a dying family member can impoverish households⁹².

The problem of orphans and vulnerable children will persist for years, even with the expansion of prevention and treatment programmes. Studies in several districts in South Africa found that the majority of orphans are being cared for by grandparents, family members or through self-care in child-headed households⁹³. Orphans and vulnerable children are at higher risk for HIV infection, as they face numerous material, emotional and social problems⁹⁴.

They also face:

- Discrimination and stigma, as they are often shunned by society, lack affection and are left with few resources;
- Many of them drop out of school due to inability to pay school fees;
- They also often suffer from malnutrition and ill health and are in danger of exploitation and abuse⁹⁵.

Psychosocial impacts, mental health and HIV

Interventions to address HIV and AIDS have tended to focus on biomedical interventions including, for example, condoms for HIV prevention, and ART and PMTCT, for people living with HIV. Psychological distress and psychological disorders are also more prevalent amongst PLHIV, and the importance of mental health programming in relation to HIV has long been overlooked⁹⁶. Less emphasis has been given to the psychosocial impacts of the disease which are related to illness and death of parents, children and other family members; caring for people who are ill and dying of AIDS; and living with and coping with an HIV-positive diagnosis. A recent study in South Africa found a higher prevalence of mental disorders amongst PLHIV including depression, anxiety, increased anxiety amongst PLHIV with children, and alcohol-related problems.

The health care system

HIV and AIDS affect both the supply and demand of health care systems. On the 'supply' side of health systems, the human resource effects of HIV are two-fold: the stress and morale impacts of rapidly changing epidemiological, demand and mortality profiles in patients caused by HIV and AIDS, and HIV infection in providers themselves.

In a survey of 512 public sector workers in four provinces, 16.3% were HIV infected⁹⁷. An HIV prevalence study at Helen Joseph and Coronation Hospitals with a 91% response rate, found that 13.7% of 644 nurses were HIV infected and 19% had AIDS-defining CD4 cell counts⁹⁸.

Education system

The epidemic affects the supply and demand for primary and secondary schooling. On the supply side, infected teachers will eventually become chronically ill, with increased absenteeism, lower morale and productivity.

A South African education sector study found a sero-prevalence of 12.7% among teachers and significant gender, racial and geographical differences⁹⁹.

In conclusion, the challenge of HIV and AIDS in South Africa requires an intensified comprehensive, multi-sectoral national response.

This response should:

- address the social and economic realities that make certain segments of society most vulnerable;
- provide tools for prevention of infection;
- provide services designed to mitigate the wide-ranging impacts of the epidemic.



To achieve this there is a continuing need to guide policy and programmes at all levels and in all sectors and to inspire renewed commitment from all South Africans.

The South African National AIDS Council (SANAC) recommended a rapid assessment of the NSP: 2000-2005 as a first step toward developing the NSP: 2007-2011. A task team was formed to coordinate the assessment, which was done between August and September 2006. This evaluation enabled stakeholders to identify the strengths and weaknesses of the NSP 2000-2005. The NSP 2007-2011 thus partly builds on the findings of this assessment.

