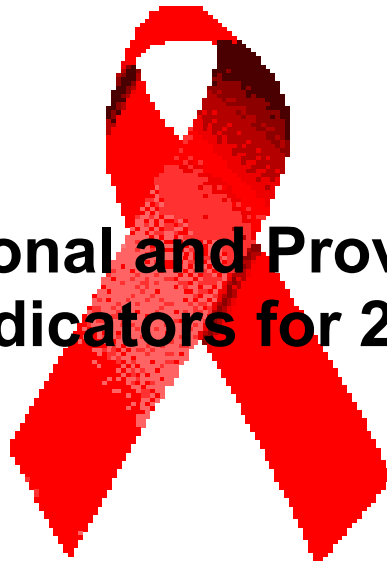


The Demographic Impact of HIV/AIDS in South Africa

National and Provincial Indicators for 2006



Prepared by

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**The Centre for
Actuarial
Research**



**The Burden of
Disease
Research Unit**



**The Actuarial
Society of
South Africa**

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This report can be downloaded from the following websites:

www.commerce.uct.ac.za/care

www.mrc.ac.za/bod

www.assa.org.za

Executive Summary

The ASSA2003 AIDS and Demographic model is structurally only a slight modification of the previous model but has been calibrated to fit each of the provincial epidemics and for the national model to be (as is far as is possible within the constraints of such modelling) consistent with the sum of the provincial projections. The modelling of the epidemic provincially helps to create a more nuanced and accurate picture of the epidemic in South Africa as a whole, and provides estimates at a geographic level where they are more useful to planning and management.

The model is based on a thorough analysis of a range of epidemiological and demographic data including the antenatal surveys and recorded deaths up to the year 2003. In addition the projections allow for the impact of major current interventions.

According to the projections about 5.4 million people out of a total of nearly 48 million South Africans were HIV positive in the middle of 2006, giving a total population prevalence rate of a little over 11%. Around 600 000 are sick with AIDS (11% of the HIV infected).

The projections show that the prevalence in the country and most provinces is reaching a plateau, with KwaZulu-Natal the highest (estimated antenatal plateau of around 40%), the Western Cape the lowest (estimated antenatal plateau of around 17%) and Northern Cape and Limpopo slightly higher than the Western Cape. The other provinces are expected to level off or peak at an antenatal prevalence of 30-35%.

The projections also suggest that antiretroviral treatment (ART) could, even at this late stage, have a significant impact on reducing the number of AIDS deaths per year. Without ART we would have expected some 505 thousand deaths a year due to AIDS in 2010, but with ART (rolled out according to the default assumption in the model) this will be reduced to approximately 388 thousand a year – a difference of over 100 thousand deaths in a year. However, there is uncertainty about the coverage of the ART roll-out in future and the number of AIDS deaths in 2010 could even be as low as 291 000 a year if 90% of people progressing to AIDS were to receive treatment. With the default assumptions regarding interventions, life expectancy, which is already some 13 years below what it is expected it would have been without HIV/AIDS, is projected to fall to just under 50 years. Without ART this would have been around 48, somewhat higher than earlier estimates of around 43 years (which is the estimate of some international agencies). In 2006 the life expectancy is estimated to be approximately 49 years for males and 53 years for females.

It is estimated that by the middle of 2006 some 711 thousand people were in need of ART, while approximately some 225 thousand are receiving it. The number on treatment can be expected to rise, reaching at least 500 thousand

by 2015 even if coverage fell to only 20%. If coverage increased to 90% there would be over 2 million on treatment by 2015.

New infections are being driven by the high incidence in the 15-24 age group, particularly that of young women. Incidence rates at all other ages peaked between 1997 and 2000.

The following are some of the key indicators of the HIV/AIDS epidemic in 2006 estimated by the model:

- 38 thousand babies will be infected at birth and around 26 thousand through breastfeeding
- around 1.3% of uninfected people (527 thousand) will become infected,
- 11% of the population (5.4 million) is infected and 11% of these (around 600 thousand) are sick with AIDS
- of the 5.4 million infected, 1.3 million are under 25 years of age, 3.5 million are pre-AIDS and 225 thousand are receiving treatment
- the prevalence for women is higher than that for men in the 15-24 age band while it is higher for men for ages over 45, reaching peaks at ages 25-29 (32.5%) for women, and 30-34 for men (26.5%)
- there will be 737 thousand deaths, nearly half of which (47%) due to HIV/AIDS, rising to nearly 71% of deaths in the 15-49 year age group
- the infant mortality rate (IMR) and under five mortality rate are 48 and 73 per 1000 live births respectively
- over half of 15 year olds are not expected to survive to age 60

In addition there are estimated to be a total of 1.5 million orphans (maternal orphans¹ under the age of 18 years) of whom about two thirds are due to AIDS and about 300 thousand became orphans in 2006. The model estimates that by the middle of 2006 nearly 540 thousand people were sick with AIDS but did not have access to ART². About 225 thousand people are assumed to be on ART, with perhaps two thirds of these being in the public sector.

The distribution of condoms has increased, with the number of male condoms distributed reaching 346 million by 2004 and the number of female condoms distributed reaching 0.2 million in 2003. Other indicators of prevention are sadly lacking. Over 70% of facilities provide PMTCT although coverage differs by province with over 90% coverage in the Free State, and over 80% in Western Cape and Gauteng, but barely half in Eastern Cape and KwaZulu-Natal. However, little information could be obtained on the number of mothers who have received this intervention or the impact that it is having. On average, roughly 2 people per 100 over the age of 14 received VCT in primary health care facilities in 2002. Utilization of VCT services varied from a high of nearly 4 per 100 in Western Cape to barely 1 in Free State and Mpumalanga.

¹ The term 'maternal orphans' is used in this report to refer to children who have lost a mother or both parents.

² This excludes people who started on ART but discontinued treatment due to adverse side effects or inability to adhere to treatment

In terms of treatment, accurate statistics are not available. However, increasing numbers of people are receiving treatment and it was estimated that by the end of August 2005, 78 thousand people were receiving anti-retroviral treatment through the public sector, up from 19.5 thousand in October of the previous year. In June 2006, the Joint Civil Society Monitoring Forum estimated that 140 thousand people had initiated treatment in the public sector.

The population growth rate has been affected by HIV/AIDS and although the growth rate is falling, it is not expected to become negative for the country as a whole, but may do so, slightly, for one or two provinces. It is estimated to be about 0.7% in 2006 and is projected to fall, reaching about 0.2% by 2025. The only provinces expected to show negative population growth by 2015 are Gauteng (in part due to falling fertility and rising mortality) and Free State (due in part to the assumption of very low or negative net migration). However, whether or not these provinces will actually experience negative or stagnant population growth is very much dependent on the patterns of future migration, and this is something about which there is little certainty.

Although given the uncertainty around both the demographic and epidemiological, not to mention the behavioural, assumptions that go to make up a projection model, it is pleasing to note a convergence of estimates around those of the ASSA model. Last year estimates of the number infected ranged from a low of 4.5 million (Stats SA) to a high of 6.3 million (Department of Health). This year the Stats SA's estimate is 5.2 million, while that of the Department of Health is 5.35 million. Although the estimate implied by the projections of the UN Population Division is 5.7 million (12% of the population) this is likely to be reduced when they release their new estimates at the end of the year.

In terms of the provinces, not unexpectedly the greatest impact is felt in KwaZulu-Natal while the province least affected is the Western Cape. Some of the key results are:

- KwaZulu-Natal and Gauteng each account for a little over 20% of the national population and in all provinces except Gauteng, the number of women outnumber the number of men
- KwaZulu-Natal accounts for the highest proportion of births in the country (21.6%), of which the highest proportion is infected (8.6%)
- projections of antenatal prevalence suggest that while Western Cape is levelling off at around 17% and Northern Cape and Limpopo at around 20%, KwaZulu-Natal is at double this level (40%) with the other provinces are between 30% and 35%
- thus KwaZulu-Natal accounts for 28.7% of all infections, while Gauteng accounts for 26.2% (but only 17.3% of the infected youth)
- the prevalence in the labour force (working age group 20-64) is nearly three times higher in KwaZulu-Natal than in the Western Cape (15.7% vs 5.4%)
- incidence has peaked in all provinces and is, in the Western Cape, half that of the national average and nearly one third that of KwaZulu-Natal

- of those infected the Western Cape is providing treatment to about 8%, Gauteng to about 5%, while the Eastern Cape it only reaching about 3%
- not unexpectedly KwaZulu-Natal performs worst on all measures of mortality with an IMR of 63 per 1000 births and an under five mortality rate of 99 per 1000 births, and life expectancy at birth of 43 years
- KwaZulu-Natal accounts for nearly a third of all orphans, with Gauteng, the next highest proportion at 18%.

Although there is inevitably some uncertainty concerning the absolute magnitude of these indicators of the extent of the epidemic (and further developments of the ASSA model are underway to estimate bounds of uncertainty around key indicators), their significance is clear. The indicators for 2006 and the projections from 1990 – 2015 highlight the urgent need to strengthen our efforts to respond to the epidemic and should be used to guide planning the response.

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Glossary

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral therapy
ARV	Antiretroviral
ASSA	Actuarial Society of South Africa
BMR	Bureau of Market Research
DBSA	Development Bank of South Africa
CARe	Centre for Actuarial Research, University of Cape Town
DoH	Department of Health
HIV	Human immuno-deficiency virus
HIV+	Positive for Human immuno-deficiency antibodies
HSRC	Human Sciences Research Council
IEC	Information, education and communication
IFR	Institute for Futures Research
IMR	Infant mortality rate, the probability that a newborn dies before reaching age 1, q_0 (usually expressed as number dying out of 1 000 newborns)
PMTCT	Prevention of mother to child transmission
MRC	Medical Research Council
Stats SA	Statistics South Africa
STD	Sexually transmitted disease
STI	Sexually transmitted infection
UNAIDS	The Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations Children's Fund
U5MR	Under five mortality rate, the probability that a newborn dies before reaching age 5, ${}_5q_0$ (usually expressed as number dying out of 1 000 newborns)
VCT	Voluntary counselling and testing
WHO	World Health Organisation
45Q15	The probability of a 15-year old dying before reaching age 60, ${}_{45}q_{15}$ (usually expressed in this report as a percentage)

Introduction

Now well into the third decade of the global HIV epidemic and the second decade of the major heterosexual epidemic affecting the Southern African region, there are multiple indications of the extensive impact that the epidemic is having in South Africa. The Actuarial Society of South Africa (ASSA) has developed a demographic and AIDS model that makes use of data from several sources to project the potential course of the epidemic and the demographic impact that it is having. As more data and epidemiological information become available, the model is modified to best represent the course of the epidemic. The latest version of the model, ASSA2003, was released in November 2005. This updates the ASSA2002 national model and ASSA2000 provincial models and is similarly calibrated to several data sources including the antenatal clinic survey results³ and deaths from the population register.^{4,5} The most recent year for which the antenatal and mortality data were available for detailed analysis⁶ at the time of release is used to specify the model. Hence ASSA2003 is calibrated to data up to and including the 2003 antenatal prevalence survey and registered deaths up to 2003. This version is the first since the beta version of the ASSA2000 provincial models to estimate the impact of the epidemic provincially.

The South African government has adopted a comprehensive response that includes both prevention and treatment. In order to manage this effectively, government and other role-players need reliable estimates of the impact of the epidemic and the possible course that it could take in South Africa. Previous versions of the model have been used to produce Indicators reports, such as this one, on the epidemic for 2002 (ASSA2000) and 2004 (ASSA2002)^{7,8} In addition, the models were used to present the likely course of the epidemic through projections of key indicators to assist with planning appropriate responses to the epidemic. This Indicators report, for 2006, updates the earlier Indicators reports, providing similar information based on the new suite of models for the year 2005 and projections for the next 10 years.

³ Department of Health. 2004. National HIV and Syphilis antenatal sero-prevalence survey in South Africa - 2003.

⁴ Provided by the Department of Home Affairs as part of the Rapid Mortality Surveillance project run by the Burden of Disease Unit, MRC in collaboration with the Centre for Actuarial Research, UCT.

⁵ Statistics South Africa. 2005. *Mortality and causes of death in South Africa, 1997 - 2003: Findings from death notification*. P0309.3. Pretoria: Statistics South Africa.

⁶ Although the results for 2004 have been released the department only releases to researchers the detail needed to calibrate the various versions of the model fully six months after its report.

⁷ Dorrington RE, Bradshaw D, Budlender D. The demographic impact of HIV/AIDS in South Africa. National and Provincial Indicators for 2002. Cape Town: Centre for Actuarial Research, South African Medical Research Council, Actuarial Society of South Africa. 2002.

⁸ Dorrington RE, Bradshaw D, Johnson L, Budlender D. The demographic impact of HIV/AIDS in South Africa. National Indicators for 2004. Cape Town: Centre for Actuarial Research, South African Medical Research Council, Actuarial Society of South Africa. 2004.

The ASSA2003 model predicts that some 5.4 million South Africans were infected with HIV by mid-2006, which is similar to the number predicted by the ASSA2002 model. Although in the past there has been a wide range of estimates, they all point to the enormity of the epidemic. More recently the range is narrowing and is bracketed by the estimate of 4.5 million assumed by Statistics SA⁹ in producing the 2005 mid-year population estimates, and 5.54 million estimated by the Department of Health¹⁰ derived “using the Spectrum model” of the UNAIDS. By the start of 2003 and 2005, the UNAIDS model estimated that there were 5.3 and 5.5 million¹¹ infected people in South Africa, as against the 4.9 and 5.3 million, respectively, estimated by ASSA2003 at those points. On the other hand the HSRC estimated that 4.8 million of those aged two and older living in households in 2005 were infected¹².

As in the previous Indicators reports, the estimates provided in this report are for the calendar year and thus some of the numbers differ from the output of the model. In respect of ‘stock’ variables, which reflect the number at a particular time, the estimates in the report are the same as those provided by the ASSA2003 model, as the latter provides estimates for the middle of the year. So, for example, the estimate of the number of people who are sick with AIDS in 2005 is the same in this report as in the ASSA2003 model. In respect of ‘flow’ variables, such as births, deaths and new infections, which reflect the number occurring over a period, the estimates from the ASSA2003 model cover the period from the middle of one calendar year to the middle of the next, while the estimates in this report cover the period from the start to the end of a calendar year.

ASSA2003 is used to provide a set of indicators for South Africa as well as each of the provinces. These model-based indicators are complemented with data for selected prevention and treatment activities in the health sector at a national and provincial level. The model is used to assess the potential impact of the ART roll-out and the age groups in which new infections will occur. In addition indicators based on the projection of the course of the epidemic in each province are given.

The course of the epidemic

Nationally, the epidemic has entered the mature phase. The figure below shows the waves of the epidemic according to the default scenario of ASSA2003. The figure shows that the incidence, the number of people who

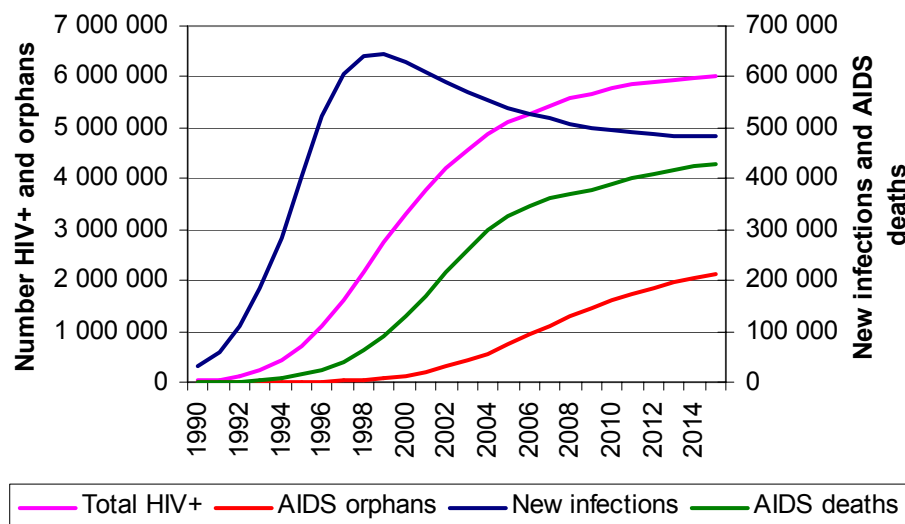
⁹ Statistics South Africa. 2005. *Mid-year population estimates, South Africa 2005*. P0302. Pretoria: Statistics South Africa.

¹⁰ Department of Health. 2006. *Summary Report: National HIV and Syphilis Antenatal Sero-Prevalence Survey in South Africa 2005* Pretoria, South Africa: Directorate: Health Systems Research, Research Coordination and Epidemiology, Department of Health. Although the report doesn’t say, presumably this figure corresponds to that for the start of 2006.

¹¹ UNAIDS. 2006. *2006 Report on the Global AIDS Epidemic*.

¹² Shisana, O., Rehle, T., Simbayi, L. C., Parker, W. et al. 2005. *South African National HIV Prevalence, HIV Incidence, Behavioural and Communications Survey, 2005*. Cape Town: HSRC.

are newly infected, peaked in about 1998 and is now decreasing. The number of people infected with HIV is beginning to stabilise at around six million people. This is because the number of new infections has slowed down to the point where it nearly matches the number of people dying from AIDS. During this period, the number of people dying from AIDS each year is increasing rapidly and is expected to plateau after 2015. In turn, this mortality is resulting in increasing numbers of children who are orphaned. The number of maternal orphans who are under 18 years of age is expected to peak soon after 2015.



The waves of the AIDS epidemic (default scenario)

ASSA2003 AIDS and Demographic Model

The ASSA2003 model is structurally the same as its predecessor, ASSA2002, and thus allows for the impact of interventions as described in the previous indicators report, only now calibrated to fit an additional year's mortality and prevalence data. In addition the national model has been derived from the provincial models.

In respect of interventions, five interventions are allowed for, namely:

- information and education campaigns,
- improved treatment of sexually transmitted diseases,
- voluntary counselling and testing,
- mother-to-child transmission prevention, and
- antiretroviral treatment.

The model produces estimates of the number of HIV-infected people in the different stages of disease. In the absence of antiretroviral treatment, adults are assumed to progress through four stages of disease before dying from AIDS. These four stages correspond to those defined in the WHO Clinical

Staging System¹³. The effects of antiretroviral treatment (ART) are modelled by introducing a further two stages, which represent people receiving treatment and people who have discontinued treatment after being on treatment. Descriptions of these six disease states are given in Table 1. The first two stages are largely asymptomatic. Symptoms occur more frequently in stage 3, and include weight loss and oral infections. People in stage 4 experience a range of more severe conditions, such as pneumonia, extrapulmonary TB and wasting syndrome. These conditions are referred to collectively as AIDS. The model estimates that currently (2006) roughly 11% of people with HIV are sick with AIDS (i.e. nearly 600 000 South Africans).

Table 1. Stages of HIV/AIDS used in ASSA2002

Stage	Description
1	WHO stage 1: Acute HIV infection
2	WHO stage 2: Early disease
3	WHO stage 3: Late disease
4	WHO stage 4: AIDS
5	Receiving antiretroviral treatment
6	Discontinued antiretroviral treatment

Most of the estimates provided in this report are derived from the default scenario. In the default scenario it is assumed that all five interventions described above are introduced, but at different times and at different rates of phase-in in each of the provinces. The effects of each intervention in terms of the key epidemiological parameters in the model as well as the default assumptions about rates of phase-in are described in the 2004 Indicators Report¹⁴, although VCT is now phased in from 8% in 1995 to 83% over 10 years.

Website

The tables on the following pages provide a summary of indicators which show where South Africa stands in 2006. The ASSA2003 models and various summary output workbooks are publicly available from the ASSA's website (<http://www.assa.org.za/aidsmodel.asp>) and could be useful to professionals in a wide variety of fields, including demographers, policymakers, economists, actuaries, health care professionals, academics researching HIV/AIDS, underwriters and journalists. Further charts and tables are available on the website.

¹³ WHO International Collaborating Group for the study of the WHO Staging System (1993) Proposed 'World Health Organization staging system for HIV infection and disease': preliminary testing by an international collaborative cross-sectional study. *AIDS*. 7: 711-718

¹⁴ Dorrington, R. E., Bradshaw, D., Johnson, L. and Budlender, D. 2004. *The Demographic Impact of HIV/AIDS in South Africa: National Indicators 2004*. Cape Town: Centre for Actuarial Research, South African Medical Research Council, Actuarial Society of South Africa. Available: <http://www.commerce.uct.ac.za/care/RESEARCH/PAPERS/IndicatorsASSA2002.pdf>

Potential Impact of Antiretroviral Treatment (ART)

The projections show that interventions are having and can be expected to have a significant impact on the course of the epidemic. The PMTCT programme has reduced the number of babies infected and behaviour change, in particular an increase in condom use, has reduced the number of adults infected. The national ART programme can be expected to play a particularly important role in the future outcome of the epidemic. For example, as shown in Figure 1, the model projects that by 2010, there are likely to be roughly 388 000 AIDS deaths per annum rather than the 505 000 that would have been expected if no ART programmes had been introduced. In the default scenario, it is assumed that ultimately only about half of South Africans who need to commence ART will be able to access it. If we assume that 90% manage to access ART then the estimated number of AIDS deaths in 2010 would be reduced to 291 000.

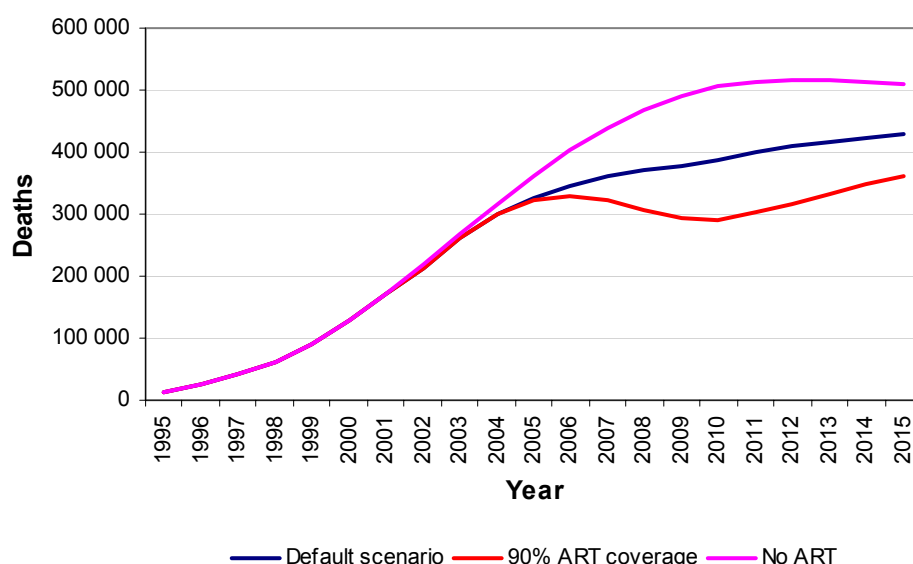


Figure 1. Projected number of AIDS deaths by level of coverage of national ART programme, ASSA2003

Figure 2 shows the impact of the ART programme on life expectancy. By 2005, the HIV/AIDS pandemic has already taken about 13 years off life expectancy. Life expectancy is thus 51 years, rather than the 64 years it would have been without HIV/AIDS. Without the ART programme, the decrease in life expectancy would be nearly 19 years by 2015, with an average life expectancy of less than 48 years. With the ART programme, the difference is expected to reduce to below 16 years, giving a life expectancy of 50 years.

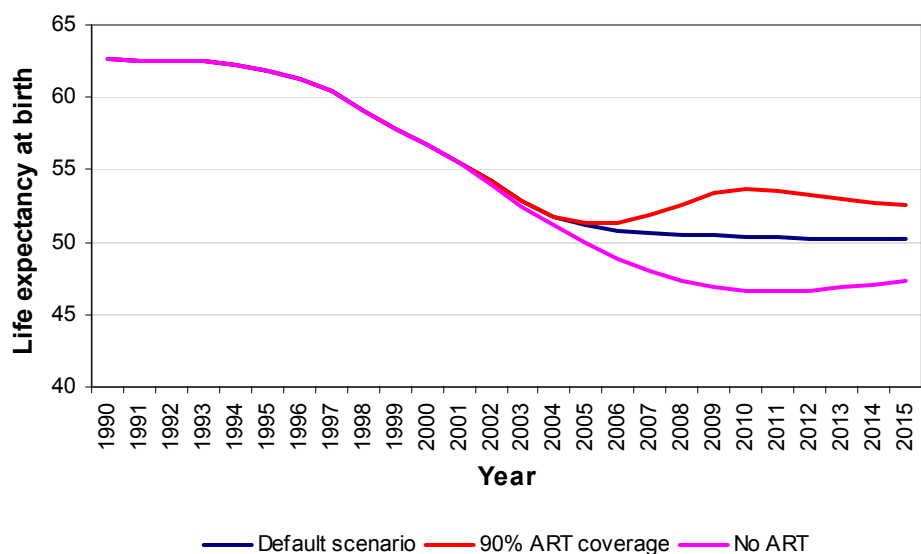


Figure 2. Projected impact on life expectancy (e_0) by level of coverage of national ART programme, ASSA2003

Based on a scenario of ART being made available so that half those who need treatment would be receiving treatment by 2010, life expectancy at birth is expected to fall to a little above 50 years by 2012 (48 years for men and 52 for women) and then level off at around this level.

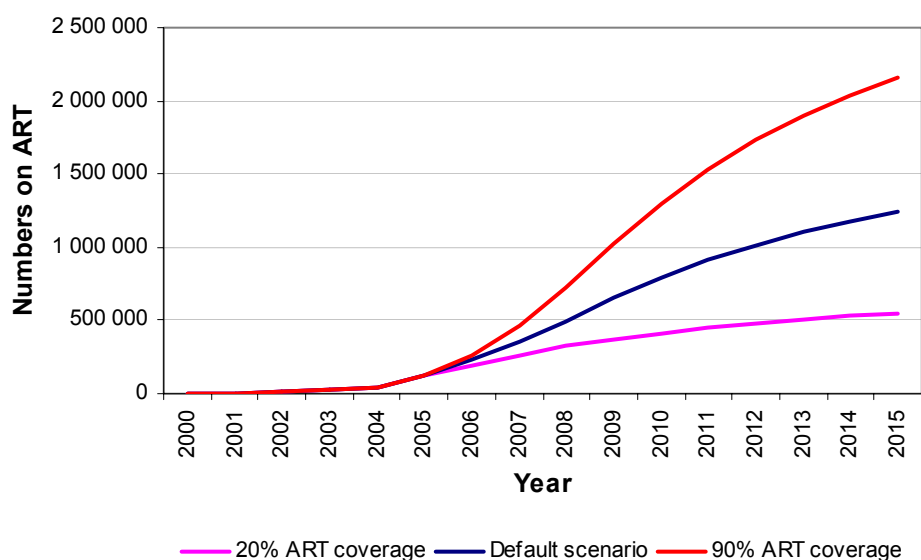


Figure 3. Projected numbers receiving treatment by level of coverage of national ART programme, ASSA2003

The model suggests that in 2006 around 711 000 people are in need of ART (i.e. have experienced AIDS-defining symptoms). The number of people that will be receiving treatment is a function of the how successful the rollout is, and of how successful ARVs are in extending life. Figure 3 shows the expected numbers on treatment under three different scenarios of ultimate

coverage of the treatment programme: 20%, 50% (the current default) and 90%, showing the number ranging from a little over 500 thousand if coverage is only 20% to over 2 million if coverage reaches 90%.

Incidence of HIV by demographic groups

The incidence of infections is one of the most important indicators of the progression of the epidemic that needs to be monitored, particularly in the more mature stage of the epidemic. Figure 4 shows the projected number of people who are expected to be newly infected with HIV each year, using the default scenario. From this figure it is clear that the 15-24 year age group, and particularly young women, contributes high numbers of new infections. Empowerment of young women could be an important strategy in limiting the spread of the epidemic.

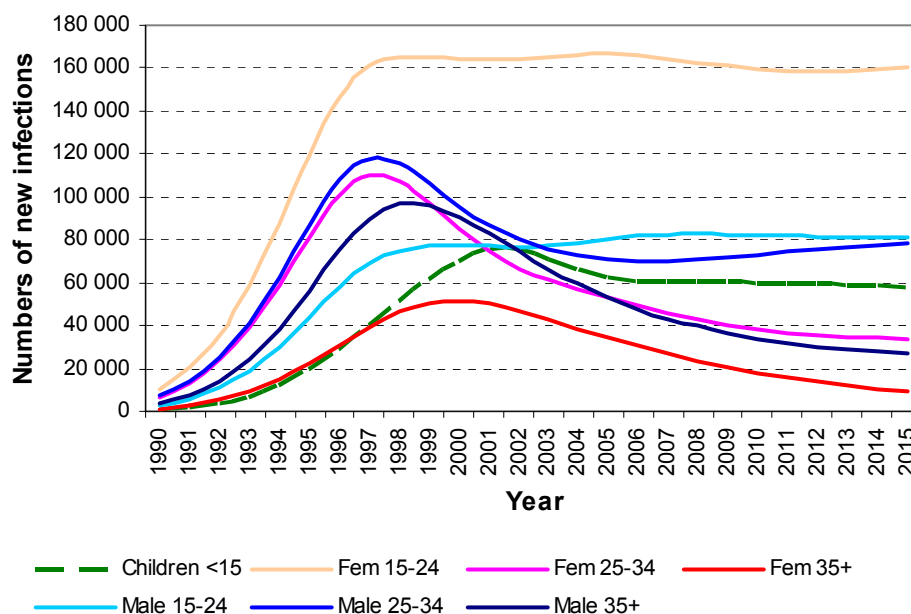


Figure 4. Projected number of newly infected people by sex and age group, ASSA2003

HIV and AIDS Indicators at mid-2006

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

Note: Numbers rounded to nearest thousand to avoid spurious accuracy

HIV prevalence by sex and age, 2006

Figure 5 shows HIV prevalence levels by sex and age group in 2005. Prevalence is higher for women than men for the 15 to 34 age group, while it is higher for men in the older ages. Among women, the rate is highest (at 32.5%) – for the age group 25-29 years. Among men, the rate peaks at slightly older ages, with 26.5% of those aged 30-34 years being estimated to be infected. Comparison of the results from the model for 2005 with those from the HSRC household prevalence survey for that year¹⁵ suggest the modelled prevalence may be slightly overestimated in the 25-29 age group for males and too low for women 55 and older, otherwise there is a close correspondence between the modelled and empirical results.

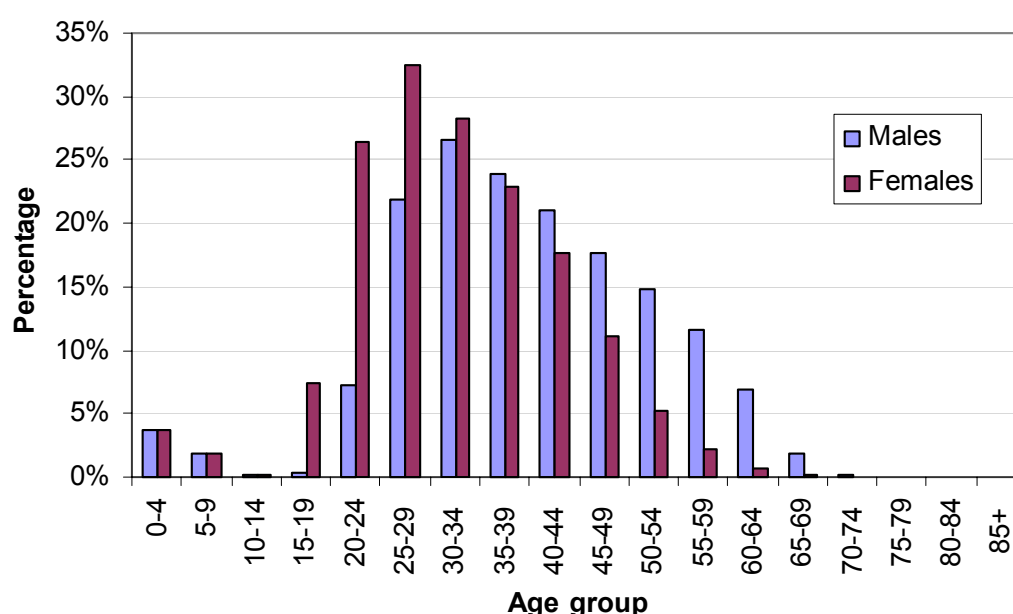


Figure 5. Estimated prevalence of HIV by sex and age, 2006

¹⁵ ASSA AIDS Committee (2006) "Initial observations on the comparison of the 2005 HSRC household HIV prevalence and behaviour survey against estimates from the ASSA2003 AIDS and Demographic model".
http://www.assa.org.za/scripts/file_build.asp?id=100000569&pageid=1000000050

Age Group	Males	Females
0-4	3.7%	3.7%
5-9	1.9%	1.9%
10-14	0.1%	0.1%
15-19	0.3%	7.5%
20-24	7.2%	26.5%
25-29	21.8%	32.5%
30-34	26.5%	28.2%
35-39	23.9%	22.9%
40-44	21.0%	17.7%
45-49	17.7%	11.1%
50-54	14.8%	5.2%
55-59	11.6%	2.1%
60-64	7.0%	0.7%
65-69	1.8%	0.1%
70-74	0.1%	0.0%
75-79	0.0%	0.0%
80-84	0.0%	0.0%
85+	0.0%	0.0%

Mortality Indicators, 2006

Deaths	
Total deaths during 2005	737 000
Non-AIDS deaths during 2005	391 000
AIDS deaths during 2005	346 000
Accumulated AIDS deaths mid-year	1 814 000
Percentage of deaths due to HIV/AIDS	
Adults (15-49)	71%
Adults (15+)	47%
Children (<15)	44%
Total deaths	47%
Mortality statistics	
Infant mortality rate (per 1000)	48
Child mortality rate (${}_5q_0$) (per 1000)	75
Adult mortality (${}_{45}q_{15}$)	56%
Adult male mortality (${}_{45}q_{15}$)	61%
Adult female mortality (${}_{45}q_{15}$)	51%
Life expectancy	
Life expectancy (e_0) (years)	50.8
Male life expectancy (e_0) (years)	49.0
Female life expectancy (e_0) (years)	52.7
Maternal orphans (under 18)	
Total orphans	1 542 000
Total AIDS orphans	1 019 000
New orphans	296 000

Population pyramid, 2006

Figure 6 shows the population pyramid for 2006 and 2016, and is followed by a table of the underlying numbers for 2006. As expected, for ages up to 14 the number of boys slightly exceeds the number of girls. However, from age 20 upwards the number of women exceeds the number of men in every age group, with the disproportion greatest in the oldest age groups due to the longer female life expectancy. The impact of AIDS is seen most clearly in the middle age groups, where the cohorts are smaller than they would otherwise have been. This has implications in terms of dependency rates, as these age groups are the ones which traditionally are expected to support older and younger people. The lower than expected number in this age group is also the cause of the high number of child orphans shown later. The relationship between the old cohorts and the young cohorts are also shifting as the population ages.

The pyramid for 2016 has been included in Figure 6 for comparative purposes (as clear bars superimposed on the solid bars representing the population in 2006). This shows that while the young adult and old adult populations continue to grow, the middle aged population hardly grows at all. Together with a declining trend in fertility, HIV/AIDS is also expected to lead to a noticeable decline in the number of children over the next 10 years.

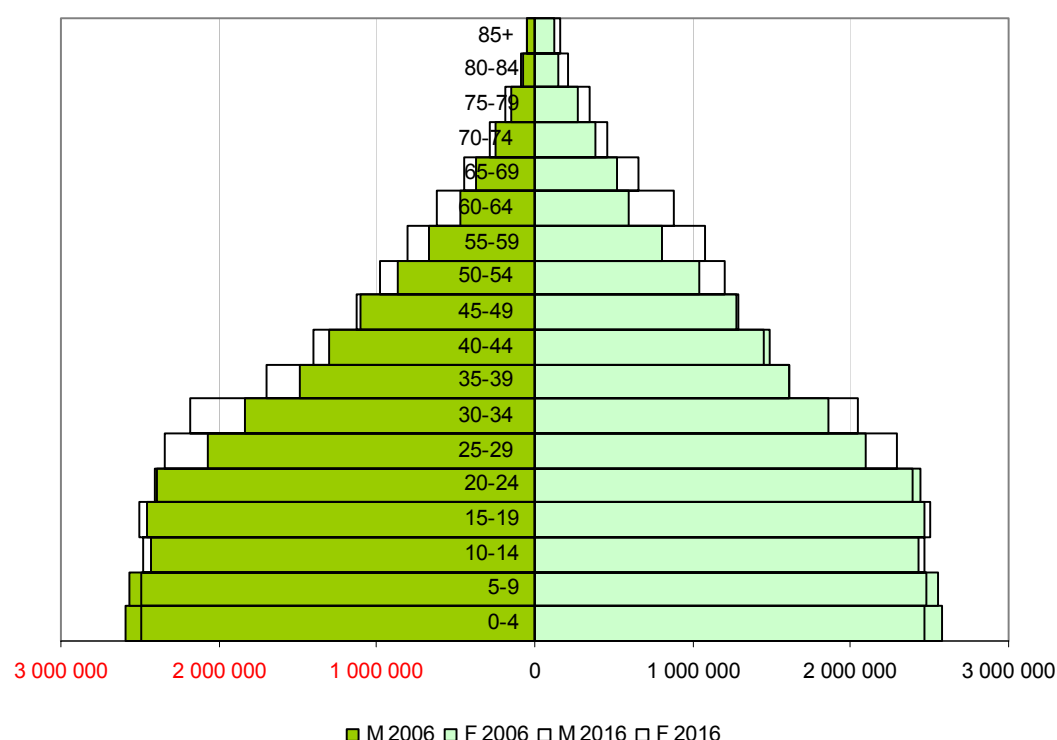


Figure 6. Estimated population pyramid, 2006 and 2016

Age	Male	Female
0-4	2 596 651	2 579 220
5-9	2 565 535	2 554 436
10-14	2 435 164	2 426 627
15-19	2 457 077	2 463 396
20-24	2 408 296	2 442 964
25-29	2 075 659	2 096 554
30-34	1 830 160	1 865 030
35-39	1 492 681	1 610 375
40-44	1 307 247	1 482 454
45-49	1 106 982	1 279 699
50-54	872 253	1 045 030
55-59	665 807	807 278
60-64	471 445	598 101
65-69	367 003	520 554
70-74	243 917	383 691
75-79	151 403	272 437
80-84	72 919	150 094
>=85	44 138	124 708
Total	23 164 337	24 702 647

Prevention and Treatment Indicators

The government has adopted a comprehensive plan that includes both prevention and treatment. However, there are limited data available to monitor the progress that has been made in implementing the plan. The table below provides a few indicators that are available.

The government has increased the distribution of condoms substantially over the last few years. The table below shows that the distribution had increased to 270 million male condoms in 2003 and 364 million in 2004. Importantly, population based surveys indicate increased use of condoms. However, they also indicate that there are still people, including young people, who expose themselves to infection through unprotected sex.

Another prevention programme is the treatment of STIs. Ideal indicators would be the prevalence of STIs and the number of successfully treated cases. However, such data are not available. The numbers of STI cases treated in the public sector are captured but these do not reflect individuals who do not seek treatment or those who attend private health facilities. The crude indicator based on the number of people treated at primary health care facilities in the public sector are included in the table and suggest that the incidence of STIs might have declined between 2002 and 2004. This is suggested for all provinces excepting the Eastern Cape and the Northern Cape. However, these trends may reflect utilisation of the service rather than the incidence of the disease. In addition, the estimate for 2002 was derived using a different data source to the 2003 and 2004 estimates.

Mother-to-child transmission prevention through anti-retrovirals was provided to a total of 55 884 women through the national pilot sites during 2001. KwaZulu-Natal accounted for 37% of the total, while Eastern Cape, Western Cape and Gauteng each accounted for a further 13% to 14%. At the time of the baseline survey in 2002, only 29% of facilities were offering PMTCT.¹⁹ It would be ideal to have regular information on this indicator as well as information on the number of women who participated in the programme and the number of babies who were included in the programme. The 2003 Facilities Survey suggests that only about 47% of women attending PMTCT services are actually receiving Nevirapine.²³

According the Department of Health, in 2002, a total of 474 public facilities around the country offered voluntary counselling and testing (VCT).¹⁶ Of these, 171 (36%) were in Limpopo. The table below indicates the percentage of primary healthcare facilities in each province that offered VCT in 2002 and 2003. Data could not be obtained for subsequent years. The 2003 Facilities Survey found that 2/3rds of primary health care facilities run VCT for at least five days per week.²³ However, the proportion in the Eastern Cape, KwaZulu Natal and Limpopo were below the average.

¹⁶ Department of Health. 2002. VCT sites List.

	EC	FS	GP	KZN	LP	MP	NC	NW	WC	SA
Condom use										
<i>Number of male condoms distributed by DOH (millions)</i>										
2002 ¹⁷	18.1	35.1	56.6	16.0	18.1	11.8	1.1	18.4	14.3	189.6
2003 ¹⁷	27.3	13.9	82.4	44.2	34.1	20.2	2.1	17.6	29.2	270.0
2004 ¹²										346.0
2005										
<i>Number of female condoms distributed by DOH (millions)</i>										
2003 ¹⁸										0.19
2004										
2005										
<i>% men 15-24 who used condom at last sex</i>										
2002 ¹⁹										57
2003 ²⁰										57
2005 ¹²										73
<i>% women 15-24 who used condom at last sex</i>										
2002 ¹⁹										46
2003 ²⁰										48
2005 ¹²										56
Sexually transmitted diseases										
<i>Incidence of STI treated per 100 population over age 15</i>										
2002 ²¹	4.8	5.3	5.0	8.4	8.7	5.8	3.8	6.5	3.7	6.1
2003 ²²	5.1	4.7	4.2	7.8	7.7	4.7	4.1	5.6	3.2	5.5
2004 ²²	5.2	4.1	3.2	6.9	7.1	4.6	4.1	5.6	2.3	4.8
2005										
Prevention of Mother to Child Transmission (PMTCT)										
<i>% of primary health care facilities that are PMTCT site</i>										
2002 ²³	29	18	22	20	35	16	29	31	57	29
<i>% of women attending PMTCT who receive HIV testing</i>										
2003 ²⁴	23	88	91	68	24		16	99	77	66
<i>% of women testing positive at PMTCT services who receive nevirapine</i>										
2003 ²⁴	83	5	67	70	1		100	89	89	70
2004										
2005										

¹⁷ LMIS as cited in South African Health Review 2005

¹⁸ National Department of Health. Provided by STD and HIV Prevention Unit.

¹⁹ Shisana O, Simbayi LC, eds. Nelson Mandela/HSRC Study of HIV/AIDS: South African National HIV Prevalence, Behavioural Risks and Mass Media Household survey 2002.

²⁰ Pettifor AE, Rees HV, Steffenson A, Hlongwa-Madikizela L, MacPhail C, Vermaak K, Kleinschmidt I. HIV and sexual behaviour among young South Africans: a national survey of 15-24 year olds.

²¹ Ramkissoon A., Kleinschmidt I., Beksinska M., et al. National Baseline Assessment of Sexually Transmitted Infection and HIV Services in South African Public Sector Health Facilities. Reproductive Health Research Unit, University of the Witwatersrand. 2004.

²² DHIS as cited in South African Health Review 2005

²³ STI HIV baseline survey as cited in South African Health Review 2005

²⁴ Reagon G., Irlam J. and Levin J. (2004) *The National Primary Health Care Facilities Survey 2003*. Health Systems Trust. Available: http://www.hst.org.za/uploads/files/phc_survey04.pdf. Accessed 6 Aug 2004

Voluntary Counselling and Testing

% of primary health care facilities that provide VCT

2002 ²²	48.0	81.0	86.0	55.0	64.0	69.0	84.0	74.0	95.0	67.0
2003 ²²	54.0	96.0	76.0	53.0	78.0	88.0	64.0	59.0	81.0	70.0

2004

2005

Number of clients tested for HIV per 100 population over age 15

2002 ²³	1.0	3.1	1.3	2.0	1.1	1.0	2.7	2.5	3.8	1.9
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2003

2004

2005

Antiretroviral treatment

Number of people on ARV provided by public sector (thousands)

2004 (Oct-Nov) ²⁵	1.5	0.6	5.6	3.0	0.3	0.5		1.1	5.1	19.5
2005 (July-Sept) ²⁶	6.8	2.5	20	19		2.3	1.3	7.6	11.1	78
2006 (Mar-June) ²⁷			47						17	140

In terms of treatment, it is estimated that by the end of August 2005, 78 000 people were receiving anti-retroviral treatment through the public sector, up from 19 500 in October of the previous year. The Joint Civil Society Monitoring Forum estimates that by June 2006, approximately 140 000 people had initiated anti-retroviral treatment in the public sector.

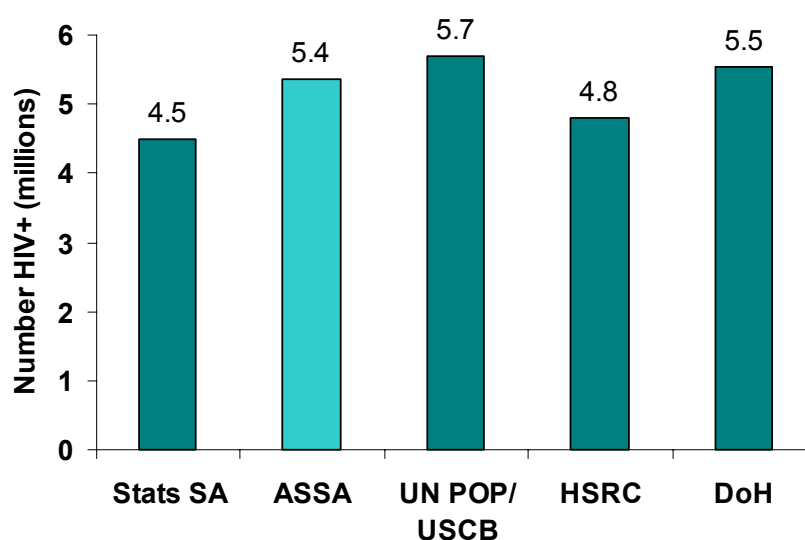
²⁵ Provincial estimates from the Joint Civil Society Monitoring Forum, Resolutions of the Bloemfontein meeting held on 19 Nov 2004. National estimates from the Department of Health (as at Oct 2004).

²⁶ Provincial estimates from the Report on the Fifth Joint Civil Society Monitoring Forum meeting held on 29 Aug 2005. National estimates from the Department of Health (as at end of Aug 2005).

²⁷ Presentations to 8th Joint Civil Society Monitoring Forum. June 2006.

Comparison with other estimates

One of the problems that policy and decision makers are faced with is the wide range of estimates of the size and impact of the HIV/AIDS epidemic. In addition, there is uncertainty regarding the size of the population as a whole. Figure 7 and Figure 8 show a range of estimates of the total number infected, and the accumulated AIDS deaths by 2005, while Figure 9 shows the range of estimates of the total population. The prevalence rates for the population as a whole implied by these numbers are shown in Figure 10. (The year 2005 was chosen since more recent estimates are not available for a number of the sources.) It is important to note that the level of uncertainty about the estimate from the ASSA model is not as great as that presented by the wide range of estimates on offer. Some of these estimates are more reliable than others. Every effort has been made to ensure that the ASSA estimates are based on the most thorough research but it is nevertheless useful to contrast them with other estimates that have been produced recently.



Notes: The DoH estimate is probably that from UNAIDS for the start of 2006. The HSRC estimate is of the numbers aged 2+ who live in households.

Sources: StatsSA²⁸, UNPOP/USCB²⁹, HSRC³⁰, DoH³¹

Figure 7. Number of people infected with HIV in 2005

²⁸ Statistics South Africa. 2005. *Mid-year population estimates, South Africa 2005*. P0302.

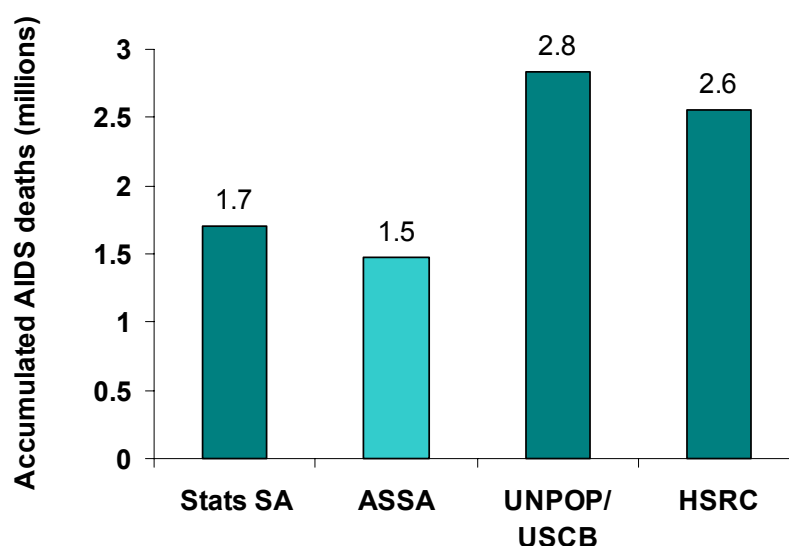
Pretoria: Statistics South Africa. Mid-year estimates for 2006 were released after drafting this report. The estimate of the number infected has risen to 5.2 million (10.9%) but the report no longer gives the cumulative number of deaths.

²⁹ Both use UNAIDS estimates as input. The numbers here were derived from the UN Population Division population projections.

³⁰ Rehle, T and Shisana, O. 2003. "Epidemiological and demographic HIV/AIDS projections: South Africa", *African Journal of AIDS Research* 2(1):1-8.

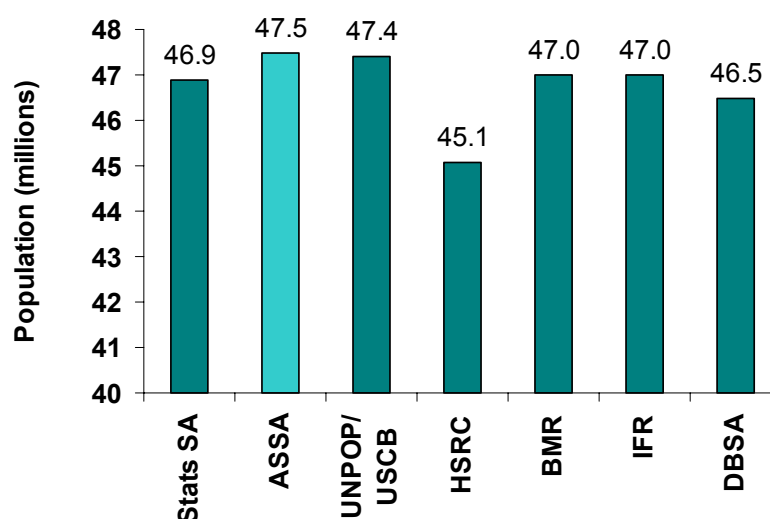
³¹ Department of Health. 2005. *Summary Report: National HIV and Syphilis Antenatal Sero-Prevalence Survey in South Africa 2004*. Pretoria, South Africa: Directorate: Health Systems Research, Research Coordination and Epidemiology, Department of Health.

It is not the purpose of this report to analyse the strengths and weaknesses of each of these estimates. However, users would be well advised to be careful about using outlier estimates unless these are supported by sound empirical data and reasoning.



Notes: Stats SA number estimated from the estimate in their 2004 mid-year estimates increased by the estimate of annual AIDS deaths over the year

Figure 8. Accumulated number of AIDS deaths to middle 2005



Source: BMR³², IFR³³ and DBSA³⁴

Figure 9. Total population mid-2005

³² van Aardt, Carl J. 2004. *A projection of the South African population, 2001 to 2021*. Research Report No. 330 (07). Pretoria: Bureau of Market Research, University of South Africa.

³³ Haldenwang, Barbel.B. 1999. *High, Medium and Low Projections of the South African Population, 1996-2031*. Belville: Institute of Futures Research, University of Stellenbosch.

³⁴ Development Bank of South Africa. 2000. *Provincial Population Projections, 1996-2021 High and low HIV/AIDS Impact (2 reports)*. Midrand: Development Bank of South Africa.

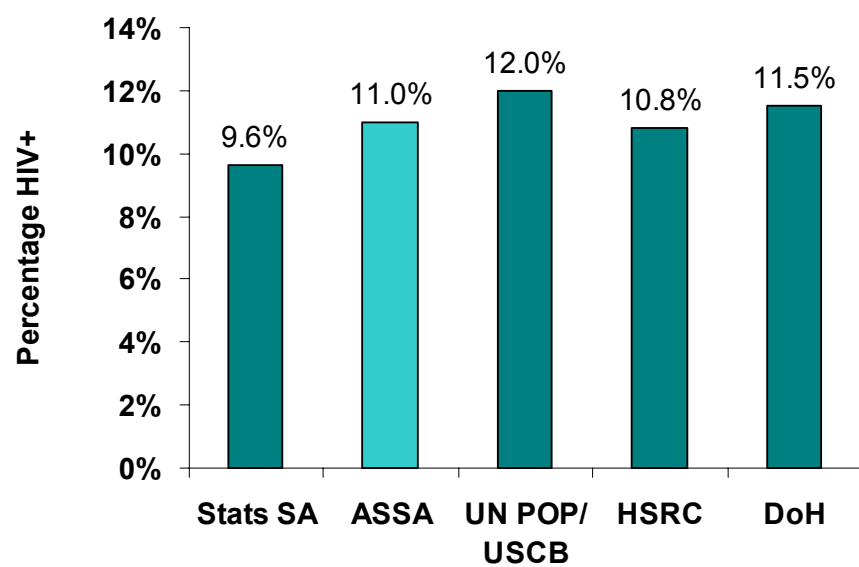


Figure 10. HIV prevalence rate in total population in 2005

Projected numbers

Total population, number of HIV+ and AIDS sick people and cumulative AIDS deaths

The overall expected trends for population size, the number of people infected with HIV, the number AIDS sick, and the number of accumulated AIDS deaths for each year are shown in Figure 11. The total population continues to increase over the period, although at a decreasing rate. From 2011, the expected annual rate of increase in population size is 0.5%. The number of people infected rises throughout the period to exceed 6 million by 2015. Likewise, the number of people sick with AIDS in the middle of each year continues to rise over the period, reaching nearly 797 000 in 2015. Accumulated AIDS deaths are close to 5.4 million by the same year. By 2006, it is estimated that over 1.8 million people have already died as a result of AIDS, 5.4 million are infected with HIV, and nearly 600 000 are AIDS sick.

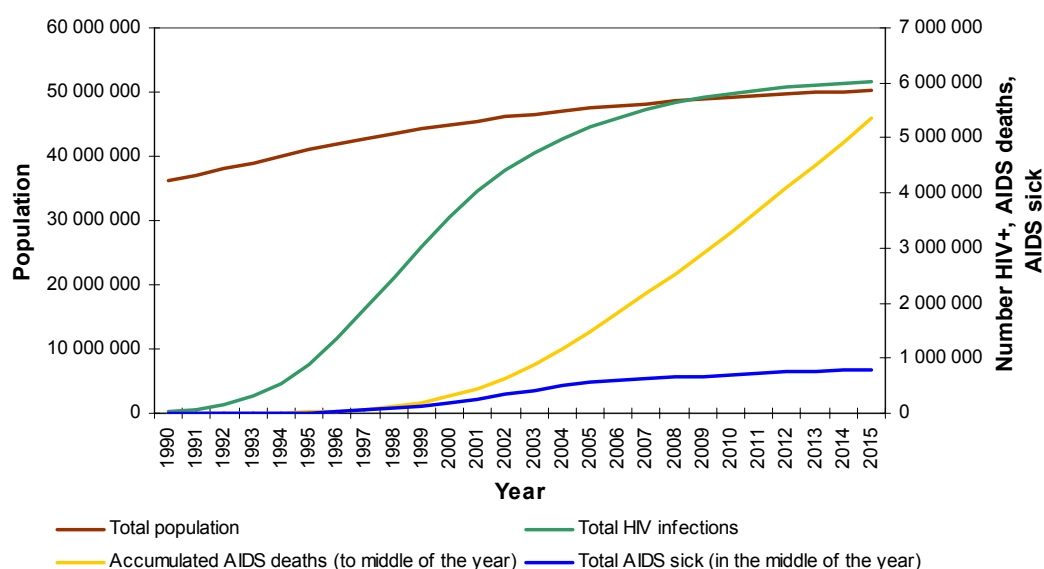


Figure 11. Projected population, number of HIV positive, AIDS sick and cumulative AIDS deaths for 1990-2015, ASSA2003 (default scenario)

Year	Total Population	Annual growth rate	Total HIV+	Cumulative AIDS deaths	Total AIDS sick
1990	36 129 744	2.2%	36 464	351	297
1991	36 987 349	2.6%	78 439	895	738
1992	38 015 542	2.7%	159 726	2 128	1 726
1993	39 031 589	2.6%	301 999	4 778	3 787
1994	40 026 130	2.5%	532 519	10 133	7 826
1995	40 985 799	2.3%	876 258	20 315	15 263
1996	41 886 566	2.1%	1 342 234	38 567	28 091
1997	42 700 054	1.9%	1 889 842	69 424	49 038
1998	43 471 883	1.7%	2 469 056	119 248	80 331
1999	44 196 808	1.6%	3 037 647	194 620	124 418
2000	44 871 939	1.5%	3 559 585	302 790	182 823
2001	45 504 436	1.3%	4 024 100	450 315	253 502
2002	46 086 931	1.2%	4 419 443	641 904	333 807
2003	46 608 823	1.1%	4 741 791	879 339	418 592
2004	47 071 290	0.9%	4 997 457	1 161 686	503 725
2005	47 486 216	0.8%	5 203 773	1 477 556	554 629
2006	47 866 984	0.8%	5 372 476	1 814 457	599 298
2007	48 218 209	0.7%	5 511 751	2 168 836	633 931
2008	48 545 698	0.7%	5 628 474	2 535 836	659 637
2009	48 855 213	0.6%	5 728 712	2 910 491	676 058
2010	49 147 177	0.6%	5 813 089	3 293 012	701 508
2011	49 418 610	0.5%	5 880 199	3 686 790	727 616
2012	49 670 161	0.5%	5 932 129	4 091 377	750 838
2013	49 904 215	0.5%	5 972 018	4 505 012	770 018
2014	50 123 162	0.4%	6 002 970	4 925 692	785 219
2015	50 328 900	0.4%	6 027 509	5 351 662	797 003

Mortality rates for children and adults

The mortality rates for infants and young children, as well as for adults, are shown in Figure 12. The infant and under-5 mortality rate³⁵ curves have a similar shape, with both peaking around 2001. The infant rate peaks at 60 per 1 000, while that for children under five years peaks at 89 per 1 000. After 2001, both rates decline, mainly as a result of the impact of the PMTCT programme assumed in the model.

The figures and graphs for adults represent the probability that people aged 15 years will die before they reach the age of 60 years ($_{45}q_{15}$). The rate for women is lower than that for men throughout the period, due to lower non-AIDS mortality, but the relative difference between the two rates narrows from the mid-1990s onwards as a result of the more immediate and severe impact of HIV/AIDS on women. The male rate peaks around 2008 at around 61%. The female rate continues to rise reaching 54% by 2015. In 2006, a little over three-fifths of 15-year old young men and half of 15-year old young women are expected to die before reaching their 60th birthday.³⁶

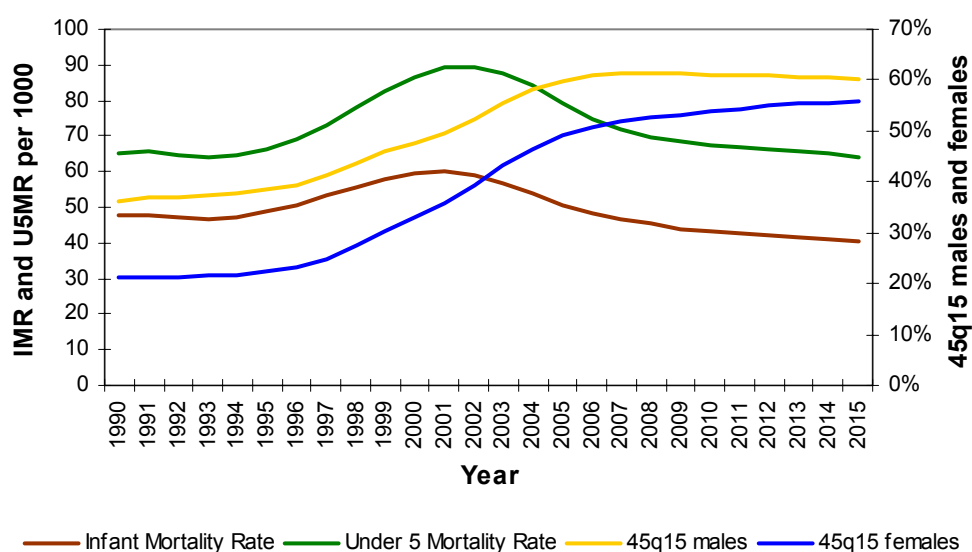


Figure 12. Projected rates of infant mortality (IMR), under five mortality (U5MR) and adult mortality (45Q15) for 1990-2015, ASSA2003

³⁵ The number of newborns expected to die before age 1 and 5 respectively.

³⁶ It should be pointed out that the $_{45}q_{15}$ reported here (and in most other texts) is what is known as a period rate, meaning that it reflects mortality rates at each age as at a point in time. A 'cohort' rate would reflect the rates of survival in a cohort of 15 year olds over the 45-year period following the time point. Cohort rates do not increase as rapidly or reach such high levels.

Year	Infant mortality rate q_0 (per 1000)	Child mortality rate ${}_5q_0$ (per 1000)	${}_{45}q_{15}$ males	${}_{45}q_{15}$ females
1990	48	65	36%	21%
1991	48	66	37%	21%
1992	47	65	37%	21%
1993	47	64	37%	21%
1994	47	64	38%	22%
1995	49	66	39%	22%
1996	51	69	39%	23%
1997	53	73	41%	25%
1998	56	78	44%	28%
1999	58	82	46%	30%
2000	60	86	47%	33%
2001	60	89	49%	36%
2002	59	89	52%	39%
2003	57	88	56%	43%
2004	54	84	58%	47%
2005	51	79	60%	49%
2006	48	75	61%	51%
2007	47	72	61%	52%
2008	45	70	61%	53%
2009	44	68	61%	53%
2010	43	67	61%	54%
2011	43	67	61%	54%
2012	42	66	61%	55%
2013	41	66	61%	55%
2014	41	65	60%	56%
2015	40	64	60%	56%

Maternal orphans under 18 years

As mothers play an important role in ensuring the health and well-being of children, the number of maternal orphans is a key indicator. Figure 13 shows the trends in respect of maternal orphans under the age of 18 (children under the age of 18 who have lost a mother or both parents). In 1990, there were fewer than 500 000 maternal orphans under the age of 18 years in the country, and very few of these children had lost their mothers as a result of AIDS. By 2006, the number of orphans has increased to over 1.5 million, with around 1 million of the total being orphaned as a result of AIDS. The number of non-AIDS orphans falls steadily from 2000, but the number of AIDS orphans is set to continue to increase throughout the period as a result of the ongoing increase in the number of deaths, reaching 2.5 million by 2015.

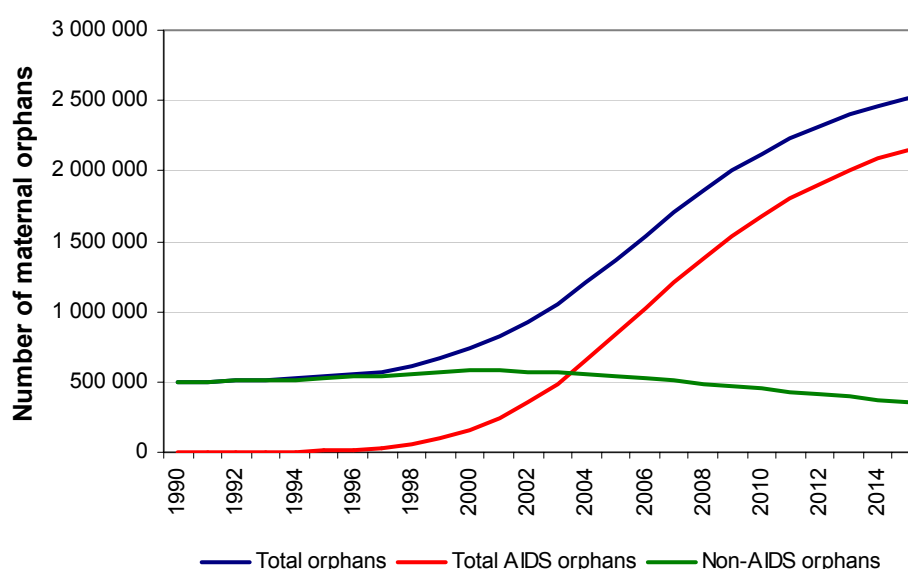


Figure 13. Projected number of maternal orphans under the age of 18 years due to AIDS and other causes of death for 1990-2015, ASSA2003

Year	Total orphans	AIDS orphans	Non-AIDS orphans
1990	495 176	100	495 077
1991	499 572	278	499 294
1992	505 483	714	504 768
1993	512 886	1 713	511 173
1994	522 288	3 864	518 423
1995	534 697	8 232	526 465
1996	551 433	16 583	534 850
1997	574 795	31 629	543 166
1998	613 889	57 301	556 588
1999	667 697	97 877	569 820
2000	739 054	158 073	580 981
2001	819 651	240 533	579 118
2002	922 786	349 506	573 279
2003	1 051 849	486 940	564 909
2004	1 203 969	650 736	553 233
2005	1 371 626	832 246	539 380
2006	1 542 201	1 018 548	523 653
2007	1 708 032	1 201 675	506 357
2008	1 862 671	1 374 883	487 788
2009	2 001 479	1 532 991	468 488
2010	2 123 286	1 674 359	448 927
2011	2 229 985	1 800 456	429 529
2012	2 322 158	1 911 406	410 752
2013	2 400 101	2 007 063	393 037
2014	2 464 127	2 087 368	376 759
2015	2 513 100	2 151 616	361 484

Provincial variations

The antenatal data reveal that the spread of the epidemic differs between the provinces. The projections of the HIV prevalence amongst pregnant women attending public sector antenatal clinics, according to the provincial versions of the ASSA2003 model, are shown in Figure 14 for each of the provinces. The provinces differ in terms of ultimate plateaux, which range from a low of 17% for the Western Cape to a high of nearly 40% for KwaZulu-Natal. Five of the nine provinces appear to be levelling off at between 30% and 35% while the epidemics in Limpopo, Northern Cape and the Western Cape are expected to level off at lower levels than the others. The epidemic in KwaZulu-Natal appears to have started earliest and is expected to peak at the highest level. These differences in the stage of the epidemic as well as the different patterns need to be borne in mind when interpreting the snapshot estimates for the nine provinces for 2006 presented later in this report.

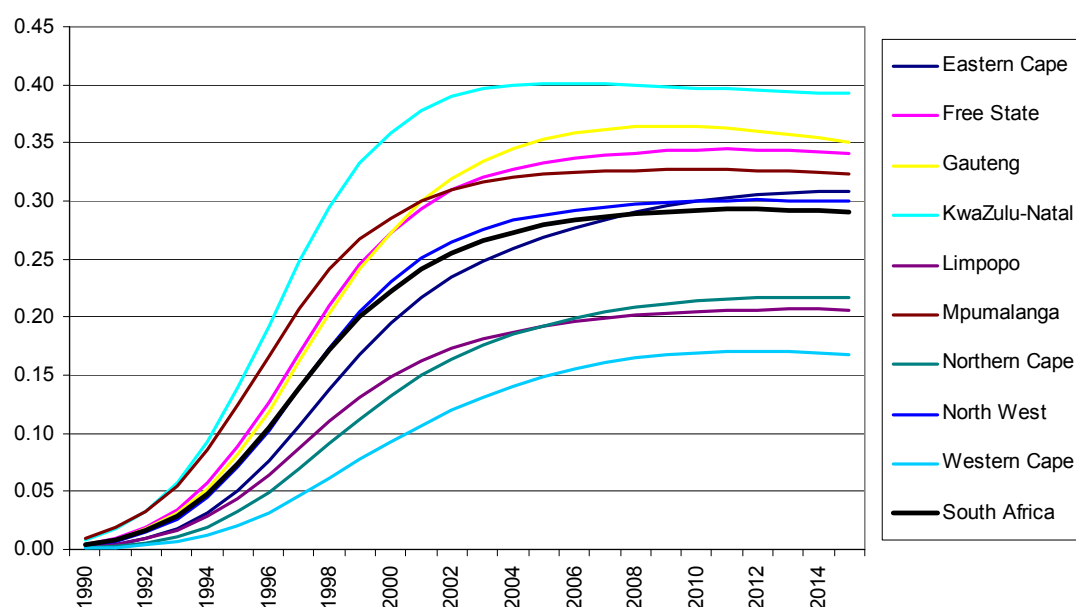


Figure 14. Projected prevalence among antenatal attenders

Population

The ASSA model, summed across all provinces, estimates the total population of the country as a whole, as at 1 July 2006, to be around 47.7 million. This is slightly lower than the 47.9 million estimated when the country, as a whole, is modelled.

Of the total, some 51.6% are female. This percentage is lower than the 52.2% recorded in the 2001 population census, which is thought to have undercounted men to a certain extent. Females outnumber males in all provinces except Gauteng, where females account for 49.5% of the provincial

population. The percentage of females is highest in the Limpopo and Eastern Cape provinces where it exceeds 53%. KwaZulu-Natal is the most populous province, and accounts for just over one-fifth (20.5%) of the total population. Gauteng accounts for a further 20.2%. Northern Cape is the smallest province in terms of population.

Population	EC	FS	GT	KZ	LM	MP	NC	NW	WC	SA
Total population	6 693 156	2 795 556	9 683 782	9 791 815	5 748 394	3 335 162	888 715	3 773 095	4 994 244	47 866 984
Male population	3 135 223	1 347 551	4 890 035	4 658 470	2 674 704	1 625 999	436 917	1 873 238	2 443 580	23 164 337
Female population	3 557 933	1 448 005	4 793 747	5 133 345	3 073 690	1 709 163	451 798	1 899 857	2 550 663	24 702 647

Births

As can be seen from the table below the ASSA model predicts a total of over 1.1 million births for the period 1 January to 31 December 2006. According to the model we have passed the point of maximum number of births and the number is falling slowly each year. KwaZulu-Natal accounts for over one-fifth (21.6%) of these births. Of all babies born in South Africa during this period, about 38 thousand (3.6%) are estimated to have been infected at or before birth, while more than 26 thousand (2.4%) will become infected through mother's milk during the year. The percentage of babies infected through vertical transmission (from mother to child) ranges from a high of 5.1% in KwaZulu-Natal, to a low of 3.0% in Western Cape.

Births	EC	FS	GT	KZ	LM	MP	NC	NW	WC	SA
Uninfected births	153 746	59 006	193 555	228 450	149 428	78 875	17 532	79 376	98 113	1 057 383
HIV+ births	5 669	2 509	8 055	11 683	3 657	3 285	387	3 016	1 775	38 268
Infected mother's milk	3 780	1 698	5 464	7 944	2 445	2 228	257	2 037	1 171	25 817

People living with HIV/AIDS

The ASSA model estimates that there were 5.4 million people in South Africa living with HIV/AIDS on 1 July 2006. Of these, over 4.9 million (90.8%) were in the age group 20-64 years. This is also the age group which is most likely to form part of the labour force. An estimated 2.8 million women of child-bearing age (15-49 years) were living with HIV/AIDS. This group accounted for around half (52.3%) of all infections. In all adult age groups shown in the table, there were more women than men living with HIV/AIDS. The gender imbalance is most stark among youth, aged 15-24 years, where there were more than four infected young women for every infected young man. The numbers of children under the age of 15 years infected is relatively small when compared with the numbers for other age groups below the age of 65. The main source of infection for children is transmission before or during birth and transmission through mother's milk, rather than the sexual transmission which is the main source of infection for adults.

KwaZulu-Natal accounts for 28.7% of total infections and for a third of infections among youth and children. Gauteng accounts for 26.2% of infections overall, and as much as 27.0% of infections among adult men aged

20-64 years. However, it accounts for only 17.3% of infections among youth, and 20.5% of infected children. Eastern Cape on the other hand accounts for 12.1% of infections among adults, but the third highest proportion (16.4%) of infections in youth. These patterns are more a reflection of the age and population group profiles of the different provinces than a reflection of the differences between the epidemics in the provinces. The patterns also affect the spread of the disease in each province in subsequent years.

People living with HIV/AIDS	EC	FS	GT	KZ	LM	MP	NC	NW	WC	SA
Total HIV infections	666 822	387 770	1 407 486	1 540 183	396 873	446 010	61 415	480 387	267 289	5 372 476
Adults (20-64)	590 805	354 118	1 318 547	1 376 555	347 938	400 197	57 247	439 560	250 796	4 880 464
Adult men (20-64)	237 299	163 160	650 214	617 185	130 001	181 481	24 809	214 665	97 005	2 178 752
Adult women (20-64)	353 507	190 958	668 333	759 370	217 938	218 716	32 437	224 894	153 792	2 701 712
Adults aged 15-49	583 978	339 961	1 268 025	1 346 457	347 885	389 291	54 599	422 906	243 337	4 755 813
Men aged 15-49	207 838	141 821	590 315	550 308	115 246	160 557	21 952	188 326	89 081	1 946 132
Women aged 15-49	376 140	198 140	677 711	796 148	232 639	228 734	32 647	234 580	154 256	2 809 681
Youth (15-24)	165 526	72 083	174 810	324 996	101 613	89 792	9 159	85 128	36 300	1 012 167
Male youth (15-24)	27 633	12 995	33 550	62 833	17 187	16 492	1 624	15 457	5 510	180 722
Female youth (15-24)	137 893	59 088	141 260	262 163	84 426	73 300	7 535	69 671	30 790	831 445
Children (0-14)	40 537	19 261	60 076	97 088	27 303	27 592	2 631	23 250	11 453	293 549

Prevalence rate

The prevalence rate is the percentage of a group who are infected at a particular point in time. Overall, in July 2006, the ASSA model estimates that 11.2% of people in South Africa and 19.2% of adults between the ages 20 to 64 were infected. The figure is as high as 15.7% in KwaZulu-Natal, and at a low of 5.4% in Western Cape. In six provinces, more than one in every ten people is infected.

Prevalence	EC	FS	GT	KZ	LM	MP	NC	NW	WC	SA
Total population	10.0%	13.9%	14.5%	15.7%	6.9%	13.4%	6.9%	12.7%	5.4%	11.2%
Adults (20-64)	19.2%	23.1%	21.7%	28.0%	13.7%	23.5%	11.5%	21.5%	8.5%	19.2%
Adult men (20-64)	17.2%	22.2%	20.9%	27.0%	11.7%	22.0%	10.1%	20.9%	6.7%	17.8%
Adult women (20-64)	20.9%	23.9%	22.7%	28.9%	15.2%	25.0%	12.9%	22.1%	10.2%	20.4%
Adults aged 15-49	17.4%	22.2%	22.2%	26.2%	12.1%	21.8%	11.2%	20.5%	8.6%	18.3%
Men aged 15-49	13.2%	19.1%	20.0%	22.3%	8.7%	18.3%	9.0%	18.1%	6.4%	15.4%
Woman aged 15-49	21.2%	25.1%	24.5%	29.7%	14.9%	25.1%	13.3%	22.9%	10.8%	21.2%
Youth (15-24)	10.3%	12.4%	11.9%	15.2%	7.2%	12.4%	5.1%	11.2%	4.1%	10.4%
Male youth (15-24)	3.4%	4.5%	4.6%	5.9%	2.4%	4.6%	1.8%	4.1%	1.3%	3.7%
Female youth (15-24)	17.2%	20.1%	19.0%	24.4%	12.0%	20.0%	8.4%	18.1%	6.9%	16.9%
Antenatal clinics	27.7%	33.7%	35.8%	40.2%	19.6%	32.5%	19.9%	29.2%	15.5%	28.3%

Prevalence is highest among women of child-bearing age, at 21.2% overall, and at 29.7% in KwaZulu-Natal. Among those attending antenatal clinics, prevalence is predicted to be 28.3% for the country as a whole (a bit lower than the prevalence observed at antenatal clinics in 2005), and 40.2% in KwaZulu-Natal. Prevalence is much higher for female youth than male youth, at 16.9% and 3.7% respectively. Among adults, however, the gender difference varies between provinces. For the country as a whole, prevalence is a little higher for adult women than adult men.

Incidence rate

The incidence rate is the percentage of people who are uninfected at the beginning of a 12 month period who will become infected over the following 12 months. It is a better measure of where we are in the epidemic than prevalence, in that prevalence is an index of past cumulative incidence less past mortality. For the total population, the incidence rate is estimated to be 1.2% for the 2006 calendar year, and has peaked in all provinces. Around 3.5% of children are estimated to have been infected at or before birth, while the incidence rate is 2.4% for infants becoming infected primarily through breastfeeding during the year.

Incidence	EC	FS	GT	KZ	LM	MP	NC	NW	WC	SA
Total population	1.3%	1.5%	1.4%	1.7%	0.9%	1.4%	0.8%	1.4%	0.6%	1.2%
Adults (20-64)	2.0%	2.0%	1.8%	2.3%	1.3%	2.0%	1.2%	1.9%	0.8%	1.7%
Adult men (20-64)	2.2%	2.3%	2.0%	2.9%	1.4%	2.3%	1.1%	2.1%	0.7%	1.9%
Adult women (20-64)	1.9%	1.7%	1.6%	1.8%	1.2%	1.7%	1.3%	1.6%	0.9%	1.5%
Woman aged 15-49	3.1%	2.8%	2.3%	3.4%	1.9%	2.8%	1.7%	2.6%	1.2%	2.4%
At or before birth (of births)	3.6%	4.1%	4.0%	4.9%	2.4%	4.0%	2.2%	3.7%	1.8%	3.5%
Mother's milk (of infants)*	2.5%	2.9%	2.8%	3.5%	1.6%	2.8%	1.5%	2.6%	1.2%	2.4%

* The incidence for mother's milk is calculated here as the number of new infections in 2006 through breast milk as a percentage of babies born uninfected during the year.

Stages of infection

A person who is HIV-positive typically passes through several stages of infection. The table below shows the proportion of those infected and untreated, in each of four stages according to the WHO staging system, the proportion receiving antiretroviral treatment and the proportion who have discontinued antiretroviral treatment. Those in stages 1 and 2 will be relatively asymptomatic, those in stage 3 will be suffering intermittently from conditions such as weight loss, diarrhoea and oral infections, and those in stage 4 will have full-blown AIDS. Typically, a person not receiving treatment will die within a year or two of reaching stage 4.

Overall, 29% of all infected adults in South Africa were in WHO stage 1 in July 2006, with a further 21% in WHO stage 2, 36% in WHO stage 3, and some 14.0% in need of treatment or receiving treatment. Thus over half of infected adults are asymptomatic, which partly explains why many people who are infected are not aware of their HIV status. In those provinces with more advanced epidemics, the percentages in the first stage are below 30%. On the other hand, in Western Cape, Eastern Cape, Northern Cape and Limpopo, around a third of infected people are in the first stage which indicates that the epidemics in these provinces are still emerging.

Stages of infection: Adults	EC	FS	GT	KZ	LM	MP	NC	NW	WC	SA
% in stage 1	33%	27%	26%	27%	32%	27%	32%	28%	31%	29%
% in stage 2	22%	21%	21%	21%	22%	21%	22%	21%	22%	21%
% in stage 3	33%	36%	37%	37%	34%	37%	33%	36%	33%	36%
% in stage 4*	9%	11%	10%	12%	9%	12%	7%	10%	5%	10%
% on ART	3%	4%	5%	4%	4%	4%	4%	4%	8%	4%
% discontinued ART	0.3%	0.3%	0.5%	0.3%	0.4%	0.4%	0.4%	0.4%	0.7%	0.4%

*Not receiving antiretroviral treatment

As far as children are concerned, a much higher proportion (85%) is in the untreated pre-AIDS stage, while around 14% are in need of treatment and only 30% of these are receiving ART.

Stages of infection: Children	EC	FS	GT	KZ	LM	MP	NC	NW	WC	SA
% pre-AIDS	88%	85%	84%	84%	87%	84%	87%	85%	86%	85%
% with AIDS*	9%	11%	10%	12%	9%	12%	7%	10%	5%	10%
% on ART	3%	4%	5%	4%	4%	4%	5%	4%	8%	4%
% discontinued ART	0.3%	0.3%	0.5%	0.3%	0.4%	0.4%	0.4%	0.4%	0.8%	0.4%

*Not receiving antiretroviral treatment

People who are sick with AIDS

As mentioned above, AIDS represents the last stage of HIV infection. The next table shows, for each province, the estimated number of new AIDS cases occurring in 2006, as well as the total estimated number of people who are sick with AIDS, i.e. those in stage 4 and 25% of those on treatment (stage 5) and those who have discontinued treatment (stage 6), on 1 July 2006. For all provinces other than the Western Cape, the number of new AIDS cases during the year is only a little less than the number of total AIDS sick at mid-year, because people sick with AIDS usually do not survive much more than a year after becoming AIDS sick, unless they receive treatment. (In the Western Cape, a high proportion of new AIDS cases have access to antiretroviral treatment, with the result that the number of people experiencing AIDS symptoms in mid-2006 is lower than the number progressing to AIDS during 2006.)

AIDS sick	EC	FS	GT	KZ	LM	MP	NC	NW	WC	SA
New AIDS sick over the year	54 202	35 222	129 356	145 078	33 198	42 111	4 947	43 352	21 285	478 953
Total AIDS sick mid-year	64 096	46 249	156 328	193 028	39 474	57 470	5 385	54 083	19 736	599 298

Deaths

Without therapy, HIV/AIDS is invariably fatal. In 2006, AIDS will account for nearly 47% of all deaths, as illustrated by the table below. In Limpopo, Northern Cape and Western Cape, the provinces with the lowest prevalence, AIDS accounts for around 30% of all deaths. At 1 July 2006, AIDS will have resulted in over 1.8 million deaths cumulatively in the country. More than a third (34.2%) of these deaths will have occurred in KwaZulu-Natal, and nearly a quarter (24.1%) in Gauteng.

Deaths	EC	FS	GT	KZ	LM	MP	NC	NW	WC	SA
Non-AIDS deaths over the year	65 221	25 804	70 558	85 134	37 692	25 560	8 079	30 058	41 362	390 903
AIDS deaths over the year	38 507	26 616	87 736	111 199	23 560	32 960	3 165	31 170	11 278	345 640
Accumulated AIDS deaths mid-year	194 443	139 411	437 762	621 291	121 557	189 233	15 065	159 873	53 512	1 814 457

Mortality statistics

By causing additional deaths, HIV/AIDS impacts on mortality statistics. In 2006, the infant mortality rate is 48 per 1 000 live births for the country as a whole, while the child mortality rate – the number of children per 1 000 births who die before reaching age five – is 75. Adult mortality, as measured by the probability that a person aged 15 will not live to the age of 60 years ($_{45}q_{15}$), is 51% for women, 61% for men, and 56% for both sexes combined. Male life expectancy at birth is 49 years while female life expectancy is 53 years. On each of the mortality measures, KwaZulu-Natal is the province with the highest mortality rates, while Western Cape has the lowest mortality.

Mortality statistics	EC	FS	GT	KZ	LM	MP	NC	NW	WC	SA
Infant mortality rate	62	59	38	63	38	54	35	44	27	48
Child mortality rate (1000_5q_0)	93	91	63	99	58	85	52	70	40	75
Adult mortality ($_{45}q_{15}$)	58%	63%	54%	71%	46%	65%	44%	58%	36%	56%
Adult male mortality ($_{45}q_{15}$)	64%	68%	58%	76%	52%	70%	49%	63%	41%	61%
Adult female mortality ($_{45}q_{15}$)	52%	57%	50%	65%	41%	60%	39%	52%	31%	51%
Life expectancy (e_0)	49.1	46.9	52.3	43.1	56.2	46.5	57.6	50.4	61.7	50.8
Male life expectancy (e_0)	46.9	45.2	50.8	41.8	53.7	45.0	55.1	48.7	59.2	49.0
Female life expectancy (e_0)	51.3	48.7	53.8	44.5	58.7	48.0	60.1	52.3	64.2	52.7

While child mortality, particularly infant mortality, is estimated to have peaked and now to be falling adult mortality is expected to increase for some years to come. By comparison, in 1990 the infant mortality rate was estimated to be 48 per 1 000 births, childhood mortality stood at 65 per 1000, adult mortality was 29% and life expectancy was over 61 years.

Maternal orphans

Defining an orphan as a person under the age of 18 years whose mother has died (whether or not the father has died), it is estimated that there were over 1.5 million orphans in South Africa in July 2006. Of the overall total, two thirds have been orphaned as a result of AIDS. In Gauteng, KwaZulu-Natal, around three quarters of all maternal orphans were orphaned as a result of AIDS. KwaZulu-Natal and Gauteng together, account for over half (55%) of all AIDS orphans currently.

Maternal orphans	EC	FS	GT	KZ	LM	MP	NC	NW	WC	SA
Total orphans	225 618	102 737	277 109	480 004	136 752	143 919	17 160	114 628	77 739	1 542 201
Total AIDS orphans	124 055	69 265	203 287	360 026	78 569	106 895	7 884	78 262	29 830	1 018 548
New orphans	40 321	19 632	59 361	90 701	25 781	26 914	3 124	22 580	13 847	295 588
New AIDS orphans	30 835	16 458	51 015	79 227	19 792	23 285	2 090	18 923	8 007	241 867

During the year starting 1 January 2006, over 295 000 children became orphaned. In all provinces, more than half of newly orphaned children were orphaned due to AIDS. Overall, AIDS accounted for 82% of all new orphans in 2006. It accounted for over 87% of the new orphans in KwaZulu-Natal.

Projections 1990 – 2015

Provincial profiles 1990-2015

Introduction

The previous section of this report presents a snapshot for 2006 of the national and provincial situation in respect of HIV/AIDS. The introductory discussion explains that the differences in the situation across provinces are partly a result of differences in the stage of the epidemic reached and partly a result of different epidemic patterns (different starting times and ultimate prevalence levels) across provinces. These two differences become clearer when we look at patterns over time. This section therefore presents a series of tables and figures for each province, that give the key indicators and population structure as at 1 July 2006 and show the change in selected key indicators over the period 1990 to 2015.

Following the tables of key indicators and the population pyramid, the first figure for each province shows the predicted total population, total number infected with HIV/AIDS, the number who are sick with AIDS, and cumulative AIDS deaths for each year from 1990 to 2015. The second figure shows infant, child and male and female adult mortality rates for each year of the period. The third figure shows the predicted number of children under 18 years who have lost their mother due to AIDS and other causes for each year (maternal orphans). The final figures for each province show projected numbers of AIDS deaths and the numbers on treatment under various treatment coverage scenarios. Numbers on antiretroviral treatment are totals for the private and public health sectors together. In the default scenario, it is assumed that ultimately 90% of private health facility users progressing to AIDS start treatment and 40% of public health facility users progressing to AIDS start treatment (except in Gauteng and Western Cape, where ultimate public access is assumed to be 65% instead of 40%). In the '90% coverage' scenario, the proportion of public health facility users progressing to AIDS who access treatment is assumed to rise to 90%, the same as in the private health sector.

Those interested in comparing the provinces over time on any one of these variables or many others, can download an Excel workbook (ProvOutput_051129.xls) from the ASSA website. The comparison sheet of this workbook allows the user to produce figures comparing the provinces by simply specifying the row number of the row on each sheet containing the desired output.

Eastern Cape

HIV and AIDS Indicators at mid-2006

Births	
Uninfected births (over calendar year)	154 000
HIV+ births (over calendar year)	5 700
Infected through breastfeeding	3 800
People living with HIV/AIDS	
Total HIV infected	667 000
Adults (20-64)	591 000
Adult men (20-64)	237 000
Adult women (20-64)	354 000
Adults (15-49)	584 000
Adult men (15-49)	208 000
Adult women (15-49)	376 000
Youth (15-24)	166 000
Male youth (15-24)	28 000
Female youth (15-24)	138 000
Children (0-14)	41 000
New infections	81 000
Prevalence	
Total HIV infected	10.0%
Adults (20-64)	19.2%
Adult men (20-64)	17.2%
Adult women (20-64)	20.9%
Adults (15-49)	17.4%
Adult men (15-49)	13.2%
Adult women (15-49)	21.2%
Youth (15-24)	10.3%
Male youth (15-24)	3.4%
Female youth (15-24)	17.2%
Children (0-14)	1.7%
Incidence	
Total population	1.3%
Adults (20-64)	2.0%
Adult men (20-64)	2.2%
Adult women (20-64)	1.9%
At or before birth (of births)	3.6%
Breastfeeding (no. infected through breastfeeding in year/uninfected births in that year)	2.5%
Number adults (14+) infected by stage	
Stage 1	206 000
Stage 2	138 000
Stage 3	208 000
Stage 4 (not on treatment)	54 000
Receiving antiretroviral treatment	18 400
Discontinued antiretroviral treatment	1 700
Number children (<14) infected by stage	
Pre-AIDS	34 000
Stage 4 (not on treatment)	4 000
Receiving antiretroviral treatment	3 000
Discontinued antiretroviral treatment	180
AIDS sick	
New AIDS sick during 2006	54 000
Total AIDS sick mid-year	64 000

Note: Numbers rounded to nearest thousand to avoid spurious accuracy

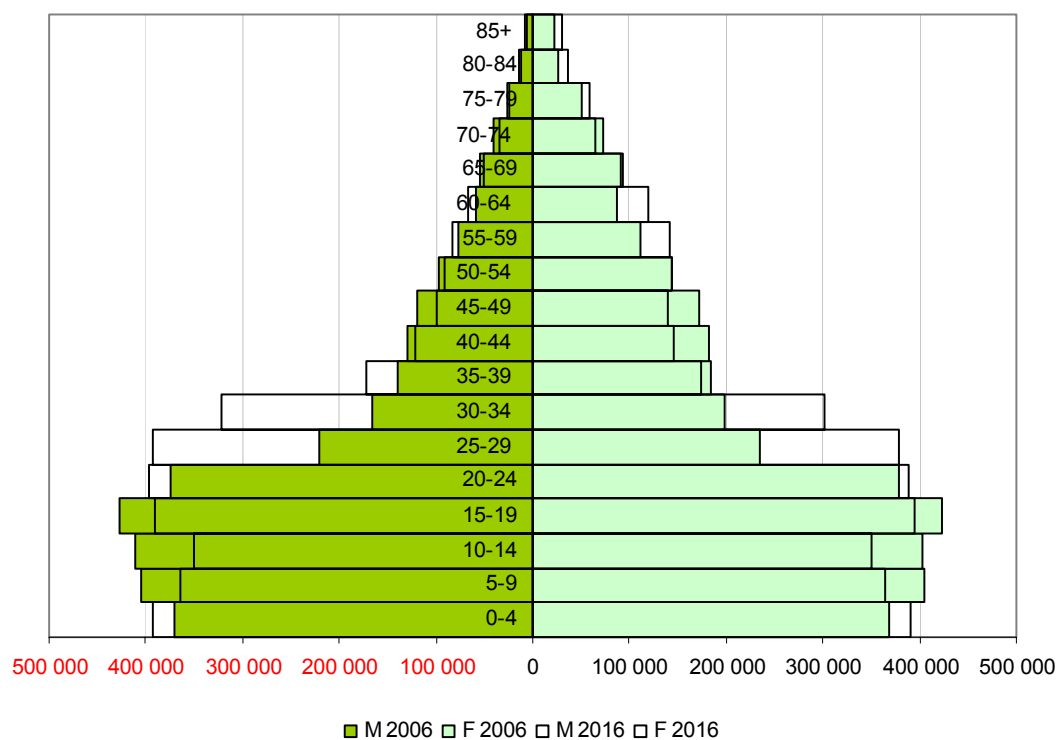
Eastern Cape

Mortality Indicators, 2006

Deaths	
Total deaths during 2005	104 000
Non-AIDS deaths during 2005	65 000
AIDS deaths during 2005	39 000
Accumulated AIDS deaths mid-year	194 000
Percentage of deaths due to HIV/AIDS	
Adults (15-49)	64%
Adults (15+)	37%
Children (<15)	18%
Total deaths	37%
Mortality statistics	
Infant mortality rate (per 1000)	62
Child mortality rate (${}_5q_0$) (per 1000)	93
Adult mortality (${}_{45}q_{15}$)	58%
Adult male mortality (${}_{45}q_{15}$)	64%
Adult female mortality (${}_{45}q_{15}$)	52%
Life expectancy	
Life expectancy (e_0) (years)	49.1
Male life expectancy (e_0) (years)	46.9
Female life expectancy (e_0) (years)	51.3
Maternal orphans (under 18)	
Total orphans	226 000
Total AIDS orphans	124 000
New orphans	40 000

Eastern Cape

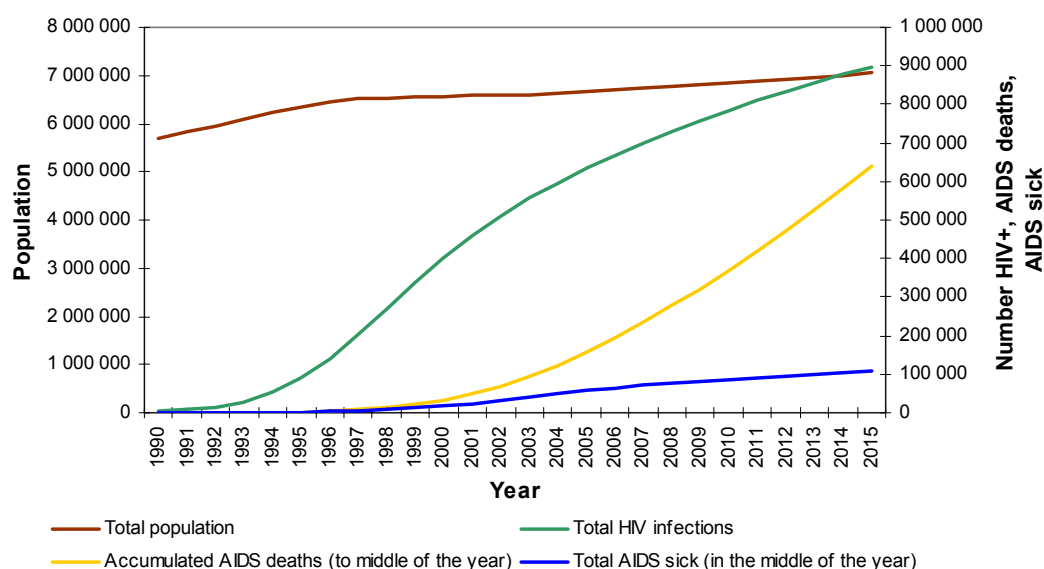
Population pyramid in 2006 and 2016



Age	2006		2016	
	Male	Female	Male	Female
0-4	370 328	369 159	392 227	390 375
5-9	404 405	405 811	365 027	364 655
10-14	411 904	402 173	349 678	350 645
15-19	427 528	422 780	391 333	394 636
20-24	375 465	379 357	396 746	389 187
25-29	219 682	235 137	392 440	378 695
30-34	165 817	197 564	320 997	300 883
35-39	138 738	184 561	171 555	173 771
40-44	128 649	182 073	121 580	146 752
45-49	119 050	172 706	99 325	139 816
50-54	97 937	142 812	90 957	142 949
55-59	77 702	112 318	82 416	141 614
60-64	58 986	87 613	65 961	118 859
65-69	55 382	92 961	49 901	90 852
70-74	40 319	72 135	33 783	65 396
75-79	24 860	49 685	25 539	59 669
80-84	11 617	26 832	13 720	37 434
>=85	6 856	22 257	7 278	29 932
Total	3 135 223	3 557 933	3 370 463	3 716 121

Eastern Cape

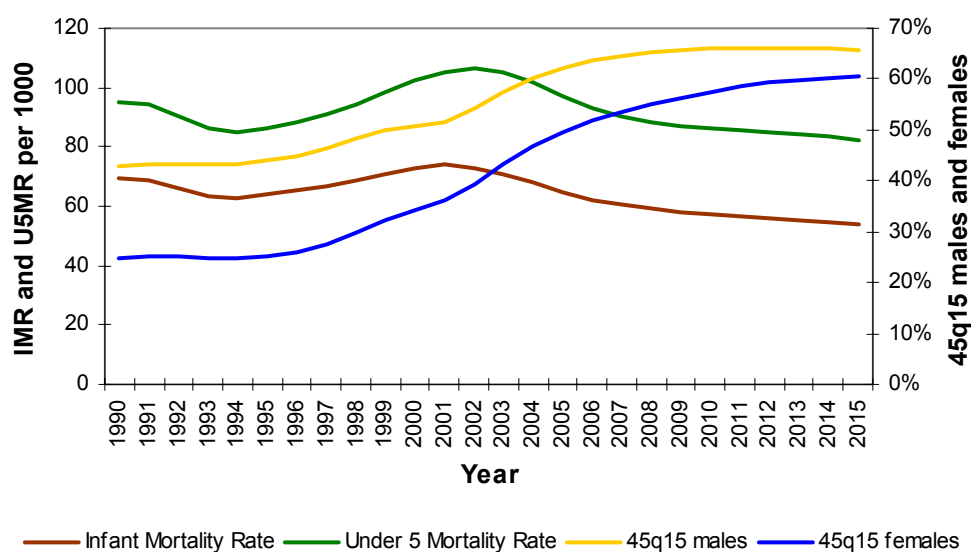
Total population, number of HIV+ and AIDS sick people and cumulative AIDS deaths



Year	Total Population	Growth rate	Total HIV+	Cumulative AIDS deaths	Total AIDS sick
1990	5 690 221	2.4%	3 097	33	27
1991	5 828 223	2.3%	6 813	85	66
1992	5 961 248	2.2%	14 290	202	153
1993	6 094 548	2.2%	28 215	458	338
1994	6 225 955	2.1%	51 955	986	707
1995	6 351 653	1.9%	88 756	2 015	1 402
1996	6 462 806	1.2%	141 105	3 904	2 608
1997	6 506 455	0.6%	202 641	7 127	4 640
1998	6 539 537	0.4%	270 277	12 414	7 648
1999	6 562 135	0.3%	338 870	20 413	11 888
2000	6 574 575	0.1%	402 821	31 856	17 535
2001	6 578 936	0.1%	459 589	47 422	24 490
2002	6 592 801	0.3%	511 096	67 650	32 735
2003	6 612 333	0.3%	556 580	92 877	41 839
2004	6 635 607	0.4%	596 456	123 204	51 628
2005	6 662 509	0.4%	632 896	157 416	57 697
2006	6 693 156	0.5%	666 822	194 443	64 096
2007	6 726 657	0.5%	698 699	234 430	70 031
2008	6 762 613	0.5%	728 915	277 114	75 300
2009	6 800 839	0.6%	757 818	322 057	79 705
2010	6 840 719	0.6%	785 217	369 280	84 991
2011	6 881 389	0.6%	810 783	419 091	90 323
2012	6 922 426	0.6%	834 589	471 405	95 372
2013	6 963 675	0.6%	856 815	526 022	100 046
2014	7 004 964	0.6%	877 609	582 740	104 372
2015	7 046 039	0.6%	897 012	641 397	108 407

Eastern Cape

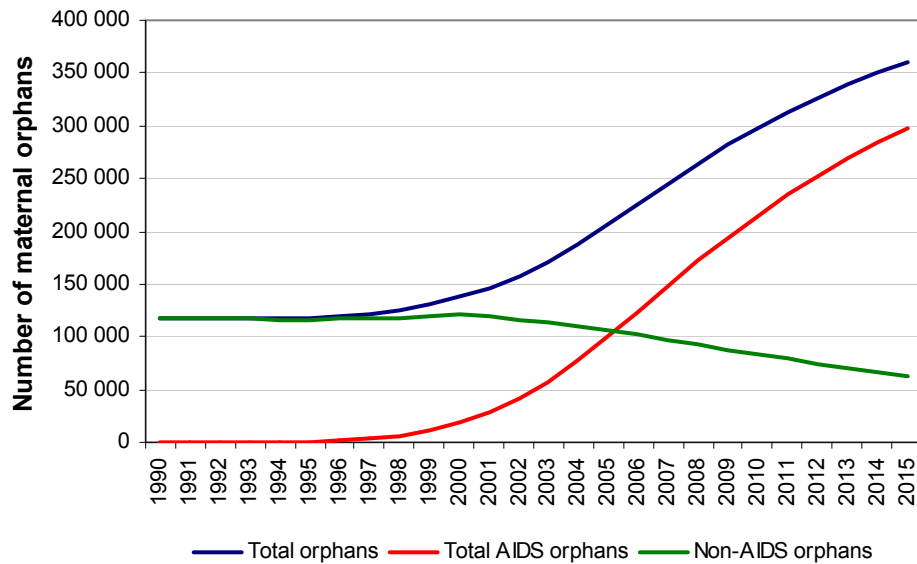
Mortality rates for children and adults



Year	Infant mortality rate	Child mortality rate	45q ₁₅ males	45q ₁₅ females
1990	69	95	43%	25%
1991	69	94	43%	25%
1992	66	91	43%	25%
1993	63	86	43%	25%
1994	63	85	43%	25%
1995	64	87	44%	25%
1996	65	88	45%	26%
1997	67	91	46%	27%
1998	69	95	48%	30%
1999	71	98	50%	32%
2000	73	102	51%	34%
2001	74	105	52%	36%
2002	73	106	54%	39%
2003	71	105	57%	43%
2004	68	102	60%	47%
2005	65	97	62%	50%
2006	62	93	64%	52%
2007	61	90	65%	54%
2008	60	88	65%	55%
2009	58	87	66%	56%
2010	57	86	66%	57%
2011	57	86	66%	58%
2012	56	85	66%	59%
2013	55	84	66%	60%
2014	55	83	66%	60%
2015	54	83	66%	61%

Eastern Cape

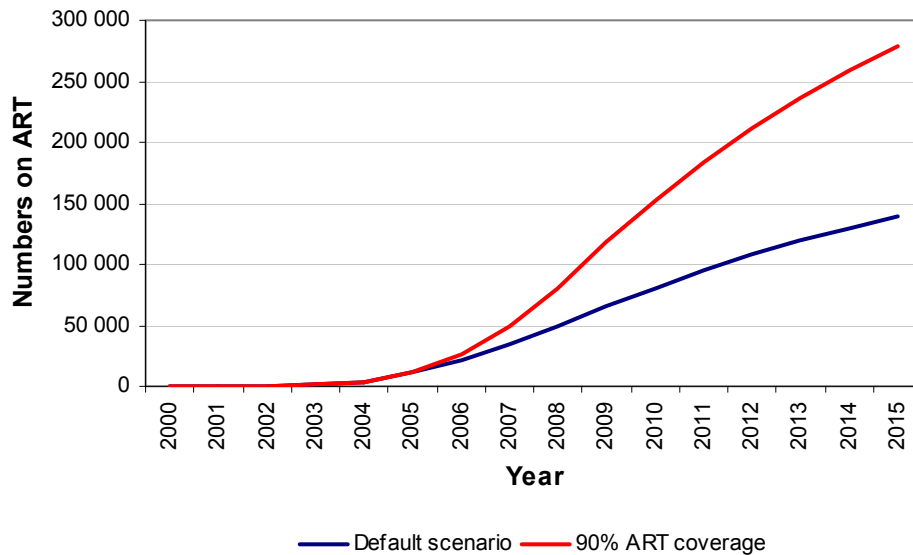
Maternal orphans under 18 years



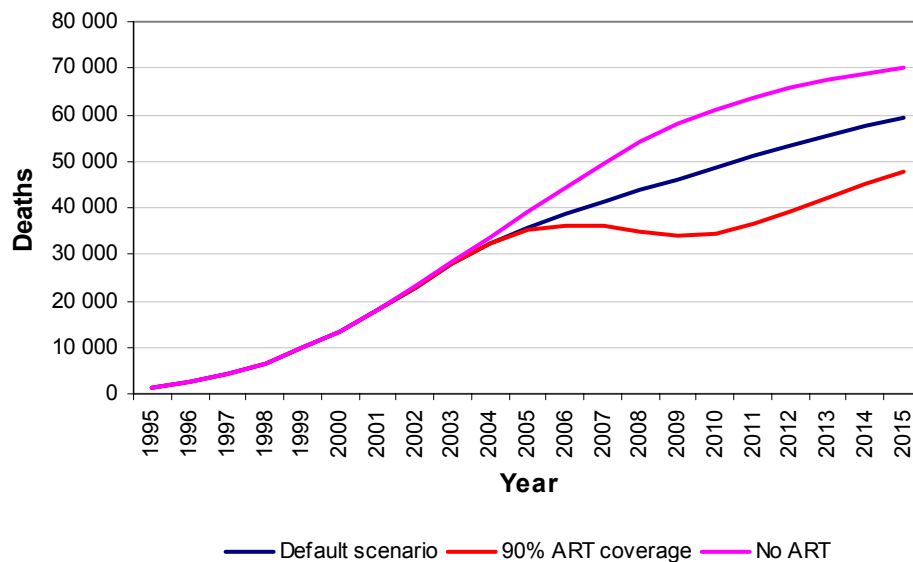
Year	Total orphans	Total AIDS orphans	Total non-AIDS orphans
1990	117 628	11	117 617
1991	117 409	30	117 379
1992	117 290	76	117 213
1993	117 063	181	116 882
1994	116 917	407	116 510
1995	117 423	876	116 547
1996	118 543	1 794	116 748
1997	120 528	3 489	117 038
1998	124 889	6 432	118 457
1999	130 968	11 137	119 831
2000	138 940	18 181	120 759
2001	146 843	27 854	118 989
2002	157 176	40 761	116 416
2003	170 668	57 304	113 364
2004	187 212	77 478	109 735
2005	206 023	100 245	105 778
2006	225 618	124 055	101 563
2007	245 266	148 125	97 141
2008	264 241	171 679	92 562
2009	282 000	194 060	87 940
2010	298 255	214 946	83 310
2011	313 138	234 406	78 732
2012	326 735	252 436	74 299
2013	339 172	269 059	70 113
2014	350 530	284 290	66 241
2015	360 929	298 225	62 704

Eastern Cape

Numbers on ART, default and 90% coverage



Numbers of AIDS deaths, no ART, default and 90% coverage



HIV and AIDS Indicators at mid-2006

Births	
Uninfected births (over calendar year)	59 000
HIV+ births (over calendar year)	2 500
Infected through breastfeeding	1 700
People living with HIV/AIDS	
Total HIV infected	388 000
Adults (20-64)	354 000
Adult men (20-64)	163 000
Adult women (20-64)	191 000
Adults (15-49)	340 000
Adult men (15-49)	142 000
Adult women (15-49)	198 000
Youth (15-24)	72 000
Male youth (15-24)	13 000
Female youth (15-24)	59 000
Children (0-14)	19 000
New infections	36 000
Prevalence	
Total HIV infected	13.9%
Adults (20-64)	23.1%
Adult men (20-64)	22.2%
Adult women (20-64)	23.9%
Adults (15-49)	22.2%
Adult men (15-49)	19.1%
Adult women (15-49)	25.1%
Youth (15-24)	12.4%
Male youth (15-24)	4.5%
Female youth (15-24)	20.1%
Children (0-14)	2.3%
Incidence	
Total population	1.5%
Adults (20-64)	2.0%
Adult men (20-64)	2.3%
Adult women (20-64)	1.7%
At or before birth (of births)	4.1%
Breastfeeding (no. infected through breastfeeding in year/uninfected births in that year)	2.9%
Number adults (14+) infected by stage	
Stage 1	101 000
Stage 2	78 000
Stage 3	134 000
Stage 4 (not on treatment)	40 000
Receiving antiretroviral treatment	13 000
Discontinued antiretroviral treatment	1 200
Number children (<14) infected by stage	
Pre-AIDS	16 000
Stage 4 (not on treatment)	2 000
Receiving antiretroviral treatment	1 400
Discontinued antiretroviral treatment	80
AIDS sick	
New AIDS sick during 2006	35 000
Total AIDS sick mid-year	46 000

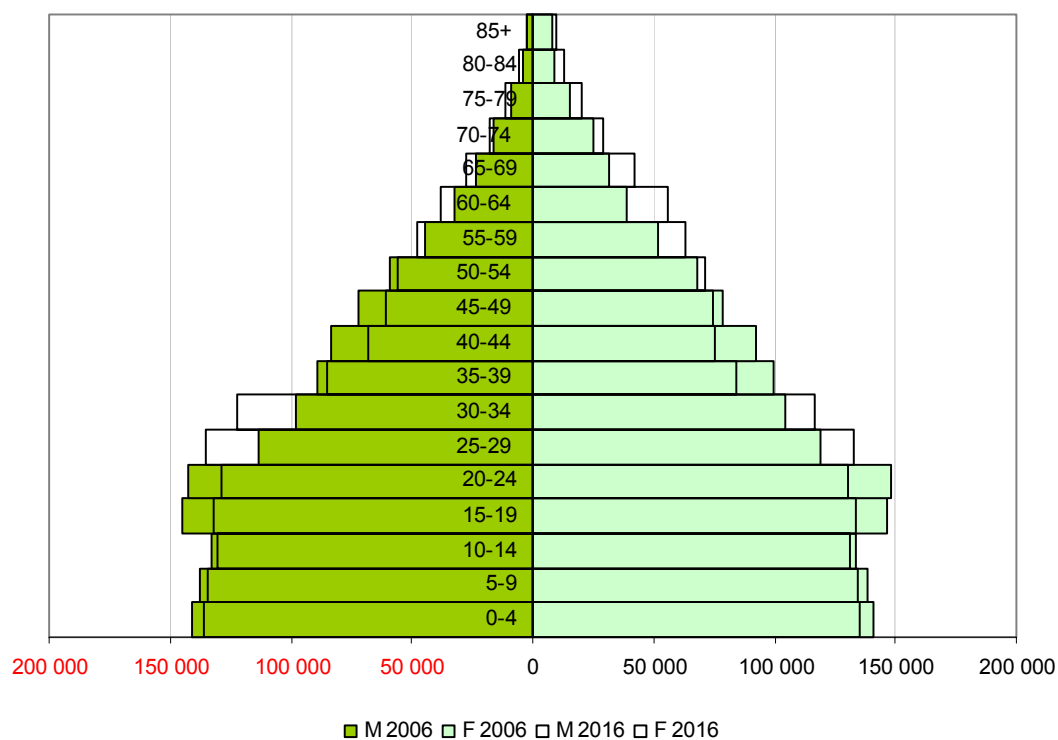
Note: Numbers rounded to nearest thousand to avoid spurious accuracy

Free State

Mortality Indicators, 2006

Deaths	
Total deaths during 2005	52 000
Non-AIDS deaths during 2005	26 000
AIDS deaths during 2005	27 000
Accumulated AIDS deaths mid-year	139 000
Percentage of deaths due to HIV/AIDS	
Adults (15-49)	74%
Adults (15+)	52%
Children (<15)	22%
Total deaths	51%
Mortality statistics	
Infant mortality rate (per 1000)	59
Child mortality rate (${}_5q_0$) (per 1000)	91
Adult mortality (${}_{45}q_{15}$)	63%
Adult male mortality (${}_{45}q_{15}$)	68%
Adult female mortality (${}_{45}q_{15}$)	57%
Life expectancy	
Life expectancy (e_0) (years)	46.9
Male life expectancy (e_0) (years)	45.2
Female life expectancy (e_0) (years)	48.7
Maternal orphans (under 18)	
Total orphans	103 000
Total AIDS orphans	69 000
New orphans	20 000

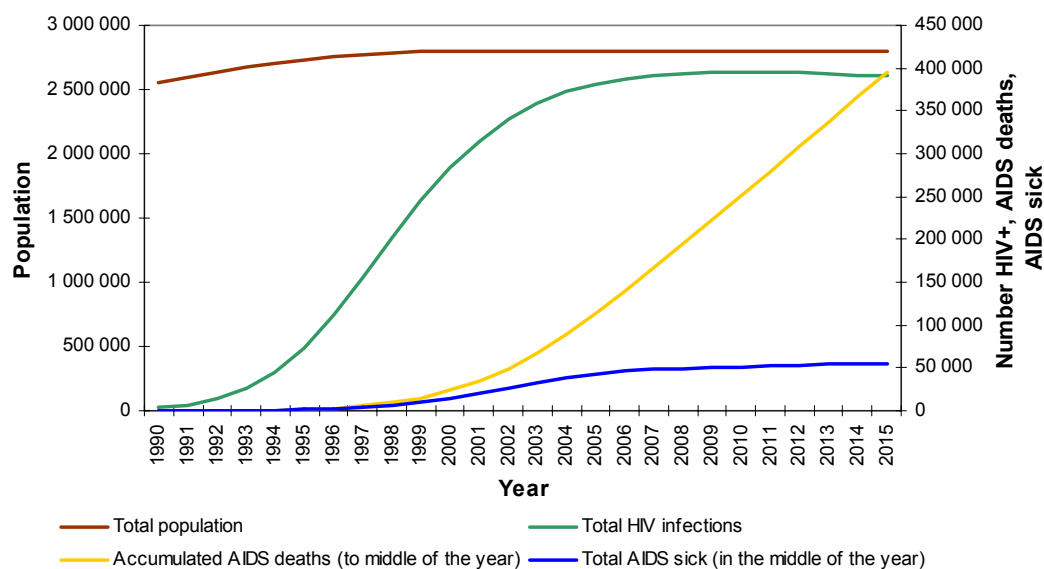
Population pyramid in 2006 and 2016



Age	2006		2016	
	Male	Female	Male	Female
0-4	140 974	140 702	135 900	135 123
5-9	138 021	138 637	134 616	134 315
10-14	132 670	133 354	130 742	131 058
15-19	145 001	146 852	132 365	133 594
20-24	142 881	147 809	128 715	130 107
25-29	113 336	119 000	134 824	132 979
30-34	98 128	104 727	122 633	116 432
35-39	88 812	99 383	85 398	84 201
40-44	83 578	92 068	67 818	75 469
45-49	72 384	78 475	60 403	74 205
50-54	59 429	67 726	55 886	70 963
55-59	44 575	52 092	47 769	63 521
60-64	32 077	38 692	38 273	56 107
65-69	23 300	31 392	27 543	42 234
70-74	16 502	25 012	18 194	29 166
75-79	8 894	15 068	11 065	20 513
80-84	4 335	8 953	5 846	13 231
>=85	2 654	8 062	2 749	9 342
Total	1 347 551	1 448 005	1 340 739	1 452 560

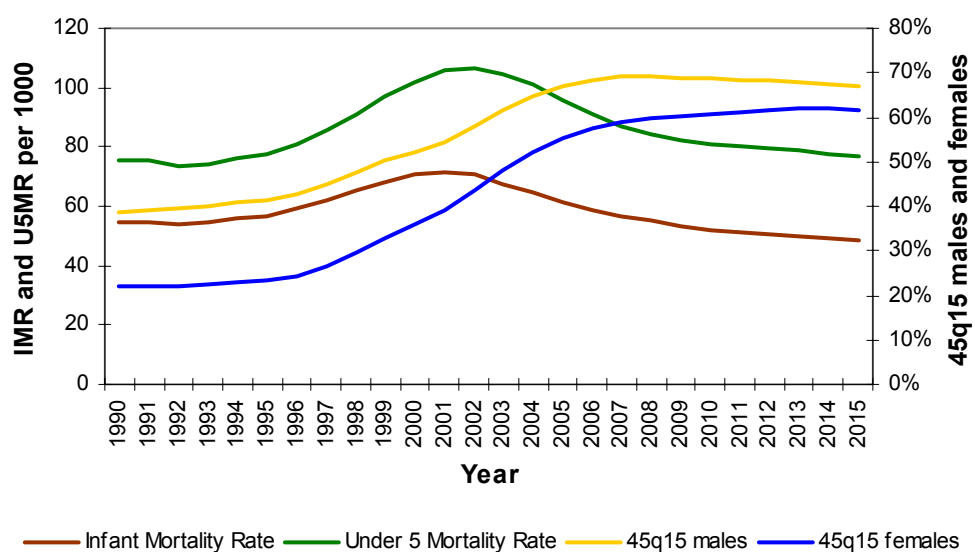
Free State

Total population, number of HIV+ and AIDS sick people and cumulative AIDS deaths



Year	Total Population	Growth rate	Total HIV+	Cumulative AIDS deaths	Total AIDS sick
1990	2 554 441	1.8%	3 227	27	24
1991	2 598 729	1.6%	6 912	70	61
1992	2 638 313	1.4%	13 905	168	141
1993	2 674 716	1.3%	26 023	378	308
1994	2 706 535	1.1%	45 418	798	633
1995	2 732 873	0.8%	73 916	1 593	1 226
1996	2 752 206	0.7%	111 955	3 009	2 249
1997	2 769 526	0.6%	156 289	5 397	3 923
1998	2 782 739	0.4%	202 120	9 264	6 407
1999	2 791 515	0.3%	245 607	15 118	9 878
2000	2 795 765	0.1%	283 552	23 507	14 422
2001	2 796 219	0.1%	315 090	34 892	19 784
2002	2 797 491	0.1%	340 361	49 582	25 823
2003	2 798 272	0.0%	359 376	67 707	32 104
2004	2 798 046	0.0%	372 770	89 180	38 427
2005	2 796 956	0.0%	381 860	113 387	42 934
2006	2 795 556	0.0%	387 770	139 411	46 249
2007	2 794 199	0.0%	391 527	166 618	48 392
2008	2 793 203	0.0%	393 863	194 458	49 656
2009	2 792 830	0.0%	395 344	222 470	50 111
2010	2 792 934	0.0%	396 068	250 625	51 196
2011	2 793 107	0.0%	395 938	279 163	52 308
2012	2 793 228	0.0%	395 106	308 051	53 208
2013	2 793 305	0.0%	393 791	337 170	53 833
2014	2 793 355	0.0%	392 196	366 394	54 205
2015	2 793 365	0.0%	390 469	395 621	54 381

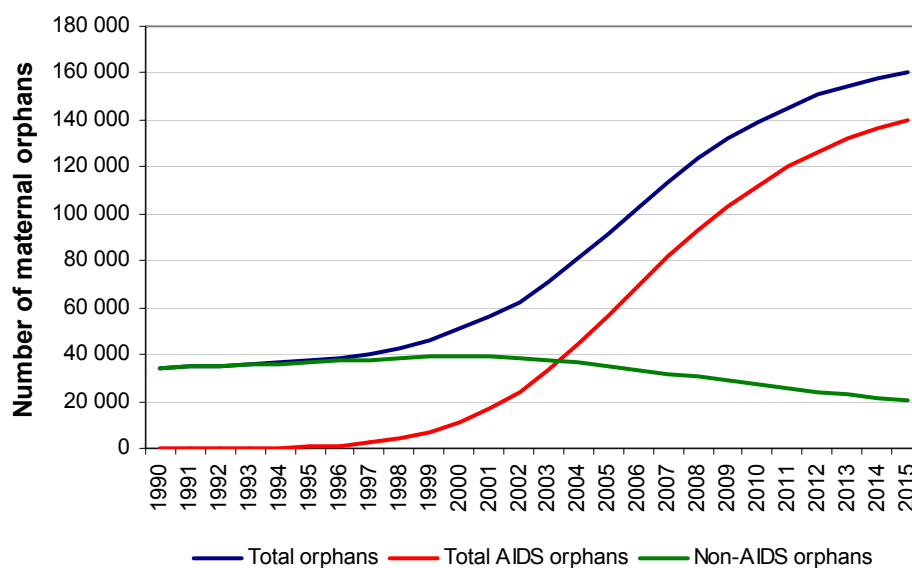
Mortality rates for children and adults



Year	Infant mortality rate	Child mortality rate	45q ₁₅ males	45q ₁₅ females
1990	55	75	39%	22%
1991	55	75	39%	22%
1992	54	73	39%	22%
1993	54	74	40%	22%
1994	56	76	41%	23%
1995	57	77	41%	23%
1996	59	81	43%	24%
1997	62	86	45%	26%
1998	65	91	48%	30%
1999	68	97	50%	33%
2000	71	102	52%	36%
2001	72	106	54%	39%
2002	70	106	58%	43%
2003	68	105	62%	48%
2004	65	101	65%	52%
2005	61	96	67%	55%
2006	59	91	68%	57%
2007	57	87	69%	59%
2008	55	84	69%	60%
2009	53	82	69%	60%
2010	52	81	69%	61%
2011	52	80	68%	61%
2012	51	79	68%	62%
2013	50	79	68%	62%
2014	49	78	67%	62%
2015	49	77	67%	62%

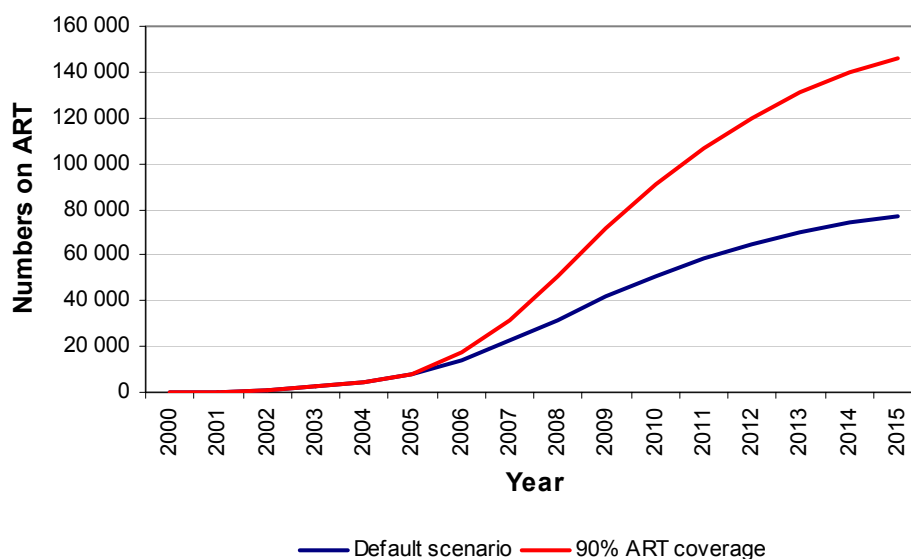
Free State

Maternal orphans under 18 years

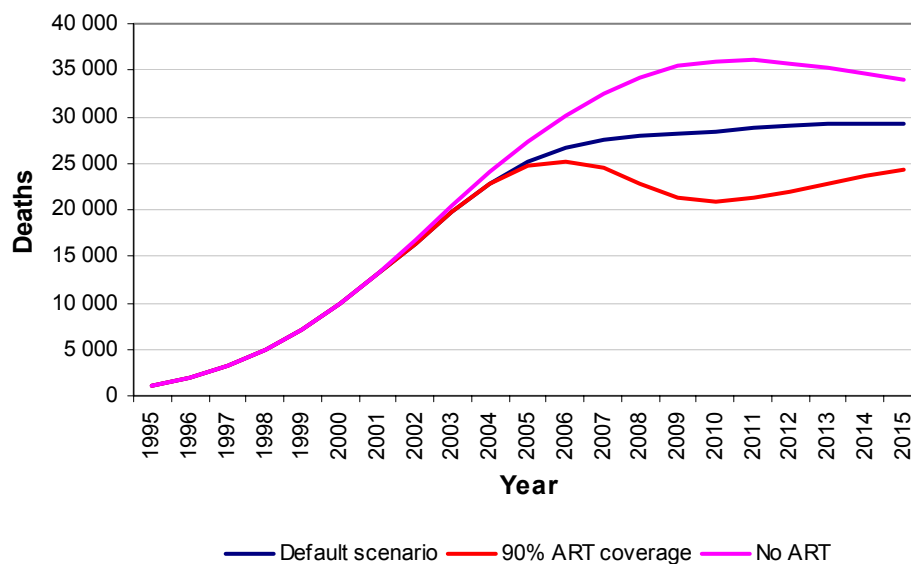


Year	Total orphans	Total AIDS orphans	Total non-AIDS orphans
1990	34 161	8	34 153
1991	34 651	21	34 630
1992	35 167	54	35 113
1993	35 722	127	35 595
1994	36 502	286	36 217
1995	37 358	602	36 756
1996	38 454	1 199	37 256
1997	39 946	2 261	37 685
1998	42 519	4 070	38 449
1999	46 073	6 917	39 156
2000	50 780	11 113	39 668
2001	56 017	16 797	39 221
2002	62 679	24 217	38 462
2003	70 979	33 481	37 498
2004	80 741	44 451	36 290
2005	91 591	56 653	34 939
2006	102 737	69 265	33 471
2007	113 491	81 572	31 919
2008	123 341	93 029	30 312
2009	131 965	103 265	28 700
2010	139 276	112 165	27 111
2011	145 445	119 865	25 581
2012	150 575	126 427	24 149
2013	154 716	131 877	22 839
2014	157 965	136 284	21 681
2015	160 319	139 684	20 635

Numbers on ART, default and 90% coverage



Numbers of AIDS deaths, no ART, default and 90% coverage



HIV and AIDS Indicators at mid-2006

Births	
Uninfected births (over calendar year)	194 000
HIV+ births (over calendar year)	8 100
Infected through breastfeeding	5 500
People living with HIV/AIDS	
Total HIV infected	1 407 000
Adults (20-64)	1 319 000
Adult men (20-64)	650 000
Adult women (20-64)	668 000
Adults (15-49)	1 268 000
Adult men (15-49)	590 000
Adult women (15-49)	678 000
Youth (15-24)	175 000
Male youth (15-24)	34 000
Female youth (15-24)	141 000
Children (0-14)	60 000
New infections	115 000
Prevalence	
Total HIV infected	14.5%
Adults (20-64)	21.7%
Adult men (20-64)	20.9%
Adult women (20-64)	22.7%
Adults (15-49)	22.2%
Adult men (15-49)	20.0%
Adult women (15-49)	24.5%
Youth (15-24)	11.9%
Male youth (15-24)	4.6%
Female youth (15-24)	19.0%
Children (0-14)	2.4%
Incidence	
Total population	1.4%
Adults (20-64)	1.8%
Adult men (20-64)	2.0%
Adult women (20-64)	1.6%
At or before birth (of births)	4.0%
Breastfeeding (no. infected through breastfeeding in year/uninfected births in that year)	2.8%
Number adults (14+) infected by stage	
Stage 1	351 000
Stage 2	288 000
Stage 3	500 000
Stage 4 (not on treatment)	131 000
Receiving antiretroviral treatment	70 000
Discontinued antiretroviral treatment	6 600
Number children (<14) infected by stage	
Pre-AIDS	49 000
Stage 4 (not on treatment)	5 000
Receiving antiretroviral treatment	6 400
Discontinued antiretroviral treatment	400
AIDS sick	
New AIDS sick during 2006	129 000
Total AIDS sick mid-year	156 000

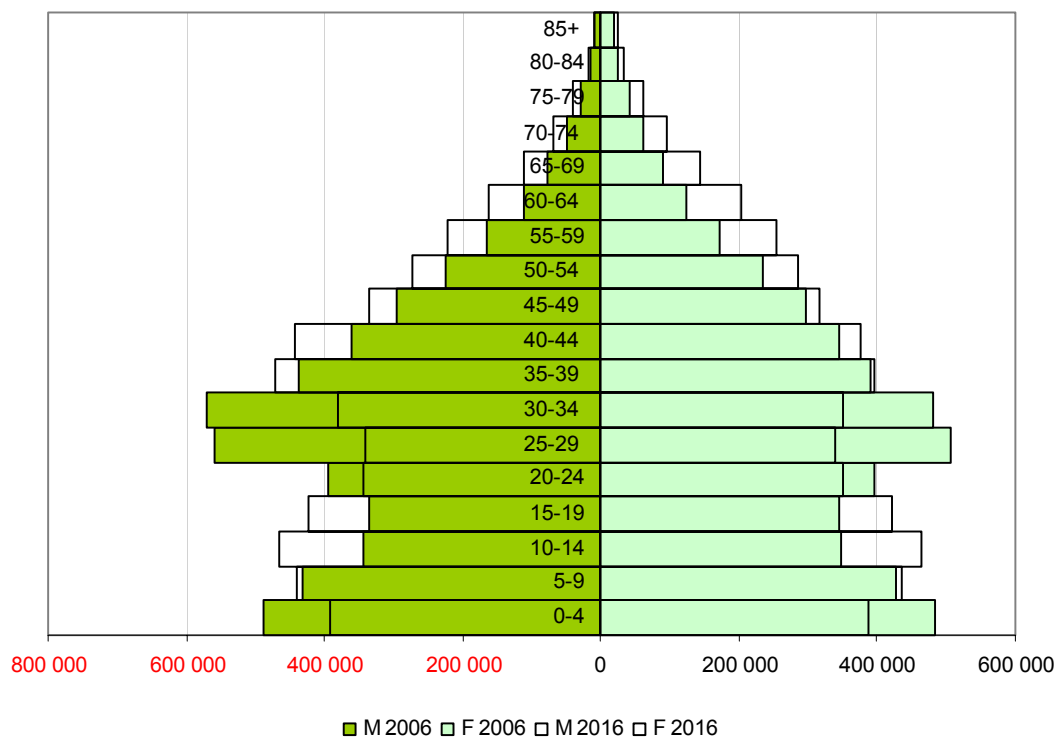
Note: Numbers rounded to nearest thousand to avoid spurious accuracy

Gauteng

Mortality Indicators, 2006

Deaths	
Total deaths during 2005	158 000
Non-AIDS deaths during 2005	71 000
AIDS deaths during 2005	88 000
Accumulated AIDS deaths mid-year	438 000
Percentage of deaths due to HIV/AIDS	
Adults (15-49)	77%
Adults (15+)	56%
Children (<15)	27%
Total deaths	55%
Mortality statistics	
Infant mortality rate (per 1000)	38
Child mortality rate (${}_5q_0$) (per 1000)	63
Adult mortality (${}_{45}q_{15}$)	54%
Adult male mortality (${}_{45}q_{15}$)	58%
Adult female mortality (${}_{45}q_{15}$)	50%
Life expectancy	
Life expectancy (e_0) (years)	52.3
Male life expectancy (e_0) (years)	50.8
Female life expectancy (e_0) (years)	53.8
Maternal orphans (under 18)	
Total orphans	277 000
Total AIDS orphans	203 000
New orphans	59 000

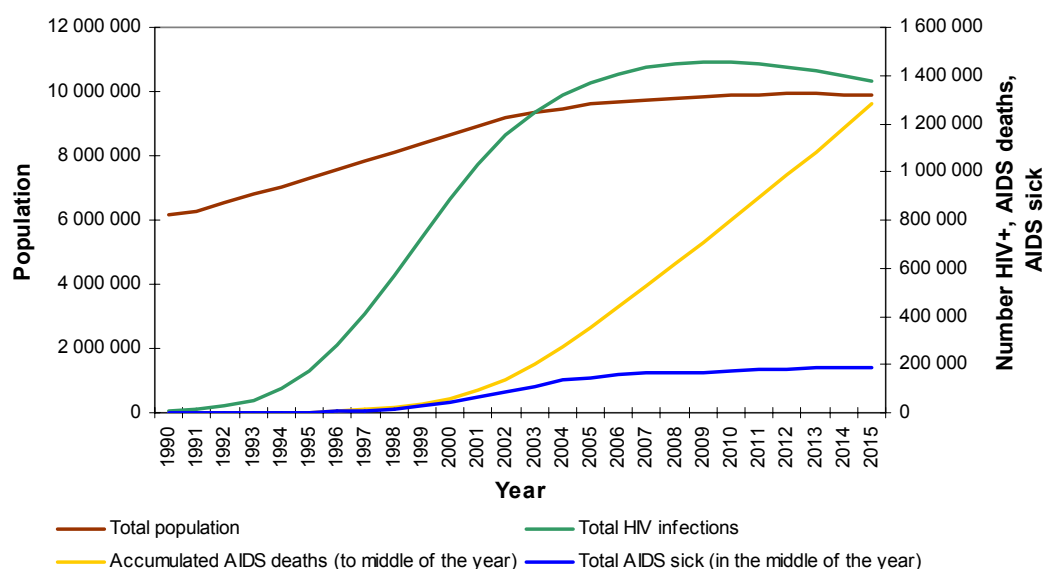
Population pyramid in 2006 and 2016



Age	2006		2016	
	Male	Female	Male	Female
0-4	488 708	483 745	390 913	386 711
5-9	431 776	427 765	440 578	436 570
10-14	342 342	347 660	466 186	462 556
15-19	335 967	344 461	423 544	421 328
20-24	394 518	397 313	343 658	349 674
25-29	559 988	506 374	341 581	338 336
30-34	570 097	481 835	380 861	350 041
35-39	435 927	391 257	471 770	395 360
40-44	360 361	344 790	442 475	375 597
45-49	296 481	296 958	335 905	317 676
50-54	223 586	235 177	273 676	286 699
55-59	164 322	173 155	221 660	254 093
60-64	110 388	123 558	161 452	201 920
65-69	75 936	90 345	112 389	143 856
70-74	48 600	62 725	68 031	95 317
75-79	28 366	42 008	39 078	61 003
80-84	14 330	25 206	18 922	34 273
>=85	8 342	19 415	9 744	25 035
Total	4 890 035	4 793 747	4 942 425	4 936 044

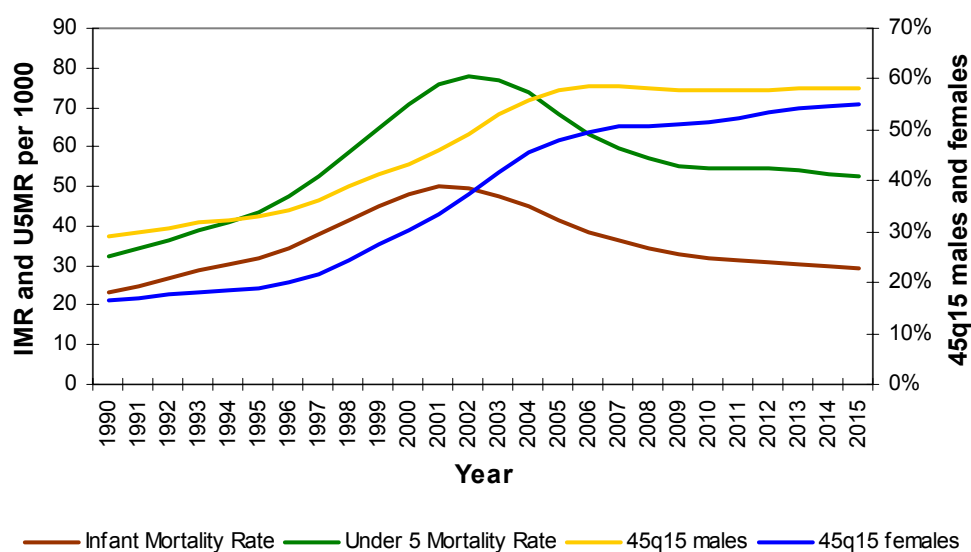
Gauteng

Total population, number of HIV+ and AIDS sick people and cumulative AIDS deaths



Year	Total Population	Growth rate	Total HIV+	Cumulative AIDS deaths	Total AIDS sick
1990	6 157 714	1.3%	5 516	39	39
1991	6 274 859	3.1%	12 331	103	103
1992	6 537 441	4.1%	26 847	257	261
1993	6 797 636	3.9%	53 986	615	614
1994	7 053 090	3.6%	100 626	1 397	1 354
1995	7 301 981	3.4%	174 088	2 998	2 810
1996	7 542 346	3.5%	279 208	6 074	5 502
1997	7 829 851	3.7%	414 138	11 663	10 097
1998	8 115 404	3.5%	567 244	21 265	17 417
1999	8 396 938	3.4%	727 486	36 738	28 317
2000	8 672 818	3.2%	883 576	60 278	43 500
2001	8 943 259	2.8%	1 029 964	94 048	62 611
2002	9 164 071	2.2%	1 152 527	139 867	84 840
2003	9 342 490	1.7%	1 249 095	198 611	108 678
2004	9 483 637	1.3%	1 320 318	270 359	133 388
2005	9 594 886	1.0%	1 371 558	351 599	146 432
2006	9 683 782	0.8%	1 407 486	437 762	156 328
2007	9 754 441	0.7%	1 431 389	527 070	162 429
2008	9 810 525	0.5%	1 446 094	617 703	165 632
2009	9 855 058	0.4%	1 454 006	708 092	166 078
2010	9 888 664	0.3%	1 455 350	798 788	171 132
2011	9 910 433	0.2%	1 449 404	891 639	177 271
2012	9 920 889	0.1%	1 436 915	986 884	182 766
2013	9 921 332	0.0%	1 419 236	1 084 065	186 845
2014	9 913 338	-0.1%	1 397 922	1 182 455	189 286
2015	9 898 530	-0.2%	1 374 478	1 281 296	190 161

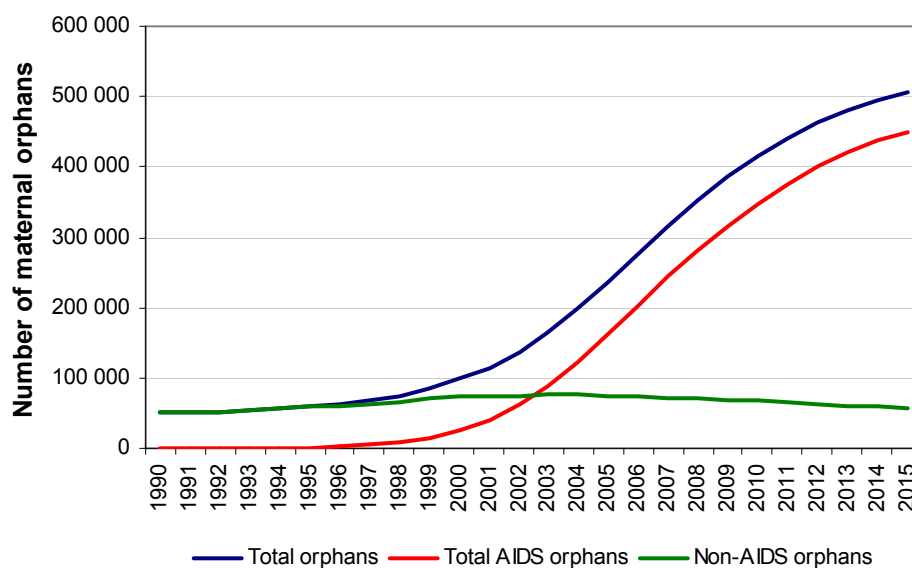
Mortality rates for children and adults



Year	Infant mortality rate	Child mortality rate	45q ₁₅ males	45q ₁₅ females
1990	23	32	29%	17%
1991	25	34	30%	17%
1992	27	37	31%	18%
1993	29	39	32%	18%
1994	30	41	32%	18%
1995	32	43	33%	19%
1996	35	47	34%	20%
1997	38	53	36%	22%
1998	42	59	39%	24%
1999	45	65	41%	27%
2000	48	71	43%	30%
2001	50	76	46%	33%
2002	50	78	49%	37%
2003	48	77	53%	42%
2004	45	74	56%	46%
2005	41	68	58%	48%
2006	38	63	58%	50%
2007	36	60	59%	51%
2008	34	57	58%	51%
2009	33	55	58%	51%
2010	32	55	58%	52%
2011	31	55	58%	52%
2012	31	55	58%	53%
2013	30	54	58%	54%
2014	30	53	58%	55%
2015	29	53	58%	55%

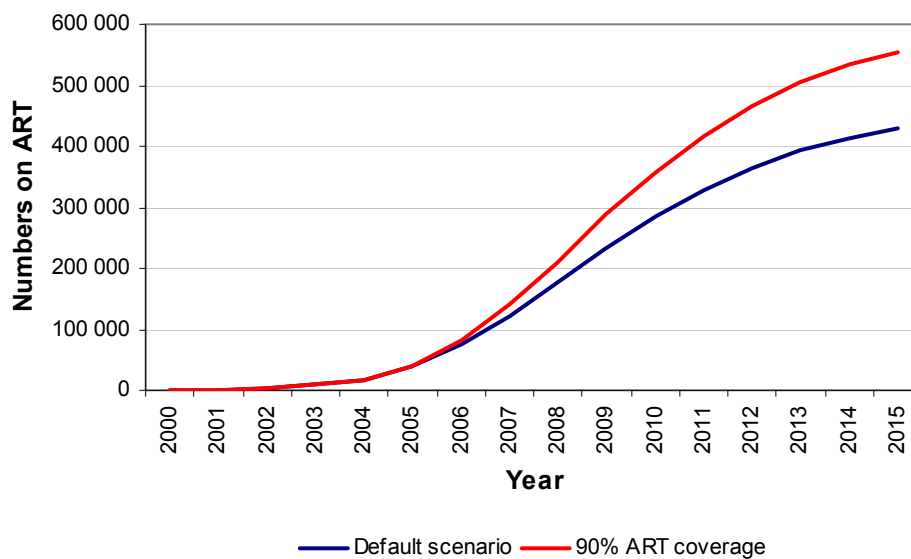
Gauteng

Maternal orphans under 18 years

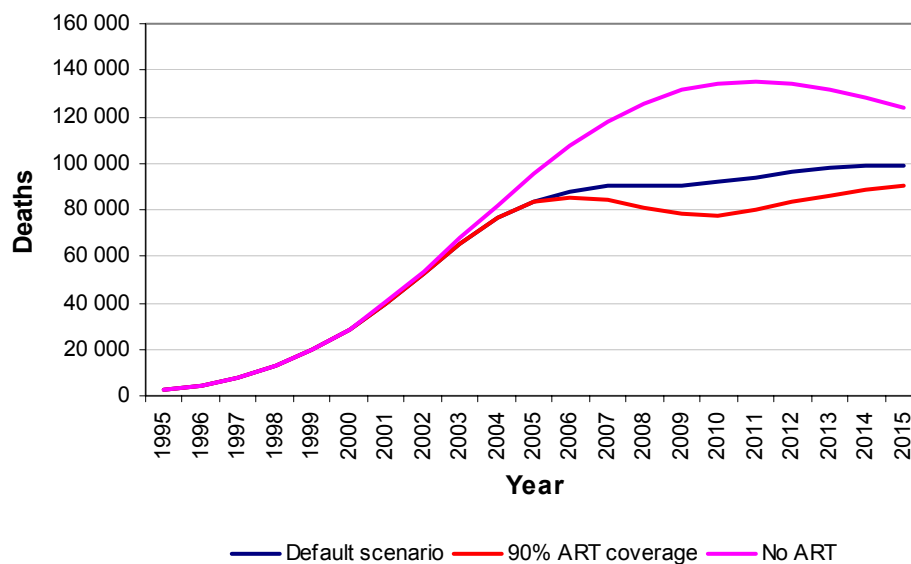


Year	Total orphans	Total AIDS orphans	Total non-AIDS orphans
1990	49 927	10	49 917
1991	50 731	28	50 703
1992	52 134	76	52 059
1993	54 128	194	53 934
1994	56 675	468	56 207
1995	59 614	1 054	58 561
1996	63 264	2 233	61 031
1997	68 021	4 465	63 556
1998	75 256	8 464	66 792
1999	85 186	15 124	70 062
2000	98 651	25 542	73 109
2001	114 974	40 609	74 365
2002	136 612	61 504	75 107
2003	164 503	89 014	75 490
2004	198 613	123 256	75 357
2005	237 211	162 422	74 789
2006	277 109	203 287	73 823
2007	316 291	243 785	72 506
2008	353 040	282 151	70 889
2009	386 035	316 989	69 046
2010	414 971	347 935	67 036
2011	440 535	375 597	64 938
2012	462 707	399 883	62 825
2013	481 188	420 424	60 764
2014	495 732	436 898	58 834
2015	505 768	448 926	56 842

Numbers on ART, default and 90% coverage



Numbers of AIDS deaths, no ART, default and 90% coverage



KwaZulu-Natal

HIV and AIDS Indicators at mid-2006

Births	
Uninfected births (over calendar year)	228 000
HIV+ births (over calendar year)	11 700
Infected through breastfeeding	7 900
People living with HIV/AIDS	
Total HIV infected	1 540 000
Adults (20-64)	1 377 000
Adult men (20-64)	617 000
Adult women (20-64)	759 000
Adults (15-49)	1 346 000
Adult men (15-49)	550 000
Adult women (15-49)	796 000
Youth (15-24)	325 000
Male youth (15-24)	63 000
Female youth (15-24)	262 000
Children (0-14)	97 000
New infections	138 000
Prevalence	
Total HIV infected	15.7%
Adults (20-64)	28.0%
Adult men (20-64)	27.0%
Adult women (20-64)	28.9%
Adults (15-49)	26.2%
Adult men (15-49)	22.3%
Adult women (15-49)	29.7%
Youth (15-24)	15.2%
Male youth (15-24)	5.9%
Female youth (15-24)	24.4%
Children (0-14)	2.9%
Incidence	
Total population	1.7%
Adults (20-64)	2.3%
Adult men (20-64)	2.9%
Adult women (20-64)	1.8%
At or before birth (of births)	4.9%
Breastfeeding (no. infected through breastfeeding in year/uninfected births in that year)	3.5%
Number adults (14+) infected by stage	
Stage 1	385 000
Stage 2	301 000
Stage 3	534 000
Stage 4 (not on treatment)	167 000
Receiving antiretroviral treatment	51 000
Discontinued antiretroviral treatment	4 800
Number children (<14) infected by stage	
Pre-AIDS	80 000
Stage 4 (not on treatment)	10 000
Receiving antiretroviral treatment	7 000
Discontinued antiretroviral treatment	400
AIDS sick	
New AIDS sick during 2006	145 000
Total AIDS sick mid-year	193 000

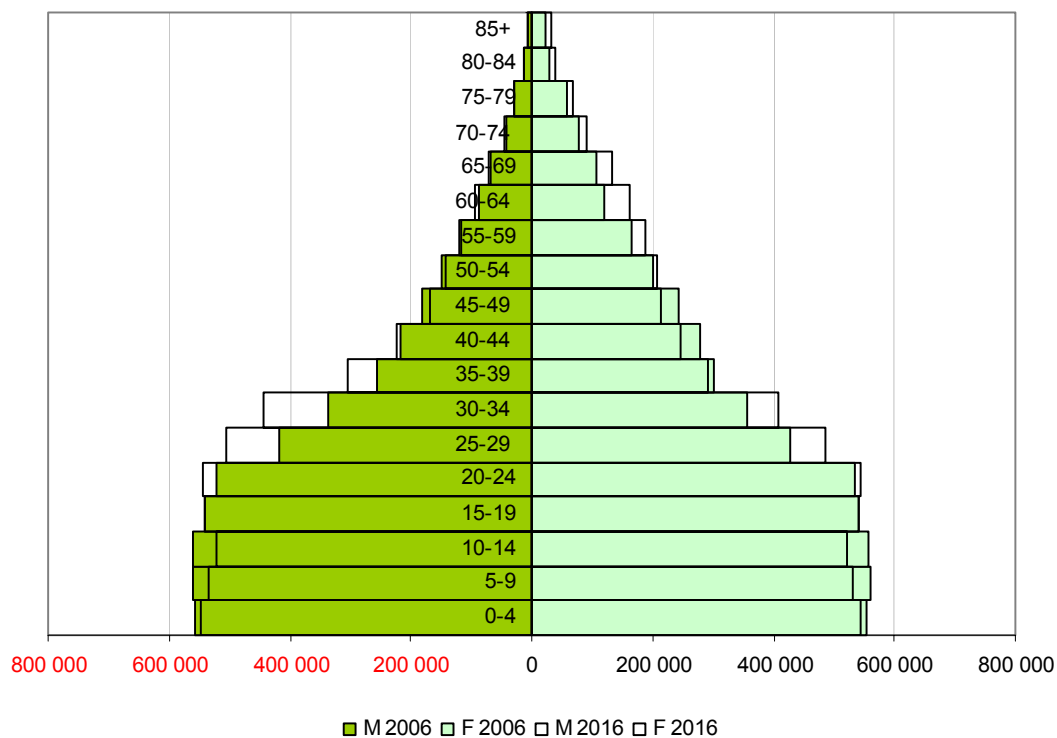
Note: Numbers rounded to nearest thousand to avoid spurious accuracy

KwaZulu-Natal

Mortality Indicators, 2006

Deaths	
Total deaths during 2005	196 000
Non-AIDS deaths during 2005	85 000
AIDS deaths during 2005	111 000
Accumulated AIDS deaths mid-year	621 000
Percentage of deaths due to HIV/AIDS	
Adults (15-49)	78%
Adults (15+)	58%
Children (<15)	25%
Total deaths	57%
Mortality statistics	
Infant mortality rate (per 1000)	63
Child mortality rate (${}_5q_0$) (per 1000)	99
Adult mortality (${}_{45}q_{15}$)	71%
Adult male mortality (${}_{45}q_{15}$)	76%
Adult female mortality (${}_{45}q_{15}$)	65%
Life expectancy	
Life expectancy (e_0) (years)	43.1
Male life expectancy (e_0) (years)	41.8
Female life expectancy (e_0) (years)	44.5
Maternal orphans (under 18)	
Total orphans	480 000
Total AIDS orphans	360 000
New orphans	91 000

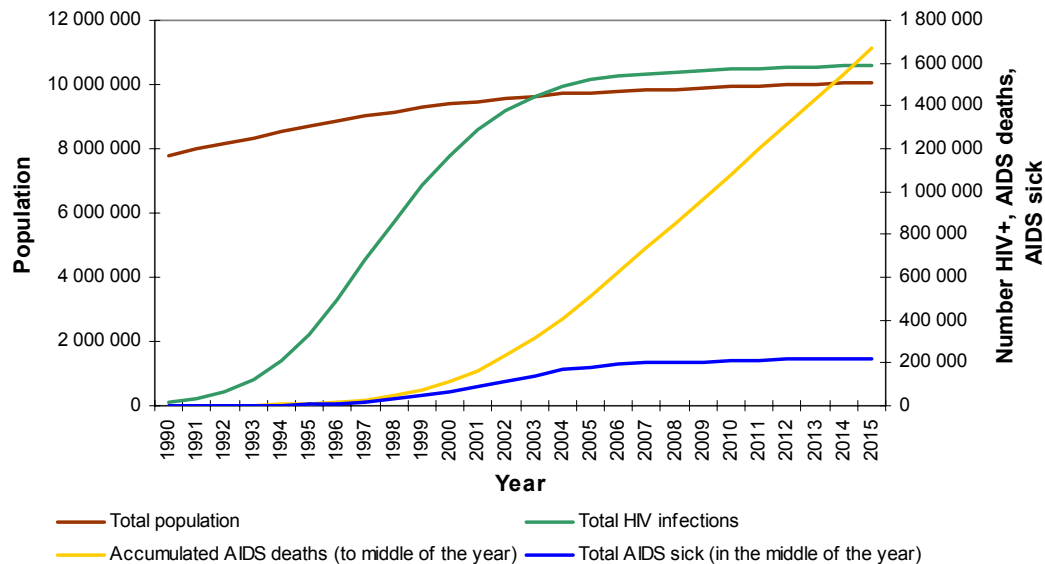
Population pyramid in 2006 and 2016



Age	2006		2016	
	Male	Female	Male	Female
0-4	556 530	553 708	547 950	544 692
5-9	560 672	559 017	533 025	531 263
10-14	560 281	557 908	522 876	522 265
15-19	539 619	539 597	540 154	541 053
20-24	522 005	535 122	544 999	544 670
25-29	419 077	428 320	505 033	485 154
30-34	336 398	354 678	444 652	408 002
35-39	255 305	300 377	304 242	290 491
40-44	215 809	279 409	222 017	245 205
45-49	180 527	241 575	167 877	214 769
50-54	149 040	201 032	141 144	206 083
55-59	120 648	165 175	116 523	188 444
60-64	85 878	121 322	93 640	163 087
65-69	67 811	107 994	71 951	131 903
70-74	43 014	78 125	46 758	90 025
75-79	27 581	58 135	30 572	69 094
80-84	11 892	29 429	14 522	40 154
>=85	6 382	22 421	7 739	32 320
Total	4 658 470	5 133 345	4 855 675	5 248 674

KwaZulu-Natal

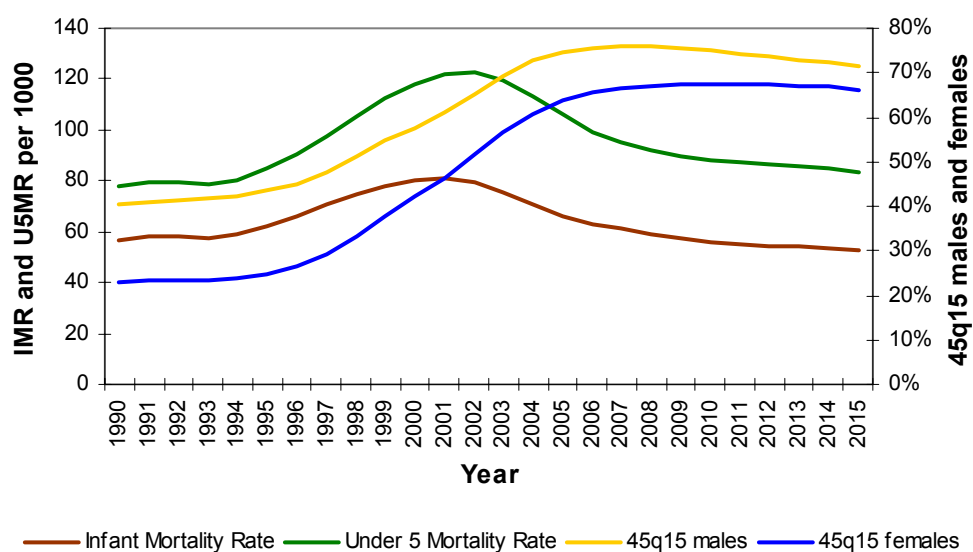
Total population, number of HIV+ and AIDS sick people and cumulative AIDS deaths



Year	Total Population	Growth rate	Total HIV+	Cumulative AIDS deaths	Total AIDS sick
1990	7 784 964	2.4%	15 495	162	130
1991	7 976 808	2.4%	32 905	409	320
1992	8 164 488	2.3%	65 246	959	732
1993	8 348 520	2.2%	120 431	2 112	1 571
1994	8 528 077	2.0%	208 070	4 380	3 173
1995	8 696 220	1.8%	334 621	8 580	6 027
1996	8 845 549	1.7%	497 692	15 882	10 807
1997	9 002 528	1.7%	680 909	27 838	18 576
1998	9 146 331	1.5%	862 305	46 752	29 885
1999	9 275 055	1.3%	1 028 663	74 690	45 407
2000	9 387 453	1.1%	1 170 848	113 828	65 382
2001	9 484 797	1.0%	1 288 002	165 996	88 885
2002	9 572 574	0.8%	1 380 107	232 411	114 958
2003	9 645 417	0.7%	1 447 112	313 306	141 539
2004	9 703 594	0.5%	1 491 837	407 862	167 515
2005	9 750 935	0.5%	1 521 149	511 974	181 694
2006	9 791 815	0.4%	1 540 183	621 291	193 028
2007	9 827 879	0.4%	1 552 390	734 372	200 628
2008	9 861 135	0.3%	1 560 573	849 481	204 976
2009	9 893 513	0.3%	1 567 048	964 964	206 294
2010	9 925 414	0.3%	1 572 457	1 080 680	209 638
2011	9 956 255	0.3%	1 576 698	1 197 399	212 962
2012	9 986 310	0.3%	1 580 360	1 314 975	215 535
2013	10 015 990	0.3%	1 584 077	1 433 017	217 260
2014	10 045 556	0.3%	1 588 258	1 551 178	218 324
2015	10 075 055	0.3%	1 593 022	1 669 254	218 987

KwaZulu-Natal

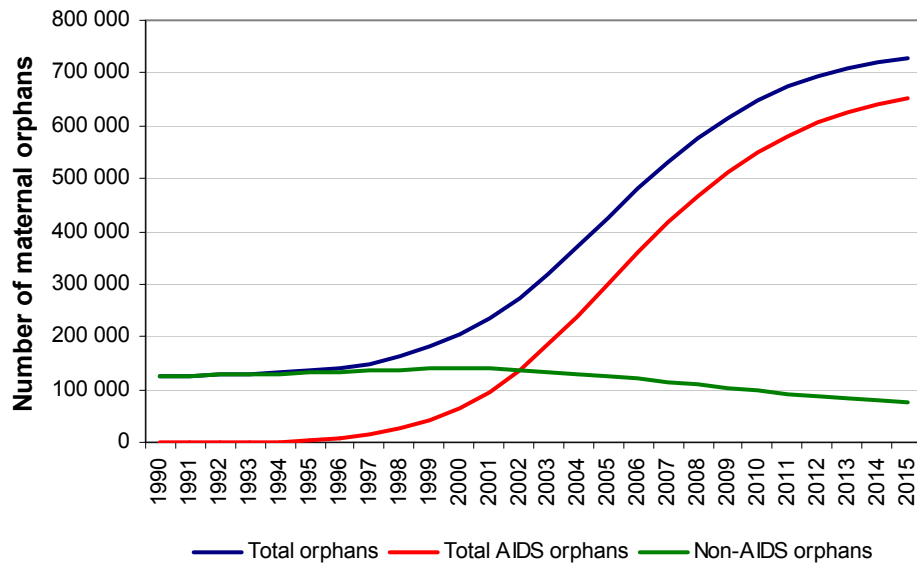
Mortality rates for children and adults



Year	Infant mortality rate	Child mortality rate	45q ₁₅ males	45q ₁₅ females
1990	57	78	40%	23%
1991	58	80	41%	23%
1992	58	79	41%	23%
1993	58	79	42%	24%
1994	59	81	42%	24%
1995	62	85	43%	25%
1996	66	91	45%	26%
1997	71	98	48%	29%
1998	75	105	51%	33%
1999	78	112	55%	38%
2000	80	118	58%	42%
2001	81	122	61%	46%
2002	79	122	65%	52%
2003	75	119	69%	57%
2004	71	114	73%	61%
2005	66	106	75%	64%
2006	63	99	76%	65%
2007	61	95	76%	67%
2008	59	92	76%	67%
2009	57	89	75%	67%
2010	56	88	75%	67%
2011	55	87	74%	67%
2012	55	86	74%	67%
2013	54	86	73%	67%
2014	53	85	72%	67%
2015	53	84	72%	66%

KwaZulu-Natal

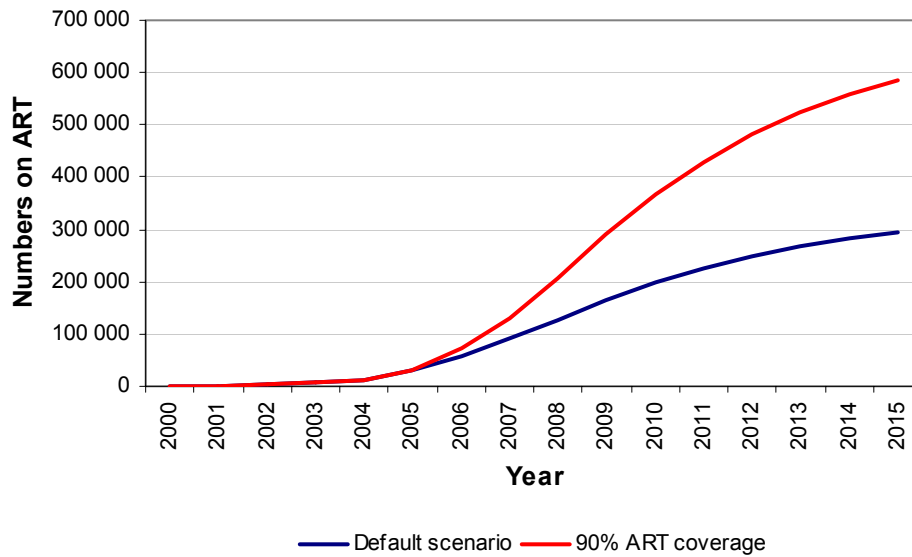
Maternal orphans under 18 years



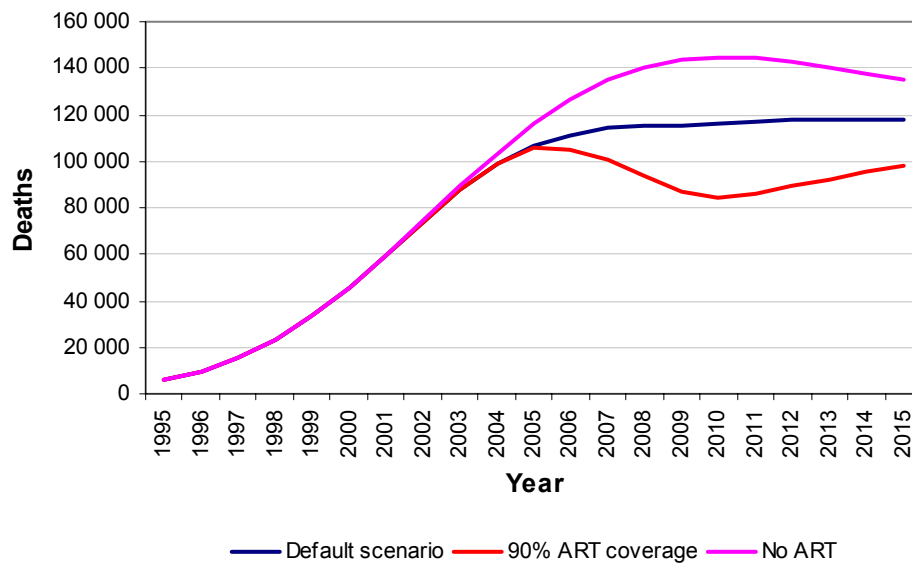
Year	Total orphans	Total AIDS orphans	Total non-AIDS orphans
1990	124 429	52	124 377
1991	125 845	142	125 703
1992	127 651	358	127 293
1993	129 766	840	128 926
1994	132 289	1 845	130 443
1995	135 974	3 834	132 141
1996	141 284	7 525	133 759
1997	149 136	13 975	135 161
1998	162 340	24 683	137 657
1999	181 015	41 104	139 910
2000	206 185	64 693	141 492
2001	235 772	95 921	139 851
2002	272 904	135 738	137 166
2003	318 072	184 265	133 807
2004	369 928	240 284	129 644
2005	425 415	300 417	124 998
2006	480 004	360 026	119 978
2007	531 029	416 347	114 682
2008	576 531	467 328	109 203
2009	615 360	511 666	103 694
2010	647 284	549 060	98 223
2011	673 133	580 250	92 883
2012	693 534	605 760	87 775
2013	709 137	626 127	83 010
2014	720 471	641 801	78 670
2015	727 741	652 924	74 817

KwaZulu-Natal

Numbers on ART, default and 90% coverage



Numbers of AIDS deaths, no ART, default and 90% coverage



HIV and AIDS Indicators at mid-2006

Births	
Uninfected births (over calendar year)	149 000
HIV+ births (over calendar year)	3 700
Infected through breastfeeding	2 400
People living with HIV/AIDS	
Total HIV infected	397 000
Adults (20-64)	348 000
Adult men (20-64)	130 000
Adult women (20-64)	218 000
Adults (15-49)	348 000
Adult men (15-49)	115 000
Adult women (15-49)	233 000
Youth (15-24)	102 000
Male youth (15-24)	17 000
Female youth (15-24)	84 000
Children (0-14)	27 000
New infections	47 000
Prevalence	
Total HIV infected	6.9%
Adults (20-64)	13.7%
Adult men (20-64)	11.7%
Adult women (20-64)	15.2%
Adults (15-49)	12.1%
Adult men (15-49)	8.7%
Adult women (15-49)	14.9%
Youth (15-24)	7.2%
Male youth (15-24)	2.4%
Female youth (15-24)	12.0%
Children (0-14)	1.3%
Incidence	
Total population	0.9%
Adults (20-64)	1.3%
Adult men (20-64)	1.4%
Adult women (20-64)	1.2%
At or before birth (of births)	2.4%
Breastfeeding (no. infected through breastfeeding in year/uninfected births in that year)	1.6%
Number adults (14+) infected by stage	
Stage 1	118 000
Stage 2	80 000
Stage 3	124 000
Stage 4 (not on treatment)	33 000
Receiving antiretroviral treatment	13 800
Discontinued antiretroviral treatment	1 300
Number children (<14) infected by stage	
Pre-AIDS	22 000
Stage 4 (not on treatment)	2 000
Receiving antiretroviral treatment	2 500
Discontinued antiretroviral treatment	140
AIDS sick	
New AIDS sick during 2006	33 000
Total AIDS sick mid-year	39 000

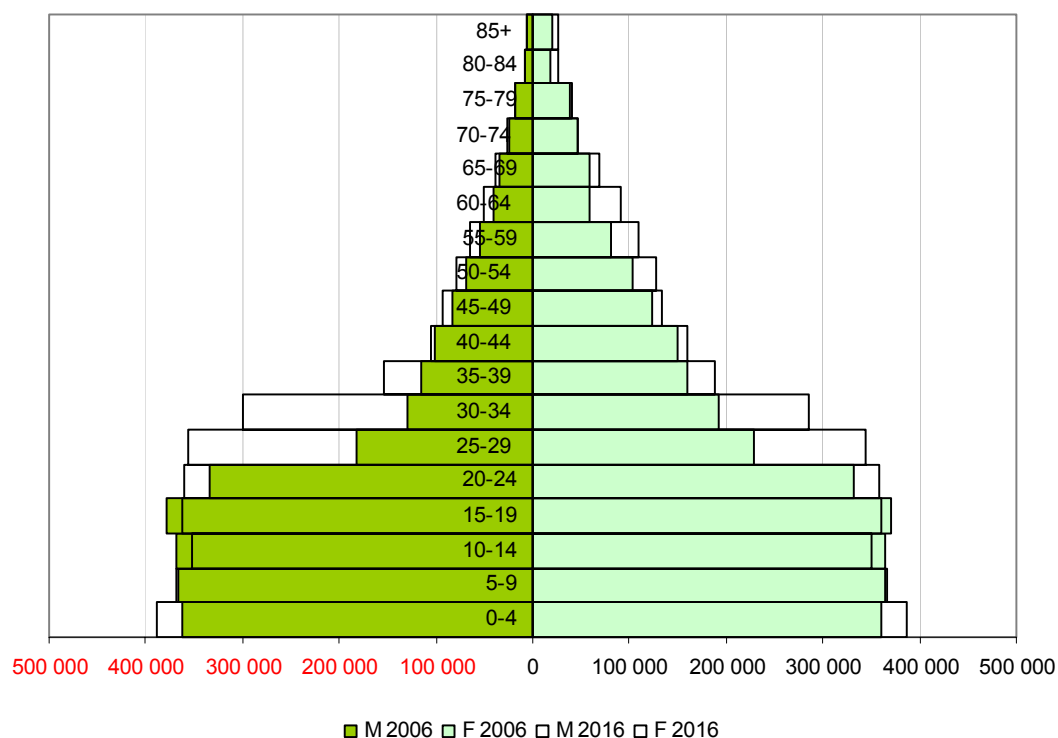
Note: Numbers rounded to nearest thousand to avoid spurious accuracy

Limpopo

Mortality Indicators, 2006

Deaths	
Total deaths during 2005	61 000
Non-AIDS deaths during 2005	38 000
AIDS deaths during 2005	24 000
Accumulated AIDS deaths mid-year	122 000
Percentage of deaths due to HIV/AIDS	
Adults (15-49)	66%
Adults (15+)	38%
Children (<15)	20%
Total deaths	38%
Mortality statistics	
Infant mortality rate (per 1000)	38
Child mortality rate (${}_5q_0$) (per 1000)	58
Adult mortality (${}_{45}q_{15}$)	46%
Adult male mortality (${}_{45}q_{15}$)	52%
Adult female mortality (${}_{45}q_{15}$)	41%
Life expectancy	
Life expectancy (e_0) (years)	56.2
Male life expectancy (e_0) (years)	53.7
Female life expectancy (e_0) (years)	58.7
Maternal orphans (under 18)	
Total orphans	137 000
Total AIDS orphans	79 000
New orphans	26 000

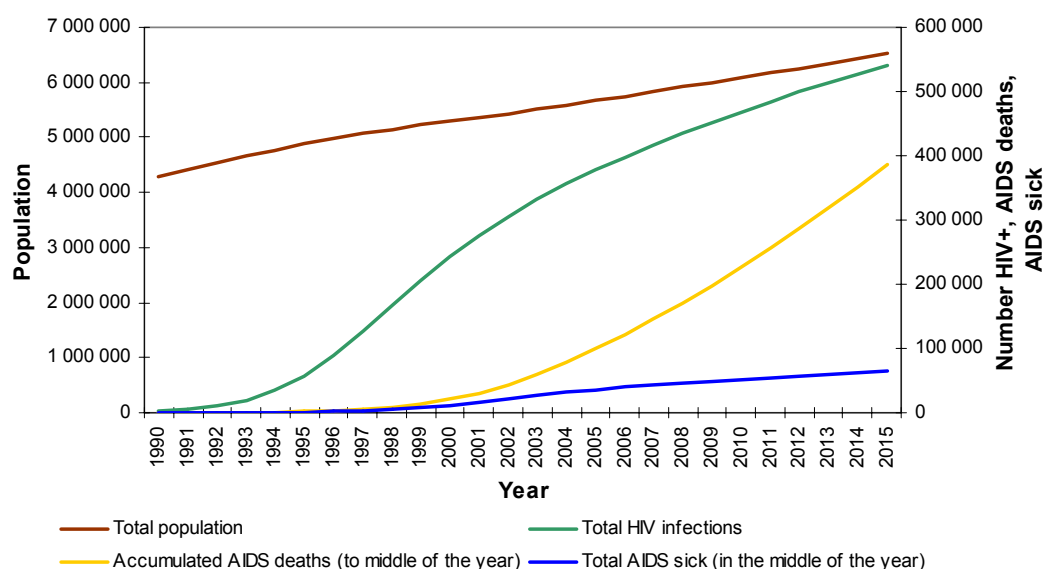
Population pyramid in 2006 and 2016



Age	2006		2016	
	Male	Female	Male	Female
0-4	361 883	359 845	388 291	385 796
5-9	366 367	363 610	367 930	366 056
10-14	368 357	364 002	352 125	350 364
15-19	377 703	370 095	362 106	359 601
20-24	334 791	332 466	360 801	357 420
25-29	182 860	228 334	355 340	344 362
30-34	129 910	192 091	299 795	285 946
35-39	115 227	159 702	154 092	187 658
40-44	100 831	149 942	105 927	159 192
45-49	83 931	124 480	92 503	133 969
50-54	67 883	103 833	79 829	128 044
55-59	55 141	81 275	65 198	108 662
60-64	39 963	59 632	50 968	90 860
65-69	35 184	59 625	39 136	69 123
70-74	23 282	46 858	25 355	47 229
75-79	17 532	39 289	18 292	41 365
80-84	7 928	18 449	9 011	26 746
>=85	5 932	20 161	5 848	27 060
Total	2 674 704	3 073 690	3 132 546	3 469 452

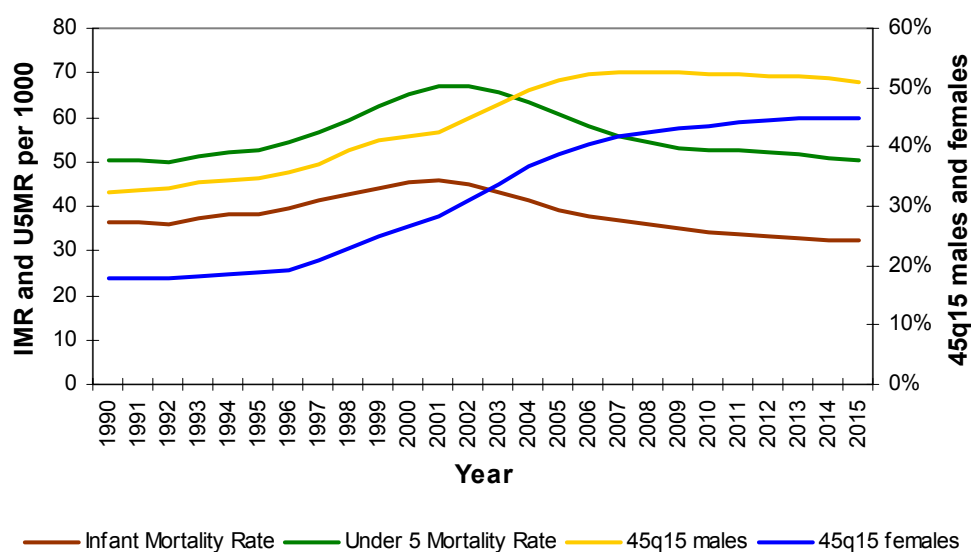
Limpopo

Total population, number of HIV+ and AIDS sick people and cumulative AIDS deaths



Year	Total Population	Growth rate	Total HIV+	Cumulative AIDS deaths	Total AIDS sick
1990	4 291 200	2.9%	2 205	25	19
1991	4 415 391	2.8%	4 822	63	48
1992	4 535 202	2.6%	10 002	148	110
1993	4 654 075	2.5%	19 394	331	239
1994	4 771 186	2.4%	34 823	703	493
1995	4 887 207	2.3%	57 817	1 414	965
1996	4 995 988	1.9%	89 355	2 695	1 769
1997	5 076 312	1.5%	126 354	4 847	3 096
1998	5 153 298	1.5%	166 355	8 316	5 063
1999	5 226 793	1.4%	206 376	13 531	7 819
2000	5 296 856	1.3%	243 459	20 959	11 460
2001	5 364 592	1.3%	276 546	30 955	15 740
2002	5 436 843	1.4%	306 425	43 732	20 627
2003	5 511 955	1.4%	332 815	59 365	25 835
2004	5 589 034	1.4%	356 070	77 853	31 438
2005	5 667 821	1.4%	377 206	98 781	35 729
2006	5 748 394	1.4%	396 873	121 557	39 474
2007	5 830 605	1.4%	415 652	145 901	42 559
2008	5 914 329	1.4%	433 820	171 555	45 229
2009	5 999 454	1.4%	451 553	198 271	47 390
2010	6 085 554	1.4%	468 659	226 131	50 275
2011	6 172 028	1.4%	484 851	255 421	53 305
2012	6 258 573	1.4%	500 094	286 148	56 243
2013	6 345 022	1.4%	514 430	318 230	59 008
2014	6 431 210	1.3%	527 909	351 572	61 601
2015	6 516 941	1.3%	540 554	386 094	64 046

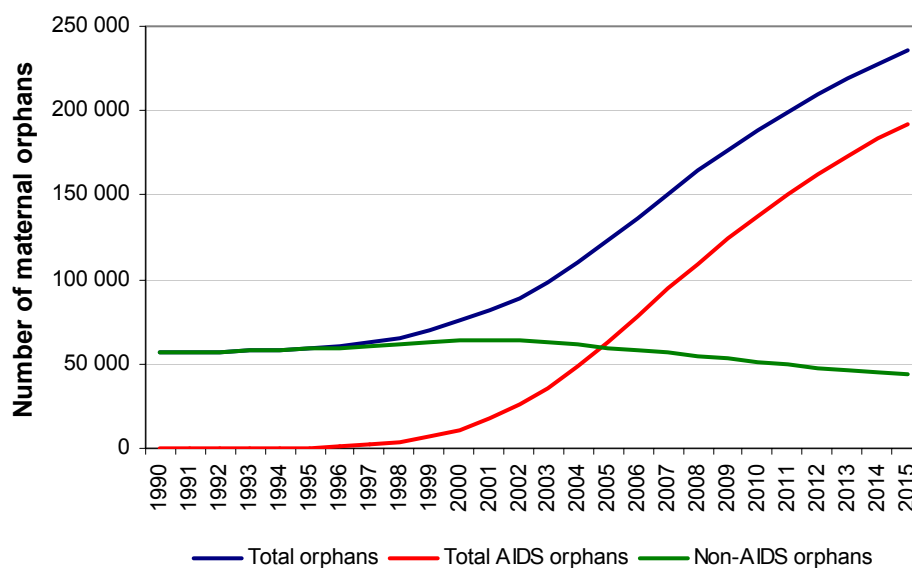
Mortality rates for children and adults



Year	Infant mortality rate	Child mortality rate	45q ₁₅ males	45q ₁₅ females
1990	36	51	32%	18%
1991	36	50	33%	18%
1992	36	50	33%	18%
1993	37	51	34%	18%
1994	38	52	34%	19%
1995	38	52	35%	19%
1996	40	54	36%	19%
1997	41	57	37%	21%
1998	43	59	39%	23%
1999	44	62	41%	25%
2000	45	65	42%	27%
2001	46	67	42%	28%
2002	45	67	45%	31%
2003	43	66	47%	34%
2004	41	63	50%	37%
2005	39	60	51%	39%
2006	38	58	52%	41%
2007	37	56	53%	42%
2008	36	54	53%	43%
2009	35	53	53%	43%
2010	34	53	52%	44%
2011	34	52	52%	44%
2012	33	52	52%	44%
2013	33	51	52%	45%
2014	33	51	51%	45%
2015	32	50	51%	45%

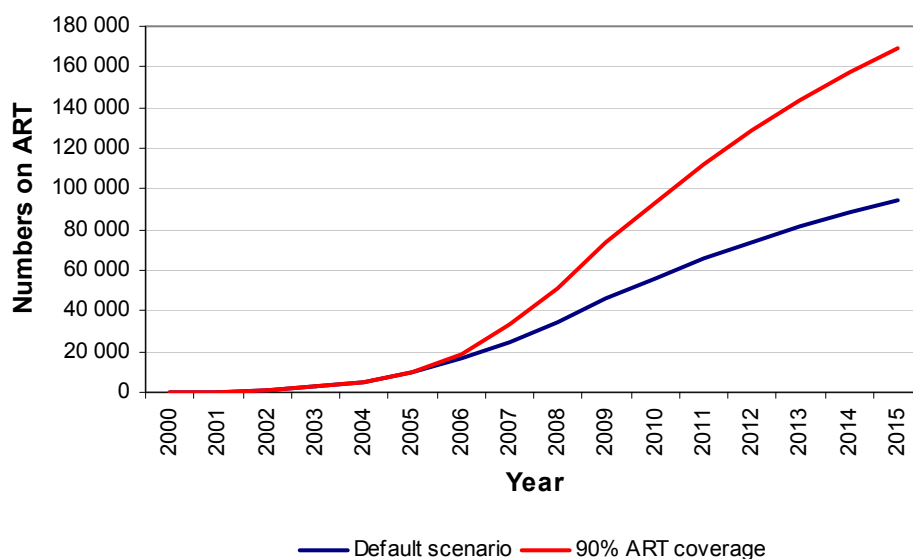
Limpopo

Maternal orphans under 18 years

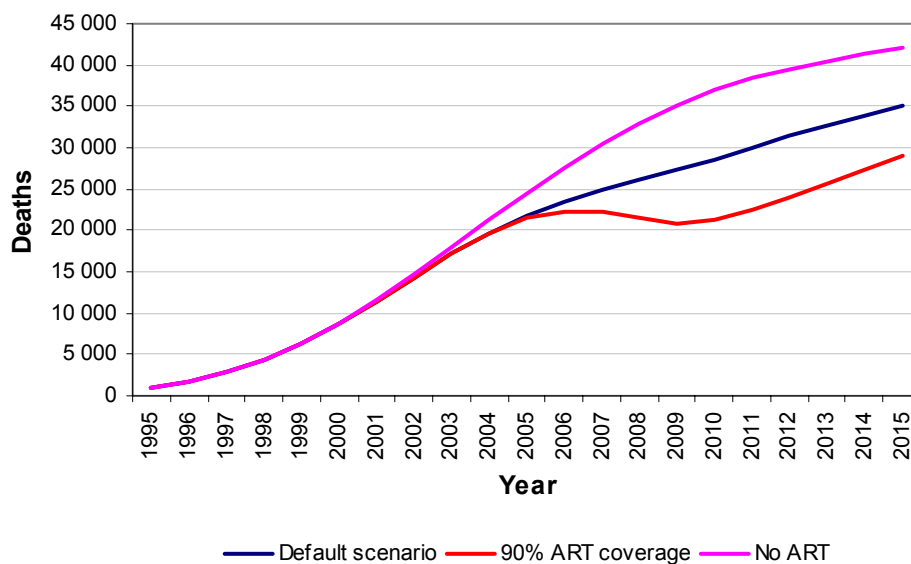


Year	Total orphans	Total AIDS orphans	Total non-AIDS orphans
1990	56 404	6	56 398
1991	56 790	18	56 772
1992	57 089	46	57 043
1993	57 639	110	57 529
1994	58 516	251	58 265
1995	59 469	539	58 930
1996	60 729	1 102	59 627
1997	62 475	2 138	60 337
1998	65 697	3 939	61 758
1999	70 091	6 847	63 244
2000	75 807	11 252	64 555
2001	81 684	17 395	64 288
2002	89 148	25 582	63 566
2003	98 612	36 015	62 597
2004	109 975	48 680	61 296
2005	122 960	63 149	59 811
2006	136 752	78 569	58 183
2007	150 665	94 208	56 457
2008	164 144	109 481	54 663
2009	176 797	123 950	52 848
2010	188 501	137 460	51 042
2011	199 441	150 143	49 298
2012	209 659	161 994	47 664
2013	219 151	172 974	46 177
2014	227 956	183 081	44 875
2015	235 788	192 150	43 638

Numbers on ART, default and 90% coverage



Numbers of AIDS deaths, no ART, default and 90% coverage



Mpumalanga

HIV and AIDS Indicators at mid-2006

Births	
Uninfected births (over calendar year)	79 000
HIV+ births (over calendar year)	3 300
Infected through breastfeeding	2 200
People living with HIV/AIDS	
Total HIV infected	446 000
Adults (20-64)	400 000
Adult men (20-64)	181 000
Adult women (20-64)	219 000
Adults (15-49)	389 000
Adult men (15-49)	161 000
Adult women (15-49)	229 000
Youth (15-24)	90 000
Male youth (15-24)	16 000
Female youth (15-24)	73 000
Children (0-14)	28 000
New infections	41 000
Prevalence	
Total HIV infected	13.4%
Adults (20-64)	23.5%
Adult men (20-64)	22.0%
Adult women (20-64)	25.0%
Adults (15-49)	21.8%
Adult men (15-49)	18.3%
Adult women (15-49)	25.1%
Youth (15-24)	12.4%
Male youth (15-24)	4.6%
Female youth (15-24)	20.0%
Children (0-14)	2.4%
Incidence	
Total population	1.4%
Adults (20-64)	2.0%
Adult men (20-64)	2.3%
Adult women (20-64)	1.7%
At or before birth (of births)	4.0%
Breastfeeding (no. infected through breastfeeding in year/uninfected births in that year)	2.8%
Number adults (14+) infected by stage	
Stage 1	112 000
Stage 2	86 000
Stage 3	153 000
Stage 4 (not on treatment)	50 000
Receiving antiretroviral treatment	15 500
Discontinued antiretroviral treatment	1 500
Number children (<14) infected by stage	
Pre-AIDS	22 000
Stage 4 (not on treatment)	3 000
Receiving antiretroviral treatment	2 100
Discontinued antiretroviral treatment	120
AIDS sick	
New AIDS sick during 2006	42 000
Total AIDS sick mid-year	57 000

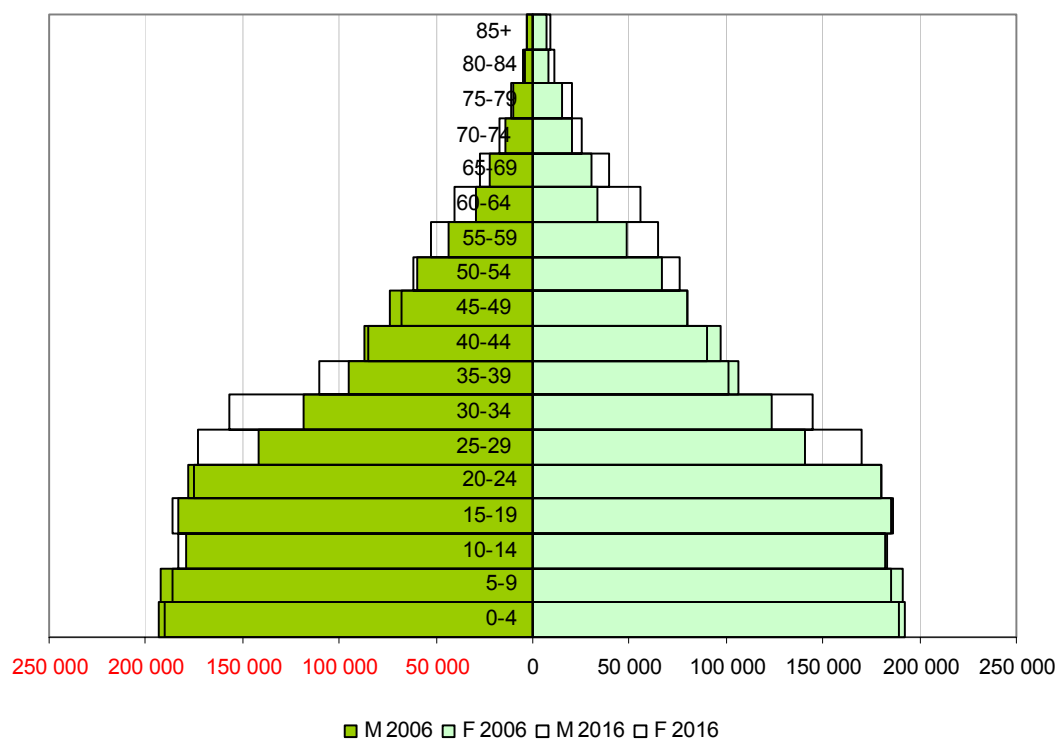
Note: Numbers rounded to nearest thousand to avoid spurious accuracy

Mpumalanga

Mortality Indicators, 2006

Deaths	
Total deaths during 2005	59 000
Non-AIDS deaths during 2005	26 000
AIDS deaths during 2005	33 000
Accumulated AIDS deaths mid-year	189 000
Percentage of deaths due to HIV/AIDS	
Adults (15-49)	77%
Adults (15+)	57%
Children (<15)	25%
Total deaths	56%
Mortality statistics	
Infant mortality rate (per 1000)	54
Child mortality rate (${}_5q_0$) (per 1000)	85
Adult mortality (${}_{45}q_{15}$)	65%
Adult male mortality (${}_{45}q_{15}$)	70%
Adult female mortality (${}_{45}q_{15}$)	60%
Life expectancy	
Life expectancy (e_0) (years)	46.5
Male life expectancy (e_0) (years)	45.0
Female life expectancy (e_0) (years)	48.0
Maternal orphans (under 18)	
Total orphans	144 000
Total AIDS orphans	107 000
New orphans	27 000

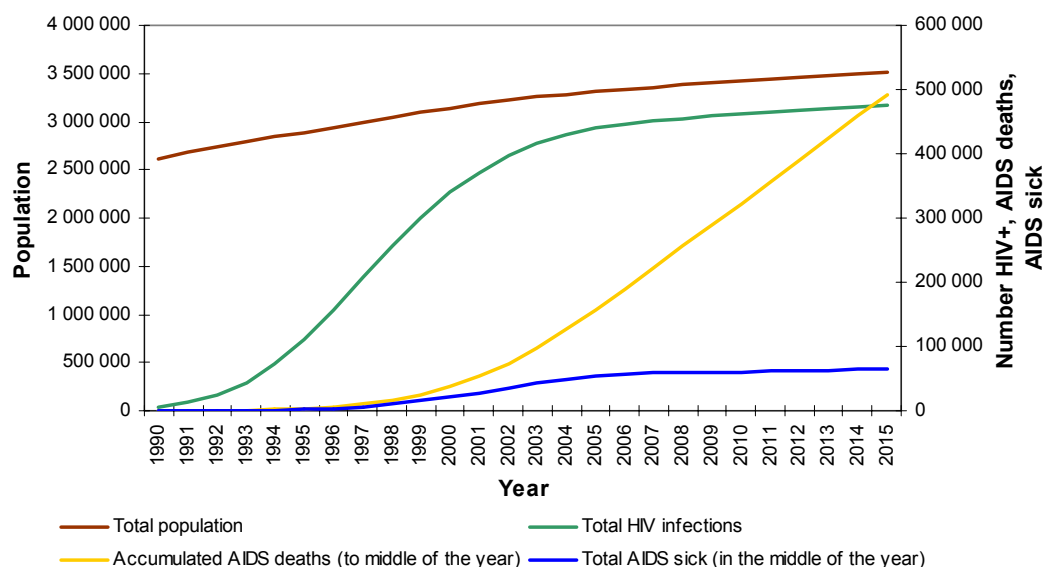
Population pyramid in 2006 and 2016



Age	2006		2016	
	Male	Female	Male	Female
0-4	193 368	192 334	190 216	189 054
5-9	191 819	191 459	186 029	185 372
10-14	179 154	183 088	182 903	182 691
15-19	182 721	185 625	185 825	186 207
20-24	178 044	180 151	175 587	179 742
25-29	141 853	140 999	173 138	170 299
30-34	118 320	123 000	156 802	144 305
35-39	94 639	105 770	110 219	101 217
40-44	86 936	96 969	85 000	89 917
45-49	74 151	79 780	67 421	80 192
50-54	59 244	66 542	61 614	75 716
55-59	43 083	48 336	52 152	64 932
60-64	29 022	33 470	40 347	55 340
65-69	22 712	30 689	27 809	39 439
70-74	13 938	20 338	16 857	25 402
75-79	9 719	15 679	10 976	20 099
80-84	4 350	7 644	5 082	10 744
>=85	2 926	7 289	2 971	9 208
Total	1 625 999	1 709 163	1 730 947	1 809 876

Mpumalanga

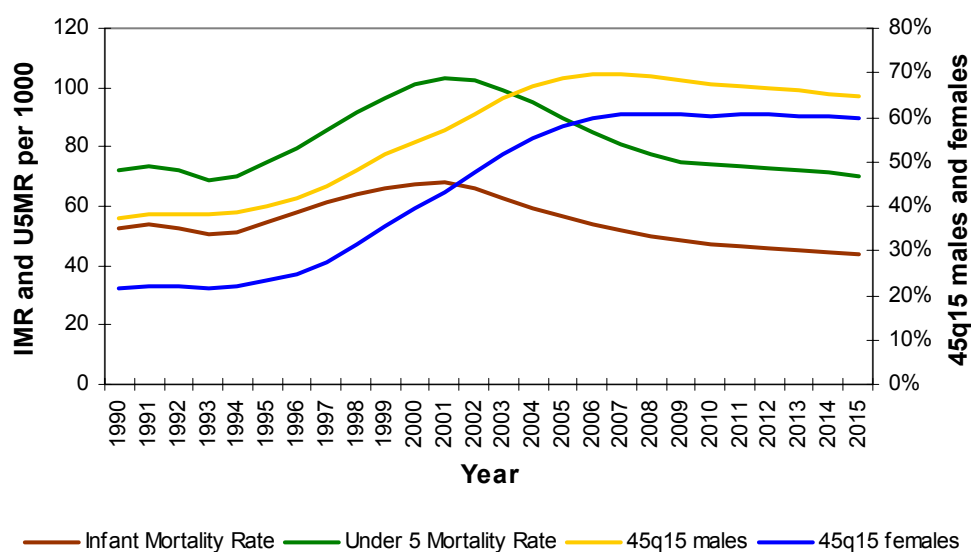
Total population, number of HIV+ and AIDS sick people and cumulative AIDS deaths



Year	Total Population	Growth rate	Total HIV+	Cumulative AIDS deaths	Total AIDS sick
1990	2 620 022	2.4%	6 568	69	56
1991	2 680 685	2.2%	13 314	172	136
1992	2 737 701	2.0%	24 964	396	301
1993	2 792 292	1.9%	43 619	848	624
1994	2 843 868	1.7%	71 687	1 700	1 212
1995	2 890 016	1.5%	110 054	3 216	2 223
1996	2 928 061	1.7%	156 619	5 762	3 840
1997	2 987 958	2.0%	207 787	9 788	6 428
1998	3 043 841	1.8%	256 840	16 019	10 085
1999	3 095 198	1.6%	301 221	25 041	14 964
2000	3 141 767	1.4%	339 286	37 456	21 076
2001	3 184 140	1.3%	371 201	53 695	27 935
2002	3 222 380	1.1%	396 834	73 951	35 240
2003	3 256 113	1.0%	416 173	98 142	42 425
2004	3 285 597	0.9%	429 919	125 964	49 359
2005	3 311 553	0.8%	439 426	156 704	54 369
2006	3 335 162	0.7%	446 010	189 233	57 470
2007	3 357 427	0.7%	450 975	222 624	59 017
2008	3 379 091	0.6%	455 135	256 226	59 581
2009	3 400 699	0.6%	459 051	289 566	59 336
2010	3 422 210	0.6%	462 687	322 742	60 107
2011	3 443 221	0.6%	465 774	356 181	61 138
2012	3 463 651	0.6%	468 363	389 959	62 114
2013	3 483 582	0.6%	470 601	424 031	62 930
2014	3 503 081	0.6%	472 635	458 322	63 582
2015	3 522 168	0.5%	474 567	492 775	64 104

Mpumalanga

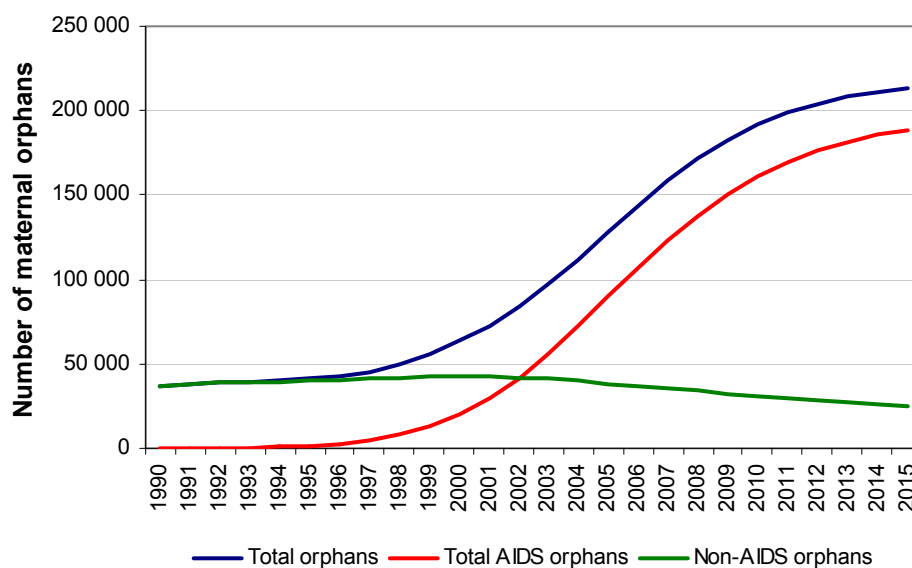
Mortality rates for children and adults



Year	Infant mortality rate	Child mortality rate	45q ₁₅ males	45q ₁₅ females
1990	53	72	37%	22%
1991	54	74	38%	22%
1992	53	72	38%	22%
1993	50	69	38%	22%
1994	51	70	39%	22%
1995	55	75	40%	23%
1996	58	80	42%	25%
1997	61	86	44%	27%
1998	64	92	48%	31%
1999	66	97	52%	36%
2000	68	101	54%	39%
2001	68	103	57%	43%
2002	66	102	61%	47%
2003	63	99	64%	52%
2004	59	95	67%	55%
2005	56	90	69%	58%
2006	54	85	70%	60%
2007	52	81	70%	61%
2008	50	77	69%	61%
2009	48	75	68%	61%
2010	47	74	67%	60%
2011	47	74	67%	60%
2012	46	73	66%	61%
2013	45	72	66%	60%
2014	45	71	65%	60%
2015	44	70	65%	60%

Mpumalanga

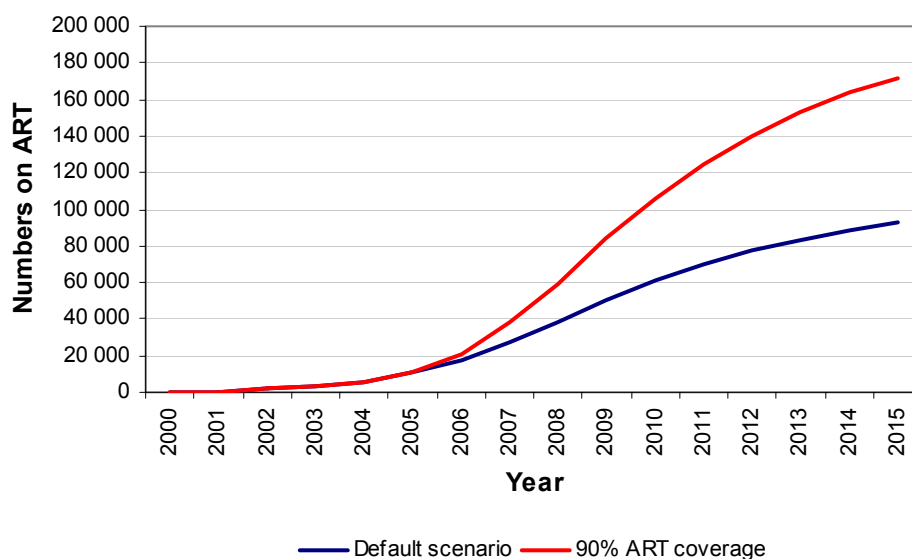
Maternal orphans under 18 years



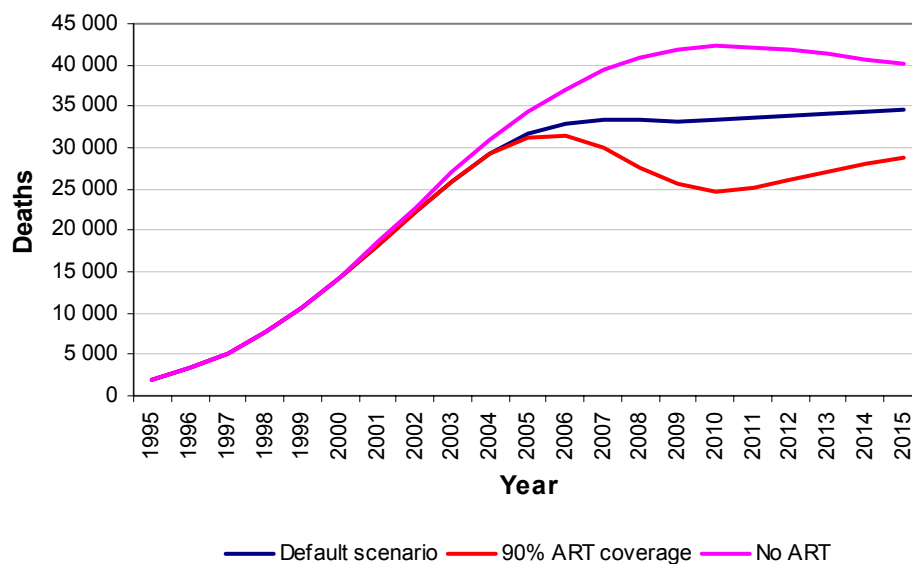
Year	Total orphans	Total AIDS orphans	Total non-AIDS orphans
1990	37 246	20	37 226
1991	37 928	54	37 874
1992	38 723	136	38 587
1993	39 482	311	39 171
1994	40 196	665	39 531
1995	41 383	1 348	40 036
1996	43 083	2 578	40 505
1997	45 567	4 664	40 903
1998	49 751	8 060	41 691
1999	55 644	13 188	42 457
2000	63 503	20 451	43 052
2001	72 569	29 946	42 623
2002	83 703	41 828	41 875
2003	96 965	56 037	40 928
2004	111 913	72 172	39 741
2005	127 943	89 513	38 430
2006	143 919	106 895	37 024
2007	158 778	123 233	35 545
2008	171 845	137 826	34 019
2009	182 792	150 297	32 494
2010	191 617	160 624	30 993
2011	198 647	169 112	29 535
2012	204 127	175 976	28 151
2013	208 312	181 427	26 885
2014	211 347	185 587	25 760
2015	213 259	188 526	24 732

Mpumalanga

Numbers on ART, default and 90% coverage



Numbers of AIDS deaths, no ART, default and 90% coverage



Northern Cape

HIV and AIDS Indicators at mid-2006

Births	
Uninfected births (over calendar year)	17 500
HIV+ births (over calendar year)	400
Infected through breastfeeding	300
People living with HIV/AIDS	
Total HIV infected	61 400
Adults (20-64)	57 200
Adult men (20-64)	24 800
Adult women (20-64)	32 400
Adults (15-49)	54 600
Adult men (15-49)	22 000
Adult women (15-49)	32 600
Youth (15-24)	9 200
Male youth (15-24)	1 600
Female youth (15-24)	7 500
Children (0-14)	2 600
New infections	7 000
Prevalence	
Total HIV infected	6.9%
Adults (20-64)	11.5%
Adult men (20-64)	10.1%
Adult women (20-64)	12.9%
Adults (15-49)	11.2%
Adult men (15-49)	9.0%
Adult women (15-49)	13.3%
Youth (15-24)	5.1%
Male youth (15-24)	1.8%
Female youth (15-24)	8.4%
Children (0-14)	1.0%
Incidence	
Total population	0.8%
Adults (20-64)	1.2%
Adult men (20-64)	1.1%
Adult women (20-64)	1.3%
At or before birth (of births)	2.2%
Breastfeeding (no. infected through breastfeeding in year/uninfected births in that year)	1.5%
Number adults (14+) infected by stage	
Stage 1	18 900
Stage 2	13 000
Stage 3	19 600
Stage 4 (not on treatment)	4 400
Receiving antiretroviral treatment	2 600
Discontinued antiretroviral treatment	200
Number children (<14) infected by stage	
Pre-AIDS	2 100
Stage 4 (not on treatment)	200
Receiving antiretroviral treatment	300
Discontinued antiretroviral treatment	16
AIDS sick	
New AIDS sick during 2006	4 900
Total AIDS sick mid-year	5 400

Note: Numbers rounded to nearest thousand to avoid spurious accuracy

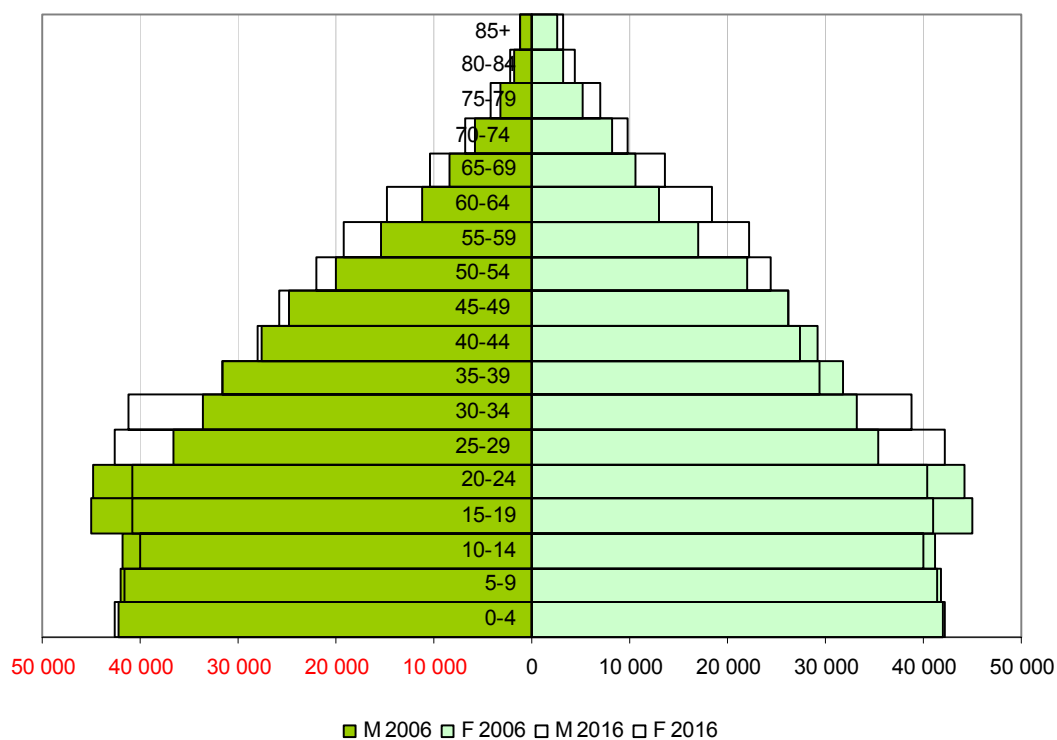
Northern Cape

Mortality Indicators, 2006

Deaths	
Total deaths during 2005	11 200
Non-AIDS deaths during 2005	8 100
AIDS deaths during 2005	3 200
Accumulated AIDS deaths mid-year	15 100
Percentage of deaths due to HIV/AIDS	
Adults (15-49)	53%
Adults (15+)	28%
Children (<15)	16%
Total deaths	28%
Mortality statistics	
Infant mortality rate (per 1000)	35
Child mortality rate (${}_5q_0$) (per 1000)	52
Adult mortality (${}_{45}q_{15}$)	44%
Adult male mortality (${}_{45}q_{15}$)	49%
Adult female mortality (${}_{45}q_{15}$)	39%
Life expectancy	
Life expectancy (e_0) (years)	57.6
Male life expectancy (e_0) (years)	55.1
Female life expectancy (e_0) (years)	60.1
Maternal orphans (under 18)	
Total orphans	17 200
Total AIDS orphans	7 900
New orphans	3 100

Northern Cape

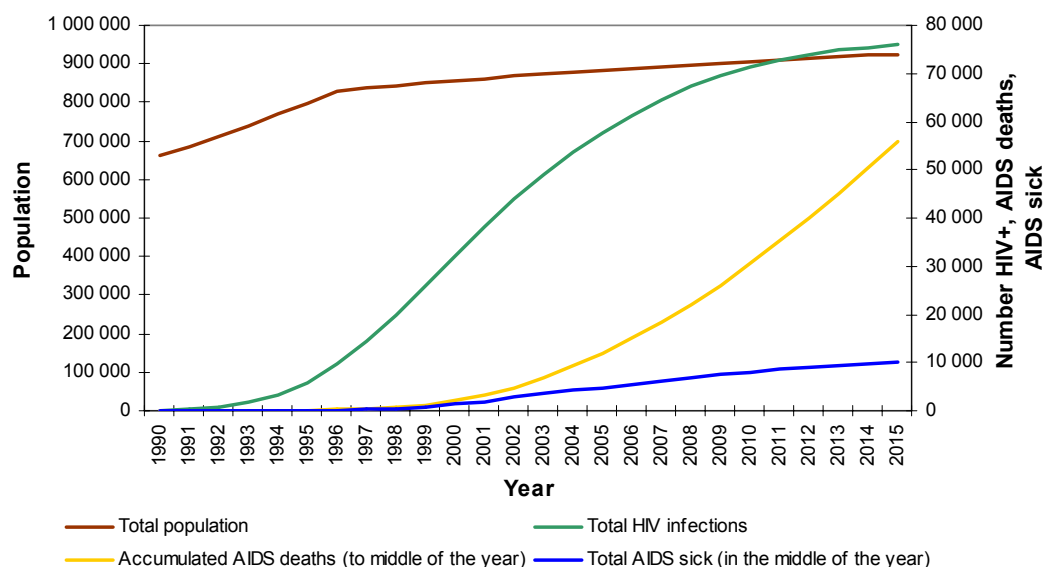
Population pyramid in 2006 and 2016



Age	2006		2016	
	Male	Female	Male	Female
0-4	42 289	42 006	42 651	42 146
5-9	41 932	41 887	41 650	41 331
10-14	41 818	41 173	40 018	39 928
15-19	44 901	45 037	40 844	41 021
20-24	44 852	44 144	40 706	40 334
25-29	36 578	35 351	42 551	42 229
30-34	33 537	33 176	41 152	38 851
35-39	31 589	31 733	31 693	29 389
40-44	27 506	29 195	27 923	27 384
45-49	24 760	26 279	25 883	26 296
50-54	20 069	21 904	22 019	24 388
55-59	15 325	16 973	19 209	22 212
60-64	11 211	13 069	14 762	18 310
65-69	8 427	10 607	10 388	13 586
70-74	5 861	8 279	6 706	9 767
75-79	3 241	5 101	4 196	6 990
80-84	1 808	3 227	2 281	4 494
>=85	1 215	2 657	1 300	3 138
Total	436 917	451 798	455 930	471 795

Northern Cape

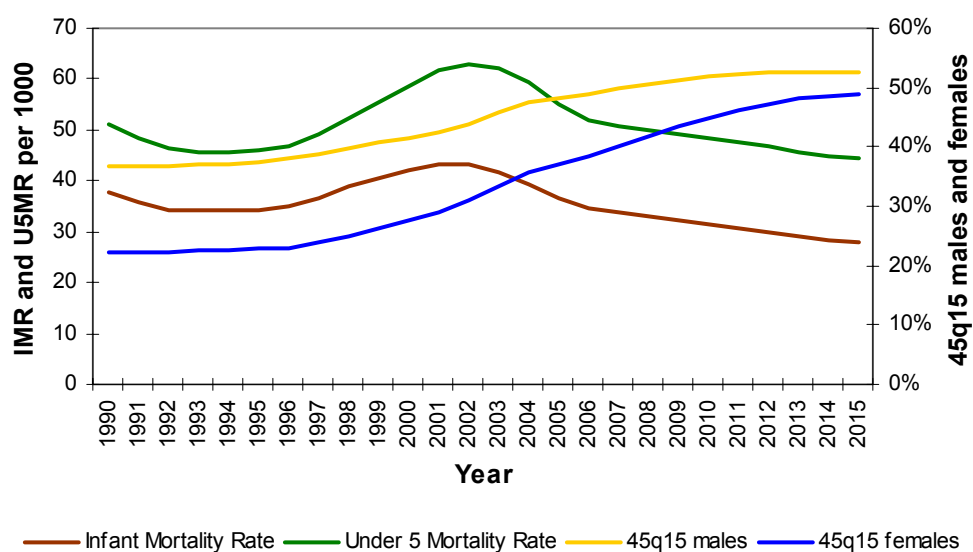
Total population, number of HIV+ and AIDS sick people and cumulative AIDS deaths



Year	Total Population	Growth rate	Total HIV+	Cumulative AIDS deaths	Total AIDS sick
1990	662 984	3.1%	164	1	1
1991	685 736	3.7%	369	4	3
1992	713 061	3.9%	815	9	8
1993	740 848	3.8%	1 692	21	19
1994	769 021	3.8%	3 272	47	41
1995	798 056	3.8%	5 855	101	86
1996	828 508	2.4%	9 710	207	170
1997	836 521	0.9%	14 441	399	314
1998	843 820	0.8%	19 974	729	540
1999	850 371	0.7%	26 032	1 255	875
2000	856 158	0.6%	32 228	2 048	1 345
2001	861 255	0.7%	38 303	3 183	1 955
2002	867 199	0.7%	44 022	4 731	2 705
2003	872 892	0.6%	49 174	6 747	3 562
2004	878 279	0.6%	53 684	9 254	4 477
2005	883 523	0.6%	57 752	12 062	4 794
2006	888 715	0.6%	61 415	15 065	5 385
2007	893 714	0.6%	64 610	18 392	6 075
2008	898 468	0.5%	67 330	22 077	6 787
2009	902 959	0.5%	69 595	26 116	7 458
2010	907 183	0.5%	71 434	30 486	8 093
2011	911 141	0.4%	72 883	35 155	8 654
2012	914 845	0.4%	74 000	40 079	9 128
2013	918 332	0.4%	74 845	45 210	9 516
2014	921 633	0.4%	75 478	50 503	9 826
2015	924 762	0.3%	75 947	55 923	10 069

Northern Cape

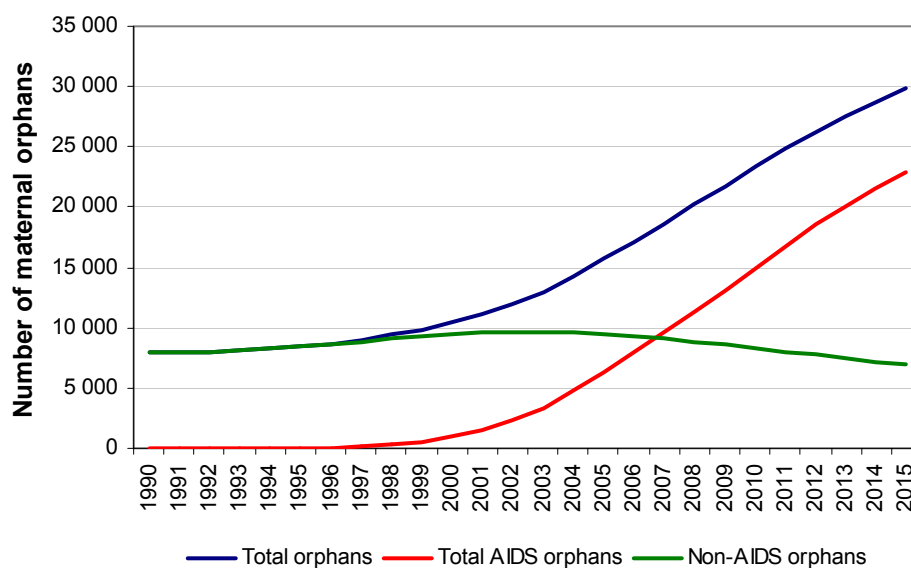
Mortality rates for children and adults



Year	Infant mortality rate	Child mortality rate	45q ₁₅ males	45q ₁₅ females
1990	38	51	37%	22%
1991	36	48	37%	22%
1992	34	46	37%	22%
1993	34	46	37%	22%
1994	34	46	37%	23%
1995	34	46	38%	23%
1996	35	47	38%	23%
1997	37	49	39%	24%
1998	39	52	40%	25%
1999	40	56	41%	26%
2000	42	59	41%	28%
2001	43	62	42%	29%
2002	43	63	44%	31%
2003	42	62	46%	34%
2004	40	59	47%	36%
2005	37	55	48%	37%
2006	35	52	49%	39%
2007	34	51	50%	40%
2008	33	50	51%	42%
2009	32	49	51%	43%
2010	31	48	52%	45%
2011	31	47	52%	46%
2012	30	47	53%	47%
2013	29	46	53%	48%
2014	28	45	53%	49%
2015	28	44	52%	49%

Northern Cape

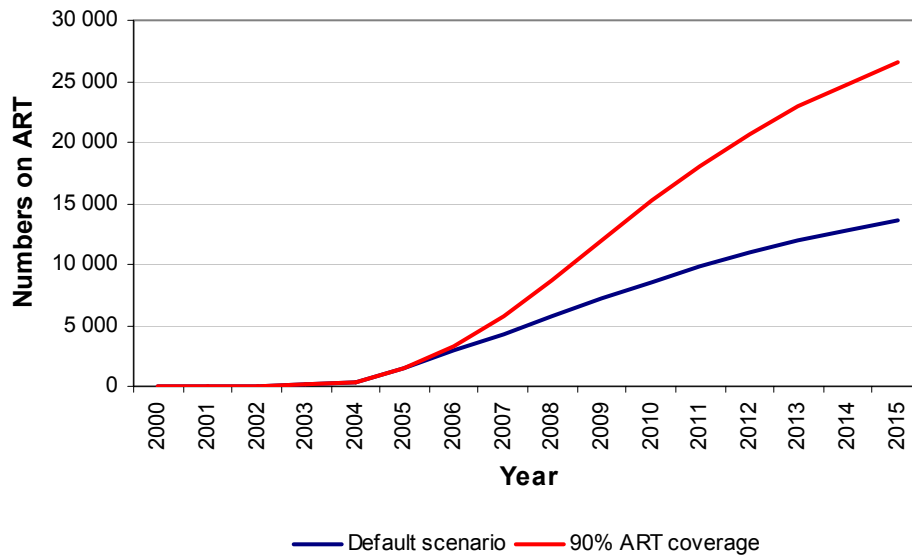
Maternal orphans under 18 years



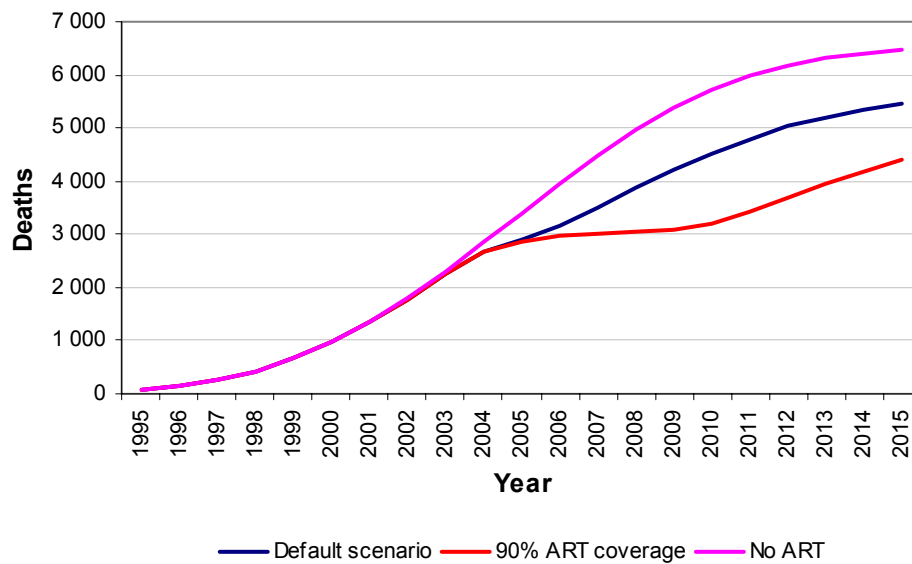
Year	Total orphans	Total AIDS orphans	Total non-AIDS orphans
1990	7 945	0	7 945
1991	7 964	1	7 963
1992	8 024	3	8 022
1993	8 130	7	8 123
1994	8 285	17	8 268
1995	8 471	38	8 433
1996	8 702	82	8 620
1997	8 991	167	8 824
1998	9 384	319	9 066
1999	9 869	570	9 298
2000	10 468	964	9 505
2001	11 118	1 533	9 584
2002	11 948	2 330	9 618
2003	13 007	3 396	9 611
2004	14 294	4 748	9 547
2005	15 715	6 282	9 433
2006	17 160	7 884	9 275
2007	18 656	9 579	9 076
2008	20 197	11 355	8 842
2009	21 760	13 179	8 581
2010	23 308	15 009	8 299
2011	24 813	16 805	8 007
2012	26 239	18 526	7 713
2013	27 557	20 132	7 425
2014	28 748	21 599	7 149
2015	29 784	22 892	6 892

Northern Cape

Numbers on ART, default and 90% coverage



Numbers of AIDS deaths, no ART, default and 90% coverage



HIV and AIDS Indicators at mid-2006

Births	
Uninfected births (over calendar year)	79 000
HIV+ births (over calendar year)	3 000
Infected through breastfeeding	2 000
People living with HIV/AIDS	
Total HIV infected	480 000
Adults (20-64)	440 000
Adult men (20-64)	215 000
Adult women (20-64)	225 000
Adults (15-49)	423 000
Adult men (15-49)	188 000
Adult women (15-49)	235 000
Youth (15-24)	85 000
Male youth (15-24)	15 000
Female youth (15-24)	70 000
Children (0-14)	23 000
New infections	45 000
Prevalence	
Total HIV infected	12.7%
Adults (20-64)	21.5%
Adult men (20-64)	20.9%
Adult women (20-64)	22.1%
Adults (15-49)	20.5%
Adult men (15-49)	18.1%
Adult women (15-49)	22.9%
Youth (15-24)	11.2%
Male youth (15-24)	4.1%
Female youth (15-24)	18.1%
Children (0-14)	2.0%
Incidence	
Total population	1.4%
Adults (20-64)	1.9%
Adult men (20-64)	2.1%
Adult women (20-64)	1.6%
At or before birth (of births)	3.7%
Breastfeeding (no. infected through breastfeeding in year/uninfected births in that year)	2.6%
Number adults (14+) infected by stage	
Stage 1	127 000
Stage 2	98 000
Stage 3	165 000
Stage 4 (not on treatment)	46 000
Receiving antiretroviral treatment	18 400
Discontinued antiretroviral treatment	1 700
Number children (<14) infected by stage	
Pre-AIDS	19 000
Stage 4 (not on treatment)	2 000
Receiving antiretroviral treatment	2 000
Discontinued antiretroviral treatment	100
AIDS sick	
New AIDS sick during 2006	43 000
Total AIDS sick mid-year	54 000

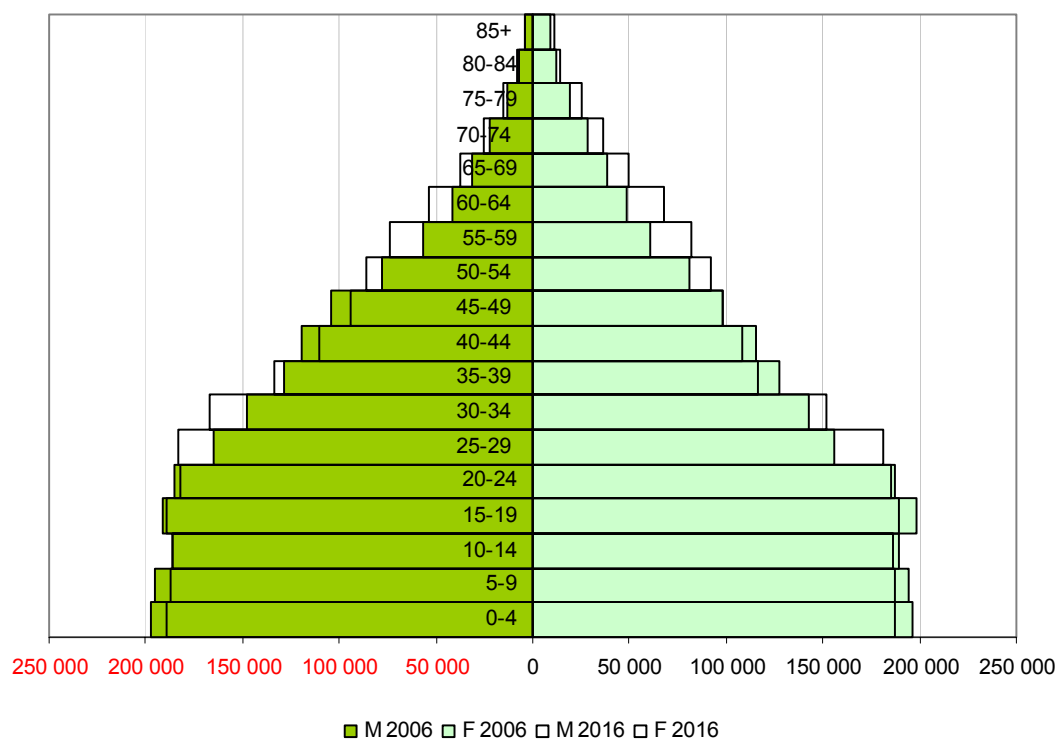
Note: Numbers rounded to nearest thousand to avoid spurious accuracy

North West

Mortality Indicators, 2006

Deaths	
Total deaths during 2005	61 000
Non-AIDS deaths during 2005	30 000
AIDS deaths during 2005	31 000
Accumulated AIDS deaths mid-year	160 000
Percentage of deaths due to HIV/AIDS	
Adults (15-49)	75%
Adults (15+)	51%
Children (<15)	24%
Total deaths	51%
Mortality statistics	
Infant mortality rate (per 1000)	44
Child mortality rate (${}_5q_0$) (per 1000)	70
Adult mortality (${}_{45}q_{15}$)	58%
Adult male mortality (${}_{45}q_{15}$)	63%
Adult female mortality (${}_{45}q_{15}$)	52%
Life expectancy	
Life expectancy (e_0) (years)	50.4
Male life expectancy (e_0) (years)	48.7
Female life expectancy (e_0) (years)	52.3
Maternal orphans (under 18)	
Total orphans	115 000
Total AIDS orphans	78 000
New orphans	23 000

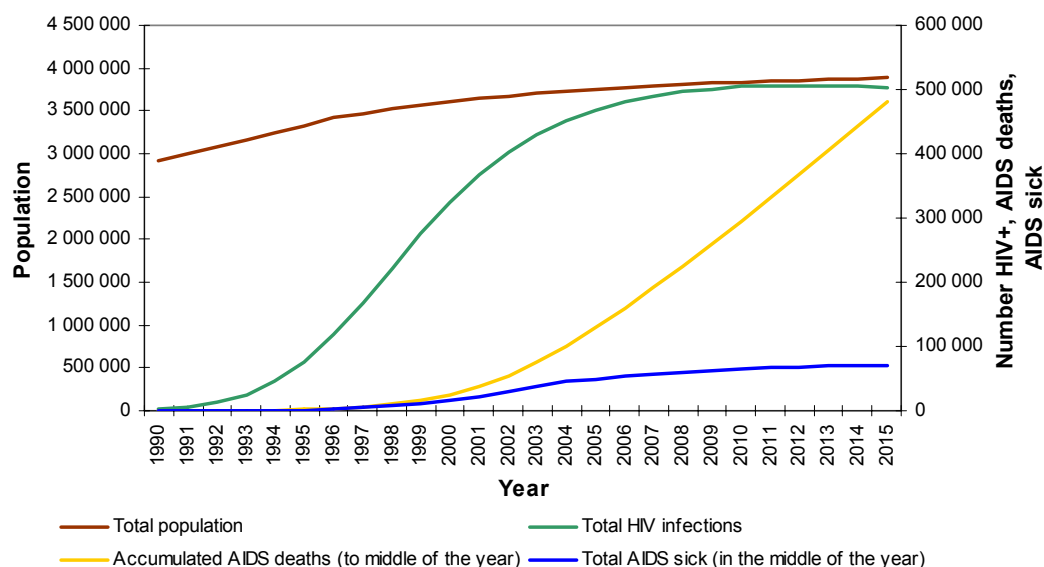
Population pyramid in 2006 and 2016



Age	2006		2016	
	Male	Female	Male	Female
0-4	197 204	195 954	189 071	187 726
5-9	195 222	194 203	187 746	186 773
10-14	185 793	189 257	186 209	185 738
15-19	191 607	198 112	189 376	189 520
20-24	185 103	187 131	182 492	185 623
25-29	164 847	155 935	183 595	181 241
30-34	147 372	143 009	166 813	151 450
35-39	128 161	127 062	133 328	116 496
40-44	119 499	115 018	110 456	108 100
45-49	104 153	98 526	93 682	98 278
50-54	78 284	80 594	86 077	91 697
55-59	56 821	60 456	73 938	81 905
60-64	41 761	48 350	53 858	68 167
65-69	31 719	38 719	37 148	49 859
70-74	22 061	27 954	24 798	36 916
75-79	13 112	18 755	15 679	25 484
80-84	6 774	11 915	8 053	14 616
>=85	3 746	8 907	4 123	11 175
Total	1 873 238	1 899 857	1 926 439	1 970 762

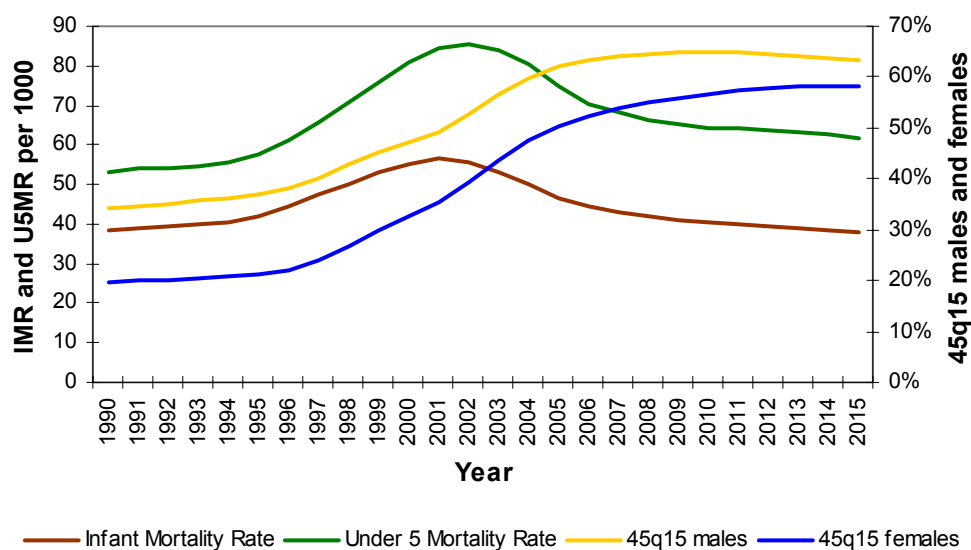
North West

Total population, number of HIV+ and AIDS sick people and cumulative AIDS deaths



Year	Total Population	Growth rate	Total HIV+	Cumulative AIDS deaths	Total AIDS sick
1990	2 927 608	2.2%	2 834	24	21
1991	2 997 207	2.6%	6 217	62	55
1992	3 080 173	2.7%	12 952	151	130
1993	3 163 139	2.6%	25 094	346	291
1994	3 245 765	2.6%	45 180	751	616
1995	3 329 342	2.6%	75 639	1 543	1 236
1996	3 417 940	2.1%	117 896	3 011	2 359
1997	3 470 329	1.5%	167 837	5 606	4 103
1998	3 519 294	1.3%	221 742	9 755	6 796
1999	3 564 222	1.2%	275 240	16 097	10 662
2000	3 604 795	1.1%	324 193	25 326	15 854
2001	3 641 654	1.0%	366 963	38 074	22 215
2002	3 675 516	0.9%	402 615	54 841	29 573
2003	3 705 322	0.7%	430 767	75 888	37 450
2004	3 730 811	0.6%	451 906	101 218	45 572
2005	3 753 032	0.6%	468 034	129 611	49 805
2006	3 773 095	0.5%	480 387	159 873	54 083
2007	3 791 028	0.5%	489 585	191 950	57 718
2008	3 807 171	0.4%	496 274	225 491	60 618
2009	3 821 964	0.4%	501 066	260 053	62 634
2010	3 835 557	0.3%	504 224	295 480	64 916
2011	3 847 887	0.3%	505 848	331 822	66 924
2012	3 859 106	0.3%	506 245	368 892	68 471
2013	3 869 463	0.3%	505 763	406 448	69 543
2014	3 879 177	0.2%	504 711	444 272	70 213
2015	3 888 395	0.2%	503 327	482 197	70 578

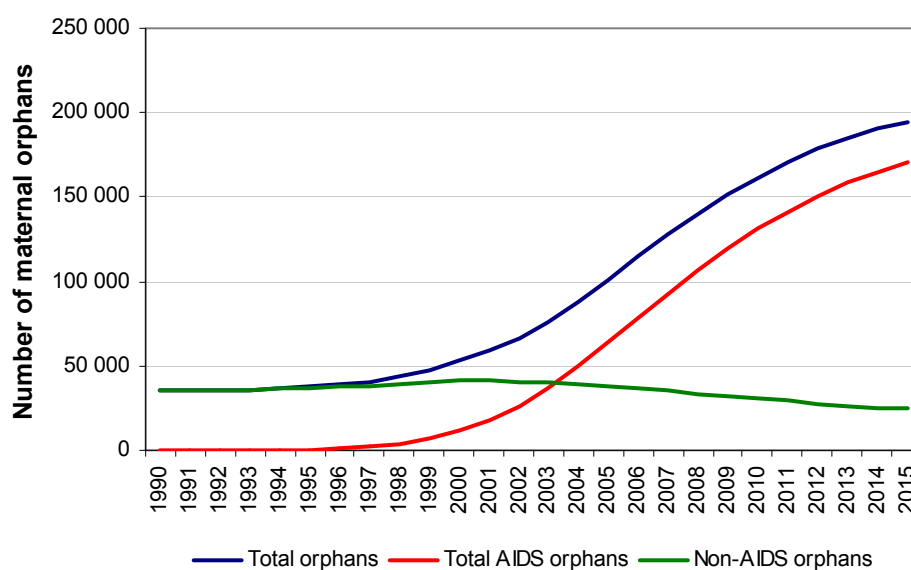
Mortality rates for children and adults



Year	Infant mortality rate	Child mortality rate	45q ₁₅ males	45q ₁₅ females
1990	38	53	34%	20%
1991	39	54	35%	20%
1992	39	54	35%	20%
1993	40	54	36%	20%
1994	41	55	36%	21%
1995	42	58	37%	21%
1996	45	61	38%	22%
1997	47	66	40%	24%
1998	50	71	43%	27%
1999	53	76	45%	30%
2000	55	81	47%	33%
2001	56	84	49%	35%
2002	56	85	53%	39%
2003	53	84	57%	44%
2004	50	80	60%	48%
2005	47	75	62%	50%
2006	44	70	63%	52%
2007	43	68	64%	54%
2008	42	66	65%	55%
2009	41	65	65%	56%
2010	40	64	65%	57%
2011	40	64	65%	57%
2012	39	64	65%	58%
2013	39	63	64%	58%
2014	38	62	64%	58%
2015	38	62	63%	58%

North West

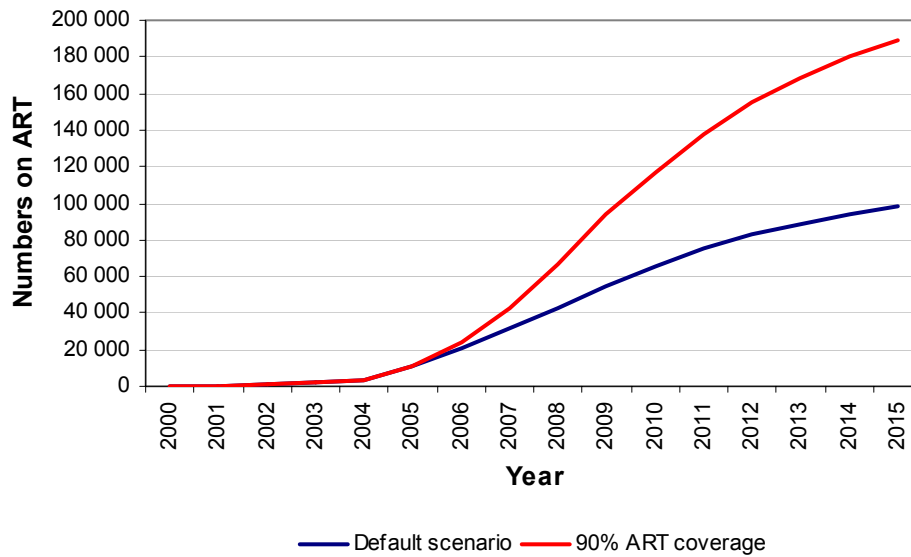
Maternal orphans under 18 years



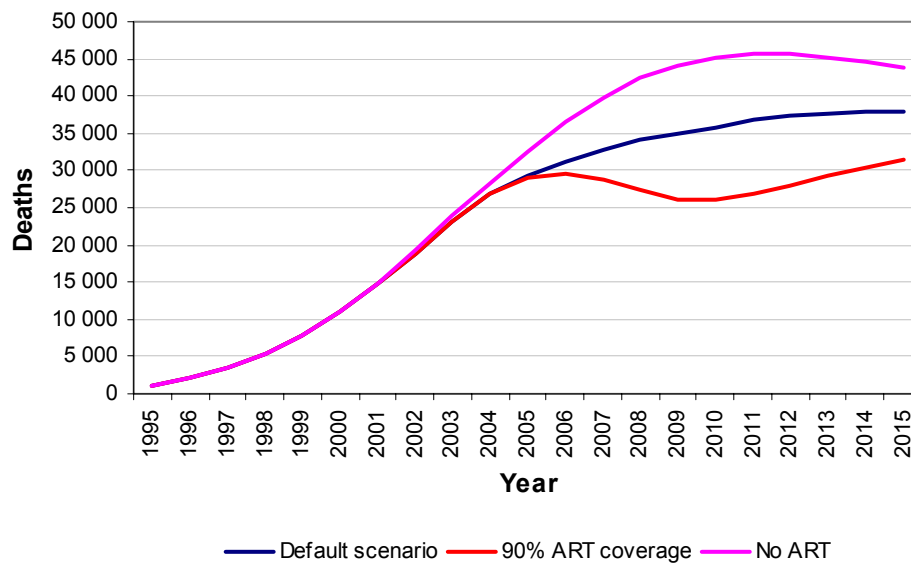
Year	Total orphans	Total AIDS orphans	Total non-AIDS orphans
1990	35 078	6	35 072
1991	35 241	17	35 224
1992	35 608	45	35 563
1993	36 134	109	36 025
1994	36 822	251	36 570
1995	37 721	548	37 174
1996	38 937	1 128	37 809
1997	40 646	2 200	38 446
1998	43 536	4 055	39 480
1999	47 520	7 032	40 488
2000	52 828	11 510	41 318
2001	58 830	17 728	41 102
2002	66 585	26 026	40 559
2003	76 422	36 609	39 812
2004	88 214	49 407	38 808
2005	101 302	63 651	37 650
2006	114 628	78 262	36 366
2007	127 728	92 749	34 979
2008	140 151	106 634	33 517
2009	151 544	119 513	32 031
2010	161 720	131 167	30 552
2011	170 706	141 586	29 119
2012	178 493	150 723	27 770
2013	185 104	158 562	26 542
2014	190 608	165 140	25 468
2015	194 865	170 404	24 461

North West

Numbers on ART, default and 90% coverage



Numbers of AIDS deaths, no ART, default and 90% coverage



Western Cape

HIV and AIDS Indicators at mid-2006

Births	
Uninfected births (over calendar year)	98 000
HIV+ births (over calendar year)	1 800
Infected through breastfeeding	1 200
People living with HIV/AIDS	
Total HIV infected	267 000
Adults (20-64)	251 000
Adult men (20-64)	97 000
Adult women (20-64)	154 000
Adults (15-49)	243 000
Adult men (15-49)	89 000
Adult women (15-49)	154 000
Youth (15-24)	36 000
Male youth (15-24)	6 000
Female youth (15-24)	31 000
Children (0-14)	11 000
New infections	28 000
Prevalence	
Total HIV infected	5.4%
Adults (20-64)	8.5%
Adult men (20-64)	6.7%
Adult women (20-64)	10.2%
Adults (15-49)	8.6%
Adult men (15-49)	6.4%
Adult women (15-49)	10.8%
Youth (15-24)	4.1%
Male youth (15-24)	1.3%
Female youth (15-24)	6.9%
Children (0-14)	0.9%
Incidence	
Total population	0.6%
Adults (20-64)	0.8%
Adult men (20-64)	0.7%
Adult women (20-64)	0.9%
At or before birth (of births)	1.8%
Breastfeeding (no. infected through breastfeeding in year/uninfected births in that year)	1.2%
Number adults (14+) infected by stage	
Stage 1	79 000
Stage 2	57 000
Stage 3	85 000
Stage 4 (not on treatment)	13 000
Receiving antiretroviral treatment	19 900
Discontinued antiretroviral treatment	1 900
Number children (<14) infected by stage	
Pre-AIDS	9 000
Stage 4 (not on treatment)	1 000
Receiving antiretroviral treatment	2 100
Discontinued antiretroviral treatment	110
AIDS sick	
New AIDS sick during 2006	21 000
Total AIDS sick mid-year	20 000

Note: Numbers rounded to nearest thousand to avoid spurious accuracy

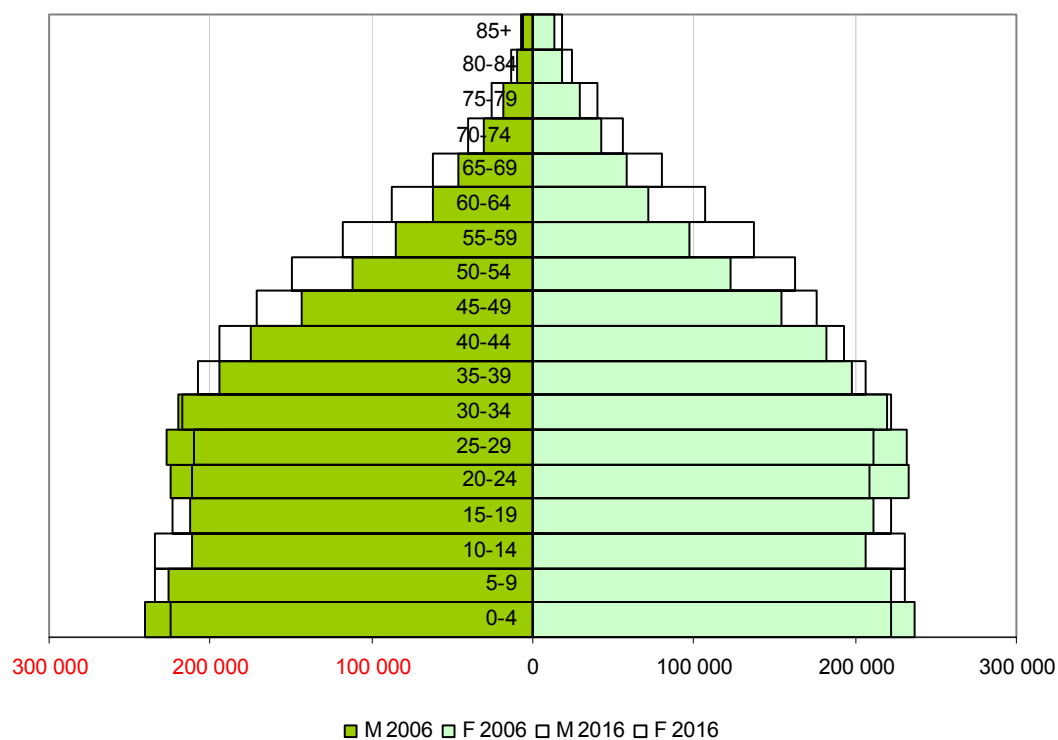
Western Cape

Mortality Indicators, 2006

Deaths	
Total deaths during 2005	53 000
Non-AIDS deaths during 2005	41 000
AIDS deaths during 2005	11 000
Accumulated AIDS deaths mid-year	54 000
Percentage of deaths due to HIV/AIDS	
Adults (15-49)	43%
Adults (15+)	21%
Children (<15)	14%
Total deaths	21%
Mortality statistics	
Infant mortality rate (per 1000)	27
Child mortality rate (${}_5q_0$) (per 1000)	40
Adult mortality (${}_{45}q_{15}$)	36%
Adult male mortality (${}_{45}q_{15}$)	41%
Adult female mortality (${}_{45}q_{15}$)	31%
Life expectancy	
Life expectancy (e_0) (years)	61.7
Male life expectancy (e_0) (years)	59.2
Female life expectancy (e_0) (years)	64.2
Maternal orphans (under 18)	
Total orphans	78 000
Total AIDS orphans	30 000
New orphans	14 000

Western Cape

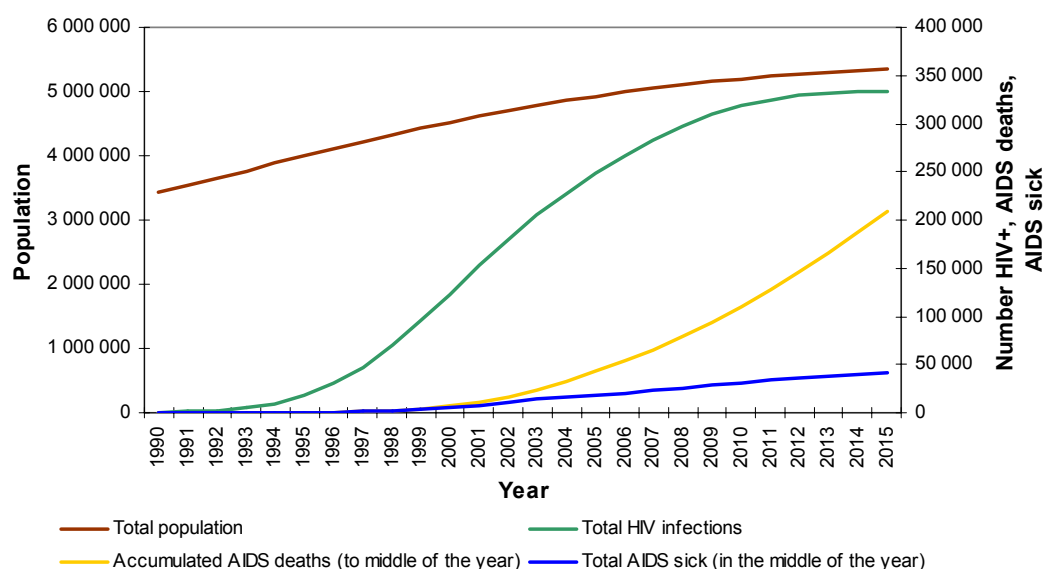
Population pyramid in 2006 and 2016



Age	2006		2016	
	Male	Female	Male	Female
0-4	240 510	236 976	225 245	221 703
5-9	225 372	222 341	234 179	230 991
10-14	211 562	206 654	234 174	231 296
15-19	213 003	211 778	224 056	221 928
20-24	224 770	233 712	210 974	208 804
25-29	226 729	232 432	210 506	211 837
30-34	219 517	219 236	216 824	221 713
35-39	194 718	197 776	208 191	206 425
40-44	174 333	182 379	194 909	193 503
45-49	143 456	154 511	171 083	176 251
50-54	111 576	122 831	149 604	162 285
55-59	85 451	96 578	118 327	136 822
60-64	61 370	72 157	87 112	106 450
65-69	46 443	58 105	61 735	80 157
70-74	30 607	42 037	39 523	55 965
75-79	18 290	28 887	25 001	39 855
80-84	9 859	18 399	13 155	24 299
>=85	6 015	13 875	7 852	18 699
Total	2 443 580	2 550 663	2 632 451	2 748 983

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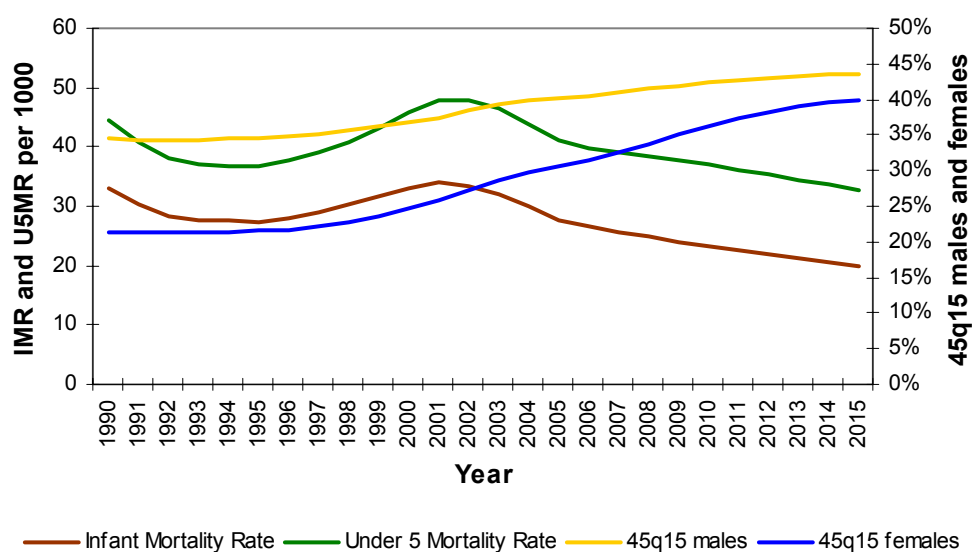
Total population, number of HIV+ and AIDS sick people and cumulative AIDS deaths



Year	Total Population	Growth rate	Total HIV+	Cumulative AIDS deaths	Total AIDS sick
1990	3 439 620	2.6%	438	4	3
1991	3 528 507	2.9%	949	9	8
1992	3 646 511	3.2%	2 190	22	21
1993	3 764 115	3.1%	4 743	53	51
1994	3 880 471	3.0%	9 522	123	117
1995	3 995 532	2.9%	17 603	273	252
1996	4 108 953	2.7%	30 080	578	517
1997	4 214 243	2.5%	47 653	1 158	987
1998	4 318 088	2.4%	69 753	2 190	1 784
1999	4 420 086	2.3%	95 484	3 924	3 041
2000	4 519 927	2.2%	123 375	6 676	4 896
2001	4 617 577	2.0%	152 304	10 790	7 381
2002	4 706 746	1.8%	179 693	16 551	10 399
2003	4 787 819	1.6%	204 619	24 144	13 904
2004	4 862 042	1.5%	227 386	33 140	15 831
2005	4 930 727	1.3%	248 406	42 879	17 315
2006	4 994 244	1.2%	267 289	53 512	19 736
2007	5 052 604	1.1%	283 742	65 434	22 524
2008	5 105 973	1.0%	297 669	78 784	25 499
2009	5 154 568	0.9%	309 102	93 578	28 391
2010	5 198 586	0.8%	318 115	109 803	31 338
2011	5 238 210	0.7%	324 837	127 426	34 089
2012	5 273 709	0.6%	329 509	146 307	36 512
2013	5 305 429	0.6%	332 423	166 262	38 552
2014	5 333 727	0.5%	333 891	187 092	40 196
2015	5 358 950	0.4%	334 214	208 606	41 461

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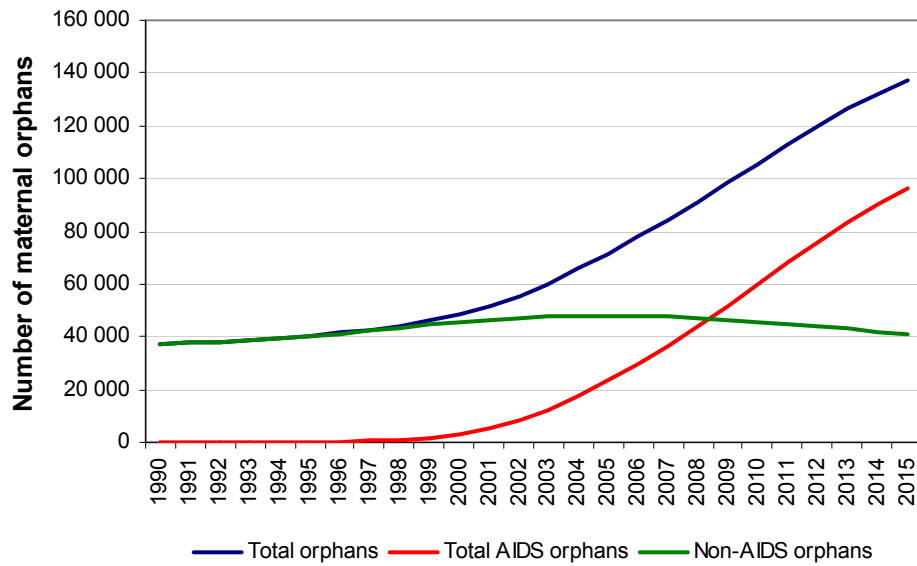
Mortality rates for children and adults



Year	Infant mortality rate	Child mortality rate	45q ₁₅ males	45q ₁₅ females
1990	33	44	34%	21%
1991	30	41	34%	21%
1992	28	38	34%	21%
1993	28	37	34%	21%
1994	27	37	34%	21%
1995	27	37	35%	21%
1996	28	38	35%	22%
1997	29	39	35%	22%
1998	30	41	36%	23%
1999	32	43	36%	24%
2000	33	46	37%	25%
2001	34	48	37%	26%
2002	33	48	38%	27%
2003	32	47	39%	29%
2004	30	44	40%	30%
2005	28	41	40%	31%
2006	27	40	41%	31%
2007	26	39	41%	33%
2008	25	38	41%	34%
2009	24	38	42%	35%
2010	23	37	42%	36%
2011	23	36	43%	37%
2012	22	35	43%	38%
2013	21	35	43%	39%
2014	20	34	43%	40%
2015	20	33	44%	40%

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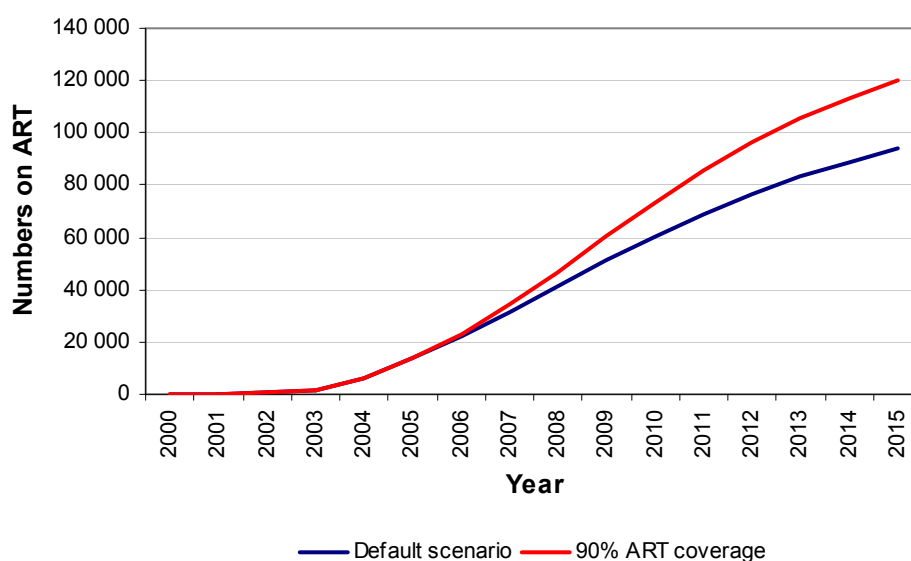
Maternal orphans under 18 years



Year	Total orphans	Total AIDS orphans	Total non-AIDS orphans
1990	37 400	1	37 399
1991	37 833	3	37 830
1992	38 260	7	38 253
1993	38 833	18	38 815
1994	39 601	44	39 558
1995	40 449	101	40 348
1996	41 434	223	41 212
1997	42 598	466	42 132
1998	44 162	926	43 236
1999	46 128	1 739	44 389
2000	48 617	3 086	45 531
2001	51 475	5 152	46 324
2002	55 229	8 210	47 020
2003	60 042	12 470	47 572
2004	65 637	17 741	47 896
2005	71 561	23 555	48 006
2006	77 739	29 830	47 909
2007	84 295	36 677	47 618
2008	91 216	44 066	47 150
2009	98 399	51 873	46 526
2010	105 694	59 926	45 768
2011	112 953	68 043	44 910
2012	119 963	75 975	43 989
2013	126 468	83 438	43 031
2014	132 264	90 195	42 069
2015	137 176	96 080	41 096

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Numbers on ART, default and 90% coverage



Numbers of AIDS deaths, no ART, default and 90% coverage

