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Department:
Health
REPUBLIC OF SOUTH AFRICA

**NATIONAL HIV AND SYPHILIS
ANTENATAL SERO-PREVALENCE
SURVEY
IN SOUTH AFRICA
2004**



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Directorate: Health Systems
Research, Research Coordination
and Epidemiology

**NATIONAL HIV AND SYPHILIS ANTENATAL SERO-
PREVALENCE SURVEY
IN SOUTH AFRICA
2004**

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PREFACE

In October 2004, the National Department of Health once again in partnership with the provincial departments of health conducted the annual antenatal survey. This was the 15th survey since the 1st of the series began in 1990. The survey was conducted at nearly 400 clinics countrywide with over 16 000 women attending antenatal care for the 1st time participating in the survey. The information gathered is very valuable and assists us in tracking HIV and syphilis trends. Although the survey is conducted among pregnant women, it provides important information which is an indicator of what is happening in the general South African population.

In the year since the last survey was conducted many initiatives and projects around the prevention, treatment, care and support and research activities have been conducted and strengthened to consolidate our efforts around HIV and AIDS. One of the key initiatives has been the implementation of the Comprehensive Plan for HIV and AIDS. It is now up to us as members of families and communities to strengthen our support for those on ART, so that together we can make a difference. Stigma and discrimination may be barriers towards access to voluntary counselling and treatment (VCT) and subsequent uptake of treatment including ARVs. For those who are on treatment, non-disclosure may inhibit the compliant use of treatment resulting in drug resistance, therefore it is now more critical than ever that we give our support. Other initiatives include the treatment of opportunistic infections and improved nutrition (e.g. supplements) in order to boost the immune system. Research on traditional medicine complements for treatment are ongoing, and it is our hope that these may lead to improvements in the lives of those infected and affected by HIV and AIDS.

The youth remain our hope that we will yet have an AIDS-free generation and it is through the combined efforts of government, non-government organisations, religious groups, business and civil society that we achieve this and reverse the HIV infection in line with our goals and the Millennium Development Goals.

This study will continue to inform our efforts in combating HIV and AIDS by providing us with the key statistics needed to plan and implement appropriate programmes for prevention, care and support and research activities.

MINISTER OF HEALTH

DR M E TSHABALALA-MSIMANG

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Finally, thank you to all the service providers at all participating sites and women attending clinics, without whom the survey would not have been possible.

MR THAMSANQA MSELEKU
DIRECTOR-GENERAL: HEALTH

1. INTRODUCTION

Globally it was estimated that in 2004, there were 39.4 million people worldwide living with HIV. Of these, 17.6 million were women whilst 2.2 million were children. Almost 12 % (4.9 million) of these became newly infected in 2004. AIDS deaths are estimated at 3.1 million (UNAIDS, 2004). HIV and AIDS remain two of humankind's biggest challenges and threaten to reverse the gains made in advancing development and political stability, particularly in the African continent, where an estimated 25.4 million individuals are infected. In South Africa, a total number of 5.6 million individuals had acquired HIV infection by the end of 2003 (Department of Health, 2004).

In South Africa, as in many other countries with generalised HIV epidemics, estimates of HIV prevalence are based on blood samples taken from pregnant women attending antenatal clinics. These surveys have been conducted in South Africa annually since 1990.

The antenatal survey provides the best available estimates of HIV infection among the South African population. Other studies and surveillance approaches (such as population-based or household surveys) are increasingly becoming available, however it is important to note the various challenges and limitations associated with these methods. These include costs, logistic problems, and low response rates in some settings. UNAIDS estimates refusal rates of between 24 to 42% in recent surveys carried out in some African countries. Facility-based methods including voluntary counselling and testing (VCT), may be easier approaches, however they may be subject to bias as participants are self-selecting.

The findings of the most recent antenatal survey, which was conducted in 2004 are summarised in this report.

2. SURVEY OBJECTIVES

The primary objective of the antenatal survey was to provide information on HIV and Syphilis prevalence among pregnant women attending antenatal care in the public sector. The specific objectives of the 2004 survey were to:

- Determine an estimate of HIV and syphilis prevalence among pregnant women attending public sector antenatal clinics in 2004
- Describe HIV and syphilis trends in terms of time, place (province) and age among pregnant women.
- Determine estimate of HIV infection in the general population through modelling
- Determine an estimate of HIV prevalence among young women (15 to 24 years) in terms of the UNGASS commitment

3. METHODOLOGY

Study Design

A cross-sectional, anonymous, unlinked survey was conducted among pregnant women attending antenatal care at selected sites in all nine provinces in the country. All pregnant women attending antenatal care for the first time during the current pregnancy were eligible for inclusion in the survey. The survey was conducted in October 2004. Some demographic details, (excluding personal identifiers such as names, addresses and identification number) are collected using standard forms in all nine provinces. Blood samples were collected from all participating women and labelled with a unique barcode label, which was also used on the data collection sheet. All specimens were transported to participating laboratories where they were tested for HIV using ELISA and for syphilis using RPR technique (WHO Global Programme on AIDS, 1989, Department of Health, 1997, UNAIDS/WHO, 2001).

Training and fieldwork

A preparatory workshop was held with all provincial survey and laboratory coordinators.

The purpose of the workshop was: To clarify the roles and responsibilities for each participating province and laboratory; to revisit the study protocol, study administration methods and procedures; to clarify and resolve any outstanding issues regarding the logistics, the administration and the procedural audit of the survey.

Laboratory coordinators sent the data capture sheets with the results and the preliminary electronic data to the provincial coordinator. The coordinators did the second data entry. They also ensured proper storage and transportation of all HIV positive sera to the National Institute for Communicable Diseases (NICD).

Following the workshop, all provinces in conjunction with the Epidemiology directorate conducted training workshops for the critical role players in the survey including; regional and district managers, communicable disease coordinators, health information officers, clinic supervisors, clinic staff, *etc.* At these workshops all participants were introduced to the survey's standard operating procedures: logistics, transportation of specimens and overall administration of the survey.

The study population comprised pregnant women attending antenatal care for the first time during the current pregnancy in October 2004.

Specimen collection

After the routine blood sample was drawn, a second vacutainer of blood was taken from every participating woman. This blood sample is labelled with a barcode label, at the same time demographic data such as age, race, education, gravidity, parity, *etc.* are completed on a data capture sheet, which is labelled with a second barcode label with the same number. The specimen and data capture sheet are sent via courier to the participating laboratory in the province.

For HIV testing, all specimens were tested with one ELISA in all provinces. All specimens were also screened for syphilis using the RPR test. All HIV

positive specimens were sent from all participating laboratories to the NICD for incidence testing.

Quality Assurance

External quality control for prevalence testing was conducted by the National Institute for Communicable Diseases (NICD) using a panel of 20 specimens (HIV positive, negative and borderline) sent by participating laboratories prior to the survey who were required to test and submit the results to the NICD.

External quality control for syphilis testing was conducted by the Medical University of South Africa (MEDUNSA). They also used a panel of 20 specimens received from all participating laboratories for this purpose.

Data Processing and Analysis

All participating laboratories conducted the initial data entry. All laboratories transferred the data into an Excel spreadsheet, which together with the original data capture forms, were sent to all Provincial Coordinators for second data entry and checking. The data was sent to the National Epidemiology directorate for re-checking, cleaning, and merging for analysis using STATA.

Extrapolation of HIV estimates to the general population

The Department of Health model for estimating the number of HIV infected people in the general South African population was used. This model, like other models utilises national population figures and HIV prevalence estimates and a number of standard assumptions are made in the modelling.

The assumptions are: The prevalence rate of HIV infection in all pregnant women in South Africa is the same as the prevalence rate in women attending public antenatal clinics, The prevalence rate of HIV infection in all women aged 15 to 49 years is the same as the prevalence rate in pregnant women,

Estimate of males infected= 85% of infected females, and The mother- to-child transmission rate is 30%¹

4. FINDINGS

4.1 Distribution and characteristics of study participants

The distribution of women who participated in the antenatal survey in 2004 is shown in Table 1 below.

Table 1 a. Antenatal survey participants for 2003 and 2004 by province

Province	2003	2004
Eastern Cape	1919	1711
Free State	1039	1016
Gauteng	3146	3169
Kw aZulu-Natal	3406	3522
Limpopo	1890	1894
Mpumalanga	1241	1114
Northern Cape	623	494
North West	1388	1192
Western Cape	1991	1952
Total	16 643	16 064

Age group: 2002 - 2004

The proportions of women by age group participating in the antenatal survey have remained consistent over the past three years. This suggests that patterns of pregnancy by age are consistent over the years. Women 19 years and younger constitute approximately 19% of all women participating in the survey. As expected, in line with declining fertility, there are fewer older women, with those aged over 40 years constituting less than 3% of all participants.

¹ Note that this assumes a 30% transmission rate from mother to child and does not factor in the reductions due to Prevention of Mother –to-Child Transmission of HIV interventions that are in place.

Table 1 b. Antenatal survey participants for 2002 to 2004 by age group

	2002	Percent of the total sample	2003	Percent of the total sample	2004	Percent of the total sample
Age						
< 20	3211	19.4	3198	19.2	3133	19.5
20-24	5052	30.5	5152	30.9	4992	31.1
25-29	3871	23.3	3886	23.4	3702	23.0
30-34	2604	15.7	2612	15.7	2510	15.6
35-39	1323	8.0	1297	7.8	1261	7.9
40-44	378	2.3	371	2.2	350	2.2
45-49	42	0.3	39	0.2	37	0.2
Missing	106	0.6	88	0.5	79	0.5
Total	16587	100.0	16643	100.0	16064	100.0

4.2 HIV prevalence

4.2.1 HIV prevalence trends: 1990- 2004

The findings of the 2004 survey indicate that HIV prevalence among pregnant women is **29.5%** (CI 28.5% - 30.5%) compared to the **27.9%** (CI 26.8% – 28.9%) observed in 2003. Data from the ANC surveys for 2002, 2003, and 2004 were analysed to establish HIV prevalence trends. Adjusting for the effects of province and age group, the three-year increase is statistically significant ($p < 0.001$).

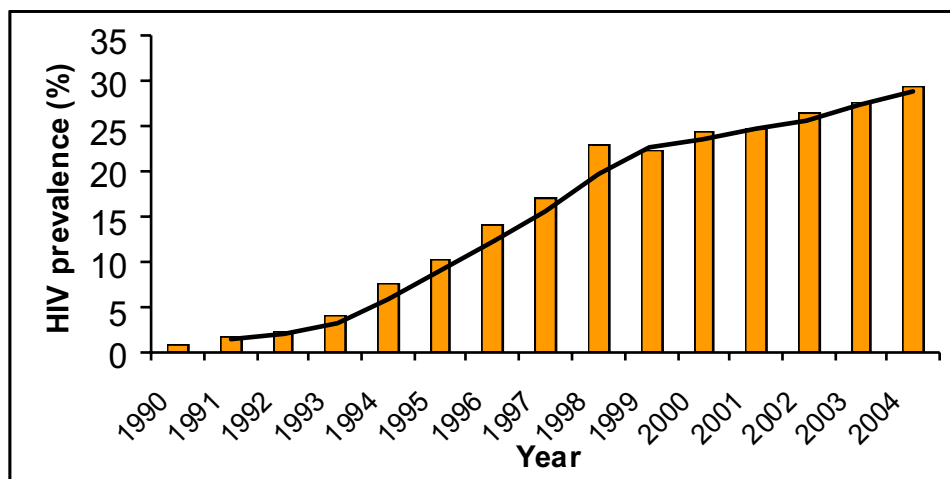


Figure 1: Prevalence of HIV among antenatal care attendees in South Africa, 1990- 2004

4.2.2 HIV prevalence by province

HIV prevalence continues to differ by province, with differences remaining largely constant over the years. The prevalence trends from 2002 to 2004 are shown in Figure 2 and Table 2. It is noted that the increase/decrease is not uniform across provinces: Eastern Cape, KwaZulu-Natal and Limpopo had increases, which were statistically significant. Western Cape and Northern Cape had increases that were not statistically significant. Gauteng, Mpumalanga, Free State, and North West did not have consistent prevalence patterns over the three-year period. Since the province by year interaction was not significant, we could regard the increase as applying to each province. It was observed that three provinces, namely North West ($p < 0.748$), Mpumalanga ($p < 0.262$) and Free State ($p < 0.805$) recorded slightly lower HIV prevalence rates compared to 2003. The remaining three provinces, Northern Cape ($p < 0.448$), Gauteng (and $p < 0.300$), and Western Cape ($p < 0.235$) recorded higher rates.

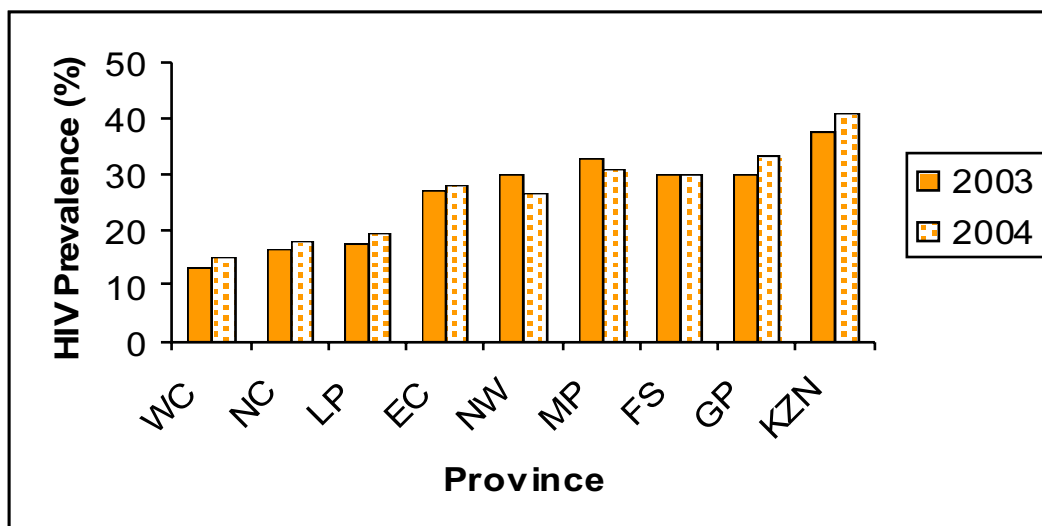


Figure 2. HIV prevalence by province among antenatal clinic attendees, South Africa: 2003 – 2004

Table 2. HIV prevalence by province among antenatal clinic attendees, South Africa: 2002 – 2004

Province	HIV prev (CI 95%) 2002	HIV prev (CI 95%) 2003	HIV prev (CI 95%) 2004
Kw aZulu-Natal	36.5 (33.8 – 39.2)	37.5 (35.2 – 39.8)	40.7 (38.8 – 42.7)
Gauteng	31.6 (29.7 – 33.6)	29.6 (27.8 – 31.5)	33.1 (31.0 – 35.3)
Mpumalanga	28.6 (25.3 – 31.8)	32.6 (28.5 – 36.6)	30.8 (27.4 – 34.2)
Free State	28.8 (26.3 – 31.2)	30.1 (26.9 – 33.3)	29.5 (26.1 – 32.9)
Eastern Cape	23.6 (21.1 – 26.1)	27.1 (24.6 – 29.7)	28.0 (25.0 – 31.0)
North West	26.2 (23.1 – 29.4)	29.9 (26.8 – 33.1)	26.7 (23.9 – 29.6)
Limpopo	15.6 (13.2 – 17.9)	17.5 (14.9 – 20.0)	19.3 (16.8 – 21.9)
Northern Cape	15.1 (11.7 – 18.6)	16.7 (11.9 – 21.5)	17.6 (13.0 – 22.2)
Western Cape	12.4 (8.8 – 15.9)	13.1 (8.5 – 17.7)	15.4 (12.5 – 18.2)
South Africa	26.5 (25.5 – 27.6)	27.9 (26.8 – 28.9)	29.5 (28.5 – 30.5)

N.B. The true value is estimated to fall within the two confidence limits, thus the Confidence interval (CI) is important to refer to when interpreting data

4.2.3 HIV prevalence by age group

HIV prevalence is different among the different age groups suggesting different patterns of risk. HIV infection is higher among women in the late twenties and early thirties and lower among teenagers. Figure 3 below shows trends in HIV prevalence by age group from 1991 to 2004. Declines in HIV prevalence among young women (below 20 years) were recorded from 1998

to 2002. However if the 4-year trend is compared to the 2-year period (2003 & 2004) a slight increase was observed in the latter.

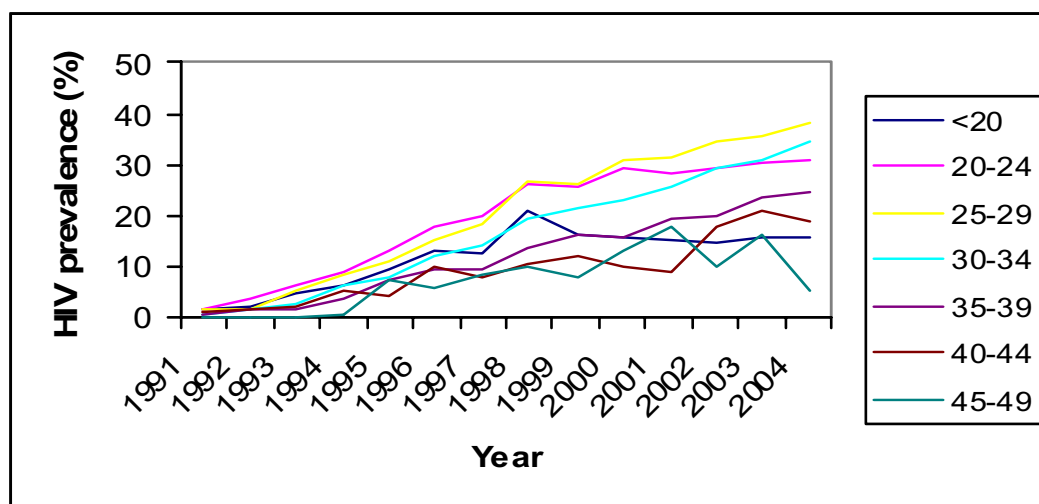


Figure 3. HIV prevalence trends by age group among antenatal clinic attendees, South Africa: 1991 – 2004

The age groups 40 to 44 years and 45 years and above have been categorised together into one over 40 years category due to the low numbers of women in these two groups. The prevalence trends among different age groups are shown in Figure 3 and Table 3 for 2002 to 2004. It was observed that there have been increases in prevalence across all age groups between 2003 and 2004. Nearly forty percent of women aged between 25 and 29 years are HIV positive. Women in the early twenties and early thirties show lower rates at around 30% prevalence. Older women and teenagers have prevalence rates below 20%.

Some increases in the HIV prevalence were observed in different age groups. However, the increases were not uniform across age groups: there were larger increases in prevalence rates in the age groups 25-29, 30-34 and 35-39; slight increases in the prevalence in the age groups <20 and 20-24.

Table 3. HIV prevalence by age group among antenatal clinic attendees, South Africa: 2002 – 2004

Age group (Years)	HIV prev (CI 95%) 2002	HIV prev (CI 95%) 2003	HIV prev (CI 95%) 2004
< 20	14.8 (13.4 – 16.1)	15.8 (14.3 – 17.2)	16.1 (14.7 – 17.5)
20 – 24	29.1 (27.5 – 30.6)	30.3 (28.8 – 31.8)	30.8 (29.3 – 32.3)
25 – 29	34.5 (32.6 – 36.4)	35.4 (33.6 – 37.2)	38.5 (36.8 – 40.3)
30 – 34	29.5 (27.4 – 31.6)	30.9 (28.9 – 32.9)	34.4 (32.2 – 36.6)
35 – 39	19.8 (17.5 – 22.0)	23.4 (20.9 – 25.9)	24.5 (21.9 – 27.2)
40+	17.2 (13.5 – 20.9)	15.8 (12.3 – 19.3)	17.5 (14.0 – 21.0)

N.B. The true value is estimated to fall within the two confidence limits, thus the Confidence interval (CI) is important to refer to when interpreting data

4.2.4 United Nations General Assembly Special Session on HIV/AIDS (UNGASS) Indicators

The following section reports on indicators for UNGASS based on the findings of the annual antenatal HIV and syphilis survey.

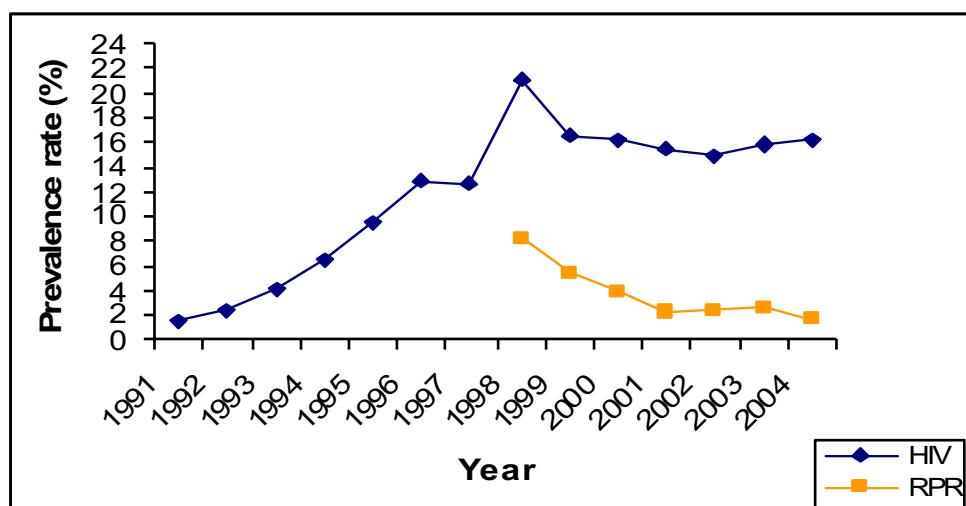
Table 4 shows HIV infection by age among women aged 15 to 24 years. The table shows the number of women tested in each age (indicated in brackets) as well as the proportion of those who tested HIV positive in each age. The table shows that HIV infection increases with age indicating a higher risk among the older teenagers and women in the early twenties.

Table 4: Annual Antenatal Survey Prevalence of HIV among pregnant women aged 15-24 years 2002 to 2004

Age in years	% HIV+ 2002	No. HIV+ (n) 2002	% HIV+ 2003	No. HIV+ (n) 2003	% HIV+ 2004	No. HIV+ (n) 2004
15	7.2	10 (145)	8.5	12 (145)	10.0*	16 (163)
16	8.3	32 (386)	9.4	36 (390)	9.1*	37 (406)
17	11.7	73 (639)	12.5	91 (740)	12.3*	79 (635)
18	16.1	153 (959)	19.1	176 (931)	19.0*	163 (874)
19	18.7	188 (1036)	19.4	180 (947)	19.9*	198 (1001)
20	23.4	257 (1121)	23.0	247 (1093)	25.1*	255 (1033)
21	25.7	242 (955)	27.5	295 (1089)	28.5*	294 (1030)
22	31.1	328 (1068)	28.1	257 (937)	31.1*	311 (1016)
23	33.5	332 (1008)	36.3	409 (1142)	34.7*	322 (943)
24	32.3	284 (900)	37.1	326 (891)	35.5*	340 (970)
15 - 19	14.7	463 (3211)	15.8	495 (3198)	16.2*	493 (3079)
20 – 24	29.1	1443 (5052)	30.3	1534 (5152)	30.8*	1522 (4992)
15 – 24	23.5	1906 (8263)	24.8	2029 (8350)	25.2*	2015 (8071)

*Refers to the weighted prevalence rates from the full dataset

Figure 4 below shows HIV and syphilis trends among women aged below 20 years since 1991 for HIV and 1998 for syphilis. There has been a decline in syphilis rates among teenagers between 2003 and 2004.



Note: RPR trends by age are shown from 1998 when these data became available

Figure 4 HIV and syphilis prevalence among ANC attendees aged below 20 years in South Africa: 1991-2004

4.2.5 Extrapolation of HIV prevalence to the general population

The Department of Health annually use a mathematical model to derive estimations of the number of people potentially infected with HIV, based on the prevalence rates obtained during the ANC survey. This model makes use of national population figures. The 2004 population estimates used were based on the Statistics South Africa (StatsSA) mid-year population estimates. Two sets of estimates were produced by StatsSA, one that takes into account the impact of AIDS on the population and the other that does not consider the impact of AIDS. This report used both sets of estimates for comparative purposes. HIV progression to AIDS is a reality in South Africa therefore a focus is placed on the estimates that are based on the population figures that take account of the effect of AIDS.

The estimations in the demographic model that take into account the impact of AIDS on the population results in an estimated number of females infected ranging from 3.07 million to 3.6 million. The best estimate² being 3.3 million for females. The estimated number of males infected range from 2.6 million to 3.07 million. The best estimate being 2.8 million for males. In the estimations for the number of babies infected the range is 98 347 to 111 403, the best estimate derived at being 104 963. The total estimated number of potentially HIV positive individuals is between 5.7 million and 6.7 million. The mid-point estimate is 6.29 million. However given that the ANC method is known to slightly over estimate the true prevalence in the general population, the number of people potentially infected is most likely to be in the range between 5.7 million and 6.2 million.

It is important to keep in mind that these are estimates with fairly wide confidence limits. These figures are thus not absolute and should be viewed as such.

In the following section these figures are provided.

² The convention has been to site the mid-point between the highest and lowest estimates, as the best estimate.

Table 5 a. Estimated number of HIV infected women; 2004

Age Group	Estimated population	Estimated infections (LE, HE) [#]
<i>With AIDS</i>		
15-19	2 448 341	393 448 (359 171; 427 970)
20-24	2 320 855	714 823 (680 707; 749 404)
25-29	2 111 636	813 613 (776 026; 851 200)
30-34	1 843 665	634 221 (593 476; 674 966)
35-39	1 449 763	355 627 (317 353; 393 901)
40+	2 469 958	432 490 (344 806; 520 173)
TOTAL	12 644 218	3 344 222 (3 071 540; 3 617 614)
<i>Without AIDS</i>		
15-19	2 451 087	393 890 (359 574; 428 450)
20-24	2 371 540	730 434 (695 572; 904 306)
25-29	2 243 379	864 374 (824 442; 904 306)
30-34	1 996 484	686 790 (642 668; 730 913)
35-39	1 557 337	382 015 (340 901; 423 128)
40+	2 582 666	452 225 (360 540; 543 909)
TOTAL	13 202 493	3 509 728 (3 223 698; 3 796 477)

N.B. The true value is estimated to fall within the two confidence limits, thus the Confidence interval is important to refer to when interpreting data

Table 5b. Estimated number of infected babies

Women's Age Group	Estimated births	Estimated HIV infected babies (LE; HE) #
<i>With AIDS</i>		
15-19	186 074	8 971 (8 189; 9 758)
20-24	322 599	29 808 (28 385; 31 250)
25-29	301 964	34 904 (33 291; 36 516)
30-34	200 959	20 739 (19 406; 22 071)
35-39	107 282	7 895 (7 045; 8 744)
40+	48 471	2 546 (2 030; 3 062)
TOTAL	1 167 350	104 963 (98 347; 111 403)
<i>Without AIDS</i>		
15-19	186 283	8 981 (8 198; 9 768)
20-24	329 644	30 459 (29 005; 31 932)
25-29	320 803	37 081 (35 368; 38 795)
30-34	217 617	22 458 (21 015; 23 901)
35-39	115 243	8 480 (7 568; 9 393)
40+	50 901	2 674 (2 132; 3 216)
TOTAL	1 220 491	110 134 (103 287; 117 006)

N.B. The true value is estimated to fall within the two confidence limits

Table 5c. Estimated number of infected males

Age Group	Estimated population	Estimated HIV infected males (LE; HE) #
<i>With AIDS</i>		
15-19	2 475 651	338 161 (308 701; 367 832)
20-24	2 358 355	617 417 (587 949; 647 285)
25-29	2 179 953	713 945 (680 962; 746 928)
30-34	1 852 780	541 753 (506 948; 576 557)
35-39	1 401 549	292 230 (260 779; 323 680)
40+	2 282 682	339 743 (270 863; 408 623)
TOTAL	12 550 970	2 843 250 (2 616 204; 3 070 907)
<i>Without AIDS</i>		
15-19	2 477 014	338 347 (308 871; 368 034)
20-24	2 376 952	622 286 (592 586; 652 390)
25-29	2 234 223	731 719 (697 915; 765 522)
30-34	1 963 224	574 047 (537 167; 610 926)
35-39	1 525 661	318 108 (283 872; 352 343)
40+	2 490 705	370 704 (295 547; 445 861)
TOTAL	13 067 779	2 955 212 (2 715 959; 3 195 079)

N.B. The true value is estimated to fall within the two confidence limits, thus the Confidence interval is important to refer to when interpreting data

#- Low estimate and high estimate

4.3 SYPHILIS PREVALENCE

4.3.1 Syphilis prevalence trends: 1997- 2004

The 2004 antenatal survey showed a syphilis prevalence rate of 1.6%. This continues the observed declining trend in syphilis among pregnant women since 1997. Figure 5 below shows trends since 1998. It is apparent from the graph that there is definite trend towards declining syphilis from 1998 to now.

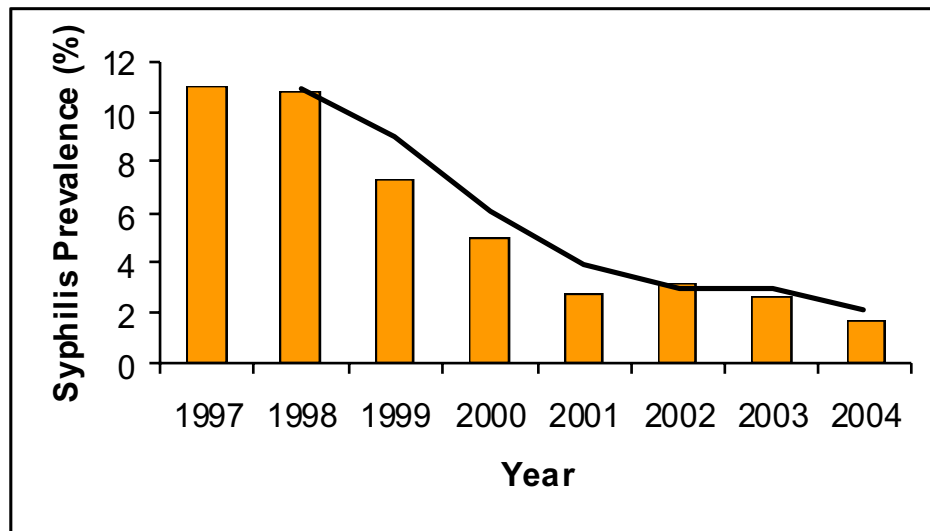


Figure 5: Syphilis prevalence trends among antenatal clinic attendees: 1997- 2004

4.3.2 Syphilis prevalence by province

The table below shows syphilis prevalence trends by province from 2002 to 2004. It clear that syphilis prevalence is declining across all nine provinces, however it is still relatively high in the Northern Cape (7.0%) in comparison with the other provinces. KwaZulu-Natal shows the lowest rate at 0.8% and is one of three provinces with syphilis prevalence rates in 2004 lower than one percent. The other two are Limpopo and Gauteng.

Table 6. Syphilis prevalence by province among antenatal clinic attendees, South Africa 2002 – 2004

Province	RPR prev (CI 95%) 2002	RPR prev (CI 95%) 2003	RPR prev (CI 95%) 2004
Northern Cape	5.2 (2.5 – 7.9)	8.6 (5.9 – 11.3)	7.0 (3.8 – 10.3)
Free State	5.0 (3.6 – 6.4)	3.8 (2.6 – 5.1)	3.8 (2.9 – 4.8)
Eastern Cape	3.1 (2.1 – 4.1)	3.8 (2.5 – 5.1)	2.4 (1.5 – 3.3)
North West	3.2 (2.0 – 4.5)	2.0 (1.2 – 2.8)	2.1 (1.1 – 3.1)
Western Cape	2.0 (1.2 – 2.9)	5.5 (4.5 – 6.5)	1.6 (0.9 – 2.3)
Mpumalanga	2.5 (1.6 – 3.4)	1.8 (1.1 – 2.6)	1.3 (0.5 – 2.0)
Gauteng	6.0 (5.0 – 7.1)	2.1 (1.6 – 2.6)	0.9 (0.5 – 1.3)
Limpopo	1.9 (1.3 – 2.6)	1.7 (1.1 – 2.4)	0.9 (0.4 – 1.4)
KwaZulu-Natal	1.5 (1.0 – 1.9)	1.4 (1.0 – 1.8)	0.8 (0.5 – 1.1)
South Africa	3.2 (2.9 – 3.6)	2.7 (2.4 – 3.0)	1.6 (1.3 – 1.8)

N.B. The true value is estimated to fall within the two confidence limits, thus the Confidence interval (CI) is important to refer to when interpreting data

4.3.3 Syphilis prevalence by age group

Syphilis prevalence rates for 2004 are low across age groups, and there are no significant differences. Table 7 shows prevalence trends by age group from 2002 to 2004.

Table 7. Syphilis prevalence by age group among antenatal clinic attendees, South Africa: 2002 – 2004

Age group	RPR prev (CI 95%) 2002	RPR prev (CI 95%) 2003	RPR prev (CI 95%) 2004
< 20	2.4 (1.8 – 3.0)	2.6 (2.0 – 3.1)	1.7 (1.2 – 2.1)
20 – 24	3.5 (3.0 – 4.1)	2.8 (2.3 – 3.3)	1.8 (1.4 – 2.2)
25 – 29	3.7 (3.1 – 4.4)	3.0 (2.4 – 3.5)	1.3 (0.9 – 1.7)
30 – 34	3.2 (2.5 – 4.0)	2.8 (2.2 – 3.4)	1.5 (1.0 – 1.9)
35 – 39	2.8 (1.9 – 3.7)	2.1 (1.4 – 3.0)	1.5 (0.8 – 2.1)
40+	1.3 (0.3 – 2.3)	1.6 (0.17 – 3.0)	0.7 (0.0004 – 1.6)

N.B. The true value is estimated to fall within the two confidence limits, thus the Confidence interval (CI) is important to refer to when interpreting data.

6. DISCUSSION AND IMPLICATIONS OF FINDINGS

The survey estimates an HIV prevalence rate of 29.5%, in comparison to the 2003 estimate of 27.9%. This suggests that although HIV prevalence has tended towards stabilisation in recent years, there is still a minor increase.

HIV prevalence is markedly different among the different age groups of women suggesting different risk patterns. Younger women (below 20 years) and older women (over 40 years), as expected have lower rates compared to women in the twenties and thirties. Higher rates of increase between 2003 and 2004 are observed among women aged from 25 to 34 years, suggesting a cumulative effect of younger infected women moving from one (younger) age cohort to another (older). This age group (25 to 34 years) is also associated with higher fertility and the time when the majority of women begin to have children.

Programmes aimed at addressing the HIV epidemic in South Africa have been strengthened by the implementation of the Comprehensive HIV and AIDS Treatment Plan, which is providing services in every district. The decline in syphilis prevalence continues across all age groups. These findings point to a strong STI prevention and treatment programme that is geared towards syndromic management. The STI prevention and treatment programme is implemented in all clinics across the country and has had a positive impact on reducing the prevalence of syphilis.

We do however need to continue emphasising prevention and must therefore continue to promote safer sex behaviour such as abstinence, being faithful and using condoms (ABC messages), otherwise we may be faced with an HIV epidemic that is still to peak in the lower prevalence provinces.

In conclusion, the findings confirm that HIV is still a problem of public health importance and warrants the continued efforts and resources of government, business and civil society.

6. REFERENCES

1. Department of Health, 1997. *Annual Antenatal Survey Protocol*.
2. Department of Health, 2004. Report: *National HIV and Syphilis Antenatal sero-prevalence survey in South Africa, 2003*.
3. UNAIDS/WHO, 2000. WORKING group on HIV/AIDS & STI surveillance. *Guidelines for 2nd Generation HIV surveillance*.
4. UNAIDS (2001). Declaration of Commitment on HIV/AIDS: UN General Assembly Special Session on HIV/AIDS, 25-27 June 2001.
5. UNAIDS (2004a). *AIDS Epidemic Update, 2004*
6. UNAIDS (2004b). HIV/AIDS estimates for South Africa. <http://www.unaids.org/html/pub/fact-sheets01/Southafrica>
7. WHO Global Programme on AIDS, 1989. *Unlinked anonymous screening for the public health surveillance of HIV infections. International Guidelines*.
8. WHO Global Programme on AIDS (1989). *Unlinked anonymous screening for the public health surveillance of HIV infections. International Guidelines*.