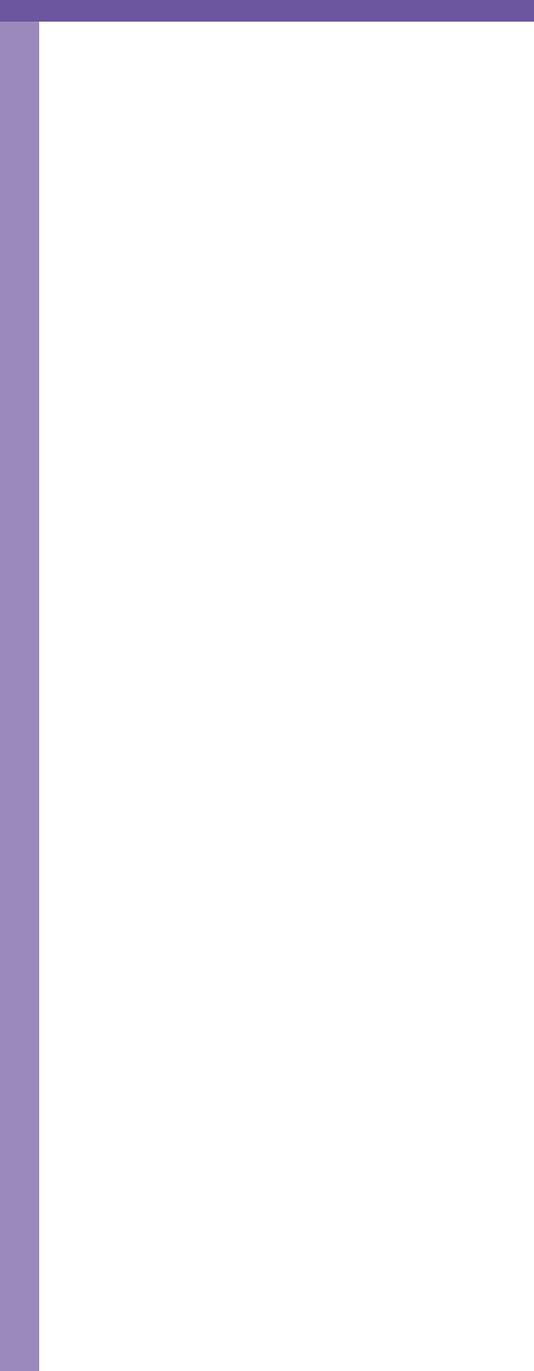


Impending Catastrophe Revisited

**an update on
the HIV/AIDS
epidemic in
South Africa**

**love
Life**
talk about it

A decorative graphic consisting of a horizontal purple bar at the top left and a vertical purple bar extending downwards from its left end, forming an L-shape.

loveLife is a new lifestyle brand for young South Africans promoting healthy living and positive sexuality. Organised under the auspices of Mrs. Zanele Mbeki and other leading South Africans, loveLife combines high-powered media with nationwide adolescent sexual health services, outreach and support programmes. loveLife's programmes are implemented by a consortium of leading South African non-governmental organisations: the Reproductive Health Research Unit, the Planned Parenthood Association of South Africa, Advocacy Initiatives and the Health Systems Trust. Major funding for loveLife is provided by the Henry J Kaiser Family Foundation and the Bill and Melinda Gates Foundation. Additional funding is provided by the South African Government and UNICEF. For information visit www.lovelife.org.za or call thethajunction on 0800 121 900.

Impending Catastrophe Revisited

An update on
the HIV/AIDS
epidemic in
South Africa

Abt

Abt Associates Inc.

talk about it **love
Life**

P R E F A C E

This report was commissioned by the Henry J Kaiser Family Foundation and is published by loveLife. The purpose of the report is to help South Africans understand the ramifications of the HIV epidemic.

Already more than five million South Africans have contracted HIV. Six to ten million South Africans could die of AIDS in the next ten to 15 years. This is certainly the greatest catastrophe South Africa has ever confronted. This report reviews and updates data and projections for the epidemic first published by loveLife last year.

The report was prepared by Abt Associates (South Africa) Inc. Abt Associates's brief was to use the most reliable available data and to model projections on the most likely outcomes. Some of the projections may seem conservative in comparison to other studies of the future impact of the HIV epidemic. The purpose of this report is not to over-sensationalize what is clearly a very bleak picture, but to provide the most realistic possible scenario.

Opinions expressed in this report are solely those of the authors.

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The Henry J Kaiser Family Foundation is one of the largest foundations in the United States dedicated to health. The Foundation has operated in South Africa since 1987 for the purpose of improving the health and health care of disadvantaged South Africans.

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CONTENTS

Methodology	2
1. Introduction	3
2. The Epidemiology of HIV Infection and AIDS In South Africa	4
3. Economic Impact	12
4. Macro-Economic Impact of HIV/AIDS	15
5. Health Care Cost Projections	16
6. HIV Prevention In South Africa	23
7. Implications For Education And Training	31
Addendum: The 2001 Antenatal Survey	35

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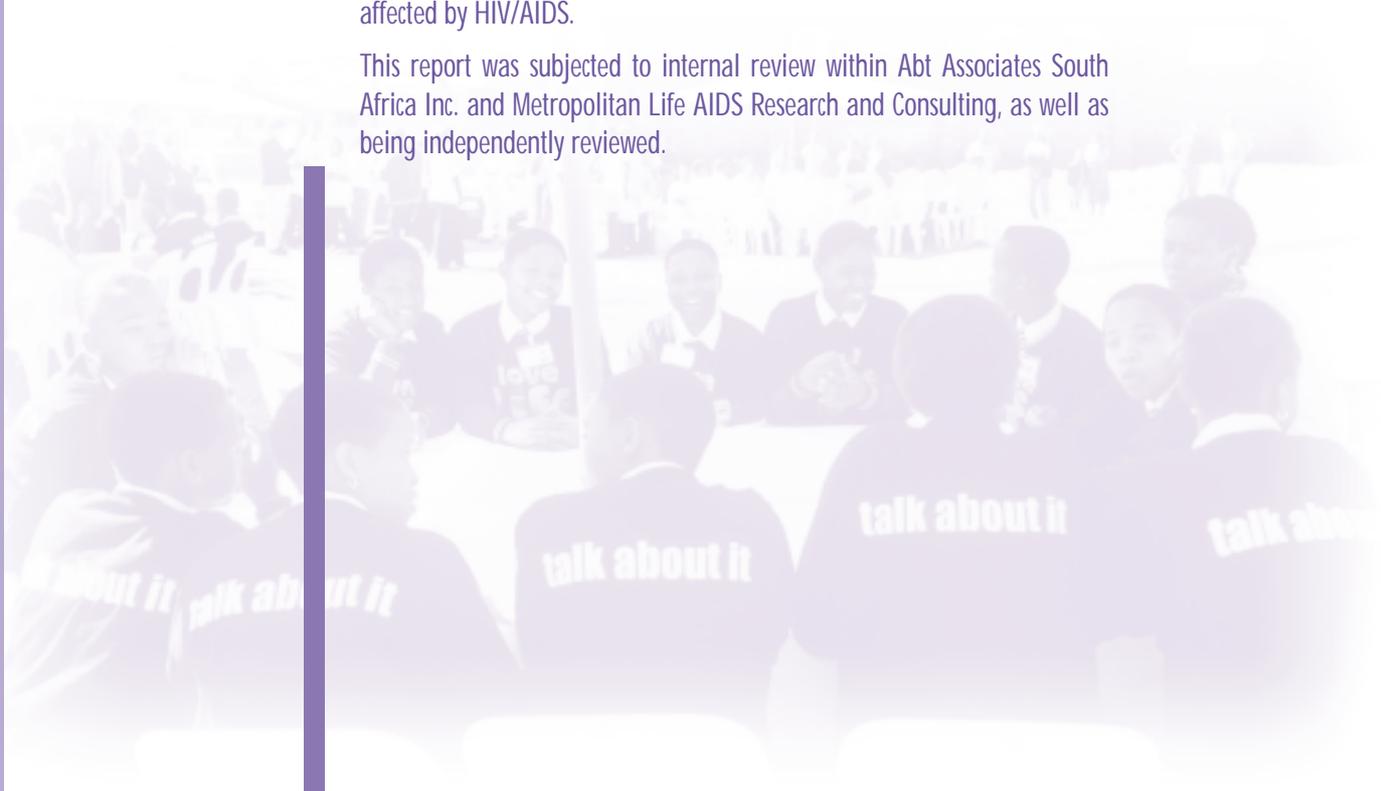
METHODOLOGY

The data obtained from the anonymous annual survey of pregnant women attending public sector antenatal clinics are not perfect. There are arguments to suggest both an under and over estimation of the true size of the epidemic from these data. For example, HIV infection levels in the general community in South Africa are thought to be lower than in the public sector antenatal clinic attendee population. This is because children and the elderly, who are at substantially lower risk of HIV, are not captured by antenatal surveys. Even among adults in sexually active groups, the antenatal survey prevalence figures do not reflect the lower overall risk of men, people who are less sexually active, and communities using the private sector. On the other hand, recent studies indicate that fertility among HIV positive women is substantially lower than among uninfected women, and this suggests that antenatal data may in fact underestimate HIV prevalence in women of reproductive age in many communities.

On balance, however, these antenatal care data are widely felt to be sufficient for purposes of estimating current infection rates in the general population and projections of these rates into the future, provided that the models used are sound.

The HIV/AIDS demographic projections presented in this report have been made using the most recently calibrated version of the Metropolitan Life Doyle Model. The Doyle Model is widely used and accepted for projecting the HIV/AIDS epidemic in South Africa, and is currently being used to produce projections for several government departments. Earlier versions of it have formed the basis of other models in use in South Africa. The model has been developed using data from both South Africa and other African countries affected by HIV/AIDS.

This report was subjected to internal review within Abt Associates South Africa Inc. and Metropolitan Life AIDS Research and Consulting, as well as being independently reviewed.



INTRODUCTION

During the period 1994 to 2001, there has been an exponential growth of HIV infections in South Africa. This growth has been accompanied by greater visibility of the epidemic, especially owing to the increasing numbers of AIDS cases and deaths. Experts agree that South Africa now faces one of the world's most severe HIV/AIDS epidemics.

The South African epidemic has developed later than those afflicting other sub-Saharan African countries. Nevertheless, the enormous political, legislative and delivery challenges faced by the first democratically elected government in 1994 have meant that South Africa's responses to HIV/AIDS have not been as comprehensive or directed as they may have been. While there is now considerable political commitment to tackling HIV/AIDS, the lack of a unified response to the epidemic has hampered the government's efforts.

Despite the scale of the epidemic, there are relatively limited data on the impact at personal community, business or national level. One reason for this is undoubtedly the enormous stigma that is still attached to HIV infection. This is not to underplay the many anecdotal reports that continue to be provided of child headed households orphaned by AIDS, overburdened health care services struggling to cope with rising HIV/AIDS case loads, and measurable impacts on businesses. However, routine anonymous surveys of public sector, antenatal clinic attendees remain the only national source of information on the growth of the epidemic. Many of the assumptions regarding the impact of the epidemic have thus to be based on computer simulation models which are calibrated to antenatal data, and this methodological approach has been used for much of the work contained in this report.¹

International recognition of the tragedy of the African epidemic has recently gained tremendous momentum. The United Nations will hold a special session of the General Assembly in June 2001 dedicated to HIV/AIDS and steps to establish a global fund to tackle the epidemic, especially on the African continent, have recently been initiated. This is the time for courageous and insightful leadership at all levels of society in South Africa. Critical to this is to increase efforts to prevent new infections, while at the same time finding humane, cost effective and practical ways to care for and support those already infected.

¹ Computer modelling is not an exact science. Results will obviously vary depending on the weight given different variables informing the model. This explains differences between this and other studies in longterm projections of the impact of the epidemic.

THE EPIDEMIOLOGY OF HIV INFECTION AND AIDS IN SOUTH AFRICA

The Global HIV Epidemic

According to recent estimates from the Joint United Nations Program on HIV/AIDS (UNAIDS) and the World Health Organisation (WHO), 34.7 million adults and 1.4 million children were living with HIV worldwide at the end of 2000. In addition, the epidemic has created a cumulative total of 13.2 million AIDS orphans. In 2000, an estimated 600 000 children aged 14 or younger became infected with HIV. Over 90% of these were babies born to HIV-positive women, who acquired the virus before or at birth, or through their mother's breast milk. Almost nine-tenths of these new infections occurred in sub-Saharan Africa.

The overwhelming majority of HIV infections, around 95% of the global total, live in the developing world. This is a proportion that is set to grow even further as infection rates continue to rise in countries where poverty, poor health care systems, and limited resources for effective prevention and care fuel the spread of the virus.

Sub-Saharan Africa is the worst affected region, having around 70% of the global total of HIV-positive people. Most of these infected populations will die in the next 10 years, joining the 13.7 million Africans already claimed by the epidemic.

The current status of the epidemic in South Africa and projections

The total number of HIV infected people in South Africa is expected to increase well into the next decade. Despite continuing rapid increases in the rate of infection in high-risk groups, such as adolescents, the rate of infection among the general population could appear to stabilise in the near future. This is because the number of AIDS-related deaths will begin to offset the number of new infections. Predisposing factors to new infections still exist, and HIV infections will continue to increase until society at large appreciates the extent of the epidemic, and people alter their behaviour and their response to those people who are infected and affected.

For many people, this has been a sustained epidemic of infection without illness. As more infected individuals become ill with AIDS, the epidemic is becoming more visible. The scale of this epidemic means that the life of every person in the country will probably be affected in some way.

There are a number of predisposing factors that have made and continue to make South Africans susceptible to a particularly severe epidemic. These include:

- Established epidemics of other sexually transmitted diseases (STDs). These act to increase the likelihood of transmission of HIV.
- Disrupted family and communal life, due in part to apartheid, migrant labour patterns and high levels of poverty in the region.

- Good transport infrastructure and high mobility, allowing for rapid movement of the virus into new communities.
- Resistance to the use of condoms, based on cultural and social norms.
- The low status of women in society and within relationships. Economic dependency and the threat of physical force, in particular, make it difficult for women to protect themselves from infection.
- Social norms that accept or encourage high numbers of sexual partners, especially amongst men.
- Parallel norms that frown on open discussion of sexual matters, including sex education for children and teenagers.

South African HIV/AIDS data

Most data on the South African HIV/AIDS epidemic is obtained from the anonymous, annual survey of pregnant women attending public sector antenatal clinics.² A review of the South African antenatal surveys is presented at the end of this document. Although imperfect, these data are sufficient to estimate the current and future size and impact of the epidemic by using projection models, such as the Doyle simulation model used here, to extrapolate from antenatal clinic attendees to the rest of the population.

Using projection models allows us to estimate the level of HIV infection in the general population. However, some groups and geographical areas will be much more or less affected than the average, and we need to consider this when assessing these models. Community surveys have confirmed the high level of infection among young women. For example, one study in a high-risk community surrounding a mine in Gauteng showed that HIV prevalence among men peaked at 30% at age 35, and among women at 50% at age 25. Also, information from death certificates confirms an alarming increase in deaths among the 20 to 40 year age group.

HIV prevalence

It is estimated that around 4 million South Africans are currently HIV infected. This number is expected to continue to rise over the next 10 years – unless major behaviour change occurs that could significantly alter the course of the epidemic. There could be around 5.3-6.1 million infected individuals by 2005, and 6 to 7.5 million by 2010.³ (See Figure 1). These estimates from the Doyle model are lower than estimates from other sources, which put the number of currently infected people in South Africa at 4.5 to 5 million people.

² HIV infection levels in the general community in South Africa are thought to be lower than in the public sector antenatal clinic attendee population. Children and the elderly, who are at substantially lower risk of HIV, are not captured by antenatal surveys. Even among adults in sexually active age groups, the antenatal survey prevalence figures do not reflect the lower overall risk of men, people who are less sexually active, and communities using the private sector. However, recent studies indicate that fertility among HIV positive women is substantially lower than among uninfected women, in all but the youngest age groups, and this suggests that antenatal data may in fact underestimate HIV prevalence in women of reproductive age in many communities.

³ Currently, just over 50% of all new infections in southern Africa are occurring in South Africa.