

# **HIV/AIDS IN AFRICA**



**Health Studies Branch  
International Programs Center  
Population Division  
U.S. Bureau of the Census**

**Research Note No. 20**

**Prepared for the**

**IX International Conference on AIDS and STDs in Africa  
Kampala, Uganda  
December 10-14, 1995**

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## Preface

This research note is the 20th of a series of short research documents resulting from analysis conducted in the Health Studies Branch of the International Programs Center, Population Division, U.S. Bureau of the Census. Distribution in the research note format is intended to allow for rapid dissemination of results to a specialized audience, highlighting recent developments or emerging trends. Reports containing a more thorough presentation and discussion of research findings will continue to be issued in the International Programs Center Staff Paper series.

This note was prepared by the staff of the Health Studies Branch--Karen Stanecki De Lay, Chief, and Jinkie Corbin, Anne Ross, Peggy Seybolt, Lisa Mayberry, and David Rudolph. Peter O. Way, Special Assistant, International Programs Center, Population Division, also reviewed the report and provided comments. The preparation of this report was supported by funding from the U.S. Agency for International Development.

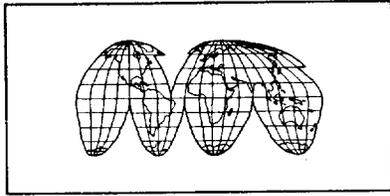
Comments and questions regarding this study should be addressed to Karen Stanecki De Lay or Peter Way, International Programs Center, Population Division, Bureau of the Census, Washington, D.C. 20233-8860; telephone (301) 457-1406.

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### Country Profiles for African Countries:

Benin	Ethiopia	Niger
Botswana	Gabon	Nigeria
Burkina Faso	The Gambia	Rwanda
Burundi	Ghana	Senegal
Cameroon	Guinea	Sierra Leone
Central African Republic	Kenya	South Africa
Chad	Lesotho	Swaziland
Congo	Madagascar	Tanzania
Côte d'Ivoire	Malawi	Togo
Djiboute	Mali	Uganda
Egypt	Morocco	Zaire
Eritrea	Mozambique	Zambia
	Namibia	Zimbabwe



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## International Programs Center Population Division

United States Bureau  
of the Census

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### HIV/AIDS in Africa

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#### Introduction

As infection by the Human Immunodeficiency Virus (HIV) and the impact of the Acquired Immune Deficiency Syndrome (AIDS) spread within population groups throughout the world, they threaten to become the overriding demographic and social issues for countries in Africa, Latin America and Asia in the 1990's.

This report describes levels and trends of HIV infection along the themes of geography, time, and population, highlighting recent patterns and trends, emerging epidemics and the ever-expanding diffusion of HIV. Data presented in the following discussion are taken from the *HIV/AIDS Surveillance Data Base*, developed and maintained at the U.S. Bureau of the Census, with funding support from the U.S. Agency for International Development. Data are regularly compiled from the scientific and technical literature, as well as presentations at major international conferences. The *HIV/AIDS Surveillance Data Base* currently contains over 25,000 data records drawn from over 3,500 publications and presentations.

In this report we use the terms "high risk" and "low risk" to describe various sampled populations. By high risk we refer to studies of commercial sex workers and their clients and also include sexually transmitted disease (STD) clinic patients. Obviously, the relevant factor is the behavior of the population (i.e., unprotected sex with multiple partners) rather than any particular descriptive label. In the low-risk category, we include studies of pregnant (prenatal) women and general population samples. Low risk is not meant to imply no risk, since pregnant women are, by definition, recently sexually active.

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High-Risk populations include:

Commercial Sex Workers  
STD Clinic Patients

Low-Risk populations include:

Pregnant Women  
General Population Surveys

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## HIV Levels and Trends

As of mid-1995, the World Health Organization Global Programme on AIDS (WHO/GPA) estimated that over 11 million adult infections had occurred in Africa with an estimated 8.5 million HIV-infected adults still alive.<sup>1</sup> Of those infected, about one-half to two-thirds were in east and central Africa, an area which accounts for only about one-sixth of the total population of Sub-Saharan Africa. In the countries most affected by HIV and AIDS, a quarter or more of the adult urban populations is infected with HIV.

Recent evidence also shows that infant and child mortality levels are increasing in several countries most affected by AIDS.<sup>2</sup> Life expectancy, which had enjoyed a 40-year period of advance, is now declining in many of the most affected countries. In a prospective cohort study in rural Masaka District, Uganda, the HIV-1 epidemic has had a profound impact on adult mortality even though prevalence and incidence rates in adults are relatively low, 8 and 1 percent, respectively.<sup>3</sup> The HIV-attributable mortality fraction was 44 percent for adult men, 50 percent for adult women, and 89 percent for adults aged 25-34 years (both sexes combined) (Figure 1). In a study in Rakai District, Uganda, 87 percent of all deaths in adults aged 20-39 years occurred in persons with HIV (Figure 1).<sup>4</sup> The cumulative effect of national AIDS epidemics will be staggering.

### Geographic Distribution

Despite the fact that HIV/AIDS epidemics in the region are now more than a decade old, much geographic variation remains in current levels of HIV infection between and within countries. Factors that can be shown or hypothesized to contribute to the observed geographical variation include the timing of HIV entry into the population, sexual practices before and outside of marriage, prevalence of sexually transmitted diseases in the population, and male circumcision, as well as socioeconomic factors such as urban migration for work (mostly single males) and proximity to major highways. The geographic pattern of infection is likely to change over time. In those rural areas where no studies have been conducted, HIV infection levels may be lower.

HIV-1 and HIV-2 have both been detected in Africa. Maps 1-4 show the most recently available data by country in Africa. Among high-risk urban populations, HIV-1 is highest in those countries along the Rift Valley; HIV-1 seroprevalence levels over 40 percent are seen from Ethiopia down to Zambia (Map 1). The epicenter for HIV-1 in West Africa is Abidjan, Côte d'Ivoire. HIV-1 seroprevalence levels are over 40 percent among high-risk urban populations in Côte d'Ivoire, Mali, Benin and

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<sup>1</sup>World Health Organization, 1995, "The Current Global Situation of the HIV/AIDS Pandemic," July.

<sup>2</sup>U.S. Bureau of the Census, 1994, "The Impact of HIV/AIDS on World Population," May.

<sup>3</sup>Mulder, D.W., A.J. Nunn, H.U. Wagner, et al., 1994, "HIV-1 Incidence and HIV-1 Associated Mortality in Rural Ugandan Population Cohort," *AIDS*, vol. 8, no. 1, pp. 87-92.

<sup>4</sup>Sewankambo, N.K., M.J. Wawer, R.H. Gray, et al., 1994, "Demographic Impact of HIV Infection in Rural Rakai District, Uganda: Results of a Population-Based Cohort Study," *AIDS*, vol. 8, no. 12, pp. 1707-1713.

Cameroon. Among low-risk urban populations, the same pattern is seen with higher HIV-1 seroprevalence levels in urban centers along the Rift Valley from Kenya to Zimbabwe (Map 2). In fact, in several of these countries, HIV-1 seroprevalence levels among the urban low-risk populations are around 25 percent.

HIV-2 is found only in a few countries predominantly in West Africa and in the former Portuguese colonies of Angola and Mozambique. The routes of transmission and risk factors for HIV-1 and HIV-2 are similar and both result in AIDS.<sup>5</sup> However, the latency period for HIV-2 appears to be longer, and vertical transmission (from mother to child) is rare.<sup>6</sup> Maps 3 and 4 show the geographic distribution of HIV-2 between high- and low-risk urban populations. High levels of HIV-2 seroprevalence are seen in Côte d'Ivoire, Mali, Benin and Angola.

Maps 5 through 9 are regional maps providing a more detailed geographic distribution of HIV seroprevalence among low-risk populations. These maps point out the variability of the epidemic not only among but also within countries.

### **Urban/Rural Differentials**

Large differentials in HIV infection levels between urban and rural areas of a country have been shown in many Sub-Saharan countries. Data from Burundi, for example, found 20 percent of sampled pregnant women in Bujumbura to be infected in 1992, while 5 percent of pregnant women in semiurban areas and 2 percent of pregnant women in rural areas were HIV positive (Figure 2).<sup>7</sup>

In Malawi, 33 percent of urban pregnant women tested were HIV positive compared to 12 percent of rural pregnant women (1993). Similar patterns were seen from studies conducted in Côte d'Ivoire, Rwanda, Tanzania, and Uganda (see also Figures 9 and 10).

### **Commercial Sex Workers.**

Given the predominant role that heterosexual transmission plays in the HIV epidemic in many countries, it should be no surprise that commercial sex workers and their clients have an important role in this pandemic. Commercial sex workers, because of the number of their sexual partners, are, in many countries, the group at greatest risk for HIV infection. From the beginning of the HIV/AIDS pandemic, commercial sex workers were stigmatized, discriminated against, and blamed by society as vectors of HIV infection. Before AIDS, few groups bothered investigating the underlying problems leading women to commercial sex work. Researchers are now beginning to document that

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<sup>5</sup>DeCock, K.M., and F. Brun-Veginet, 1989, "Epidemiology of HIV-2," *AIDS*, Vol. 3, Supplement 1, pp. S89-S95.

<sup>6</sup>Andreasson, P-A., F. Dias, A. Naucler, et al., 1993, "A Prospective Study of Vertical Transmission of HIV-2 in Bissau, Guinea-Bissau," *AIDS*, vol. 7, no.7, pp. 989-993.

<sup>7</sup>Source references for the figures are contained in a separate listing following the text, maps, and charts.

economic need is the force driving many women to commercial sex work. The selling of sex may be the only choice many women have for themselves and their children between starvation and survival.

Data are available on HIV infection among samples of urban commercial sex workers in the *HIV/AIDS Surveillance Data Base* for Sub-Saharan Africa (Figure 3). The most recent data show infection levels over 30 percent for many countries. In several countries more than half of these women are infected. As we will see with data from other population groups, infection levels in many countries are increasing. For example, in Abidjan, Côte d'Ivoire, seroprevalence among commercial sex workers rose from 69 percent in 1990 to 86 percent in 1992-93.

### **STD Clinic Patients**

Patients attending STD clinics can be considered a sample of the population with frequent casual sexual contact, since they or their partners are likely to have had sexual contact with others. They are at elevated risk both due to the presence of multiple partners as well as due to the potentially enhanced risk of HIV infection among those with various other STDs.<sup>8</sup>

Patterns of an increase in HIV infection among samples of STD patients for several Sub-Saharan African countries are shown in Figure 4. Continued growth in infection levels is noted in Tanzania, Kenya, Côte d'Ivoire, and most recently in South Africa (results for black females). The infection levels in the capital cities of these countries have reached over 20 percent for STD patients.

Recent data from Botswana indicate high levels of HIV seroprevalence in STD clinic patients. Rates among STD clinic patients from the 2nd National HIV Sentinel Surveillance Survey in 1993 have ranged from around 15 percent in Ghanzi and Lobatse districts to rates as high as 30 percent in Gabarone, 44 percent in Chobe/Kasane district, and 49 percent in Francistown.

Studies of STD patients in several other countries have documented HIV infection levels over 50 percent (Figure 5). Patterns of sex differentials in HIV infection are now becoming more consistent. In all of these cases, females have higher HIV infection levels than males. Data among STD clinic patients from the various provinces in Zambia, by sex, indicate 1991 HIV seroprevalence rates ranging from 40 to 70 percent for women and 35 to 60 percent for men (Figure 6). These findings highlight the particular vulnerability of women to HIV infection among STD patients.

### **Pregnant Women**

Much information has been gathered on pregnant women. Since most pregnant women will attend a government antenatal clinic at some point, they are relatively easy to follow. Research has shown

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<sup>8</sup>Wasserheit, J.N., S.O. Aral, K.K. Holmes, 1991, "Research Issues in Human Behavior and Sexually Transmitted Diseases in the AIDS Era." American Society for Microbiology, Washington, D.C.

that women in traditional marriages and regular partnerships rarely exhibit risky sexual behaviors. However, WHO estimates that worldwide 50 percent of all new HIV infections are in women, and in Sub-Saharan Africa the share is 60 percent.<sup>9</sup> A study of HIV positive Baganda women in Uganda suggested that the husband's behavior put the women at risk since most of these women had no sexual partners outside of marriage.<sup>10</sup> In another study in Kigali, Rwanda, 24 percent of women who thought they were in mutually monogamous relationships were HIV positive.<sup>11</sup> Even among women who had only one lifetime partner--their husband--21 percent were infected. Although little or no information is available for the partners of these women, these findings imply that HIV seroprevalence among the men is at least as high if not higher.

Since 1985, HIV seroprevalence studies of pregnant women have been conducted in a number of African countries (Figure 7). A variety of studies over the past 8 or more years in Uganda, Zambia, and Malawi show a consistent and rapid increase in HIV infection levels among pregnant women in the capital cities of these countries. By 1990, more than 20 percent of the samples of pregnant women in those areas were infected. Kigali, Rwanda (not shown in Figure 7), with a reported infection rate of over 30 percent since 1989, is another major urban area with high levels of infection. In the neighboring country of Burundi, 20 percent of pregnant women attending prenatal clinics in Bujumbura were HIV positive in 1992.

In contrast, seroprevalence levels among pregnant women in Kinshasa have been relatively stable over the past several years. Researchers, however, suspect that these reported stable seroprevalence levels are masking increasing incidence levels among younger age groups.

Infection levels for pregnant women in Abidjan increased rapidly to around 10 percent by 1987, appeared to have reached a plateau by 1990, but have started increasing again. Rates are increasing in other West African countries. In Bobo Dioulasso, Burkina Faso, a study conducted from June 1990 to July 1991, reported infection rates of 13 percent among pregnant women. In Nigeria, the most populous country in Africa, rates reported from the antenatal clinics from the Sentinel Surveillance system, November 1991 to March 1992, ranged from 0 percent in Borno, Cross River and Edo States to 2 percent in Kano and Lagos states.

Alarming increases in rates of HIV seroprevalence have been recorded among pregnant women in Botswana. In Francistown, HIV seroprevalence increased from less than 10 percent in 1991 to over 30 percent in 1993 and in Gabarone, HIV seroprevalence rose from 6 percent in 1990 to 19 percent in 1993.

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<sup>9</sup>World Health Organization, 1995, "WHO Calls on Policy-Makers to Reduce Women's Growing Vulnerability to HIV/AIDS," February.

<sup>10</sup>Rwabukwali, C., J.W. McGrath, D.A. Schumann, et al., 1991, "Socioeconomic Determinants of Sexual Risk Behavior among Baganda Women in Kampala, Uganda," VII International Conference on AIDS, Florence, Italy, 6/16-21, Abstract MD4226.

<sup>11</sup>Allen, S., C. Lindan, A. Serufilira, et al., 1991, "Human Immunodeficiency Virus Infection in Urban Rwanda," *JAMA*, vol. 266, no. 12, pp. 1657-1663.

## **Blood Donors**

Early in the HIV/AIDS epidemic, concerns about the blood supply were often raised. As a result many countries began donor screening programs. Early in the epidemic, HIV seroprevalence among blood donors was used as an indicator of seroprevalence levels among the general population. While blood donors provided an easy population to test, it does not appear that this group represents a valid proxy for the general population.

As epidemics mature, and as populations become increasingly aware of the association of risk behavior and HIV infection, blood donors tend to be less representative of the general population. Data from Rwanda demonstrate this phenomenon--between 1985 and 1990, HIV infection among blood donors in Kigali decreased steadily from 13.5 to 2.1 percent, while surveillance data for the general population and pregnant women documented continued increases in HIV infection in the population at large.

## **Age and Sex Patterns**

Age patterns are influenced by the tendency for males to choose a younger female as a spouse (as well as a casual sexual partner). This behavior results in higher HIV infection levels in younger women than males in the same age cohort, while older males tend to have higher infection levels than females of the same age. This pattern is shown in Figure 8 for Masaka, Uganda; Figure 9 for the Rakai District in Uganda; and Figure 10 for Mwanza, Tanzania.

Available data from several African countries in the latest round of sexual behavior surveys suggest that a differential in sexual behavior exists, with males more likely to engage in casual sexual contacts than females. However, the precarious state of women's reproductive health in the world's poorer nations combined with lack of treatment for STD's among women who are asymptomatic or ashamed to seek care at an STD clinic place women at an augmented risk.

As was noted earlier, WHO now estimates that more women than men are being infected in Sub-Saharan Africa. However, the timing of the epidemic and sexual behavior patterns will influence these results. In Uganda, for example, serosurveys have found 1 infected male for each 1.4 infected females, while in Côte d'Ivoire, rural seroprevalence levels imply nearly 2 infected males per infected female in the rural area. In Mali, a national seroprevalence study found HIV prevalence levels were higher for women than men in nearly every region ( Figure 11). In Masaka, Uganda, a low prevalence region (overall prevalence 4.8 percent) similar results were obtained, 5.3 percent of the women were HIV positive versus 4.4 percent of the men (Figure 8).

## Conclusion

The HIV/AIDS pandemic continues to spread throughout Africa. In each country the details of the epidemic vary, having its own distinct origin, geographic patterns of dispersion, and particular population subgroups affected. But across Africa the roots of the pandemic are shared. It is predominantly heterosexual, being transmitted by unprotected sex with multiple partners. Specific risk behaviors and practices differ from one culture to the next, but the common roots suggest that a common set of behavior changes can result in reduced numbers of new infections. Yet no country in the region can claim to be spared from this pandemic. Within the region, high proportions of women without high-risk activity are at risk for infection due to the behavior of their partners, and infants and children are at risk through maternal-child transmission.

However, there is some reason for cautious optimism. Recent data from a rural Uganda cohort indicates a potential decline in HIV-1 seroprevalence among young adults in a general population.<sup>12</sup> A randomized trial conducted in rural Tanzania concluded that improved STD treatment reduced HIV incidences by about 40 percent in the population studied.<sup>13</sup> These and other positive results coming from an aggressive anti-AIDS campaign in Thailand should encourage the active pursuit of AIDS control methods. We have learned that no single approach will contain the epidemic and all means are necessary.

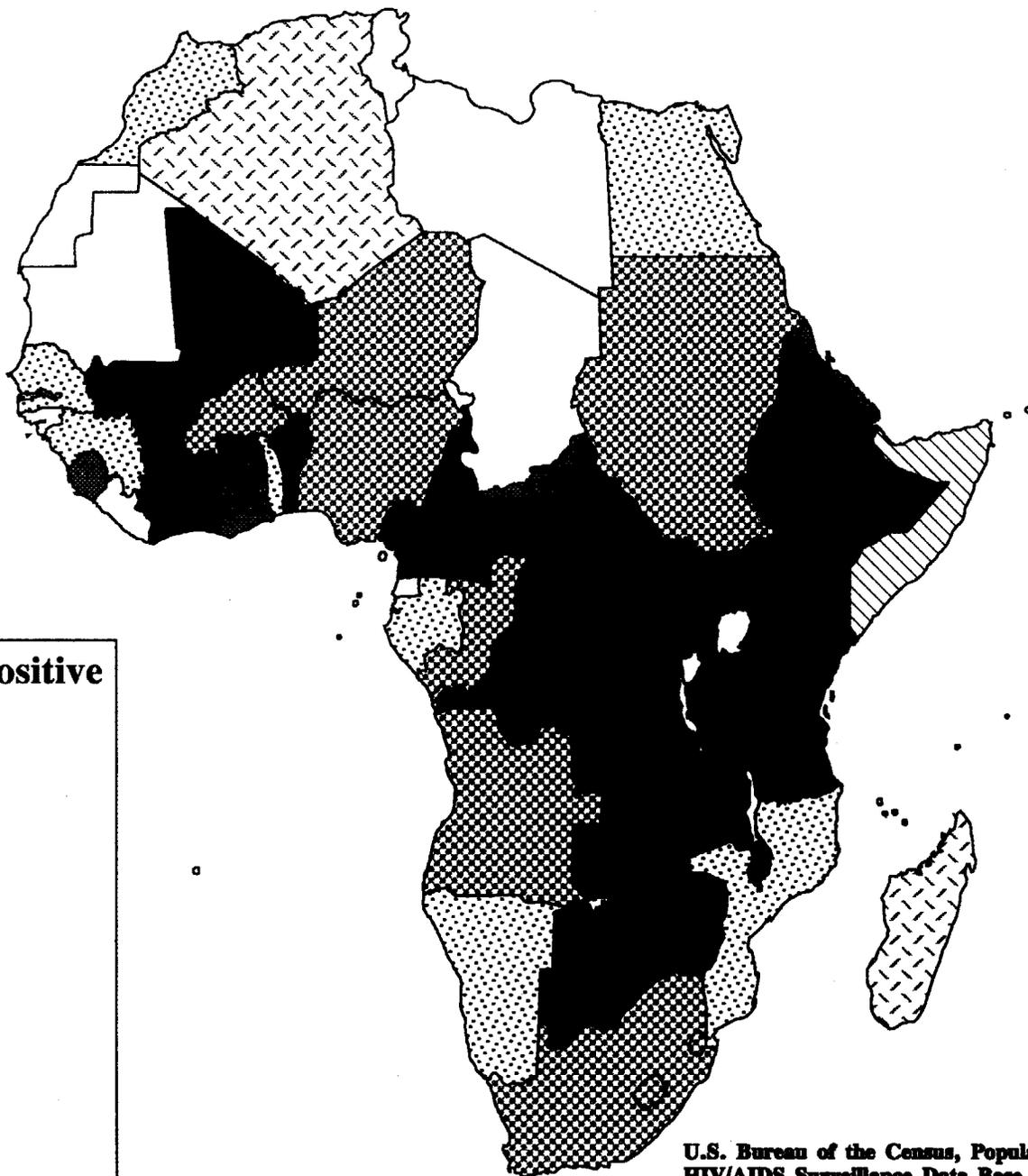
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<sup>12</sup>Mulder, D., A. Nunn, A. Kamali, et al., 1995, "Decreasing HIV-1 Seroprevalence in Young Adults in a Rural Ugandan Cohort," *BMJ*, vol. 311, no. 7009, pp. 833-836.

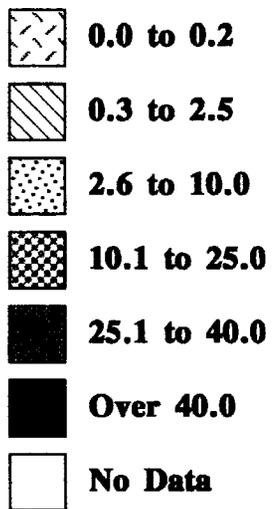
<sup>13</sup>Grosskurth, H., F. Mosha, J. Todd, et al., 1995, "Impact of Improved Treatment of Sexually Transmitted Diseases on HIV Infection in Rural Tanzania: Randomized Controlled Trial," *Lancet*, vol. 345, no. 8974, pp. 530-536.

# Map 1

## African HIV-1 Seroprevalence for High-Risk Urban Populations



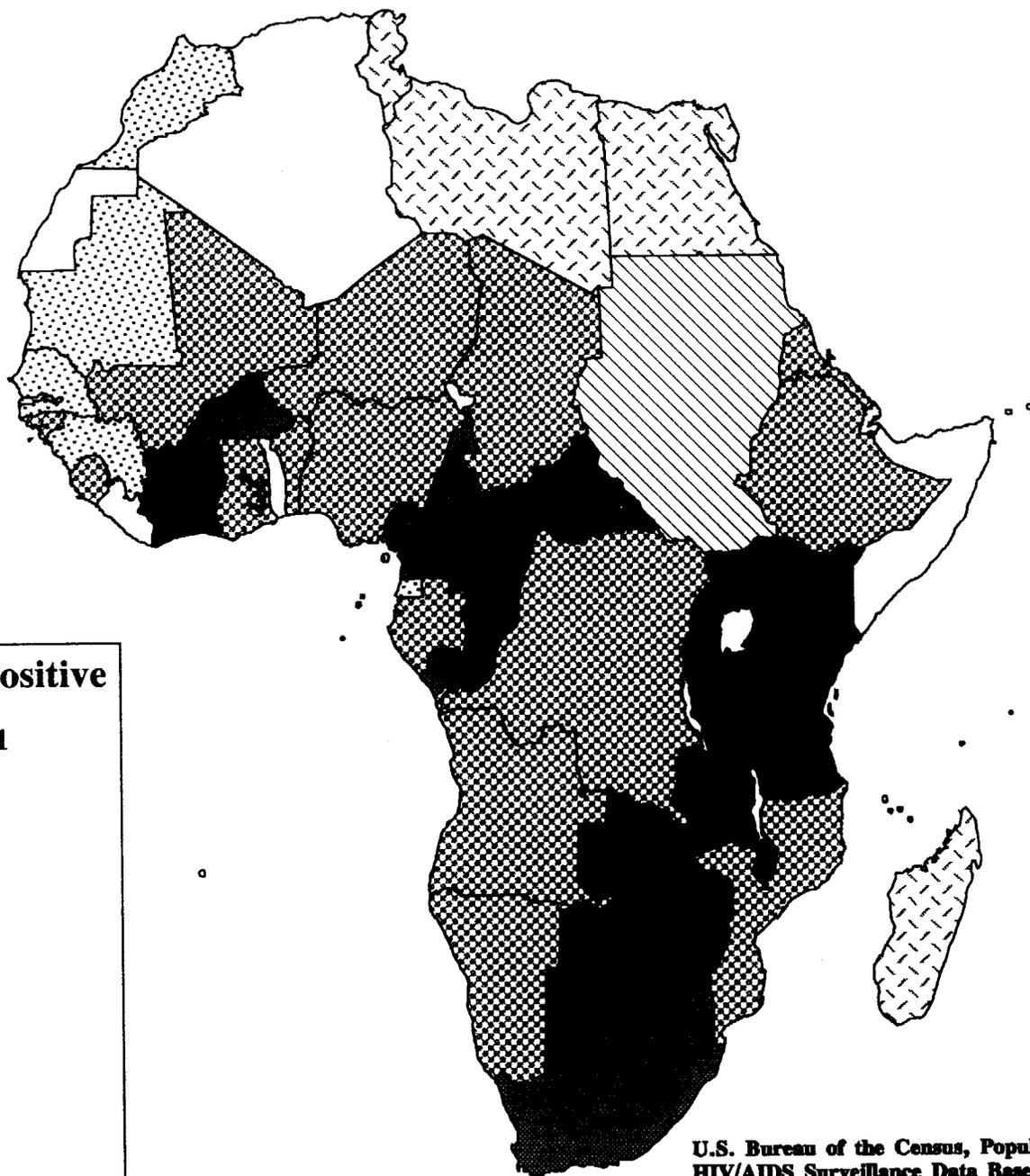
### Percent Seropositive



U.S. Bureau of the Census, Population Division, International Programs Center,  
HIV/AIDS Surveillance Data Base, July 1995.

# Map 2

## African HIV-1 Seroprevalence for Low-Risk Urban Populations



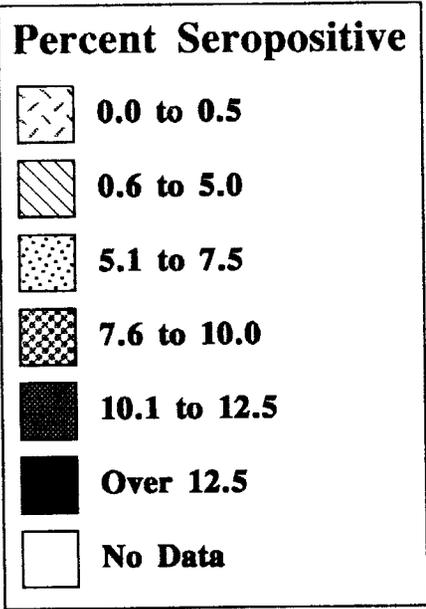
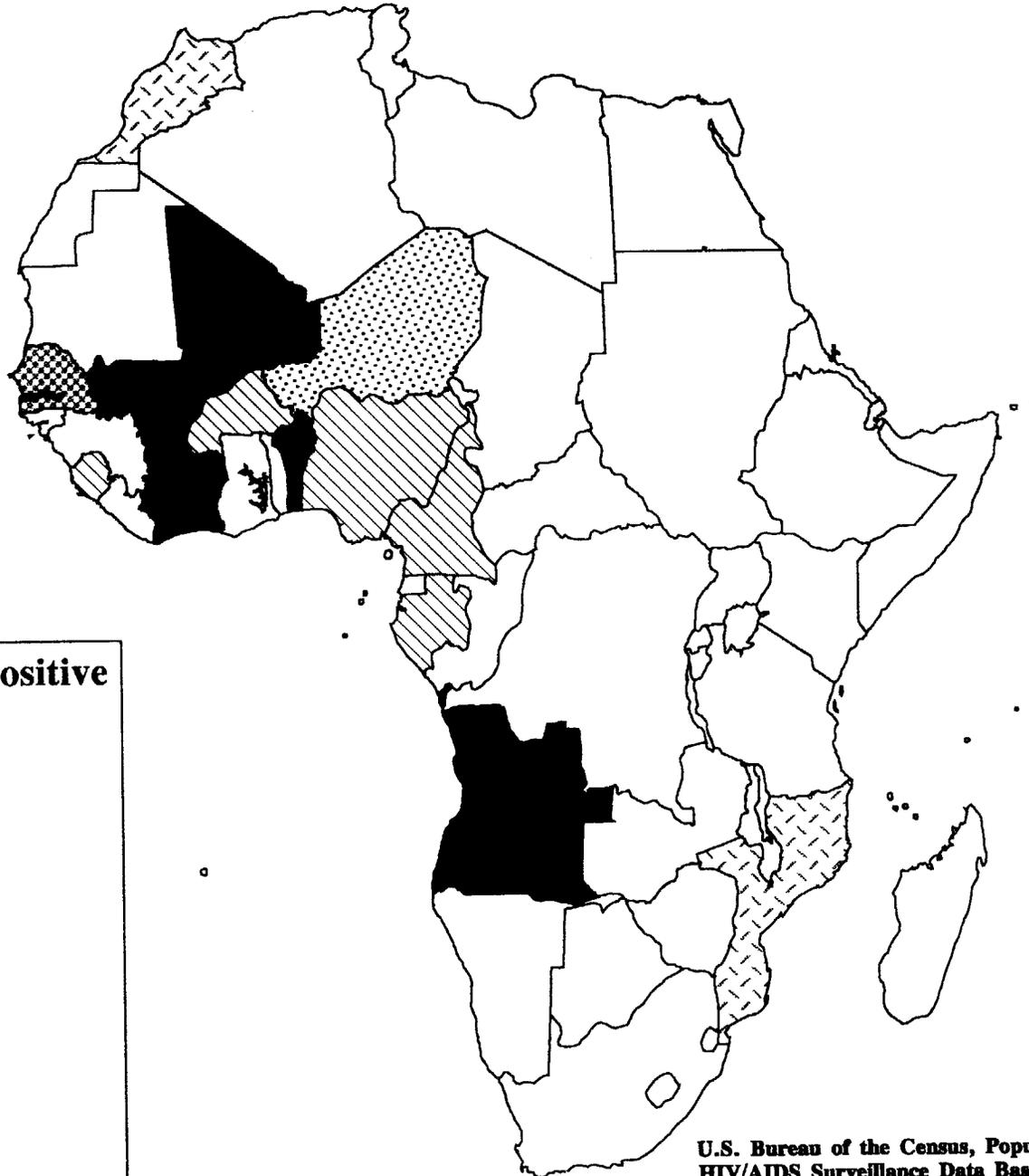
### Percent Seropositive

-  Less than 0.1
-  0.1
-  0.2 to 1.0
-  1.1 to 5.0
-  5.1 to 10.0
-  Over 10.0
-  No Data

U.S. Bureau of the Census, Population Division, International Programs Center, HIV/AIDS Surveillance Data Base, July 1995.

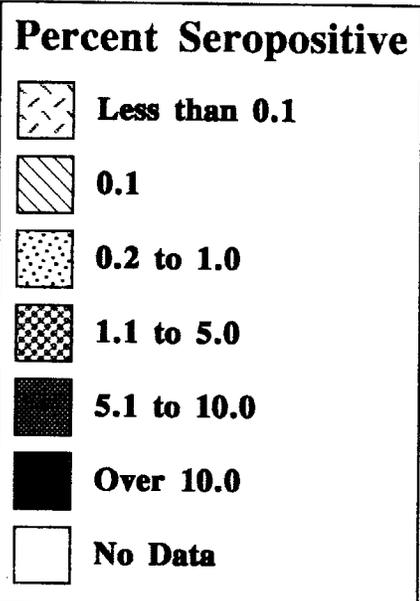
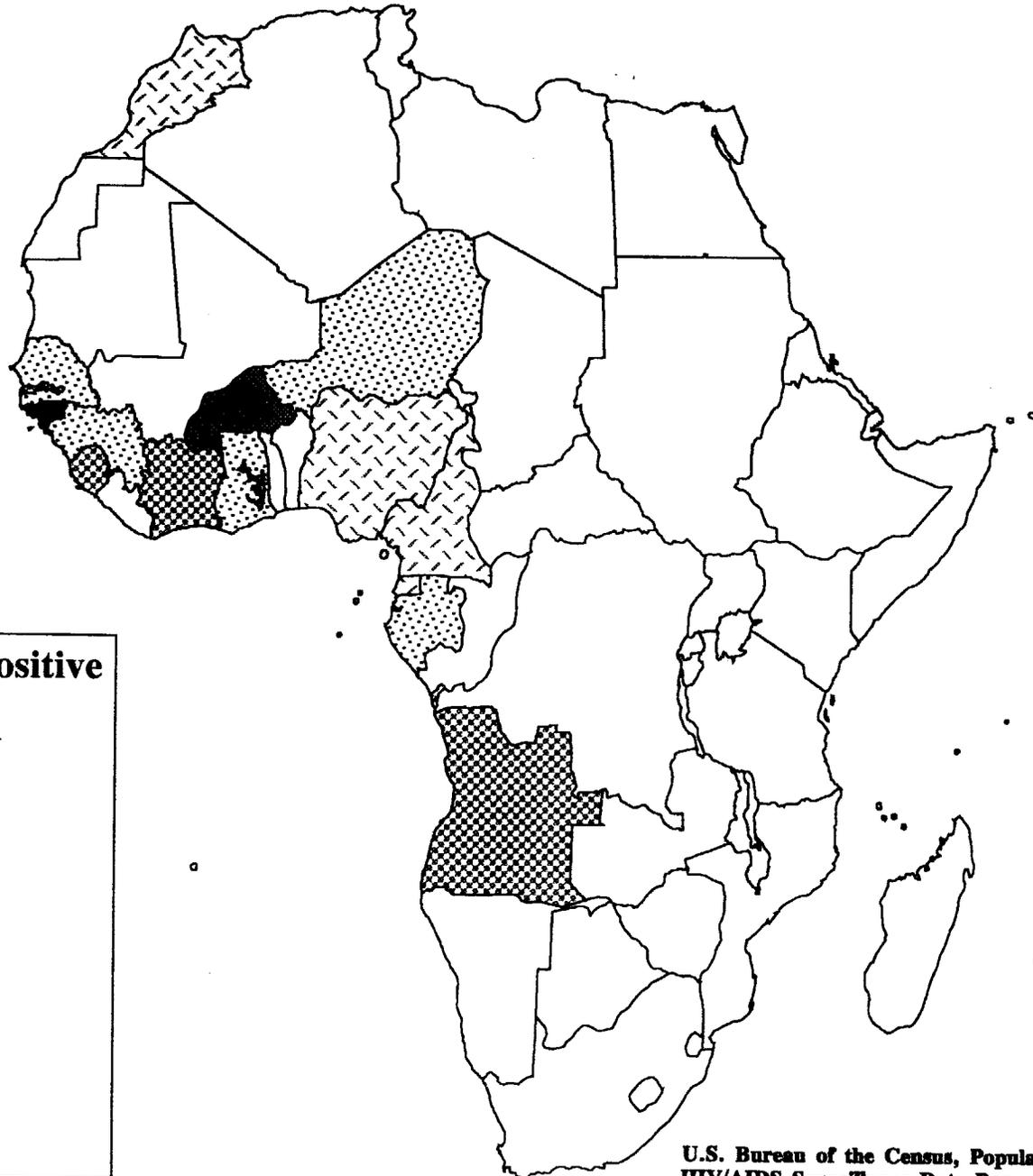
# Map 3

## African HIV-2 Seroprevalence for High-Risk Urban Populations



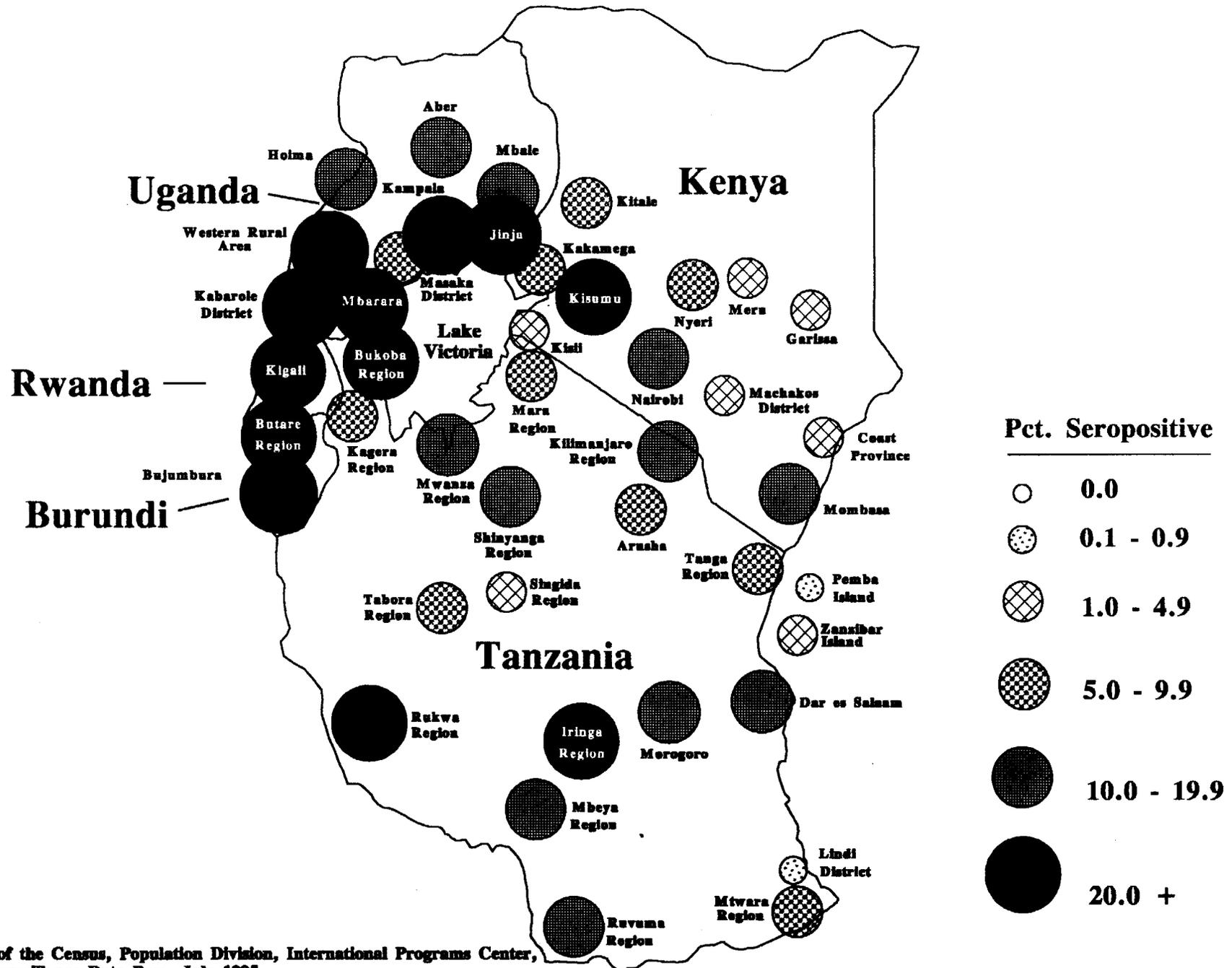
U.S. Bureau of the Census, Population Division, International Programs Center, HIV/AIDS Surveillance Data Base, July 1995.

# Map 4 African HIV-2 Seroprevalence for Low-Risk Urban Populations

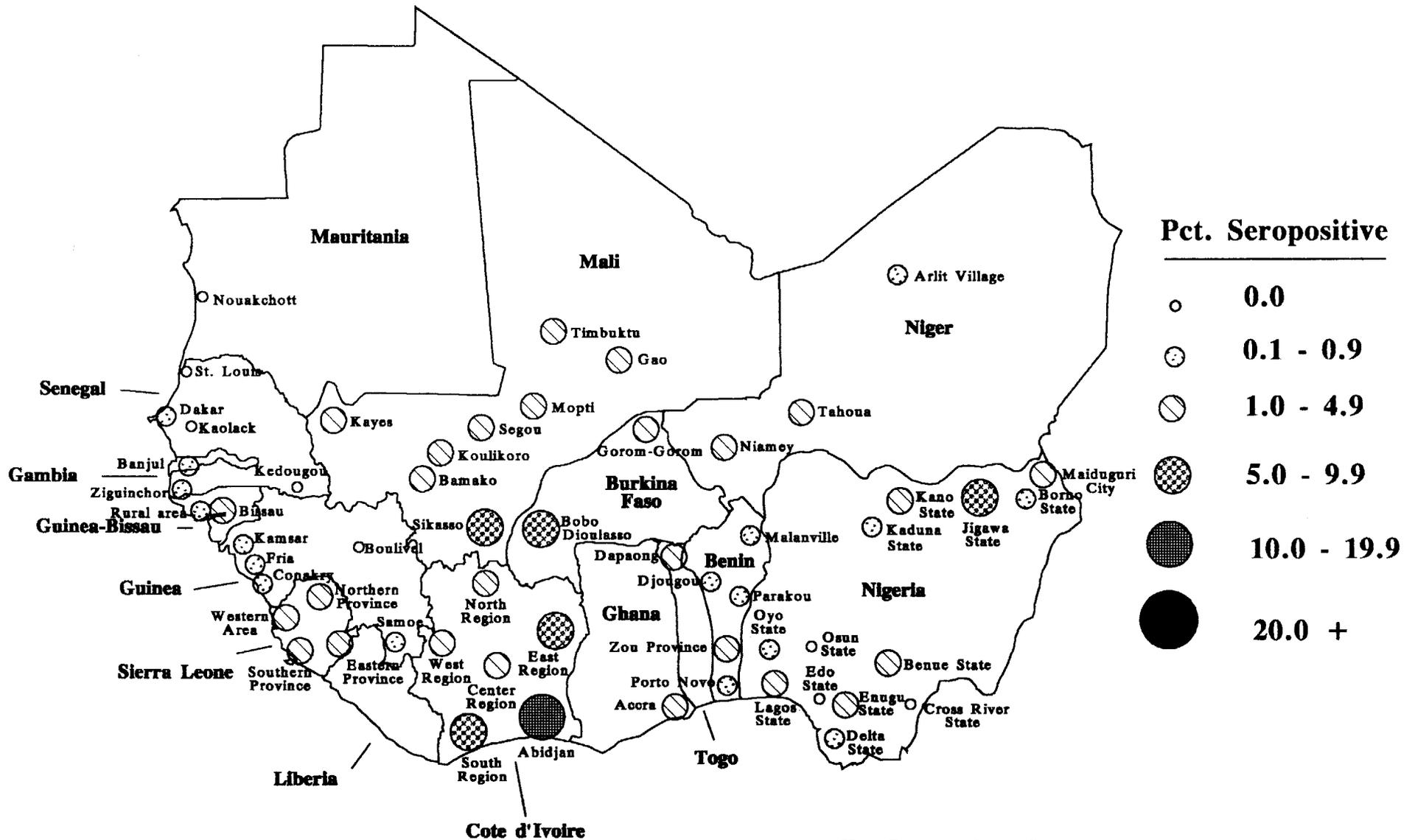


U.S. Bureau of the Census, Population Division, International Programs Center, HIV/AIDS Surveillance Data Base, July 1995.

# Map 5: Seroprevalence of HIV-1 for Low-Risk Populations in East Africa

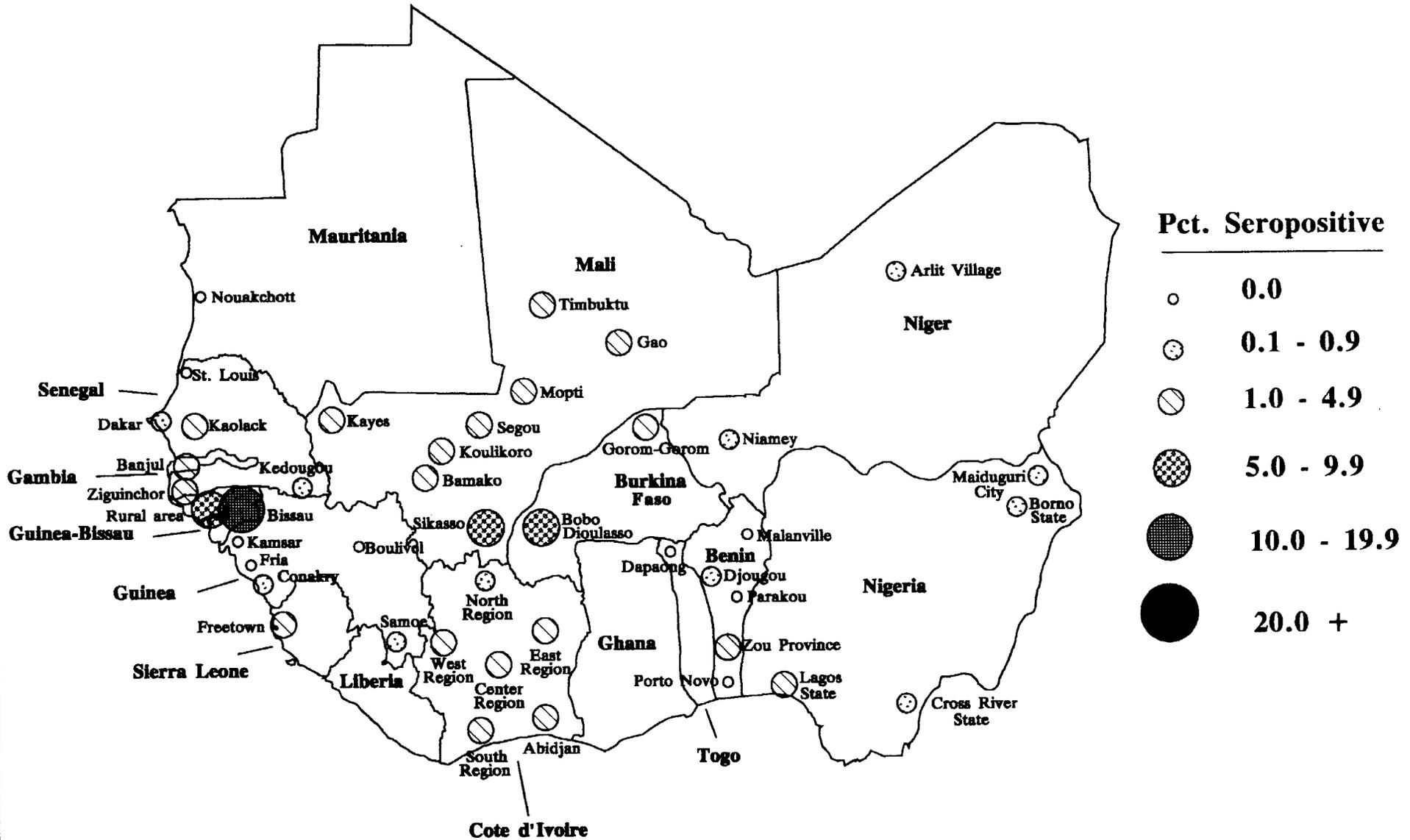


# Map 6: Seroprevalence of HIV-1 for Low-Risk Populations in West Africa



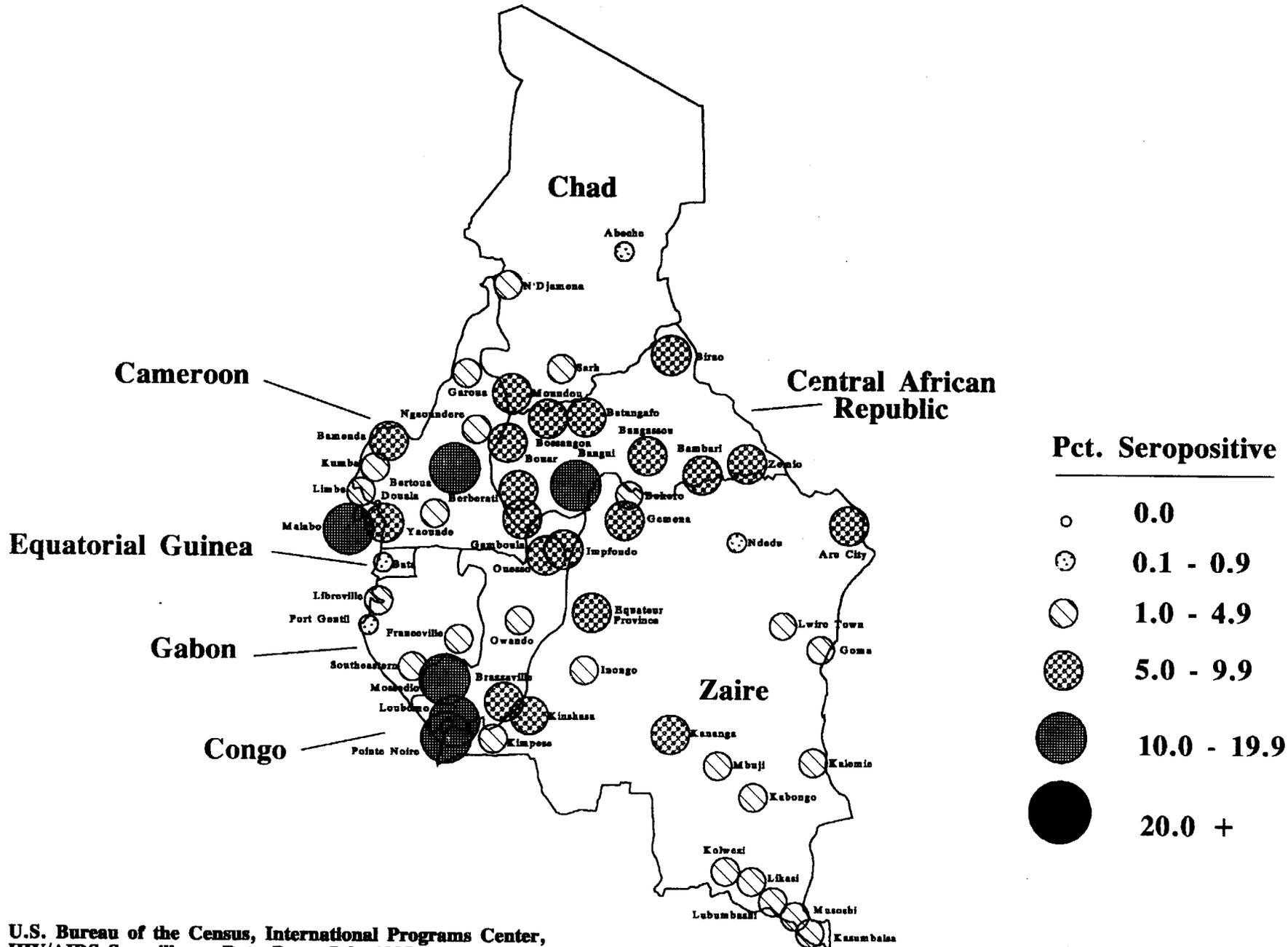
U.S. Bureau of the Census, International Programs Center,  
HIV/AIDS Surveillance Data Base, July 1995.

# Map 7: Seroprevalence of HIV-2 for Low-Risk Populations in West Africa



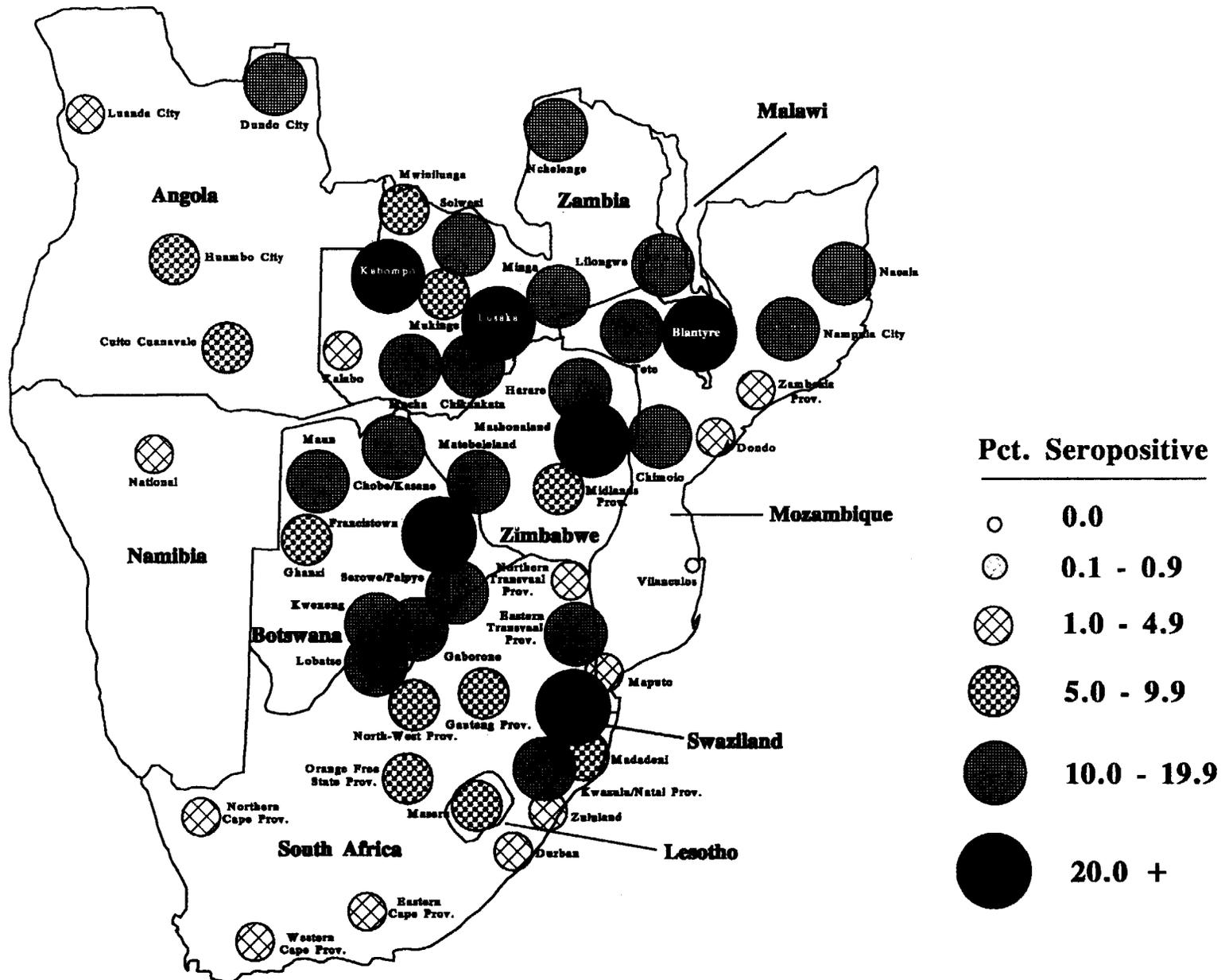
U.S. Bureau of the Census, International Programs Center, HIV/AIDS Surveillance Data Base, July 1995.

# Map 8: Seroprevalence of HIV-1 for Low-Risk Populations in Central Africa

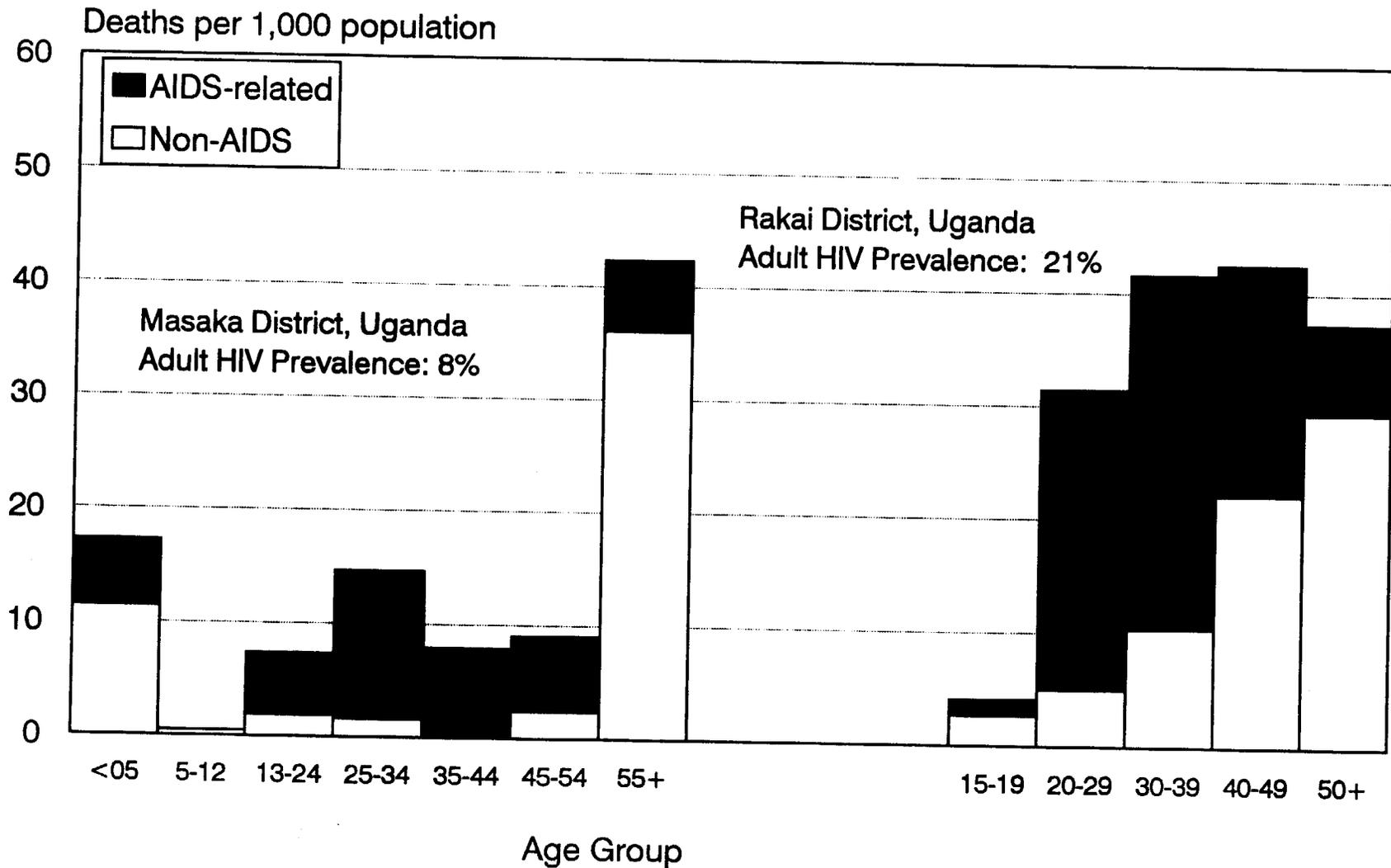


U.S. Bureau of the Census, International Programs Center,  
HIV/AIDS Surveillance Data Base, July 1995.

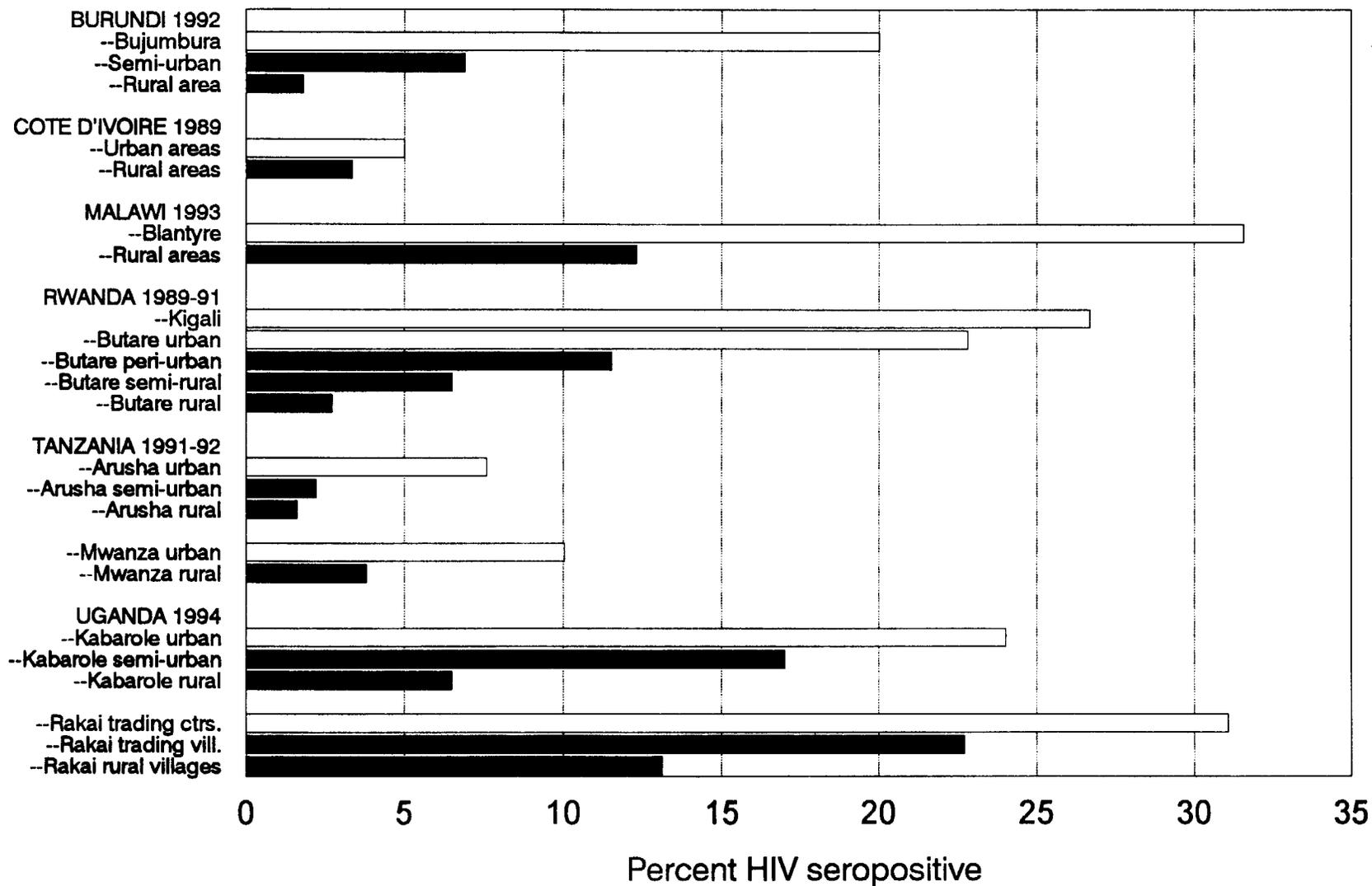
# Map 9: Seroprevalence of HIV-1 for Low-Risk Populations in Southern Africa



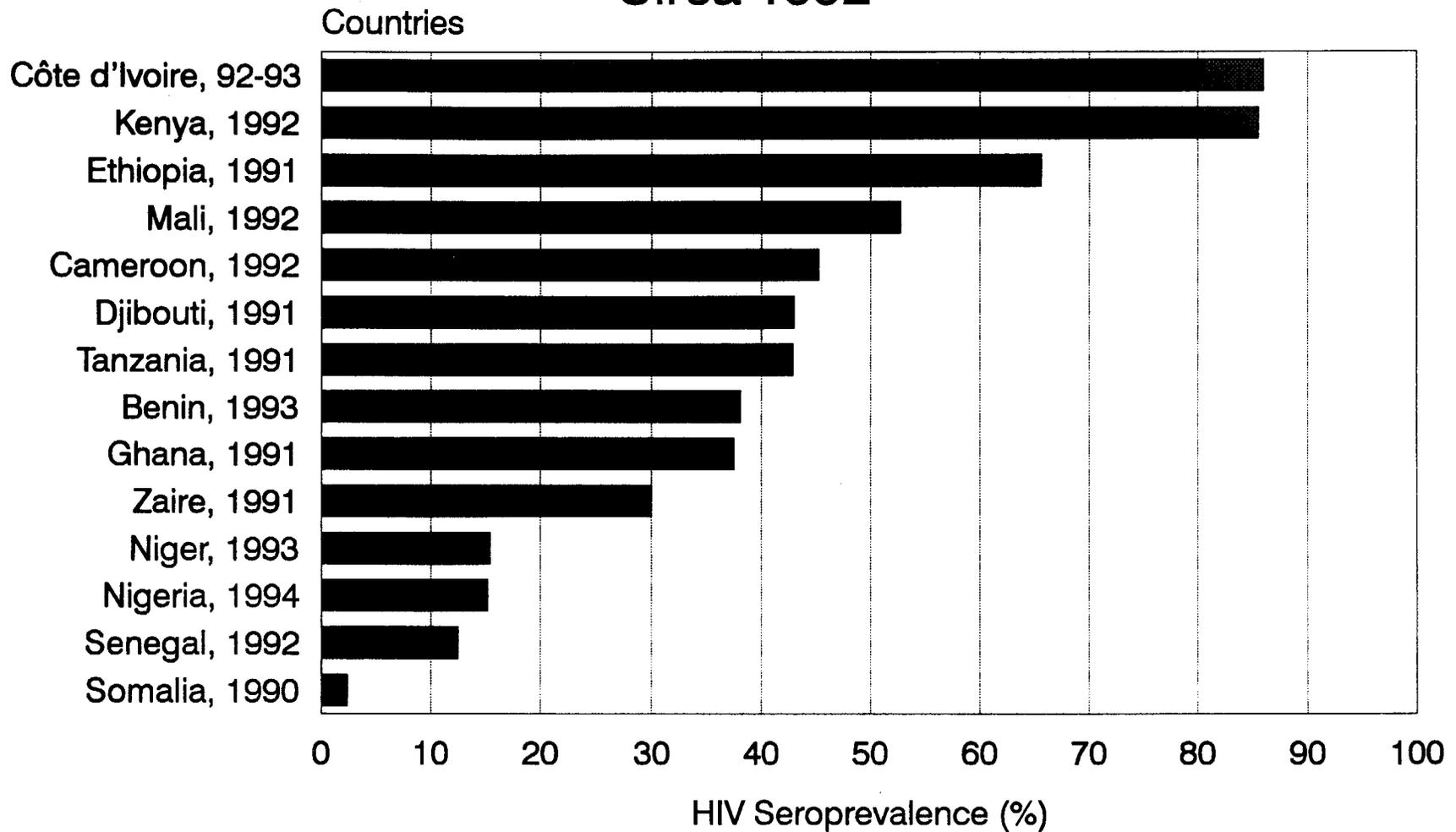
# Figure 1: Empirical Evidence of AIDS Impact on Mortality



## Figure 2: Urban - Rural Differentials in HIV Infection for Africa

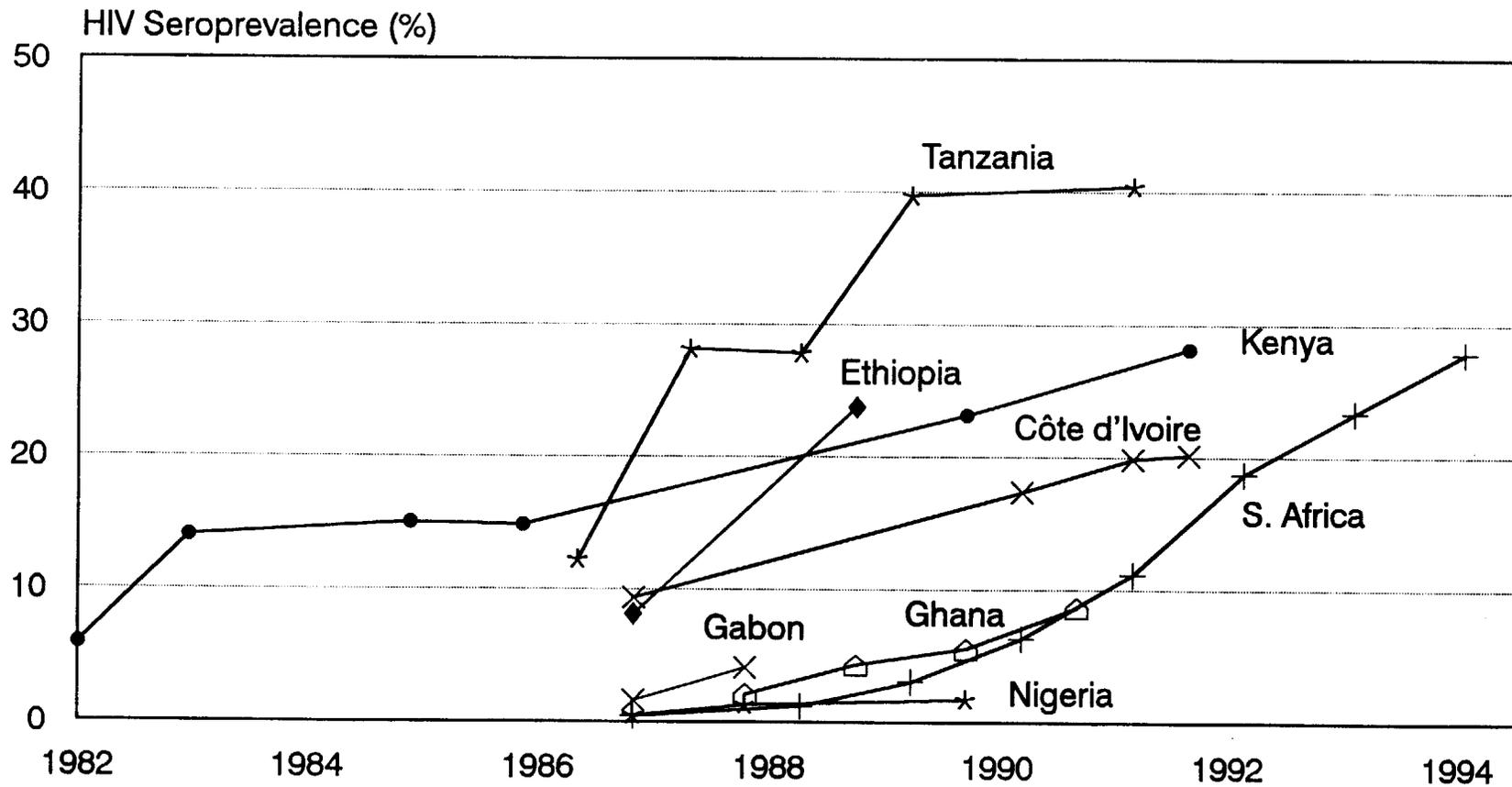


**Figure 3: HIV Seroprevalence for Commercial Sex Workers in Sub-Saharan Africa:  
Circa 1992**



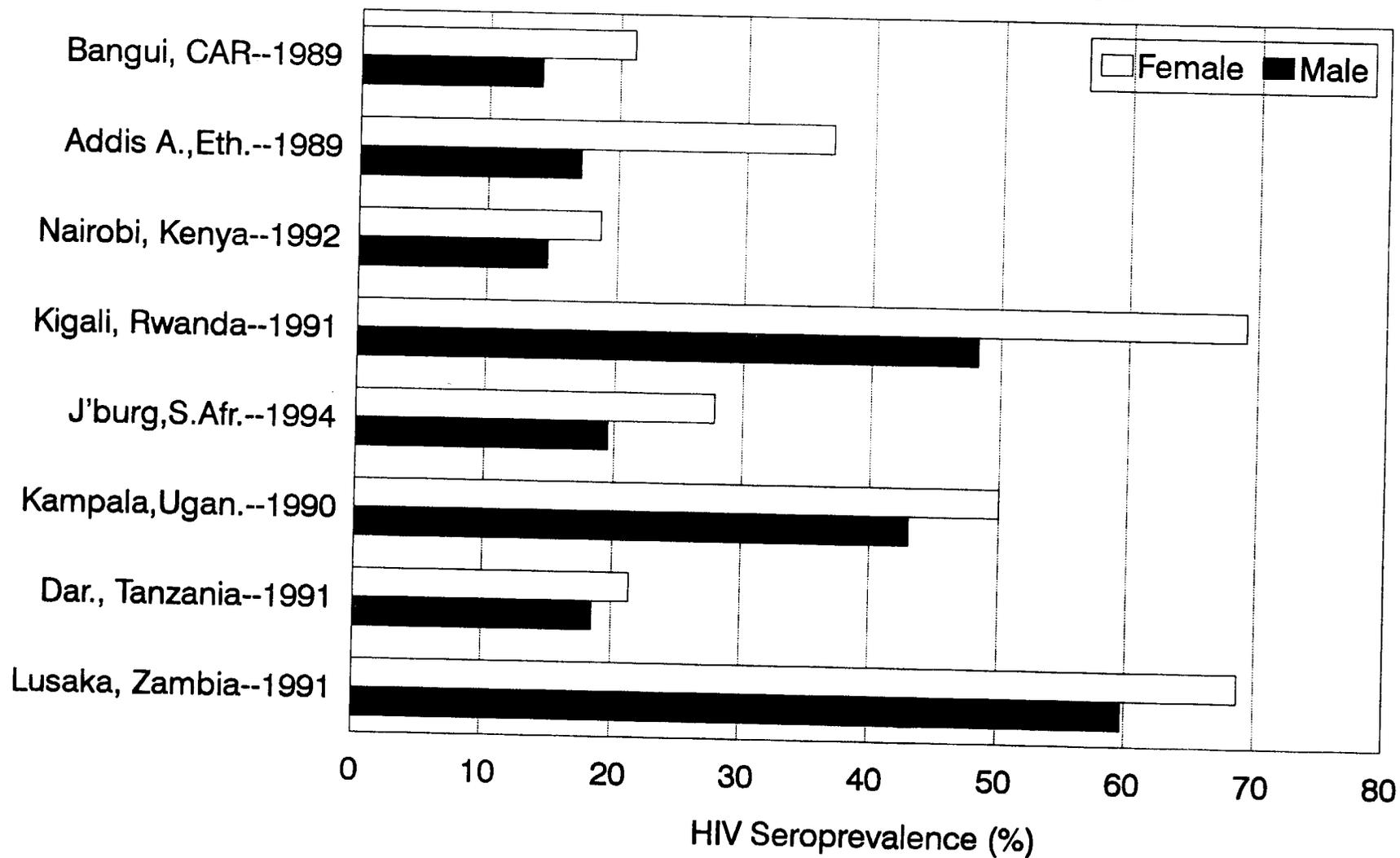
Note: Includes infection from HIV-1 and/or HIV-2

Figure 4: HIV Seroprevalence for STD Patients  
in Urban Areas of Selected African  
Countries: 1982-94



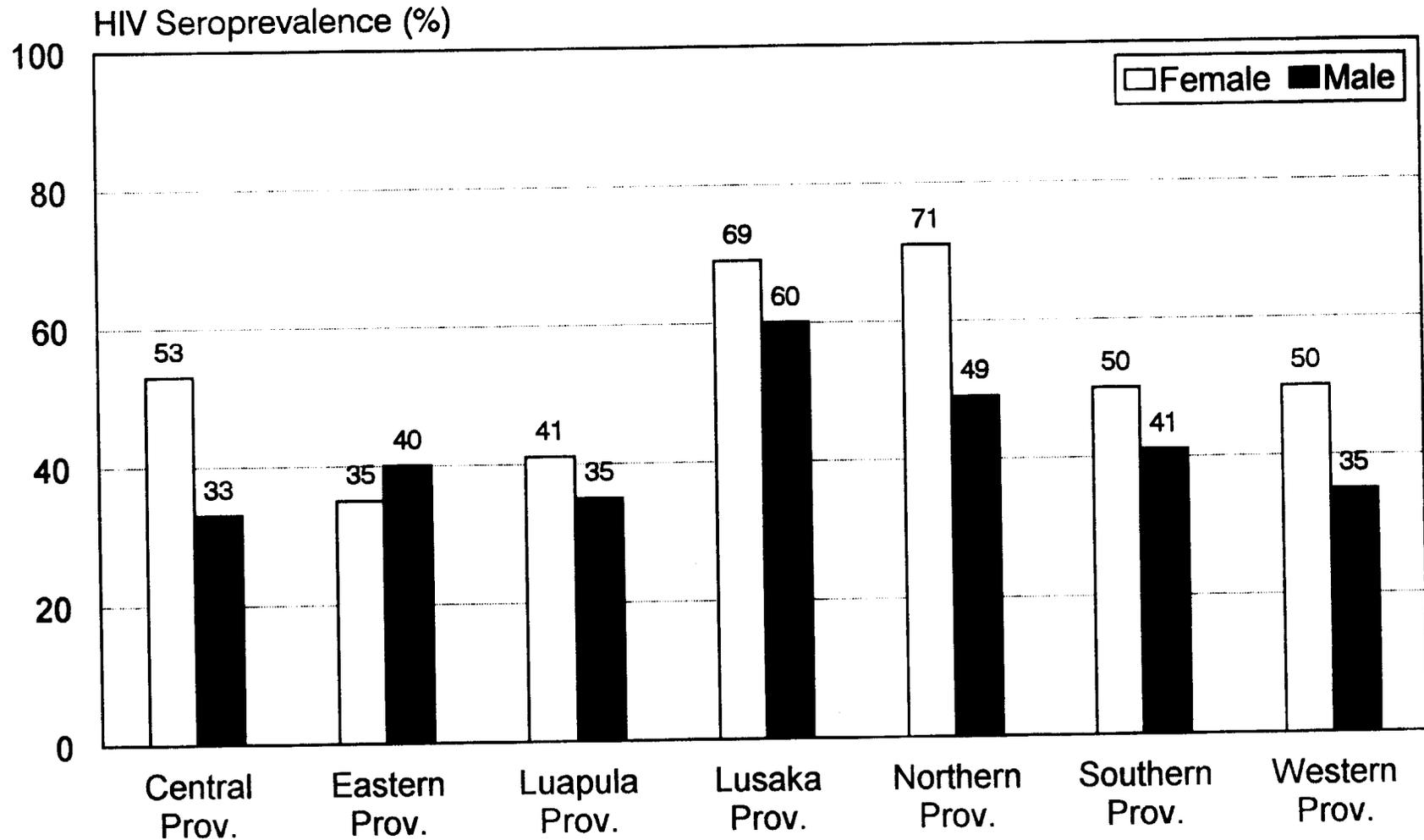
Note: Includes infection from HIV-1  
and/or HIV-2.

Figure 5: HIV Seroprevalence for STD Patients by Sex in Selected African Countries

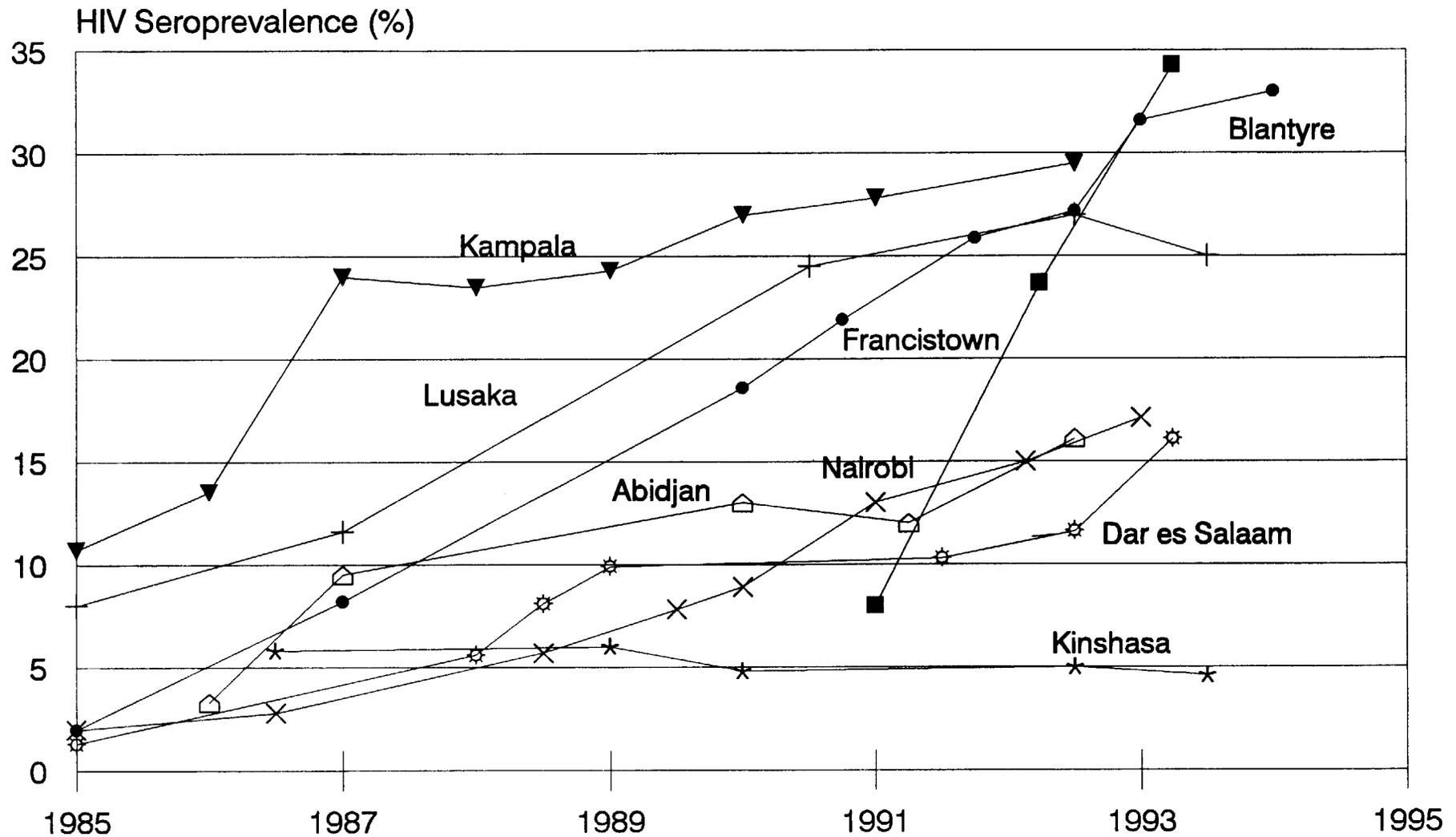


Note: Includes infection from HIV-1 and/or HIV-2.

Figure 6: HIV Seroprevalence for STD Clinic  
Patients in Various Provinces  
Zambia: 1991



# Figure 7: HIV Seroprevalence for Pregnant Women in Selected Urban Areas of Africa: 1985-1994



Note: Includes infection from HIV-1 and/or HIV-2.

Figure 8: HIV Seroprevalence of Adult Population Masaka, Uganda by Age and Sex: 1989-90

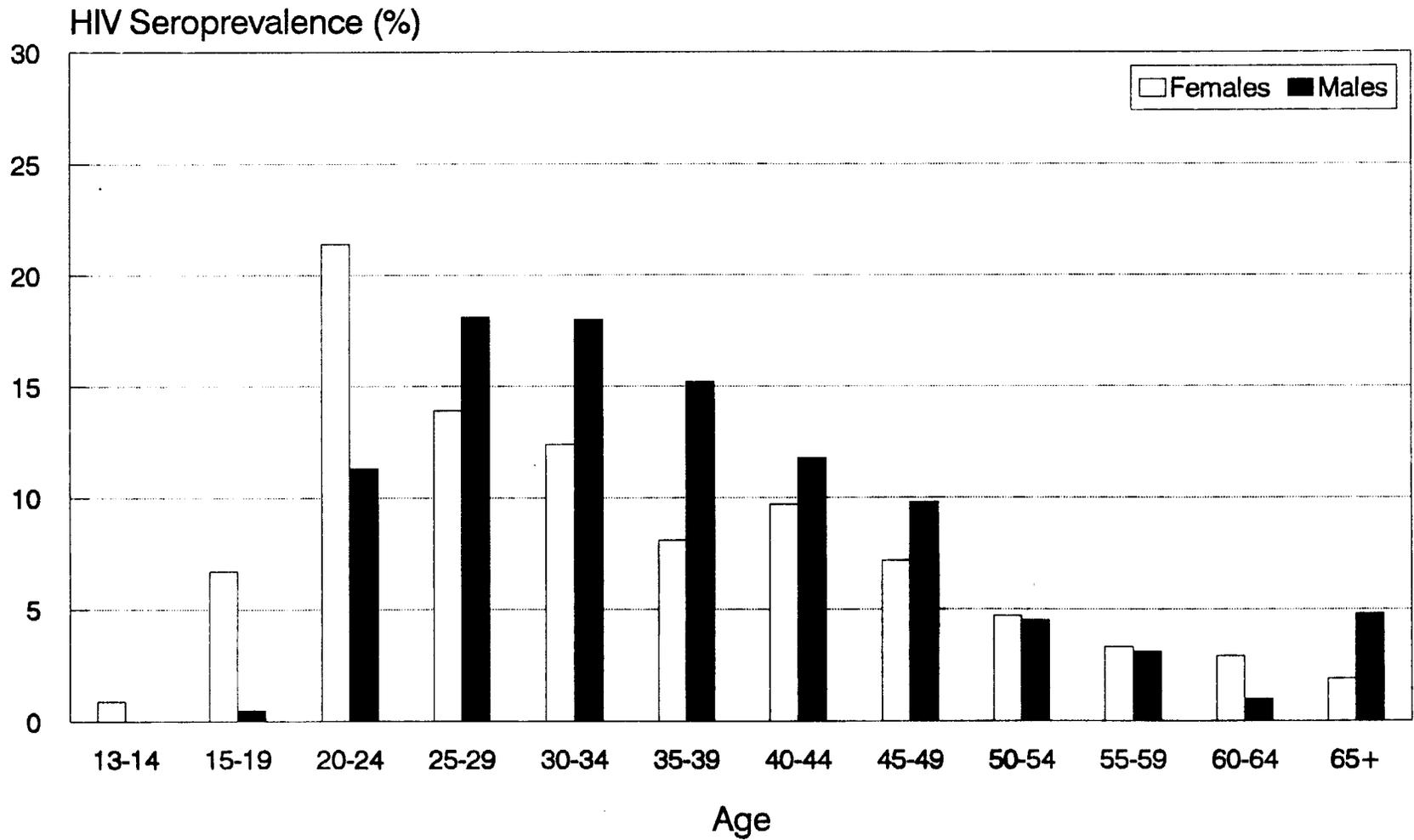


Figure 9: HIV Seroprevalence for Rakai District by Age, Sex, and Residence: 1990

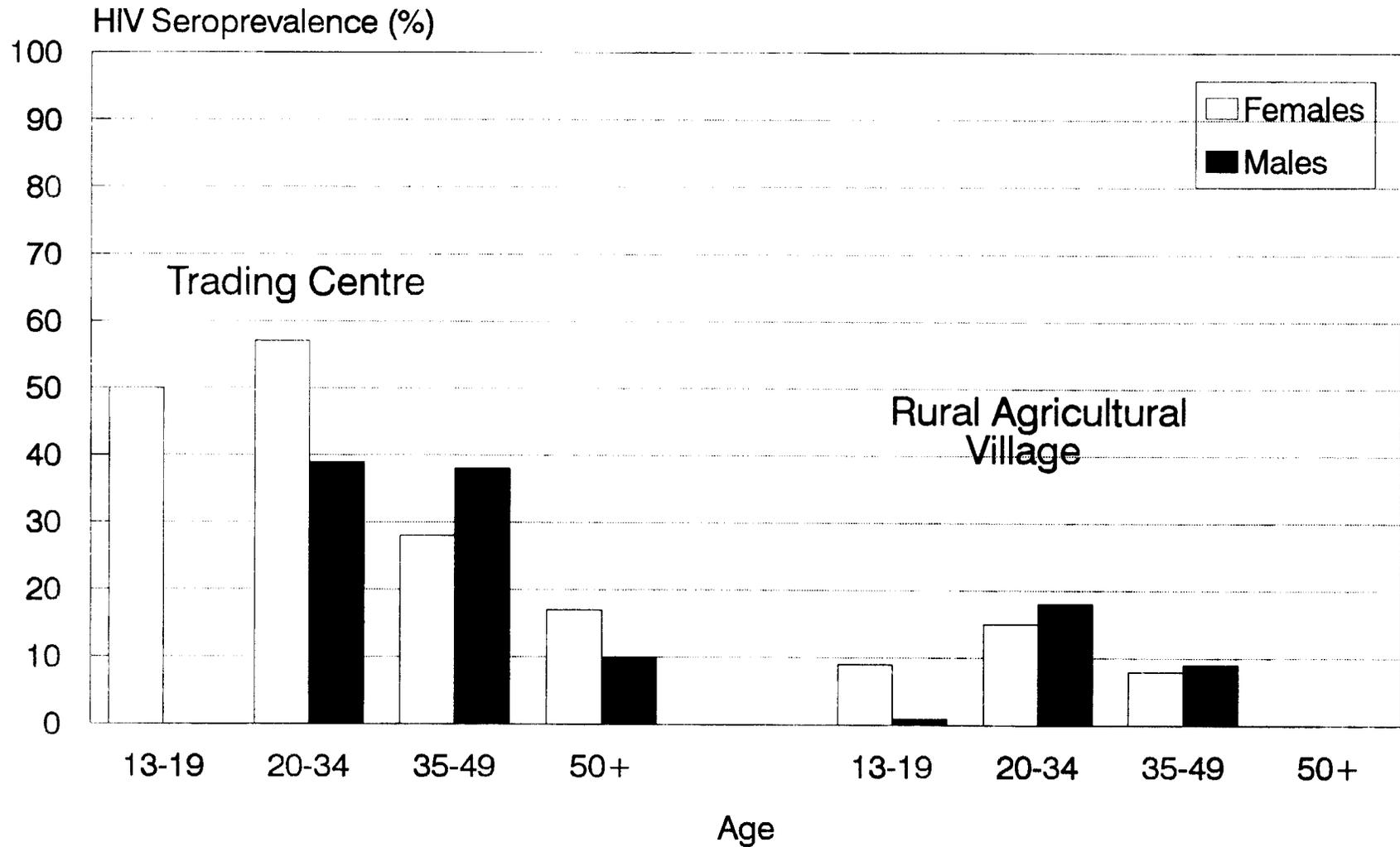
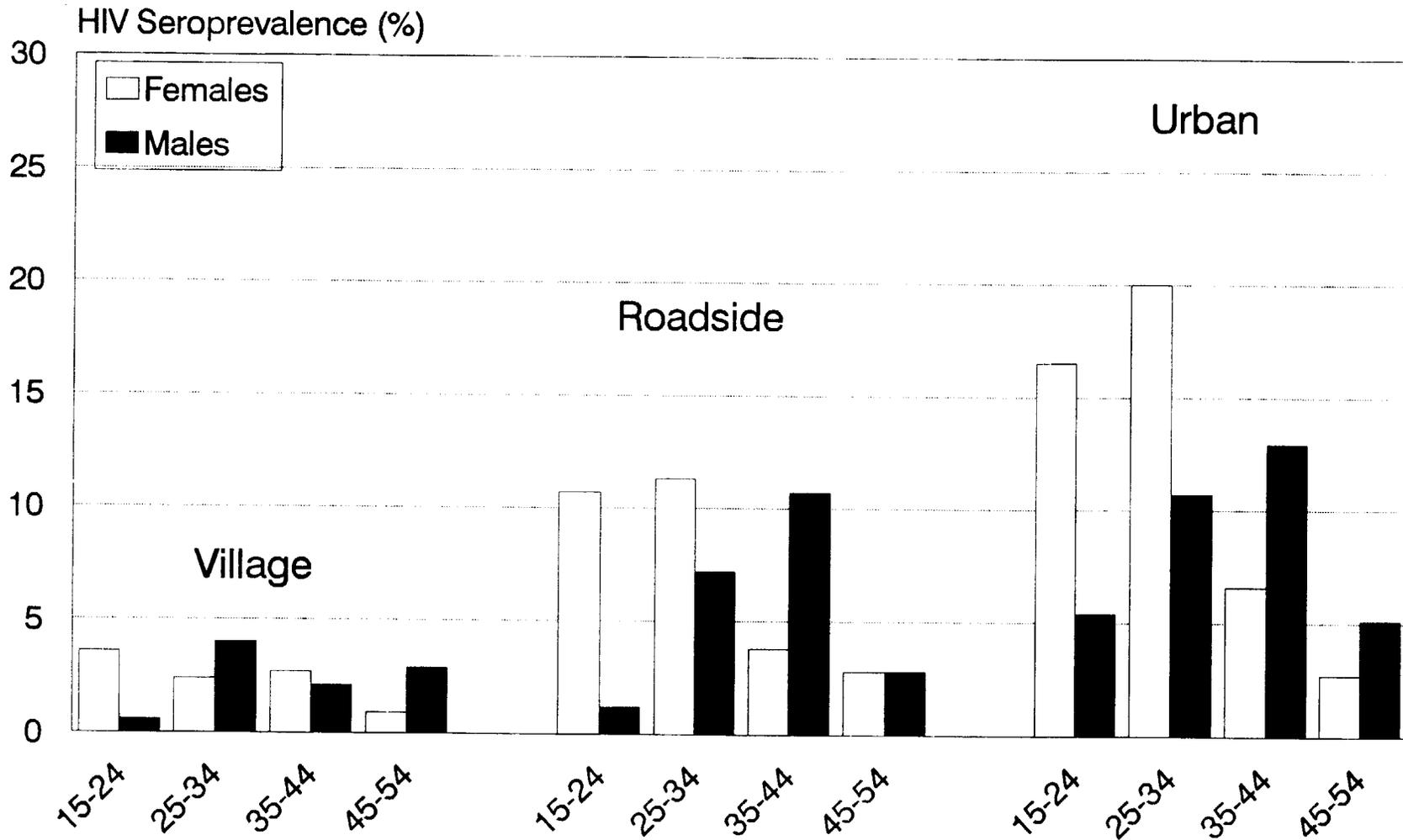
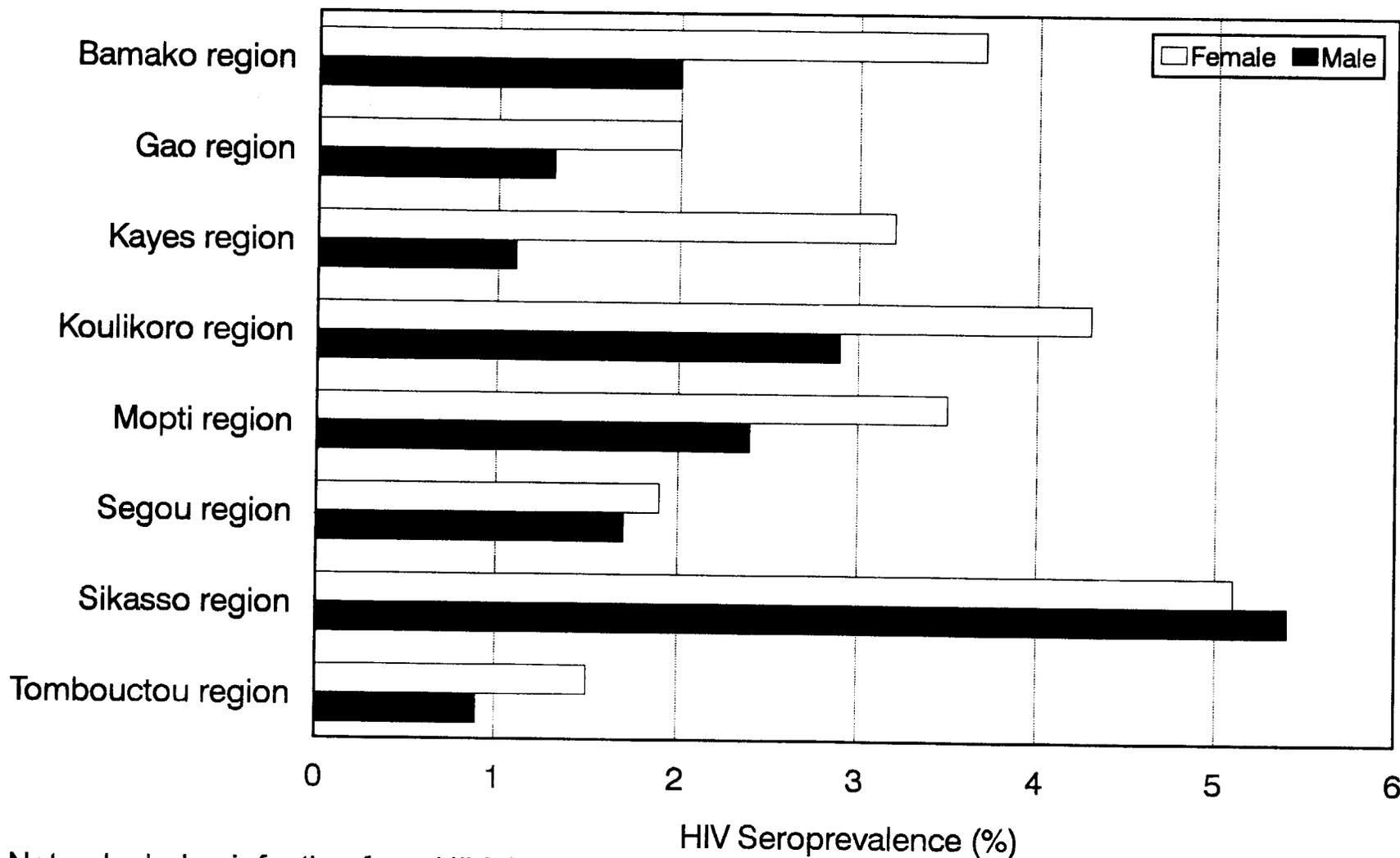


Figure 10: HIV Seroprevalence for Mwanza, Tanzania by Age, Sex, and Residence: 1990-1991



# Figure 11: HIV Seroprevalence for General Population by Region and Sex, Mali: 1992



Note: Includes infection from HIV-1 and/or HIV-2.

## Sources for HIV/AIDS in Africa

The following list contains the complete citation for data used in the graphs and maps of the "HIV/AIDS in Africa" paper.

- A0006 Akar, L., B. Larouze, S. Mabika Wa Bantu, et al., 1987, Distribution of Antibodies to HIV1 in an Urban Community (Arua, Upper Zaire), II International Symposium: AIDS and Associated Cancers in Africa, Naples, Italy, 10/7-9, Poster TH-34.
- A0012 Ayeahunie, S., D. Zewde, F. Ketema, et al., 1988, Seropositivity to HIV-1 Antibodies in Addis Ababa, Ethiopia, IV International Conference on AIDS, Stockholm, 6/13-14, Poster 5044.
- A0032 Andrew, K., T. Kargbo, I. Thorlie, et al., 1989, Prevalence of HIV Seropositivity among STD Patients in Freetown - Sierra Leone, V International Conference on AIDS, Montreal, 6/4-9, Poster W.G.P. 16.
- A0043 Akinsete, I., A. Nasidi, S. A. Egbewunmi, et al., 1989, Seroprevalence of HIV-Infection in Various Groups Tested at the Lagos University Teaching Hospital, Lagos, Nigeria, between ..., IV Internat. Conf.: AIDS and Assoc. Cancers in Africa, Marseille, Oct. 18-20, Poster 400.
- A0046 Andrade, D., L. Leite, S. Theobald, et al., 1989, Taux de Seroprevalence des Anticorps Anti-HIV dans les iles du Cap Vert: Etude par Sondage en Grappe, IV Internat. Conf.: AIDS and Assoc. Cancers in Africa, Marseille, Oct. 18-20, Abstract 047.
- A0065 Almaviva, M., K. Welo, W. Maganga, et al., 1990, Anti-HIV-1 Antibodies among Young, Unpaid Blood Donors from Goma, Northern Kivu, Zaire, AIDS, vol. 4, no. 11, pp. 1162-1163.
- A0071 Ahmed, S. M., E. H. H. M. Kheir, 1990, Sudanese Sexual Behaviour in the Context of Socio-Cultural Norms and the Transmission of HIV, Anthropological Studies Relevant to the Sexual Transmission of HIV, Sonderborg, Denmark, 11/19-22.
- A0081 Aisu, T., M. C. Raviglione, J. P. Narain, et al., 1992, Monitoring HIV-Associated Tuberculosis in Uganda: Seroprevalence and Clinical Features, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster PoC 4023.
- A0086 Asimwe, G., G. Tembo, W. Naamara, et al., 1992, AIDS Surveillance Report: June 1992, Ministry of Health, AIDS Control Programme Surveillance Unit, Entebbe, Uganda, unpublished report.
- A0090 Asamoah-Odei, E. J., P. M. Antwi, A. Asamoah-Adu, et al., 1992, HIV Surveillance among Men Attending STD Clinic in Accra, Ghana, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Abstract T.P.026.
- A0092 Ashu, F. A., R. A. Tanjong, P. B. Tchouwu, et al., 1992, Update on Seroprevalence of HIV Infection in Cameroon, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.008.
- A0101 Asagba, A. O., J. J. Andy, T. Ayele, et al., 1992, HIV Sentinel Surveillance in Nigeria, Nigeria Bulletin of Epidemiology, vol. 2, no. 2, pp. 10-13.
- A0125 Andersson, S., F. Dias, H. Norrgren, et al., 1993, Evaluation of an Alternative Strategy for Confirmation of HIV Infection in an HIV-2 Endemic Country, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract Th.R.T.015.
- A0132 Addad, B., S. Hamdi, A. Bouguermauh, 1993, Prevalence des MST en Consultation de Gynecologie - Obstetrique et dans le Milieu Carceral de la Prostitution, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract W.P.C.076.
- A0143 Alary, M., A. Guedeme, F. Padonou, et al., 1995, Use of a Clinic Algorithm for the Screening of STDs among Female Prostitutes in Benin, IUVDI World STD/AIDS Congress, Singapore, 3/19-23, Focus Session 3.
- A0144 Acquaye, J. K., 1993, Screening of Blood Donors for Antibody to Human Immunodeficiency Virus Type 1, West African Journal of Medicine, vol. 12, no. 2, pp. 93-95.
- B0037 Bailly, C., M. Santiago, M. Abbate, et al., 1988, Situation in Djibouti: Sero Epidemiological Survey, III International Conference: AIDS and Associated Cancers in Africa, Sept. 14-16, Poster.
- B0093 Behets, F., K. Bishagara, A. Disasi, et al., 1992, Diagnosis of HIV Infection with Instrument-Free Assays as an Alternative to the ELISA and Western Blot Testing Strategy: An ..., Journal of Acquired Immune Deficiency Syndromes, vol. 5, no. 9, pp. 878-882.
- B0096 Brown, R., K. Kawunda, 1990, Sero-Surveillance of HIV Infection in Kananga, Zaire, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.35.

## Sources for HIV/AIDS in Africa cont.

- B0108 Benoit, S. N., G. M. Gershy-Damet, A. Coulibaly, et al., 1990, Seroprevalence of HIV Infection in the General Population of the Cote d'Ivoire, West Africa, *Journal of Acquired Immune Deficiency Syndromes*, vol. 3, no. 12, pp. 1193-1196.
- B0122 Brattegaard, K., R. Doorly, J. Kouadio, et al., 1991, Alternative Screening and Supplemental Testing Strategies for HIV-1 and HIV-2 Infections, VII International Conference on AIDS, Florence, Italy, 6/16-21, Abstract M.C.88.
- B0126 Barongo, L. R., M. W. Borgdorff, F. F. Moshia, et al., 1992, The Epidemiology of HIV-1 Infection in Urban Areas, Roadside Settlements and Rural Villages in Mwanza Region, Tanzania, *AIDS*, vol. 6, no. 12, pp. 1521-1528.
- B0127 Bazabana, M., J. C. Loukaka, P. M'Pele, et al., 1991, Tendence de l'Infection a VIH chez les Femmes Encientes au Congo, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster M.A.268.
- B0162 Bazabana, M. M., J. C. Loukaka, M. Makuwa, et al., 1992, Surveillance par Reseau de Postes Sentinelles au Niveau District 1991 - 1992: Experience Congolaise, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.032.
- B0169 Ben Salem, N., M. Ben Rachid, C. Hankins, et al., 1993, STD/HIV Seroprevalence among Women Attending an Antenatal Clinic in Tunis, IX International Conference on AIDS, Berlin, 6/6-11, Poster PO-C09-2792.
- B0219 Baidy, B. L., M. A. Khalifa, M. Adimourty, et al., 1993, Seroprevalence du VDRL et VIH chez les Donneurs de Sang, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract M.P.A.021.
- B0224 Bassabi, K., W. Babombena, E. Delaporte, et al., 1993, Seroprevalence des Infections a VIH et VHC chez les Hommes Jeunes du Togo, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract W.O.P.011.
- B0227 Behets, F. M. T., G. Liomba, G. Lule, et al., 1995, Sexually Transmitted Diseases and Human Immunodeficiency Virus Control in Malawi: A Field Study of Genital Ulcer Disease, *Journal of Infectious Diseases*, vol. 171, no. 2, pp. 451-455.
- B0233 Buzingo, T., A. Kamuragiye, B. Herch, et al., 1993, Epidemiologie au VIH/SIDA au Burundi, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Poster Th.P.C.088.
- B0242 Bulterys, M., A. Chao, P. Habimana, et al., 1994, Incident HIV-1 Infection in a Cohort of Young Women in Butare, Rwanda, *AIDS*, vol. 8, no. 11, pp. 1585-1591.
- B0243 Bogaerts, J., L. Kestens, W. Martinez-Tello, et al., 1994, Effect of HIV on Clinical Presentation, Etiology and Response to Therapy of Genital Ulcers in Rwanda, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Poster P.C.0580.
- B0254 Barreto, A., B. De Hulsten, A. Noya, et al., 1995, Review of the First 6 Years of Functioning of the STD/AIDS Programme in Mozambique, IUVDT World STD/AIDS Congress, Singapore, 3/19-23, Special Session.
- B0255 Bourgeois, A., Y. Minko-Ndong, D. Hentzel, et al., 1995, Evaluation of Different Flowcharts for the Screening of STDs in Pregnant Women in Libreville, Gabon, IUVDT World STD/AIDS Congress, Singapore, 3/19-23, Special Session.
- C0006 Crespi, M., B. D. Schoub, S. F. Lyons, et al., 1987, Perspective of AIDS in South Africa, II International Symposium: AIDS and Associated Cancers in Africa, Naples, Italy, 10/7-9, Poster TH-45.
- C0038 Carswell, J. W., 1987, HIV Infection in Healthy Persons in Uganda, *AIDS*, vol. 1, no. 4, pp. 223-227.
- C0088 Christiansen, C. B., P. Wantzin, J. F. Shao, et al., 1989, Prevalence of HIV-1 and HIV-2 among Low-Risk Groups in Tanzania, IV Internat. Conf.: AIDS and Assoc. Cancers in Africa, Marseille, Oct. 18-20, Abstract 086.
- C0093 Coulibaly, Y. N., J. L. Sankale, A. Gueye, et al., 1989, HIV-1 and HIV-2 in Mauritania, IV Internat. Conf.: AIDS and Assoc. Cancers in Africa, Marseille, Oct. 18-20, Abstract 028.
- C0109 Chikwem, J. O., I. Mohammed, H. G. Bwala, et al., 1990, Human Immunodeficiency Virus (HIV) Infection in Patients Attending a Sexually Transmitted Diseases Clinic in Borno State of ..., *Tropical and Geographical Medicine*, vol. 42, pp. 17-22.
- C0122 Corwin, A. L., J. G. Olson, M. A. Omar, et al., 1991, HIV-1 in Somalia: Prevalence and Knowledge among Prostitutes, *AIDS*, vol. 5, no. 7, pp. 902-904.
- C0141 Couzineau, B., J. Bouloumie, P. Hovette, et al., 1991, Prevalence of HIV Infection in a Target Population in the Republic of Djibouti, *Medecine Tropicale*, vol. 51, no. 4, pp. 485-486.
- C0183 Cossa, H. A., S. Gloyd, R. G. Vaz, et al., 1994, Syphilis and HIV Infection among Displaced Pregnant Women in Rural Mozambique, *International Journal of STD and AIDS*, vol. 5, pp. 117-123.

## Sources for HIV/AIDS in Africa cont.

- D0027 Delaporte, E., A. Dupont, M. Merlin, et al., 1988, Seroepidemiological Survey of HIV-1 and HIV-2 Antibodies in Gabon, *AIDS*, vol. 2, no. 2, pp. 136-137.
- D0030 Denis, F., G. Gershy-Damet, M. Lhuillier, et al., 1987, Prevalence of Human T-Lymphotropic Retroviruses Type III (HIV) and Type IV in Ivory Coast, *Lancet*, Feb. 21, vol. 1, pp. 408-411.
- D0067 Decroix, Y., J. De Saint Martin, 1990, Seroprevalence of HIV Infection in Arlit, Northern Niger, *Transactions of the Royal Society of Tropical Medicine and Hygiene*, vol. 84, no. 1, p. 147.
- D0089 Doorly, R., A. Kadio, K. Brattegaard, et al., 1991, Trends in HIV-1 and HIV-2 Infections in Abidjan, Cote d'Ivoire, 1987-1990, VII International Conference on AIDS, Florence, Italy, 6/16-21, Session M.C.42.
- D0095 Davo, N., C. Adjovi, I. Zohoun, et al., 1991, Sentinel Serosurveillance of HIV in Benin: First Results from 1990, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster T.A.129.
- D0096 Diaw, I., I. Thior, T. Siby, et al., 1991, Prevalence du VIH et MST Majeures chez les Prostituees Nouvellement Inscrites, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Session W.O.128.
- D0105 Diaw, I., T. Siby, I. Thior, et al., 1992, HIV and STD Infections among Newly Registered Prostitutes in Dakar, VIII International Conference on AIDS, Amsterdam, 7/19-24, Abstract PoC 4333.
- D0112 Diallo, M. O., V. Traore, M. Maran, et al., 1992, Sexually Transmitted Diseases and HIV-1/HIV-2 Infections among Pregnant Women Attending an Antenatal Clinic in Abidjan, Cote ..., VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.041.
- D0117 Dlamini-Kapenda, W., 1993, First HIV Sentinel Surveillance in Swaziland, 1992, February, unpublished report.
- D0120 Dada, A. J., F. Oyewole, R. Onofowokan, et al., 1993, Demographic Characteristics of Retroviral Infections (HIV-1, HIV-2, and HTLV-1) among Female Professional Sex Workers in ..., *Journal of Acquired Immune Deficiency Syndromes*, vol. 6, no. 12, pp. 1358-1363.
- D0131 De Sousa, P., A. Noya, A. Barreto, 1993, Resettlement in Post-War Mozambique: Implications for STD/HIV Control, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Poster Session.
- D0132 Diarra Aichata, S., O. F. Sangare, 1993, Strategie de Diagnostic Clinique des MST Experience du Projet FHI au Mali, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract M.P.B.048.
- D0137 Dietrich, M., A. A. Hoosen, J. Moodley, et al., 1992, Urogenital Tract Infections in Pregnancy at King Edward VIII Hospital, Durban, South Africa, *Genitourinary Medicine*, vol. 68, pp. 39-41.
- D0141 Dieng, A., M. S. Diallo, K. S. Lakiss, et al., 1993, Seroprevalence de l'Infection a VIH et de la Syphilis chez les Femmes Consultant pour Ecoulement Vaginal avec ou sans ..., VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Session W.O.P.037.
- D0145 Davo, N., C. Adjovi, S. Anagonou, et al., 1993, Evolution de l'Epidemie VIH/SIDA au Benin, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Session W.P.C.082.
- E0023 Ekpini, R. A., G. Adjorlolo, T. Sibailly, et al., 1991, Prospective Study of HIV-1 and HIV-2 Mother-to-Child Transmission, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster M.A.247.
- E0042 Ettiegne-Traore, V., P. D. Ghys, M. O. Diallo, et al., 1993, Dual HIV-1 and HIV-2 Reactivity in Female Commercial Sex Workers in Abidjan, Cote d'Ivoire, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Session T.R.T.023.
- F0018 Foucault-Fretz, C., J. C. Gluckman, J. J. Fomel, et al., 1989, Double HIV-1 and HIV-2 Seropositivity in Guinea, V International Conference on AIDS, Montreal, 6/4-9, Poster T.G.P. 28.
- F0063 Fox, E., E. Karita, J. Twagirakristu, et al., 1991, The Progression of the HIV Epidemic in Rwanda, Directeur du PNLS, Minisante, B. P. 84, Kigali, Rwanda, draft manuscript.
- F0073 Fylkesnes, K., R. Mubanga Musonda, N. P. Luo, et al., 1993, HIV Infection in Pregnant Women in Zambia 1990-93: HIV among Women in Zambia, The Epidemiology and Research Unit, National AIDS/STS/TB and Leprosy Programme, Lusaka, unpublished report, pp. 1-22.
- F0076 Foster, G., R. Shakespeare, F. Chinemana, et al., 1995, Orphan Prevalence and Extended Family Care in a Peri-Urban Community in Zimbabwe, *AIDS Care*, vol. 7, no. 1, pp. 3-17.

### Sources for HIV/AIDS in Africa cont.

- G0061 Gresenguet, G., L. Belec, P. M. V. Martin, et al., 1991, Seroprevalence de l'Infection a VIH1 au Sein des Consultants de la Clinique des Maladies Sexuellement Transmissibles de ..., Bulletin de la Societe de Pathologie Exotique, vol. 84, no. 3, pp. 240-246.
- G0071 Goubau, P., K. Kayembe, H. Carton, et al., 1990, Absence of Relationship between HIV and HTLV Seropositivity in General Population, Zaire, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster W.P.B.13.
- G0087 Gershy-Damet, G. M., K. Koffi, B. Soro, et al., 1991, Seroepidemiological Survey of HIV-1 and HIV-2 Infections in the Five Regions of Ivory Coast, AIDS, vol. 5, no. 4, pp. 462-463.
- G0091 Giasuddin, A. S. M., M. M. Ziu, I. A. Shaafie, et al., 1991, Brucella and HIV-1 Antibodies in Libyan Blood Donors, Journal of Infection, vol. 22, no. 3, pp. 294-296.
- G0095 Grant, R. M., N. S. Hellmann, P. S. Nsubuga, et al., 1992, Trends of HIV Seroprevalence and Risk Behaviors in STD Patients in Uganda, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster PoC 4022.
- G0105 Gichangi, P., M. Temmerman, A. F. Mohamed, et al., 1992, Rapid Increase in HIV-1 Infection and Syphilis between 1989 and 1991 in Pregnant Women in Nairobi, Kenya, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster PoC 4029.
- G0109 Garin, B., D. Jeannel, K. Kazadi, et al., 1993, Introduction of HIV-1 in a Rural City of Zaire, Annales de la Societe Belge de Medicine Tropicale, vol. 73, no. 2, pp. 143-147.
- G0143 Green, S. D. R., W. A. M. Cutting, J. L. K. Mokili, et al., 1994, Stable Seroprevalence of HIV-1 in Antenatal Women in Rural Bas-Zaire, 1988-1993, AIDS, vol. 8, no. 3, pp. 397-398.
- G0146 Gallin, M. Y., A. Z. Adams, E. A. C. Gbaguidi, et al., 1993, The Prevalence of Antibodies to HIV-1 and HIV-2 in Onchocerciasis-Endemic Rural Areas in Southern Benin, AIDS, vol. 7, no. 11, pp. 1534-1536.
- G0147 Garcia-Calleja, J. M., P. Ngoumou, A. Boupda, et al., 1992, HIV Seroprevalence Study among Commercial Sex Workers in Yaounde and Douala, AIDS Control Unit, Ministry of Health, Yaounde, Sept. 92.
- H0028 Hira, S., G. Bhat, J. Kamanga, et al., 1989, Perinatal Transmission of HIV-1 in Lusaka, Zambia, British Medical Journal, vol. 299, no. 6718, pp. 1250-1252.
- H0055 Harry, T. O., W. Gashau, O. Ekenna, et al., 1990, Growing Threat of HIV Infection in a Low Prevalence Area, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.21.
- H0061 Herald, The, 1991, One in Six Expectant Mothers HIV Positive, The Herald Newspaper, Thursday, March 21, p. 1.
- H0066 Hellmann, M. S., S. Desmond-Hellman, P. S. J. Nsubuga, et al., 1991, Genital Trauma During Sex is a Risk Factor for HIV Infection in Uganda, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster M.C.3079.
- H0068 Hira, S., J. Kamanga, G. Tembo, et al., 1991, Control Strategies in STD/HIV Clinic in Zambia: a Demonstration Project, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster W.C.3082.
- H0086 Hasan, M., D. Barsoum, 1992, Acceptability of Screening for HIV Infection among Women Attending Family Planning Clinics in Cairo, Egypt, VIII International Conference on AIDS, Amsterdam, 7/19-24, Abstract PoD 5143.
- H0094 Harry, T. O., D. N. Bukbuk, A. Idrisa, et al., 1993, HIV Infection among Pregnant Women: A Worsening Situation in Maiduguri, Nigeria, IX International Conference on AIDS, Berlin, 6/6-11, Poster PO-C11-2862.
- H0106 Habi, G., A. Hassane, M. B. Amsagana, 1993, MST/SIDA: Enquete chez les Femmes Enceintes en Milieu Rural (Departement de Tahoua) Niger, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Poster Th.P.C.074.
- H0108 Haukenes, G., J. Shao, F. Mhalu, et al., 1992, The AIDS Epidemic in Tanzania: Rate of Spread of HIV in Blood Donors and Pregnant Women in Dar es Salaam, Scandinavian Journal of Infectious Diseases, vol. 24, pp. 701-706.
- H0109 Harms, G., T. Kirsch, M. Rahelimirana, et al., 1994, HIV and Syphilis in Madagascar, AIDS, vol. 8, no. 2, pp. 279-280.
- H0113 Harry, T., 1994, Seven Years of HIV/AIDS in Maiduguri, Nigeria, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Abstract P.C.0043.
- H0116 Hasan, M. A., 1994, Sexual Behaviour of Inhabitants of Cemeteries in Cairo, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Abstract 1180.

### Sources for HIV/AIDS in Africa cont.

- H0117 Hawkes, S., H. Whittle, R. Jagne, et al., 1994, The Increase in HIV-1 Prevalence in Commercial Sex Workers (CSWs) in the Gambia, and Association with Other STDs Including ..., Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Session 393C.
- I0027 Irlam, J., J. Stuart, 1993, AIDS Brief: A Newsletter of HIV/AIDS in Natal/KwaZulu, Epidemiological Comments, vol. 20, no. 11, p. 204.
- J0001 Johns Hopkins University, 1986, AIDS -- A Public Health Crisis, Population Information Program, Population Reports, Issues in World Health, July-Aug., Series L, no. 6, pp. 194-228.
- J0009 Josse, R., E. Delaporte, A. Trebuco, et al., 1988, Seroepidemiological Survey of HIV Infection in Equatorial Guinea, III International Conference: AIDS and Associated Cancers in Africa, Sept. 14-16, Poster TP 12.
- J0016 Jackson, H., 1993, AIDS Update in Zimbabwe: AIDS Cases, ZAINET AIDS News, vol. 1, no. 3, pp. 10-13.
- J0028 Jeannel, D., B. Garin, 1992, HTLV-1 and HIV in the Republic of Guinea and in Inongo, Zaire, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster W.RT.Jeannel.
- K0060 Kosia, A., T. Kargbo, E. Makiu, et al., 1989, Prevalence of HIV-I and HIV-II among Blood Donors in Sierra, Leone, IV Internat. Conf.: AIDS and Assoc. Cancers in Africa, Marseille, Oct. 18-20, Poster 390.
- K0073 Kaptue, L., L. Zekeng, P. Feldblum, et al., 1990, HIV-2 Infection among High Risk Groups in Yaounde, Cameroon, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster W.P.B.3.
- K0096 Kanyama, I. D. A., 1991, Sentinel Surveillance of HIV Infection in Northern Zambia, VII International Conference on AIDS, Florence, Italy, 6/16-21, Abstract M.C.3301.
- K0117 Kivuvu, M., M. Tuliza, B. Malele, et al., 1991, HIV Infection and Other STD among Kinshasa Prostitutes: a Comparison between 1988 and 1991, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Session W.O.130.
- K0127 Karita, E., W. Martinez, P. Van de Perre, et al., 1993, HIV Infection among STD Patients - Kigali, Rwanda, 1988 to 1991, International Journal of STD and AIDS, vol. 4, no. 4, pp. 211-213.
- K0140 Kizonde, K., P. Kalonji, K. Magazani, et al., 1992, Infection a VIH Plus Rare a Kasumbalesa (Zaire) Qu'en Zambie Avoisinante, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Abstract T.P.011.
- K0142 Kimani, J., I. Mclean, G. Maitha, et al., 1992, An Activated Charcoal Medium in the Primary Isolation of H. Ducreyi, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Abstract W.P.197.
- K0159 Killewo, J., A. Sandstrom, G. Kuesigabo, et al., 1993, Acceptability of Voluntary HIV Testing in a Rural Village in Tanzania: A Pilot Study, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract Th.R.T.007.
- K0160 Kalengayi, M. R., N. J. Ilunga, M. R. Nsiala, et al., 1993, HIV and Syphilis Seroprevalence and Risk Factors in Pregnant Women at Antenatal Clinic, Kinshasa University Hospital, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract Th.P.B.052.
- K0165 Kline, R. L., A. Dada, W. Blattner, et al., 1994, Diagnosis and Differentiation of HIV-1 and HIV-2 Infection by Two Rapid Assays in Nigeria, Journal of Acquired Immune Deficiency Syndromes, vol. 7, no. 6, pp. 623-626.
- L0022 Lopes Martins, J., W. F. Canas Ferreira, E. Prieto, et al., 1988, Study of HIV-1 and HIV-2 Infection in Sao Tome Island, III International Conference: AIDS and Associated Cancers in Africa, Sept. 14-16, Poster TP 5.
- L0063 Luyeye, M., M. Gerniers, N. Lebughe, et al., 1990, Prevalence et Facteurs de Risque Pour les MST Chez les Femmes Enceintes dans les Soins de Sante Primaires a Kinshasa, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.C.8.
- L0065 Lauwers, M., N. N. Nzila, P. Goubau, et al., 1990, Evaluation of the WHO Clinical Case-Definition of AIDS in a Semi-Rural Setting in Gemena, Zaire, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Abstract F.P.B.24.
- L0077 Le Guenno, B., G. Pison, C. Enel, et al., 1992, HIV-2 Prevalence in Three Rural Regions of Senegal: Low Levels and Heterogeneous Distribution, Transactions of the Royal Society of Tropical Medicine and Hygiene, vol. 86, no. 3, pp. 301-302.

### Sources for HIV/AIDS in Africa cont.

- L0086 Lankoande, S., A. Rochereau, D. S. Mugrditchian, et al., 1991, Etiologies of Urethritis and GUD in Young Men Attending Health Centers in Bobo-Dioulasso, Burkina Faso, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Session W.O.124.
- L0105 Lobe, V. E., R. Moyo, D. Mfonfu, et al., 1992, Prevalence of HIV Infection in Kumba, Cameroon, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.009.
- L0107 Louis, J. P., R. Trebucq, R. Migliani, et al., 1992, Avancee du Front Epidemique de L'Infection a VIH 1 en Afrique Centrale, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.O.008.
- L0108 Lisekie, F., H. Grosskurth, A. Klokke, et al., 1992, Comparison of Sentinel and Cross-Sectional Study Data: Is Sentinel Surveillance a Useful Tool to Monitor the HIV/AIDS Epidemic?, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.035.
- M0096 Mhalu, F., U. Bredberg-Raden, E. Mbeni, et al., 1987, Prevalence of HIV Infection in Healthy Subjects and Groups of Patients in Tanzania, AIDS, vol. 1, no. 4, pp. 217-221.
- M0107 Mohammed, I., A. Nasidi, J. O. Chikwem, et al., 1989, Nigeria - A Possible Buffer Zone for HIV in Africa, IV Internat. Conf.: AIDS and Assoc. Cancers in Africa, Marseille, Oct. 18-20, Poster 033.
- M0108 Mmiro, F., C. Ndugwa, P. Kataaha, et al., 1989, HIV Infection and Pregnancy in Mulago Hospital: Preliminary Data, IV Internat. Conf.: AIDS and Assoc. Cancers in Africa, Marseille, Oct. 18-20, Poster 160.
- M0134 McCarthy, M. C., El Hag, A. E.T., 1990, HIV-1 Infection in Juba, Southern Sudan, VI International Conference on AIDS, San Francisco, 6/20-24, Poster F.C.605.
- M0138 Ministry of Health (Mozambique), 1989, HIV Seroprevalence: Blood-Bank Mozambique, Unpublished.
- M0143 Mingle, J., M. Osei-Kwesi, P. Antwi, et al., 1990, HIV-1 and HIV-2 Seroprevalence in Three Population Groups in Ghana, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.5.
- M0146 Mefane, C., D. Benoni, M. Guerch, et al., 1989, Seroprevalence des Infections a Retrovirus Humains a Libreville (Gabon), Medecine d'Afrique Noire, vol. 36, no. 6, pp. 491-496.
- M0149 Maitha, G. M., J. M. Simwa, F. A. Plummer, 1990, HIV Seroprevalence among High Risk and Low Risk Groups in Nairobi during the Period May 1989 Through May 1990, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.20.
- M0171 Mbugua, G. G., L. N. Muthami, J. M. Kimata, et al., 1991, Rising Trends of HIV Infection among Antenatal Mothers in a Kenyan Rural Area, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster W.C.3283.
- M0183 Mwakagile, D. S. M., A. B. M. Swai, S. Mwambinga, et al., 1991, Socio-Epidemiological and Microbiological Aspects of Sexually Transmitted Diseases and HIV Infection in Dar es Salaam, Tanzania, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Abstract W.A.144.
- M0185 Makiu, E. J. K., A. Kosia, 1991, The Impact of a Decentralised HIV Testing Approach in the Prevention of Blood Born HIV Transmission in Sierra Leone, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster M.A.251.
- M0237 Makiu, E. J. K., A. M. Kosia, N. Mansaray, 1992, A Strategy to Control HIV Infection among Female Commerical Sex Workers (CSW) and Their Clients in Freetown, Sierra Leone, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Abstract T.P.098.
- M0241 Mahomed, K., J. Kasule, D. Makuyana, et al., 1991, Seroprevalence of HIV Infection amongst Antenatal Women in Greater Harare, Zimbabwe, Central African Journal of Medicine, vol. 37, no. 10, pp. 322-325.
- M0243 Mungai, J. N., J. Ombette, J. Kimani, et al., 1992, Laboratory Findings for the Prevalence of HIV, Neisseria Gonorrhoea and Chlamydia Trachomatis Infections among Prostitutes ..., VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Abstract W.P.189.
- M0249 Mwakagile, D. S. M., A. B. M. Swai, K. J. Pallangyo, et al., 1992, Trend of Anogenital Warts among Patients Seen at a Referral Clinic for Sexually Transmitted Diseases in Dar es Salaam, Tanzania, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster W.P.190.
- M0256 Mhalu, F., A. Swai, D. Mwakagile, et al., 1992, Surveillance and Control of HIV-1 Transmission among Female Bar workers in Dar es Salaam 1986-1991, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.108.

### Sources for HIV/AIDS in Africa cont.

- M0261 Martin, D. J., B. D. Schoub, G. N. Padayachee, et al., 1990, One Year Surveillance of HIV-1 Infection in Johannesburg, South Africa, Transactions of the Royal Society of Tropical Medicine and Hygiene, vol. 84, pp. 728-730.
- M0262 Magazani, K., G. Laleman, J. H. Perriens, et al., 1993, Low and Stable HIV Seroprevalence in Pregnant Women in Shaba Province, Zaire, Journal of Acquired Immune Deficiency Syndromes, vol. 6, no. 4, pp. 419-423.
- M0265 Minister of Public Health, 1993, Serosurveillance Report of HIV Infection, Republic of Zaire, National Control Programme Against AIDS, Central Coordination Bureau, BCC/SIDA, Official Report.
- M0266 Ministry of Public Health & Social Affairs, 1992, WHO Report on AIDS Surveillance, SFI/GPA/WHO/11.8, Official Report.
- M0272 Monny-Lobe, M., M. Ella, V. Ngoumou, et al., 1993, A Comparative HIV Seroprevalence Study among CSWs in Yaounde and Douala - Cameroon, IX International Conference on AIDS, Berlin, 6/6-11, Abstract PO-C31-3300.
- M0273 Mnyika, K. S., K. I. Klepp, P. E. Kissila, et al., 1993, Population-Based KABP and HIV-Screening in Arusha, Tanzania, IX International Conference on AIDS, Berlin, 6/6-11, Poster PO-C07-2747.
- M0303 Massawe, A. W., K. Karlsson, E. J. M. Urassa, et al., 1993, Vertical Transmission of HIV-1 Infection and Mortality in Infants of HIV Positive Mothers in Dar es Salaam, Tanzania, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Session M.O.P.010.
- M0307 Mwakagile, D., R. Mkuna, A. B. M. Swai, et al., 1993, Diagnosis of Sexually Transmitted Diseases (STDs) in Pregnant Women, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract M.O.P.027.
- M0322 Mboup, S., et al., 1993, Surveillance Sentinelle des Infection de HIV, Bulletin Epidemiologique HIV, December, no. 4.
- M0326 Muloko, N., S. Ossari, A. Lefandi, et al., 1993, Evolutivite du HIV-1 et HIV-2 dans une Zone de Forte Prevalence HTLV, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Poster T.P.A.022.
- M0327 Mehret, M., L. Khodakevich, D. Zewdie, et al., 1990, HIV-1 Infection and Related Risk Factors among Female Sex Workers in Urban Areas of Ethiopia, Ethiopian Journal of Health Development, vol. 4, no. 2, pp. 163-170.
- M0331 Maiga, Y. I., Z. Sissoko, et al., 1993, Etude de la Seroprevalence de l'Infection a VIH dans les 7 Regions Economiques du Mali, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Session M.O.P.055.
- M0333 M'Pele, P., J. Loukaka, T. Guerma, 1991, La Surveillance de l'Infection a VIH a Brazzaville, Option, vol. 1, pp. 69-73.
- M0334 Ministry of Public Health (Guinee), 1991, Bulletin de Liaison No. 8, Bureau de Coordination du Comite MST-SIDA Rez-de-Chaussee du Laboratoire du Service de la Prevention Face 2 Octobre B. P.: 3820 - Conakry Guinee, unpublished document.
- M0375 Mattke, P., M. Grunitzky-Bekele, E. Klee, 1994, Sentinel Surveillance among Pregnant Women in Northern Togo during 1992 and 1993, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Poster P.C.0051.
- M0389 Mnyika, K. S., K. I. Klepp, G. Kvale, et al., 1994, Prevalence of HIV-1 Infection in Urban, Semi-Urban and Rural Areas in Arusha Region, Tanzania, AIDS, vol. 8, no. 10, pp. 1477-1481.
- M0391 Ministry of Health and Social Welfare Kingdom of Lesotho, 1993, HIV Sentinel Surveillance Report, National STD/AIDS Prevention and Control Program, World Health Organization, report.
- M0394 Ministry of Health, 1993, Etude de Prevalence des Maladies Sexuellement Transmissibles et des Infections a VIH au Niger, Republique du Niger, Ministere de la Sante Publique, Niamey, Octobre, rapport final.
- M0397 Miotti, P.G., G. Dallabetta, E. Ndovi, et al., 1990, HIV-1 and Pregnant Women: Associated Factors, Prevalence, Estimate of Incidence and Role in Fetal Wastage in Central Africa, AIDS, vol. 4, no. 8, pp. 733-736.
- M0411 Ministry of Health, 1995, HIV/AIDS Surveillance Report, STD/AIDS Control Programme, Ministry of Health, Entebbe, Uganda, March report.
- N0027 N'Galy, B., R. Ryder, H. Francis, et al., 1988, HIV Prevalence in Zaire, 1984 to 1988, IV International Conference on AIDS, Stockholm, 6/13-14, Poster 5632.
- N0048 Naamara, W., S. Berkley, R. Downing, et al., 1989, Sentinel Surveillance for HIV Infection in a Kampala Antenatal Clinic, IV Internat. Conf.: AIDS and Assoc. Cancers in Africa, Marseille, Oct. 18-20, Poster 019.

### Sources for HIV/AIDS in Africa cont.

- N0062 Ntutunu, J., J. M. Garcia, L. Lekeng, 1990, HIV Seroprevalence in Blood Donors in Equatorial Guinea, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Abstract T.P.E.32.
- N0068 Ndinya-Achola, J. O., P. Datta, J. Embree, et al., 1991, Increasing Seroprevalence (SP) of HIV-1 in Pregnant Women in Nairobi, 1986-1990, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster W.C.3264.
- N0083 NACP/MOH (Ethiopia), 1992, Surveillance and Research Activities on HIV/AIDS: Activities Accomplished So Far in Ethiopia, 1984-1991, Ethiopia NACP/MOH data, unpublished report.
- N0087 NACP, 1992, Report on the First HIV Sentinel Surveillance in Botswana, July, Unpublished Report.
- N0097 Namboze, J. M., 1993, AIDS/HIV Update - Botswana, WHO/Botswana, unpublished memo.
- N0100 Ndinya-Achola, J. O., A. E. Ghee, K. K. Holmes, et al., 1993, Gender-Specific Sexual Behaviors among STD Patients at a Nairobi Primary Health Care Clinic, IX International Conference on AIDS, Berlin, 6/6-11, Poster PO-D01-3406.
- N0119 Nnatu, S. N., C. E. Anyiwo, C. L. Obi, et al., 1993, Prevalence of Human Immunodeficiency Virus (HIV) Antibody among Apparently Healthy Pregnant Women in Nigeria, International Journal of Gynecology and Obstetrics, vol. 40, no. 2, pp. 105-107.
- N0124 Ntizoyimana, P., E. Rubayiza, Y. Alexandre, 1993, Surveillance du VIH en Milieu Semi-Urbain au Burundi (La Commune de Rumonge), VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract T.P.C.091.
- N0126 Ntawuruhunga, J., J. Ladner, X. Malatre, et al., 1993, Utilisation des Preservatifs et Impact du Conseilling chez les Femmes en Age de Procreer. Une Etude de Cohorte a Kigali ..., VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract W.O.P.047.
- N0128 Nunn, A. J., J. F. Kengeya-Kayondo, S. S. Malamba, et al., 1994, Risk Factors for HIV-1 Infection in Adults in a Rural Ugandan Community: A Population Study, AIDS, vol. 8, no. 1, pp. 81-86.
- N0142 National AIDS Control Programme of Kenya, Ministry of Health ..., 1994, AIDS in Kenya -- Background - Projections - Impact - Interventions, Nairobi, Kenya.
- N0148 Nunn, A. J., H. U. Wagner, A. Kamali, et al., 1995, Migration and HIV-1 Seroprevalence in a Rural Ugandan Population, AIDS, vol. 9, no. 5, pp. 503-506.
- 00004 Odehouri, K., K. M. DeCock, J. W. Krebs, et al., 1989, HIV-1 and HIV-2 Associated with AIDS in Abidjan, Cote d'Ivoire, AIDS, vol 3, no. 8, pp. 509-512.
- 00029 Ouedraogo, L. M., N. Lorenz, D. Bakouan, et al., 1990, HIV - Baseline Study in the General Population of Corom Corom/Burkina Faso, VI International Conference on AIDS, San Francisco, 6/20-24, Poster F.C.595.
- 00044 Ousseini, H., J. L. Pecarrere, D. Meynard, et al., 1991, Evolution de la Seroprevalence des Infections a VIH1 et VIH2 a l'Hopital National de Niamey, Niger, Bulletin de la Societe de Pathologie Exotique, vol. 84, no. 3, pp. 235-239.
- 00056 Othman, A. A., A. M. Shein, A. K. Ali, 1994, Laboratory Findings for the Prevalence of HIV and Other STDs in Antenatal Attendees at Mnazi Mmoja Hospital: A Pilot Study, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Abstract P.A.0190.
- P0022 Peeters, M., E. Delaporte, L. Narraido, et al., 1988, Retroviral Infections in Southeastern Gabon: A Seven Year Follow-up, III International Conference: AIDS and Associated Cancers in Africa, Sept. 14-16, Abstract WP 44.
- P0024 Piot, P., F. A. Plummer, M. A. Rey, et al., 1987, Retrospective Seroepidemiology of AIDS Virus Infection in Nairobi Populations, Journal of Infectious Diseases, vol. 155, no. 6, pp. 1108-1112.
- P0059 Petat, E., F. Martinet, F. Barin, 1990, Prevalence of HIV Infection in the Comoros Islands (Indian Ocean), Journal of Acquired Immune Deficiency Syndromes, vol. 3, no. 11, pp. 1115-1117.
- P0060 Petry, U., H. Kingu, K. Sally, et al., 1990, Remarkable Low Prevalence of HIV Antibodies among Pregnant Women in South-Eastern Tanzania, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.19.
- P0074 Pyndiah, M., C. Chan Kam, B. Jowaheer, et al., 1991, Prevalence of HIV/AIDS in Mauritius, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster M.C.3285.
- P0103 Procupet, A., L. Fernandes, C. Lemos, 1992, Seroprevalence du VIH chez les Donneurs de Sang de Onze Provinces de la Republique d'Angola, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.158.
- Personal communication with Maria Wawer.

### Sources for HIV/AIDS in Africa cont.

- R0021 Ryder, R. W., W. Nsa, S. E. Hassig, et al., 1989, Perinatal Transmission of the Human Immunodeficiency Virus Type 1 to Infants of Seropositive Women in Zaire, *New England Journal Medicine*, vol. 320, no. 25, pp. 1637-1642.
- R0046 Riyad, M., D. Serrhini, S. Sekkat, et al., 1990, Transmission Sexuelle du HIV au Maroc, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.C.5.
- R0051 Rodier, G., E. Fox, D. Watts, et al., 1991, A Dramatic Increase in the Prevalence of HIV Infection in Djibouti, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster M.C.3031.
- R0099 Redouane, A., S. Sekkat, S. Hamdani, et al., 1993, Etude de la Transmission Materno-Foetale de l'Infection par VIH, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Poster M.P.C.095.
- R0100 RSA Department of National Health and Population Development, 1993, AIDS in South Africa: Status on World AIDS Day 1993, *Epidemiological Comments*, vol. 20, no. 11, pp. 184-203.
- R0117 Remy, G., 1993, Image Geographique de l'Infection a VIH 1 en Afrique Centrale: Des Discontinuites Remarquables, *Annales de la Societe Belge de Medecine Tropicale*, vol. 73, no. 2, pp. 127-142.
- R0122 RSA Department of National Health, 1994, The HIV/AIDS Epidemic in Neighbouring Countries, *Epidemiological Comments*, vol. 21, no. 11, p. 228.
- R0123 RSA Department of National Health, 1994, NIV Sentinel Surveillance, *Epidemiological Comments*, vol. 21, no. 11, pp. 230-231.
- R0131 RSA Department of Health, 1995, Fifth National HIV Survey in Women Attending Antenatal Clinics of the Public Health Services in South Africa, Oct./Nov. 1994, *Epidemiological Comments*, vol. 22, no. 5, pp. 90-100.
- S0011 Surmont, I., J. Desmyter, 1987, Urban to Rural Spread of HIV Infection in Dungen, Zaire, II International Symposium: AIDS and Associated Cancers in Africa, Naples, Italy, 10/7-9, Poster TH-33.
- S0043 Santos-Ferreira, M., M. Matos Almeida, A. Lourenco, et al., 1988, HIV 1 and HIV 2 Seroprevalence in Patients Attending an STD-Clinic in Lunda-Norte, N.E. Province of Popular Republic of Angola, III International Conference: AIDS and Associated Cancers in Africa, Sept. 14-16, Poster TP 16.
- S0046 Simonsen, J. N., W. Cameron, M. N. Gakinya, et al., 1988, Human Immunodeficiency Virus Infection among Men with Sexually Transmitted Diseases, *New England Journal of Medicine*, vol. 319, no. 5, pp. 274-278.
- S0069 Somse, P., A. J. Georges, R. M. Siopathis, et al., 1989, Les Aspects Epidemiologiques des Affections Liees Aux VIH 1 et 2 en Republique Centrafricaine, V International Conference on AIDS, Montreal, 6/4-9, Poster W.G.O. 28.
- S0110 Santos-Ferreira, M. O., T. Cohen, M. H. Lourenco, et al., 1990, A Study of Seroprevalence of HIV-1 and HIV-2 in Six Provinces of People's Republic of Angola: Clues to the Spread of HIV ..., *Journal of Acquired Immune Deficiency Syndromes* vol. 3, pp. 780-786.
- S0145 Sangare, L., M. Luki, K. Travers, et al., 1991, Infections a VIH chez les Femmes Enceintes a Bobo-Dioulasso (Burkina-Faso), VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster M.A.286.
- S0216 Schmalzbauer, E., S. Tibananuka, G. G. Frosner, 1993, Seroprevalence of HIV-1/2 Infection in Pregnant Women, Out and Inpatients at a Hospital in Western Uganda, IX International Conference on AIDS, Berlin, 6/6-11, Poster PO-C07-2756.
- S0255 Seif, M. J., S. H. Haji, A. M. Shein, et al., 1993, Anonymous Unlinked Testing HIV Prevalence in Pregnant Mothers in Pemba (Zanzibar), VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract Th.P.C.076.
- S0258 Soga, G., A. Hassane, A. Aboubacar, et al., 1993, Etude de Prevalence des Infections Sexuellement Transmises (IST) chez les Prostituees a Niamey, Niger, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Session T.R.T.024.
- S0268 Seidel, K., A. Eimbeck, M. Goraseb, 1993, Safe Transfusion is Achievable the Namibian Experience in Blood Transfusion Services, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract Th.P.A.028.
- S0269 Sarr Nd Mame Anta, N. G., D. S. Ba, T. Ndoeye, et al., 1993, Facteurs de Risque de l'Infection a VIH chez la Femme Enceinte a Dakar, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Poster M.P.C.087.

## Sources for HIV/AIDS in Africa cont.

- S0294 Sandala, L., M. R. Sunkutu, P. Lurie, et al., 1994, Traditional Sexual Practices among Women at a Sexually Transmitted Diseases (STD) Clinic in Zambia, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Poster P.C.0124.
- S0315 Sam-Abbenyi, A., 1994, Report on HIV-1 Sentinel Surveillance System in Cameroon 1994, Ministry of Public Health, Republic of Cameroon, AIDS Control Unit, Epidemiology Section, report.
- T0049 Tyndall, M., P. Odhiambo, A. R. Ronald, et al., 1991, The Increasing Seroprevalence of HIV-1 in Males with Other STD's in Nairobi, Kenya, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster W.C.3117.
- T0053 Twa-Twa, J., G. Tembo, G. Asimwe, et al., 1991, AIDS Surveillance Report (First and Second Quarter) for the Year 1991, Ministry of Health, AIDS Control Programme Surveillance Unit, Entebbe, Uganda, unpublished report.
- T0057 Temmerman, M., F. M. Ali, J. O. Ndinya-Achola, et al., 1991, Rapid Increase of both HIV-1 and Syphilis among Pregnant Women in Nairobi, Kenya, AIDS, vol. 6, no. 10, pp. 1181-1185.
- T0078 Traore-Ettiegne, V., M. O. Diallo, A. Amouzou, et al., 1992, Trends in HIV-1 and HIV-2 Infections in Men Attending an Abidjan Sexually Transmitted Diseases Clinic, 1990-1992, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.027.
- T0102 Tanzania Ministry of Health, 1992, National AIDS Control Programme, Surveillance Report No. 7., December, Epidemiology Unit, NACP.
- T0123 Tanzania Ministry of Health, 1994, National AIDS Control Programme, Surveillance Report, no. 8, June, Epidemiology Unit, NACP.
- T0128 Temmerman, M., E. N. Chomba, J. Ndinya-Achola, et al., 1994, Maternal Human Immunodeficiency Virus-1 Infection and Pregnancy Outcome, Obstetrics and Gynecology, vol. 83, no. 4, pp. 495-501.
- U0016 U.S. Department of State, 1993, AIDS/HIV in Malawi - A Status Report, Unclassified cable, 8/93, Lilongwe 03703.
- U0025 U.S. Department of State, 1994, HIV/AIDS Update for the Republic of South Africa, Unclassified Cable, June, Pretoria 009165.
- U0026 U.S. Department of State, 1994, HIV/AIDS Update for Malawi, Unclassified Cable, September, Lilongwe 003358.
- U0027 U.S. Department of State, 1994, AIDS in the Central African Republic, Unclassified Cable, April, Bangui 001505.
- U.S. Bureau of the Census, 1994, The Impact of HIV/AIDS on World Population, U.S. Government Printing Office, Washington, D.C.
- V0022 Vercauteren, G., R. Colebunders, R. Ryder, et al., 1989, HIV-1 and HTLV-1 Prevalence in Africa and European Populations: A Comparison of 3 HTLV-1 Antibody Assays, V International Conference on AIDS, Montreal, 6/4-9, Poster T.B.P. 108.
- V0053 Vaz, R. G., A. Fernandes, R. Bastos, et al., 1992, HIV Seroprevalence among Patients Attending an STD Clinic in Maputo, Mozambique, VIII International Conference on AIDS, Amsterdam, 7/19-24, Abstract PuC 8020.
- V0063 Vuylsteke, B., R. Bastos, J. Barreto, et al., 1993, High Prevalence of Sexually Transmitted Diseases in a Rural Area in Mozambique, Genitourinary Medicine, vol. 69, pp. 427-430.
- W0022 Weekly Review, The, 1989, International Conference Focuses on AIDS, Joint Publication Research Service: Epidemiology, April 28, no. 008, pp. 1-2.
- W0027 Wilkins, A., R. Hayes, P. Alonso, et al., 1991, Risk Factors for HIV-2 Infection in the Gambia, AIDS, vol. 5, no. 9, pp. 1127-1132.
- W0056 Wawer, M. J., D. Serwadda, S. D. Musgrave, et al., 1991, Dynamics of Spread of HIV-1 Infection in a Rural District of Uganda, British Medical Journal, vol. 303, no. 6813, pp. 1303-1306.
- W0061 Whiteside, A., 1991, HIV Infection and AIDS in Zimbabwe: An Assessment, Southern Africa Foundation for Economic Research, Economic Research Unit, University of Natal, pp. 1-50.
- W0069 World Health Organization, 1991, Global Programme on AIDS, Weekly Epidemiological Record, vol. 66, no. 35, pp. 257-259.
- W0077 Wilkinson, D., 1992, HIV Survey of Women Attending Antenatal Clinics, Hlabisa Health Ward, Zululand, 1992, Epidemiological Comments, vol. 19, no. 9, pp. 154-155.
- W0082 Wilkins, A., D. Ricard, J. Todd, et al., 1993, The Epidemiology of HIV Infection in a Rural Area of Guinea-Bissau, AIDS, vol. 7, no. 8, pp. 1119-1122.

### Sources for HIV/AIDS in Africa cont.

- W0094 Weis, P., C. Masheisha, G. Sahimuller, et al., 1994, Assessing Trends of the HIV Epidemic in Western Uganda, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Poster P.C.0041.
- Z0011 Zewdie, D., M. Abdurahman, S. Ayhunie, et al., 1989, High Prevalence of HIV-1 Antibodies in STD Patients with Genital Ulcers, V International Conference on AIDS, Montreal, 6/4-9, Poster T.A.P. 102.
- Z0022 Zahraoui, M., F. Denis, K. Marhoum, et al., 1991, Etude de la Seroprevalence des Virus HTLV-1, HIV-1, HIV-2 et Herpes 6 Virus (HHV6) au Maroc, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Abstract T.A.143.
- Z0041 Zewdie, D., Y. Sisay, D. Kebede, et al., 1992, HIV Infection in Ethiopian Blood Donors: Prevalence, Trends and Future Projections, Ethiopian Journal of Health Development, vol. 6, no. 2, pp. 1-8.
- Z0045 Zekeng, L., L. Gurtler, E. Afane Ze, et al., 1994, Prevalence of HIV-1 Subtype O Infection in Cameroon: Preliminary Results, AIDS, vol. 8, no. 11, pp. 1626-1628.

# ***APPENDIX***

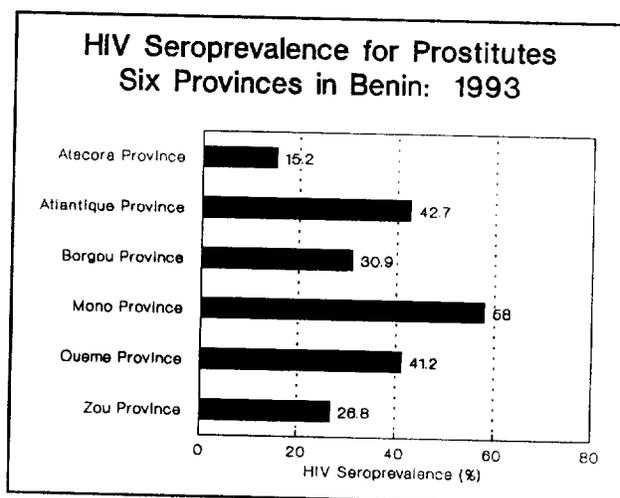
# Benin

## Demographic Indicators

Population (1,000s)	5,342	Growth Rate (%)	3.3
Infant Mortality Rate		Life Expectancy	
Both Sexes	110	Both Sexes	52
Male	119	Male	50
Female	101	Female	54
Crude Birth Rate	48	Crude Death Rate	14
Total Fertility Rate	6.8	Percent Urban	41
<b>Note: Above indicators are for 1994.</b>			
Cumulative AIDS rate (per 1,000) as of 5/9/94		0.14	
Cumulative AIDS cases as of 5/9/94		742	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

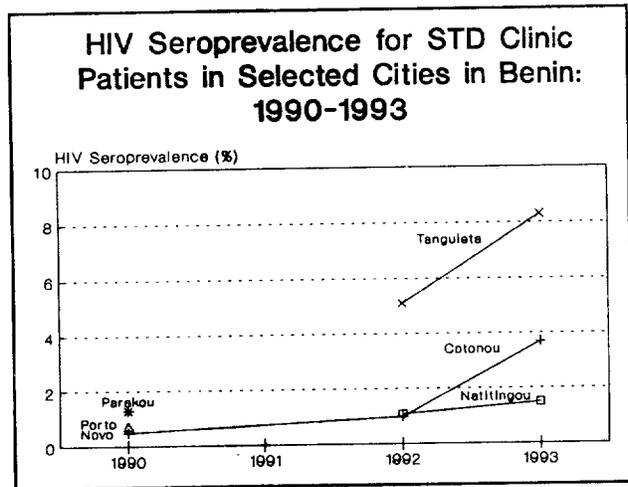
- Female prostitutes are at high risk for HIV infection in Benin. The levels of HIV infection in prostitutes vary by province. In 1993, HIV seroprevalence ranged from 15 percent to 58 percent.



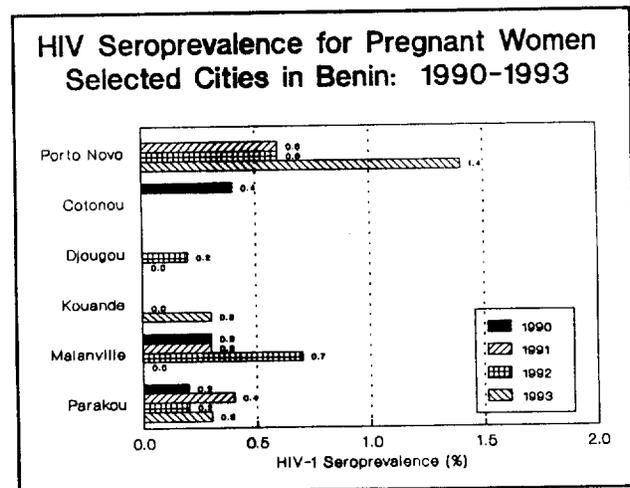
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1994.

**Benin**

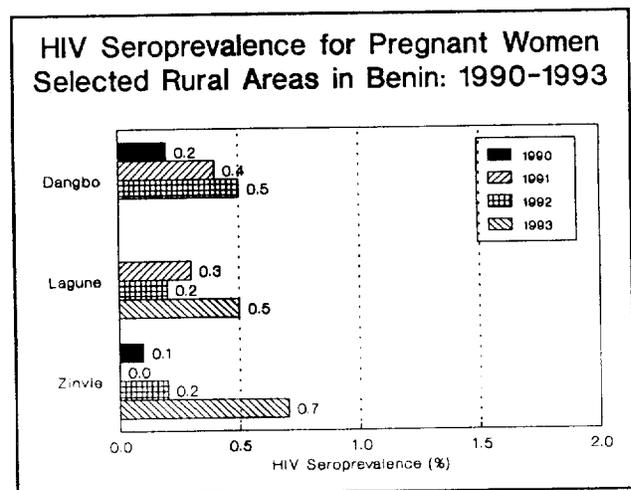
- Studies of HIV infection among sexually transmitted diseases clinic attendees found prevalence increasing in three cities. In Tangueta, HIV levels rose from 5.1 percent in 1992 to 8.3 percent in 1993. In Cotonou, levels rose from 0.5 percent in 1990 to 3.7 percent in 1993 and in Natitingou from 1.1 in 1992 to 1.5 in 1993. In Porto Novo and Parakou, HIV infection levels were less than 2 percent in 1990.



- In Porto Novo, the capital city, HIV infection levels among pregnant women rose from 0.6 percent to 1.4 percent in the 1990-93 period. In other cities, HIV infection levels were less than 1 percent.



- In rural areas, HIV infection levels among pregnant women showed a very slow but steady increase from 1990 to 1993. Results suggest HIV infection levels among rural pregnant women are similar to those seen in urban pregnant women.



Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1994.

## Sources for Benin

- D0095 Davo, N., C. Adjovi, I. Zohoun, et al., 1991, Sentinel Serosurveillance of HIV in Benin: First Results from 1990, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster T.A.129.
- D0114 Davo, N., C. Adjovii, S. Anagonou, et al., 1992, Approche de l'Epidemie VIH/SIDA au Benin, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.018.
- D0145 Davo, N., C. Adjovi, S. Anagonou, et al., 1993, Evolution de l'Epidemie VIH/SIDA au Benin, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Session W.P.C.082.

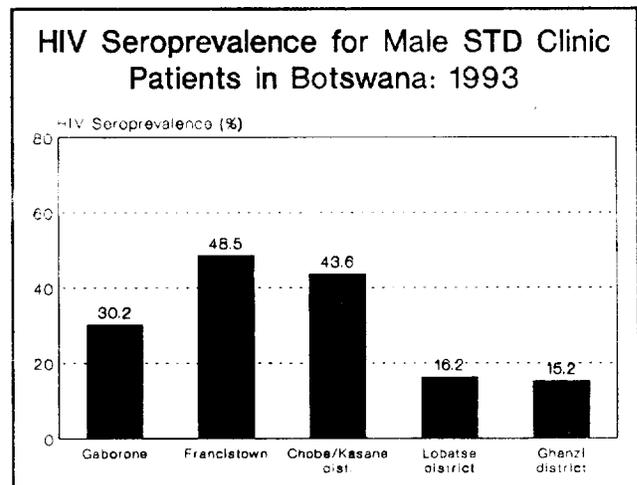
# Botswana

## Demographic Indicators

Population (1,000s)	1,359	Growth Rate (%)	2.4
Infant Mortality Rate		Life Expectancy	
Both Sexes	39	Both Sexes	63
Male	42	Male	60
Female	37	Female	66
Crude Birth Rate	32	Crude Death Rate	8
Total Fertility Rate	4.1	Percent Urban	30
<b>Note: Above indicators are for 1994.</b>			
Cumulative AIDS rate (per 1,000) as of 12/31/93		1.05	
Cumulative AIDS cases as of 12/31/93		1,415	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

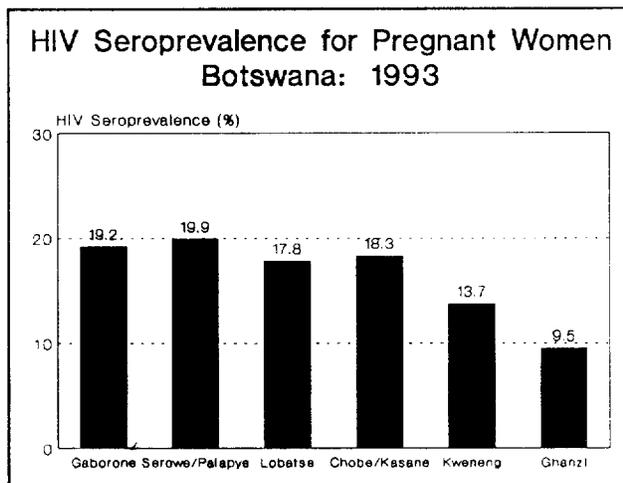
## Epidemiological Data

- In 1993, the second HIV sentinel surveillance survey was carried out in Botswana. Thirty percent of the males attending sexually transmitted disease (STD) clinics in the capital city of Gaborone were HIV positive. Over 40 percent of males attending STD clinics in Francistown and Chobe/Kasane were HIV positive.

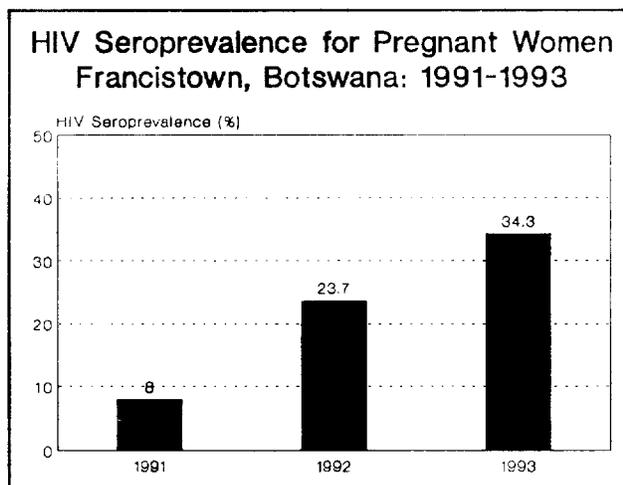


## Botswana

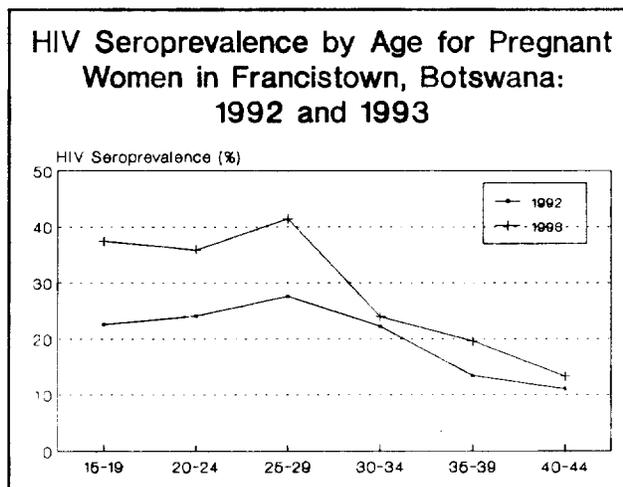
- Data from the second HIV sentinel surveillance survey among pregnant women show HIV seroprevalence levels ranging from 9.5 percent to 20.0 percent in various districts. In the capital city, Gaborone, the HIV seroprevalence level among pregnant women attending antenatal clinics is 19.2 percent. HIV seroprevalence in the rural districts of Serowe/Palapye and Chobe/Kasane was as high as those seen in Gaborone and the town of Lobatse. Kweneng and Ghanzi are rural districts.



- The highest HIV prevalence level among pregnant women in Botswana is found in Francistown. The national HIV sentinel surveillance surveys show a steady increase in HIV infection levels, reaching 34.3 percent in 1993.

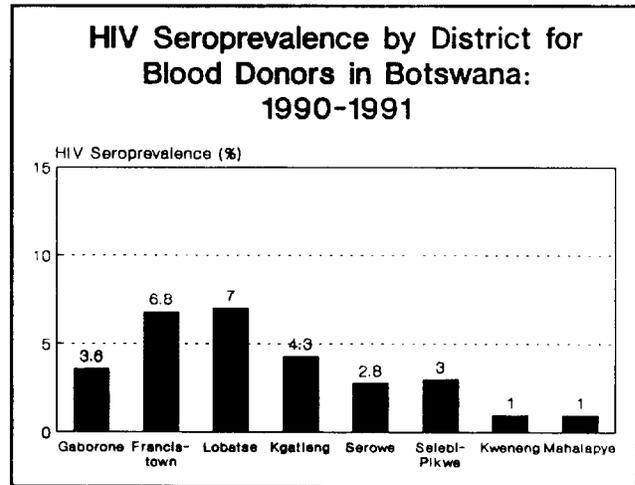


- HIV seroprevalence among women in the age group of 15 to 29 years increased by more than 50 percent in just one year, 1992-1993. The pattern of HIV infection level by age among pregnant women in Francistown is similar to that found in other countries, whereby the peak infection level for women is in their twenties.



## Botswana

- In another study, data for blood donors show HIV infection ranging from 1 percent to 7 percent in various districts.



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## Sources for Botswana

- L0091 Letamo, G., R. V. Rao, 1992, Knowledge and Perception of AIDS among Botswana Women: Analysis of DHS Data, Population Association of America Annual Meeting, Denver, Colorado, 4/30 - 5/2.
- N0087 NACP, 1992, Report on the First HIV Sentinel Surveillance in Botswana, July, Unpublished Report.
- N0097 Namboze, J. M., 1993, AIDS/HIV Update - Botswana, WHO/Botswana, unpublished memo.
- S0020 Star, The (Johannesburg), 1987, AIDS Deaths Reported, Joint Publication Research Service: Epidemiology, Dec. 2, no. 023, p. 3.
- W0013 World Health Organization, 1988, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 2, no. 6, pp. 487-490.
- W0032 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 6, pp. 405-406.
- W0042 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 6, pp. 605-606.
- W0054 World Health Organization, 1991, World Health Organization Global AIDS Statistics, AIDS Care, vol. 3, no. 4, pp. 481-484.
- W0058 World Health Organization, 1992, World Health Organization Global AIDS Statistics, AIDS Care, vol. 4, no. 2, pp. 231-234.
- W0072 World Health Organization, 1993, World Health Organization Global AIDS Statistics, AIDS, vol. 5, no. 1, pp. 125-128.
- W0079 World Health Organization, 1993, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 7, no. 9, pp. 1287-1291.
- W0087 World Health Organization, 1994, The Current Global Situation of the HIV/AIDS Pandemic, Global Programme on AIDS, January 4, document.

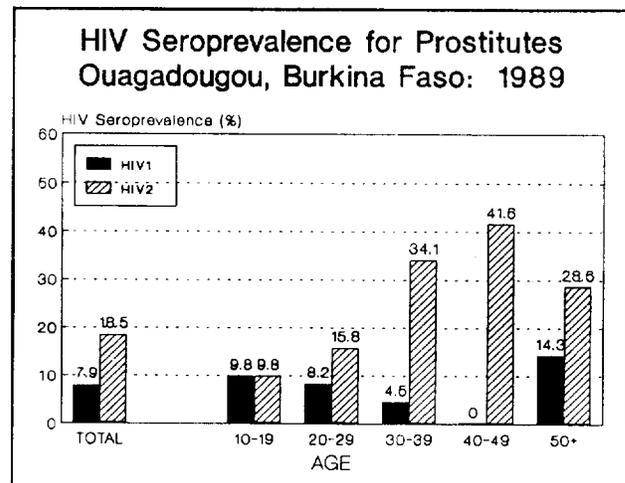
# Burkina Faso

## Demographic Indicators

Population (1,000s)	10,135	Growth Rate (%)	2.8
Infant Mortality Rate		Life Expectancy	
Both Sexes	118	Both Sexes	47
Male	125	Male	46
Female	112	Female	48
Crude Birth Rate	48	Crude Death Rate	18
Total Fertility Rate	6.9	Percent Urban	19
<b>Note: Above indicators are for 1994.</b>			
Cumulative AIDS rate (per 1,000) as of 12/31/93		0.42	
Cumulative AIDS cases as of 12/31/93		4,193	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

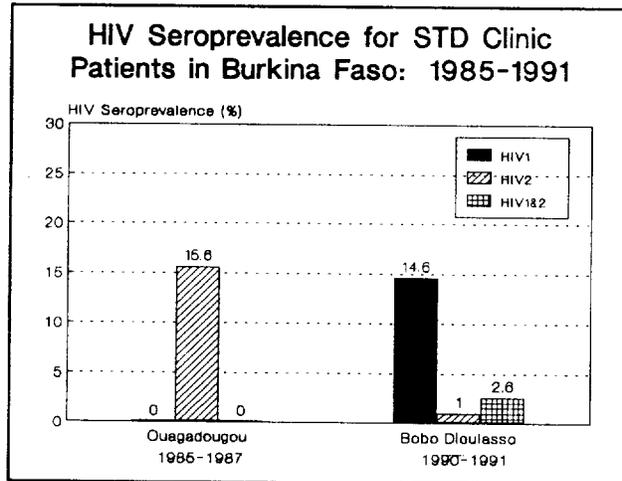
- Among groups who engage in high-risk sexual behavior, such as prostitutes, high levels of HIV infection have been reported. Evidence of this is shown in a study of prostitutes in the capital city of Ouagadougou. By age, HIV-1 levels ranged from 0 to 14.3 percent with those 50+ most infected. HIV-2 levels ranged from 9.8 to 41.6 percent, with a maximum in ages 40-49.



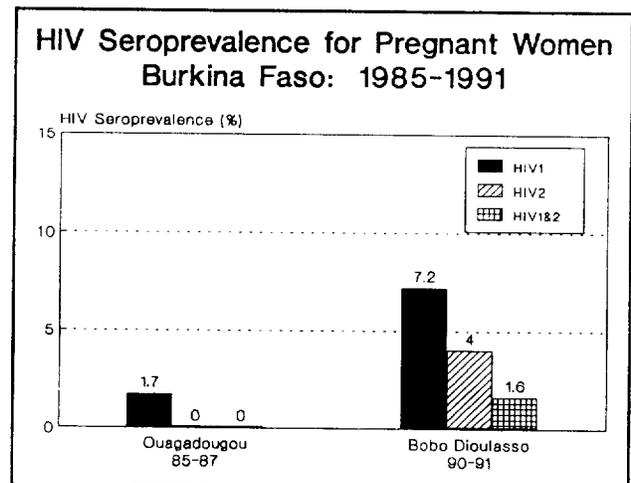
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, Oct. 1992.

## Burkina Faso

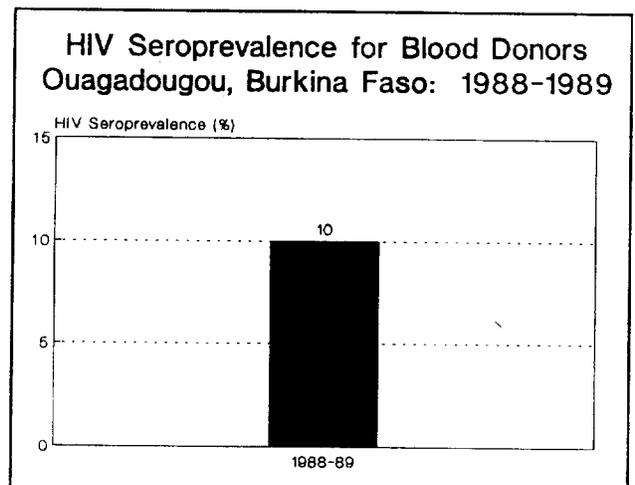
- Early studies among a small sample of sexually transmitted diseases patients in Ouagadougou showed evidence only of HIV-2 infection. In a more recent study in the city of Bobo Dioulasso, HIV levels were 14.6, 1.0 and 2.6 percent for HIV-1, HIV-2 and dual infection, respectively. Both viruses are present in Burkina Faso as indicated in these studies.



- Early studies done among a small sample of pregnant women in Ouagadougou during February 1985 and January 1987 reported 1.7 percent of pregnant women were HIV-1 infected, with no evidence of HIV-2 or dual infection. More recently, a study in Bobo Dioulasso reported HIV-2 and dual infection levels under 5 percent and an HIV-1 level of 7.2 percent. Thus, HIV has made substantial inroads into this population of relatively low risk.



- There have been very few studies published on HIV seroprevalence among blood donors in Burkina Faso. One study in the capital city, Ouagadougou, showed the overall HIV prevalence rate to be 10 percent among blood donors in 1988-89.



## Sources for Burkina Faso

- K0033 Kanki, P. J., S. M'Boup, D. Richard, et al., 1987, Human T-lymphotropic Virus Type 4 and the Human Immunodeficiency Virus in West Africa, *Science*, vol. 236, no. 4803, pp. 827-831.
- L0048 Lalle, B., K. Bocar, O. L. Hamade, et al., 1989, Epidemiological Situation and the Organization of the Effort Against AIDS in Burkina Faso, Paper presented at Reunion Inter-etats Pour l'Elaboration d'un Plan de Lutte Coordonee Contre le SIDA, Bobo Dioulasso, Burkina Faso, May 22-24., pp. 1-4.
- L0086 Lankoande, S., A. Rochereau, D. S. Mugrditchian, et al., 1991, Etiologies of Urethritis and GUD in Young Men Attending Health Centers in Bobo-Dioulasso, Burkina Faso, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Session W.O.124.
- S0010 Sangare, L., S. M'Boup, P. Kanki, et al., 1987, HIV and Related Human Retroviruses Seroprevalence in Ouagadougou, Burkina-Faso, II International Symposium: AIDS and Associated Cancers in Africa, Naples, Italy, 10/7-9, Poster TH-18.
- S0077 Sangare, L., J. L. Sankale, C. S. Boye, et al., 1989, Infection of HIV-1, HIV-2, HBV and Treponeme Pale in a Population of Prostitutes in Ouagadougou, IV Internat. Conf.: AIDS and Assoc. Cancers in Africa, Marseille, Oct. 18-20, Poster 071.
- S0145 Sangare, L., N. Luki, K. Travers, et al., 1991, Infections a VIH chez les Femmes Enceintes a Bobo-Dioulasso (Burkina-Faso), VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster M.A.286.
- W0002 Wellcome Foundation, 1987, AIDS and Its Management, The Wellcome Foundation Limited Berkhamsted Herts England, B.5676/09.87/5.0/R, pp. 4-5.
- W0013 World Health Organization, 1988, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 2, no. 6, pp. 487-490.
- W0032 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 6, pp. 405-406.
- W0033 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 9, pp. 619-620.
- W0045 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 12, pp. 1305-1306.

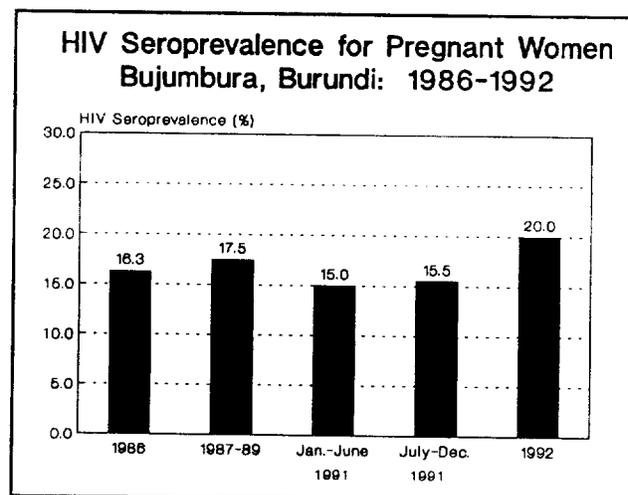
# Burundi

## Demographic Indicators

Population (1,000s)	6,125	Growth Rate (%)	2.3
Infant Mortality Rate		Life Expectancy	
Both Sexes	114	Both Sexes	40
Male	124	Male	38
Female	103	Female	42
Crude Birth Rate	44	Crude Death Rate	21
Total Fertility Rate	6.7	Percent Urban	6
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 12/10/93		1.19	
Cumulative AIDS cases as of 12/10/93		7,225	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

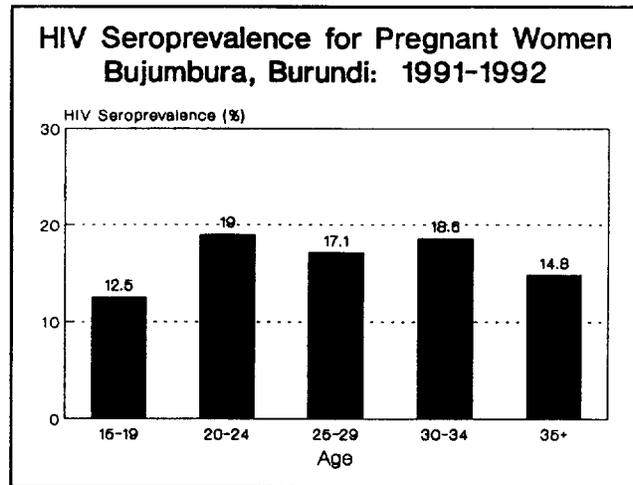
- Seroprevalence studies of pregnant women attending antenatal clinics in the capital city of Bujumbura reported levels of HIV infection to be stable but over 15 percent since 1986.



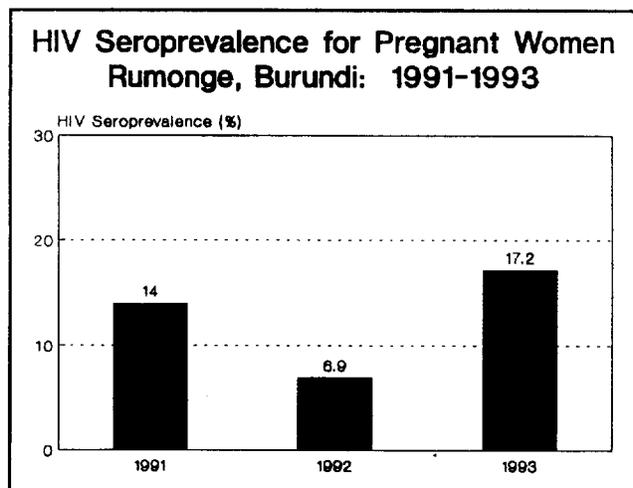
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1994.

## Burundi

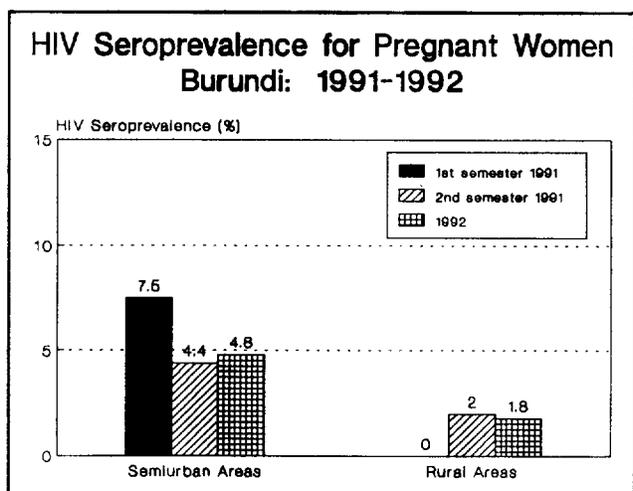
- In a study conducted among pregnant women from three clinics in Bujumbura in 1991-92, HIV infection levels were reported lowest among women aged 15-19 years and highest among women aged 20-24 years. This follows the same age pattern as seen in other African countries.



- Pregnant women visiting a prenatal clinic in Rumonge, a semiurban area, were tested for HIV infection during the 3-year period, 1991-93. The HIV infection level reached 17.2 percent for this area by 1993.

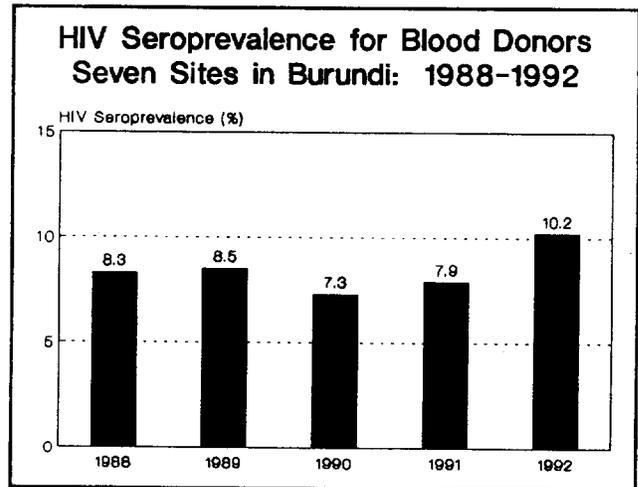


- Urban/rural differentials in HIV infection levels exist within Burundi as elsewhere. Infection levels in semiurban areas (important commercial centers) are twice as high as those in rural areas.



## Burundi

- HIV seroprevalence levels among blood donors remained essentially unchanged from 1988 to 1991. However, in 1992, HIV infection increased to 10.2 percent.



Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1994.

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## Sources for Burundi

- B0161 Buzingo, T., Y. Alexandre, S. Nkurikiye, et al., 1992, L'Epidemiologie du VIH et SIDA au Burundi, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.015.
- B0231 Buzingo, T., D. Sokal, T. Saidel, et al., 1993, Epidemiologie du VIH/SIDA au Burundi: Etude de Cohortes (1990-1993), VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Poster Th.P.C.083.
- M0332 Ministry of Health (Burundi), 1992, Surveillance Epidemiologique du VIH/SIDA/MST, Programme National de Lutte Contre le SIDA et MST, Bujumbura, June, unpublished document.
- N0124 Ntizoyimana, P., E. Rubayiza, Y. Alexandre, 1993, Surveillance du VIH en Milieu Semi-Urbain au Burundi (La Commune de Rumonge), VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract T.P.C.091.
- S0071 Standart, B., P. Kocheleff, P. Kadende, et al., 1988, Acquired Immunodeficiency Syndrome and Human Immunodeficiency Virus Infection in Bujumbura, Burundi, Transactions of the Royal Society of Tropical Medicine and Hygiene, vol. 82, no. 6, pp. 902-904.
- S0116 Sindayirwanya, J. B., 1990, Les Implications Cliniques de l'Infection par VIH Pour la Mere et l'Enfant. (a Propos de 206 Cas), V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Abstract W.P.D.5.
- S0272 Sokal, D. C., T. Buzingo, N. Nitunga, et al., 1993, Geographic and Temporal Stability of HIV Seroprevalence among Pregnant Women in Bujumbura, Burundi, AIDS, vol. 7, no. 11, pp. 1481-1484.
- W0002 Wellcome Foundation, 1987, AIDS and Its Management, The Wellcome Foundation Limited Berkhamsted Herts England, B.5676/09.87/5.0/R, pp. 4-5.
- W0013 World Health Organization, 1988, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 2, no. 6, pp. 487-490.
- W0033 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 9, pp. 619-620.
- W0041 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 3, pp. 277-278.
- W0042 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 6, pp. 605-606.
- W0046 World Health Organization, 1991, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 5, no. 3, pp. 349-350.
- W0072 World Health Organization, 1993, World Health Organization Global AIDS Statistics, AIDS, vol. 5, no. 1, pp. 125-128.
- W0079 World Health Organization, 1993, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 7, no. 9, pp. 1287-1291.
- W0087 World Health Organization, 1994, The Current Global Situation of the HIV/AIDS Pandemic, Global Programme on AIDS, January 4, document.

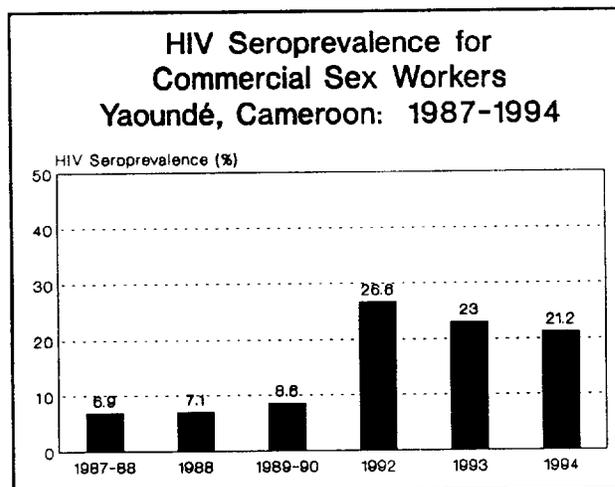
# Cameroon

## Demographic Indicators

Population (1,000s)	13,852	Growth Rate (%)	2.9
Infant Mortality Rate (per 1,000)		Life Expectancy	
Both Sexes	80	Both Sexes	53
Male	87	Male	52
Female	73	Female	54
Crude Birth Rate (per 1,000)	43	Crude Death Rate (per 1,000)	13
Total Fertility Rate	6.1	Percent Urban	45
<b>Note:</b> Above indicators are for 1995.			
Cumulative AIDS rate (per 1,000) as of 12/31/94		0.39	
Cumulative AIDS cases as of 12/31/94		5,375	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

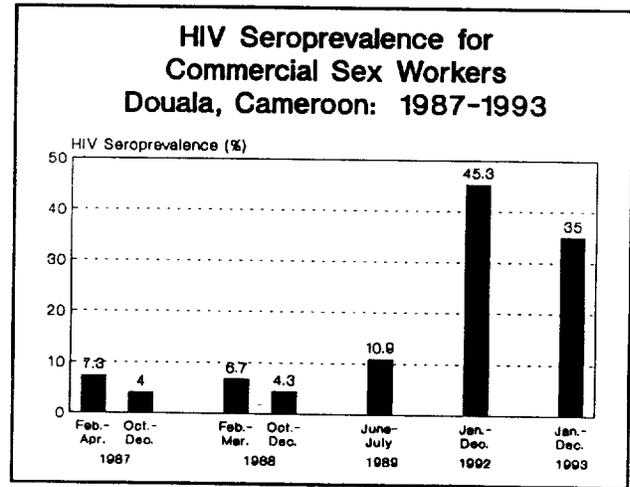
- HIV-1 infection dramatically increased among commercial sex workers in the capital city of Yaoundé from less than 10 percent in the late 1980s to over 25 percent in 1992. Studies conducted in the mid-1990s document seroprevalence of over 20 percent among commercial sex workers tested.



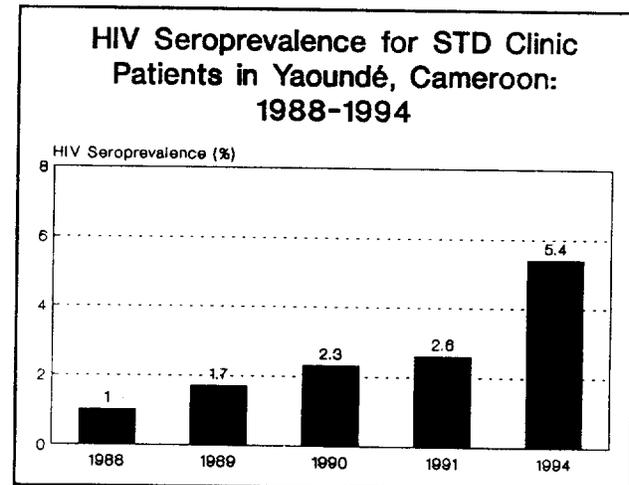
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, July 1995.

## Cameroon

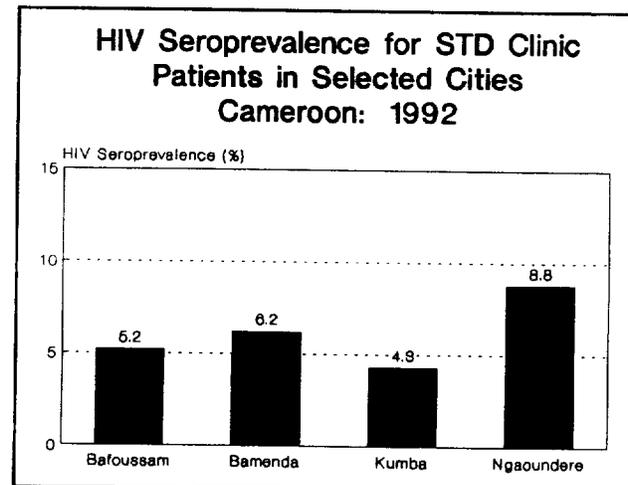
- Similar to Yaoundé, HIV infection among commercial sex workers tested in the port city of Douala increased to 45 percent in 1992. A study conducted among commercial sex workers in 1993 documented HIV seroprevalence levels at 35 percent.



- Among sexually transmitted disease patients tested in Yaoundé, HIV-1 infection levels have been increasing, reaching 5.4 percent in 1994. There was no evidence of HIV-2 infection in this population over the 1988-94 period.

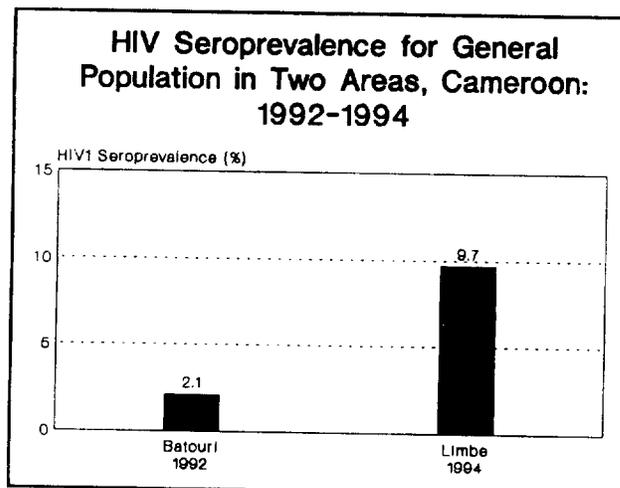


- In selected cities, HIV seroprevalence among STD clinic patients tested in 1992 ranged from 4.3 percent in Kumba to 8.8 percent in Ngaoundere.

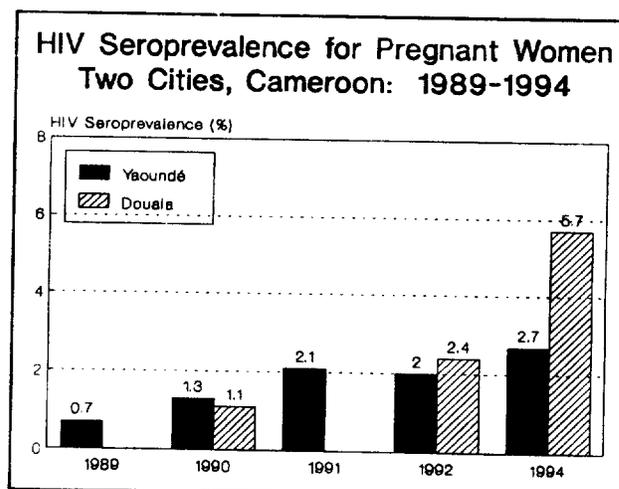


## Cameroon

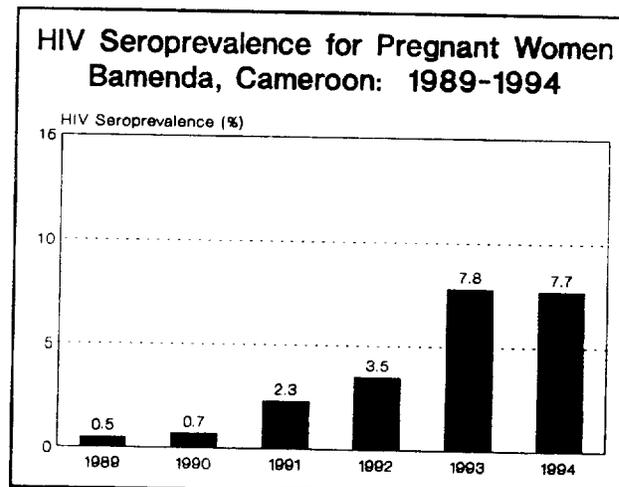
- HIV infection has also been documented among low-risk populations in Cameroon. A 1992 study in the city of Batouri reported 2 percent of the general population tested were HIV-1 infected. Another study of individuals selected among the general population in Limbe, an industrial harbor in the Southwest Province, reported HIV-1 infection level of 9.7 percent in 1994.



- Since 1989, the percent of pregnant women testing HIV positive in Yaoundé has nearly quadrupled. HIV prevalence increased from 0.7 percent in 1989 to 2.7 percent in 1994. Pregnant women testing HIV positive in Douala increased from 1.1 percent in 1990 to nearly 6 percent in 1994.



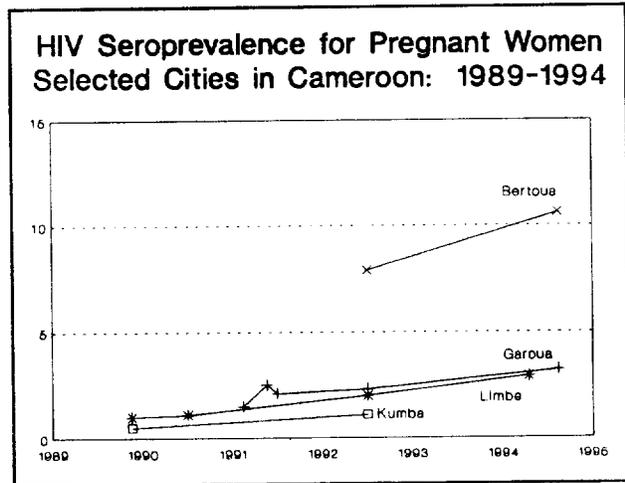
- In Bamenda, the Northwest Province capital, HIV infection levels among pregnant women tested increased dramatically over the 5-year period 1989-1994 from less than 1 percent to nearly 8 percent.



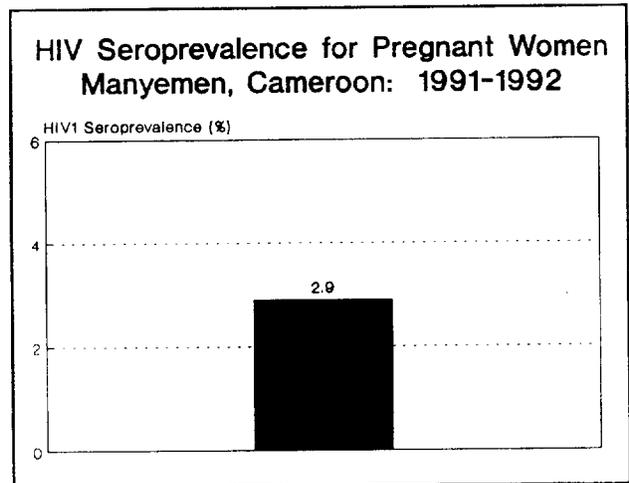
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, July 1995.

**Cameroon**

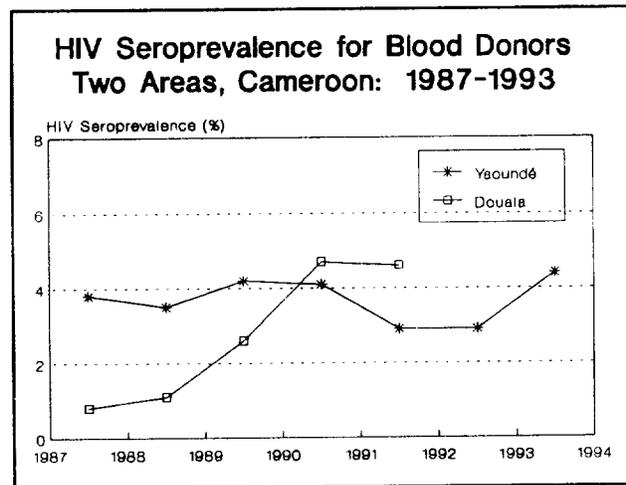
- HIV-1 infection levels among pregnant women in Bertoua, Garoua, Kumba, and Limbe increased from 1989-94. HIV infection in Kumba and Limbe, two cities in the Southwest Province, more than doubled in 2- and 4-year periods, respectively. Much higher seroprevalence levels were seen among pregnant women in Bertoua than in the other three cities.



- In Manyemen, a rural area located in South West Province, HIV-1 infection levels among pregnant women were just as high as HIV levels in some cities of Cameroon. There was no evidence of HIV-2 among these rural pregnant women.



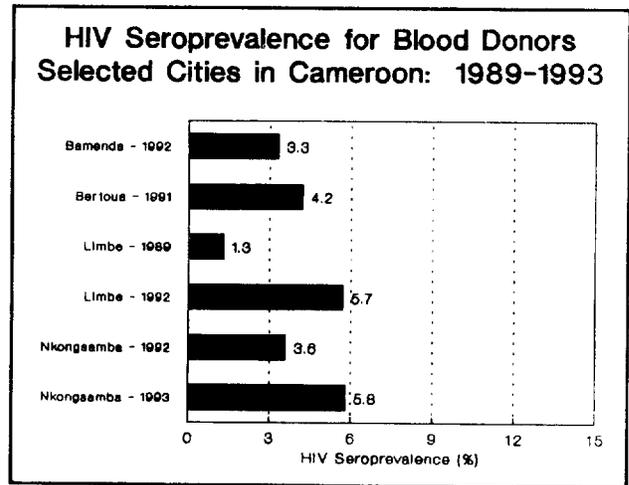
- The level of HIV infection among blood donors in Yaoundé has remained virtually the same over the 7-year period 1987-93, fluctuating around 3-4 percent. The percent of blood donors testing HIV positive in Douala increased from less than 1 percent in 1987 to nearly 5 percent in 1990 and 1991.



Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, July 1995.

## Cameroon

- HIV infection levels among blood donors in other areas vary. In Limbe and Nkongsamba, HIV levels increased to nearly 6 percent. In Bamenda, 1992, and in Bertoua, 1991, HIV infection levels were 3.3 percent and 4.2 percent, respectively. Data from Batouri in 1991 and Bafoussam in 1992 showed no evidence of HIV infection.



## Source for Cameroon

- E0032 Ella, M. M. Monny-Lobe, A. Ngoumou, 1993, Constraints of Pre and Post-Test Counselling on Blood Donors, IX International Conference on AIDS, Berlin, 6/6-11, Abstract PO-C21-3127.
- G0110 Garcia-Calleja, J. M., L. Zekeng, J. P. Louis, et al., 1992, HIV Infection in Cameroon: 30 Months' Surveillance in Yaounde, AIDS, vol. 6, no. 8, pp. 881-882.
- G0112 Garcia-Calleja, J. M., L. Zekeng, S. Abbenyi, et al., 1992, Validation of the Results Found in Pregnant Women Sentinel Site for HIV Infection in Yaounde, Cameroon, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.037.
- G0114 Gandji, R. T., L. Monny, L. Bowen, et al., 1992, Etude Retrospective de l'Evolution de la Seroprevalence du VIH chez les Donneurs de Sang a Yaounde et Douala, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.159.
- G0142 Garcia-Calleja, J. M., A. Sam-Abbenyi, J. J. Akamba, et al., 1993, KABP and HIV Seroprevalence Study among Sexually Active Men in Nkongsamba (Littoral Province), Cameroon, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract Th.P.C.081.
- K0024 Kaptue, L., G. Garrigue, M. Merlin, et al., 1988, Serology Survey of HIV 1 during Three Years in Cameroon, IV International Conference on AIDS, Stockholm, 6/13-14, Poster 5031.
- K0030 Kaptue, L., L. Zekeng, S. Djoumessi, et al., 1991, HIV and Chlamydia Infections among Prostitutes in Yaounde, Cameroon, Genitourinary Medicine, vol. 67, no. 2, pp. 143-145.
- K0070 Kaptue, L., L. Zekeng, R. Salla, et al., 1990, Setting Up a Sentinel Surveillance System for HIV Infection in Cameroon, VI International Conference on AIDS, San Francisco, 6/20-24, Poster F.C.597.
- K0073 Kaptue, L., L. Zekeng, P. Feldblum, et al., 1990, HIV-2 Infection among High Risk Groups in Yaounde, Cameroon, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster W.P.B.3.
- L0105 Lobe, V. E., R. Moyo, D. Mfonfu, et al., 1992, Prevalence of HIV Infection in Kumba, Cameroon, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.009.
- L0107 Louis, J. P., R. Trebucq, R. Migliani, et al., 1992, Avancee du Front Epidemique de l'Infection a VIH 1 en Afrique Centrale, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.O.008.
- M0272 Monny-Lobe, M., M. Ella, V. Ngoumou, et al., 1993, A Comparative HIV Seroprevalence Study among CSWs in Yaounde and Douala - Cameroon, IX International Conference on AIDS, Berlin, 6/6-11, Abstract PO-C31-3300.
- N0127 Ndumbe, P. M., A. M. Luma, J. Skalsky, et al., 1993, Update on HIV Epidemic in Cameroon, AIDS, vol. 7, no. 10, pp. 1397-1399.
- P0042 Pinay, P., G. De The, 1989, "Stagnation" Apparente de l'Infection HIV-1 a Douala, Cameroon, Apparition du HIV-2, IV Internat. Conf.: AIDS and Assoc. Cancers in Africa, Marseille, Oct. 18-20, Poster 050.
- S0195 Skalsky, J., 1992, HIV and AIDS in a Rural Area of the South West Province of Cameroon, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.007.
- S0261 Sam-Abbenyi, A., J. M. Garcia Calleja, L. Zekeng, et al., 1993, HIV Sentinel Surveillance among Pregnant Women in Six Provinces in Cameroon, 1989-1992, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract Th.P.C.069.
- T0107 Tapko, J. B., A. Kouinche, T. Kamdem, et al., 1993, Seroprevalence du HIV chez les Donneurs de Sang de l'Hopital General de Yaounde Pendant le 1er Semestre 1993, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract M.P.C.080.
- Z0014 Zekeng, L., P. Barth, R. Salla, et al., 1990, A Seroepidemiological Study of Sexually Transmitted Agents (HIV, Hepatitis B Virus, T. Pallidum) among Sentinel Population..., VI International Conference on AIDS, San Francisco, 6/20-24, Poster F.C.598.
- Z0025 Zekeng, L., Andela, J. M. Garcia, et al., 1991, Trends of HIV Infection among Pregnant women in Yaounde, Cameroon from 1989 to 1991, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster T.A.109.

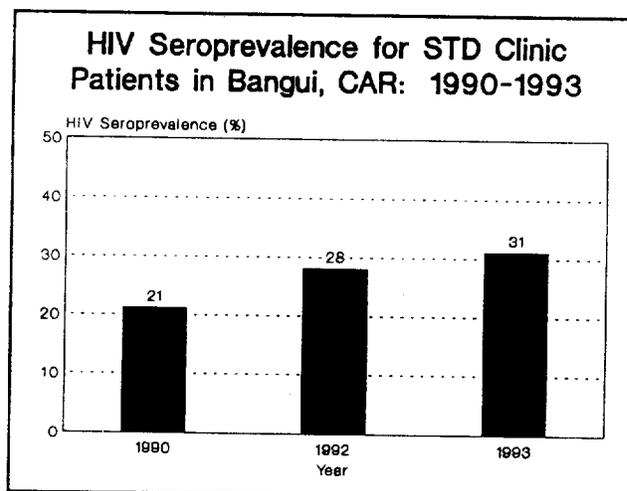
# Central African Republic

## Demographic Indicators

Population (1,000s)	3,142	Growth Rate (%)	2.2
Infant Mortality Rate		Life Expectancy	
Both Sexes	137	Both Sexes	43
Male	146	Male	41
Female	128	Female	44
Crude Birth Rate	42	Crude Death Rate	21
Total Fertility Rate	5.4	Percent Urban	50
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 11/30/92		1.23	
Cumulative AIDS cases as of 11/30/92		3,730	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

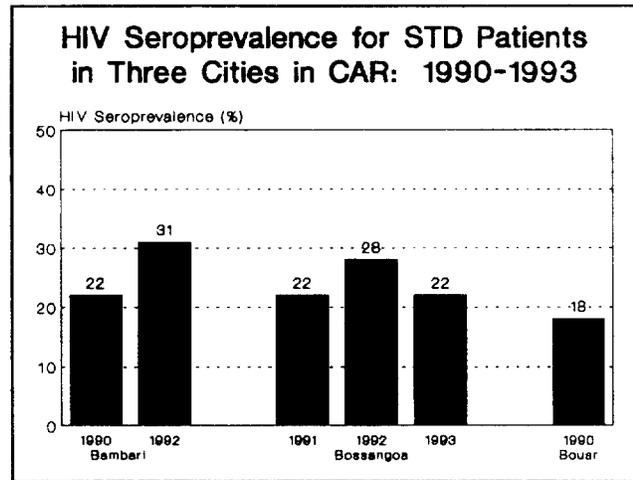
- In the capital city Bangui, seroprevalence studies report a steady increase of HIV infection from 21 percent in 1990 to 31 percent in 1993 among STD patients.



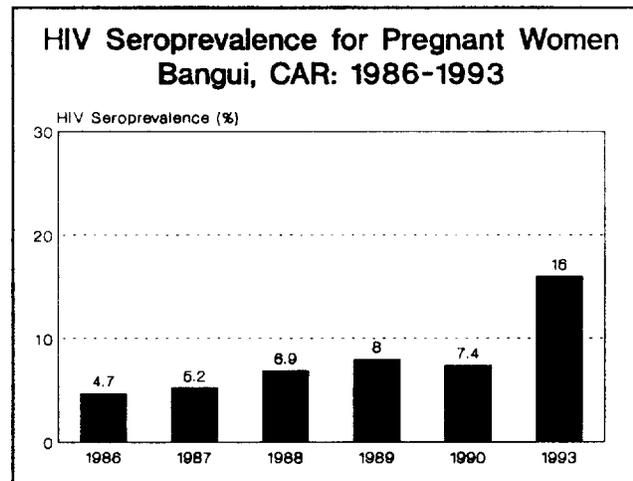
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, Dec. 1994.

## Central African Republic

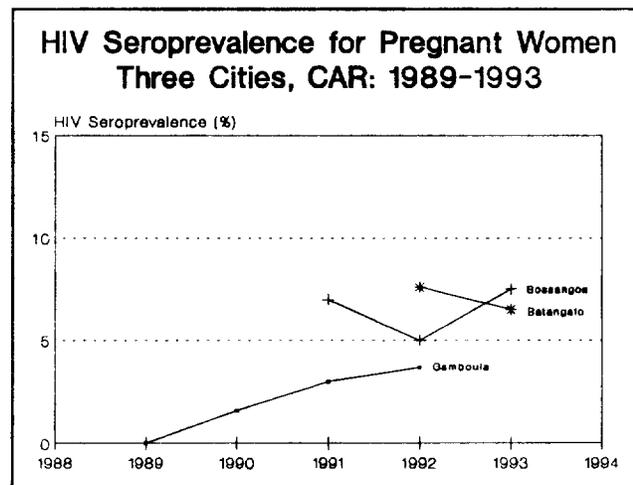
- Sentinel surveillance of STD clinic patients in three other cities indicates similar HIV infection levels. In Bambari, HIV infection increased among STD patients from 22 percent in 1990 to 31 percent in 1992. A study conducted in Bossangoa from 1991 to 1993 reported HIV infection levels fluctuating between 20 and 30 percent. In Bouar, the HIV infection level among STD patients was 18 percent in 1990.



- Annual surveys of pregnant women have documented a slow but steady increase of HIV-1 infection in Bangui over the 1986-1990 period from nearly 5 to 7.4 percent. However, data collected by local maternity clinics in 1993 reported HIV seroprevalence levels of 16 percent.

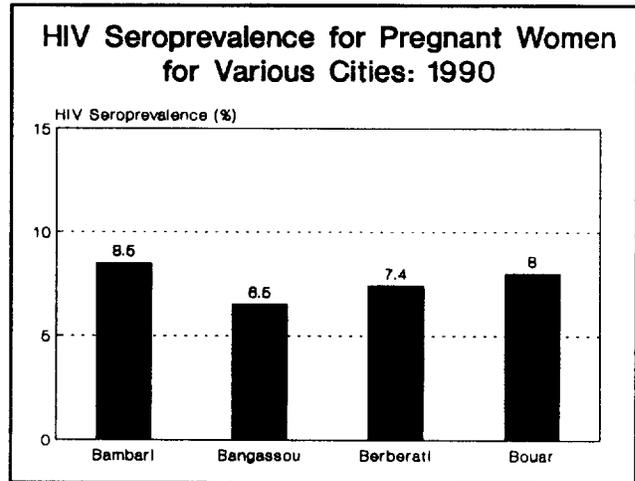


- A study conducted among pregnant women in three cities in Central African Republic reported different HIV seroprevalence levels. In Gamboula, located in Haute Sangha Prefecture on the border with Cameroon, the study found no HIV infection in 1989, but by 1992, the HIV infection level rose to 3.7 percent. In Batangafo, located in Ouham Prefecture, and in Bossangoa, HIV infection levels fluctuated between 5 and 7 percent from 1991 to 1993.

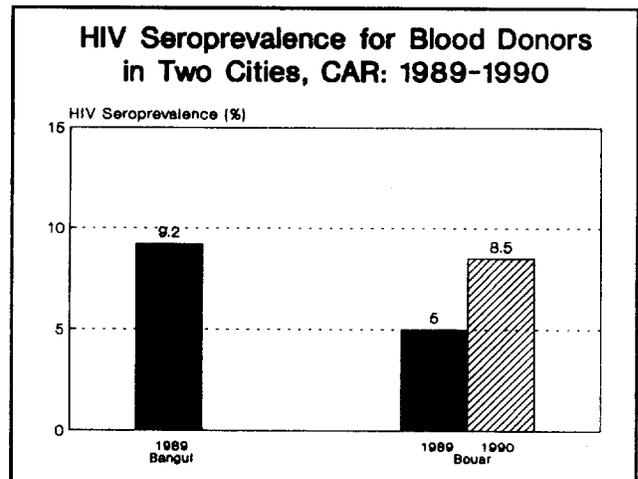


## Central African Republic

- In 1990, studies among pregnant women in various cities indicated HIV seroprevalence levels ranging from 6.5 percent to 8.5.



- A 1989 study reported the percent of blood donors positive for the HIV virus to be 9.2 percent in Bangui and 5 percent in Bouar. However, a 1990 study reported an increase in HIV level for Bouar to 8.5 percent.



## Sources for Central African Republic

- G0059 Georges, A. J., M. C. Georges-Courbot, P. M. V. Martin, et al., 1989, Infection and Morbidity due to HIV in Central African Republic, IV Internat. Conf.: AIDS and Assoc. Cancers in Africa, Marseille, Oct. 18-20, Poster 077.
- G0120 Gresenguet, G., A. Todesco, B. Pascal, et al., 1993, Use of STD National Clinic in Bangui to Control HIV Infection in Central Africa Rep., IX International Conference on AIDS, Berlin, 6/6-11, Poster PO-C20-3089.
- L0107 Louis, J. P., R. Trebucq, R. Migliani, et al., 1992, Avancee du Front Epidemique de l'Infection a VIH 1 en Afrique Centrale, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.O.008.
- S0069 Somse, P., A. J. Georges, R. M. Siopathis, et al., 1989, Les Aspects Epidemiologiques des Affections Liees Aux VIH 1 et 2 en Republique Centrafricaine, V International Conference on AIDS, Montreal, 6/4-9, Poster W.G.O. 28.
- U0027 U.S. Department of State, 1994, AIDS in the Central African Republic, Unclassified Cable, April, Bangui 001505.
- W0069 World Health Organization, 1991, Global Programme on AIDS, Weekly Epidemiological Record, vol. 66, no. 35, pp. 257-259.

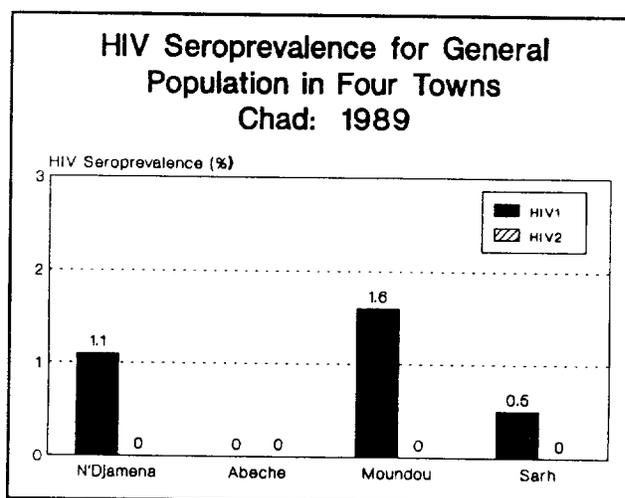
# Chad

## Demographic Indicators

Population (1,000s)	5,467	Growth Rate (%)	2.2
Infant Mortality Rate		Life Expectancy	
Both Sexes	132	Both Sexes	41
Male	129	Male	40
Female	135	Female	42
Crude Birth Rate	42	Crude Death Rate	21
Total Fertility Rate	5.3	Percent Urban	36
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 12/10/93		0.28	
Cumulative AIDS cases as of 12/10/93		1,523	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

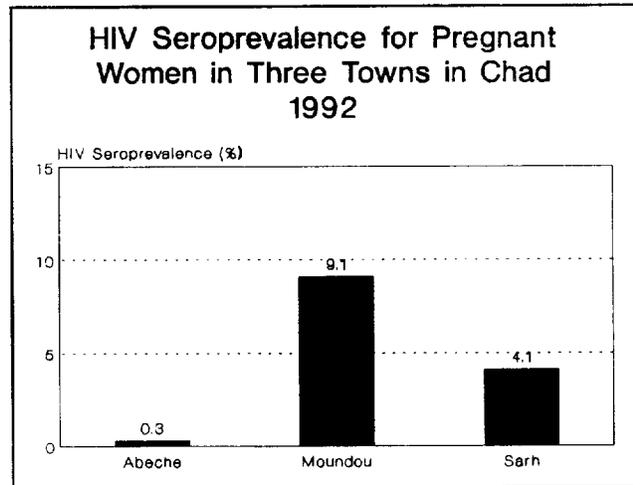
## Epidemiological Data

- A sero-epidemiological survey conducted in four towns in Chad in 1989 among adults from the general population found levels of HIV-1 infection varying from 0 to 1.6 percent. HIV-2 infection was not detected.

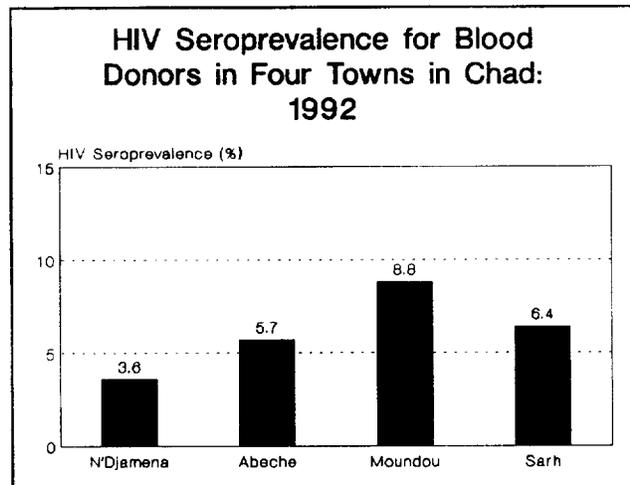


## Chad

- Results from the 1992 WHO report on AIDS surveillance in three towns in Chad showed the percent of pregnant women testing positive for HIV varied by town. Testing in the northern area, Abeche had a low prevalence rate of 0.3 percent while the southern areas, Moundou and Sarh, had higher prevalence rates of 9.1 percent and 4.1 percent, respectively.



- In the same report, HIV seroprevalence levels among blood donors also varied by city. HIV levels ranged from 8.8 percent in Moundou city to 3.6 in the capital city, N'Djamena.



## Sources for Chad

- L0080 Louis, J. P., A. Trebucq, C. Hengy, et al, 1990, Epidemiologie des Infections a Retrovirus VIH1 - VIH2 et HTLV1 en Republique du Tchad, Bulletin de la Societe de Pathologie, Exotique, vol. 83, no. 5, pp. 603-610.
- M0266 Ministry of Public Health & Social Affairs, 1992, WHO Report on AIDS Surveillance, SFI/GPA/WHO/11.8, Official Report.
- W0002 Wellcome Foundation, 1987, AIDS and Its Management, The Wellcome Foundation Limited Berkhamsted Herts England, B.5676/09.87/5.0/R, pp. 4-5.
- W0003 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 3, pp. 187-188.
- W0013 World Health Organization, 1988, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 2, no. 6, pp. 487-490.
- W0033 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 9, pp. 619-620.
- W0041 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 3, pp. 277-278.
- W0045 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 12, pp. 1305-1306.
- W0046 World Health Organization, 1991, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 5, no. 3, pp. 349-350.
- W0054 World Health Organization, 1991, World Health Organization Global AIDS Statistics, AIDS Care, vol. 3, no. 4, pp. 481-484.
- W0067 World Health Organization, 1992, World Health Organization Global AIDS Statistics, AIDS Care, vol. 4, no. 3, pp. 365-368.
- W0072 World Health Organization, 1993, World Health Organization Global AIDS Statistics, AIDS, vol. 5, no. 1, pp. 125-128.
- W0079 World Health Organization, 1993, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 7, no. 9, pp. 1287-1291.

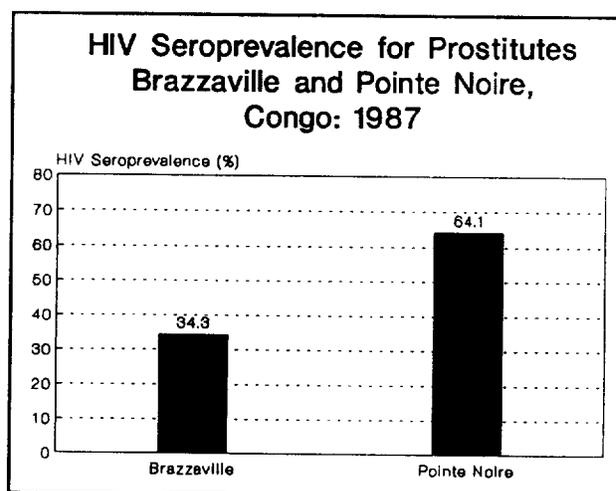
# Congo

## Demographic Indicators

Population (1,000s)	2,447	Growth Rate (%)	2.4
Infant Mortality Rate		Life Expectancy	
Both Sexes	111	Both Sexes	48
Male	118	Male	46
Female	104	Female	49
Crude Birth Rate	40	Crude Death Rate	16
Total Fertility Rate	5.3	Percent Urban	43
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 3/23/94		2.63	
Cumulative AIDS cases as of 3/23/94		6,393	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

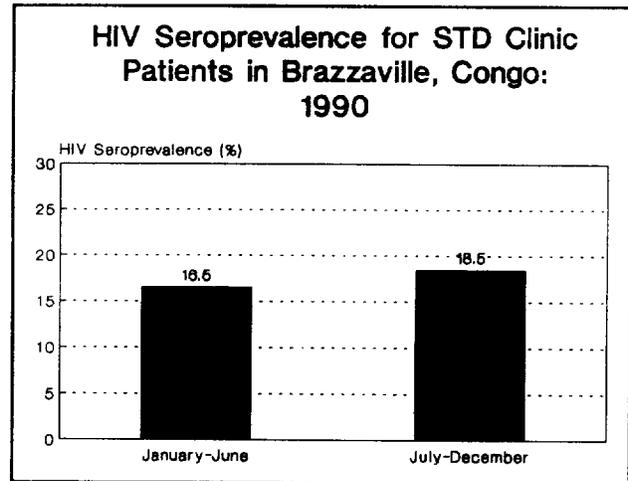
- A study conducted in 1987 reported HIV infection levels of 34.3 percent among prostitutes in the capital city of Brazzaville and 64.1 percent among prostitutes in the port city of Pointe Noire.



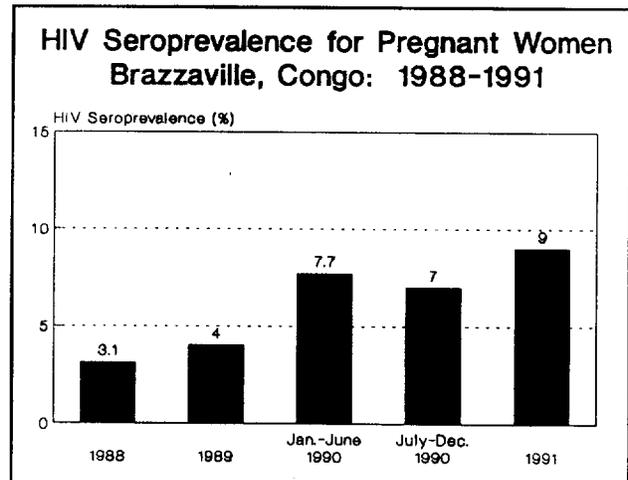
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1993.

## Congo

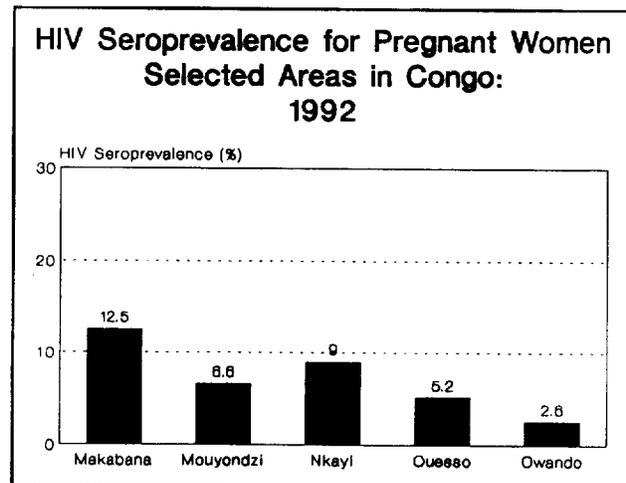
- In two successive 6-month periods in Brazzaville, HIV infection among STD clinic patients increased 2 percentage points from 16.5, January-June 1990, to 18.5 percent, July-December 1990.



- HIV infection in pregnant women in Brazzaville has tripled in recent years from 3 percent in 1988 to 9 percent in 1991.



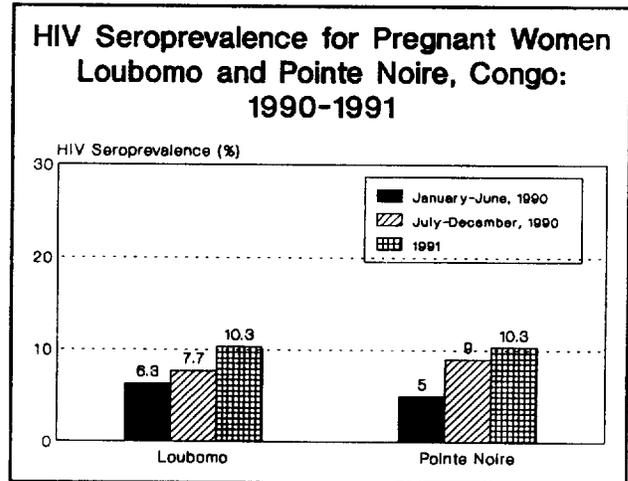
- HIV infection among pregnant women from these sentinel surveillance sites ranged from 5.2 percent to 12.5 percent. These sites cover a wide geographical range in the Congo.



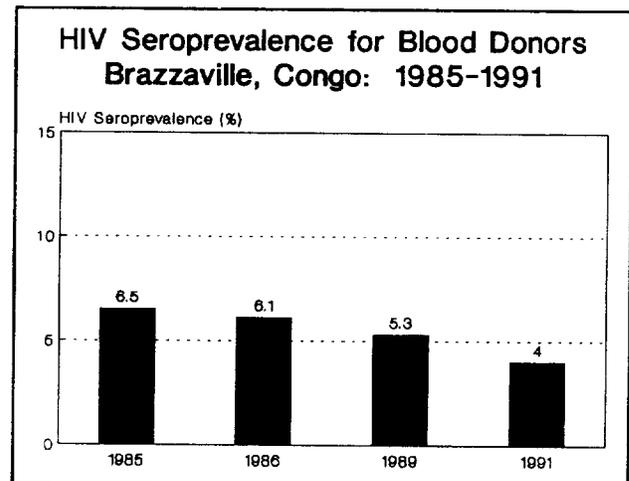
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1993.

## Congo

- Recent studies conducted in the city of Loubomo and in the port city of Pointe Noire have also found HIV infection rates ranging from 5 to 10.3 percent among pregnant women.



- Studies conducted among blood donors in Brazzaville from 1985-91 indicated a decrease in HIV infection levels. This may be attributed to donors who felt they may have been exposed to the virus declining to donate or to donor screening programs.



## Sources for Congo

- B0127 Bazabana, M., J. C. Loukaka, P. M'Pele, et al., 1991, Tendances de l'Infection à VIH chez les Femmes Encintes au Congo, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster M.A.268.
- B0162 Bazabana, M. M., J. C. Loukaka, M. Makuwa, et al., 1992, Surveillance par Réseau de Postes Sentinelles au Niveau District 1991 - 1992: Expérience Congolaise, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.032.
- C0105 Copin, N., P. M'Pele, E. Fenouillet, et al., 1990, Evolution de la Séroprévalence HIV 1 chez les Donneurs de Sang de Brazzaville au Centre de Transfusion Sanguine de Brazzaville, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.26.
- G0073 Guerma, T., P. M'Pele, J. C. Loukaka, et al., 1990, Serosurveillance de l'Infection à VIH Par Réseau des Postes Sentinelles Parmi les Femmes Enceintes et des Malades Atteints..., V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.3.
- G0090 Gueguen, M., A. Bimokono, C. Goumbi, et al., 1991, Infection Récente à VIH chez les Donneurs de Sang de Brazzaville: Estimation du Risque Transfusionnel Résiduel ..., VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster M.A.270.
- L0039 Lallemand, M., S. Lallemand-Le Coeur, G. Jourdain, et al., 1989, Infection par HIV 1 dans les 5 Maternités de Brazzaville: Facteurs de Risque Maternel et Caractéristiques des Nouveaux-Nés, V International Conference on AIDS, Montreal, 6/4-9, Poster W.G.P. 10.
- M0026 M'Pele, P., A. Itoua-Ngaporo, M. Rosenheim, et al., 1987, Sero-Prevalence of Anti-HIV Antibodies in Brazzaville (Congo), III International Conference on AIDS, Washington D.C., 6/1-5, Abstract WP.79.
- M0032 M'Pele, P., A. Itoua-Ngaporo, M. Rosenhelm, et al., 1987, HIV Antibodies in Prostitutes, Brazzaville and Pointe Noire (Congo), II International Symposium: AIDS and Associated Cancers in Africa, Naples, Italy, 10/7-9, Abstract TH-30.
- MC192 M'Pele, P., M. Lallemand, S. Lallemand-Le, et al., 1991, Stabilité de l'Infection à VIH chez la Femme Enceinte à Brazzaville, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Abstract W.A.152.
- Y0008 Yala, F., C. Olembe, P. M'Pele, et al., 1988, HBs Antigen, Anti-HIV Antibodies and Their Association Carrier State among Blood Donors in Brazzaville, Bulletin de la Société de Pathologie Exotique, vol. 81, no. 1, pp. 32-39.

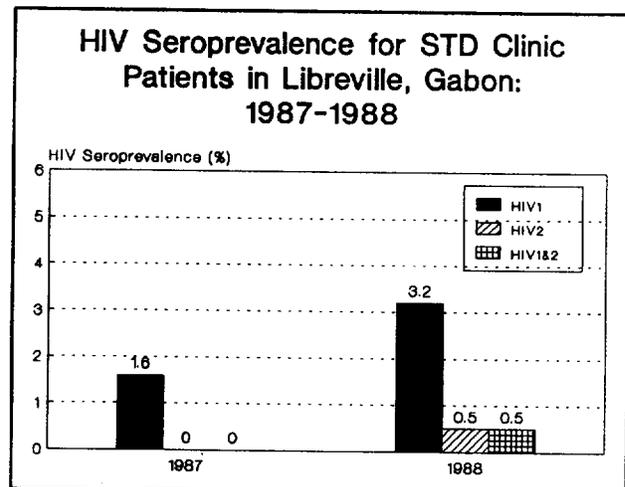
# Gabon

## Demographic Indicators

Population (1,000s)	1,139	Growth Rate (%)	1.5
Infant Mortality Rate		Life Expectancy	
Both Sexes	95	Both Sexes	55
Male	107	Male	52
Female	83	Female	58
Crude Birth Rate	28	Crude Death Rate	14
Total Fertility Rate	4.0	Percent Urban	49
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 12/10/93		0.42	
Cumulative AIDS cases as of 12/10/93		472	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

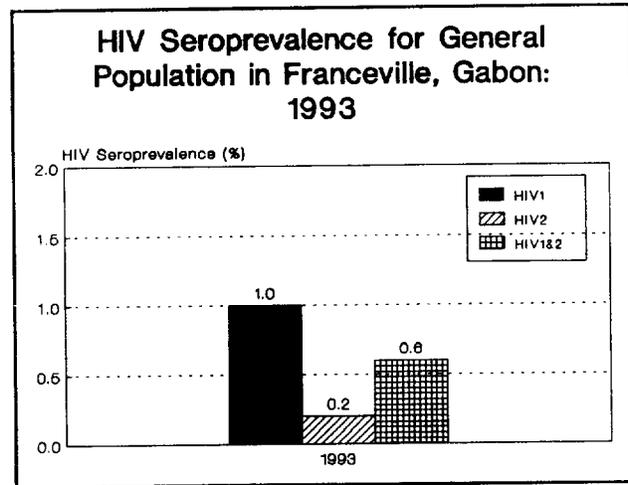
- In the capital city, Libreville, HIV-1 infection among sexually transmitted diseases clinic attendees doubled between 1987 and 1988. HIV-2 and dual infections were absent in 1987 but were detected in 1988.



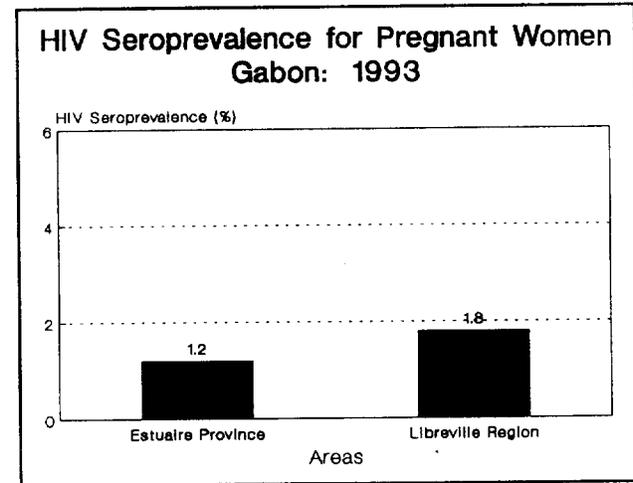
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1994.

## Gabon

- In Franceville, HIV infection levels among the general population in 1993 were moderately low. This study found HIV-1 seroprevalence (1.0 percent) higher than HIV-2 (0.2 percent). In addition, dual infection was present (0.6 percent).



- A recent study from two areas reported HIV infection levels among pregnant women less than 2 percent. In Estuaire Province and Libreville region, HIV levels were 1.2 percent and 1.8 percent, respectively.



## Sources for Gabon

- A0128 Amblard, M., M. Peeters, E. Roggen, et al., 1993, Seroprevalence de la Syphilis, d'Haemophilus Ducreyi et du VIH chez des Femmes Vivants en Zone Urbaine et Rurale au Gabon, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Session W.O.P.039.
- M0146 Mefane, C., D. Benoni, M. Guerch, et al., 1989, Seroprevalence des Infections a Retrovirus Humains a Libreville (Gabon), Medecine d'Afrique Noire, vol. 36, no. 6, pp. 491-496.
- M0326 Muloko, N., S. Ossari, A. Lefandi, et al., 1993, Evolutivite du HIV-1 et HIV-2 dans une Zone de Forte Prevalence HTLV, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Poster T.P.A.022.
- W0002 Wellcome Foundation, 1987, AIDS and Its Management, The Wellcome Foundation Limited Berkhamsted Herts England, B.5676/09.87/5.0/R, pp. 4-5.
- W0013 World Health Organization, 1988, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 2, no. 6, pp. 487-490.
- W0032 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 6, pp. 405-406.
- W0034 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 12, pp. 863-864.
- W0042 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 6, pp. 605-606.
- W0045 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 12, pp. 1305-1306.
- W0047 World Health Organization, 1991, Statistics from the who and the Centers for Disease Control, AIDS, 5(6):785-790.
- W0067 World Health Organization, 1992, World Health Organization Global AIDS Statistics, AIDS Care, vol. 4, no. 3, pp. 365-368.
- W0079 World Health Organization, 1993, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 7, no. 9, pp. 1287-1291.
- W0087 World Health Organization, 1994, The Current Global Situation of the HIV/AIDS Pandemic, Global Programme on AIDS, January 4, document.

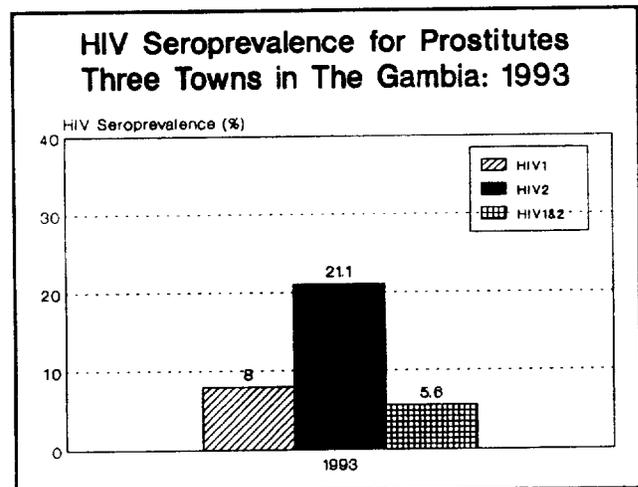
# The Gambia

## Demographic Indicators

Population (1,000s)	959	Growth Rate (%)	3.1
Infant Mortality Rate		Life Expectancy	
Both Sexes	124	Both Sexes	50
Male	136	Male	48
Female	111	Female	52
Crude Birth Rate	46	Crude Death Rate	16
Total Fertility Rate	6.3	Percent Urban	25
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 12/31/93		0.29	
Cumulative AIDS cases as of 12/31/93		277	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

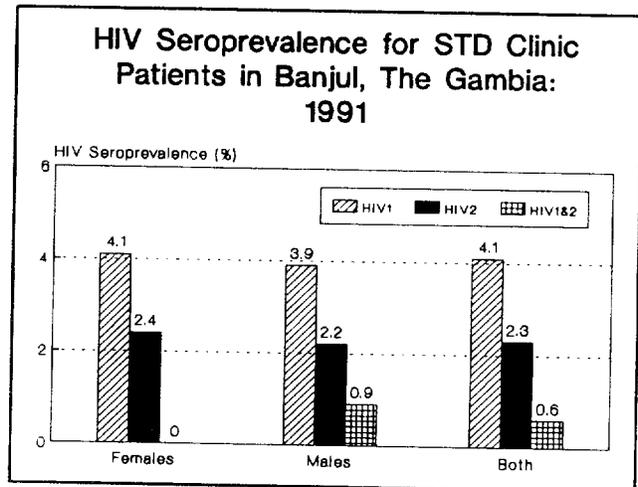
- Similar to other countries in West Africa, The Gambia has higher HIV-2 infection levels than HIV-1. Evidence of this is shown in this study conducted among prostitutes in three urban towns in The Gambia. The HIV-2 infection level is 21 percent while HIV-1 is 8 percent. About 6 percent of the prostitutes are dually infected with HIV-1 and HIV-2.



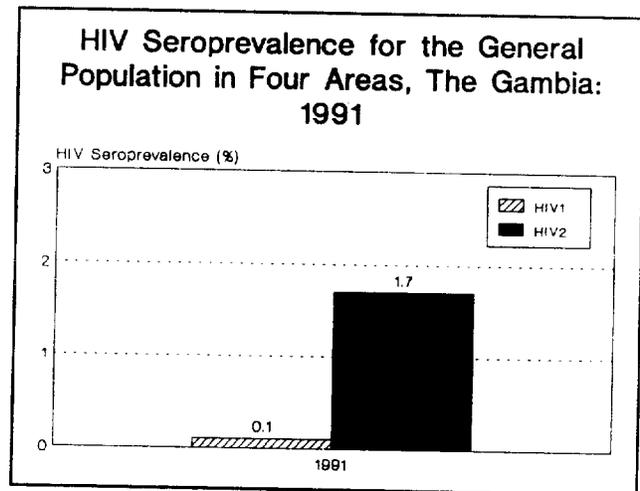
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, Dec. 1994.

## The Gambia

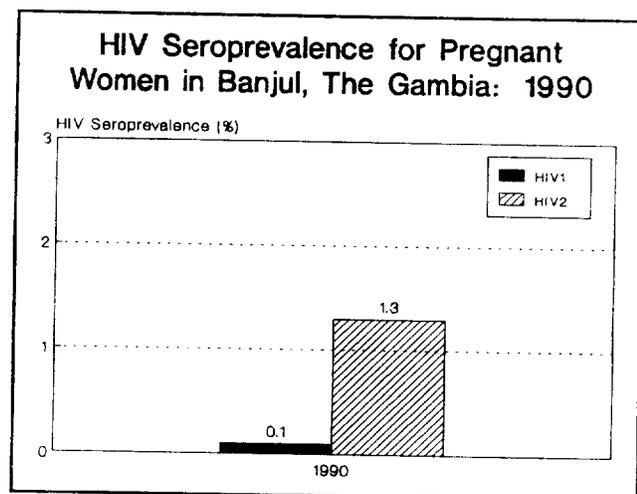
- In Banjul, the capital city, a seroprevalence study of STD patients found somewhat equal levels of infection in both sexes. The most noticeable deviation occurred with dual infection. None of the females showed dual infection, while nearly 1 percent of males were so infected.



- A serosurvey carried out in greater Banjul and three other areas found about 2 percent of a sample of adults infected with HIV-2 but only 0.1 percent infected with HIV-1.

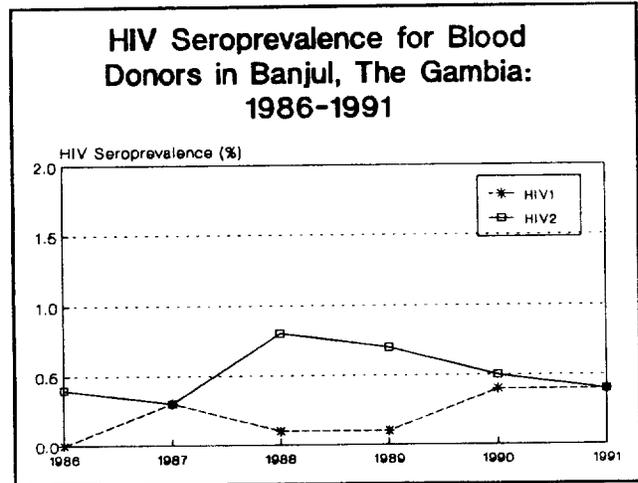


- In Banjul, at the Royal Victoria Hospital, a study of pregnant women found a notable difference between HIV-1 and HIV-2 infection levels. HIV-1 seroprevalence was only 0.1 percent compared with 1.3 percent for HIV-2.



## The Gambia

- HIV infection among blood donors has remained under 1 percent as indicated by this study from Banjul. HIV-1 has fluctuated between 0 and 0.4 percent of donors. On the other hand, HIV-2 appears to have peaked in 1988 and has gradually declined to around 0.4 percent in 1991.



## Sources for Gambia

- H0117 Hawkes, S., H. Whittle, R. Jagne, et al., 1994, The Increase in HIV-1 Prevalence in Commercial Sex Workers (CSWs) in the Gambia, and Association with Other STDs Including ..., Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Session 393C.
- M0031 Mabey, D. C. W., R. S. Tedder, A. S. Huhes, et al., 1988, Human Retroviral Infections in the Gambia: Prevalence and Clinical Features, British Medical Journal, Jan. 9, vol. 296, pp. 83-86.
- M0197 Manneh, K. K., R. S. Njie, R. Sarr, et al., 1991, The Prevalence of HIV Seropositivity in STD Patients in a Relatively Low Prevalence General Population, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster W.A.154.
- M0203 Manneh, K. K., R. S. Njie, R. Sarr, et al., 1992, HIV Status of Antenatal Women Reporting for Routine Blood Tests at the Royal Victoria Hospital, VIII International Conference on AIDS, Amsterdam, 7/19-24, Abstract PuC 8133.
- S0160 Sarge-Njie, R., E. G. Sarr, K. K. Manneh, et al., 1992, The Role of Donors in HIV Transmission, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster PoD 5683.
- W0027 Wilkins, A., R. Hayes, P. Alonso, et al., 1991, Risk Factors for HIV-2 Infection in the Gambia, AIDS, vol. 5, no. 9, pp. 1127-1132.

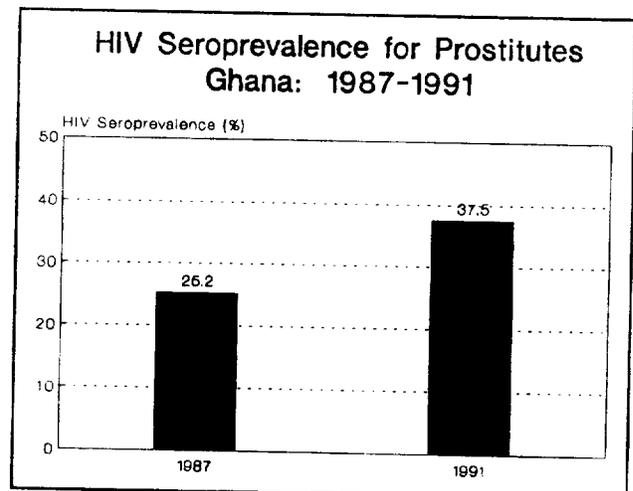
# Ghana

## Demographic Indicators

Population (1,000s)	17,225	Growth Rate (%)	3.1
Infant Mortality Rate		Life Expectancy	
Both Sexes	83	Both Sexes	56
Male	90	Male	54
Female	76	Female	58
Crude Birth Rate	44	Crude Death Rate	12
Total Fertility Rate	6.2	Percent Urban	36
Note: Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 8/31/93		0.69	
Cumulative AIDS cases as of 8/31/93		11,629	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

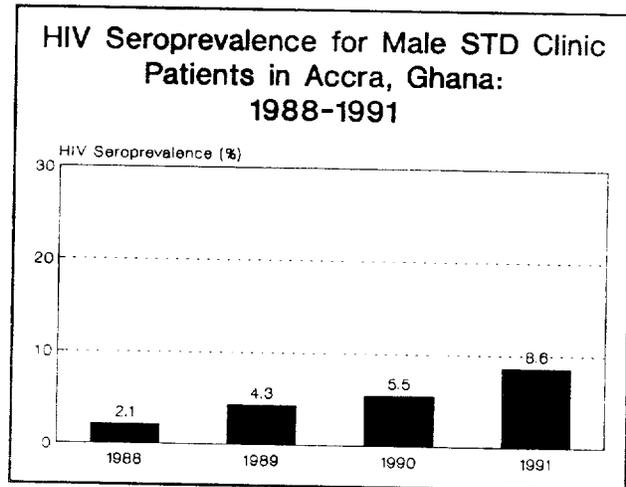
- In Ghana, HIV infection levels among prostitutes increased from 25.2 percent in 1987 to 37.5 percent in 1991.



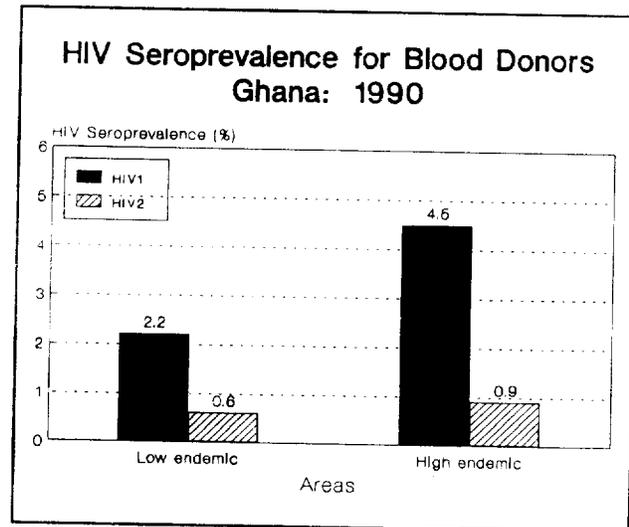
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1993.

## Ghana

- In the capital city, Accra, the prevalence of HIV infection in males attending a sexually transmitted diseases clinic more than quadrupled from 2.1 percent in 1988 to 8.6 percent in 1991.



- A study of blood donors was conducted for two months in high endemic areas of Ghana (where previous seroprevalence studies had reported high levels of HIV infection). A study of blood donors in a low endemic area was done for a period of one year. HIV-1 seroprevalence among blood donors in the high endemic area, 4.5 percent, was twice the HIV-1 level in the low endemic area, 2.2 percent. HIV-2 levels have remained under 1 percent in both areas.



## Sources for Ghana

- A0090 Asamoah-Odei, E. J., P. M. Antwi, A. Asamoah-Adu, et al., 1992, HIV Surveillance among Men Attending STD Clinic in Accra, Ghana, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Abstract T.P.026.
- D0096 Diaw, I., I. Thior, T. Siby, et al., 1991, Prevalence du VIH et MST Majeures chez les Prostituees Nouvellement Inscrites, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Session W.O.128.
- M0018 Mingle, J. A. A., M. Hayami, M. Osei-Kwasi, et al., 1987, Reactivity of Ghanaian Sera to Human Immunodeficiency Virus, (HIV) and Simian T-Lymphotropic Virus III (STLV-III), III International Conference on AIDS, Washington, D.C., 6/1-5, Abstract MP.94.
- M0143 Mingle, J., M. Osei-Kwesi, P. Antwi, et al., 1990, HIV-1 and HIV-2 Seroprevalence in Three Population Groups in Ghana, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.5.
- W0003 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 3, pp. 187-188.
- W0013 World Health Organization, 1988, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 2, no. 6, pp. 487-490.
- W0032 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 6, pp. 405-406.
- W0040 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 9, pp. 937-941.
- W0041 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 3, pp. 277-278.
- W0045 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 12, pp. 1305-1306.
- W0054 World Health Organization, 1991, World Health Organization Global AIDS Statistics, AIDS Care, vol. 3, no. 4, pp. 481-484.
- W0058 World Health Organization, 1992, World Health Organization Global AIDS Statistics, AIDS Care, vol. 4, no. 2, pp. 231-234.
- W0067 World Health Organization, 1992, World Health Organization Global AIDS Statistics, AIDS Care, vol. 4, no. 3, pp. 365-368.
- W0072 World Health Organization, 1993, World Health Organization Global AIDS Statistics, AIDS, vol. 5, no. 1, pp. 125-128.

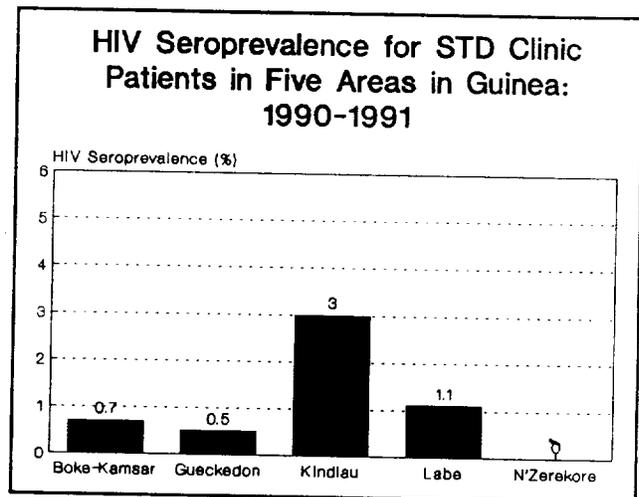
# Guinea

## Demographic Indicators

Population (1,000s)	6,392	Growth Rate (%)	2.4
Infant Mortality Rate		Life Expectancy	
Both Sexes	139	Both Sexes	44
Male	151	Male	42
Female	127	Female	46
Crude Birth Rate	44	Crude Death Rate	20
Total Fertility Rate	5.9	Percent Urban	29
<b>Note: Above indicators are for 1994.</b>			
Cumulative AIDS rate (per 1,000) as of 12/31/93		0.15	
Cumulative AIDS cases as of 12/31/93		976	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

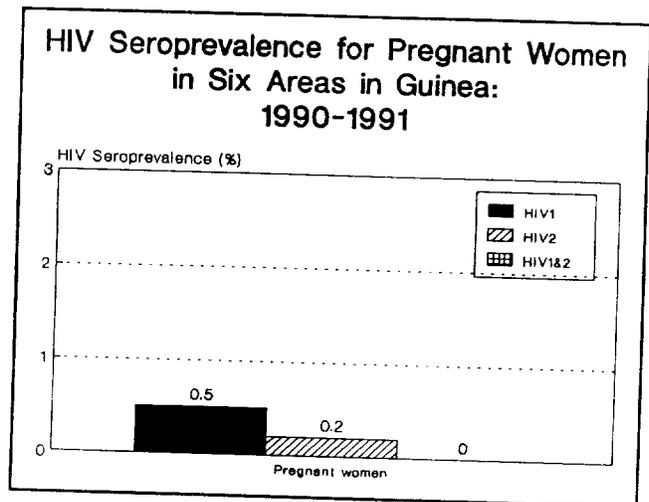
- In Guinea, substantial regional variation is noted for HIV-1 infection among STD clinic attendees. Three percent of patients were HIV positive in Kindlau compared to no reported HIV infections in N'Zerekore.



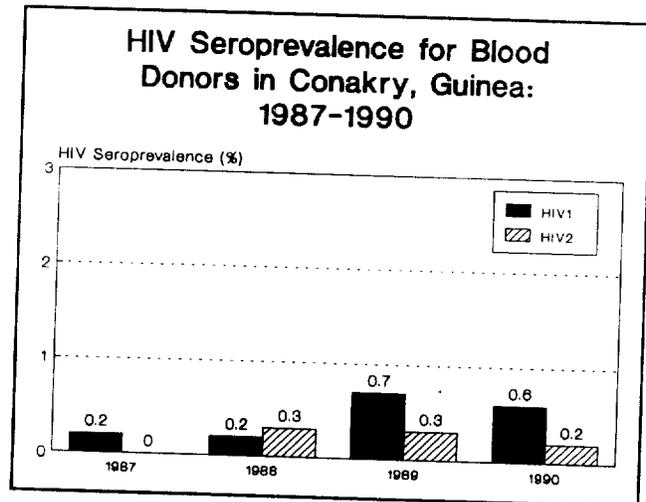
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, Feb. 1992.

## Guinea

- Both HIV-1 and HIV-2 are present in Guinea. In 1990-91, a study in six urban areas, including the capital, reported HIV infection levels for pregnant women less than 1 percent (0.5 for HIV-1 and 0.2 for HIV-2) with no evidence of a double infection. Prevalence of HIV infection among pregnant women is lower than that reported in most other African urban areas.



- HIV-1 prevalence rates among blood donors in the capital city increased between 1987-88 and 1989-90.



## Sources for Guinea

- K0074 Kourouma, K., K. Kaba, L. Koivogui, 1990, Seroprevalence de l'Infection a VIH Chez les Donneurs de Sang a Conakry, Guinee, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.6.
- L0074 Lakiss, S., K. Kourouma, M. P. Diallo, et al., 1991, HIV-1/2 Seroprevalence in Guinea Conakry, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster M.C.3300.

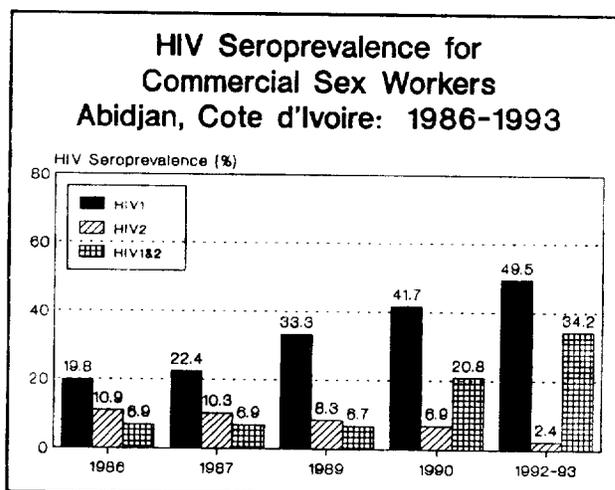
# Côte d'Ivoire

## Demographic Indicators

Population (1,000s)	14,296	Growth Rate (%)	3.4
<b>Infant Mortality Rate</b>		<b>Life Expectancy</b>	
Both Sexes	95	Both Sexes	49
Male	103	Male	47
Female	86	Female	51
Crude Birth Rate	47	Crude Death Rate	15
Total Fertility Rate	6.7	Percent Urban	43
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 2/24/94		1.32	
Cumulative AIDS cases as of 2/24/94		18,670	
<b>Sources:</b> U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

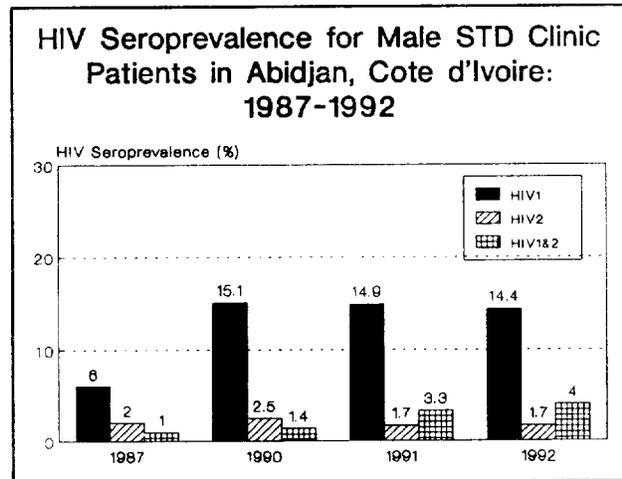
- Since 1986, HIV infection has increased dramatically among commercial sex workers in the capital and port city of Abidjan. In Abidjan, the rate of HIV-1 infection is higher than the rate of HIV-2.



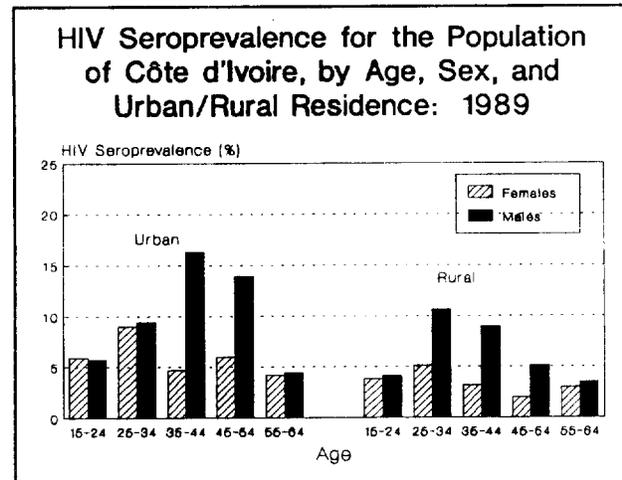
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1993.

## Côte d'Ivoire

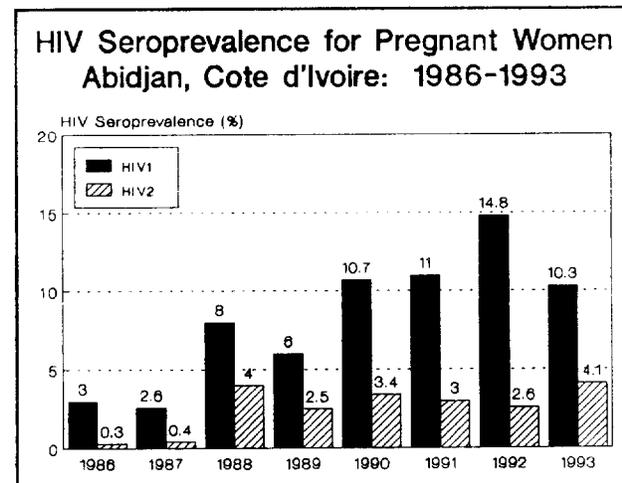
- Male STD clinic patients provide the best opportunity to study HIV infection among "high-risk" males. A recent study in Abidjan confirms the exposure of this group to the risk of infection.



- In all age categories, HIV infection levels were higher among men than women except in the urban age group 15-24.

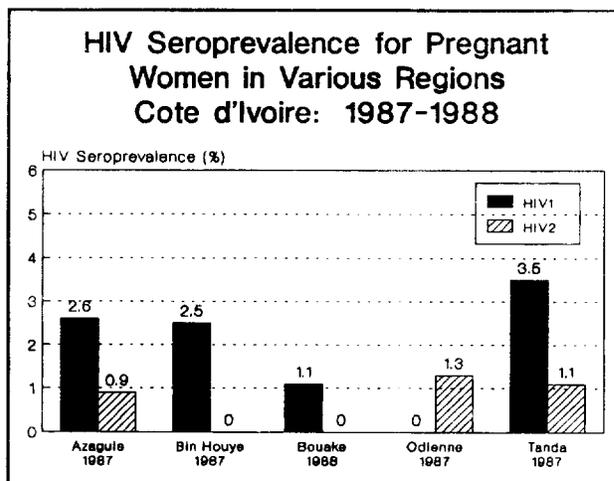


- HIV-1 infection has risen rapidly in pregnant women in Abidjan over the past several years. However, HIV-2 infection has remained 4 percent or below. Abidjan's infection level now places it among the more infected areas in Africa, surpassing areas which showed higher rates of infection in 1986.

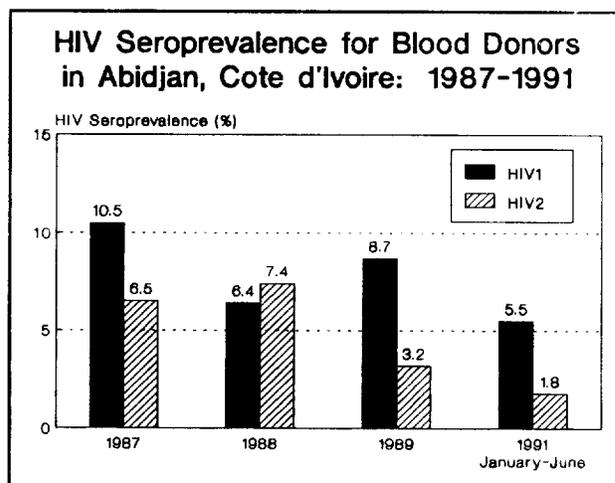


## Côte d'Ivoire

- Levels of HIV seroprevalence in pregnant women in Cote d'Ivoire vary by regions. In 1987-88, HIV-1 infection levels ranged from 0 to 3.5 percent and HIV-2 levels varied from 0 to 1.3 percent.



- Over the last several years, patterns of HIV infection among blood donors in Abidjan show a mixed trend. As awareness of AIDS grows, those considering themselves at risk may be declining to donate. The rate of HIV-2 is generally less than HIV-1 in this population group.



## Sources for Côte d'Ivoire

- B0108 Benoit, S. N., G. M. Gershy-Damet, A. Coulibaly, et al., 1990, Seroprevalence of HIV Infection in the General Population of the Cote d'Ivoire, West Africa, *Journal of Acquired Immune Deficiency Syndromes*, vol. 3, no. 12, pp. 1193-1196.
- D0030 Denis, F., G. Gershy-Damet, M. Lhuillier, et al., 1987, Prevalence of Human T-Lymphotropic Retroviruses Type III (HIV) and Type IV in Ivory Coast, *Lancet*, February 21, vol. 1, pp. 408-411.
- D0086 De Cock, K. M., E. Gnaore, G. Adjorlolo, et al., 1991, Risk of Tuberculosis in Patients with HIV-1 and HIV-II Infections in Abidjan, Ivory Coast, *British Medical Journal*, vol. 302, pp. 496-499.
- K0105 Koffi, K., G. M. Gershy-Damet, N. Koffi, et al., 1991, Diffusion Rapide des Infections à VIH à Abidjan, Côte d'Ivoire de 1987 à 1990, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster T.A.112.
- O0004 Odehouri, K., K. M. DeCock, J. W. Krebs, et al., 1989, HIV-1 and HIV-2 Associated with AIDS in Abidjan, Côte d'Ivoire, *AIDS*, vol. 3, no. 8, pp. 509-512.
- O0027 Ouattara, A., M. A. Rey, F. Brun-Vesinet, et al., 1988, Retroviral Infections by HIV-1, HIV-2 and AIDS - Related Complex in the Ivory Coast, *C R Acad Sci*, vol. 306, no. 2, pp. 47-50.
- S0141 Savarit, D., R. Schutz, S. Konate, et al., 1991, Prevalence de l'Infection V.I.H. des Donneurs de Sang du C.N.T.S. d'Abidjan, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster M.A.252.
- T0078 Traore-Ettiegne, V., M. O. Diallo, A. Amouzou, et al., 1992, Trends in HIV-1 and HIV-2 Infections in Men Attending an Abidjan Sexually Transmitted Diseases Clinic, 1990-1992, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.027.
- V0012 Verdier, M., A. Sangare, G. Leonard, et al., 1988, HIV-1, HIV-2 and HTLV-1 Prevalence in Pregnant Women of Seven Areas of Ivory Coast, III International Conference: AIDS and Associated Cancers in Africa, Sept. 14-16, Poster FP 17.
- W0002 Wellcome Foundation, 1987, AIDS and Its Management, The Wellcome Foundation Limited Berkhamsted Herts England, B.5676/09.87/5.0/R, pp. 4-5.
- W0013 World Health Organization, 1988, Statistics from the WHO and the Centers for Disease Control, *AIDS*, vol. 2, no. 6, pp. 487-490.
- W0041 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, *AIDS*, vol. 4, no. 3, pp. 277-278.
- W0042 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, *AIDS*, vol. 4, no. 6, pp. 605-606.
- W0046 World Health Organization, 1991, Statistics from the WHO and the Centers for Disease Control, *AIDS*, vol. 5, no. 3, pp. 349-350.
- W0047 World Health Organization, 1991, Statistics from the who and the Centers for Disease Control, *AIDS*, 5(6):785-790.
- W0057 World Health Organization, 1992, World Health Organization Global AIDS Statistics, *AIDS Care*, vol. 4, no. 1, pp. 125-128.
- W0067 World Health Organization, 1992, World Health Organization Global AIDS Statistics, *AIDS Care*, vol. 4, no. 3, pp. 365-368.

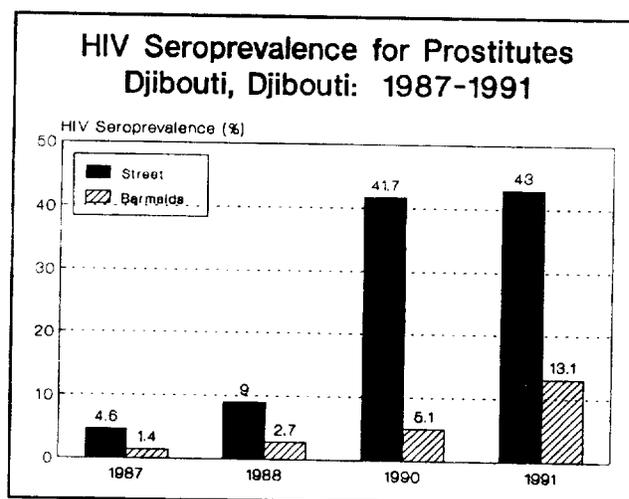
# Djibouti

## Demographic Indicators

Population (1,000s)	413	Growth Rate (%)	2.7
Infant Mortality Rate		Life Expectancy	
Both Sexes	111	Both Sexes	49
Male	120	Male	47
Female	102	Female	51
Crude Birth Rate	43	Crude Death Rate	16
Total Fertility Rate	6.2	Percent Urban	82
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 4/19/94		1.19	
Cumulative AIDS cases as of 4/19/94		490	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

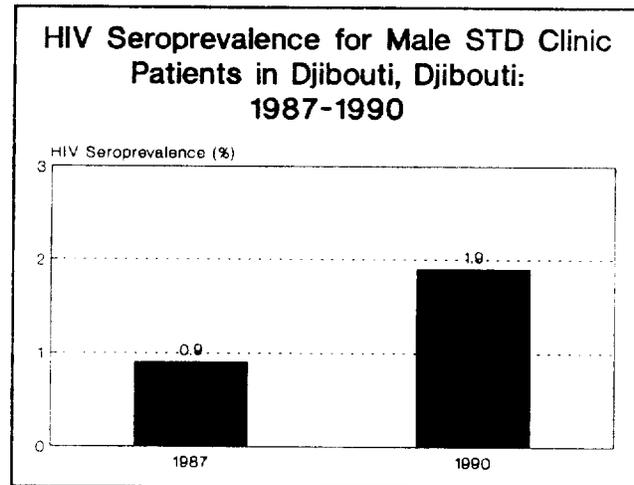
- The prevalence of HIV infection among prostitutes in the capital city of Djibouti increased over the 4-year period from 1987 to 1991. The levels of HIV increased dramatically among street prostitutes from 4.6 percent in 1987 to 43 percent in 1991. Among barmaids, HIV levels increased from 1.4 percent in 1987 to 13.1 percent in 1991, showing both groups to be at high risk for acquiring HIV.



Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1993.

## Djibouti

- Studies conducted among sexually transmitted diseases patients in 1987 and 1990 showed seroprevalence levels of 0.9 percent and 1.9 percent, respectively, in the capital city, Djibouti. Although levels of HIV infection vary considerably across Africa, the infection level observed in Djibouti within this risk group was lower than studies from other East African countries.



## Sources for Djibouti

- C0141 Couzineau, B., J. Bouloumie, P. Hovette, et al., 1991, Prevalence of HIV Infection in a Target Population in the Republic of Djibouti, *Medecine Tropicale*, vol. 51, no. 4, pp. 485-486.
- F0017 Fox, E., E. A. Abbatte, H. H. Wassef, et al., 1989, Low Prevalence of HIV Infection in Djibouti: Has the AIDS Epidemic Come to a Stop at the Horn of Africa?, *Transactions of the Royal Society of Tropical Medicine and Hygiene*, vol. 83, no. 1, pp. 103-106.
- F0025 Fox, E., E. A. Abbatte, N. T. Constantine, et al., 1989, Incidence of HIV Infection in Djibouti in 1988, *AIDS*, vol. 3, no. 4, pp. 244-245.
- R0051 Rodier, G., E. Fox, D. Watts, et al., 1991, A Dramatic Increase in the Prevalence of HIV Infection in Djibouti, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster M.C.3031.

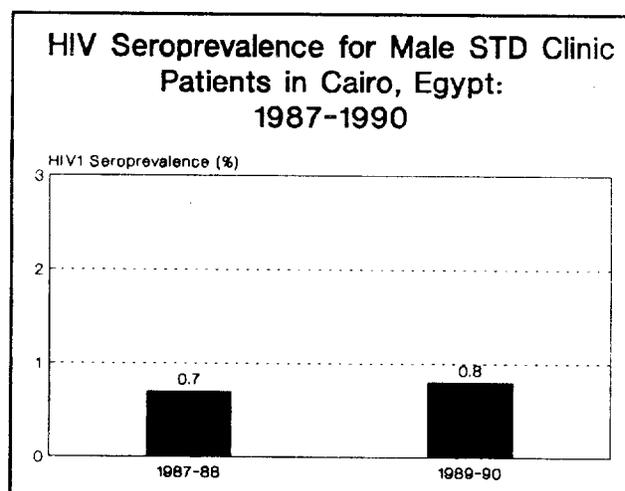
# Egypt

## Demographic Indicators

Population (1,000s)	60,765	Growth Rate (%)	1.9
Infant Mortality Rate		Life Expectancy	
Both Sexes	76	Both Sexes	61
Male	78	Male	59
Female	75	Female	63
Crude Birth Rate	29	Crude Death Rate	9
Total Fertility Rate	3.8	Percent Urban	45
<b>Note: Above indicators are for 1994.</b>			
Cumulative AIDS rate (per 1,000) as of 2/7/94		0.00	
Cumulative AIDS cases as of 2/7/94		91	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

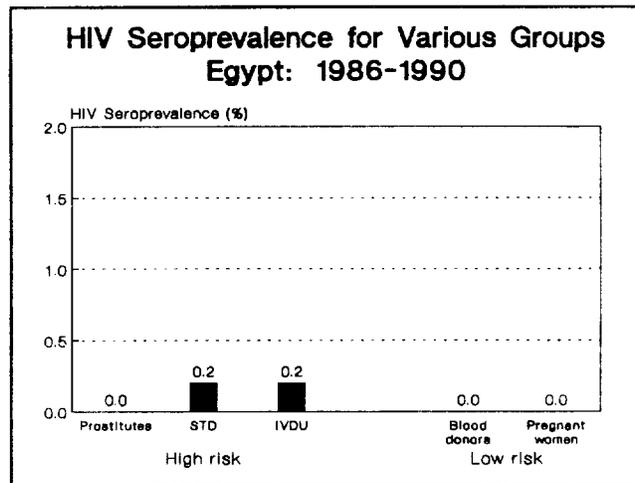
- A 1987-88 study among male STD clinic patients attending an STD clinic in Cairo found the HIV-1 infection level to be 0.7 percent. A more recent study from the same STD clinic showed the prevalence of HIV-1 to have remained low, 0.8 percent.



Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1994.

## Egypt

- Serosurveys were conducted from April 1986 to March 1990 among high-risk groups and low-risk groups in Egypt. Results from these studies show low or no evidence of HIV prevalence among high-risk groups. In the low-risk groups, i.e., blood donors and pregnant women, there was no evidence of HIV infection.



## Source for Egypt

- H0070 Hasan, M. A., M. A. Elbaz, 1991, Screening for HIV - Antibody during Pregnancy in Egypt, VII International Conference on AIDS, Florence, Italy, 6/16-21, Abstract M.C.3275.
- S0127 Sadek, A., S. Bassily, M. Bishai, et al., 1991, Human Immunodeficiency Virus and Other Sexually Transmitted Pathogens among STD Patients in Cairo, Egypt, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster M.C.3033.
- W0002 Wellcome Foundation, 1987, AIDS and Its Management, The Wellcome Foundation Limited Berkhamsted Herts England, B.5676/09.87/5.0/R, pp. 4-5.
- W0017 World Health Organization, 1989, Acquired Immunodeficiency Syndrome (AIDS), Weekly Epidemiology Record, March 3, vol. 64, no. 9, pp. 61-68.
- W0034 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 12, pp. 863-864.
- W0040 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 9, pp. 937-941.
- W0047 World Health Organization, 1991, Statistics from the who and the Centers for Disease Control, AIDS, 5(6):785-790.
- W0058 World Health Organization, 1992, World Health Organization Global AIDS Statistics, AIDS Care, vol. 4, no. 2, pp. 231-234.
- W0067 World Health Organization, 1992, World Health Organization Global AIDS Statistics, AIDS Care, vol. 4, no. 3, pp. 365-368.
- W0072 World Health Organization, 1993, World Health Organization Global AIDS Statistics, AIDS, vol. 5, no. 1, pp. 125-128.
- W0079 World Health Organization, 1993, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 7, no. 9, pp. 1287-1291.
- W0084 Watts, D. M., N. T. Constantine, M. F. Sheba, et al., 1993, Prevalence of HIV Infection and AIDS in Egypt Over Four Years of Surveillance (1986-1990), Journal of Tropical Medicine and Hygiene, vol. 96, pp. 113-117.
- W0087 World Health Organization, 1994, The Current Global Situation of the HIV/AIDS Pandemic, Global Programme on AIDS, January 4, document.

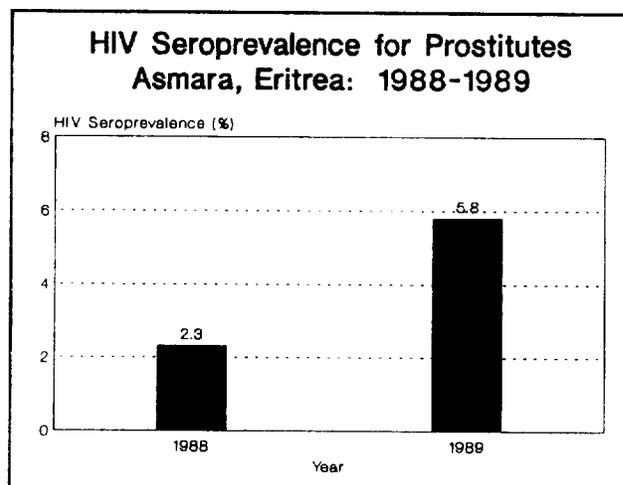
# Eritrea

## Demographic Indicators

Population (1,000s)	3,309	Growth Rate (%)	6.5
Infant Mortality Rate		Life Expectancy	
Both Sexes	122	Both Sexes	50
Male	133	Male	48
Female	112	Female	51
Crude Birth Rate	43	Crude Death Rate	16
Total Fertility Rate	6.6	Percent Urban	13
Notes: Above indicators are for 1994. Percent urban refers to Ethiopia before Eritrea's independence.			
Cumulative AIDS rate (per 1,000) as of 12/31/92		0.12	
Cumulative AIDS cases as of 12/31/92		372	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

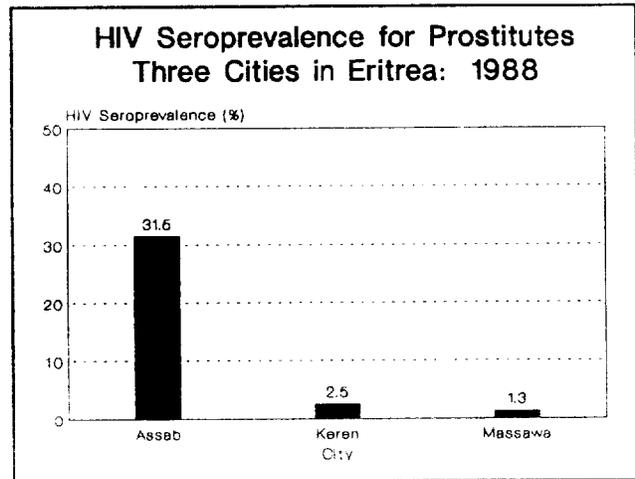
- Very few studies among prostitutes in Eritrea have been reported. Results from studies conducted in Asmara, the capital, show HIV infection levels more than doubled from 1988 to 1989.



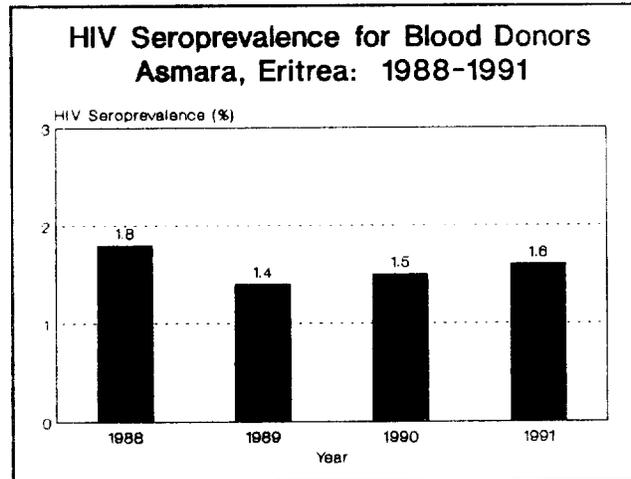
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, Dec. 1994.

## Eritrea

- In 1988, an HIV seroprevalence study was conducted among prostitutes in different urban areas in Eritrea. Assab, located near Djibouti, had the highest HIV infection level, 31.5 percent. Results from Keren and Massawa, both located near Sudan, were much lower at 2.5 and 1.3 percent, respectively.



- Results from the Ethiopian Red Cross Society blood bank in Asmara show that between 1988 and 1991, approximately 1.5 percent of blood donors were HIV infected.



## Sources for Eritrea

- M0327 Mehret, M., L. Khodakevich, D. Zewdie, et al., 1990, HIV-1 Infection and Related Risk Factors among Female Sex Workers in Urban Areas of Ethiopia, Ethiopian Journal of Health Development, vol. 4, no. 2, pp. 163-170.
- N0083 NACP/MOH (Ethiopia), 1992, Surveillance and Research Activities on HIV/AIDS: Activities Accomplished So Far in Ethiopia, 1984-1991, Ethiopia NACP/MOH data, unpublished report.
- Z0041 Zewdie, D., Y. Sisay, D. Kebede, et al., 1992, HIV Infection in Ethiopian Blood Donors: Prevalence, Trends and Future Projections, Ethiopian Journal of Health Development, vol. 6, no. 2, pp. 1-8.

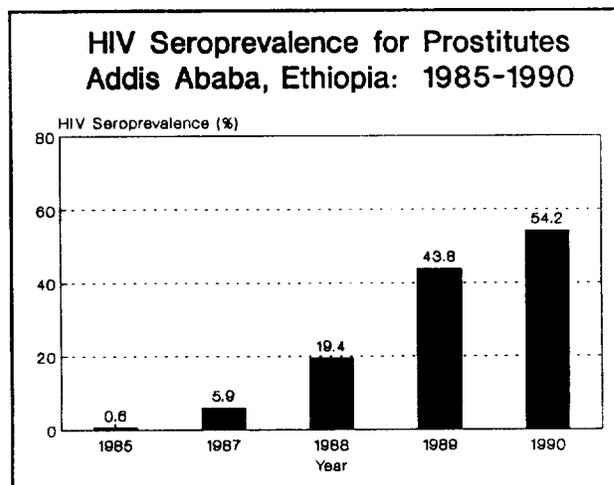
# Ethiopia

## Demographic Indicators

Population (1,000s)	54,253	Growth Rate (%)	3.2
Infant Mortality Rate		Life Expectancy	
Both Sexes	122	Both Sexes	50
Male	133	Male	48
Female	112	Female	51
Crude Birth Rate	47	Crude Death Rate	16
Total Fertility Rate	7.1	Percent Urban	13
Notes: Above indicators are for 1994. Percent urban refers to Ethiopia before Eritrea's independence.			
Cumulative AIDS rate (per 1,000) as of 6/3/94		0.24	
Cumulative AIDS cases as of 6/3/94		12,958	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

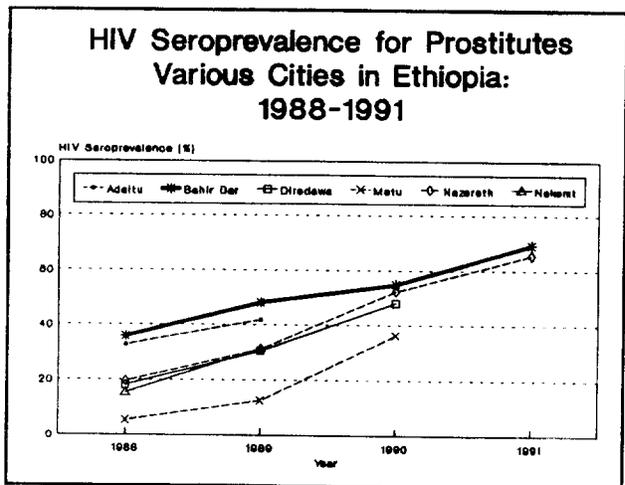
- In high risk populations, significant levels of HIV infection have been seen in Ethiopia. In Addis Ababa, the HIV infection level among prostitutes increased from 0.6 percent in 1985 to 54.2 percent in 1990.



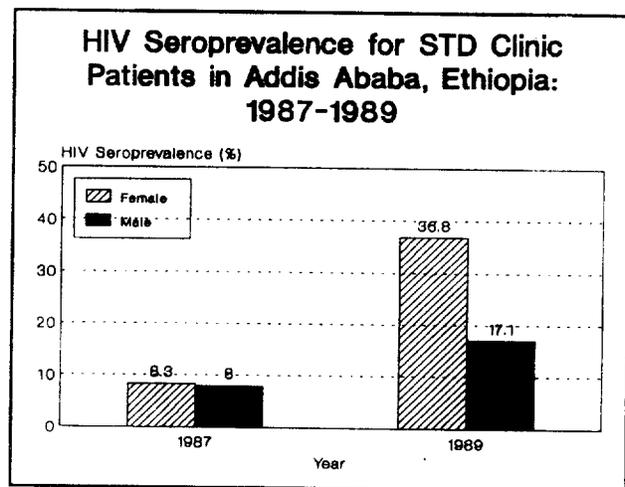
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, Dec. 1994.

## Ethiopia

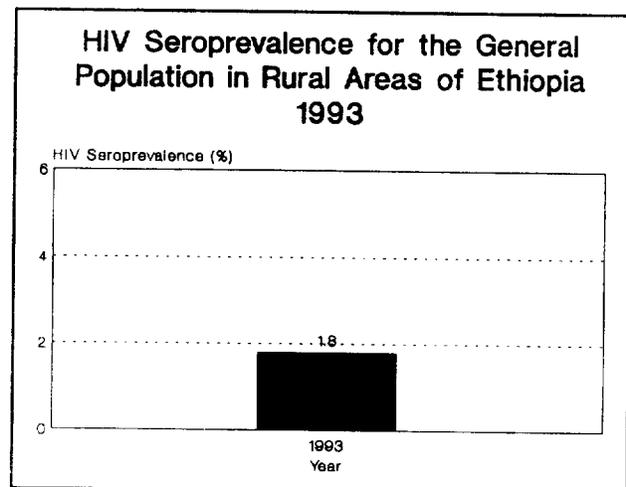
- Significant levels of HIV infection have also been observed outside of Addis Ababa. The level of HIV infection observed in Metu's prostitutes was lower than any other city. However, all cities showed increasing levels of HIV infection.



- Studies conducted in Addis Ababa in 1987 and 1989 show more than a quadrupling of HIV infection for female STD patients and a doubling for males during this two-year period.

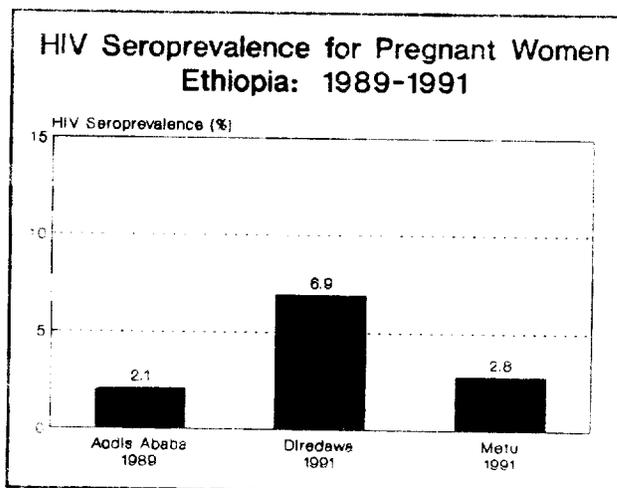


- Very few studies of HIV infection in the general population of Ethiopia have been published. However, in 1993, a study conducted in six rural areas reported an HIV seroprevalence level of 1.8 percent among the general population (age range 15-49).

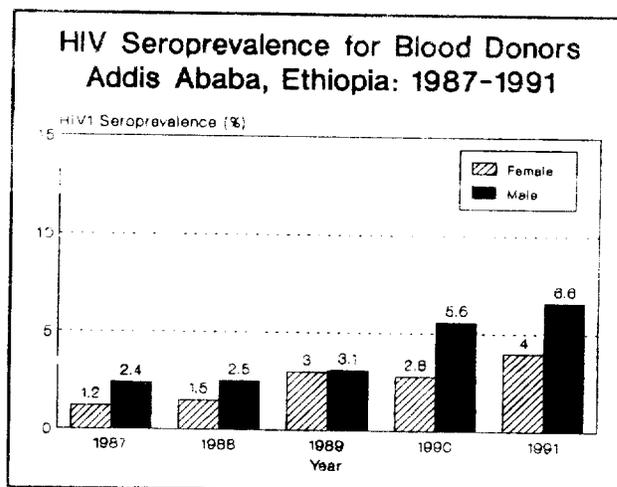


## Ethiopia

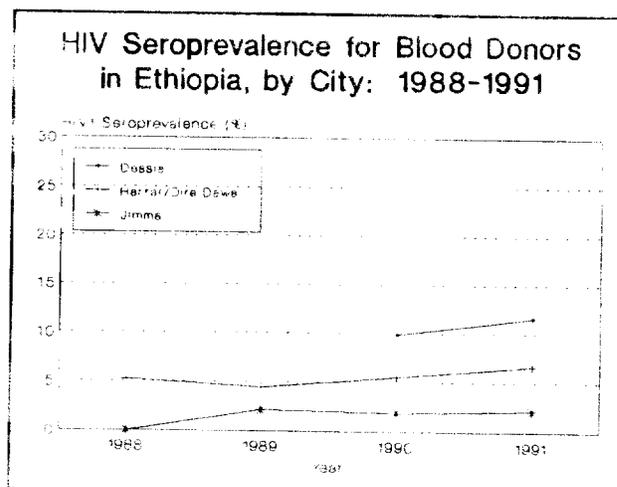
- In 1989, a study conducted in the capital city, Addis Ababa, reported a level of HIV infection among pregnant women of 2.1 percent. Another study conducted in Dire Dawa and Metu reported HIV infection levels of 6.9 and 2.8 percent, respectively, in 1991.



- HIV seroprevalence data from the Ethiopian Red Cross Society blood banks show an increase in HIV infection levels among both sexes. Furthermore, HIV seroprevalence levels are higher among males than females.



- Data from the above study indicate HIV infection levels increased from 1990 to 1991 among blood donors in Dessie and Harrar/Dire Dawa. In Jimma, HIV levels remained relatively the same from 1989 to 1991.



## Sources for Ethiopia

- A0012 Ayehunie, S., D. Zewde, F. Ketema, et al., 1988, Seropositivity to HIV-1 Antibodies in Addis Ababa, Ethiopia, IV International Conference on AIDS, Stockholm, 6/13-14, Poster 5044.
- H0046 Hailu, K., B. Desta, D. Zewdie, 1990, Prevalence of HIV-1 Antibodies in Pregnant Women in Addis Ababa, Ethiopia, VI International Conference on AIDS, San Francisco, 6/20-24, Abstract 3154.
- H0112 Hailu, N., 1994, HIV Serosurvey among Rural Population 1993, Ethiopia, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Abstract P.C.0046.
- M0327 Mehret, M., L. Khodakevich, D. Zewdie, et al., 1990, HIV-1 Infection and Related Risk Factors among Female Sex Workers in Urban Areas of Ethiopia, Ethiopian Journal of Health Development, vol. 4, no. 2, pp. 163-170.
- M0328 Mehret, M., L. Khodakevich, D. Zewdie, et al., 1990, HIV-1 Infection and Some Related Risk Factors among Female Sex Workers in Addis Ababa, The Ethiopian Journal of Health Development, vol. 4, no. 2, pp. 171-176.
- N0083 NACP/MOH (Ethiopia), 1992, Surveillance and Research Activities on HIV/AIDS: Activities Accomplished So far in Ethiopia, 1984-1991, Ethiopia NACP/MOH data, unpublished report.
- Z0011 Zewdie, D., M. Abdurahman, S. Ayhunie, et al., 1989, High Prevalence of HIV-1 Antibodies in STD Patients with Genital Ulcers, V International Conference on AIDS, Montreal, 6/4-9, Poster T.A.P. 102.
- Z0041 Zewdie, D., Y. Sisay, D. Kebede, et al., 1992, HIV Infection in Ethiopian Blood Donors: Prevalence, Trends and Future Projections, Ethiopian Journal of Health Development, vol. 6, no. 2, pp. 1-8.

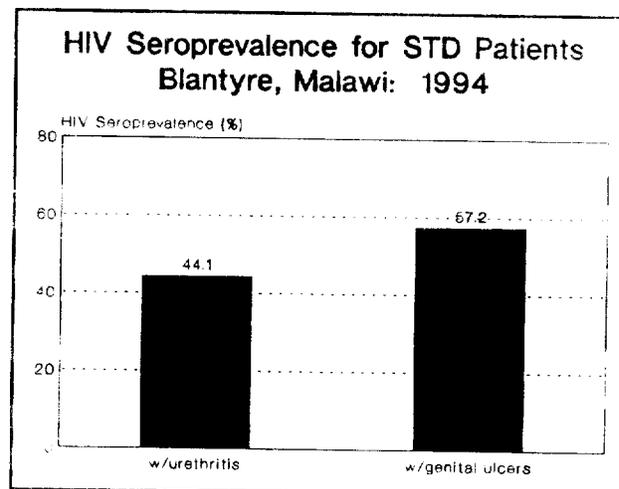
# Malawi

## Demographic Indicators

Population (1,000s)	9,732	Growth Rate (%)	-1.1
<b>Infant Mortality Rate</b>		<b>Life Expectancy</b>	
Both Sexes	141	Both Sexes	40
Male	149	Male	39
Female	133	Female	41
Crude Birth Rate	50	Crude Death Rate	23
Total Fertility Rate	7.4	Percent Urban	13
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 2/10/94		3.26	
Cumulative AIDS cases as of 2/10/94		31,857	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

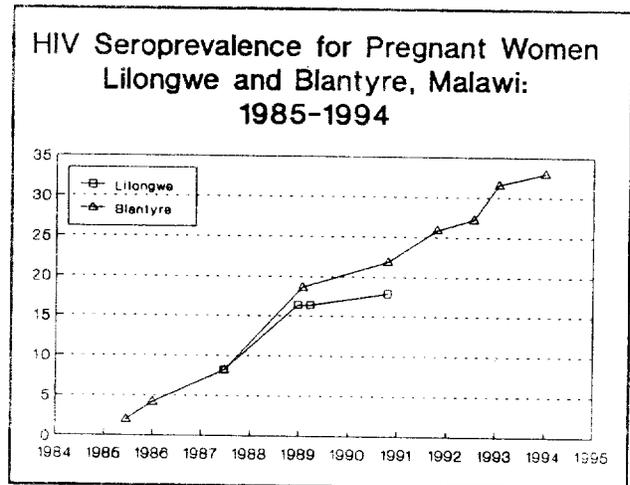
## Epidemiological Data

- The results of this HIV seroprevalence study among male STD clinic patients show infection levels were higher among those with a current genital ulcer, 57.2 percent, than those with urethritis, 44.1 percent. According to another study, levels of HIV infection among STD patients is high, 62.4 percent, in the capital, Lilongwe.

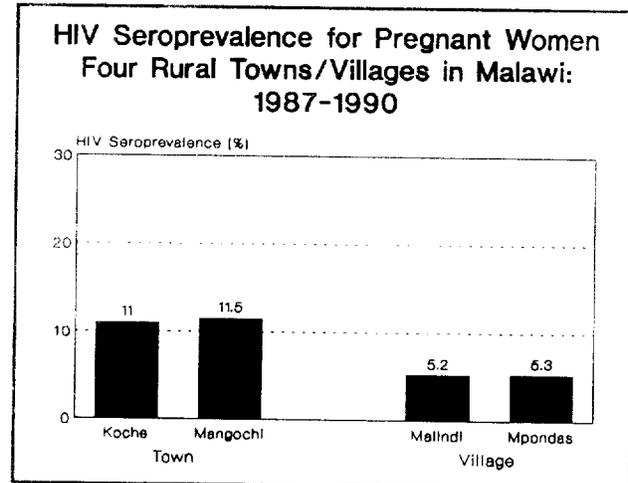


## Malawi

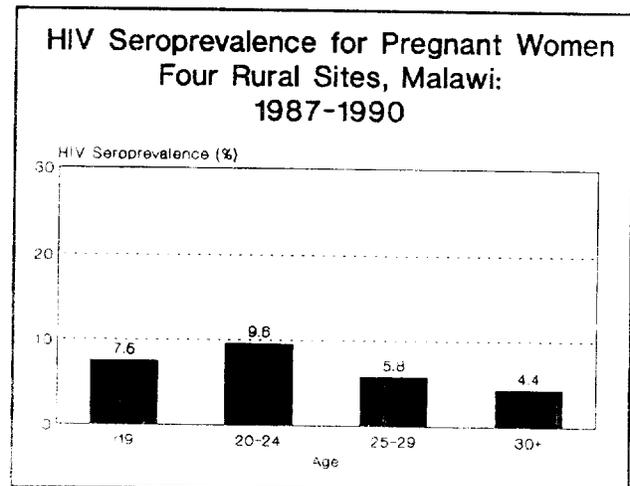
- In the capital city of Lilongwe, the HIV infection level among pregnant women has increased from 8.2 percent in 1987 to 17.9 percent in 1990. In Blantyre, HIV infection levels rose from 2 percent in 1985 to 33.0 percent in 1994.



- HIV infection varied by site of enrollment among pregnant women in rural Malawi. All four sites are located in Mangochi district. The highest levels, 11 percent, are found among those attending antenatal clinics in towns. Lower levels of 5 percent are found among women attending village clinics.



- The above study also presents HIV seroprevalence levels by age for the four sites. Pregnant women 20-24 years of age were at greater risk of HIV infection than any other age group. HIV infection was lowest among women 30 years of age and older.



## Sources for Malawi

- C0068 Chiphangwi, J., E. Ndovi, G. Dallabetta, et al., 1989, Factors Associated with Prevalent HIV-1 Infection in Pregnant Women in Malawi, V International Conference on AIDS, Montreal, 6/4-9, Abstract Th.G.O. 28.
- G0005 Gurtler, L., J. Eberle, F. Deinhardt, et al., 1987, Prevalence of HIV-1 in Selected Populations of Areas in Malawi, II International Symposium: AIDS and Associated Cancers in Africa, Naples, Italy, 10/7-9, Abstract TH-44.
- L0163 Lule, G., F. Behets, I. Hoffman, et al., 1994, HIV Infection among Patients with Urethritis (U) and Genital Ulcer Disease (GUD) in Blantyre, Malawi, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Poster P.C.0564.
- S0298 Slutsker, L., J. Cabeza, J. J. Wirima, et al., 1994, HIV-1 Infection among Women of Reproductive Age in a Rural District in Malawi, AIDS, vol. 8, no. 9, pp. 1337-1340.
- U0016 U.S. Department of State, 1993, AIDS/HIV in Malawi - A Status Report, Unclassified cable, 8/93, Lilongwe 03703.
- U0026 U.S. Department of State, 1994, HIV/AIDS Update for Malawi, Unclassified Cable, September, Lilongwe 003358.

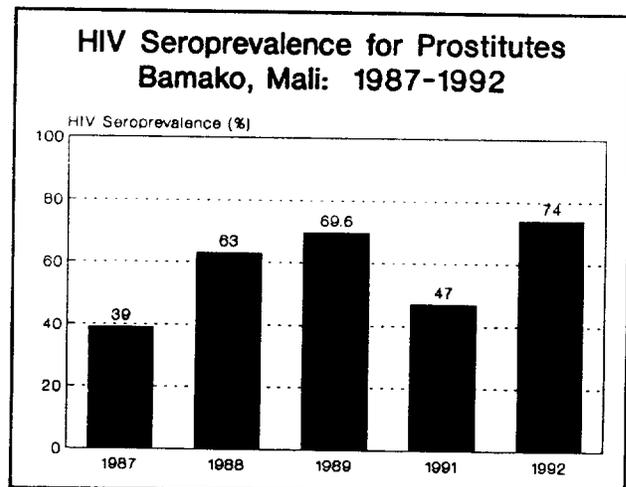
# Mali

## Demographic Indicators

Population (1,000s)	9,113	Growth Rate (%)	2.8
<b>Infant Mortality Rate</b>		<b>Life Expectancy</b>	
Both Sexes	106	Both Sexes	46
Male	113	Male	44
Female	100	Female	48
Crude Birth Rate	52	Crude Death Rate	20
Total Fertility Rate	7.3	Percent Urban	26
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 8/31/93		0.21	
Cumulative AIDS cases as of 8/31/93		1,874	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

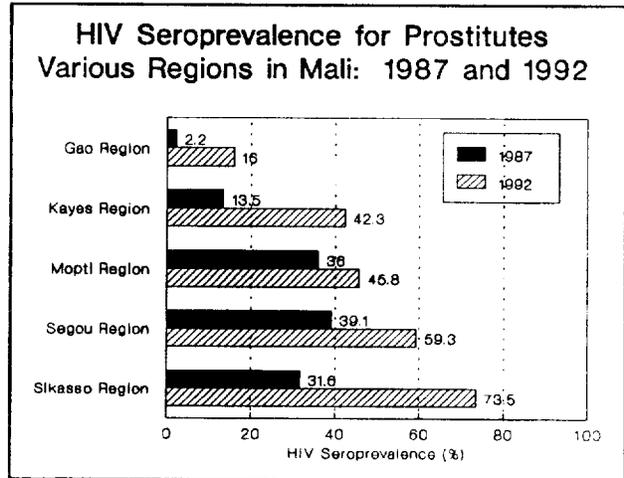
- HIV infection levels among prostitutes in the capital city of Bamako were already high in the late 1980's and continued high in the early 1990's. Clients of prostitutes clearly run a risk of exposure to HIV infection.



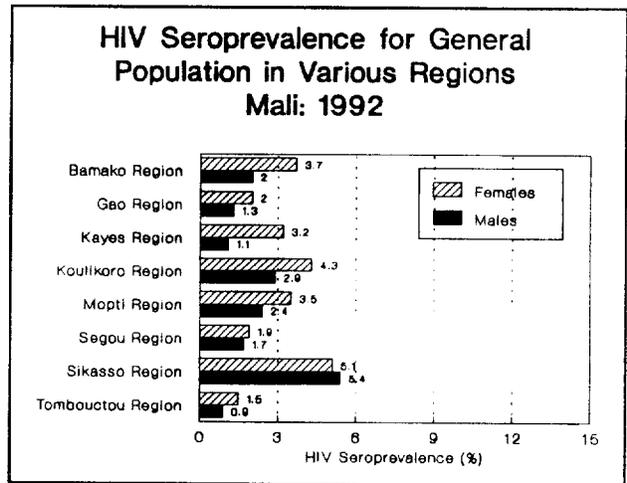
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1994.

**Mali**

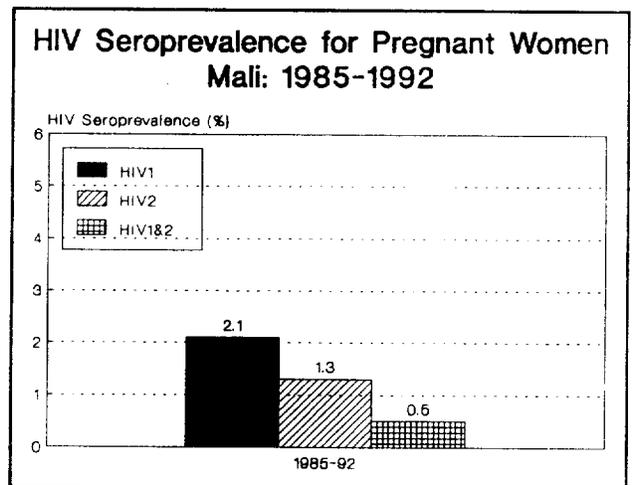
- Regional data show HIV infection levels among prostitutes increased greatly over a 5-year period. Gao, Kayes, and Sikasso regions reported larger increases (two to sevenfold) in HIV infection than Mopti and Segou which already had high levels of HIV infection in 1987.



- Regional survey data among the general population show HIV infection levels ranging from 1 percent to 5 percent. In all regions except Sikasso, female HIV infection levels were higher than male HIV infection levels.



- Both HIV-1 and HIV-2 are present in the general population of Mali. One study, spanning a 7-year period, found 2.1 percent of the pregnant women infected with HIV-1, 1.3 percent with HIV-2, and 0.5 percent with dual infection.



Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1994.

## Source for Mali

- K0116 Katlama, C., F. Simon, E. Pichard, et al., 1991, Infection VIH1, VIH2 et VIH1&2 chez des Femmes Prostituees au Mali, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Session M.O.137.
- L0149 Lamine, D., 1992, Surveillance de l'Infection a VIH par Postes Sentinelles au Mali, Republique du Mali, Direction Nationale de la Sante Publique, Division Epidemiologie, unpublished report.
- M0331 Maiga, Y. I., Z. Sissoko, et al., 1993, Etude de la Seroprevalence de l'Infection a VIH dans les 7 Regions Economiques du Mali, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Session M.O.P.055.
- P0058 Pichard, E., A. Guindo, G. Grossetete, et al., 1988, HIV Infection in Mali, Medecine Tropicale, vol. 48, no. 4, pp. 345-349.
- S0265 Stephens, D., 1993, The Failure of an AIDS Prevention Program, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract T.R.T.008.
- W0013 World Health Organization, 1988, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 2, no. 6, pp. 487-490.
- W0042 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 6, pp. 605-606.
- W0046 World Health Organization, 1991, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 5, no. 3, pp. 349-350.
- W0072 World Health Organization, 1993, World Health Organization Global AIDS Statistics, AIDS, vol. 5, no. 1, pp. 125-128.
- W0079 World Health Organization, 1993, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 7, no. 9, pp. 1287-1291.
- W0087 World Health Organization, 1994, The Current Global Situation of the HIV/AIDS Pandemic, Global Programme on AIDS, January 4, document.

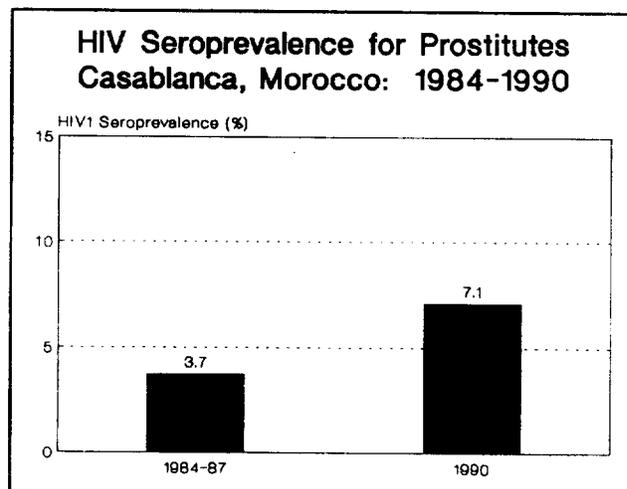
# Morocco

## Demographic Indicators

Population (1,000s)	28,559	Growth Rate (%)	2.1
Infant Mortality Rate		Life Expectancy	
Both Sexes	50	Both Sexes	68
Male	55	Male	66
Female	44	Female	70
Crude Birth Rate	29	Crude Death Rate	6
Total Fertility Rate	3.8	Percent Urban	48
Note: Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 5/20/94		0.01	
Cumulative AIDS cases as of 5/20/94		196	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

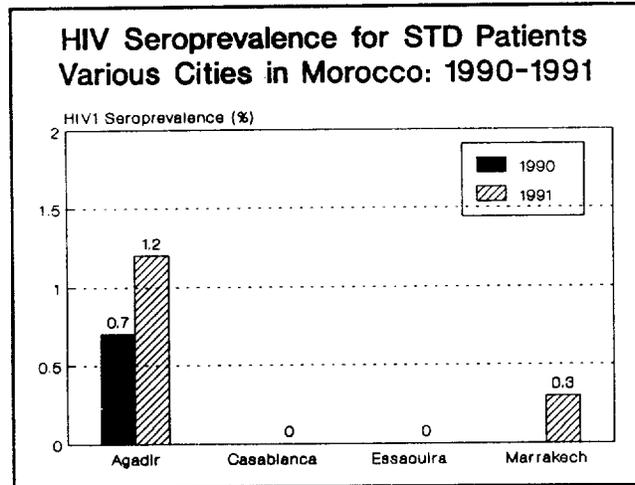
- Very few studies among prostitutes in Morocco have been reported. Results from these studies show HIV infection levels among prostitutes in Casablanca nearly doubled from 3.7 percent in 1984-87 to 7.1 percent in 1990.



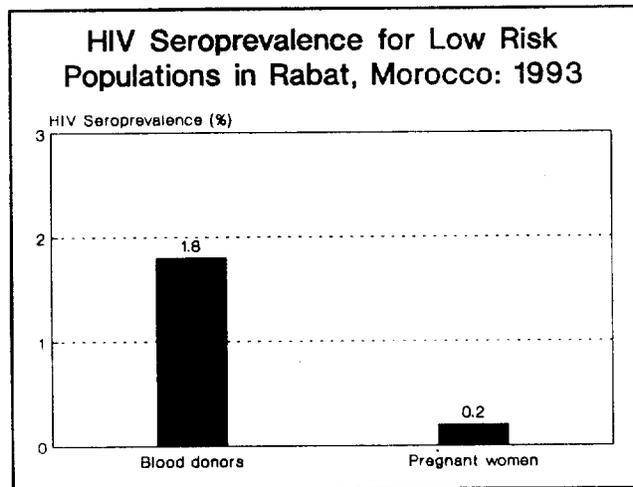
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1994.

## Morocco

- Among STD patients in four Moroccan STD centers, HIV infection levels are lower than levels seen in Sub-Saharan Africa. The prevalence of HIV-1 infection in Agadir increased from 0.7 to 1.2 percent. In 1991, the HIV infection level was 0.3 percent in Marrakech and no evidence of infection was reported in Casablanca or Essaouira.



- Studies conducted in the capital city, Rabat, in 1993 reported 1.8 percent of blood donors and 0.2 percent of pregnant women HIV positive. However, a 1991 study reported no evidence of HIV infection among these same low risk groups in Casablanca, Marrakech, or Tangier.



## Sources for Morocco

- B0009 Benslimane, A., M. Rivjad, S. Sekkat, et al., 1987, Incidence of HIV Infections in Morocco, II International Symposium: AIDS and Associated Cancers in Africa, Naples, Italy, 10/7-9, Abstract TH-84.
- O0054 Ouanaïm, A., S. Nadifi, A. Alami, et al., 1993, Groupes Sanguins Erythrocytaires Abo et Maladies Transmissibles par le Sang SIDA, Hépatite Virale B et Syphilis, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract W.O.P.035.
- R0046 Riyad, M., O. Serrhini, S. Sekkat, et al., 1990, Transmission Sexuelle du HIV au Maroc, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.C.5.
- R0069 Riyad, M., L. Menfalout, L. Dkhissy, et al., 1992, STDs and HIV Infections in Four Moroccan Centers, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster PoC 4305.
- R0099 Redouane, A., S. Sekkat, S. Hamdani, et al., 1993, Etude de la Transmission Materno-Foetale de l'Infection par VIH, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Poster M.P.C.095.
- W0003 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 3, pp. 187-188.
- W0013 World Health Organization, 1988, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 2, no. 6, pp. 487-490.
- W0017 World Health Organization, 1989, Acquired Immunodeficiency Syndrome (AIDS), Weekly Epidemiology Record, March 3, vol. 64, no. 9, pp. 61-68.
- W0032 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 6, pp. 405-406.
- W0034 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 12, pp. 863-864.
- W0041 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 3, pp. 277-278.
- W0042 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 6, pp. 605-606.
- W0045 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 12, pp. 1305-1306.
- W0046 World Health Organization, 1991, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 5, no. 3, pp. 349-350.
- W0047 World Health Organization, 1991, Statistics from the WHO and the Centers for Disease Control, AIDS, 5(6):785-790.
- W0057 World Health Organization, 1992, World Health Organization Global AIDS Statistics, AIDS Care, vol. 4, no. 1, pp. 125-128.
- W0058 World Health Organization, 1992, World Health Organization Global AIDS Statistics, AIDS Care, vol. 4, no. 2, pp. 231-234.
- W0067 World Health Organization, 1992, World Health Organization Global AIDS Statistics, AIDS Care, vol. 4, no. 3, pp. 365-368.
- W0072 World Health Organization, 1993, World Health Organization Global AIDS Statistics, AIDS, vol. 5, no. 1, pp. 125-128.
- W0079 World Health Organization, 1993, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 7, no. 9, pp. 1287-1291.
- W0087 World Health Organization, 1994, The Current Global Situation of the HIV/AIDS Pandemic, Global Programme on AIDS, January 4, document.

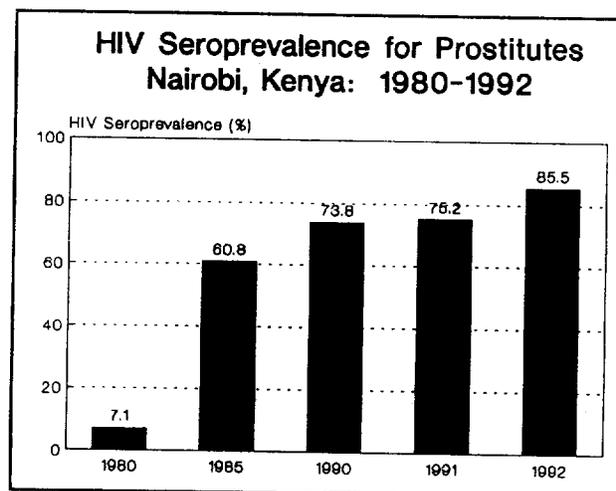
# Kenya

## Demographic Indicators

Population (1,000s)	28,817	Growth Rate (%)	1.0
Infant Mortality Rate (per 1,000)		Life Expectancy	
Both Sexes	74	Both Sexes	52
Male	77	Male	51
Female	70	Female	54
Crude Birth Rate (per 1,000)	42	Crude Death Rate (per 1,000)	12
Total Fertility Rate	5.8	Percent Urban	28
Note: Above indicators are for 1995.			
Cumulative AIDS rate (per 1,000) as of 4/25/95		1.97	
Cumulative AIDS cases as of 4/25/95		56,573	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

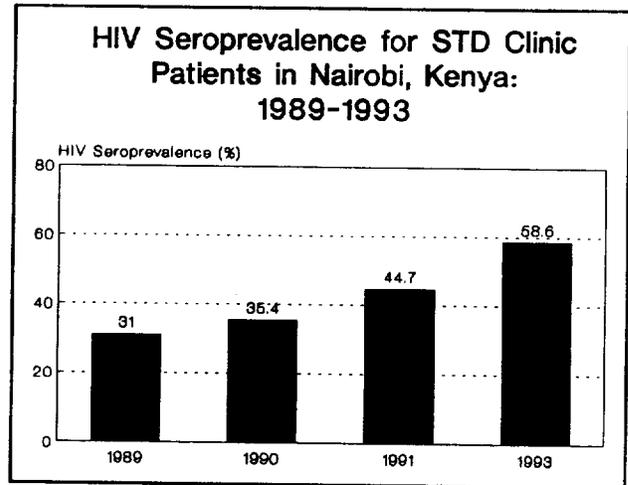
- HIV infection has risen rapidly among prostitutes in Nairobi over the past 12 years. HIV infection increased from 7.1 percent in 1980 to 85.5 percent in 1992.



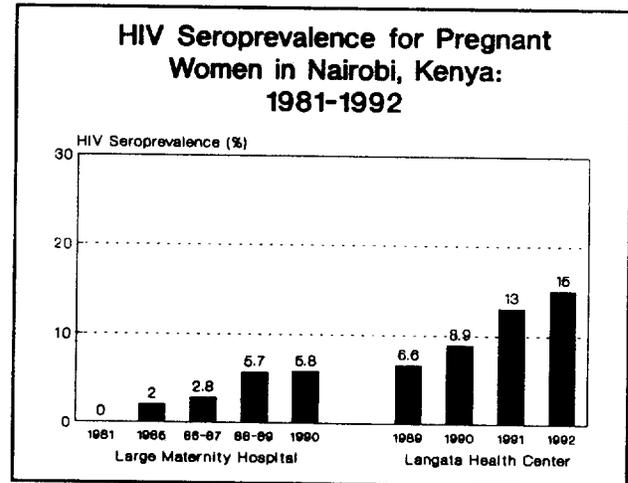
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, July 1995.

## Kenya

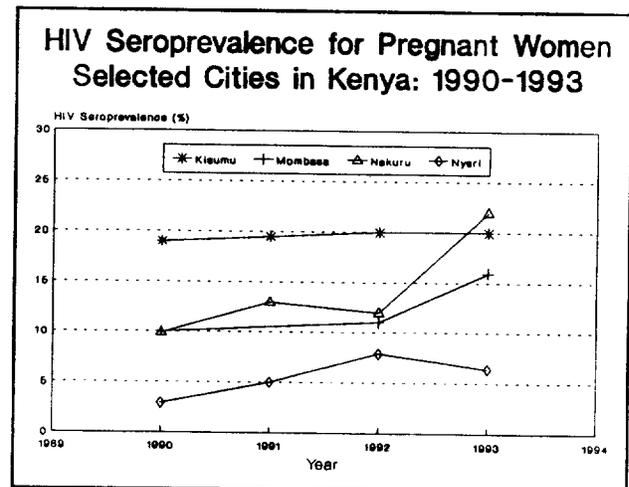
- Those with sexually transmitted diseases (STDs) continue to be at high risk for infection. The level of HIV infection over a 4-year period among the STD clinic patients in Nairobi increased from 31.0 percent in 1989 to 58.6 percent in 1993.



- Among pregnant women in Nairobi, HIV infection was not detected until about 1985. HIV prevalence levels rose steadily at a large maternity hospital from 1985 to 1989, but may have leveled off in 1990, while levels at the Langata Health Center showed a strong continuous growth from 6.6 percent in 1989 to 15 percent in 1992.

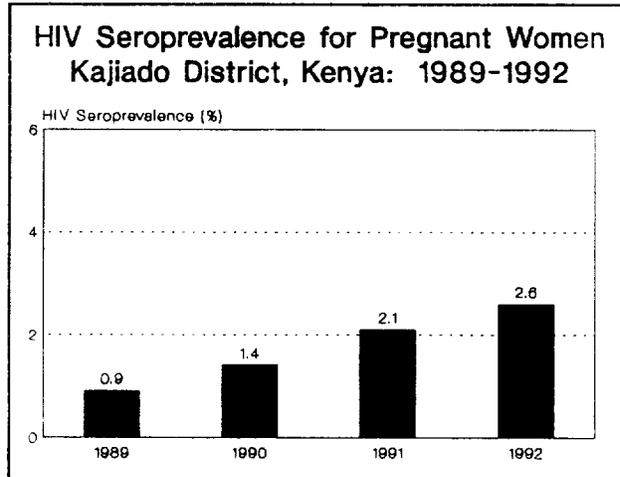


- Sentinel surveillance data from four cities documented varying levels of HIV infection among pregnant women. The data from Mombasa, Nyeri, and Nakuru indicate increasing HIV seroprevalence levels from 1990 to 1993. Nearly 20 percent of pregnant women tested in Kisumu were HIV positive by 1990 and the rate remained constant during this period.

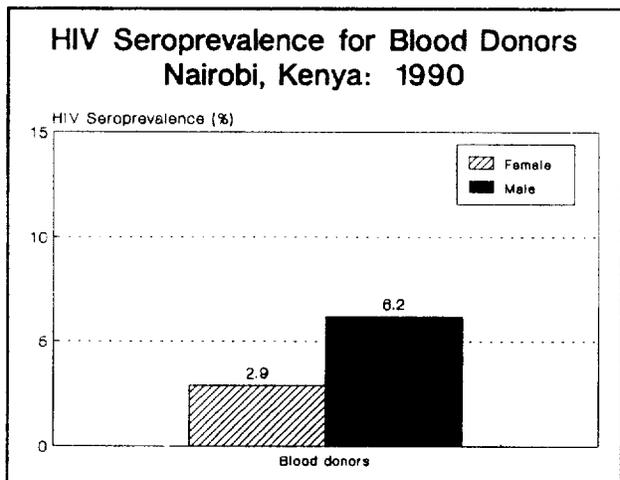


## Kenya

- HIV seroprevalence data from a rural community in Kajiado district showed a steady increase in infection levels among pregnant women tested. Infection levels rose from 0.9 percent in 1989 to 2.6 percent in 1992.



- Very few studies of HIV infection in blood donors for the capital of Kenya, Nairobi, have been published. In one study, the male prevalence level (6.2) was more than double that of the females (2.9). The overall HIV level was 5.6 percent.



## Sources for Kenya

- B0002 Brun-Vezinet, F., 1985, Seroepidemiological Studies of LAV in Central Africa, International Symposium on African AIDS, 11/22-23, Abstract.
- G0105 Gichangi, P., M. Temmerman, A. F. Mohamed, et al., 1992, Rapid Increase in HIV-1 Infection and Syphilis between 1989 and 1991 in Pregnant Women in Nairobi, Kenya, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster PoC 4029.
- K0124 Kitabu, M. Z., G. M. Maitha, J. N. Mungai, et al., 1992, Trends and Seroprevalence of HIV amongst Four Population Groups in Nairobi in the Period 1989 to 1991, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster PoC 4018.
- M0217 Mungai, J. N., G. M. Maitha, M. Z. Kitabu, et al., 1992, Prevalence of HIV and Other STD's in Three Populations in Nairobi for Year 1991, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster PoC 4714.
- M0243 Mungai, J. N., J. Ombette, J. Kimani, et al., 1992, Laboratory Findings for the Prevalence of HIV, Neisseria Gonorrhoea and Chlamydia Trachomatis Infections among Prostitutes ..., VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Abstract W.P.189.
- N0068 Ndinya-Achola, J. O., P. Datta, J. Embree, et al., 1991, Increasing Seroprevalence (SP) of HIV-1 in Pregnant Women in Nairobi, 1986-1990., VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster W.C.3264.
- N0071 Nyamongo, J., S. Mitchell, P. M. Tukei, et al., 1991, Use of a Blood Donor Survey to Develop Donor Deferral Guidelines and Selective Recruitment Criteria, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster M.C.3350.
- P0024 Piot, P., F. A. Plummer, M. A. Rey, et al., 1987, Retrospective Seroepidemiology of AIDS Virus Infection in Nairobi Populations, Journal of Infectious Diseases, vol. 155, no. 6, pp. 1108-1112.
- S0046 Simonsen, J. N., W. Cameron, M. N. Gakinya, et al., 1988, Human Immunodeficiency Virus Infection among Men with Sexually Transmitted Diseases, New England Journal of Medicine, vol. 319, no. 5, pp. 274-278.
- T0049 Tyndall, M., P. Odhiambo, A. R. Ronald, et al., 1991, The Increasing Seroprevalence of HIV-1 in Males with Other STD's in Nairobi, Kenya, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster W.C.3117.
- T0057 Temmerman, M., F. M. Ali, J. O. Ndinya-Achola, et al., 1991, Rapid Increase of both HIV-1 and Syphilis among Pregnant Women in Nairobi, Kenya, AIDS, vol. 6, no. 10, pp. 1118-1185.
- T0060 Tyndall, M., E. Agoki, W. Malisa, et al., 1992, HIV-1 Prevalence and Risk of Seroconversion among Uncircumcised Men in Kenya, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster PoC 4308.
- W0022 Weekly Review, The, 1989, International Conference Focuses on AIDS, Joint Publications Research Service: Epidemiology, April 28, no. 008, pp. 1-2.

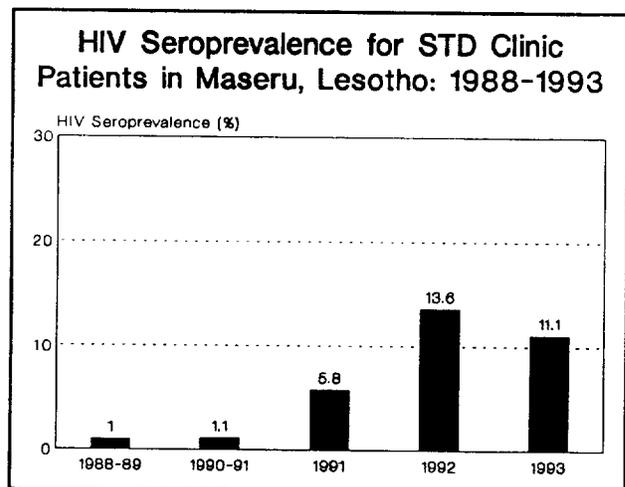
# Lesotho

## Demographic Indicators

Population (1,000s)	1,993	Growth Rate (%)	2.4
Infant Mortality Rate (per 1,000)		Life Expectancy	
Both Sexes	67	Both Sexes	63
Male	70	Male	61
Female	65	Female	64
Crude Birth Rate (per 1,000)	33	Crude Death Rate (per 1,000)	9
Total Fertility Rate	4.4	Percent Urban	23
<b>Note:</b> Above indicators are for 1995.			
Cumulative AIDS rate (per 1,000) as of 12/31/94		0.26	
Cumulative AIDS cases as of 12/31/94		515	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

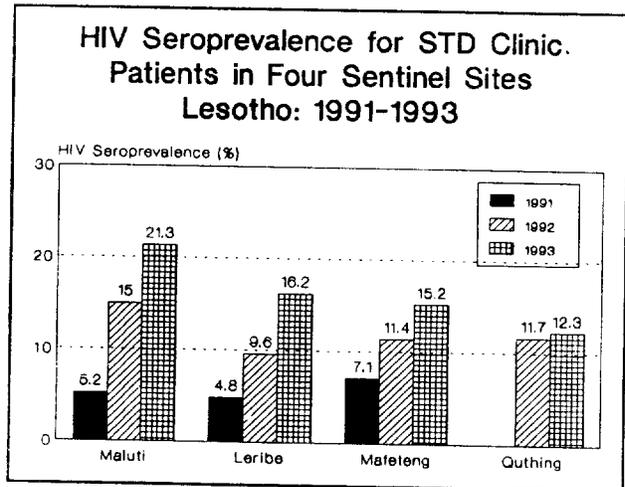
- HIV seroprevalence in Maseru, the capital of Lesotho, among sexually transmitted diseases (STD) clinic patients increased rapidly in a short period of time from 1 percent in 1988-89 to over 10 percent by 1992. Various studies have documented that Lesotho has high levels of other STDs, increasing the risk of HIV transmission.



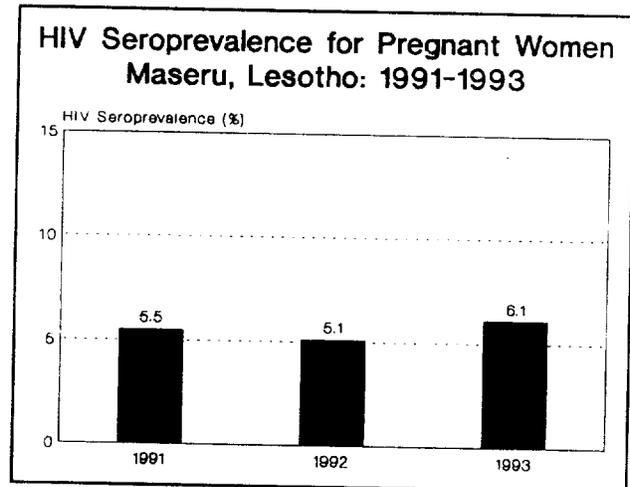
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, July 1995.

## Lesotho

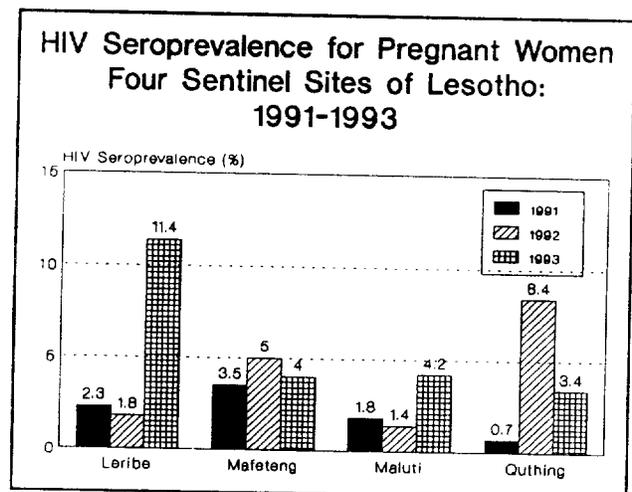
- Reports from sentinel surveillance among STD patients in three out of 10 districts and Maluti Hospital in Lesotho note increasing HIV seroprevalence levels. In 1993, all four sites reported levels of over 10 percent. Maluti Hospital reported the highest HIV infection level, 21.3 percent of STD clinic patients tested.



- Sentinel surveillance among pregnant women in Maseru, the capital, noted HIV levels around 5-6 percent, from 1991 to 1993.

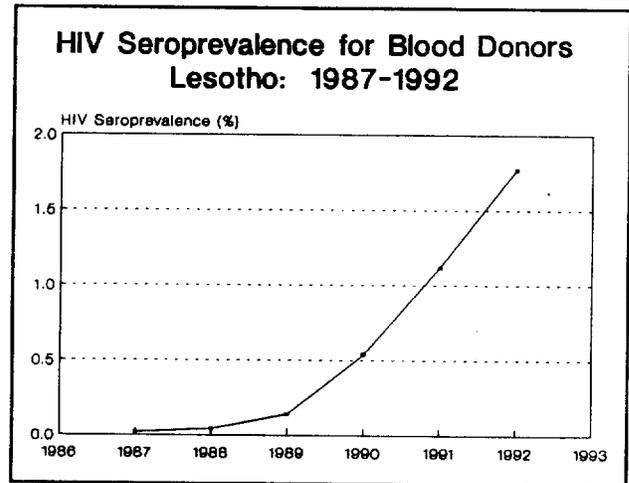


- HIV infection levels among pregnant women vary by site and over time. Data from Leribe district documented a dramatic increase in HIV infection level from 1992 to 1993. Maluti Hospital reported HIV infection levels also increased during the same period.



## Lesotho

- According to a national survey, levels of HIV seroprevalence among healthy blood donors have increased from less than 0.1 percent in 1987 to 1.8 percent in 1992.



Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, July 1995.

## Sources for Lesotho

- L0112 Lazzari, S., M. Lekometsa, 1992, Update on HIV/AIDS Status in Lesotho as of 30 May 1992., Unpublished report.
- M0267 Ministry of Health Kingdom of Lesotho, 1993, HIV Prevalence data, In: Update on HIV/AIDS in Lesotho, Disease Control and Environmental Health Division, WHO, March 1993, pp. 8-10.
- N0075 Ntsekhe, P., 1991, STDs and HIV Infection in a STD Clinic in Lesotho, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster M.A.278.
- W0002 Wellcome Foundation, 1987, AIDS and Its Management, The Wellcome Foundation Limited Berkhamsted Herts England, B.5676/09.87/5.0/R, pp. 4-5.
- W0013 World Health Organization, 1988, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 2, no. 6, pp. 487-490.
- W0034 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 12, pp. 863-864.
- W0040 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 9, pp. 937-941.
- W0058 World Health Organization, 1992, World Health Organization Global AIDS Statistics, AIDS Care, vol. 4, no. 2, pp. 231-234.
- W0072 World Health Organization, 1993, World Health Organization Global AIDS Statistics, AIDS, vol. 5, no. 1, pp. 125-128.
- W0079 World Health Organization, 1993, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 7, no. 9, pp. 1287-1291.
- W0087 World Health Organization, 1994, The Current Global Situation of the HIV/AIDS Pandemic, Global Programme on AIDS, January 4, document.

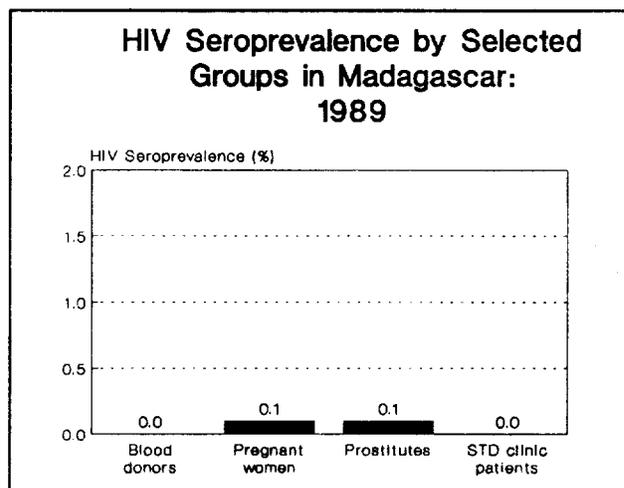
# Madagascar

## Demographic Indicators

Population (1,000s)	13,428	Growth Rate (%)	3.2
<b>Infant Mortality Rate</b>		<b>Life Expectancy</b>	
Both Sexes	89	Both Sexes	54
Male	96	Male	52
Female	82	Female	56
Crude Birth Rate	45	Crude Death Rate	13
Total Fertility Rate	6.7	Percent Urban	26
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 3/14/94		0.00	
Cumulative AIDS cases as of 3/14/94		9	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

- Information on HIV seroprevalence in Madagascar is sparse. One 1989 study in six regional capitals and three tourist centers found HIV infection levels among several groups to be relatively low.



Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, Feb. 1992.

## Sources for Madagascar

K0076 Kirsch, T., A. J. Rasamindrakotokra, U. Hof, et al., 1990, Introduction of a Nationwide HIV Sentinel Surveillance System in Madagascar, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.17.

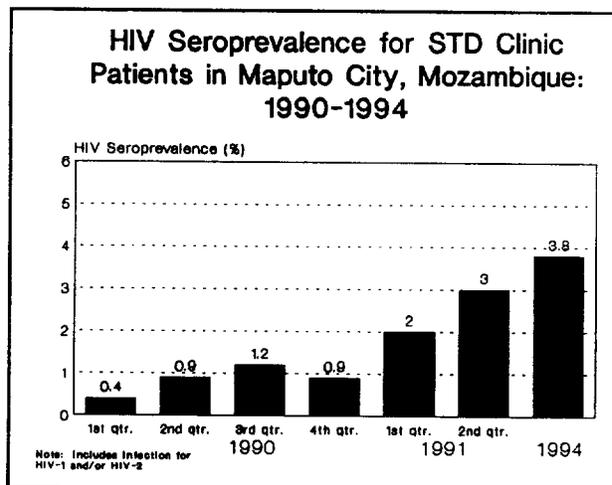
# Mozambique

## Demographic Indicators

Population (1,000s)	17,097	Growth Rate (%)	6.4
Infant Mortality Rate (per 1,000)		Life Expectancy	
Both Sexes	128	Both Sexes	44
Male	138	Male	43
Female	118	Female	45
Crude Birth Rate (per 1,000)	46	Crude Death Rate (per 1,000)	20
Total Fertility Rate	6.4	Percent Urban	34
Note: Above indicators are for 1995.			
Cumulative AIDS rate (per 1,000) as of 5/31/95		0.11	
Cumulative AIDS cases as of 5/31/95		1815	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

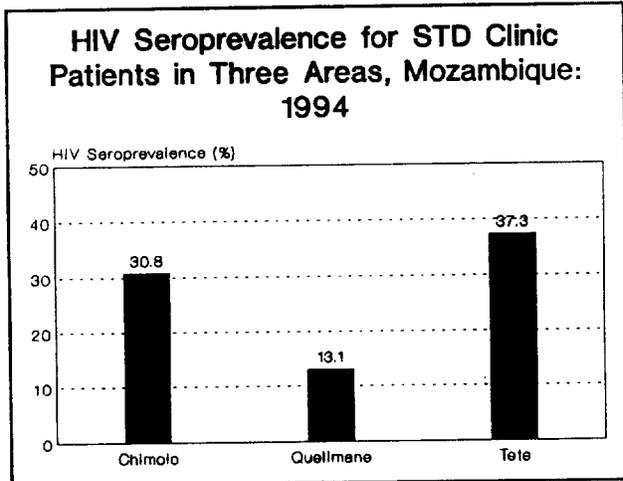
- Sentinel surveillance reporting from Maputo city, the capital, has documented an increase in HIV infection among STD clinic patients. In one year, HIV seroprevalence more than tripled from 0.9 percent in the second quarter of 1990 to 3.0 percent in the second quarter of 1991. In 1994, the HIV infection level increased further to 3.8 percent.



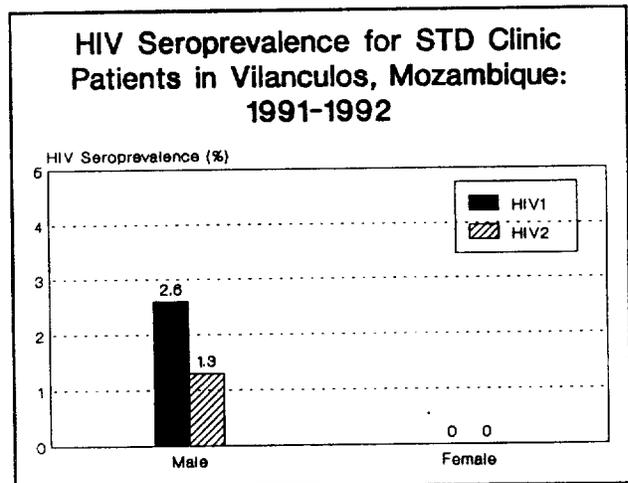
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, July 1995.

## Mozambique

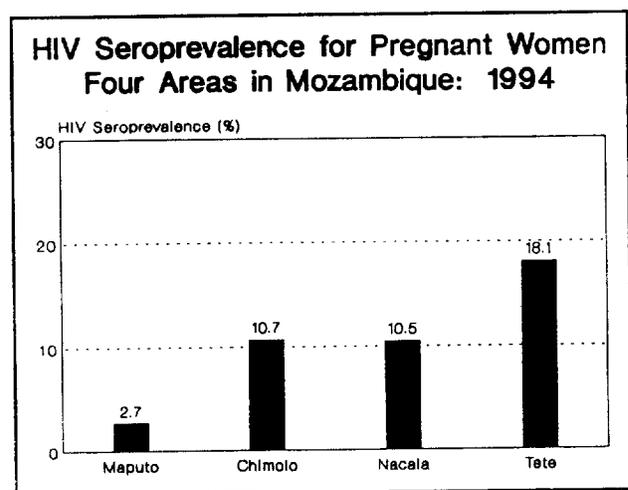
- Data from three sentinel posts in Mozambique indicate much higher levels of HIV infection among STD patients than the data from Maputo city. Reports from district/provincial health centers in Chimoi and Tete noted HIV levels of over 30 percent while Quelimane reported a level of 13 percent.



- A study conducted in Vilanculos, a rural area located in the north of Inhambane Province, documented levels of HIV seroprevalence among STD patients similar to those found in Maputo city. HIV-1 and HIV-2 have been detected in male patients, whereas there is no evidence of either infection among female patients.

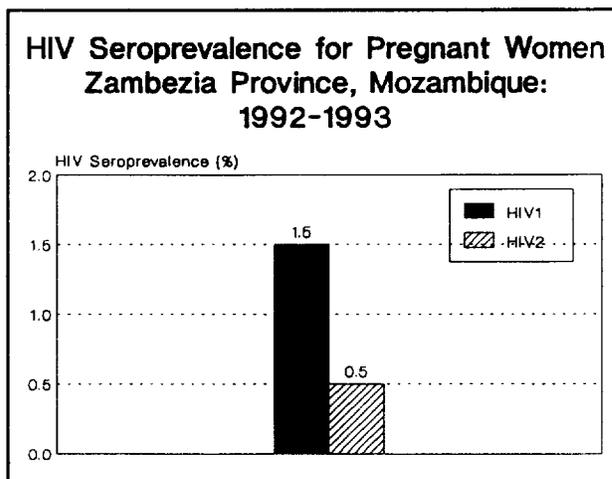


- In 1994, sentinel data from four district/provincial health centers designated as sentinel posts show HIV seroprevalence levels among pregnant women ranging from 2.7 percent in Maputo to 18.1 percent in Tete. HIV infection levels in Maputo city were less than one-quarter of the levels in the rest of the areas.

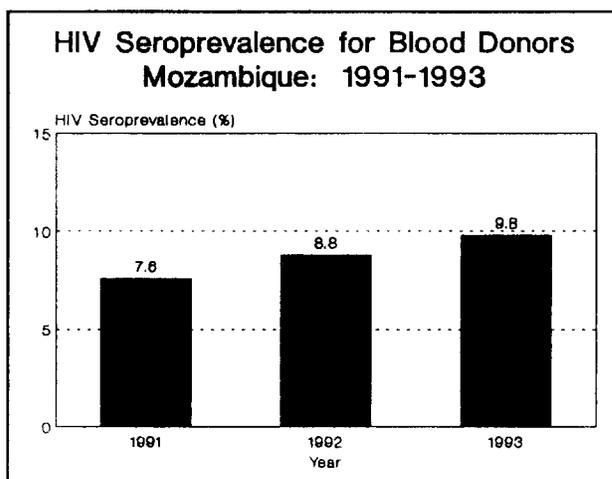


## Mozambique

- In Zambezia Province, from 14 health posts in four rural districts, HIV infection levels among displaced (internal refugee) pregnant women tested were 1.5 percent and 0.5 percent for HIV-1 and HIV-2, respectively. There was no evidence of dual infection.



- Blood donor screening for the whole country showed a slow but steady increase in HIV prevalence among blood donors. HIV seroprevalence rose from 7.6 percent in 1991 to 9.8 percent in 1993.



## Sources for Mozambique

- B0246 Barreto, A., B. De Hulsiers, A. Noya, et al., 1994, Interventions to Control STD/HIV Risk Situation Induced by Population Movements during Resettlement in Post-War Mozambique, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Poster P.D.0531.
- U0009 USAID Mission to Mozambique, 1992, Analise Epidemiologica do SIDA em Mocambique 1986 - Agosto de 1991, FAX from Mary Pat Selvaggio, HPN Officer, unpublished report.

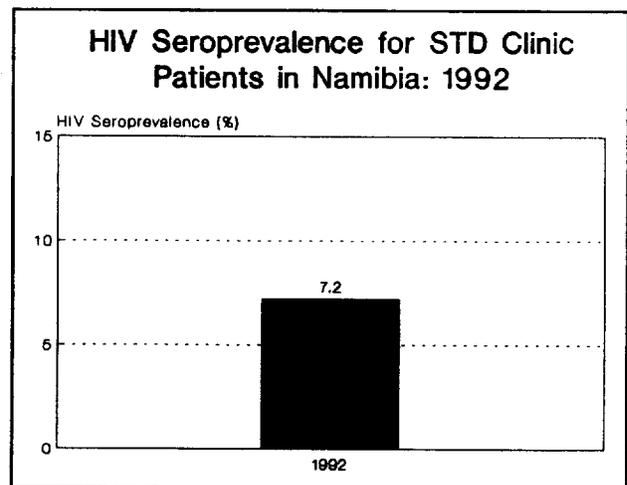
# Namibia

## Demographic Indicators

Population (1,000s)	1,596	Growth Rate (%)	3.5
Infant Mortality Rate		Life Expectancy	
Both Sexes	62	Both Sexes	62
Male	70	Male	59
Female	54	Female	64
Crude Birth Rate	43	Crude Death Rate	9
Total Fertility Rate	6.4	Percent Urban	30
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 12/31/93		3.25	
Cumulative AIDS cases as of 12/31/93		5,101	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

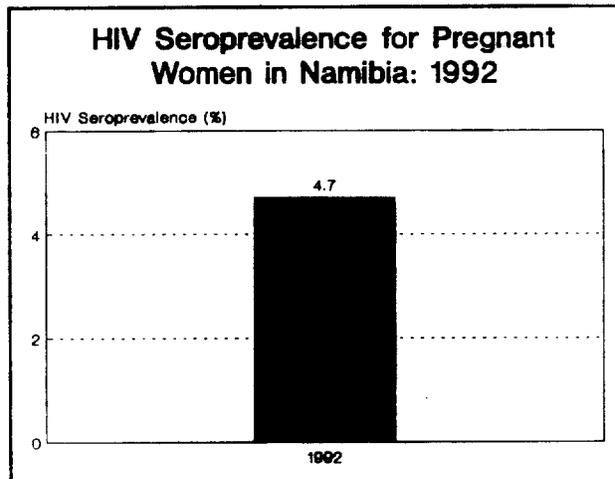
- There has been little information reported on HIV seroprevalence for Namibia. One study reported an HIV infection rate among STD clinic patients of 7.2 percent in 1992.



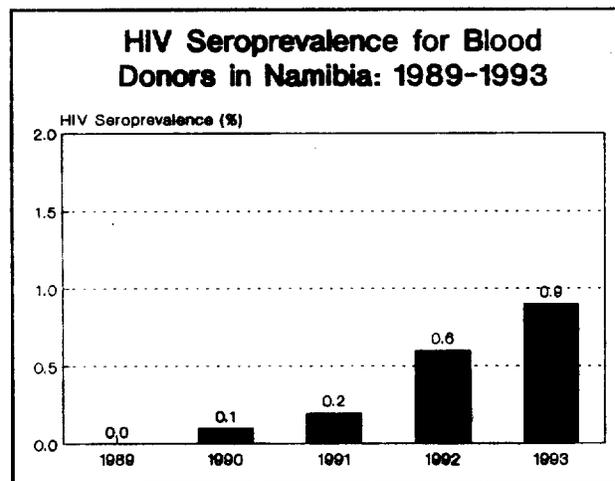
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1994.

## Namibia

- According to the same study, the HIV infection level among pregnant women was 4.7 percent.



- Data from the Blood Transfusion Service of Namibia show HIV seroprevalence levels among blood donors increased from 0 percent in 1989 to 0.9 percent in 1993.



## Sources for Namibia

S0268 Seidel, K., A. Eimbeck, M. Goraseb, 1993, Safe Transfusion is Achievable the Namibian Experience in Blood Transfusion Services, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract Th.P.A.028.

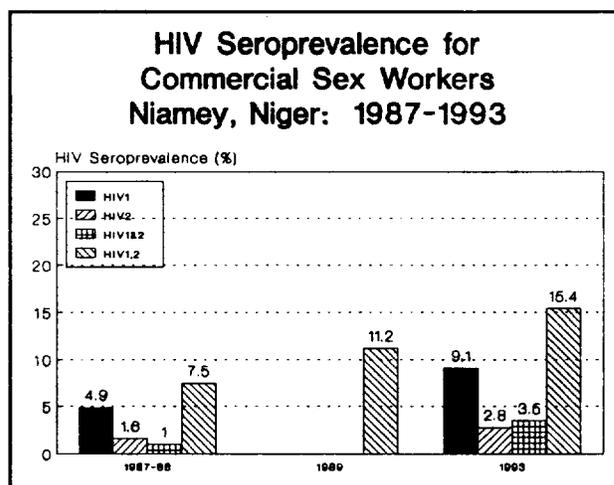
# Niger

## Demographic Indicators

Population (1,000s)	8,972	Growth Rate (%)	3.4
Infant Mortality Rate		Life Expectancy	
Both Sexes	111	Both Sexes	45
Male	118	Male	43
Female	104	Female	46
Crude Birth Rate	55	Crude Death Rate	21
Total Fertility Rate	7.4	Percent Urban	22
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 6/15/93		0.10	
Cumulative AIDS cases as of 6/15/93		921	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

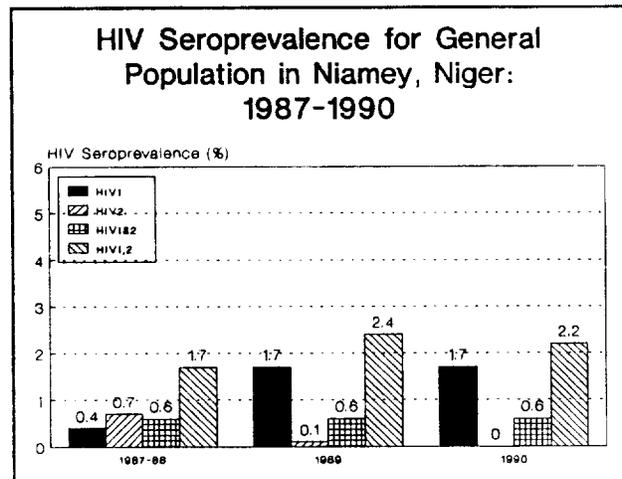
- Studies conducted in the capital, Niamey, reported moderately high HIV seroprevalence levels among commercial sex workers. The overall HIV seroprevalence level (including HIV-1, HIV-2 and dual infection) of 15.4 percent in 1993 is twice as high as the level seen in 1987-1988 (7.5 percent).



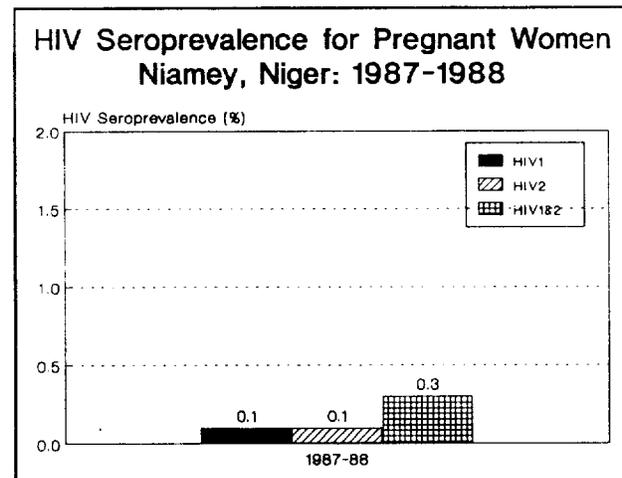
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1994.

## Niger

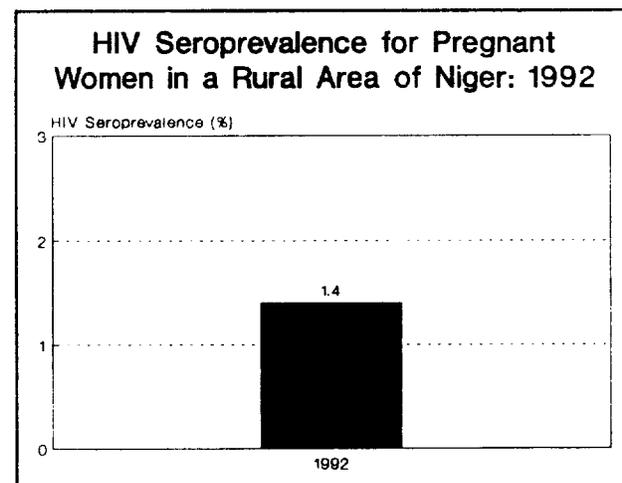
- Between 1987 and 1990, HIV-1 infection levels increased among the general population in the capital. Levels of dual infection remained the same. Overall HIV seroprevalence levels remained relatively low, under 3 percent.



- As early as 1987-88, HIV infection was reported among pregnant women in Niamey. Infection levels of HIV-1 and HIV-2 were 0.1 percent and the dual infection rate was 0.3 percent.

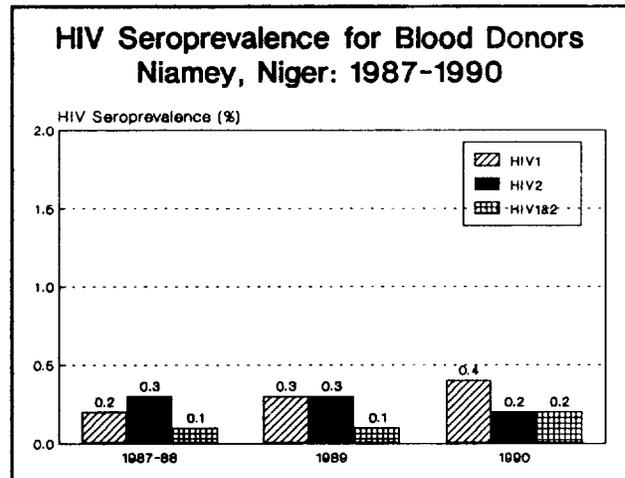


- Evidence of the risk of infection in the rural population was shown in a recent study from Niger. The HIV infection among pregnant women was 1.4 percent for a rural area located in Tahoua region.



## Niger

- A study of blood donors in Niamey reported relatively low levels of HIV infection. Preselection and/or prescreening may affect these results.



## Sources for Niger

- H0106 Habi, G., A. Hassane, M. B. Amsagana, 1993, MST/SIDA: Enquete chez les Femmes Enceintes en Milieu Rural (Departement de Tahoua) Niger, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Poster Th.P.C.074.
- 00044 Ousseini, H., J. L. Pecarrere, D. Meynard, et al., 1991, Evolution de la Seroprevalence des Infections a VIH1 et VIH2 a l'Hopital National de Niamey, Niger, Bulletin de La Societe de Pathologie Exotique, vol. 84, no. 3, pp. 235-239.
- S0258 Soga, G., A. Hassane, A. Aboubacar, et al., 1993, Etude de Prevalence des Infections Sexuellement Transmises (IST) chez les Prostituees a Niamey, Niger, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Session T.R.T.024.
- W0013 World Health Organization, 1988, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 2, no. 6, pp. 487-490.
- W0017 World Health Organization, 1989, Acquired Immunodeficiency Syndrome (AIDS), Weekly Epidemiology Record, March 3, vol. 64, no. 9, pp. 61-68.
- W0032 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 6, pp. 405-406.
- W0042 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 6, pp. 605-606.
- W0045 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 12, pp. 1305-1306.
- W0054 World Health Organization, 1991, World Health Organization Global AIDS Statistics, AIDS Care, vol. 3, no. 4, pp. 481-484.
- W0058 World Health Organization, 1992, World Health Organization Global AIDS Statistics, AIDS Care, vol. 4, no. 2, pp. 231-234.
- W0079 World Health Organization, 1993, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 7, no. 9, pp. 1287-1291.
- W0087 World Health Organization, 1994, The Current Global Situation of the HIV/AIDS Pandemic, Global Programme on AIDS, January 4, document.

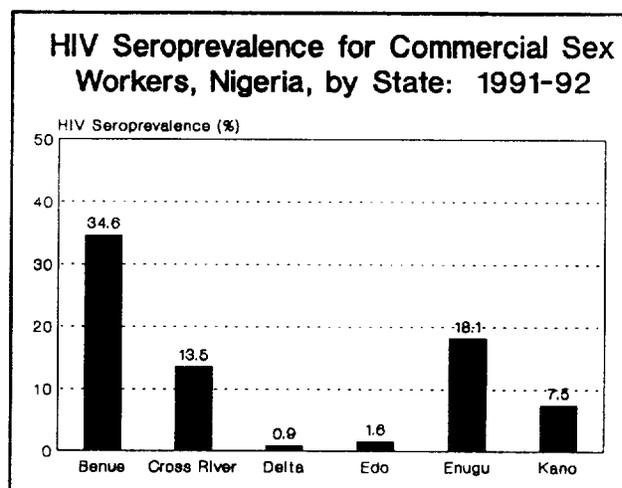
# Nigeria

## Demographic Indicators

Population (1,000s)	98,091	Growth Rate (%)	3.1
<b>Infant Mortality Rate</b>		<b>Life Expectancy</b>	
Both Sexes	75	Both Sexes	55
Male	78	Male	54
Female	72	Female	57
Crude Birth Rate	44	Crude Death Rate	12
Total Fertility Rate	6.4	Percent Urban	38
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 4/4/94		0.01	
Cumulative AIDS cases as of 4/4/94		1,148	
<b>Sources:</b> U.S. Bureau of the Census, United Nations, World Health Organization.			

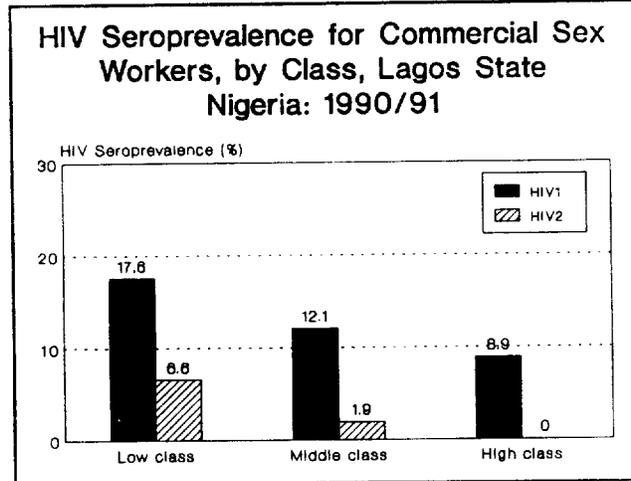
## Epidemiological Data

- The Federal Ministry of Health and Human Services with the World Health Organization conducted a serosurvey of HIV infection at selected sentinel sites in various states of Nigeria. The results of all the sites in each state show the range of HIV infection among commercial sex workers from 0.9 percent in Delta state to 34.6 in Benue state.

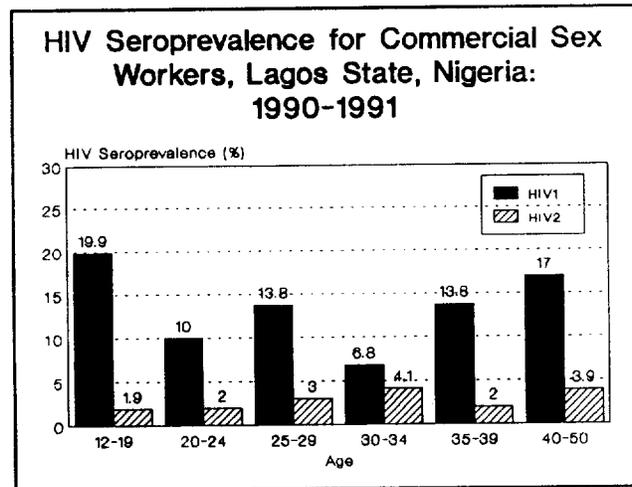


## Nigeria

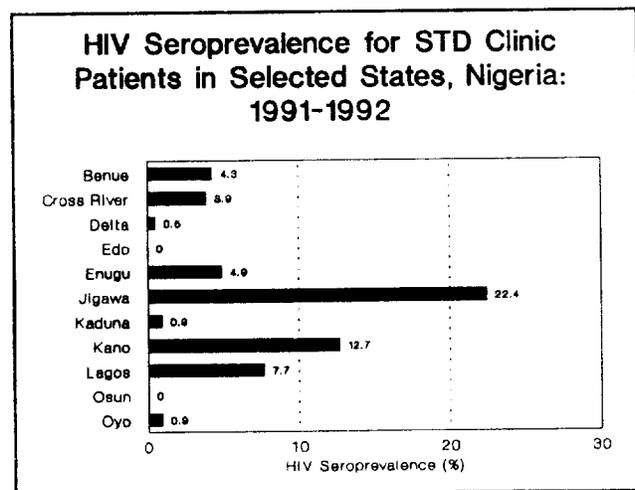
- Another study of commercial sex workers in Lagos State measured the seroprevalence of HIV-1 and HIV-2. Women in the lower class were not as likely to use condoms as the high class women. The overall prevalence rate varied by class: low class women had the highest HIV prevalence levels.



- The peak age for HIV-1 infection among commercial sex workers in Lagos State in this 1990-1991 study is 12-19 years of age. Infection with HIV-2 is present but the levels are much lower. HIV-2 infection levels vary from 1.9 percent among those 12-19 years of age to 4.1 percent among those 30-34 years old.

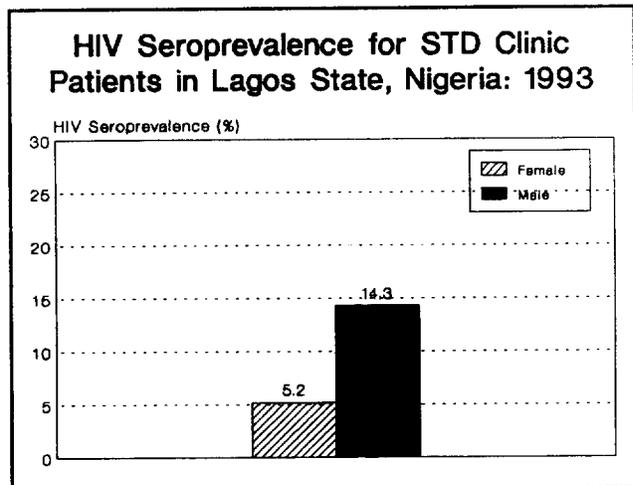


- The results from selected sentinel sites in various states show the range of HIV infection among STD clinic patients from 0.0 percent to 22.4 percent.

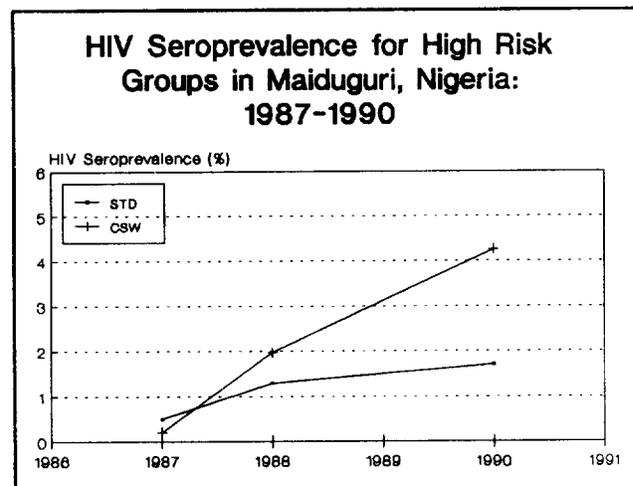


## Nigeria

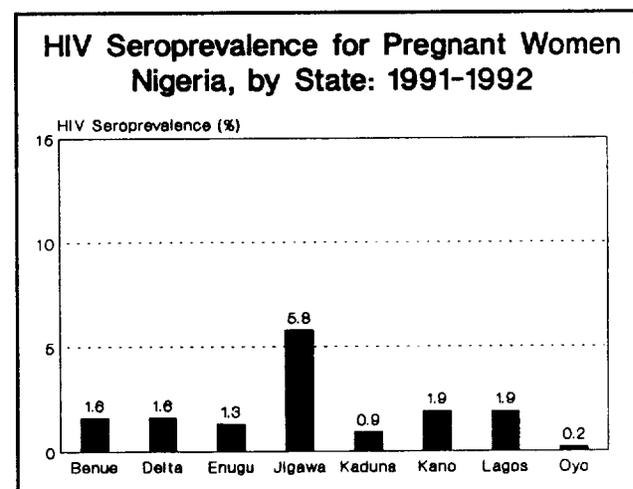
- The HIV infection level among male STD clinic patients in Lagos State is 14.3 percent which is more than double the infection level of 5.2 percent found among female patients attending the same clinic.



- Data collected on high risk populations in Maiduguri, Nigeria, show a steady increase in HIV infection between 1987 and 1990. In 1990, HIV seroprevalence reached 1.7 percent among STD patients and 4.3 percent among commercial sex workers (CSW).

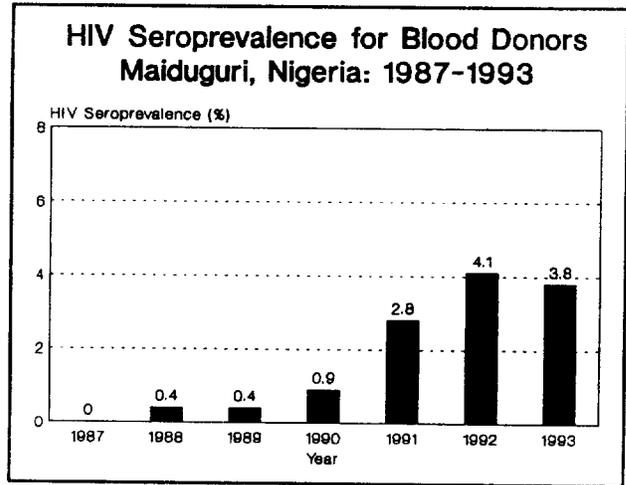


- Reports from sentinel sites within the states of Nigeria show the overall HIV seroprevalence level among pregnant women to range from 0.2 percent in Oyo state to 5.8 percent in Jigawa state.



## Nigeria

- Studies conducted in Maiduguri City between 1987 and 1993 showed an increase in the HIV infection levels among blood donors. HIV seroprevalence levels increased from 0 percent in 1987 to 4.1 percent in 1992.



## Sources for Nigeria

- A0101 Asagba, A. O., J. J. Andy, T. Ayele, et al., 1992, HIV Sentinel Surveillance in Nigeria, Nigeria Bulletin of Epidemiology, vol. 2, no. 2, pp. 10-13.
- C0109 Chikwem, J. O., I. Mohammed, H. G. Bwala, et al., 1990, Human Immunodeficiency Virus (HIV) Infection in Patients Attending a Sexually Transmitted Diseases Clinic in Borno State of ..., Tropical and Geographical Medicine, vol. 42, pp. 17-22.
- D0120 Dada, A. J., F. Oyewole, R. Onofowokan, et al., 1993, Demographic Characteristics of Retroviral Infections (HIV-1, HIV-2, and HTLV-1) among Female Professional Sex Workers in ..., Journal of Acquired Immune Deficiency Syndromes, vol. 6, no. 12, pp. 1358-1363.
- H0055 Harry, T. O., W. Gashau, O. Ekenna, et al., 1990, Growing Threat of HIV Infection in a Low Prevalence Area, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.21.
- H0087 Harry, T. O., A. E. Moses, T. O. Ola, et al., 1992, Increasing Risk of Transfusion-Associated AIDS as the Pandemic Spreads: Experience in Maiduguri, Nigeria, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.154.
- H0113 Harry, T., 1994, Seven Years of HIV/AIDS in Maiduguri, Nigeria, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Abstract P.C.0043.
- I0034 Ilori, O., C. M. Awolaru, G. K. Macaulay, et al., 1994, STD and HIV among Patients at a Public Health Lab, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Poster P.C.0565.
- O0039 Offor, E., L. Okafor, I. Osunde, et al., 1994, Changes in HIV Seroprevalence among Blood Donors in Benin City, Nigeria, AIDS, vol. 8, no. 9, pp. 1352-1354.
- O0055 Olaleye, O. D., L. Bernstein, C. C. Ekweozor, et al., 1993, Prevalence of Human Immunodeficiency Virus Types 1 and 2 Infections in Nigeria, Journal of Infectious Diseases, vol. 167, no. 3, pp. 710-714.

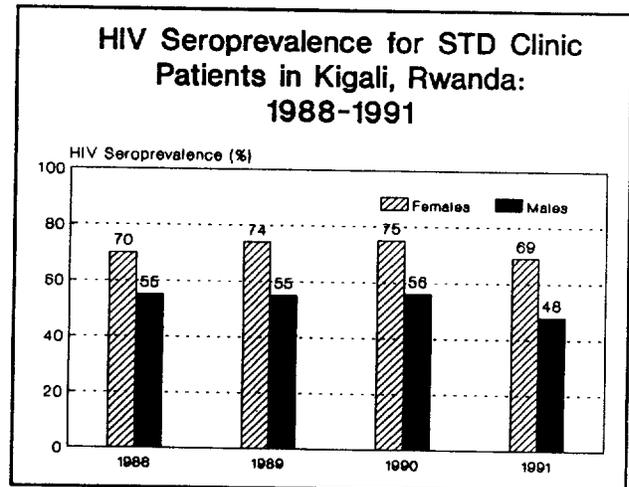
# Rwanda

## Demographic Indicators

Population (1,000s)	8,374	Growth Rate (%)	2.8
Infant Mortality Rate		Life Expectancy	
Both Sexes	119	Both Sexes	40
Male	126	Male	39
Female	111	Female	41
Crude Birth Rate	49	Crude Death Rate	21
Total Fertility Rate	8.2	Percent Urban	6
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 6/30/93		1.32	
Cumulative AIDS cases as of 6/30/93		10,706	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

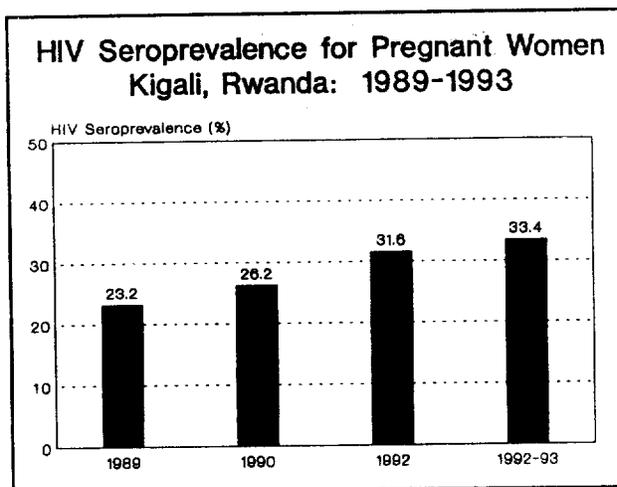
- A survey conducted at the Health Center of Biryogo, located in the center of Kigali, the capital, showed high levels of HIV infection among STD clinic patients. Women visiting this STD clinic had higher levels of HIV infection than men.



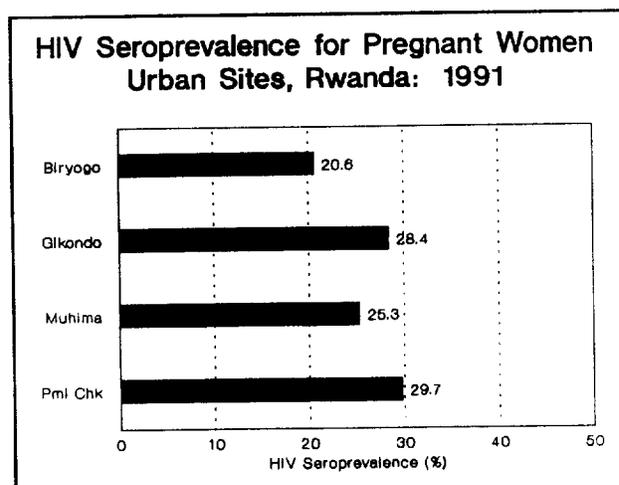
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, Dec. 1993.

## Rwanda

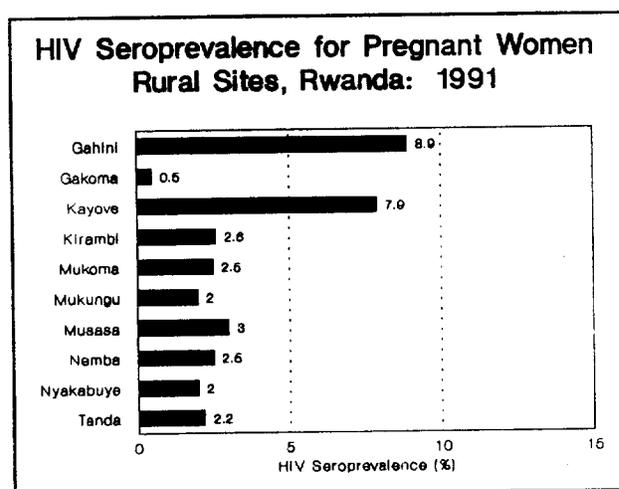
- HIV infection levels among pregnant women in Kigali increased from 23.2 percent in 1989 to 33.4 percent in 1992-93.



- During the second half of 1991 a sentinel surveillance study was conducted among pregnant women. HIV infection levels varied moderately between the different urban sites and were relatively high ranging from 20 percent to 30 percent.

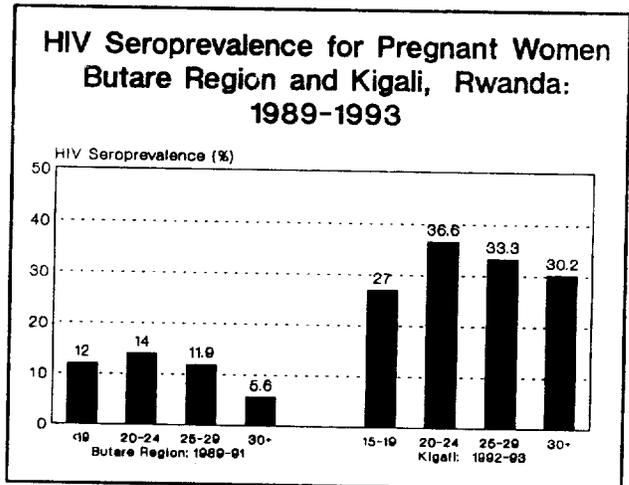


- According to the same sentinel surveillance study, pregnant women from the rural areas had much lower levels of HIV infection than urban women. In most rural areas, HIV infection levels among pregnant women were moderately low ranging from 0.5 percent to 3.0 percent, except in two semirural areas, Gahini and Kayove, 8.9 percent and 7.9 percent, respectively.

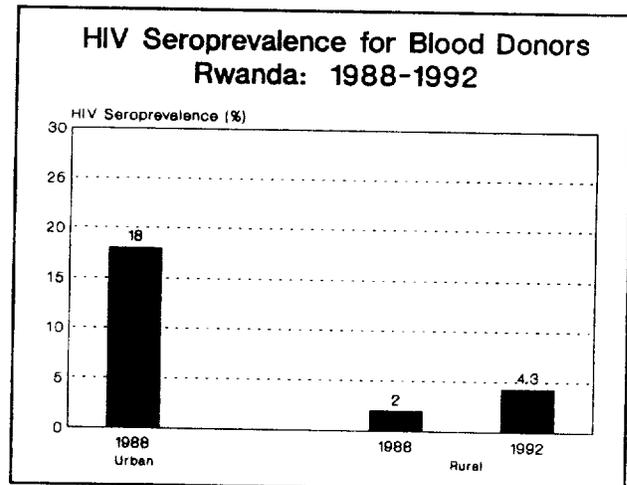


## Rwanda

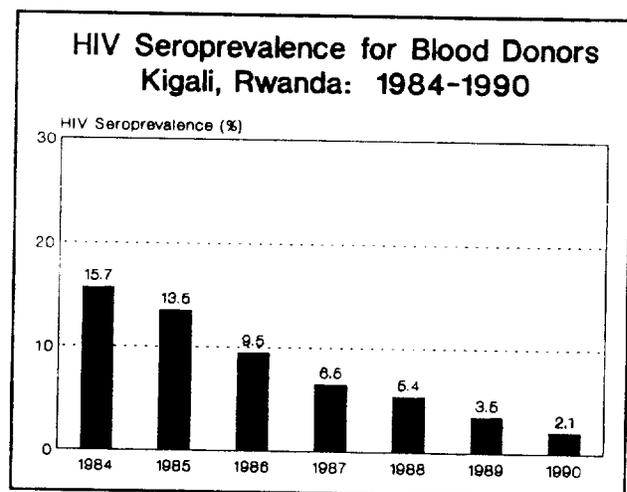
- In a sample of pregnant women from mostly rural areas in the Butare region, HIV prevalence in 1989-91 peaked at 14 percent for ages 20-24 years. A similar age pattern is seen in a study of pregnant women in Kigali. HIV seroprevalence levels peaked in ages 20-24 at 36.6 percent during 1992-93.



- In 1988, HIV seroprevalence for blood donors in the urban areas of Rwanda was much higher than in rural areas (18 percent compared to 2 percent). However, by 1992, the HIV infection level among blood donors in the rural areas doubled to 4.3 percent.



- As epidemics mature, blood donors become less representative of the general population if action is taken to screen out persons at high risk of having been infected with HIV. Results from a study conducted in Kigali, the capital city, over the past 7 years indicated a decrease in the HIV seroprevalence among blood donors even though rates among pregnant women continue to increase.



## Sources for Rwanda

- B0128 Bucyendore, A., E. Karita, P. Van de Perre, et al., 1991, Evolution de la Seroprevalence VIH-1 dans la Population Urbaine de la Ville de Kigali (Rwanda) Pendant les Annees ..., VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster T.A.150.
- C0003 Clumeck, N., M. Robert-Guroff, P. Van De Perre, et al., 1985, Seroepidemiological Studies of HTLV-III Antibody Prevalence among Selected Groups of Heterosexual Africans, JAMA, vol. 254, no. 18, pp. 2599-2602.
- C0132 Chao, A., P. Habimana, M. Bulterys, et al., 1992, Oral Contraceptive Use, Cigarette Smoking, Age at First Sexual Intercourse, and HIV Infection among Rwandan Women, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster PoC 4338.
- F0046 Francois-Gerard, C., J. Nkurunziza, C. De Clercq, et al., 1992, Seroprevalence of HIV, HBV and HCV in Rwanda, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster PoC 4027.
- K0127 Karita, E., P. Van de Perre, A. Nziyumvira, et al., 1992, HIV Seroprevalence among STD Patients in Kigali, Rwanda, during the Four-Year Period 1988-1991, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster PoC 4468.
- L0020 Le Page, P., P. Van de Perre, 1988, Nosocomial Aspects of HIV Infection in Central Africa, In: AIDS in Children, Adolescents and Heterosexual Adults, Elsevier Science Publishing Company, Inc., pp. 188-189.
- L0104 Ladner, J., A. De Clercq, C. Ukuliyimfura, et al., 1992, Seroprevalence de l'Infection par le VIH-1 et Counselling chez les Femmes Enceintes: Une Etude de Cohorte a Kigali, Rwanda ..., VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster W.P.179.
- L0119 Ladner, J., A. De Clercq, M. Nyiraziraje, et al., 1993, HIV Seroprevalence and Counselling in Pregnant Women a Cohort Study in Kigali (Rwanda), 1992, IX International Conference on AIDS, Berlin, 6/6-11, Poster PO-D15-3884.
- M0268 Mugabo, P., J. Nkurunziza, 1993, Seroprevalence of HIV-1 in Rwanda Blood Banks from 1985 to 1990, IX International Conference on AIDS, Berlin, 6/6-11, Abstract PO-C21-3113.
- T0076 Twagirakristu, J. B., E. Fox, A. Nziyumvira, et al., 1992, Etat de l'Infection VIH au Rwanda en 1991, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.014.

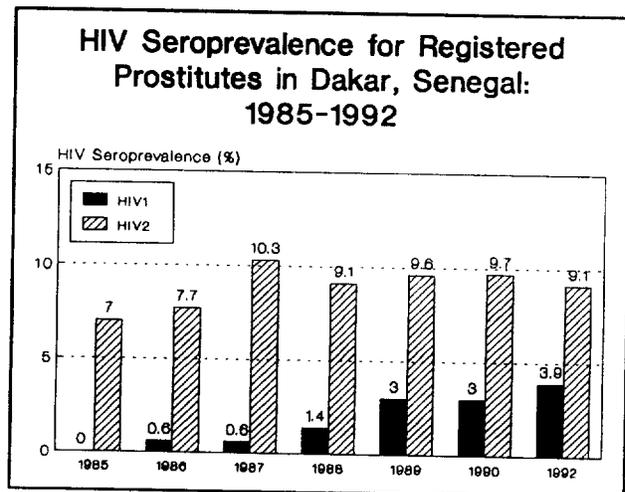
# Senegal

## Demographic Indicators

Population (1,000s)	8,731	Growth Rate (%)	3.1
Infant Mortality Rate		Life Expectancy	
Both Sexes	76	Both Sexes	57
Male	79	Male	55
Female	72	Female	58
Crude Birth Rate	43	Crude Death Rate	12
Total Fertility Rate	6.1	Percent Urban	42
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 5/31/93		0.11	
Cumulative AIDS cases as of 5/31/93		911	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

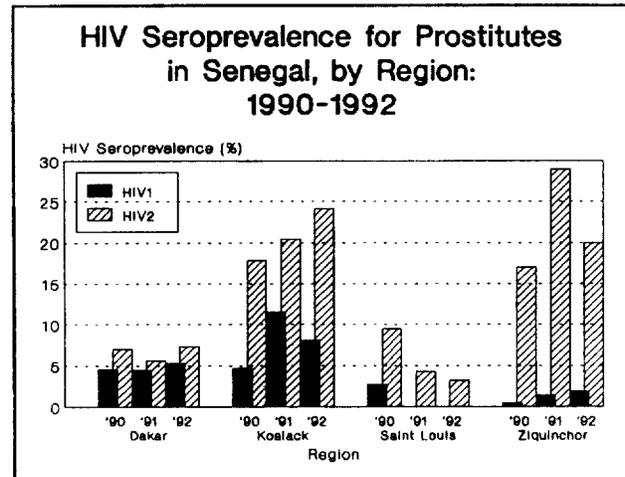
- HIV-1 infection levels increased from 0 in 1985 to 3.9 percent in 1992 among registered prostitutes in the capital, Dakar. Over the same period, infection levels of HIV-2 increased from 7.0 percent to 9.1 percent. Studies in other cities in Senegal among registered prostitutes showed similar patterns.



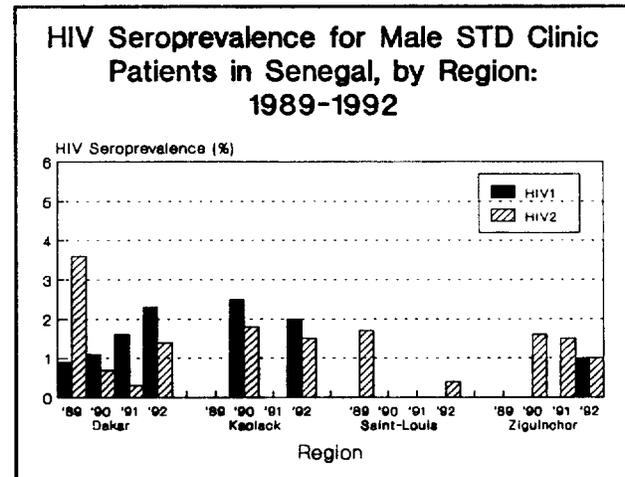
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1994.

## Senegal

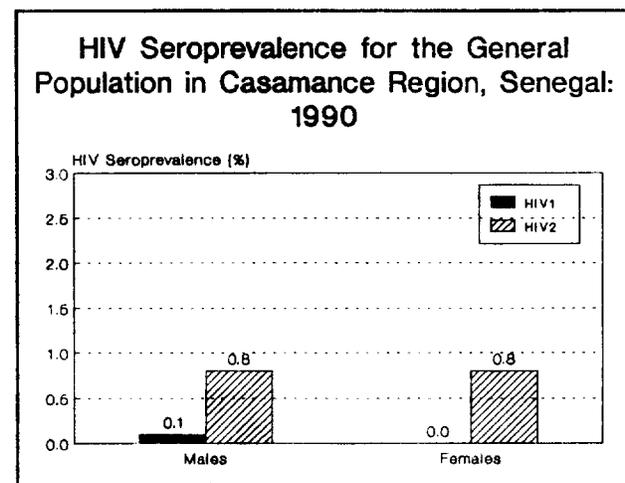
- Sentinel surveillance data from 4 of the 10 regions show the variability in HIV infection among prostitutes. In each case however, the level of HIV-2 was higher than the level of HIV-1.



- In Dakar, levels of HIV-1 infection among STD clinic attendees increased between 1989-1992, while at the same time, HIV-2 infection levels fluctuated. Other studies in Senegal over this period document the gradual spread of HIV-1 to other regions of the country.

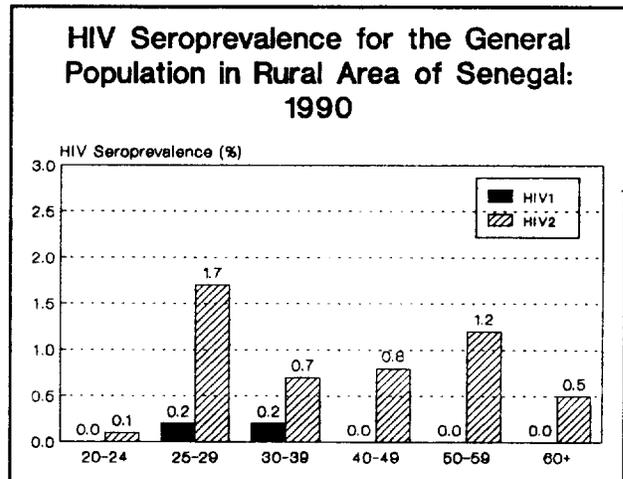


- In Casamance Region, the level of HIV-2 infection among the general population in 1990 was the same for males and females, 0.8 percent. However, the HIV-1 infection level among males was 0.1 percent and there was no evidence of HIV-1 infection among women.

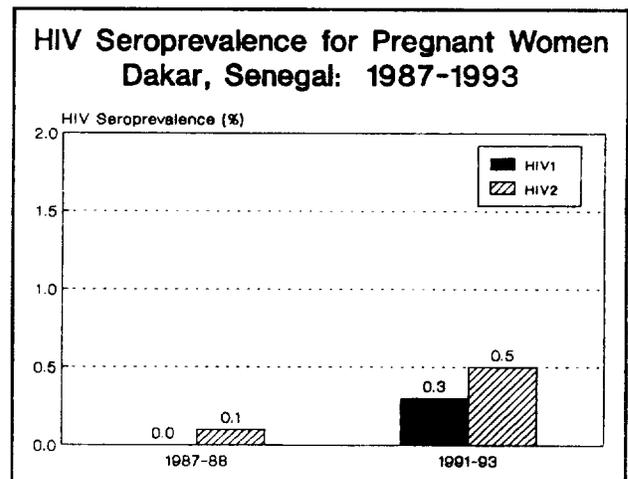


## Senegal

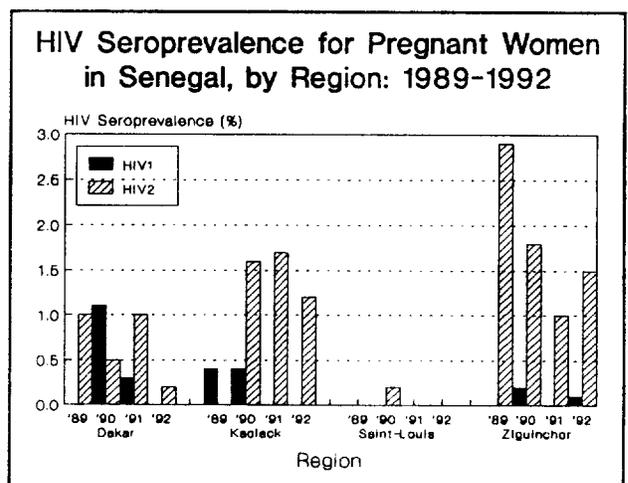
- According to a study conducted among the general population in a rural area of Senegal in 1990, ages 25-29 years were at greater risk of having been infected with HIV-2 than any other age group. HIV-1 was only present in the age groups 25-29 and 30-39.



- In a 1987-88 study of pregnant women in Dakar, no evidence of HIV-1 was found and HIV-2 had a prevalence of 0.1 percent. However, in a more recent study during 1991-93, HIV-2 levels increased to 0.5 percent and HIV-1 prevalence was 0.3 percent.

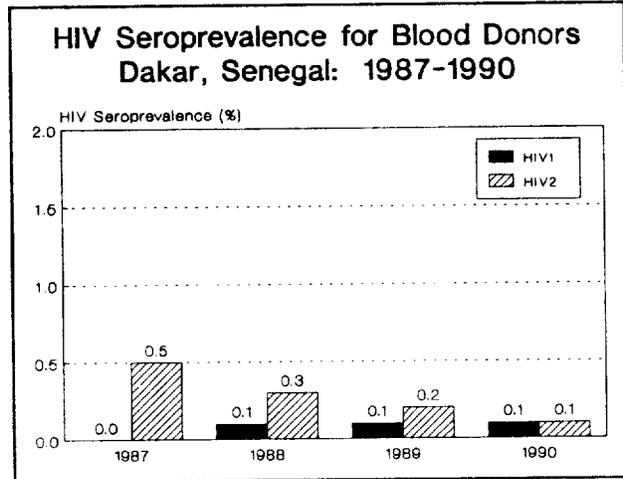


- HIV infection levels among pregnant women vary by region. During 1989-92, HIV-2 seroprevalence levels were generally higher than HIV-1. In Saint Louis Region no evidence of HIV-1 was found.

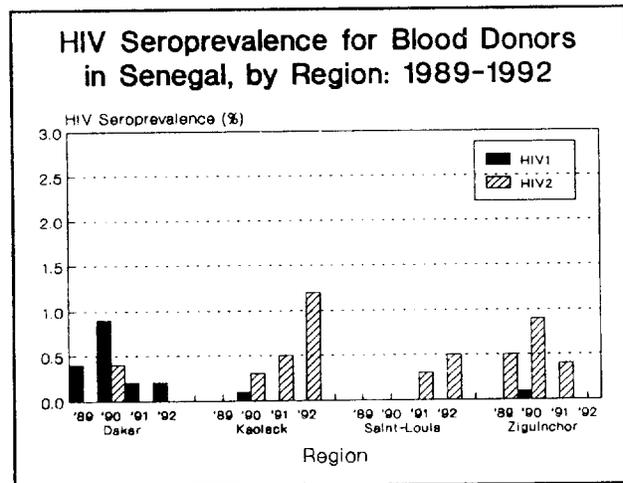


## Senegal

- Analysis of data for blood donors from November 1987 to March 1990 showed that HIV-2 seroprevalence declined over the period. HIV-1 was evident in 1988 and has been 0.1 percent throughout the study period.



- Levels of HIV seroprevalence in blood donors were less than 1 percent in several regions of Senegal. However, HIV-2 prevalence in the Kaolack Region was slightly over 1 percent in 1992.



## Source for Senegal

- D0105 Diaw, I., T. Siby, I. Thior, et al., 1992, HIV and STD Infections among Newly Registered Prostitutes in Dakar, VIII International Conference on AIDS, Amsterdam, 7/19-24, Abstract PoC 4333.
- L0009 Le Guenno, B., 1988, Affections a HIV et Grossesse a Dakar, Unpublished.
- L0077 Le Guenno, B., G. Pison, C. Enel, et al., 1992, HIV-2 Prevalence in Three Rural Regions of Senegal: Low Levels and Heterogeneous Distribution, Transactions of the Royal Society of Tropical Medicine and Hygiene, vol. 86, no. 3, pp. 301-302.
- M0129 M'Boup, S., P. Kanki, I. N'Doye, et al., 1990, Emergence of HIV-1 in a High Risk Group from an HIV-2 Endemic Area (Senegal), VI International Conference on AIDS, San Francisco, 6/20-24, Session F.C.102.
- M0162 Mboup, S., et al., 1990, Surveillance Sentinelle des Infection a HIV Bulletin Epidemiologique 001, Bulletin Epidemiologique HIV, January, no. 1.
- M0172 Mboup, S., et al., 1991, Surveillance Sentinelle des Infections a HIV, Bulletin Epidemiologique HIV, December, no. 3.
- M0322 Mboup, S., et al., 1993, Surveillance Sentinelle des Infection of HIV, Bulletin Epidemiologique HIV, December, no. 4.
- P0106 Pison, G., B. Le Guenno, E. Lagarde, et al., 1993, Seasonal Migration: A Risk Factor for HIV Infection in Rural Senegal, Journal of Acquired Immune Deficiency Syndromes, vol. 6, no. 2, pp. 196-200.
- S0269 Sarr Nd Mame Anta, N. G., D. S. Ba, T. Ndoeye, et al., 1993, Facteurs de Risque de l'Infection a VIH chez la Femme Enceinte a Dakar, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Poster M.P.C.087.
- T0041 Thiam, D., B. Le Guenno, K. Seck/Fall, et al., 1990, La Prevalence de l'Infection VIH au Sein de la Population des Donneurs de Sang dans la Region de Dakar, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.9.
- W0080 Wade, A., A. Dieng-Sarr, A. A. Diallo, et al., 1993, HIV-1 and HIV-2 Infection in Senegal, IX International Conference on AIDS, Berlin, 6/6-11, Abstract PO-C29-3264.

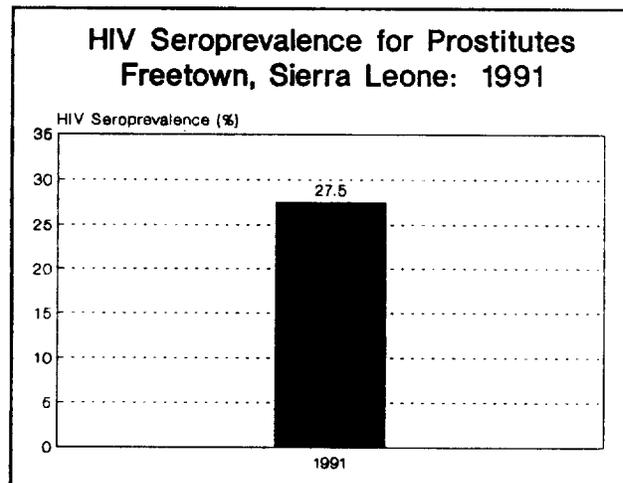
# Sierra Leone

## Demographic Indicators

Population (1,000s)	4,630	Growth Rate (%)	2.6
Infant Mortality Rate		Life Expectancy	
Both Sexes	142	Both Sexes	46
Male	158	Male	44
Female	126	Female	49
Crude Birth Rate	45	Crude Death Rate	19
Total Fertility Rate	6.0	Percent Urban	35
Note: Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 7/7/93		0.02	
Cumulative AIDS cases as of 7/7/93		95	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

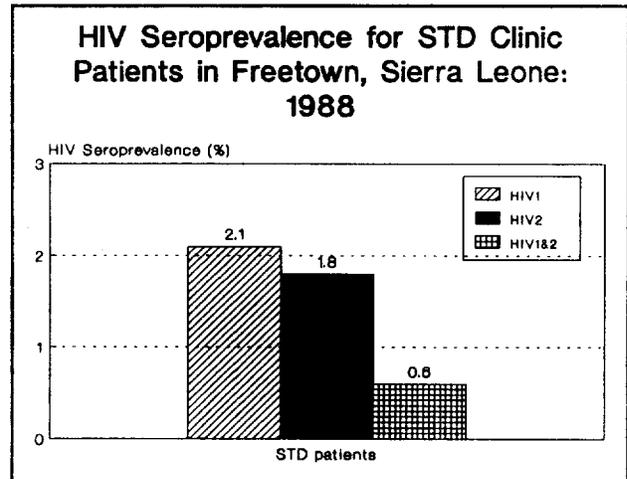
- There are few studies available on HIV seroprevalence among prostitutes in Sierra Leone. However, one recent study conducted in Freetown, the capital city, during a one day workshop in December 1991 found 27.5 percent of prostitutes HIV positive.



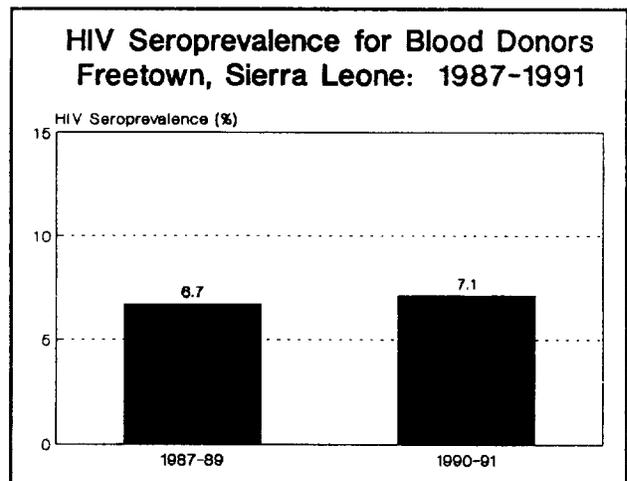
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1993.

## Sierra Leone

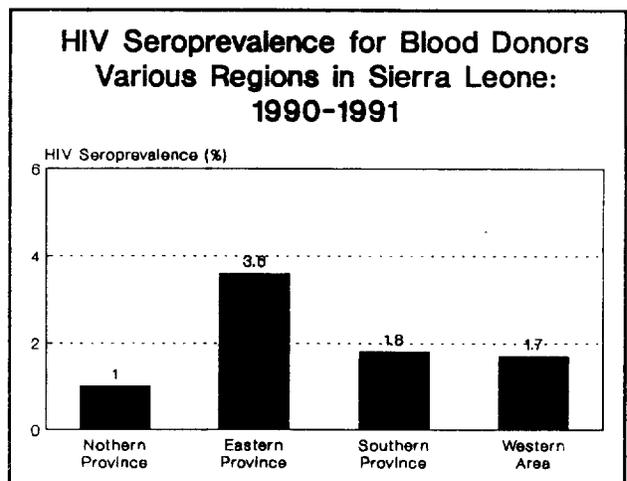
- A study conducted among STD clinic patients in Freetown found the total HIV infection to be 4.5 percent in 1988, over one-half attributable to HIV-1 and dual infection.



- Studies conducted in Freetown among blood donors showed a slight increase in the level of HIV infection, 6.7 percent to 7.1 percent between 1987-89 and 1990-91.



- A regional analysis of HIV infection levels among blood donors showed HIV infection present in the Western area (1.7 percent), Northern Province (1.0 percent), Eastern Province (3.6 percent) and Southern Province (1.8 percent).



## Sources for Sierra Leone

- A0032 Andrew, K., T. Kargbo, I. Thorlie, et al., 1989, Prevalence of HIV Seropositivity among STD Patients in Freetown - Sierra Leone, V International Conference on AIDS, Montreal, 6/4-9, Poster W.G.P. 16.
- K0060 Kosia, A., T. Kargbo, E. Makiu, et al., 1989, Prevalence of HIV-I and HIV-II among Blood Donors in Sierra, Leone, IV Internat. Conf.: AIDS and Assoc. Cancers in Africa, Marseille, Oct. 18-20, Poster 390.
- M0185 Makiu, E. J. K., A. Kosia, 1991, The Impact of a Decentralised HIV Testing Approach in the Prevention of Blood Born HIV Transmission in Sierra Leone, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster M.A.251.
- M0237 Makiu, E. J. K., A. M. Kosia, N. Mansaray, 1992, A Strategy to Control HIV Infection among Female Commerical Sex Workers (CSW) and Their Clients in Freetown, Sierra Leone, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Abstract T.P.098.

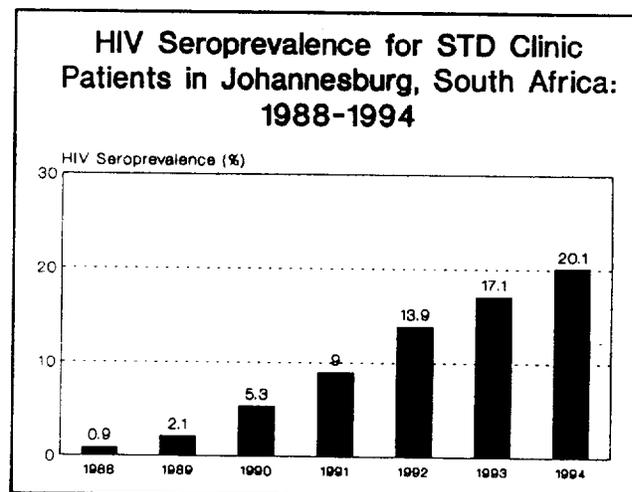
# South Africa

## Demographic Indicators

Population (1,000s)	45,095	Growth Rate (%)	2.6
Infant Mortality Rate (per 1,000)		Life Expectancy	
Both Sexes	46	Both Sexes	65
Male	44	Male	63
Female	48	Female	68
Crude Birth Rate (per 1,000)	33	Crude Death Rate (per 1,000)	7
Total Fertility Rate	4.4	Percent Urban	51
Note: Above indicators are for 1995.			
Cumulative AIDS rate (per 1,000) as of 7/27/94		0.09	
Cumulative AIDS cases as of 7/27/94		3,849	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

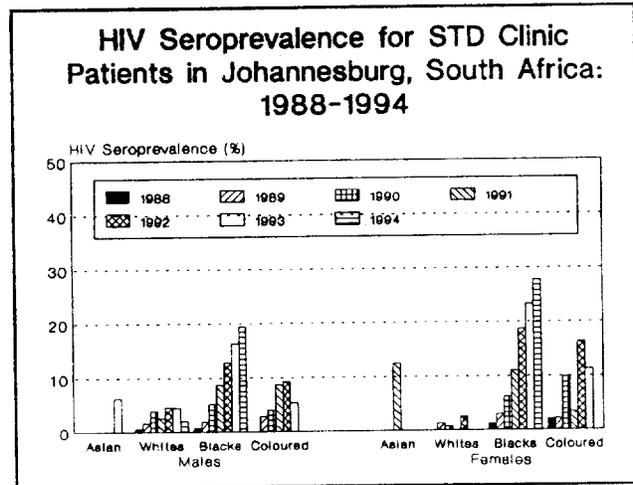
- Sentinel surveillance from Johannesburg documents the steady but marked increase in HIV seroprevalence among STD clinic patients over a 6-year period. Infection levels increased from 0.9 percent in 1988 to 20.1 percent in 1994.



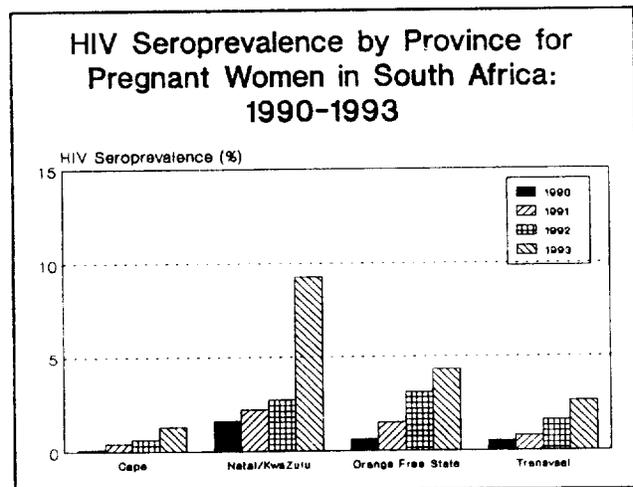
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, July 1995.

## South Africa

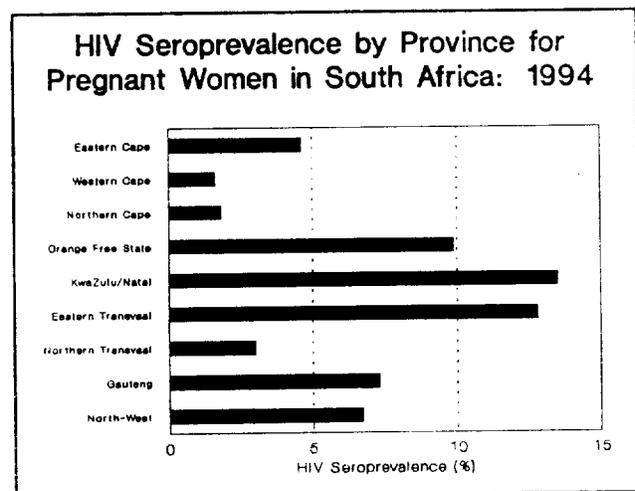
- Studies of STD clinic patients in Johannesburg indicate an increase in the level of HIV infection among both males and females for almost all population groups from 1988 to the early 1990's. The greatest increases and the highest infection levels have been observed among the black population. Female STD clinic patients had higher seroprevalence levels than males in the black, coloured, and Asian subgroups, but among whites, male clinic patients had higher levels.



- In 1993, the fourth national HIV seroprevalence survey was conducted in South Africa among pregnant women. Based on all four surveys, HIV infection increased in all four provinces. However, the HIV level in Natal/KwaZulu Province more than tripled.

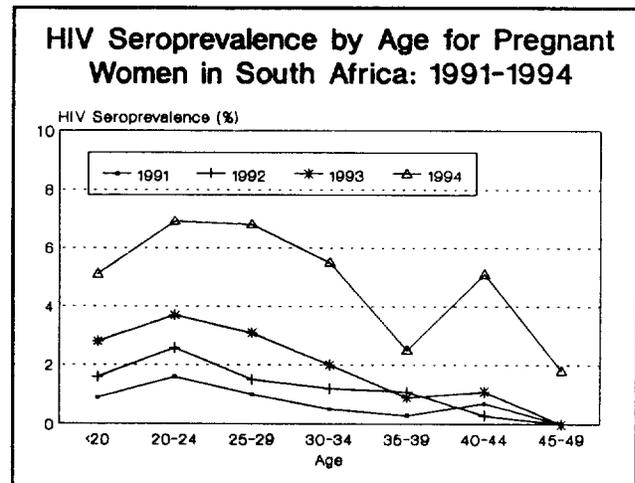


- In 1994, the fifth national HIV seroprevalence survey included data for the newly formed provinces. As in the previous four surveys, HIV infection was highest among pregnant women in KwaZulu/Natal Province. Cape Province has been subdivided into three new provinces with the highest HIV seroprevalence reported from Eastern Cape, 4.6 percent. Levels varied from 1.6 percent in Western Cape Province to 13.5 percent in KwaZulu/Natal Province.

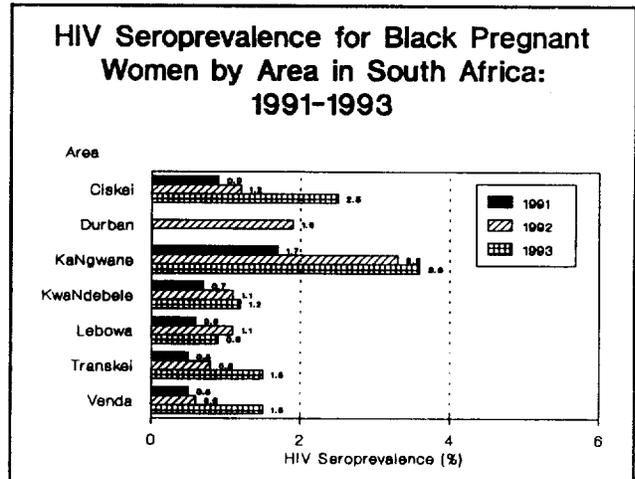


## South Africa

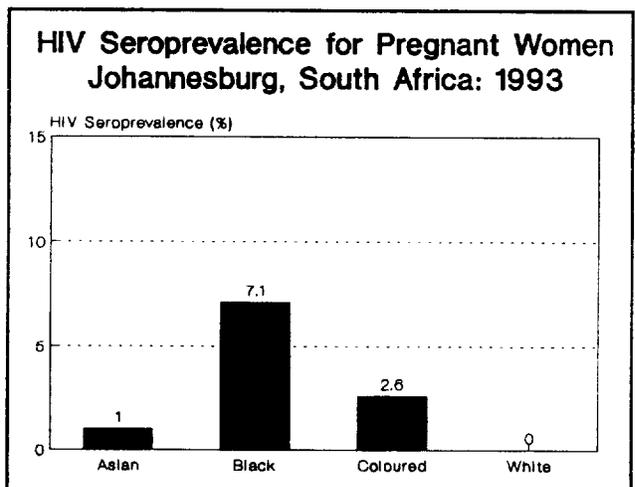
- The 1991, 1992, 1993, and 1994 national HIV seroprevalence surveys documented the pattern of HIV infection by age. Data from all four years showed a similarity in age patterns; the peak of HIV infection was in the 20-24 year age group. The data from 1994 documented a marked increase in HIV seroprevalence levels over 1993.



- HIV seroprevalence levels among black pregnant women varied by area. The 1991-1993 data showed a doubling in HIV levels for Ciskei, Transkei, and Venda. However, KaNgwane continued to have the highest HIV infection level.

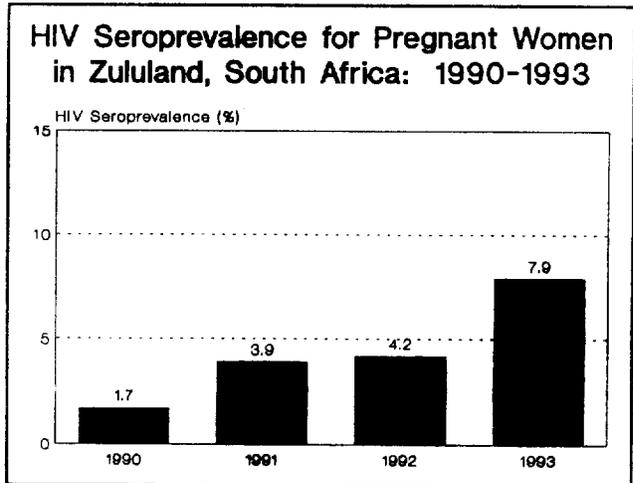


- Serosurveillance conducted by the National Institute for Virology and the Johannesburg City Health Department indicated a variation in HIV infection among pregnant women. HIV infection levels among black pregnant women were the highest compared to White, Asian and Coloured pregnant women.

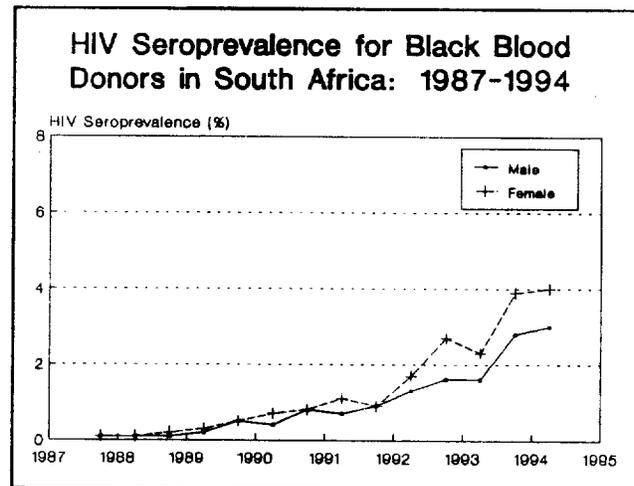


## South Africa

- HIV seroprevalence surveys among women attending antenatal clinics in a rural health district hospital, Hlabisa Health Ward, located in northern Zululand, South Africa, reported an increase in HIV levels. The data indicated rapidly rising HIV seroprevalence to 7.9 percent in 1993.



- The Department of Health blood donor surveillance has documented the increase in HIV prevalence among black blood donors from 1987 through 1994. HIV levels among women were slightly higher than those among men.



## Sources for South Africa

- D0137 Dietrich, M., A. A. Hoosen, J. Moodley, et al., 1992, Urogenital Tract Infections in Pregnancy at King Edward VIII Hospital, Durban, South Africa, *Genitourinary Medicine*, vol. 68, pp. 39-41.
- M0261 Martin, D. J., B. D. Schoub, G. N. Padayachee, et al., 1990, One Year Surveillance of HIV-1 Infection in Johannesburg, South Africa, *Transactions of the Royal Society of Tropical Medicine and Hygiene*, vol. 84, pp. 728-730.
- P0104 Preston-Whyte, E., 1993, Gender and the Lost Generation: The Dynamics of HIV Transmission among Black Southern African Teenagers in KwaZulu/Natal, *IUSSP Seminar on AIDS Impact and Prevention in the Developing World: The Contribution of Demography and Social Science*, Annecy, France, 5-9 December 1993.
- R0065 RSA Department of National Health and Population Development, 1991, AIDS in South Africa: Status on World AIDS Day 1991, *Epidemiological Comments*, vol. 18, no. 11, pp. 229-249.
- R0066 RSA Department of National Health and Population Development, 1991, First National HIV Survey of Women Attending Antenatal Clinics, South Africa, Oct/Nov 1990, *Epidemiological Comments*, vol. 18, no. 2, pp. 35-44.
- R0074 RSA Department of National Health and Population Development, 1992, Second National Survey of Women Attending Antenatal Clinics, South Africa, October/November 1991, *Epidemiological Comments*, vol. 19 no. 5, pp. 80-92.
- R0089 RSA Dept. of National Health and Population Development, 1993, Third National HIV Survey of Women Attending Antenatal Clinics, South Africa, October/November 1992, *Epidemiological Comments*, vol. 20, no. 3, pp. 35-50.
- R0100 RSA Department of National Health and Population Development, 1993, AIDS in South Africa: Status on World AIDS Day 1993, *Epidemiological Comments*, vol. 20, no. 11, pp. 184-203.
- R0101 RSA Department of National Health and Population Development, 1994, Fourth National HIV Survey of Women Attending Antenatal Clinics, South Africa, October/ November 1993, *Epidemiological Comments*, vol. 21, no. 4, pp. 68-78.
- S0111 Schoub, B. D., A. N. Smith, S. Johnson, et al., 1990, Consideration on the Further Expansion of the AIDS Epidemic in South Africa - 1990, *South African Medical Journal*, vol. 77, pp. 613-618.
- V0025 Vazquez-Valls, E., B. Torres-Mendoza, J. Vazquez-Rizo, et al., 1989, Prevalence of Postmortem Anti HIV Antibodies in the State Jalisco, Mexico, V International Conference on AIDS, Montreal, 6/4-9, Abstract G. 516.
- W0091 Wilkinson, D., 1994, Second HIV Survey of Women Attending Antenatal Clinics, 1993, Hlabisa Health Ward, Zululand, *Epidemiological Comments*, vol. 21, no. 4, pp. 78-79.
- W0096 Wilkinson, D., 1994, Anonymous Antenatal HIV Seroprevalence Surveys in Rural South Africa, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Session 070C.

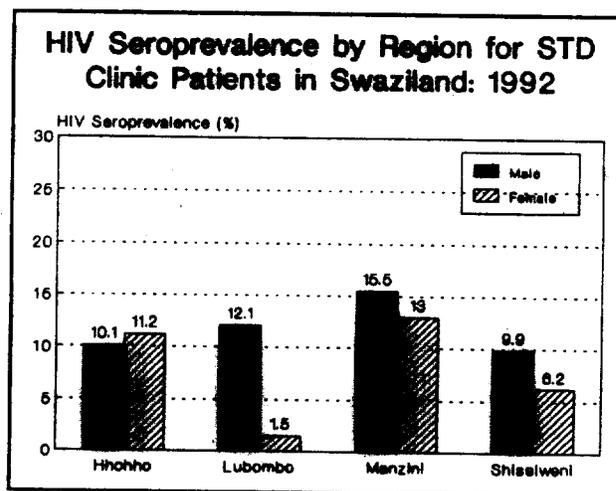
# Swaziland

## Demographic Indicators

Population (1,000s)	936	Growth Rate (%)	3.2
Infant Mortality Rate		Life Expectancy	
Both Sexes	93	Both Sexes	56
Male	103	Male	52
Female	84	Female	61
Crude Birth Rate	43	Crude Death Rate	11
Total Fertility Rate	6.1	Percent Urban	30
Note: Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 2/1/94		0.45	
Cumulative AIDS cases as of 2/1/94		413	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

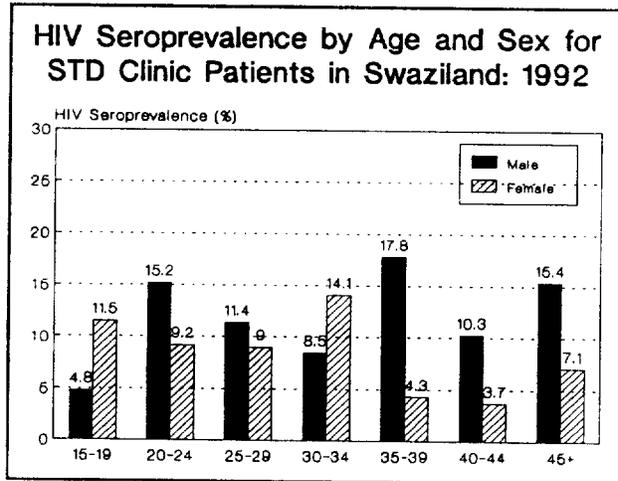
- In 1992, the first HIV sentinel surveillance study was conducted in all four administrative regions. Female STD patients had lower levels of HIV infection than male patients, except in Hhohho region.



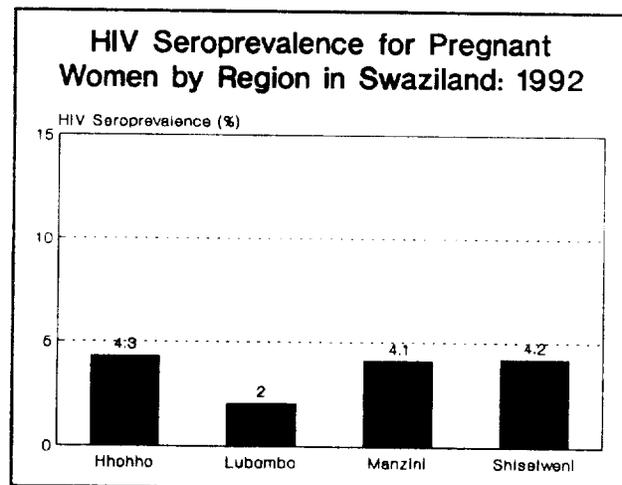
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, June 1994.

## Swaziland

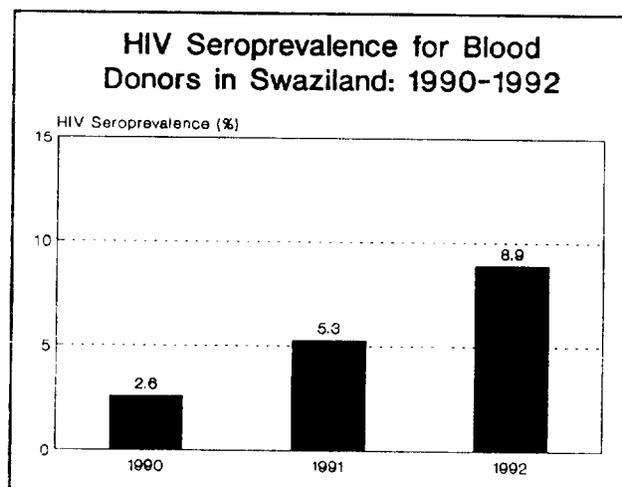
- From the above study, analysis of the age specific patterns for all regions shows the most affected age group among males was 35-39 and among females, 30-34.



- According to the same sentinel surveillance study, a regional analysis of HIV infection levels among pregnant women showed HIV infection to be present in all regions. The HIV level of infection was around 4 percent in all regions except for Lubombo which had an HIV prevalence level of 2.0 percent.



- The HIV infection level among blood donors shows a steady increase over a 3-year period, 1990-1992.



## Sources for Swaziland

D0117 Dlamini-Kapenda, W., 1993, First HIV Sentinel Surveillance in Swaziland, 1992, February, unpublished report.

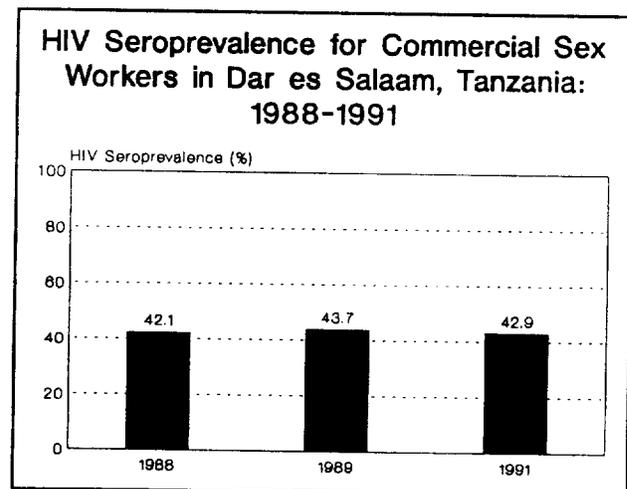
# Tanzania

## Demographic Indicators

Population (1,000s)	28,701	Growth Rate (%)	2.5
Infant Mortality Rate (per 1,000)		Life Expectancy	
Both Sexes	109	Both Sexes	43
Male	120	Male	41
Female	97	Female	44
Crude Birth Rate (per 1,000)	45	Crude Death Rate (per 1,000)	20
Total Fertility Rate	6.2	Percent Urban	24
<b>Note:</b> Above indicators are for 1995.			
Cumulative AIDS rate (per 1,000) as of 6/30/94		1.64	
Cumulative AIDS cases as of 6/30/94		45,968	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

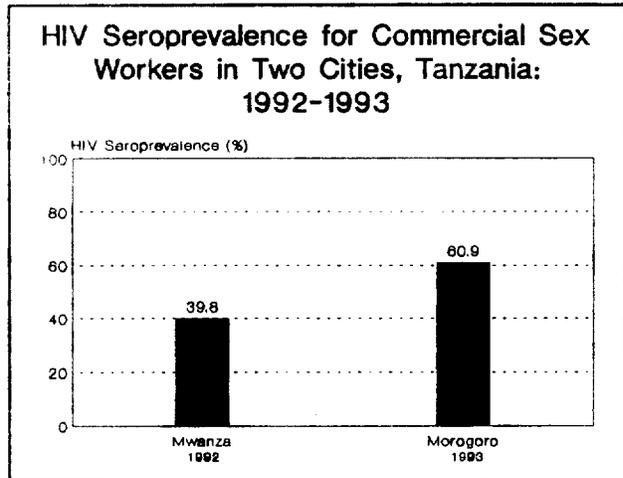
## Epidemiological Data

- In the capital city, Dar es Salaam, reported HIV infection levels among commercial sex workers already exceeded 40 percent during 1988-1991.

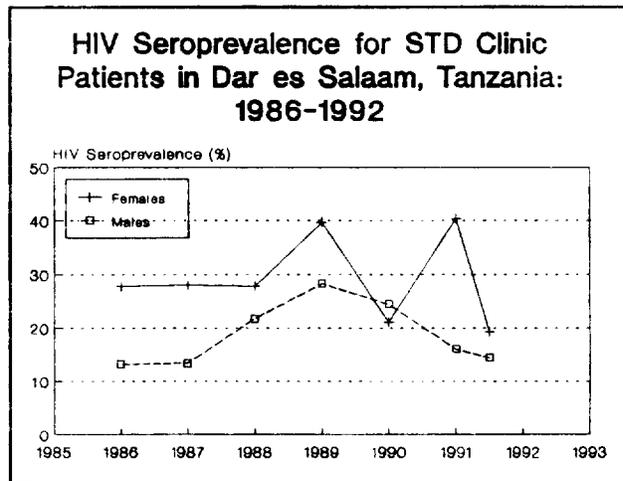


## Tanzania

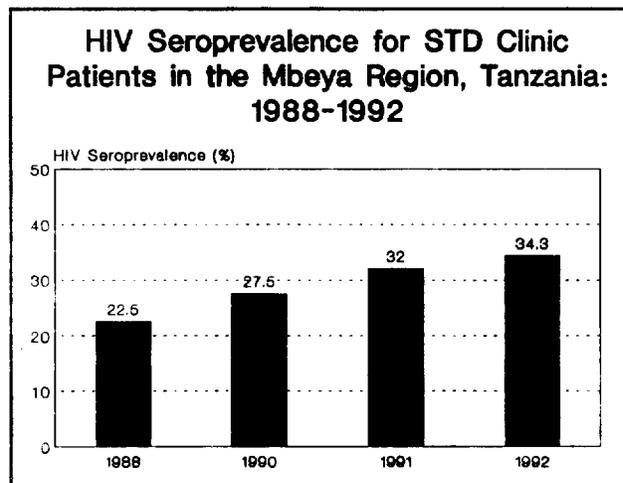
- HIV infection levels among commercial sex workers in Mwanza and Morogoro also show very high prevalence in the early 1990s.



- Female STD clinic patients in Dar es Salaam generally had higher HIV seroprevalence levels than male patients. Data from several reports showed HIV rates for females fluctuating between 20 and 40 percent since 1988.

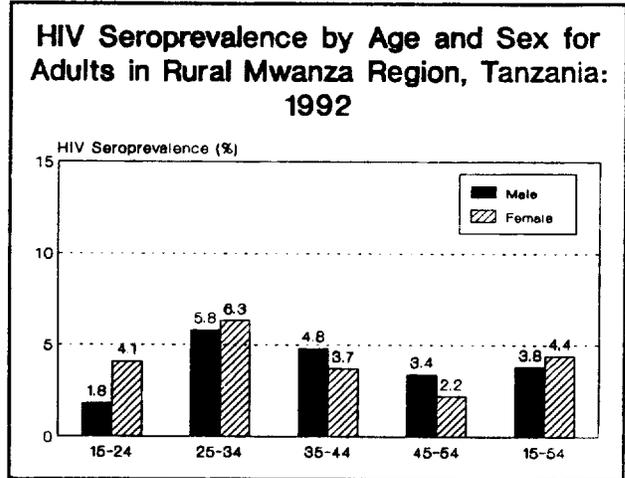


- In the Mbeya region, HIV infection levels among STD clinic patients steadily increased over a 4-year period from 22.5 to 34.3 percent.

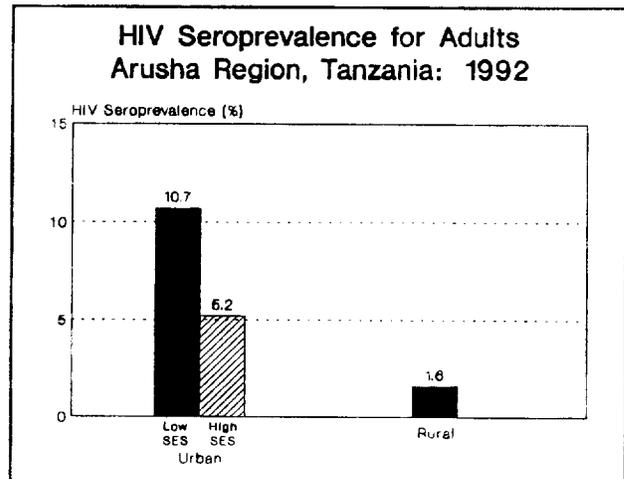


**Tanzania**

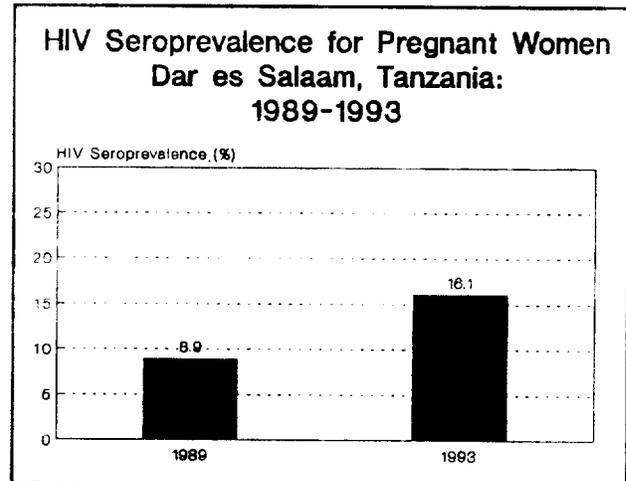
- According to a study conducted among adults from rural villages in Mwanza region for 1992, the highest rate of HIV infection fell in the age range of 25-34 years for both sexes. The overall HIV infection level was slightly higher among females than males.



- HIV-1 prevalence levels among the adult population in the Arusha region, northern Tanzania, from low and high socioeconomic status (SES) urban areas and rural villages were 10.7, 5.2, and 1.6 percent, respectively. In the urban areas, HIV prevalence levels were higher among females than males: 6.5 and 1.7 percent, respectively.



- HIV infection levels among pregnant women in the capital city, Dar es Salaam, almost doubled from 8.9 percent in 1989 to 16.1 percent in 1993.

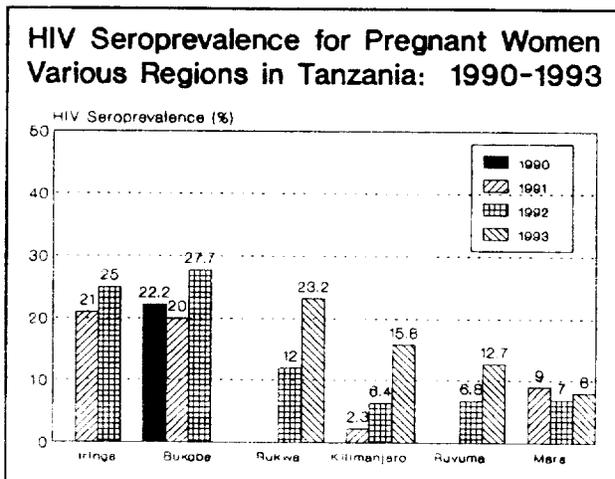


Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, July 1995.

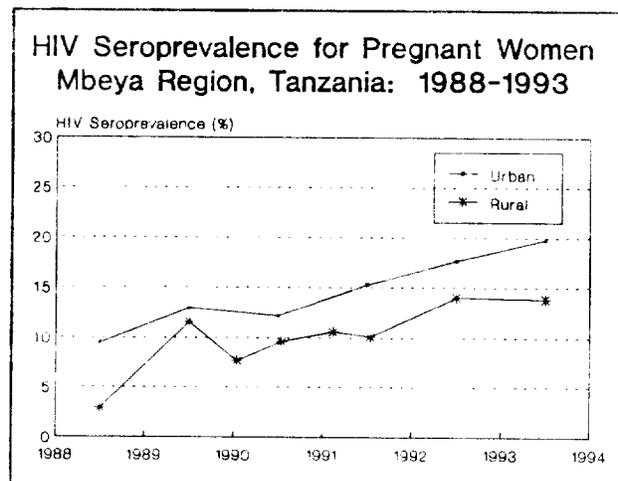
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## Tanzania

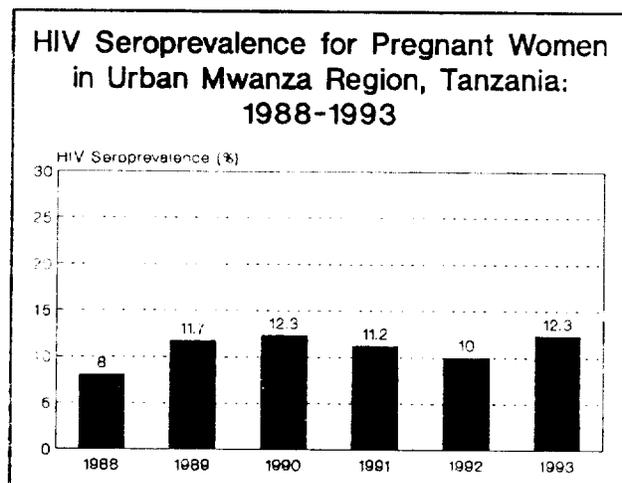
- Sentinel surveillance in Tanzania has documented the variability of HIV seroprevalence in pregnant women tested. For all regions except Mara region, an increase in HIV levels was noted. HIV seroprevalence among pregnant women ranged from less than 10 percent in Mara to over 20 percent in Bukoba, Iringa, and Rukwa.



- Sentinel surveillance documents urban/rural differentiation in HIV infection levels for the Mbeya region. In both areas, HIV infection levels in pregnant women tested are increasing. From late 1988 to 1993, HIV infection levels for rural pregnant women more than quadrupled, rising from 2.9 percent to 13.2 percent. The HIV infection levels for urban pregnant women doubled from 9.5 percent to 19.8 percent during this same period.

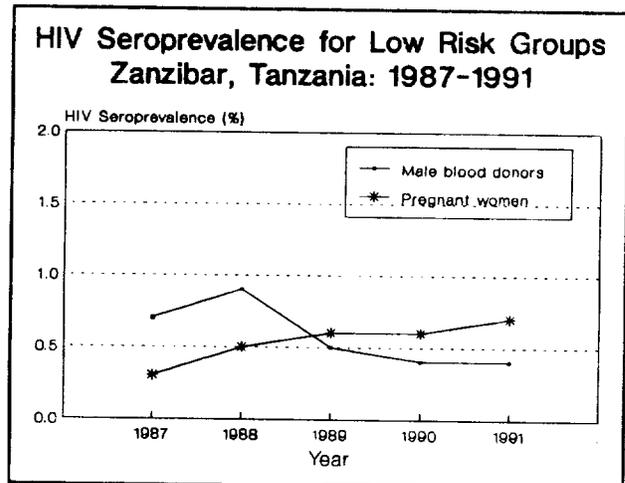


- In the urban area of Mwanza region, the level of HIV infection for pregnant women remained virtually the same over the period 1988-1993, with about one woman in eight infected.

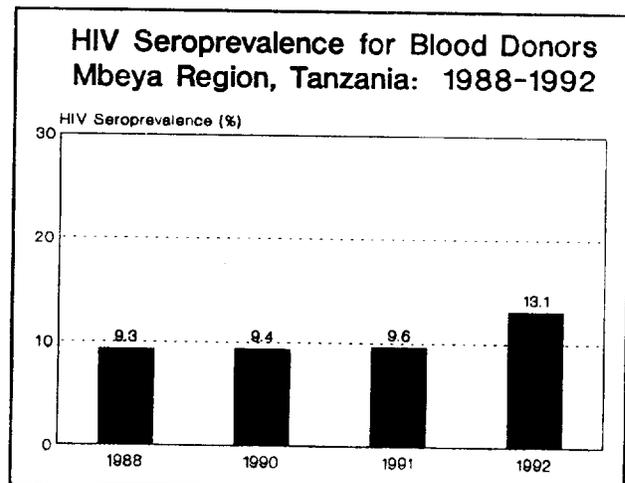


## Tanzania

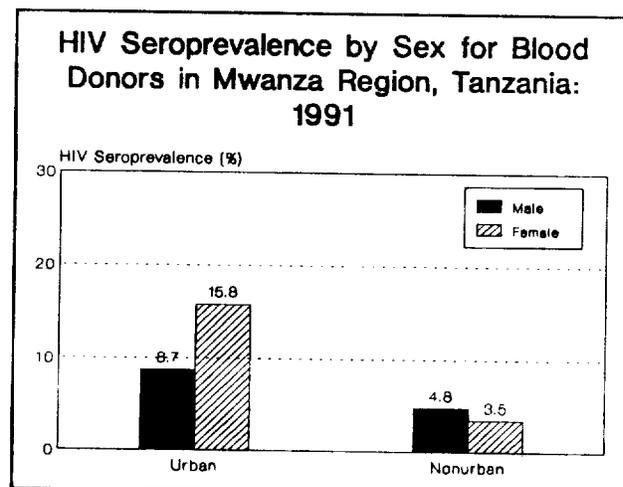
- Sentinel surveillance data collected in four centers from towns and rural areas of Unguja and Pemba Islands indicate the spread of HIV infection to Zanzibar. The HIV infection levels are under 1 percent for both pregnant women and male blood donors. However, among pregnant women HIV levels increased while among male blood donors there was a reported decrease.



- In the Mbeya region in southwest Tanzania, HIV seroprevalence among blood donors remained the same from 1988 to 1990. However, in 1992 HIV levels increased to 13.1 percent.

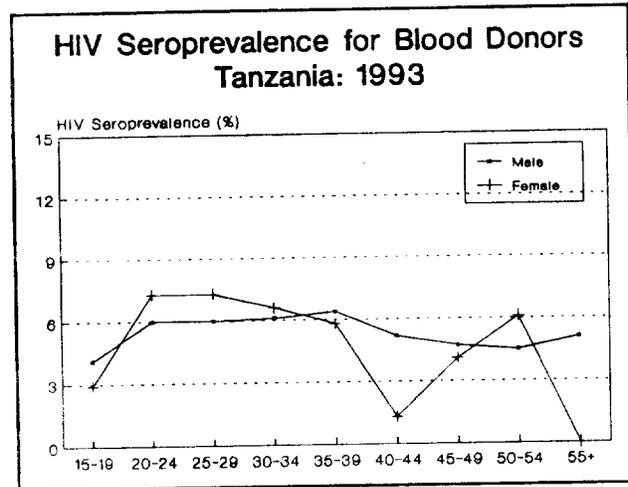


- In 1991, HIV seroprevalence among blood donors in the urban areas of Mwanza region was more than double the HIV seroprevalence in nonurban areas.



## Tanzania

- A national AIDS surveillance study of blood donors showed HIV levels of infection varying considerably by age. HIV infection among male blood donors was about 6 percent in their twenties and thirties, and slightly lower in older age groups. Female blood donors in their twenties had an HIV infection level of 8 percent. In most older age groups, the male infection rate among blood donors was higher than the female.



## Sources for Tanzania

- A0095 Ali, A. K., O. J. Khatib, W. Osei, et al., 1992, Sentinel Surveillance for HIV Infection: Five Years Period, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-12, Poster T.P.036.
- B0165 Borgdorff, M., L. Barongo, E. Van Jaarsveld, et al., 1993, Sentinel Surveillance for HIV-1 Infection: How Representative are Blood Donors, Outpatients with Fever, Anaemia, or Sexually ..., AIDS, vol. 7, no. 4, pp. 567-572.
- C0161 Chwaya, H. M., A. K. Ali, A. A. Othman, 1993, HIV Surveillance in Zanzibar: Blood Donors, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract Th.P.A.023.
- M0249 Mwakagile, D. S. M., A. B. M. Swai, K. J. Pallangyo, et al., 1992, Trend of Anogenital Warts among Patients Seen at a Referral Clinic for Sexually Transmitted Diseases in Dar es Salaam, Tanzania, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster W.P.190.
- M0256 Mhalu, F., A. Swai, D. Mwakagile, et al., 1992, Surveillance and Control of HIV-1 Transmission among Female Bar workers in Dar es Salaam 1986-1991, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.108.
- M0271 Mosha, F., H. Grosskurth, K. Senkoro, et al., 1993, The Impact of STD Intervention on HIV Infection: A Cohort Study on 12,000 People: Intermediate Results, IX International Conference on AIDS, Berlin, 6/6-11, Poster PO-C35-3383.
- M0302 Mwakagile, D., A. Swai, J. Kitange, et al., 1993, Epidemiology of STDs in Dar es Salaam, Tanzania, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Session M.O.P.058.
- M0307 Mwakagile, D., R. Mkuna, A. B. M. Swai, et al., 1993, Diagnosis of Sexually Transmitted Diseases (STDs) in Pregnant Women, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract M.O.P.027.
- R0090 Riedner, G., Y. Hemed, F. Minja, et al., 1993, The Use of Serologic Trends of HIV and Syphilis for the Evaluation of the Mbeya Regional ACP Tanzania 1986-1992, IX International Conference on AIDS, Berlin, 6/6-11, Poster PO-C29-3263.
- T0101 Tanzania Ministry of Health, 1991, National AIDS Control Programme, Surveillance Report No. 5, August, Epidemiology Unit, NACP.
- T0102 Tanzania Ministry of Health, 1992, National AIDS Control Programme, Surveillance Report No. 7., December, Epidemiology Unit, NACP.
- U0006 Urassa, E., F. S. Mhalu, E. Mbena, et al., 1990, Prevalence of HIV-1 Infection among Pregnant Women in Dar es Salaam, Tanzania, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.22.
- V0054 Van Cleeff, M. R. A., H. J. Chum, 1992, The Influence of HIV on the Epidemiology of Tuberculosis: An Analysis Made on Basis of a Pilot Study in Tanzania, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster PoC 4033.

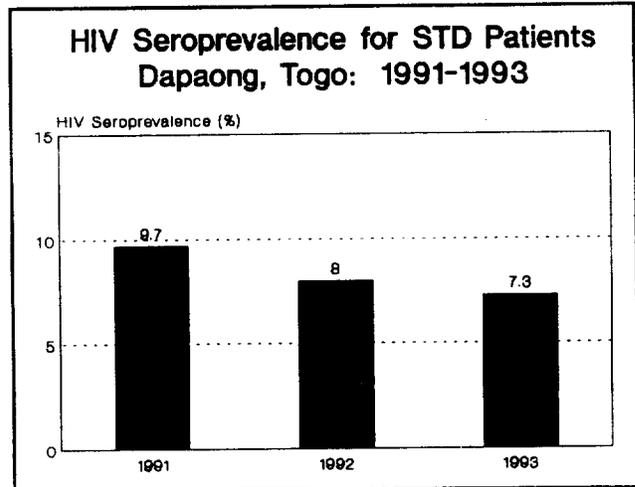
# Togo

## Demographic Indicators

Population (1,000s)	4,255	Growth Rate (%)	3.6
Infant Mortality Rate		Life Expectancy	
Both Sexes	89	Both Sexes	57
Male	96	Male	55
Female	82	Female	59
Crude Birth Rate	47	Crude Death Rate	11
Total Fertility Rate	6.9	Percent Urban	30
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 2/23/94		0.83	
Cumulative AIDS cases as of 2/23/94		3,472	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

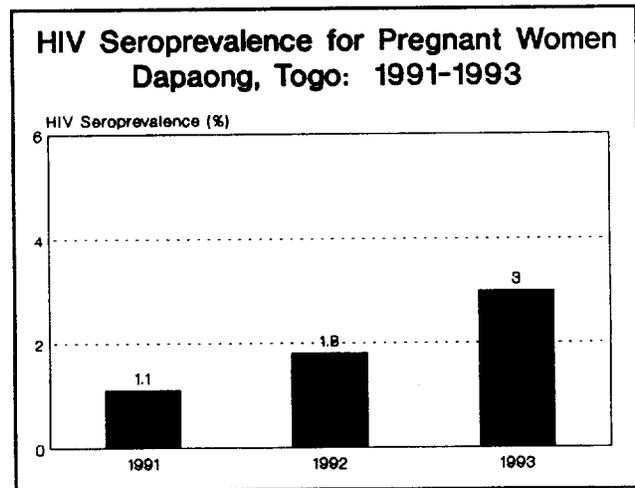
- In a rural area around Dapaong, the largest town in Northern Togo, sentinel surveillance reports HIV seroprevalence among STD patients falling from 9.7 percent in 1991 to 7.3 percent in 1993. The results are contradictory to the results among pregnant women from the same area shown in the following chart.



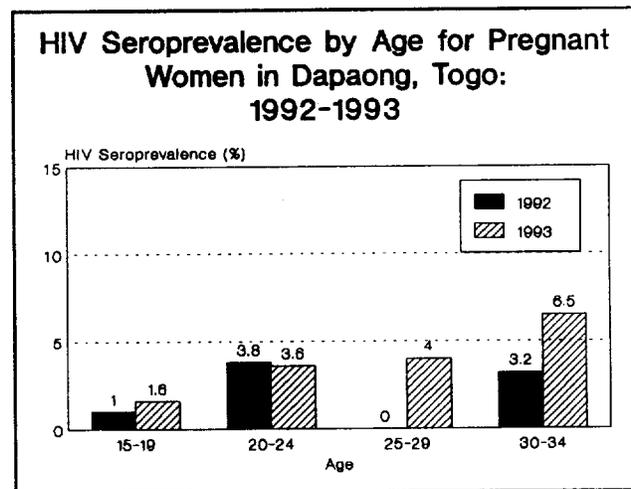
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, Dec. 1994.

## Togo

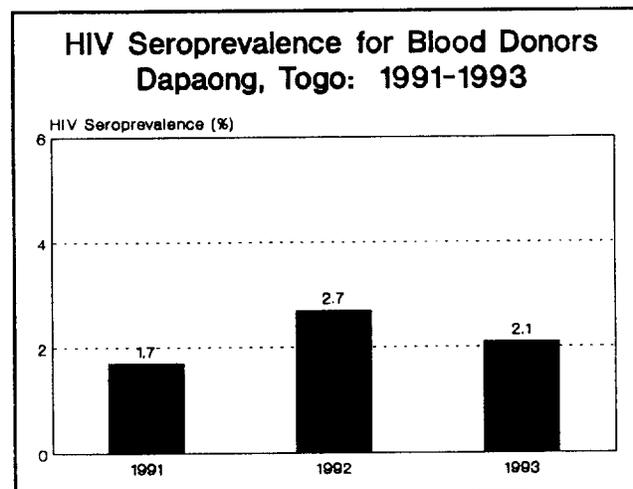
- Women attending an antenatal clinic in the rural area around Dapaong were screened for HIV infection. Researchers found a three-fold increase in the HIV infection level among pregnant women, from 1.1 percent in 1991 to 3.0 percent in 1993.



- According to the same study, HIV seroprevalence levels among pregnant women showed a peak in the age group 20-24 years old in 1992. In 1993, the highest seroprevalence level was found in the 30-34 year age group.



- HIV seroprevalence levels among blood donors in the same rural area around Dapaong fluctuated around 2 percent between 1991 and 1993.



## Sources for Togo

M0375 Mattke, P., M. Grunitzky-Bekele, E. Klee, 1994, Sentinel Surveillance among Pregnant Women in Northern Togo during 1992 and 1993, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Poster P.C.0051.

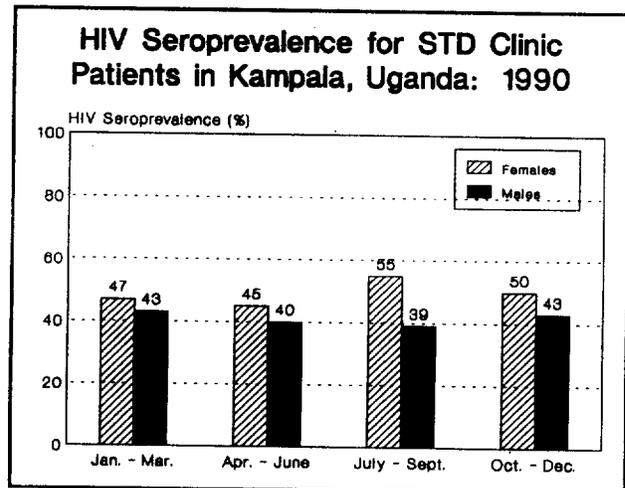
# Uganda

## Demographic Indicators

Population (1,000s)	19,573	Growth Rate (%)	2.2
Infant Mortality Rate (per 1,000)		Life Expectancy	
Both Sexes	112	Both Sexes	37
Male	120	Male	36
Female	105	Female	37
Crude Birth Rate (per 1,000)	48	Crude Death Rate (per 1,000)	24
Total Fertility Rate	6.7	Percent Urban	13
<b>Note: Above indicators are for 1995.</b>			
Cumulative AIDS rate (per 1,000) as of 12/31/94		2.38	
Cumulative AIDS cases as of 12/31/94		46,120	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

- The AIDS epidemic in Uganda is probably as severe as anywhere in the world. Those with sexually transmitted diseases continue to be at high risk for infection. The combination of high-risk behavior and increased susceptibility contributed to their high levels of infection. One study in Kampala shows females visiting STD clinics had levels of HIV infection higher than the males.

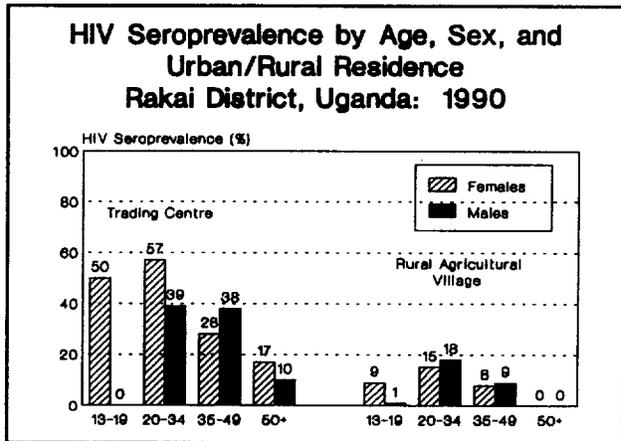


Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, July 1995.

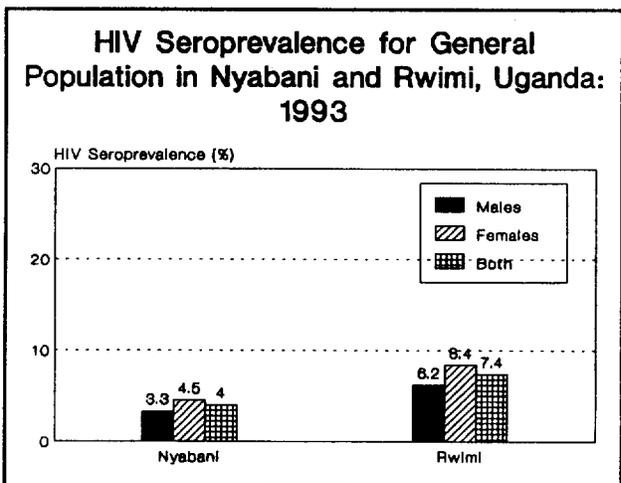
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## Uganda

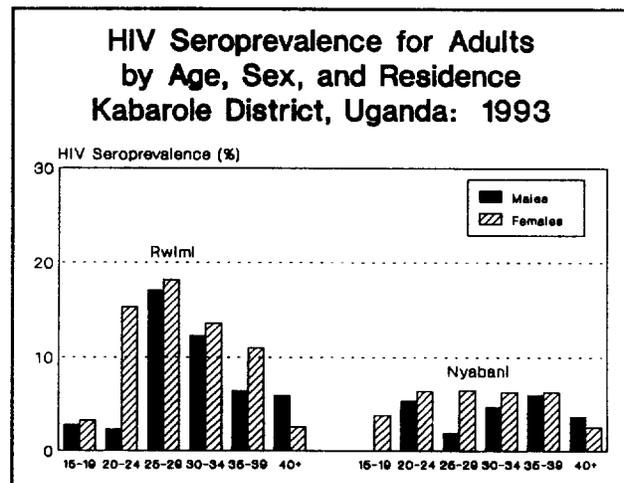
- Available studies tend to show a large differential in HIV infection levels between urban and rural areas. Data from a study of adults in the Rakai District in Uganda demonstrate both the typical age pattern of infection and the urban/rural differentiation in infection levels.



- Sentinel surveillance in Kabarole district, Western Uganda, found HIV seroprevalence levels less than 10 percent among the general population (5 years and older) in 1993. Data from the semiurban site, Rwimi, document higher HIV levels among both males and females than in the rural site, Nyabani. Infection levels among females were higher than among males in both Rwimi and Nyabani.

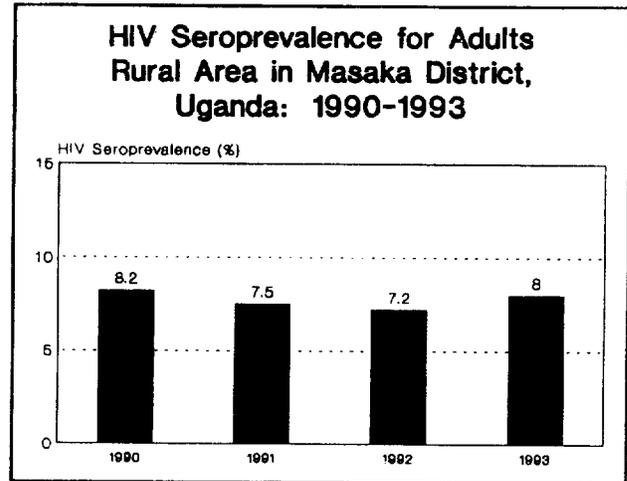


- The above sentinel surveillance in Kabarole district also presents HIV seroprevalence levels by age for adults only. Data from this study follow the same urban/rural pattern as in the Rakai District, namely higher HIV prevalence levels in the semiurban area, Rwimi, than in the rural area, Nyabani. These data show HIV infection levels to be higher among women than men in all age groups except 40 years of age and over in both areas.

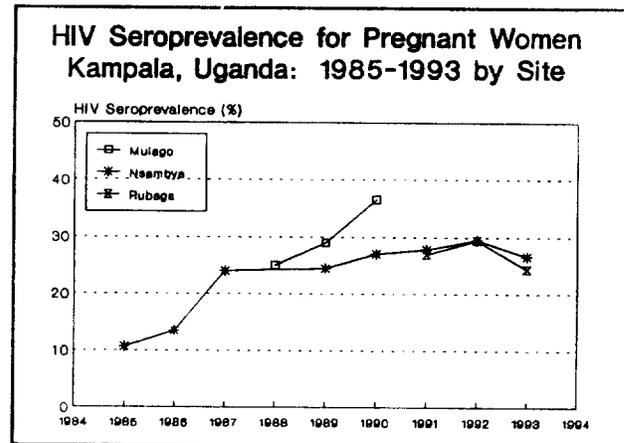


## Uganda

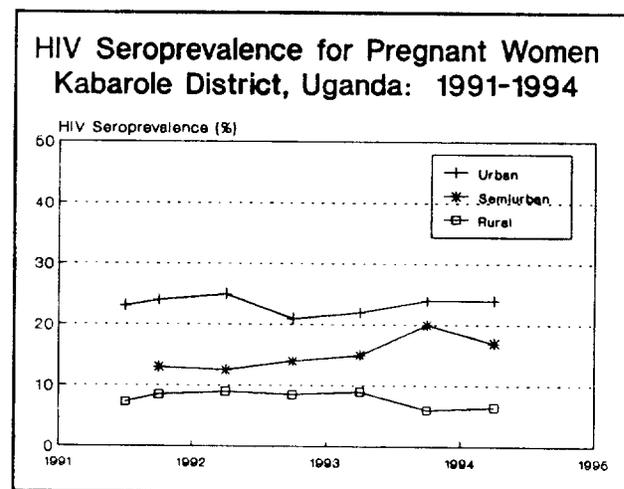
- HIV infection levels among adults in a rural sub-county of Masaka district, located in Southwest Uganda, hovered around 8 percent from 1990 to 1993.



- HIV infection levels among pregnant women were already high in the mid-1980s and have increased to about one-quarter. Data from Mulago hospital indicate HIV infection continued to increase up to 1990.

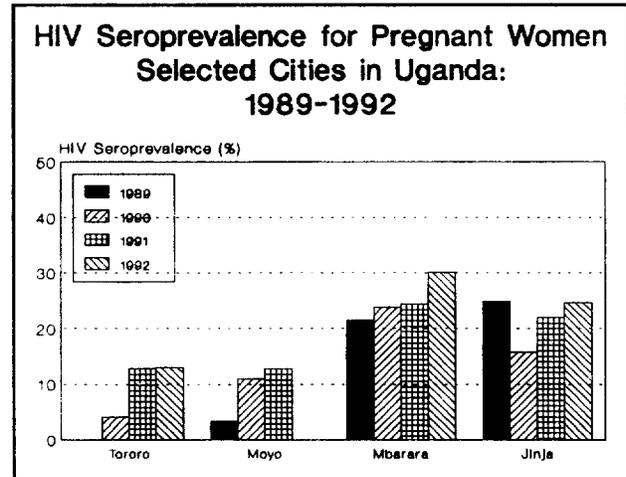


- HIV seroprevalence levels among pregnant women in Kabarole district follow the same patterns as for all adults with the HIV prevalence levels higher in urban areas than rural. Data from 1991 to 1994 show infection levels remaining relatively steady in all three areas.

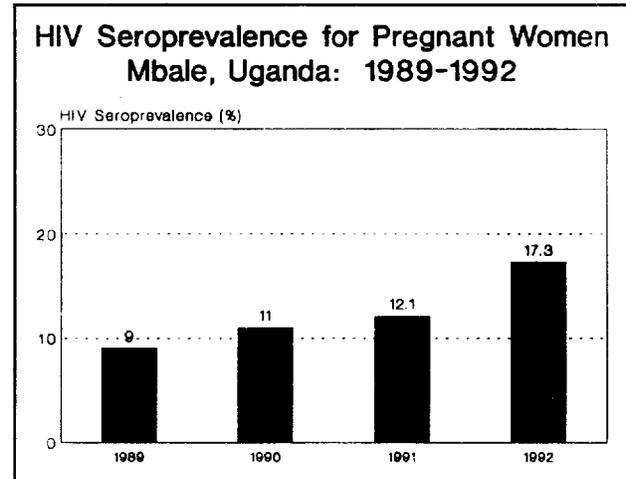


## Uganda

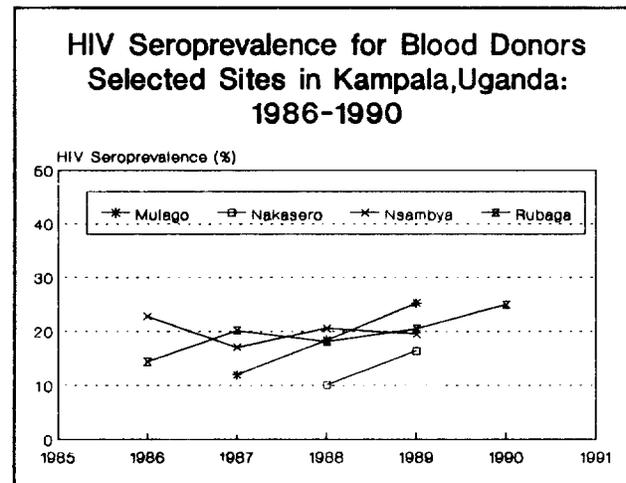
- In cities throughout Uganda, HIV infection levels among pregnant women increased over the 1989-92 time period. During 1992, Mbarara, capital of Western Region, had the highest HIV level among these sites, 30.2 percent.



- The trend in HIV infection among pregnant women in Mbale, capital of Eastern Region, a semirural area, is similar to those seen in cities. HIV infection levels increased slowly but steadily reaching 17 percent in 1992.

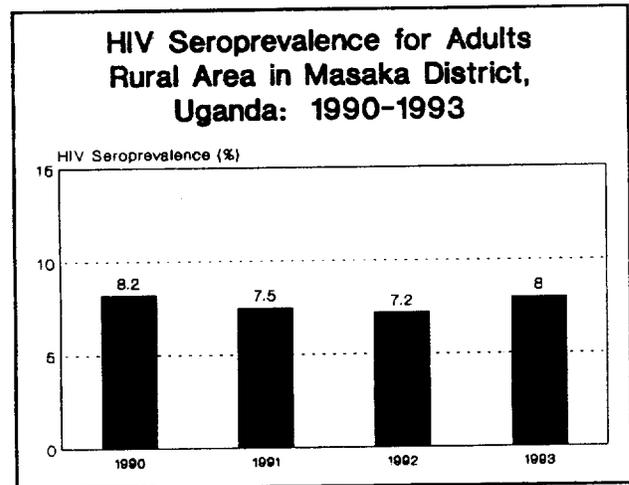


- In sentinel surveillance studies, HIV infection levels in blood donors vary among the different hospital sites. These sites reported an increase in HIV infection levels from 1986 to 1990. Nsambya is the exception, which reported a mixed trend.

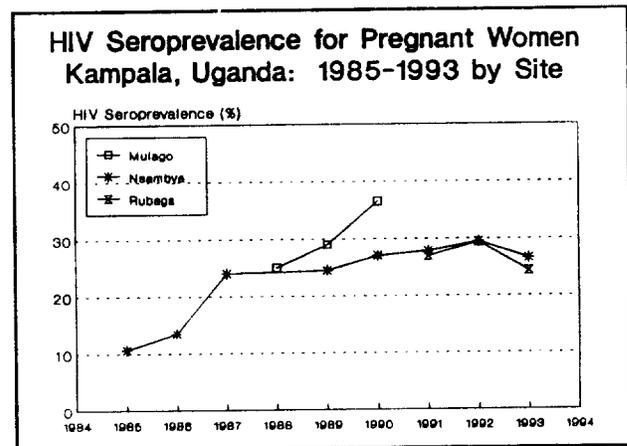


## Uganda

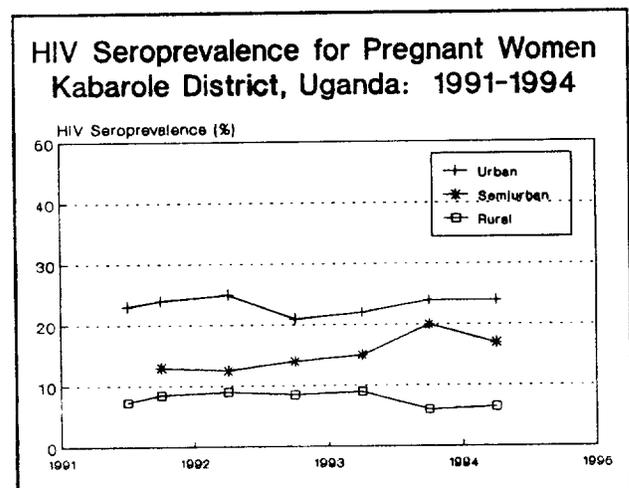
- HIV infection levels among adults in a rural sub-county of Masaka district, located in Southwest Uganda, hovered around 8 percent from 1990 to 1993.



- HIV infection levels among pregnant women were already high in the mid-1980s and have increased to about one-quarter. Data from Mulago hospital indicate HIV infection continued to increase up to 1990.

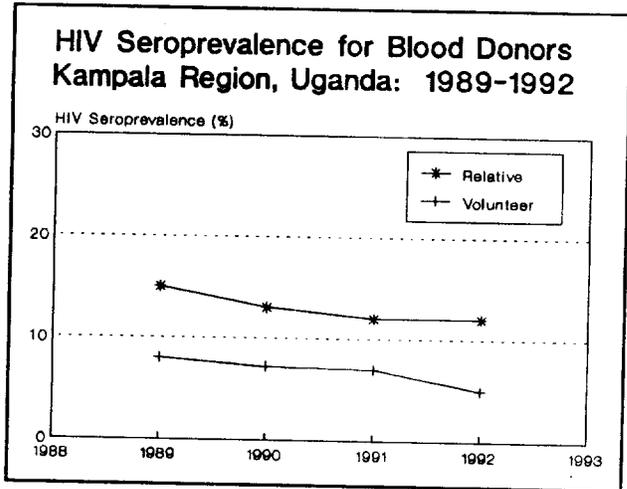


- HIV seroprevalence levels among pregnant women in Kabarole district follow the same patterns as for all adults with the HIV prevalence levels higher in urban areas than rural. Data from 1991 to 1994 show infection levels remaining relatively steady in all three areas.

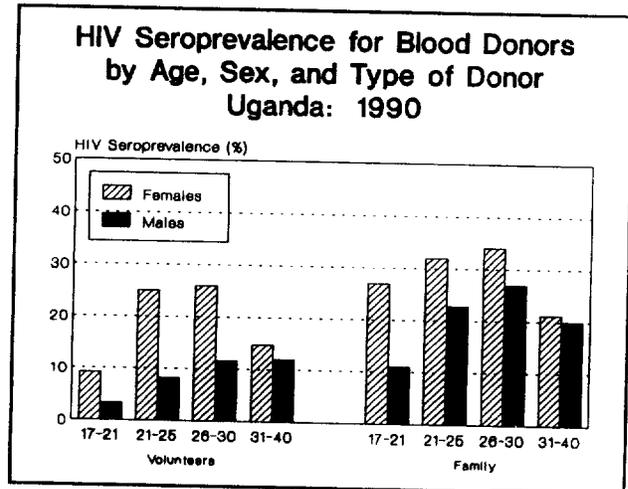


## Uganda

- HIV infection levels among blood donors in and around Kampala seem to be slowly decreasing. Family members of those requiring blood have higher rates of infection than volunteer blood donors.



- In a national study, family donors were once again found to have higher HIV infection levels than volunteer donors. Also, female blood donors had higher levels of HIV infection than males regardless of age and type of donor.



## Sources for Uganda

- A0086 Asimwe, G., G. Tembo, W. Naamara, et al., 1992, AIDS Surveillance Report: June 1992, Ministry of Health, AIDS Control Programme Surveillance Unit, Entebbe, Uganda, unpublished report.
- C0038 Carswell, J. W., 1987, HIV Infection in Healthy Persons in Uganda, AIDS, vol. 1, no. 4, pp. 223-227.
- H0066 Hellmann, N. S., S. Desmond-Hellman, P. S. J. Nsubuga, et al., 1991, Genital Trauma During Sex is a Risk Factor for HIV Infection in Uganda, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster M.C.3079.
- K0156 Kasirye, J., P. Senyonga, P. Kataaha, et al., 1993, HIV in Voluntary and Relative Blood Donors from 1989 to 1992 in Kampala, IX International Conference on AIDS, Berlin, 6/6-11, Poster PO-C21-3132.
- T0053 Twa-Twa, J., G. Tembo, G. Asimwe, et al., 1991, AIDS Surveillance Report (First and Second Quarter) for the Year 1991, Ministry of Health, AIDS Control Programme Surveillance Unit, Entebbe, Uganda, unpublished report.
- T0067 Tembo, G., J. Twa-Twa, G. Asimwe, et al., 1991, AIDS Surveillance Report: December 1991, Ministry of Health, AIDS Control Programme Surveillance Unit, Entebbe, Uganda, unpublished report.
- W0050 Watson-Williams, E. J., P. Kataaha, P. Ssenyonga, et al., 1991, Development of Uganda Blood Transfusion Service. Sept. 1988 - Jan. 1991, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster W.D.4089.
- W0056 Wawer, M. J., D. Serwadda, S. D. Musgrave, et al., 1991, Dynamics of Spread of HIV-I Infection in a Rural District of Uganda, British Medical Journal, vol. 303, no. 6813, pp. 1303-1306.

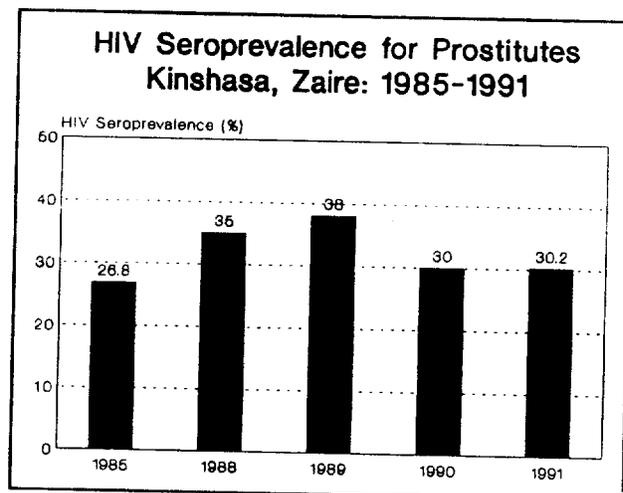
# Zaire

## Demographic Indicators

Population (1,000s)	42,684	Growth Rate (%)	3.2
Infant Mortality Rate		Life Expectancy	
Both Sexes	111	Both Sexes	47
Male	121	Male	46
Female	100	Female	49
Crude Birth Rate	48	Crude Death Rate	17
Total Fertility Rate	6.7	Percent Urban	29
<b>Note:</b> Above indicators are for 1994.			
Cumulative AIDS rate (per 1,000) as of 4/26/94		0.54	
Cumulative AIDS cases as of 4/26/94		22,747	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

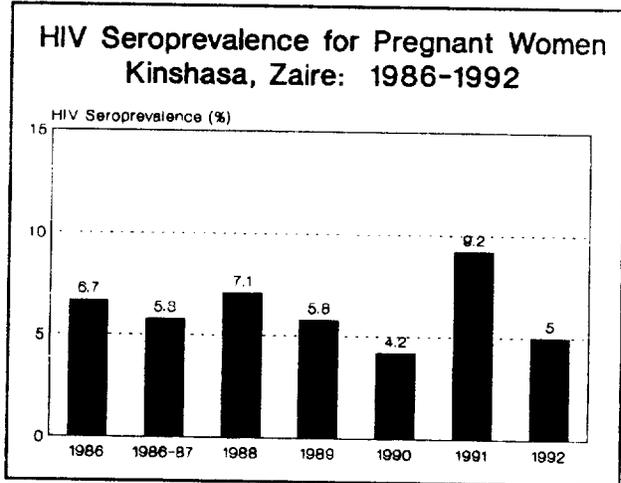
- In the capital city of Zaire, Kinshasa, HIV infection levels for prostitutes were reported to be high, 26.8 percent, as early as 1985 and continued to increase to 38 percent in 1989. In the early 1990's, HIV infection levels remained around 30 percent.



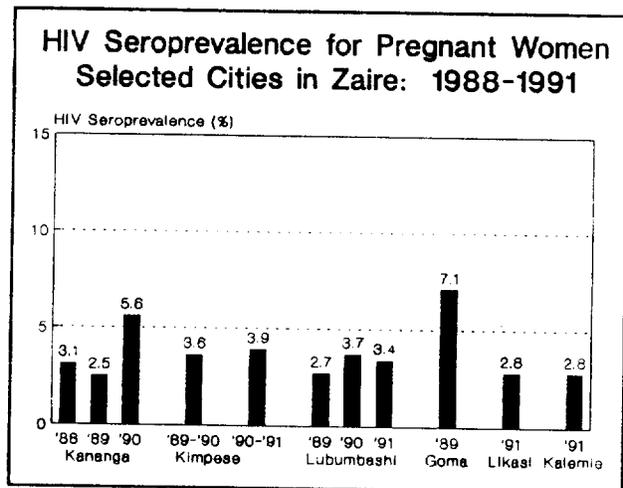
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, Dec. 1993.

## Zaire

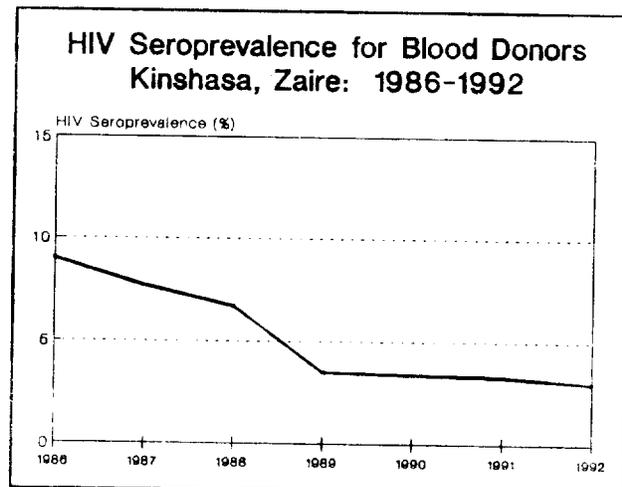
- Also, in Kinshasa, HIV infection levels in samples of pregnant women continued to hover around 7 percent.



- In Kananga, the capital city of the west Kasai Region, HIV infection levels reached 6 percent among pregnant women in 1990. Data for 1989 in Goma city found HIV levels to be 7.1 percent, in Likasi, Kalemie and Lubumbashi cities for 1991, around 3 percent, and in Kimpese city for 1990-91, 3.9 percent among pregnant women.

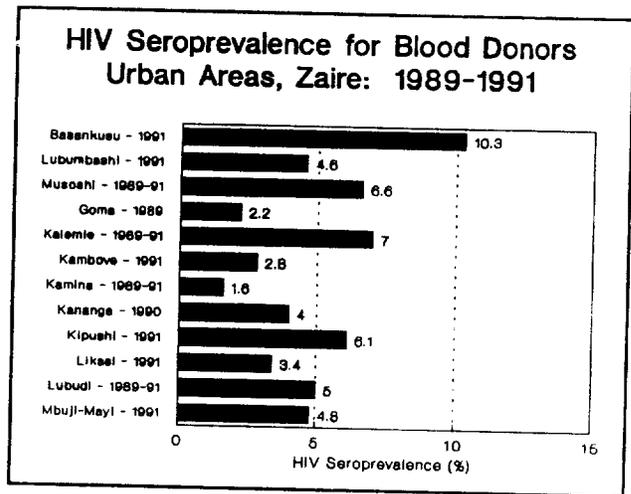


- In Kinshasa, HIV seropositive levels for blood donors underwent a substantial decline between 1986 and 1989. In 1986, the seroprevalence of donors was 9.0 percent, dropping to 3.6 percent in 1989, and continues to slowly decline. This may be due to donor screening programs and reduced donations from high risk individuals.

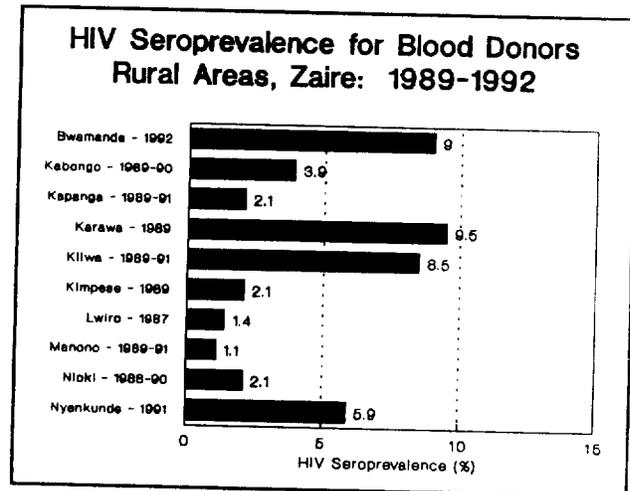


## Zaire

- Several studies among blood donors were carried out in various urban areas of Zaire. The range of HIV infection was 1.6 percent in Kamina to 10.3 percent in Basankusu.



- In the rural areas of Zaire, HIV infection levels among blood donors were in the same range as those for the urban areas. Studies in the rural areas reported HIV infection levels ranged from 1.1 percent to 9.0 percent.



## Sources for Zaire

- B0096 Brown, R., K. Kawunda, 1990, Sero-Surveillance of HIV Infection in Kananga, Zaire, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.35.
- B0106 Brown, R. C., 1990, Seroprevalence and Clinical Manifestations of HIV-1 Infection in Kananga, Zaire, AIDS, vol. 4, no. 12, pp. 1267-1269.
- G0092 Goubau, P., K. Kazadi, H. Carton, et al., 1991, HTLV-1 in Zaire and its Relationship to HIV, VI International Conference on AIDS in Africa, Dakar, Senegal, 12/16-19, Poster T.A.159.
- G0098 Green, S. D. R., J. K. L. Mokili, M. Nganzi, et al., 1992, Seroprevalence and Determinants of HIV-1 Infection in Pregnancy in Rural Zaire, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster PoC 4016.
- H0021 Hardy, I., S. R. Green, W. A. M. Cutting, et al., 1989, HIV-1 Seroprevalence in Rural Zaire, V International Conference on AIDS, Montreal, 6/4-9, Poster M.G.P. 18.
- K0097 Kashala, O., R. Marlink, M. Ilunga, et al., 1991, HIV-1, HTLV-1 and HTLV-II Infection among Leprosy Patients and Their Contacts in Zaire, VII International Conference on AIDS, Florence, Italy, 6/16-21, Abstract M.C.3311.
- M0057 Mann, J. M., N. Nzilambi, P. Piot, et al., 1988, HIV Infection and Associated Risk Factors in Female Prostitutes in Kinshasa, Zaire, AIDS, vol. 2, no. 4, pp. 249-254.
- M0147 Magazani, K., G. Laleman, et al., 1990, Sentinel Surveillance of HIV in the Shaba Province (Zaire), V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.7.
- M0252 Malulu, M., M. Nsuami, B. Matela, et al., 1992, Stabilization of HIV-1 Infection Prevalence in Women in Kinshasa: between 1986 and 1989, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Poster T.P.013.
- M0253 Maholo, F., N. Ilunga, M. Mbayo, et al., 1992, Evolution de la Seroprevalence de l'Infection VIH a Kinshasa, Zaire - Donnees de la Banque de Sang de l'Hopital Mama Yemo, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Abstract T.P.153.
- M0262 Magazani, K., G. Laleman, J. H. Perriens, et al., 1993, Low and Stable HIV Seroprevalence in Pregnant Women in Shaba Province, Zaire, Journal of Acquired Immune Deficiency Syndromes, vol. 6, no. 4, pp. 419-423.
- M0265 Minister of Public Health, 1993, Serosurveillance Report of HIV Infection, Republic of Zaire, National Control Programme Against AIDS, Central Coordination Bureau, BCC/SIDA, Official Report.
- N0027 N'Galy, B., R. Ryder, H. Francis, et al., 1988, HIV Prevalence in Zaire, 1984 to 1988, IV International Conference on AIDS, Stockholm, 6/13-14, Poster 5632.
- P0089 Pepin, J., L. Ethier, C. Kazadi, et al., 1992, The Impact of Human Immunodeficiency Virus Infection on the Epidemiology and Treatment of Trypanosoma Brucei Gambiense ..., American Journal of Tropical Medicine and Hygiene, vol. 47, no. 2, pp. 133-140.
- R0021 Ryder, R. W., W. Nsa, S. E. Hassig, et al., 1989, Perinatal Transmission of the Human Immunodeficiency Virus Type 1 to Infants of Seropositive Women in Zaire, New England Journal Medicine, vol. 320, no. 25, pp. 1637-1642.
- W0070 Welo, K., M. Almaviva, W. Maganga, et al., 1991, Seroprevalence du VIH 1 au Zaire, La Presse Medicale, vol. 20, no. 35, pp. 1717-1719.

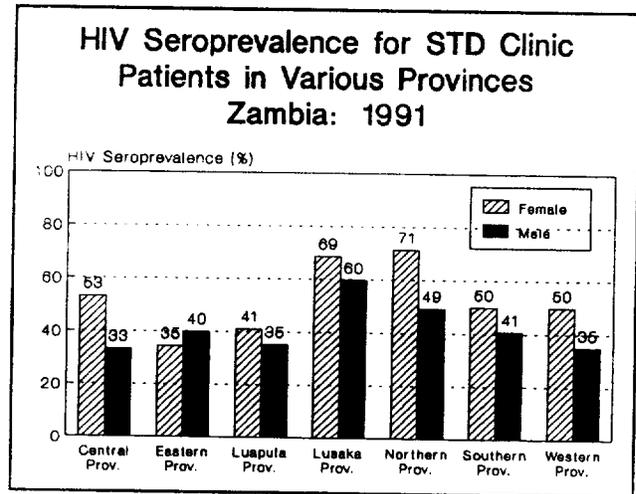
# Zambia

## Demographic Indicators

Population (1,000s)	9,446	Growth Rate (%)	2.7
Infant Mortality Rate (per 1,000)		Life Expectancy	
Both Sexes	86	Both Sexes	43
Male	90	Male	43
Female	82	Female	43
Crude Birth Rate (per 1,000)	45	Crude Death Rate (per 1,000)	18
Total Fertility Rate	6.6	Percent Urban	43
<b>Note:</b> Above indicators are for 1995.			
Cumulative AIDS rate (per 1,000) as of 10/20/93		3.30	
Cumulative AIDS cases as of 10/20/93		29,734	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

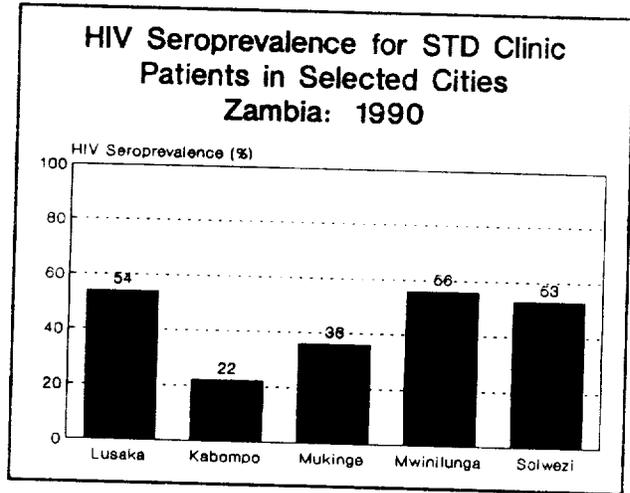
- Results from studies in Zambia show high levels of HIV infection among both male and female STD clinic attendees in all regions of the country. By province, no fewer than 33 percent and as many as 71 percent of STD clinic patients were found to be HIV seropositive in a 1991 study.



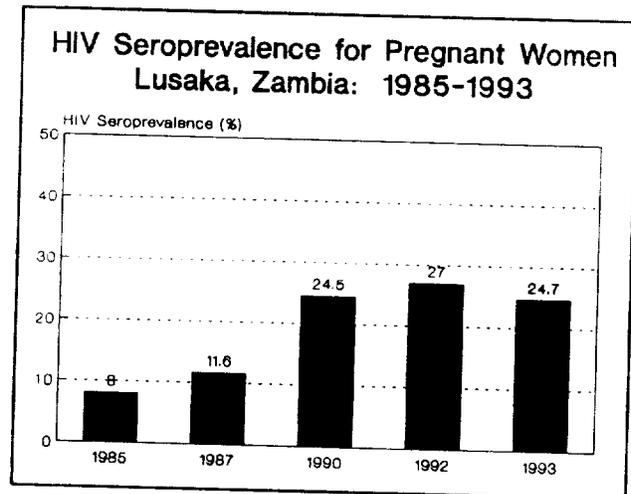
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, July 1995.

## Zambia

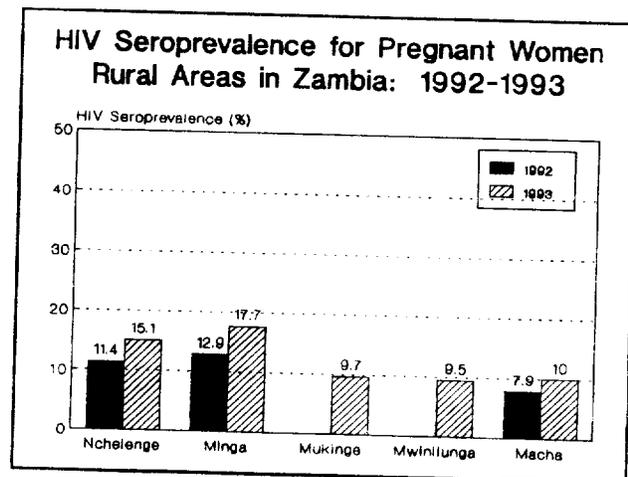
- In Lusaka, the capital city, the HIV infection level among STD clinic patients reached a high of 54 percent. Data from another study in the Northern area of Zambia showed prevalence levels for Solwezi, a semiurban area, at 53 percent, and rural areas ranging from 22 percent to 56 percent.



- In Lusaka, the level of infection in pregnant women increased from 8 percent in 1985 to nearly 25 percent in 1990. Since 1990, the seroprevalence level has remained around 25 percent.

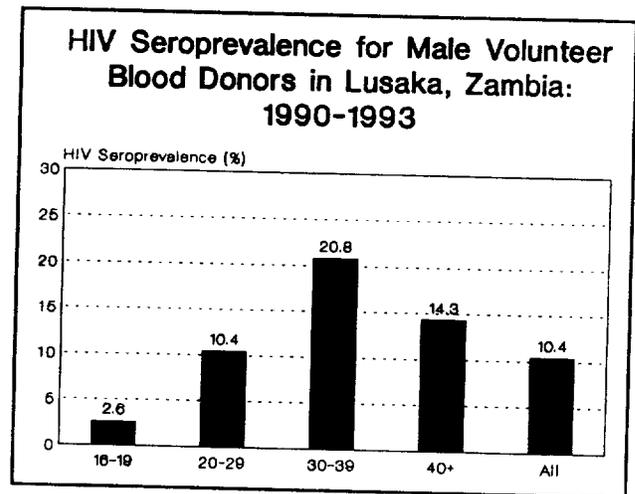


- Sentinel surveillance in rural sites of Zambia show a variety of HIV infection levels among pregnant women. Data for 1993 show levels ranging between 9 and 18 percent.



## Zambia

- A study conducted from 1990-1993 among male voluntary blood donors at the University Teaching Hospital Lusaka Blood Bank found males aged 30 to 39 to have the highest HIV rate. The overall level of HIV infection was 10.4 percent.



Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, July 1995.

## Sources for Zambia

- H0028 Hira, S., G. Bhat, J. Kamanga, et al., 1989, Perinatal Transmission of HIV-1 in Lusaka, Zambia, *British Medical Journal*, vol. 299, no. 6718, pp. 1250-1252.
- H0068 Hira, S., J. Kamanga, G. Tembo, et al., 1991, Control Strategies in STD/HIV Clinic in Zambia: a Demonstration Project, VII International Conference on AIDS, Florence, Italy, 6/16-21, Poster W.C.3082.
- J0001 Johns Hopkins University, 1986, AIDS -- A Public Health Crisis, Population Information Program, Population Reports, *Issues in World Health*, July-Aug., Series L, no. 6, pp. 194-228.
- K0096 Kanyama, I. D. A., 1991, Sentinel Surveillance of HIV Infection in Northern Zambia, VII International Conference on AIDS, Florence, Italy, 6/16-21, Abstract M.C.3301.
- M0317 Muyinda, G., L. Chipuka, 1993, Does RPR Testing Increase Safety of Blood Transfusion?, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Poster Th.P.A.026.
- T0040 Tembo, G., E. Van Praag, H. Mutambo, et al., 1990, Sentinel Surveillance of HIV Infection in Zambia, V International Conference: AIDS in Africa, Kinshasa, Zaire, Oct. 10-12, Poster T.P.E.28.

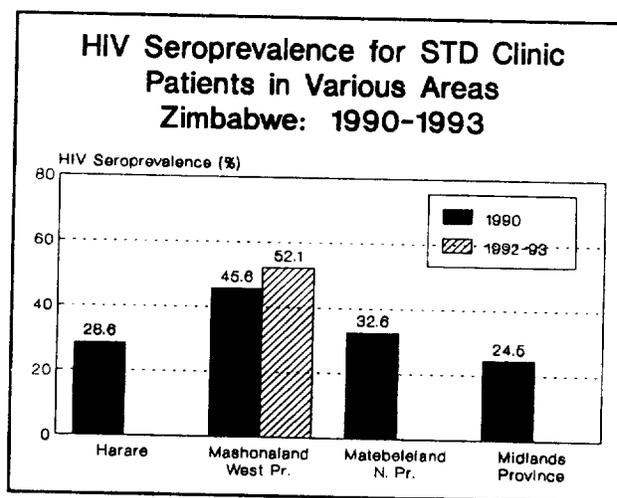
# Zimbabwe

## Demographic Indicators

Population (1,000s)	11,140	Growth Rate (%)	1.8
Infant Mortality Rate (per 1,000)		Life Expectancy	
Both Sexes	73	Both Sexes	41
Male	78	Male	40
Female	67	Female	43
Crude Birth Rate (per 1,000)	36	Crude Death Rate (per 1,000)	19
Total Fertility Rate	4.9	Percent Urban	32
<b>Note:</b> Above indicators are for 1995.			
Cumulative AIDS rate (per 1,000) as of 11/29/94		2.99	
Cumulative AIDS cases as of 11/29/94		33,063	
Sources: U.S. Bureau of the Census, United Nations, World Health Organization.			

## Epidemiological Data

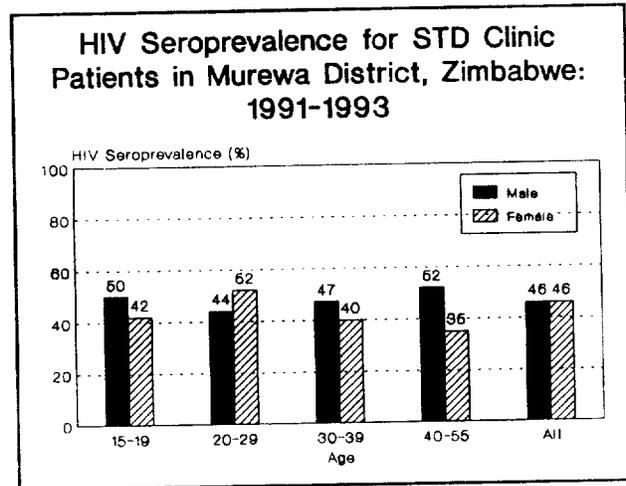
- In a 1990 sentinel survey conducted among STD patients, the HIV level in Matebeleland North Province was 32.6 percent, and in Midlands Province, 24.5 percent. In Mashonaland West Province, levels of HIV infection increased from 45.8 percent in 1990 to 52.1 percent in 1992-93. In Harare, the capital city, the Herald (a local newspaper) reported that among STD patients, 28.6 percent of unskilled workers were HIV positive.



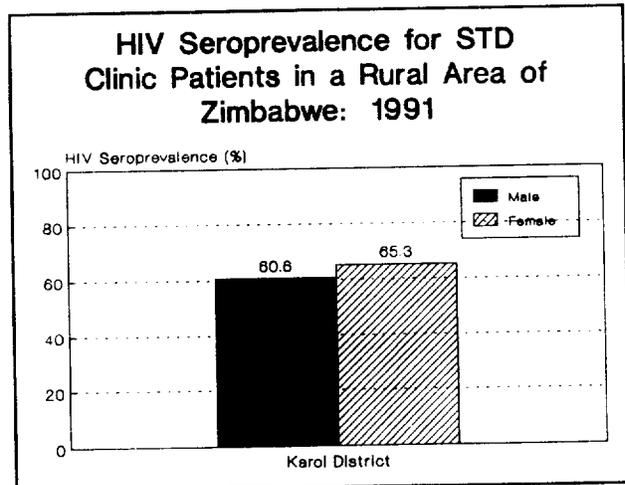
Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, July 1995.

## Zimbabwe

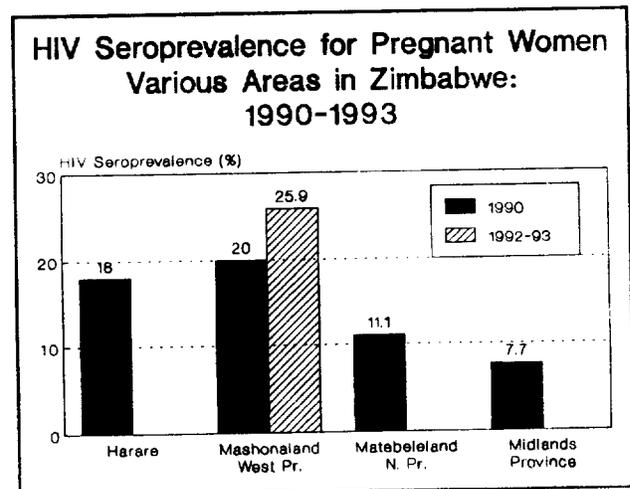
- A study carried out from March 1991 to March 1993 at Murewa District Hospital reported HIV seroprevalence levels of 46 percent among both male and female STD clinic patients. HIV prevalence peaks among females 20 to 29 years of age and males 40 to 55 years of age.



- Zimbabwe's well-developed roads facilitate the spread of HIV infection to rural areas. A 1991 study of STD patients in Karoi District reported high levels of infection among males and females.

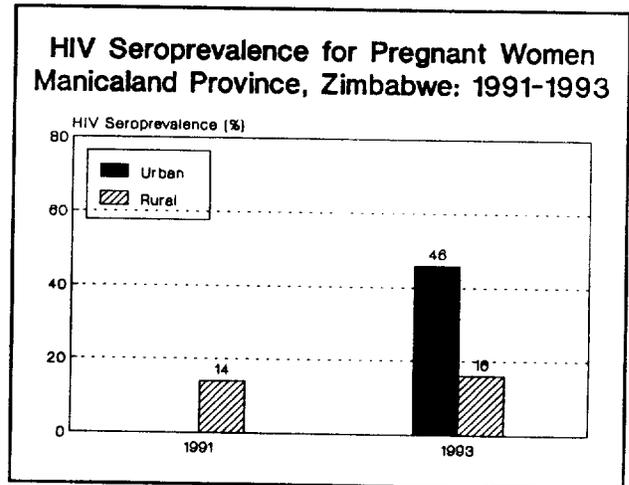


- A 1990 study conducted at Harare Maternity Hospital and two Municipal clinics reported that 18 percent of expectant mothers tested positive for the HIV virus. Another study conducted among the various provinces in 1990 found the highest levels of HIV seroprevalence, 20 percent, among pregnant women in Mashonaland West Province where a 1992-93 study found the infection level had risen to 25.9 percent.

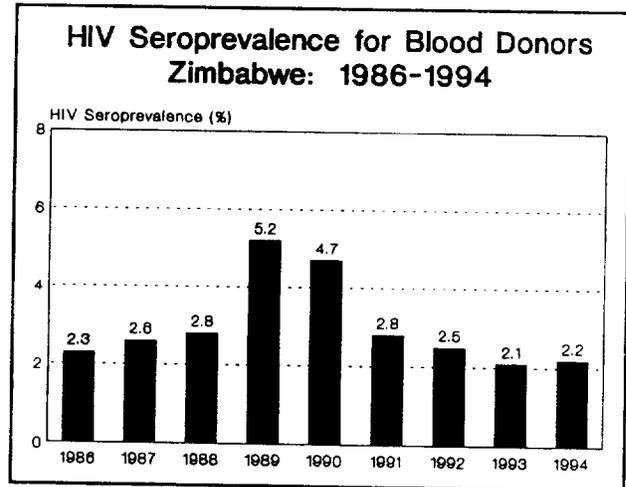


## Zimbabwe

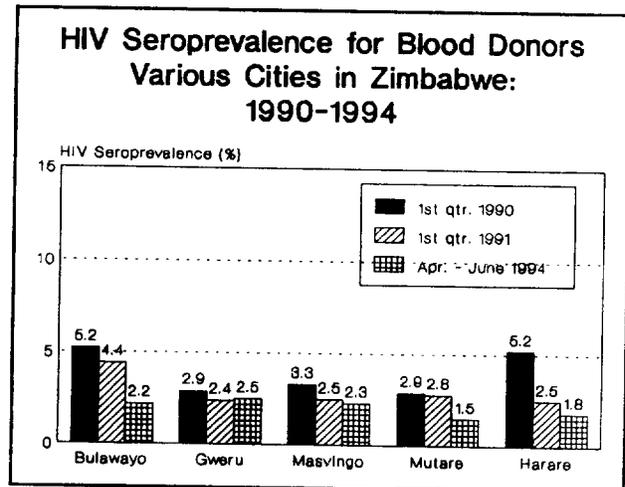
- During 1993, a study from Manicaland Province reported higher HIV infection levels among pregnant women tested in urban areas than in rural areas. Data from the urban area noted almost 50 percent of the sample of pregnant women positive for HIV, while prevalence in the rural areas was much lower, around 15 percent.



- Very few studies of HIV infection in the general population of Zimbabwe have been published. One study from the National Blood Transfusion Service reported steadily increasing HIV infection among blood donors from 1986 to 1989. After 1989, the HIV infection rate declined among blood donors to 2.2 percent for the period January-June 1994.



- Studies of blood donors in various urban centers were conducted in 1990, 1991, and 1994. All of the urban centers reported a slight decline in HIV infection levels from 1990 to 1994, which may reflect blood donor screening programs.



Source: International Programs Center, Population Division, U.S. Bureau of the Census, HIV/AIDS Surveillance Data Base, July 1995.

## Sources for Zimbabwe

- C0162 Chitsva, J., 1993, HIV Surveillance in Blood Donor Screening, VIII International Conference on AIDS in Africa, Marrakech, Morocco, 12/12-16, Abstract Th.P.A.036.
- H0061 Herald, The, 1991, One in Six Expectant Mothers HIV Positive, The Herald Newspaper, Thursday, March 21, p. 1.
- J0016 Jackson, H., 1993, AIDS Update in Zimbabwe: AIDS Cases, ZAINET AIDS News, vol. 1, no. 3, pp. 10-13.
- M0219 Mason, P. R., L. Gwanzura, F. Le Bacq, 1992, Correlation between Positive Syphilis Serology and HIV Infection in Zimbabwe, VIII International Conference on AIDS, Amsterdam, 7/19-24, Abstract PoC 4303.
- M0241 Mahomed, K., J. Kasule, D. Makuyana, et al., 1991, Seroprevalence of HIV Infection amongst Antenatal Women in Greater Harare, Zimbabwe, Central African Journal of Medicine, vol. 37, no. 10, pp. 322-325.
- W0002 Wellcome Foundation, 1987, AIDS and Its Management, The Wellcome Foundation Limited Berkhamsted Herts England, B.5676/09.87/5.0/R, pp. 4-5.
- W0013 World Health Organization, 1988, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 2, no. 6, pp. 487-490.
- W0033 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 9, pp. 619-620.
- W0034 World Health Organization, 1989, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 3, no. 12, pp. 863-864.
- W0040 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 9, pp. 937-941.
- W0041 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 3, pp. 277-278.
- W0042 World Health Organization, 1990, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 4, no. 6, pp. 605-606.
- W0046 World Health Organization, 1991, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 5, no. 3, pp. 349-350.
- W0052 World Health Organization, 1991, World Health Organization Global AIDS Statistics, AIDS Care, vol. 3, no. 3, pp. 349-352.
- W0054 World Health Organization, 1991, World Health Organization Global AIDS Statistics, AIDS Care, vol. 3, no. 4, pp. 481-484.
- W0058 World Health Organization, 1992, World Health Organization Global AIDS Statistics, AIDS Care, vol. 4, no. 2, pp. 231-234.
- W0061 Whiteside, A., 1991, HIV Infection and AIDS in Zimbabwe: An Assessment, Southern Africa Foundation for Economic Research, Economic Research Unit, University of Natal, pp. 1-50.
- W0067 World Health Organization, 1992, World Health Organization Global AIDS Statistics, AIDS Care, vol. 4, no. 3, pp. 365-368.
- W0079 World Health Organization, 1993, Statistics from the WHO and the Centers for Disease Control, AIDS, vol. 7, no. 9, pp. 1287-1291.
- W0087 World Health Organization, 1994, The Current Global Situation of the HIV/AIDS Pandemic, Global Programme on AIDS, January 4, document.