

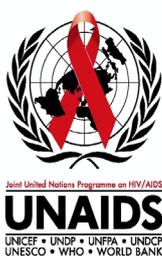
Uganda

Epidemiological Fact Sheet

on HIV/AIDS
and sexually
transmitted
infections



2000 Update

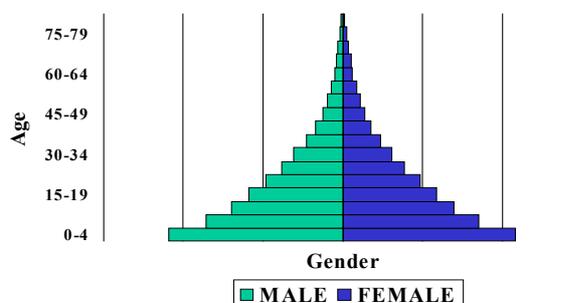


**World Health
Organization**

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Country Information

Population pyramid, 1999



UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance

Global Surveillance of HIV/AIDS and sexually transmitted infections (STIs) is a joint effort of WHO and UNAIDS. The UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance, initiated in November 1996, guides respective activities. The primary objective of the working group is to strengthen national, regional and global structures and networks for improved monitoring and surveillance of HIV/AIDS and STIs. For this purpose, the working group collaborates closely with national AIDS programmes and a number of national and international experts and institutions. The goal of this collaboration is to compile the best information available and to improve the quality of data needed for informed decision-making and planning at national, regional and global levels. The Epidemiological Fact Sheets are one of the products of this close and fruitful collaboration across the globe.

The working group and its partners have established a framework standardizing the collection of data deemed important for a thorough understanding of the current status and trends of the epidemic, as well as patterns of risk and vulnerability in the population. Within this framework, the Fact Sheets collate the most recent country-specific data on HIV/AIDS prevalence and incidence, together with information on behaviours (e.g. casual sex and condom use) which can spur or stem the transmission of HIV.

Not unexpectedly, information on all of the agreed-upon indicators was not available for many countries in 1999. However, these updated Fact Sheets do contain a wealth of information which allows identification of strengths in currently existing programmes and comparisons between countries and regions. The Fact Sheets may also be instrumental in identifying potential partners when planning and implementing improved surveillance systems.

The fact sheets can be only as good as information made available to the UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance. Therefore, the working group would like to encourage all programme managers as well as national and international experts to communicate additional information to the working group whenever such information becomes available. The working group also welcomes any suggestions for additional indicators or information proven to be useful in national or international decision-making and planning.

Indicators	Year	Estimate	Source
Total Population (thousands)	1999	21,143	UNPOP
Population Aged 15-49 (thousands)	1999	9,206	UNPOP
Annual Population Growth	1990-1998	2.8	UNPOP
% of Population Urbanized	1998	13	UNPOP
Average Annual Growth Rate of Urban Population	1990-1998	5.0	UNPOP
GNP Per Capita (US\$)	1997	330	World Bank
GNP Per Capita Average Annual Growth Rate	1996-1997	3.0	World Bank
Human Development Index Rank (HDI)	1999	158	UNDP
% Population Economic Active			
Unemployment Rate			
Total Adult Literacy Rate	1995	62	UNESCO
Adult Male Literacy Rate	1995	74	UNESCO
Adult Female Literacy Rate	1995	50	UNESCO
Male Secondary School Enrollment Ratio	1996	14.8	UNESCO
Female Secondary School Enrollment Ratio	1996	8.7	UNESCO
Crude Birth Rate (births per 1,000 pop.)	1999	51	UNPOP
Crude Death Rate (deaths per 1,000 pop.)	1999	21	UNPOP
Maternal Mortality Rate (per 100,000 live births)	1990	1,200	WHO
Life Expectancy at Birth	1998	40	UNPOP
Total Fertility Rate	1998	7.1	UNPOP
Infant Mortality Rate (per 1,000 live births)	1999	103	UNICEF/UNPOP

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<http://www.unaids.org>

Estimated number of people living with HIV/AIDS

In 1999 and during the first quarter of 2000, UNAIDS and WHO worked closely with national governments and research institutions to recalculate current estimates on people living with HIV/AIDS. These calculations are based on the previously published estimates for 1997 and recent trends in HIV/AIDS surveillance in various populations. A methodology developed in collaboration with an international group of experts was used to calculate the new estimates on prevalence and incidence of HIV and AIDS deaths, as well as the number of children infected through mother-to-child transmission of HIV. Different approaches were used to estimate HIV prevalence in countries with low-level, concentrated or generalized epidemics. The current estimates do not claim to be an exact count of infections. Rather, they use a methodology that has thus far proved accurate in producing estimates that give a good indication of the magnitude of the epidemic in individual countries. However, these estimates are constantly being revised as countries improve their surveillance systems and collect more information.

Adults in this report are defined as women and men aged 15 to 49. This age range covers people in their most sexually active years. While the risk of HIV infection obviously continues beyond the age of 50, the vast majority of those who engage in substantial risk behaviours are likely to be infected by this age. The 15 to 49 age range was used as the denominator in calculating adult HIV prevalence.

□ Estimated number of adults and children living with HIV/AIDS, end of 1999

These estimates include all people with HIV infection, whether or not they have developed symptoms of AIDS, alive at the end of 1999

Adults and children	820000		
Adults (15-49)	770000	Adult rate (%)	8.30
Women (15-49)	420000		
Children (0-14)	53000		

□ Estimated number of deaths due to AIDS

Estimated number of adults and children who died of AIDS during 1999:

Deaths in 1999	110000
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□ Estimated number of orphans

Estimated number of children who have lost their mother or both parents to AIDS (while they were under the age of 15) since the beginning of the epidemic:

Cumulative orphans	1700000
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Estimated number of children who have lost their mother or both parents to AIDS and who were alive and under age 15 at the end of 1999:

Current living orphans	997426
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Assessment of epidemiological situation – Uganda

Uganda has been sited as the success story in Sub-Saharan Africa in its efforts to reduce HIV prevalence levels.

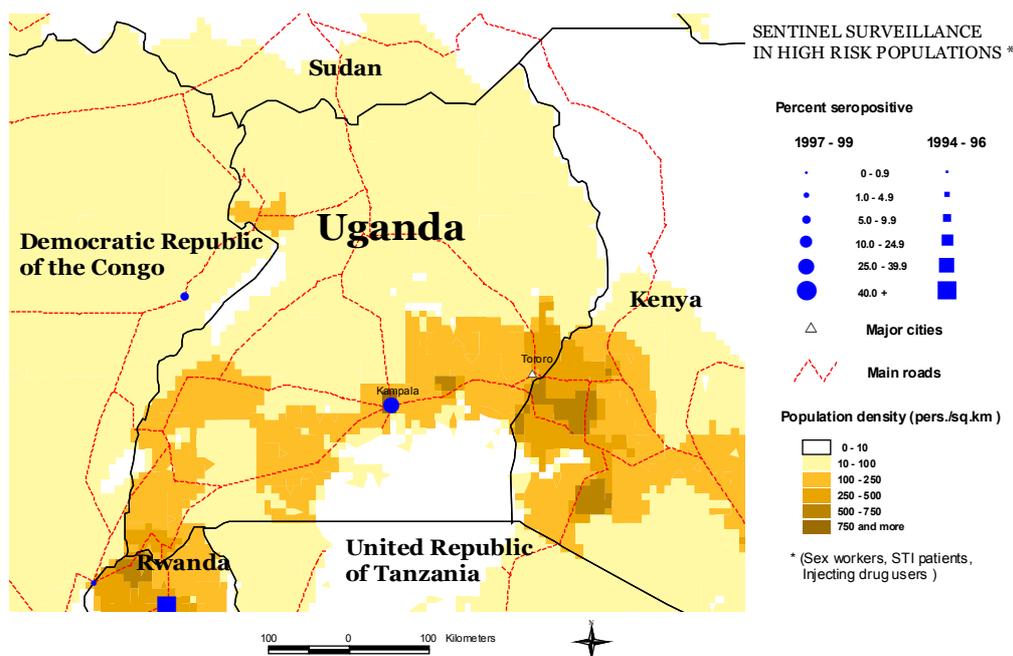
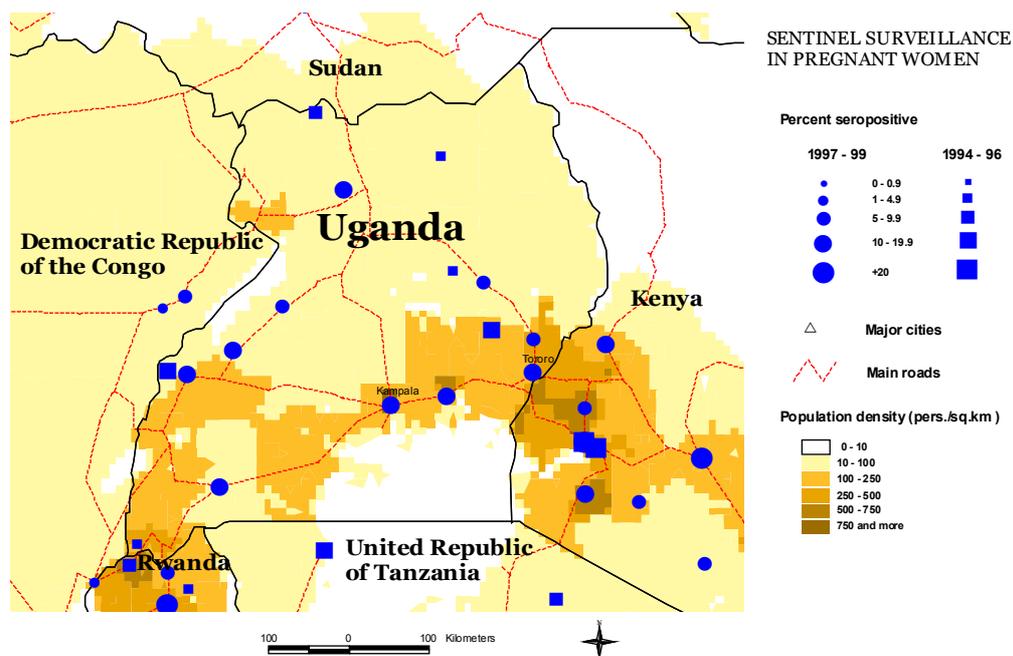
Information on HIV prevalence among antenatal clinic attendees has been available from Uganda since the mid-1980s. In Kampala, the major urban area, HIV prevalence among antenatal clinic attendees tested increased from 11 percent in 1985 to 31 percent in 1990. Beginning in 1993, however, HIV prevalence among antenatal clinic attendees began to decline in Kampala reaching 14 percent in 1998. HIV prevalence by age has been available since 1990. In 1991, 28 percent of antenatal clinic women tested who were less than 20 years of age were HIV positive. This rate has since declined to 6 percent in 1998. Sentinel surveillance of antenatal clinic attendees outside of Kampala began in 1989. Median HIV prevalence of antenatal clinic attendees outside of Kampala has declined from 13 percent of antenatal clinic women attendees tested in 1992 to 8 percent in 1998. HIV prevalence information by age is available from one or two sites over the years since 1990. In 1990, 21 percent of antenatal clinic women less than 20 years of age tested outside of Kampala were HIV positive. This rate declined to 8 percent of antenatal clinic attendees less than 20 years of age tested in 1998.

In 1989, 42 percent of male STD clinic patients tested in Kampala were HIV positive. By 1992, HIV prevalence had increased to 46 percent. In 1998, 30 percent of male STD clinic patients tested were HIV positive. In 1989, 62 percent of female STD clinic patients tested in Kampala were HIV positive, by 1997, HIV prevalence among female STD clinic patients tested had declined to 37 percent.

Among military recruits however, HIV prevalence has increased. Among military recruits tested in Kampala, HIV prevalence increased from 16 percent in 1992 to 27 percent in 1996.

Maps of HIV sentinel sites

Mapping the geographical distribution of HIV sentinel sites for different population groups may assist interpreting both the national coverage of the HIV surveillance system and explaining differences in levels and trends of prevalence. The UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance, in collaboration with the UNICEF/WHO HealthMap Programme, has produced maps showing the location and HIV prevalence of HIV sentinel sites in relation to population density, major urban areas and communication routes. Maps illustrate separately the most recent results from HIV sentinel surveillance in pregnant women and in sub-populations at higher risk of HIV infection.



The boundaries and names shown and the designations used on these maps do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement. WHO 2000, all rights reserved.

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Reported AIDS cases

AIDS cases by year of reporting

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total	Unkn
0	0	0	0	17	11	440	442	2914	3425	6090	6616	10235	6362	4641	4927	2192	3032	1962	1406		54712	0

Date of last report: 31/Mar/99

Aids cases by age and sex

Following WHO and UNAIDS recommendations, AIDS case reporting is carried out in most countries. Data from individual AIDS cases is aggregated at the national level and sent to WHO. However, case reports come from surveillance systems of varying quality. Reporting rates vary substantially from country to country and low reporting rates are common in developing countries due to weaknesses in the health care and epidemiological systems. In addition, countries use different AIDS case definitions. A main disadvantage of AIDS case reporting is that it only provides information on transmission patterns and levels of infection approximately 5-10 years in the past, limiting its usefulness for monitoring recent HIV infections.

Despite these caveats, AIDS case reporting remains an important advocacy tool and is useful in estimating the burden of HIV-related morbidity as well as for short-term planning of health care services. AIDS case reports also provide information on the demographic and geographic characteristics of the affected population and on the relative importance of the various exposure risks. In some situations, AIDS reports can be used to estimate earlier HIV infection patterns using back-calculation. AIDS case reports and AIDS deaths have been dramatically reduced in industrialized countries with the introduction of HAART (Highly Active Anti-Retroviral Therapy).

Sex	Age	<96	1996	1997	1998	1999	Unkn.	Total	%
All	All								
		0-4							
		5-9							
		10-14							
		15-19							
		20-24							
		25-29							
		30-34							
		35-39							
		40-44							
		45-49							
		50-54							
		55-59							
	60+								
Male	All								
		0-4							
		5-9							
		10-14							
		15-19							
		20-24							
		25-29							
		30-34							
		35-39							
		40-44							
		45-49							
		50-54							
		55-59							
	60+								
	NS								
Female	All								
		0-4							
		5-9							
		10-14							
		15-19							
		20-24							
		25-29							
		30-34							
		35-39							
		40-44							
		45-49							
		50-54							
		55-59							
	60+								
	NS								

AIDS cases by mode of transmission

Hetero: Heterosexual contacts.

Homo/Bi: Homosexual contacts between men.

IDU: Injecting drug use. This transmission category also includes cases in which other high-risk behaviours were reported, in addition to injection of drugs.

Blood: Blood and blood products.

Perinatal: Vertical transmission during pregnancy, birth or breastfeeding.

NS: Not specified/unknown.

Sex	Trans. Group	<96	1996	1997	1998	1999	Unkn	Total	%
All	Total								
	Hetero								
	Homo/Bi								
	IDU								
	Blood								
	Perinatal								
	Other Known								
	Unknown								
Male	Total								
	Hetero								
	Homo/Bi								
	IDU								
	Blood								
	Perinatal								
	Other Known								
	Unknown								
Female	Total								
	Hetero								
	IDU								
	Blood								
	Perinatal								
	Other Known								
	Unknown								
	NS	Total							
Hetero									
IDU									
Blood									
Perinatal									
Other Known									
Unknown									

Curable Sexually Transmitted Infections (STIs)

The predominant mode of transmission of both HIV and other STIs is sexual intercourse. Measures for preventing sexual transmission of HIV and STI are the same, as are the target audiences for interventions. In addition, strong evidence supports several biological mechanisms through which STI facilitate HIV transmission by increasing both HIV infectiousness and HIV susceptibility. Significant also is the observation of a sharp decline in the concentration of HIV in the genital secretions when the infection is treated. Monitoring trends in STI can provide valuable information on the sexual transmission of HIV as well as the impact of behavioural interventions, such as promotion of condom use.

Clinical services offering STI care are an important access point for people at high risk for both AIDS and STI, not only for diagnosis and treatment but also for information and education. Therefore, control and prevention of STI have been recognized as a major strategy in the prevention of HIV infection and ultimately AIDS. One of the cornerstones of STI control is adequate management of patients with symptomatic STIs. This includes diagnosis, treatment and individual health education and counselling on disease prevention and partner notification. Consequently, monitoring different components of STI control can also provide information on HIV prevention within a country.

Estimated incidence and prevalence of curable STIs

STI's	Year	Incidence			Prevalence			
		Male	Female	All	Year	Male	Female	All
Chlamydia trach.								
Gonorrhoea								
Syphilis								
Trichomonas								

Comments:

Source:

STI Incidence, men

Prevention Indicator 9: Proportion of men aged 15-49 years who reported episodes of urethritis in the last 12 months.

Year	Area	Age	Rate	N=
1995	Rural	15-49		11.7
1995	Urban	15-49		18.7

Comments:

Sources: Population based KABP surveys in 4 districts in Uganda by STD/ACP.

STI Prevalence, women

Prevention Indicator 8: Proportion of pregnant women aged 15-24 years attending antenatal clinics whose blood has been screened with positive serology for syphilis.

Year	Area	Age	Rate	N=
1997	Rural	15-24	2.0	
1997	Urban	15-24	15.0	

Comments:

Sources: STD/ACP – Sentinel Surveillance

STI Case management (counselled)

Prevention Indicator 7: Proportion of people presenting with STD or for STD care in health facilities who received basic advice on condoms and on partner notification.

Year	Area	Age	Rate	N=
1996	All	15-24	18.5	

Comments:

Sources: STD Control Unit, STD/ACP MOH – Baseline Survey

STI Case management (treatments)

Prevention Indicator 6: Proportion of people presenting with STD in health facilities assessed and treated in an appropriate way (according to national standards).

Year	Area	Age	Rate	N=
1996	All		14.3	

Comments:

Sources: STD Control Unit, STD/ACP MOH – Baseline Survey

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Health service indicators

HIV prevention strategies depend on the twin efforts of care and support for those living with HIV or AIDS, and targeted prevention for all people at risk or vulnerable to the infection. These efforts may range from reaching out to vulnerable communities through large-scale educational campaigns or interpersonal communication; provision of treatment for STIs; distribution of condoms and needles; creating and enabling environment to reduce risky behaviour; providing access to voluntary testing and counselling; home or institutional care for persons with symptomatic HIV infection; and preventing perinatal transmission and transmission through infected needles or blood in health care settings. It is difficult to capture such a large range of activities with one or just a few indicators. However, a set of well-established health care indicators – such as the percentage of a population with access to health care services; the percentage of women covered by antenatal care; or the percentage of immunized children – may help to identify general strengths and weaknesses of health systems. Specific indicators, such as access to testing and blood screening for HIV, help to measure the capacity of health services to respond to HIV/AIDS – related issues.

Access to health care

Indicators	Year	Estimate	Source
% of population with access to health services – total:			
% of population with access to health services – urban:			
% of population with access to health services – rural:			
Contraceptive prevalence rate (%):	1990-1999	15	UNICEF/UNPOP
% of births attended by trained health personnel:	1990-1999	38	UNICEF
% of 1-yr-old children fully immunized – DPT:	1995-1998	46	UNICEF
% of 1-yr-old children fully immunized – Polio:	1995-1998	47	UNICEF
% of 1-yr-old children fully immunized – Measles:	1995-1998	30	UNICEF
Proportion of blood donations tested:			
% of ANC clinics where HIV testing is available:			
HIV/AIDS Hospital Occupancy Rate (Days):			

Male and female condoms are the only technology available that can prevent sexual transmission of HIV and other STIs. Persons exposing themselves to the risk of sexual transmission of HIV should have consistent access to high quality condoms. AIDS Programmes implement activities to increase both availability of and access to condoms. The two condom availability indicators below are intended to highlight areas of strength and weakness at the beginning and end of the distribution system so that programmatic resources can be directed appropriately to problem areas.

Condom availability (central level)

Prevention Indicator 2: Availability of condoms in the country over the last 12 months (central level).

Year	Area	N	Rate
1997	All	53000000	6.0

Comments:

Sources: NMS, STD/ACP, SOMARCH, MSI records 1997

Condom availability (peripheral level)

Prevention Indicator 3: Proportion of people who can acquire a condom (peripheral level).

Year	Area	N	Rate
1995	Rural		30.0
1995	Urban		85.0
1995	All		50.0

Comments:

Sources: Population KABP Survey, 1995

Knowledge and behaviour

In most countries the HIV epidemic is driven by behaviours (e.g.: multiple sexual partners, intravenous drug use) that expose individuals to the risk of infection. Information on knowledge and on the level and intensity of risk behaviour related to HIV/AIDS is essential in identifying populations most at risk for HIV infection and in better understanding the dynamics of the epidemic. It is also critical information in assessing changes over time as a result of prevention efforts. One of the main goals of the 2nd generation HIV surveillance systems is the promotion of regular behavioural surveys in order to monitor trends in behaviours and target interventions.

Knowledge of HIV- related preventive practices

Prevention Indicator 1: Proportion of people citing at least two acceptable ways of protection from HIV infection.

Year	Area	Age Group	Male	Female	All
1995	Rural	15-19	70.0	65.3	67.0
1995	Urban	15-19	79.0	80.1	80.0
1995	Rural	15-49	80.0	65.5	70.0
1995	Urban	15-49	87.0	83.4	85.0
1995	Rural	20-24	79.0	73.4	76.0
1995	Urban	20-24	89.0	88.8	89.0
1995	Rural	25-49	83.0	62.8	73.0
1995	Urban	25-49	89.0	83.0	86.0

Comments:

Sources: Population based KABP surveys

Reported non-regular sexual partnerships

Prevention Indicator 4: Proportion of sexually active people having at least one sex partner other than a regular partner in the last 12 months.

Year	Area	Age Group	Male	Female	All
1989	All	15+	39.2	18.4	
1989	All	15-19	83.0	36.7	
1995	Rural	15-19	17.9	1.1	5.0
1995	Urban	15-19	40.0	26.9	30.0
1995	Rural	15-49	14.0	3.6	8.0
1995	Urban	15-49	25.2	12.6	18.0
1995	Rural	20-24	18.5	3.5	9.0
1995	Urban	20-24	37.5	16.4	24.0
1995	All	20-24	57.3	18.3	
1995	All	25-39	33.6	14.2	
1995	Rural	25-49	12.8	4.2	9.0
1995	Urban	25-49	21.1	8.2	14.0
1995	All	40-49	22.3	13.2	

Comments:

Sources: KABP/Behavioural Studies-GPA/MOH - Population based KABP surveys

Reported condom use in risk sex (gen pop)

Prevention Indicator 5: Proportion of people reporting the use of a condom during the most recent intercourse of risk.

Year	Area	Age Group	Male	Female	All
1995	Rural	15-19	20.0	0.0	17.0
1995	Urban	15-19	70.0	22.0	39.0
1995	Rural	15-49	16.0	18.0	16.0
1995	Urban	15-49	64.0	49.0	58.0
1995	Rural	20-24	0.0	20.0	5.0
1995	Urban	20-24	64.0	63.0	64.0
1995	Rural	25-49	20.0	19.0	19.0
1995	Urban	25-49	63.0	55.0	60.0

Comments:

Sources: Population based KABP surveys, 1995

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Knowledge and behaviour

Ever use of condom

Percentage of people who ever used a condom.

Year	Area	Age Group	Male	Female	All
1989	All	15-19		0.6	
1995	All	15-19		4.9	
1989	All	20-24		1.2	
1995	All	20-24		7.8	
1989	All	25-29		1.3	
1995	All	25-29		7.3	
1989	All	30-34		0.8	
1995	All	30-34		5.5	
1989	All	35-39		0.4	
1995	All	35-39		3.0	
1989	All	40-44		0.6	
1995	All	40-44		2.8	
1989	All	45-49		0.0	
1995	All	45-49		0.5	
1989	All	Total		0.8	
1995	All	Total		5.5	

Comments:

Sources: Demographic and Health Survey

Median age at first sexual experience

Median age of people at which they first had sexual intercourse.

Year	Area	Age Group	Male	Female	All
1995	All	20-24		16.5	
1995	All	45-49		15.9	

Comments:

Sources: DHS/1995

Adolescent pregnancy

Percentage of teenagers 15-19 who are mothers or pregnant with their first child

Year	Area	Age Group	N	Rate
1995	All	15	290	7.7
1995	All	16	340	22.1
1995	All	17	281	43.3
1995	All	18	392	64.7
1995	All	19	304	70.8

Comments:

Sources: DHS/1995

Sources

Data presented in this Epidemiological Fact Sheet come from several different sources, including global, regional and country reports, published documents and articles, posters and presentations at international conferences, and estimates produced by UNAIDS, WHO and other United Nations Agencies. This section contains a list of the more relevant sources used for the preparation of the Fact Sheet. Where available, it also lists selected national Web sites where additional information on HIV/AIDS and STI are presented and regularly updated. However, UNAIDS and WHO do not warrant that the information in these sites is complete and correct and shall not be liable whatsoever for any damages incurred as a result of their use.

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- Asiimwe, 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.
- Asiimwe-Okiror, G., G. Tembo, W. Naamara, 1992, HIV Infection and Syphilis Serology in Uganda, VII International Conference on AIDS in Africa, Yaounde, Cameroon, 12/8-11, Abstract T.P.067.
- Asiimwe-Okiror, G., J. Musinguzi, A. Opio, et al., 1996, HIV/AIDS Surveillance Report: March 1996, STD/AIDS Control Programme, Ministry of Health, Entebbe, Uganda, March report.
- Asiimwe-Okiror, G., J. Musinguzi, A. Opio, et al., 1997, Declining HIV Prevalence in Women Attending Antenatal Clinic Sentinel Surveillance Sites in Uganda, Paper Presented at the UNAIDS Regional Workshop on "Evidence of Behavioural Change in the Context of HIV Decline in Uganda," 10-13 February, Nairobi, Kenya.
- Asiimwe-Okiror, G., A. A. Opio, J. Musinguzi, et al., 1997, Change in Sexual Behaviour and Decline in HIV Infection among Young Pregnant Women in Urban Uganda, AIDS, vol. 11, no. 14, pp. 1757-1763.
- Bagenda, D., F. Mmiro, F. Mirembe, et al., 1995, HIV-1 Seroprevalence Rates in Women Attending Prenatal Clinics in Kampala, Uganda, IX International Conference on AIDS and STD in Africa, Kampala, Uganda, 12/10-14, Session MoC016.
- Ble, C., S. Mazzoli, C. Romeo, et al., 1997, Prevalence of STDs by PCR, Serology and Mucosal Specific IgA in a Pregnant Women Population in Gulu District . . . , Xth International Conference on AIDS and STD in Africa Abidjan, Cote d'Ivoire, 12/7-11, Abstract B.708.
- Carswell, J. W., 1987, HIV Infection in Healthy Persons in Uganda, AIDS, vol. 1, no. 4, pp. 223-227.
- George, K., D. Hom, J. McGrath, et al., 1998, Risk for HIV-1 Seroconversion in the Ugandan People's Defense Forces, 12th World AIDS Conference, Geneva, 6/28 - 7/3, Poster 23507.
- 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.
- Hellmann, N. S., R. M. Grant, P. S. Nsubuga, et al., 1992, Modifiers of the Protective Effect of Circumcision, VIII International Conference on AIDS, Amsterdam, 7/19-24, Poster Poc 4299.
- Hom, D. L., J. L. Johnson, P. Mugenyi, et al., 1997, HIV-1 Risk and Vaccine Acceptability in the Ugandan Military, Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology, vol. 15, no. 5, pp. 375-380.
- Kipp, W., J. Kamugisha, T. Rehle, 1992, Meningococcal Meningitis and HIV Infection: Results from a Case-Control Study in Western Uganda, AIDS, vol. 6, no. 12, pp. 1557-1558.
- Kemigabo, J., 1997, Factors Influencing Commerical Sex Industry in Uganda and the Relation between Prostitution and the Spread of HIV, Xth International Conference on AIDS and STD in Africa Abidjan, Cote d'Ivoire, 12/7-11, Abstract B.718.
- Kilian, A. H. D., S. Gregson, B. Ndyabangi, et al., 1999, Reductions in Risk Behaviour Provide the Most Consistent Explanation for Declining HIV-1 Prevalence in Uganda, AIDS, vol. 13, no. 3, pp. 391-398.
- Mugerwa, R. D., M. J. Mugerwa, M. Vjecha, et al., 1994, Correlates of HIV-1 Infection Rates in Military Recruits in Uganda, Tenth International Conference on AIDS, Yokohama, Japan, 8/7-12, Poster P.C.0344.
- Ministry of Health, 1995, HIV/AIDS Surveillance Report, STD/AIDS Control Programme, Ministry of Health, Entebbe, Uganda, March report.
- Mugenyi, P. N., R. Mugerwa, A. Loughlin, et al., 1995, WHO Seroincidence Study in Preparation for HIV-1 Vaccine Trials in Uganda, IX International Conference on AIDS and STD in Africa, Kampala, Uganda, 12/10-14, Session MoC086.
- Mugenyi, P., D. Hom, A. Loughlin, et al., 1996, HIV-1 Seroprevalence, Incidence and Risk Behavior in the Ugandan Military, XI International Conference on AIDS, Vancouver, 7/7-14, Poster Mo.C.1483.
- Twa-Twa, J., G. Tembo, G. Asiimwe, 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.
- Tembo, G., J. Twa-Twa, G. Asiimwe, et al., 1991, AIDS Surveillance Report: December 1991, Ministry of Health, AIDS Control Programme Surveillance Unit, Entebbe, Uganda, unpublished report.
- Tumwesigye, E., F. Kambugu, C. Whalen, et al., 1997, Towards Developing Screening Criteria for HIV Infection among Women Attending an STD Clinic in Kampala, Uganda, Xth International Conference on AIDS and STD in Africa Abidjan, Cote d' Ivoire, 12/7-11, Abstract B.370.
- U.S. Department of State, 1994, The AIDS Pandemic in Uganda, Unclassified Cable, July, Kampala 005998.
- Uganda Ministry of Health, 1992, Surveillance of HIV and AIDS in Uganda: Annual Report - 1992, AIDS Control Programme, Ministry of Health, report.
- Uganda Ministry of Health, 1994, HIV/AIDS Surveillance Report: June 1994, STD/AIDS Control Programme, Ministry of Health, Entebbe, Uganda, June, report.
- Uganda Ministry of Health, 1997, HIV/AIDS Surveillance Report: March 1997, STD/AIDS Control Programme, Ministry of Health, Entebbe, Uganda, March, report.
- Uganda Ministry of Health, 1998, HIV/AIDS Surveillance Report: March 1998, STD/AIDS Control Programme, Ministry of Health, Entebbe, Uganda, March report.
- Uganda Ministry of Health, 1999, HIV/AIDS Surveillance Report: March 1999, STD/AIDS Control Programme, Ministry of Health, Entebb, Uganda, march report.
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Websites: www.aids.africa.com

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Annex: HIV Surveillance data by site

Group	Area	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
Pregnant women	Major Urban Areas	Kampala (Mulago Hospital)					25	29	36.6									
		New Mulago										16.2						
		Kampala (Nsambya Hospital)		10.7	13.5	24		24.5	25	27.8	29.5	26.6	21.8	16.8	15.3	14.6	13.4	
Pregnant women	Outside Major Urban Areas	Kampala (Rubaga antenatal clinic)								27.4	29.4	24.4	16.5	20.2	20.3	14.8	14.2	
		Aber									17.2	9.2						
		Angul									6							
		Arua									8.7							
		Bundibugyo							4.5	2.7	4.2	7						
		Fort Portal							22.9	20	23.7	21.6	18.3	21	16.6			
		Gulu district									25	20	13.5	11	13.6			
		Hoima							11.6						9	5.4		
		Jinja					24.9	15.8	22	19.8	16.7	16.3	13.2	16.8	11	10.5		
		Kabale								11.9								
		Kabarole							23.8	16.4								
		Kagadi													10.3	11.5		
		Kasule							9.2	13.3	22							
		Kawenge								5								
		Kilembe								25.3	7	16.7	11.1	10.4	8.5			
		Kyegegwa							11.6	13	14.1							
		Lwala									5.3		5.1	3.7				
		Matany								2.8	7.6			2	1.6	1.3		
		Mbale					3.8	11	12.1	14.8	8.7	10.2	7.8	8.4	6.9	6.3		
		Mbarara					21.8	23.8	24.3	30.2	18.1	17.3	16.6	15	14.5	10.9		
		Moyo					3.3	11	12.8		5		3.1					
		Mutolere						4.1	5.8		4.2		3.6	2.6				
		Nyabani						8.6	8.6	7.5	9							
		Pallisa								7.6	5	1.2			3.2	2.6		
		Ruimi							13.5	12.1	13.9	14						
		Rukungu							4.2	6.4	8							
		Soroti									9.1		8.7	7.7	5.3	7.7		
		Tororo						4.1	12.8	13.2	11.3	10.2	12.5	8.2	9.5	10.5		
		Virika							22.6	21.2	16.8							
Group	Area	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
Sex workers	Major Urban Areas																	
Sex workers	Outside Major Urban Areas														65.9			
Group	Area	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
Injecting drug users	Major Urban Areas																	
Injecting drug users	Outside Major Urban Areas																	
Group	Area	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
STI patients	Major Urban Areas	Kampala (Mulango)												35.1	30.2			
		Kampala (Mulango, Males)					42	41.3	38.8	45.5				33.9				
		Kampala (Mulango, Females)					62	49.3	52.8					38.5		37.3		
STI Patients	Outside Major Urban Areas																	
Group	Area	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
Blood Donors	National																	
Blood Donors	Major Urban Areas																	
Blood Donors	Outside Major Urban Areas																	