

2004  
Update



## Ethiopia

**EPIDEMIOLOGICAL FACT SHEETS**  
ON HIV/AIDS AND SEXUALLY TRANSMITTED INFECTIONS



Joint United Nations Programme on HIV/AIDS

**UNAIDS**

UNHCR • UNICEF • WFP • UNDP • UNFPA  
UNODC • ILO • UNESCO • WHO • WORLD BANK



World Health  
Organization

## HIV/AIDS estimates

In 2003 and during the first quarter of 2004, 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 1999 and 2001 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 generalised 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 range was used as the denominator in calculating adult HIV prevalence.

### Estimated number of adults and children living with HIV/AIDS, end of 2003

These estimates include all people with HIV infection, whether or not they have developed symptoms of AIDS, alive at the end of 2003:

Adults and children	1,500,000		
Low estimate	950,000		
High estimate	2,300,000		
Adults (15-49)	1,400,000	Adult rate (%)	4.4
Low estimate	890,000	Low estimate	2.8
High estimate	2,100,000	High estimate	6.7
Children (0-15)	120,000		
Low estimate	69,000		
High estimate	220,000		
Women (15-49)	770,000		
Low estimate	500,000		
High estimate	200,000		

### Estimated number of deaths due to AIDS

Estimated number of adults and children who died of AIDS during 2003:

Deaths in 2003	120,000
Low estimate	74,000
High estimate	190,000

### Estimated number of orphans

Estimated number of children who have lost their mother or father or both parents to AIDS and who were alive and under age 17 at the end of 2003:

Current living orphans	720,000
Low estimate	480,000
High estimate	1,000,000

## 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.

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 2003. 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 them 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.

## Assessment of the epidemiological situation 2004

HIV sentinel surveillance among women attending antenatal care clinics has improved since 1999; surveys are conducted annually and 34 sites were used in 2001. Data on HIV prevalence among women attending antenatal care clinics in Addis Ababa were also available for 2002. In 2000, a special HIV prevalence study was conducted among 72,000 male army recruits drawn from four regions (Tigray, Amhara, Oromia and Southern Nations, Nationalities and People's Region - SNNR). A cohort study carried out from 1997 to 1999 among factory workers in Akaki and Wonji areas also generated data on HIV prevalence.

Twenty out of the 34 sites reported a prevalence rate exceeding 10% in 2001. However, there were seven sites with rates of <5%. HIV infection rates among women attending antenatal care clinics in this country have remained relatively stable at >10% since 1997. Time trends among women attending four clinics in Addis Ababa show that median HIV prevalence was 18.6% in 1996, 15.2% in 2000 and 15.1% in 2002.

In 2000, overall HIV prevalence among rural military recruits was 3.8%, compared to 7.2% among urban recruits.

## Basic indicators

For consistency reasons the data used in the table below are taken from official UN publications.

DEMOGRAPHIC DATA	YEAR	ESTIMATE	SOURCE
Total population (thousands)	2004	72,420	UN population division database
Female population aged 15-24 (thousands)	2004	7,244	UN population division database
Population aged 15-49 (thousands)	2004	32,621	UN population division database
Annual population growth rate (%)	1992-2002	2.8	UN population division database
% of population in urban areas	2003	15.5	UN population division database
Average annual growth rate of urban population	2000-2005	4.1	UN population division database
Crude birth rate (births per 1,000 pop.)	2004	42	UN population division database
Crude death rate (deaths per 1,000 pop.)	2004	17.5	UN population division database
Maternal mortality rate (per 100,000 live births)	2000	850	WHO (WHR2004)/UNICEF
Life expectancy at birth (years)	2002	48	World Health Report 2004, WHO
Total fertility rate	2002	6.2	World Health Report 2004, WHO
Infant mortality rate (per 1,000 live births)	2000	114	World Health Report 2004, WHO
Under 5 mortality rate (per 1,000 live births)	2000	179	World Health Report 2004, WHO

SOCIO-ECONOMIC DATA	YEAR	ESTIMATE	SOURCE
Gross national income, ppp, per capita (Int.\$)	2002	720	World Bank
Gross domestic product, per capita % growth	2001-2002	2.7	World Bank
Per capita total expenditure on health (Int.\$)	2001	14	World Health Report 2004, WHO
General government expenditure on health as % of total expenditure on health	2001	40.5	World Health Report 2004, WHO
Total adult illiteracy rate	2000	60.9	UNESCO
Adult male illiteracy rate	2000	52.9	UNESCO
Adult female illiteracy rate	2000	69.0	UNESCO
Gross primary school enrolment ratio, male	2000/2001	76	UNESCO
Gross primary school enrolment ratio, female	2000/2001	52	UNESCO
Gross secondary school enrolment ratio, male	2000/2001	22	UNESCO
Gross secondary school enrolment ratio, female	2000/2001	14	UNESCO

### Contact address

UNAIDS/WHO Working Group on Global  
HIV/AIDS and STI Surveillance  
20, Avenue Appia  
CH - 1211 Geneva 27  
Switzerland  
Fax: +41-22-791-4834

email: [hivstrategicinfo@who.int](mailto:hivstrategicinfo@who.int) or  
[estimates@unaids.org](mailto:estimates@unaids.org)

website: <http://www.who.int/hiv>  
<http://www.unaids.org>

Extracts of the information contained in these fact sheets may be reviewed, reproduced or translated for research or private study but not for sale or for use in conjunction with commercial purposes. Any use of information in these fact sheets should be accompanied by the following acknowledgment "UNAIDS/WHO epidemiological fact sheets on HIV/AIDS and Sexually Transmitted Infections, 2004 Update".

## HIV prevalence in different populations

This section contains information about HIV prevalence in different populations. The data reported in the tables below are mainly based on the HIV database maintained by the United States Bureau of the Census where data from different sources, including national reports, scientific publications and international conferences are compiled. To provide a simple overview of the current situation and trends over time, summary data are given by population group, geographical area (Major Urban Areas versus Outside Major Urban Areas), and year of survey. Studies conducted in the same year are aggregated and the median prevalence rates (in percentages) are given for each of the categories. The maximum and minimum prevalence rates observed, as well as the total number of surveys/sentinel sites, are provided with the median, to give an overview of the diversity of HIV-prevalence results in a given population within the country. Data by sentinel site or specific study from which the medians were calculated are printed at the end of this fact sheet.

The differentiation between the two geographical areas Major Urban Areas and Outside Major Urban Areas is not based on strict criteria, such as the number of inhabitants. For most countries, Major Urban Areas were considered to be the capital city and - where applicable - other metropolitan areas with similar socio-economic patterns. The term Outside Major Urban Areas considers that most sentinel sites are not located in strictly rural areas, even if they are located in somewhat rural districts.

### HIV sentinel surveillance\*

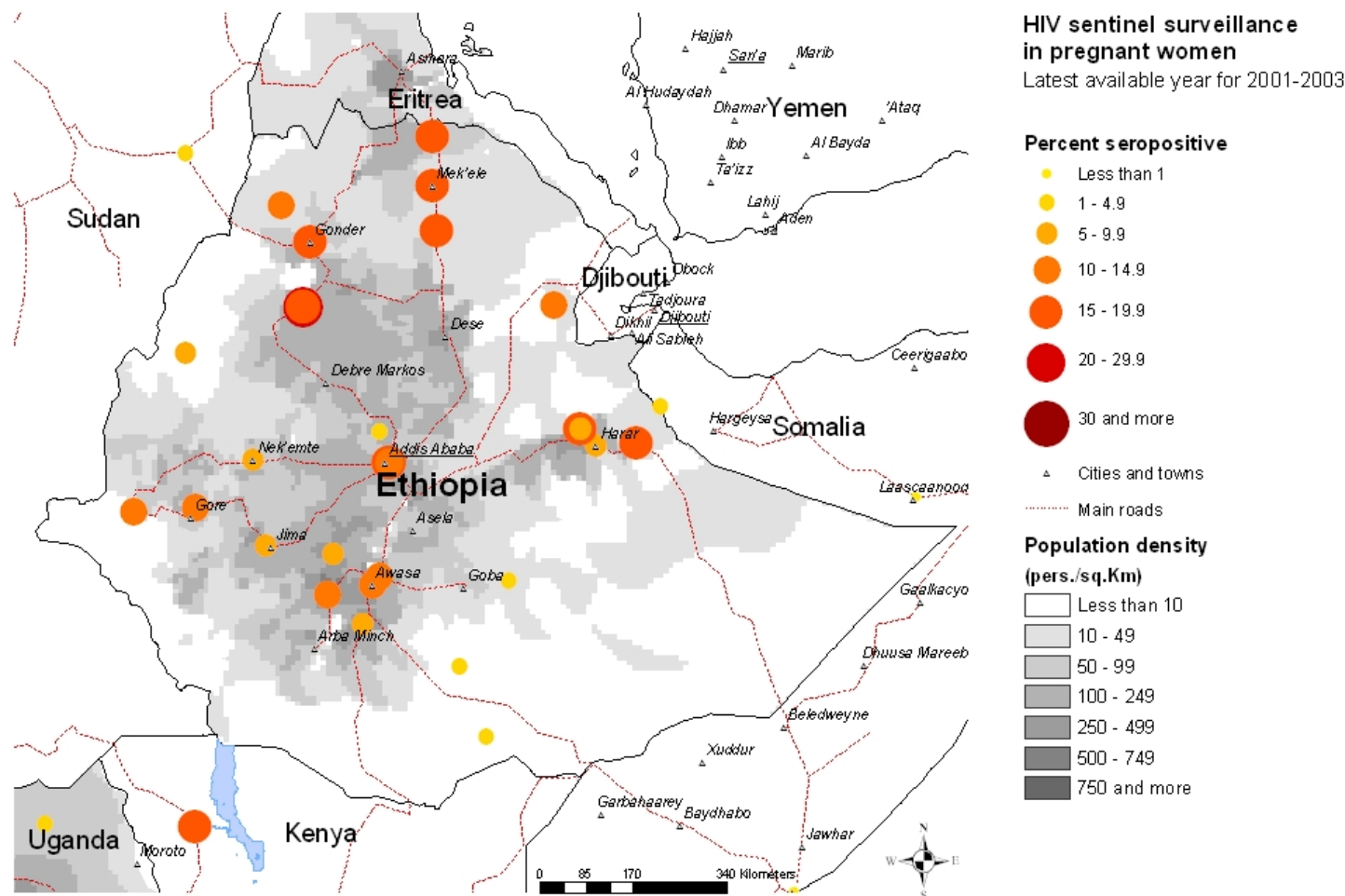
Group	Area		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
Pregnant women	Major urban areas	N-Sites			3.00		1.00	1.00	1.00	1.00	2.00	4.00	4.00			4.00	4.00			
		Minimum			2.05		10.70	11.20	20.20	20.36	19.33	9.00	13.00			10.06	12.30			
		Median			4.60		10.70	11.20	20.20	20.36	21.17	18.54	17.44			14.88	16.20			
		Maximum			8.00		10.70	11.20	20.20	20.36	23.00	26.51	18.27			17.40	17.70			
	Outside major urban areas	N-Sites					2.00		10.00	1.00	1.00		1.00	5.00	8.00	5.00	30.00			
		Minimum					2.80		0	10.74	25.30		12.70	0.80	4.00	0.72	1.10			
		Median					4.87		4.30	10.74	25.30		12.70	9.20	11.75	3.08	10.25			
		Maximum					6.94		13.00	10.74	25.30		12.70	14.50	20.77	14.25	23.40			
Sex workers	Major urban areas	N-Sites	1.00	1.00	1.00	1.00							1.00	1.00						
		Minimum	2.68	24.70	26.05	54.20								44.67	73.66					
		Median	2.68	24.70	26.05	54.20								44.67	73.66					
		Maximum	2.68	24.70	26.05	54.20								44.67	73.66					
	Outside major urban areas	N-Sites		19.00	6.00	4.00	2.00													
		Minimum		5.34	12.50	36.36	65.55													
		Median		17.72	31.18	50.23	67.47													
		Maximum		38.14	48.16	54.97	69.40													
Injecting drug users	Major urban areas	N-Sites	2.00		4.00		1.00	2.00												
		Minimum	7.95		17.11		34.00	32.00												
		Median	8.14		31.02		34.00	37.50												
		Maximum	8.33		47.20		34.00	43.00												
Men having sex with men	Major urban areas	N-Sites					1.00							1.00						
		Minimum					22.00							45.34						
		Median					22.00							45.34						
		Maximum					22.00							45.34						
	Outside major urban areas	N-Sites		1.00							1.00									
		Minimum		4.55							22.01									
		Median		4.55							22.01									
		Maximum		4.55							22.01									

\*Detailed data by site can be found in the Annex.

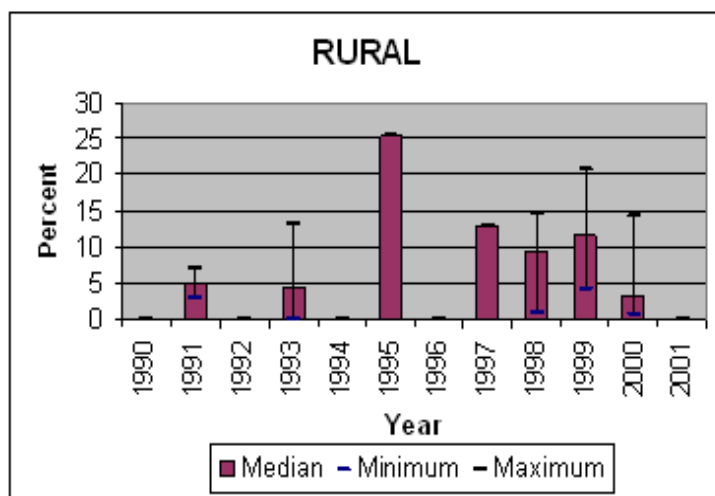
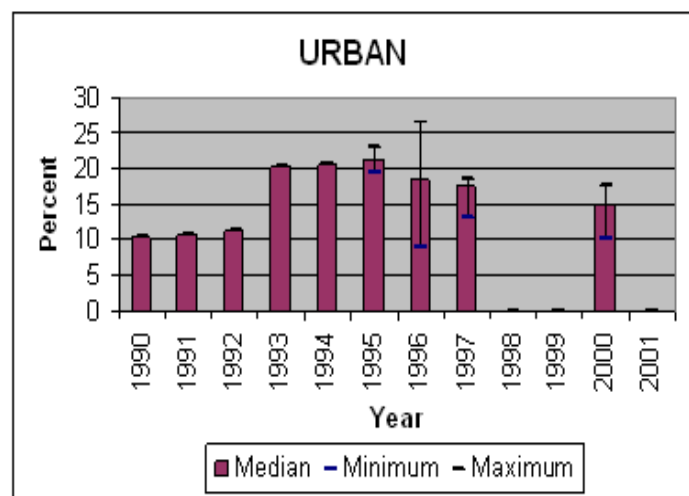
## Maps & charts

Mapping the geographical distribution of HIV prevalence among different population groups may assist in interpreting both the national coverage of the HIV surveillance system as well in explaining differences in levels of prevalence. The UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance, in collaboration with the WHO Public Health Mapping Team, Communicable Diseases, is producing maps showing the location and HIV prevalence in relation to population density, major urban areas and communication routes. For generalized epidemics, these maps show the location of prevalence of antenatal surveillance sites.

Trends in antenatal sentinel surveillance for higher prevalence countries, or in prevalence among selected populations for countries with concentrated epidemics, are a new addition. These are presented for those countries where sufficient data exist.



### Trends in HIV prevalence among antenatal clinic attendees



Median prevalence and ranges are shown in areas with more than one sentinel site.

The boundaries and names shown and the designations used on the map 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 2004, all rights reserved.

## Reported AIDS cases

Following WHO and UNAIDS recommendations, AIDS case reporting is carried out in most countries. Data from individual AIDS cases are 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 Anti-Retroviral Therapy (ART).

1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
							2	17	85	190	448	897	3256	5132	6927	3793	832	7631	9416
1999	2000	2001	2002	2003	Total	UNK	Date of last report												
11964	13347	5872			100353	30544	11/1/2001												

## 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 STIs are the same, as are the target audiences for interventions. In addition, strong evidence supports several biological mechanisms through which STIs facilitate HIV transmission by increasing both HIV infectiousness and HIV susceptibility. Thus, detection and treatment of individuals with STIs is an important part of an HIV control strategy. In summary, if the incidence/prevalence of STIs is high in a country, then there is the possibility of high rates of sexual transmission of HIV. Monitoring trends in STIs provides valuable insight into the likelihood of the importance of sexual transmission of HIV within a country, and is part of second generation surveillance. These trends also assist in assessing the impact of behavioural interventions, such as delaying sexual debut, reducing the number of sex partners and promoting condom use.

Clinical services offering STI care are an important access point for people at high risk for both STIs and HIV. Identifying people with STIs allows for not only the benefit of treating the STI, but for prevention education, HIV testing, identifying HIV-infected persons in need of care, and partner notification for STIs or HIV infection. Consequently, monitoring different components of STI prevention and control can also provide information on HIV prevention and control activities within a country.

### STI syndromes

Reported cases	1996	1997	1998	1999	2000	2001	2002	2003	Incidence 2003
----------------	------	------	------	------	------	------	------	------	----------------

Comments:

Source:

### Syphilis prevalence, women

Percent of blood samples taken from pregnant women aged 15-49 that test positive for syphilis - positive reaginic and treponemal test - during routine screening at selected antenatal clinics.

Year	Area	Rate	Range
1997-1999	Urban	3.6	
2000-2001	Urban	2.3	2.2-2.4

Comments:

Source: Tsegaye A. Decline in prevalence of HIV-1 infection and syphilis among young women attending antenatal care clinics in Addis Ababa, Ethiopia: results from sentinel surveillance, 1995-2001. *J Acquir Immune Defic Syndr.* 2002 Jul 1;30(3):359-62.

### Estimated prevalence of curable STIs among female sex workers

#### - Chlamydia

Year	Area	Rate	Range

Comments:

Source:

#### - Gonorrhoea

Year	Area	Rate	Range

Comments:

Source:

Estimated prevalence of curable STIs among female sex workers (continued)**- Syphilis**

<b>Year</b>	<b>Area</b>	<b>Rate</b>	<b>Range</b>
1997-1999	Urban	35	

**Comments:**

**Source:** Aklilu M. Factors associated with HIV-1 infection among sex workers of Addis Ababa, Ethiopia. AIDS. 2001 Jan 5;15(1):87-96.

**- Trichomoniasis**

<b>Year</b>	<b>Area</b>	<b>Rate</b>	<b>Range</b>
-------------	-------------	-------------	--------------

**Comments:**

**Source:**

## Health service and care 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. 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 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 (%)	2000	8.1	UNICEF/UNPOP
Percentage of contraceptive users using condoms			
% of births attended by skilled health personnel	2000	9.7	WHO
% of 1-yr-old children fully immunized - DPT	2002	56	WHO/UNICEF
% of 1-yr-old children fully immunized - Measles	2001	52	WHO/UNICEF
% of ANC clinics where HIV testing is available			

### Number of adults (15-49) with advanced HIV infection receiving ARV therapy as of June 2004

#### Adults on treatment

Number: 4,500

Source: WHO

### Estimated number of adults (15-49) in need of treatment in 2003

#### Adults needing treatment

Number: 200,000

Source: WHO/UNAIDS

### Coverage of HIV testing and counselling

Number of public and NGO services providing testing and counselling services.

Year	Area	N=
2004	All	500

**Comments:** VCT is expanding very fast and the actual number may well be much higher.

**Source:** Ministry of health

## Knowledge and behaviour

In most countries the HIV epidemic is driven by behaviours (e.g.: multiple sexual partners, injecting 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 a standard set of indicators defined in the National Guide (Source: National AIDS Programmes, A Guide to Monitoring and Evaluation, UNAIDS/00.17) and regular behavioural surveys in order to monitor trends in behaviours and to target interventions.

The indicators on knowledge and misconceptions are an important prerequisite for prevention programmes to focus on increasing people's knowledge about sexual transmission, and, to overcome the misconceptions that act as a disincentive to behaviour change. Indicators on sexual behaviour and the promotion of safer sexual behaviour are at the core of AIDS programmes, particularly with young people who are not yet sexually active or are embarking on their sexual lives, and who are more amenable to behavioural change than adults. Finally, higher risk male-male sex reports on unprotected anal intercourse, the highest risk behaviour for HIV among men who have sex with men.

### Knowledge of HIV prevention methods

Prevention indicator: Percentage of young people 15-24 who both correctly identify two ways of preventing the sexual transmission of HIV and who reject three misconceptions about HIV transmission.

Year	Male	Female
2000		

Comments:

Source: DHS

### Reported condom use at last higher risk sex (young people 15-24)

Prevention indicator: Proportion of young people reporting the use of a condom during sex with a non-regular partner.

Year	Male	Female
2000	30	17

Comments:

Source: DHS

### Age-mixing in sexual partnerships among young women

The proportion of young women who have had sex in the last 12 months with a partner who is 10 or more years older than themselves.

Year	Area	Age group	Male	Female	All
------	------	-----------	------	--------	-----

Comments:

Source:

### Reported non-regular sexual partnerships

Prevention indicator: Proportion of young people 15-24 having at least one sex partner other than a regular partner in the last 12 months.

Year	Male	Female
2000	64	7

Comments:

Source: DHS

Knowledge and behaviour (continued)Ever used a condom

Percentage of people who ever used a condom.

Year	Area	Age group	Male	Female	All
------	------	-----------	------	--------	-----

Comments:

Source:

Adolescent pregnancy

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

Year	Percentage
------	------------

Comments:

Source:

Age at first sexual experience

Proportion of 15-19 year olds who have had sex before age 15.

Year	Male	Female
2000	5	14

Comments:

Source: DHS

## Prevention indicators

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 Programs implement activities to increase both availability of and access to condoms. These activities should be monitored and have resources directed to problem areas. The indicator below highlights the availability of condoms. However, even if condoms are widely available, this does not mean that individuals can or do access them.

### Condom availability nationwide

Total number of condoms available for distribution nationwide during the preceding 12 months, divided by the total population aged 15-49.

Year	N	Rate
------	---	------

Comments:

Source:

### Prevention of mother-to-child transmission (MTCT) nationwide

Percentage of women who were counselled during antenatal care for their most recent pregnancy, accepted an offer of testing and received their test results, of all women who were pregnant at any time in the preceding two years.

Year	N	Rate
------	---	------

Comments:

Source:

Blood safety programs aim to ensure that the majority of blood units are screened for HIV and other infectious agents. This indicator gives an idea of the overall percentage of blood units that have been screened to high enough standards that they can confidently be declared free of HIV.

### Screening of blood transfusions nationwide

Percentage of blood units transfused in the last 12 months that have been adequately screened for HIV according to national or WHO guidelines.

Year	N	Rate
------	---	------

Comments:

Source:

## Sources

Data presented in this Epidemiological Fact Sheet come from several 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.

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.

Asamoah-Odei, E. 1999 Mission Report World Health Organization, Travel Report Summary, Ethiopia, 21 June - 04 July, unpublished report.

Aklilu, M., T. Messele, A. Tsegaye, et al. 2001 Factors Associated with HIV-1 Infection among Sex Workers of Addis Ababa, Ethiopia AIDS, vol. 15, no. 1, pp. 87-96.

Chamiso, B. 1996 Pregnancy Outcome in HIV-1 Positive Women in Gandhi Memorial Hospital Addis Ababa, Ethiopia East African Medical Journal, vol. 73, no. 12, pp. 805-809.

Demissie, M., B. Lindtjorn, B. Tegbaru 2000 Human Immunodeficiency Virus (HIV) Infection in Tuberculosis Patients in Addis Ababa Ethiopian Journal of Health Development, vol. 14, no. 3, pp. 277-282.

Ethiopia National AIDS Program 1999 Update UNAIDS Epidemiological Fact Sheet UNAIDS.

Ethiopia Ministry of Health, et al. 2000 Current Status of HIV Sentinel Surveillance Data and AIDS Case Reporting in Ethiopia Ministry of Health, Diseases Prevention and Control Department, Ethiopia, June, draft report.

Ethiopia Ministry of Health, et al. 2002 AIDS in Ethiopia Ministry of Health, Disease Prevention and Control Department, Ethiopia, Fourth Edition, October, unpublished report.

Getachew, A., M. Kibrebeal, Z. Guta 1994 Pleural TB in Patients with HIV Infection in Addis Ababa: a Case Control Study TB & HIV, no. 3, p. 14.

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.

Hussein, M., A. Abebe, G. Pollakis, et al. 2000 HIV-1 Subtype C in Sex Workers in Addis Ababa, Ethiopia Journal of Acquired Immune Deficiency Syndromes, vol. 23, no. 2, pp. 120-127.

Kebede, D., E. Sanders, M. Aklilu 2000 The Epidemiology of HIV/AIDS in Ethiopia: A Review Technical Working Group on HIV/AIDS in Ethiopia, UNAIDS-Ethiopia, March, report.

Kidan, K. G., M. Fantahun, B. Azeze 1995 Seroprevalence of Human Immunodeficiency Virus Infection and Its Association with Syphilis Seropositivity among Antenatal ... East African Medical Journal, vol. 72, no. 9, pp. 579-583.

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.

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.

Mitike, G., D. Kebede, H. Yeneneh 1997 HIV Infection and Antituberculosis Drug Resistance among Pulmonary Tuberculosis Patients in Harar Tuberculosis Centre, Ethiopia East African Medical Journal, vol. 74, no. 3, pp. 154-157.

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.

Sahlu, T. 1996 Epidemiology of HIV/AIDS in Ethiopia ENARP Scientific Advisory Committee Meeting, Addis Ababa, 17 April, report.

Stover, J. 1998 Surveillance data for Ethiopia Personal Communication from AIDS in Ethiopia, Ministry of Health, Addis Ababa, 1998, AIM booklet.

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.

Zewdie, D., N. Teferi, B. Gebrehiwot, et al. 1989 Prevalence of Syphilis and HIV-1 Antibodies in Women Attending Antenatal and Family Planning Clinics in Addis Ababa IV Internat. Conf.: AIDS and Assoc. Cancers in Africa, Marseille, Oct. 18-20, Poster 197.

**Websites:** [www.aids.africa.com](http://www.aids.africa.com)  
[www.telecom.net.et/unresco/AIDS\\_WEB/index.htm](http://www.telecom.net.et/unresco/AIDS_WEB/index.htm)

## Annex: HIV surveillance by site

Group	Area	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003			
Pregnant women	Outside major urban areas	Gambella Hospital, Gambella												19.00		14.60					
		Gambo Hospital, Gambo (rural)														0.72	1.10				
		Ginir																	3.10		
		Gondar/Gonder, Gondar									25.30										
		Gondar/Gonder, Gondar																	15.10		
		Harari																		9.40	
		Hossana													3.60						
		Hossana Hospital, Hossana														4.75				5.90	
		Jijiga																			19.00
		Jima/Jimma, Jimma								8.60											
		Jima/Jimma, Jimma																			8.60
		Maichew																			16.80
		Mekele																			17.20
		Metu						2.80		10.70											
		Metu Hospital, Metu															3.08				10.50
		Nazareth, Nazereth																			18.70
		Nekemte																			9.10
		Pawi																			8.50
		Raytu								1.00											
		Seya Debir								1.30											
		Shashemene HC, Shashemene																14.25			
		Shashemene Hospital, Shashemene																			13.10
		Shola Gebeya								6.60											
		Sodo														9.20					
		Sodo HC, Sodo															10.75				11.60
		Aasita																			12.40
		Adigrat																			16.20
		Aira, Aira (rural)															2.00				2.60
		Ambo-Toke, Ambo-Toke (rural)																			4.60
		Attat Hospital, Attat (rural)															4.00				1.50
		Attat (rural)															0.80				
		Awasa																14.40			
		Awassa HC, Awassa																11.50			10.00
		Ayuba								0.20											
		Bahir Dar								13.00											
		Bahir Dar HC, Bahir Dar															20.77				23.40
		Bahir Dar Hospital, Bahir Dar																			19.90
		Beneste								2.00											
		Boreno Dadim, Borena Dadim (rural)																			1.70
		Boreno Gosa, Borena Gosa (rural)																			1.70
		Debretabor Hospital, Debretabor (ru)									10.74										
		Dilchora Hospital, Dire Dawa															13.60				8.50
		Dilla															14.50				
		Dilla Hospital, Dilla															12.00				9.80
		Dire Dawa						6.94		12.30											
		Dire Dawa HC, Dire Dawa																			15.20
		Enda Mariam Kaharo								0											
		Estie																7.30			10.70
		Gambella																			12.70
		Major urban areas	Addis Ababa (1), Addis Ababa			8.00		10.70	11.20	20.20											
			Addis Ababa (2), Addis Ababa			2.05															
			Addis Ababa (3), Addis Ababa			4.60															

Group	Area	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
Pregnant women	Major urban areas	Gandhi Memorial Hospital, Addis Aba							20.36										
		Gulele HC, Addis Ababa									15.67	18.21			17.40	15.80			
		Higher 23 HC, Addis Ababa									9.00	13.00			10.06	12.30			
		Kazanches HC, Addis Ababa								23.00	26.51	16.67			16.72	17.70			
		Teklehmanot HC, Addis Ababa								19.33	21.40	18.27			13.05	16.60			
Sex workers	Major urban areas	Addis Ababa (1), Addis Ababa	2.68	24.70	26.05	54.20													
		Tekle-Haimanot HC & Arada HC, Addis												73.66					
		Tekle-Haimanot HC & Kazanchis HC, A											44.67						
		Outside major urban areas	Adaitu		32.76	41.82													
			Arbaminch		8.24														
	Assela			12.88															
	Awasa			15.38															
	Awash Arba, AwashArba			23.33															
	Bahir Dar			35.80	48.16	54.97	69.40												
	Dessie			38.14															
	Dire Dawa			18.01	30.47	48.09													
	Gewane			30.25															
	Goba Robi			12.21															
	Gondar/Gonder, Gonder			14.71															
	Jima/Jimma, Jimma			9.71															
	Mekele			24.24															
	Meteka			17.72															
	Metu			5.34	12.50	36.36													
	Moyale		16.16																
	Nazareth, Nazereth		19.52	31.07	52.38	65.55													
Nekemte		15.33	31.29																
Shashemene		19.38																	
Injecting drug users	Major urban areas	Addis Ababa (1), Addis Ababa	8.14	26.98		34.00	43.00												
		Addis Ababa (2), Addis Ababa		36.20				32.00											
Men having sex with men	Major urban areas	Addis Ababa (1), Addis Ababa				22.00							45.34						
		Outside major urban areas	Harar:Harar TB Centre & 2 Hospitals						22.01										
			Not Specified		4.55														