

Epidemiological Fact Sheet on HIV and AIDS

Core data on epidemiology and response

Canada

2008 Update



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The 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 UNAIDS and WHO. The UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance, initiated in November 1996, is the coordination and implementation mechanism for UNAIDS and WHO to compile and improve the quality of data needed for informed decision-making and planning at national, regional and global levels. 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 WHO Regional Offices, national AIDS programmes and a number of national and international 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 collaboration around the globe. Within this framework, the Fact Sheets collate the most recent country-specific data on HIV prevalence and incidence, together with information on behaviour determined to be important in understanding the epidemic. Information was not available on all of the agreed indicators for many countries in 2007. However, these updated Fact Sheets do contain a wealth of information that allows for the identification of strengths in currently existing programmes and for comparisons between countries and regions. The Fact Sheets may also be instrumental in identifying potential partners when planning and implementing surveillance systems. The Working Group encourages all programme managers, as well as national and international experts, to communicate new information to the Working Group whenever it becomes available. The Working Group also welcomes suggestions for additional indicators or information that has proven to be useful in national or international decision-making and planning.

About the UNGASS 2008 Indicators

In June 2001, Heads of State and Representatives of Governments met at the United Nations General Assembly Special Session (UNGASS) dedicated to HIV and AIDS. At the meeting, Heads of State and Representatives of Governments issued the Declaration of Commitment on HIV and AIDS. The Declaration remains a powerful tool that is helping to guide and secure action, commitment, support and resources for the AIDS response (1). The UNAIDS Secretariat facilitates the monitoring of national and global progress against the Declaration of Commitment. This monitoring is based on the biennial submission of national governments of Country Progress reports (2). In their Country Progress Reports, countries are requested to report against a set of 25 core indicators. These indicators were developed and refined over three successive rounds of reporting by the UNAIDS Monitoring and Evaluation Reference Group, in close consultation with international agencies, civil society and national governments. These indicators represent the minimum information necessary to track national responses to the epidemic.

Footnotes:

1. Country Progress reports are available on the UNAIDS website at:

<http://www.unaids.org/en/KnowledgeCentre/HIVData/CountryProgress/2007CountryProgressAllCountries.asp>

2. More information on the Special Session, the Declaration and the monitoring of the Declaration can be found on the UNAIDS website:

<http://www.unaids.org/en/AboutUNAIDS/Goals/UNGASS>.

About indicators on Health sector's response towards Universal Access to HIV/AIDS prevention, care and treatment

Progress in the health sector is key to achieving universal access to HIV/AIDS prevention, treatment and care. WHO, as the UNAIDS co-sponsor leading the health sector response to HIV/AIDS, is committed since the 59th World Health Assembly in 2006 to monitor countries' health sector responses to HIV/AIDS, and report annually on global progress. Within this context, WHO has developed a core framework of 39 national level indicators to monitor the availability, coverage, outcomes and impact of priority health sector interventions for HIV prevention, treatment and care (1). The framework also includes indicators to monitor health system components to support scale-up, such as drug procurement and supply management and human resources. The selection of indicators has been guided by the principle of maximum alignment with related international monitoring processes, such as the UNGASS Declaration of Commitment and indicators to monitor interventions for women and children in collaboration with UNICEF and the Interagency Task Team on the Prevention of HIV Infection in Pregnant Women, Mothers and their Children. Data are collected from national programmes on an annual basis in collaboration with partners. A global report on progress in the health sector towards universal access is published each year, bringing together data from national programmes, surveys and scientific literature (2).

Footnotes:

(1) Framework for monitoring and reporting on the health sector's response towards universal access to HIV/AIDS treatment, prevention, care and support, WHO 2007.

http://www.who.int/hiv/universalaccess2010/UAframework_Final%20Nov.pdf

(2) Towards universal access: Scaling up priority HIV/AIDS interventions in the health sector, Progress Report 2008. WHO, UNAIDS, UNICEF 2008. <http://www.who.int/hiv/mediacentre/2008progressreport/en/index.html>

Basic indicators

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

Demographic Data	Year	Estimate	Source
Total population (thousands)	2007	32 876	UN Population Division
Population aged 15-49 (thousands)	2007	16 574	UN Population Division
Female population aged 15-24 (thousands)	2007	2 164	UN Population Division
Annual population growth rate (%)	2005-2010	0.9	UN Population Division
% of population in urban areas	2007	80	UN Population Division
Crude birth rate (births per 1000 pop.)	2007	10.3	UN Population Division
Crude death rate (deaths per 1000 pop.)	2007	7.4	UN Population Division
Maternal mortality ratio (per 100 000 live births)	2005	7	WHO, UNICEF, UNFPA and The World Bank, 2007
Life expectancy at birth (years)	2006	81	World Health Statistics 2008, WHO
Total fertility rate (per woman)	2006	1.5	WHO Statistical Information System (WHOSIS)
Infant mortality rate (per 1000 live births)	2006	5	World Health Statistics 2008, WHO
Under 5 mortality rate (per 1000 live births)	2006	6	World Health Statistics 2008, WHO

Socio-economic data	Year	Estimate	Source
Gross national income, ppp, per capita (Int.\$)	2006	36 280	World Bank
Per capita total expenditure on health (Int.\$)	2005	3 419	World Health Statistics 2008, WHO
General government expenditure on health as % of total government expenditure on health (Int. \$)	2005	17.5	World Health Statistics 2008, WHO
Adult literacy rate, both sexes (%)	2006	...	UNESCO
Adult literacy rate, male (%)	2006	...	UNESCO
Adult literacy rate, female (%)	2006	...	UNESCO
Net primary school enrolment ratio, male (%)	2006	...	UNESCO
Net primary school enrolment ratio, female (%)	2006	...	UNESCO
Human Development Index (ranking)	2007/2008	4	UNDP
Human Poverty Index (ranking)	2007/2008	N/A	UNDP

	2005	2006	2007
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National funds spent by governments on HIV and AIDS from domestic sources (million USD)

Source:

HIV and AIDS estimates

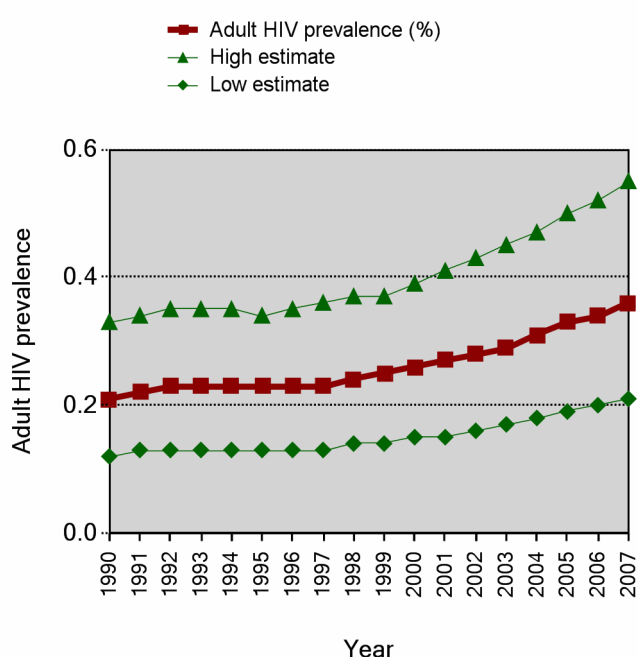
The estimates and data provided in the following tables relate to 2001 and 2007 unless stated otherwise. These estimates have been produced and compiled by UNAIDS/WHO. They have been shared with national AIDS programmes for review and comments, but are not necessarily the official estimates used by national governments. In order to calculate regional totals, older data or regional models were used to produce minimum estimates for these countries. The estimates are given in rounded numbers. However, unrounded numbers were used in the calculation of rates and regional totals, so there may be minor discrepancies between the regional/global totals and the sum of the country figures. The new estimates in this report are presented together with ranges, called 'plausibility bounds'. These bounds reflect the certainty associated with each of the estimates. The wider the bounds, the greater the uncertainty surrounding an estimate. The extent of uncertainty depends mainly on the type of epidemic, and the quality, coverage and consistency of a country's surveillance system. The general methodology and tools used to produce the country-specific estimates in the table have been described in a series of papers in *Sexually Transmitted Infections* 2008, 84 (Suppl 1). The estimates produced by UNAIDS/WHO are based on methods and on parameters that are informed by advice given by the UNAIDS Reference Group on HIV/AIDS Estimates, Modelling and Projections.

Estimated number of adults and children living with HIV

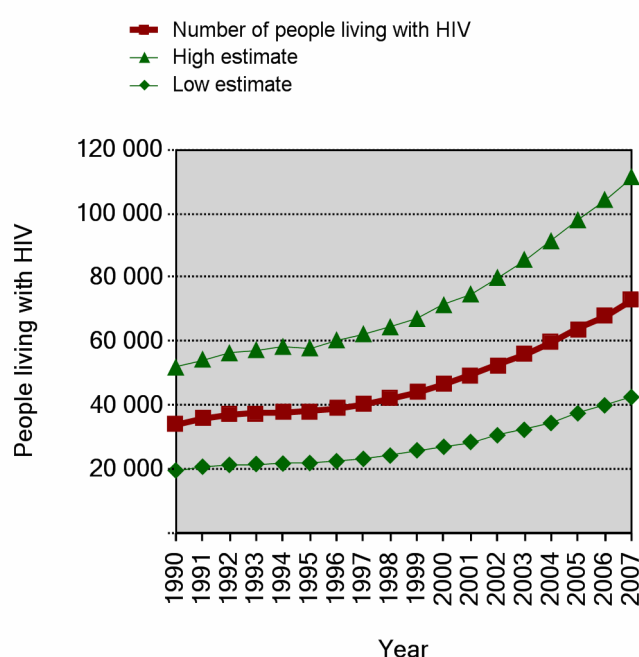
These estimates include all people whether or not they have developed symptoms of AIDS.

	2001	2007
Adults (15+) and children	49 000	73 000
Low estimate	29 000	43 000
High estimate	75 000	110 000
Adults (15+)	49 000	73 000
Low estimate	28 000	43 000
High estimate	74 000	110 000
Children (0-14)		
Low estimate		
High estimate		
Adult rate (15-49) (%)	0.3	0.4
Low estimate	0.2	0.2
High estimate	0.4	0.6
Women (15+)	13 000	20 000
Low estimate	7 200	11 000
High estimate	20 000	32 000

Estimated adult HIV (15-49) prevalence %, 1990-2007



Number of people living with HIV, 1990-2007



Source: UNAIDS/WHO, 2008

HIV prevalence among young people, 2007

	Male	Female
Prevalence among 15-24 year olds	0.4	0.2
Low estimate	0.2	0.1
High estimate	0.7	0.4

Source: UNAIDS/WHO, 2008

HIV prevalence among young people

Prevalence among young people in national population-based surveys over time

	2001	2002	2003	2004	2005	2006	2007
Male							
Female							

Source: UNAIDS/WHO, 2008

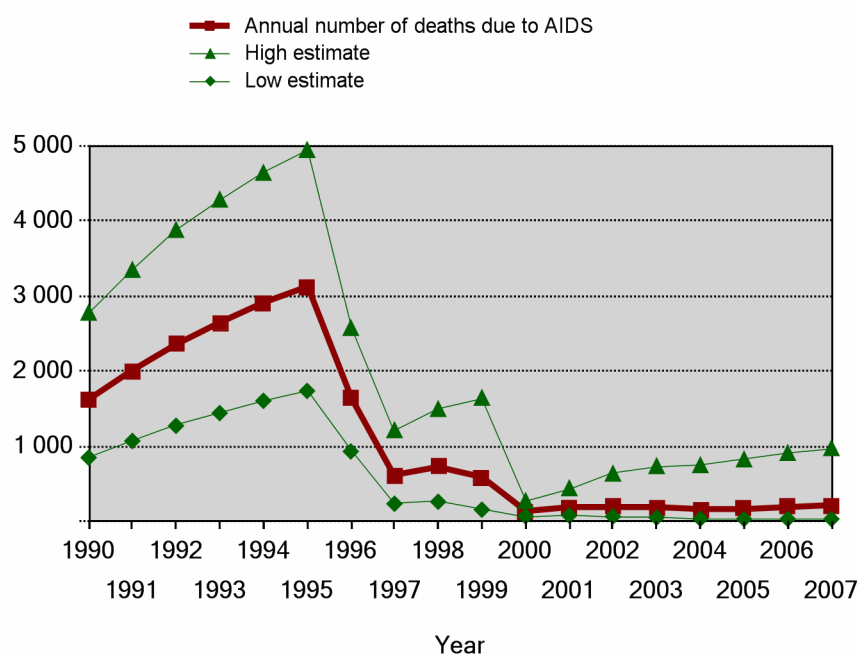
Estimated number of deaths due to AIDS

Estimated number of adults and children who died of AIDS

	2001	2007
Adults and children	<200	<500
Low estimate	<100	<100
High estimate	<500	970

Source: UNAIDS/WHO, 2008

Estimated number of deaths due to AIDS 1990-2007



Estimated number of orphans (0-17) due to AIDS

This indicator is presented only for countries with generalized epidemics.

Estimated number of children who have lost their mother or father or both parents to AIDS and who were alive and under age 17 in 2001 and 2007

Estimated number of orphans	2001	2007
Current living orphans		
Low estimate		
High estimate		

Source: UNAIDS/WHO, 2008

	2001	2007
Maternal orphans		
Low estimate		
High estimate		
Paternal orphans		
Low estimate		
High estimate		
Dual orphans		
Low estimate		
High estimate		

Source: UNAIDS/WHO, 2008

	Year	Total
Orphans: School attendance		
Support for children affected by HIV and AIDS		

UNGASS 12 notes on values:

*Data collection method differs from the UNGASS recommended methodology

**Demographic and Health Survey value provided by MEASURE DHS (www.measuredhs.com).

***Multiple Indicator Cluster Survey based on small denominators, typically 25-49 unweighted cases

****Differs from value provided by UNICEF

UNGASS 10 notes on values:

*Methodology not harmonized with UNGASS 2008 guidelines

***Source is the Multiple Indicator Cluster Survey (UNICEF MICS)

Source:

HIV prevalence in different populations

This section contains information about HIV prevalence in different populations. The data reported in the tables below are based on a 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 the year of survey. Studies conducted in the same year, 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 in Annex 1. 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 prevalence tables and maps

Group	Area	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
-------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

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 Public Health Information and Geographic Information Systems (GIS) unit within the Information, Evidence and Research (IER) cluster of WHO, 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 HIV prevalence among pregnant women. For non-generalized epidemics, specific populations of interest are shown, depending on the country. A complete listing of data is available in Annex 1 of this fact sheet.

Note on methodology: Data obtained from the United States Bureau of the Census database was used as the basis for these maps. Some sentinel site locations have been displaced for visual clarity. In some cases, the location of certain sentinel sites was unable to be determined. Therefore, the sentinel sites the maps presented here, are in many cases, a subset of the available data presented in Annex 1.



Reported HIV and AIDS cases

Following UNAIDS and WHO recommendations, AIDS case reporting is conducted in most countries and HIV case reporting is conducted in some countries. In 2006, WHO recommended to report HIV infection cases and HIV advanced infection according to the new revision of case definitions (WHO case definitions of HIV for surveillance and revised clinical staging and immunological classification of HIV-related disease in adults and children, <http://www.who.int/hiv/pub/guidelines/hivstaging/en/index.html>). 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 low- and middle-income countries due to weaknesses in the health care and epidemiological systems. In addition, countries might continue to use different AIDS case definitions.

A 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, HIV and AIDS or HIV advanced infection 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. HIV advanced infection 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 high-income countries with the introduction of antiretroviral therapy (ART).

Reported AIDS cases

	1990-95	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Total
Male														
Female														
Both sexes														

Source:

Reported HIV cases

A case of HIV infection is defined as an individual with HIV infection irrespective of clinical stage confirmed by laboratory criteria according to country definitions and requirements.

	1990-95	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Total
Male														
Female														
Both sexes														

Source:

Note: In some instances, the number in the total column is not the sum of the individual years due to differing reporting, estimation processes or available data.

Health services and care indicators

HIV prevention strategies depend on the twin efforts of care and support for those living with HIV, 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 HIV testing and blood screening for HIV, help to measure the capacity of health services to response to HIV and AIDS - related issues.

Access to health care

Indicators	Year	Estimate	Source
Population with access to health services - total (%)			
Population with access to health services - urban (%) urban			
Population with access to health services - rural (%) rural			
Contraceptive prevalence rate - any method(%)			
Contraceptive prevalence rate - condoms (%)			
Skilled attendant at delivery (%)	2000-2006	98	WHO/UNICEF, 2008
One-year-old children fully immunized - DPT3 (%)	2006	94	WHO/UNICEF
One-year-old children fully immunized - Measles (%)	2006	94	WHO/UNICEF
Facilities providing antenatal care which also provide HIV testing and counselling (%)			

Antiretroviral therapy

Estimated number of people receiving and needing antiretroviral therapy at the end of each year are rounded. The coverage estimates are based on the estimated unrounded numbers of people - all age groups - receiving antiretroviral therapy and the estimated unrounded need for antiretroviral therapy (based on UNAIDS/WHO methodology). The ranges in coverage estimates are based on plausibility bounds in the denominator: that is, low and high estimates of need. No coverage has been calculated where the estimated need is less than 500. Reported numbers of people receiving treatment in 2006 and 2007 are published in the document mentioned below.

Source: 2006 and 2007 data are derived from: (1) WHO, UNAIDS and UNICEF. Towards universal access: scaling up priority HIV/AIDS interventions in the health sector. Progress report, June 2008. Geneva, World Health Organization, 2008 and for earlier years from (2) the WHO/UNAIDS Global Online Database.

Reported number of sites that are providing antiretroviral therapy

	2005	2007
Total		

Source: UNAIDS/WHO, 2008

Estimated number of people receiving antiretroviral therapy

	2004	2005	2006	2007
Both sexes				
Low estimate				
High estimate				

Source:

Estimated number of people needing antiretroviral therapy based on UNAIDS/WHO methodology

	2004	2005	2006	2007
Both sexes				
Low estimate				
High estimate				

Source:

Estimated antiretroviral therapy coverage (%)

	2004	2005	2006	2007
Both sexes				
Low estimate				
High estimate				

Source:

Paediatrics estimates, 2007

Reported number of children aged under 15 years receiving antiretroviral therapy

Reported number	
Date of report	

Source:

Infants born to women living with HIV receiving co-trimoxazole prophylaxis within two months of birth, 2007

Reported number	
Estimated coverage (%)	

Source:

Number of people aged 15 years and over who received HIV testing and counselling in the last 12 months and know the result

The number refers to anyone receiving HIV testing and counselling (TC) in the last 12 months, regardless of the setting. These numbers will be aggregated from records where TC is recorded, and can include records from ANC, TB clinics, hospitals etc, standalone VCT sites and work sites, and mobile and home based TC and any other venue or approach.

	2006	2007
Male		
Female		
Both sexes		

Source:

Knowledge and behaviour

In most countries the HIV epidemic is related to behaviours that expose individuals to the virus and so increase the risk of infection. Information on knowledge about HIV and the level and frequency of risk behaviours related to the transmission of HIV is important in identifying and better understanding populations most at risk for HIV. Many prevention programs focus on increasing people's knowledge about sexual transmission, hoping to overcome the misconceptions that may be acting as a disincentive to behaviour change toward safer behaviours. Information on behaviours is also critical for assessing changes over time as a result of prevention efforts. One of the main goals of second generation HIV surveillance systems is to promote a standard set of indicators to monitor trends in behaviours and to target prevention interventions. In most countries, it is important to collect information on higher risk male-male sex, on sexual behaviour among sex workers, on both injecting behaviour and sexual behaviour among injecting drug users, and on sexual behaviours in other groups that may be at higher risk. Finally, sexual behaviours among the general population and among young people are of interest in many countries, as the promotion of safer sex is at the core of HIV prevention programmes.

Percentage of young people aged 15-24 who both correctly identify two ways of preventing the sexual transmission of HIV and who reject two misconceptions about HIV transmission

	15-24		
Year	Both sexes	Male	Female

Source:

Percentage of young people aged 15-24 who have had sexual intercourse before the age of 15

	15-24		
Year	Both sexes	Male	Female

Source:

Percentage of women and men aged 15-49 who have had sexual intercourse with more than one partner in the last 12 months

	15-49	
Year	Male	Female

Source:

Percentage of women and men aged 15-49 who have had more than one partner the past 12 months reporting the use of a condom during their last sexual intercourse

Year	15-49	
	Male	Female

Source:

Prevention indicators

Prevention of mother-to-child transmission (PMTCT)

Estimated numbers of pregnant women living with HIV needing antiretroviral therapy to prevent mother-to-child transmission at the end of each year are rounded. The coverage estimates are based on the unrounded numbers of HIV-infected pregnant women receiving antiretroviral therapy and the estimated unrounded need for antiretroviral therapy (based on UNAIDS/WHO methodology). Ranges around the levels of coverage are based on the uncertainty ranges around the estimates of need. Point estimates and ranges are given for countries with a generalized epidemic, whereas only ranges are given for countries with a concentrated epidemic. In general, the uncertainty around the estimates of need for preventing mother-to-child transmission in countries with a concentrated epidemic does not allow for releasing point estimates.

Source: (1) WHO, UNAIDS and UNICEF. Towards universal access: scaling up priority HIV/AIDS interventions in the health sector. Progress report, June 2008. Geneva, World Health Organization, 2008. (2) UNAIDS, UNICEF and WHO. Children and AIDS: second stocktaking report, New York, UNICEF, 2008. (3) the WHO/UNAIDS Global Online Database.

Number of pregnant women living with HIV who received antiretrovirals for preventing mother-to-child transmission

	2004	2005	2006	2007
Total

Source: UNAIDS/WHO, 2008

Estimated number of pregnant women living with HIV needing antiretrovirals for preventing mother-to-child transmission based on UNAIDS/WHO methodology

	2004	2005	2006	2007
Total
Low estimate				
High estimate				

Source: UNAIDS/WHO, 2008

Estimated percentage of pregnant women living with HIV who received antiretrovirals for preventing mother-to-child transmission

	2004	2005	2006	2007
Total
Low estimate				...
High estimate

Source: UNAIDS/WHO, 2008

Antenatal care coverage (%)

Year	Value
2000-2006	...

* Data refer to the most recent year available during the period specified.

Source: WHO/UNICEF, 2008

Prevention indicators among injecting drugs users

	Number of centers	Number of people attending services	Estimation of coverage	Year
Needle exchange programs				
Opioid substitute therapy				

Source:

Percentage of donated blood units screened for HIV in a quality-assured manner

Percentage
100

Source: UNGASS Country Progress Reports 2008
29/07/08

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 and 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.

- United Nations Population Division
- 2007 Report on the global AIDS epidemic
- United Nations Development Programme
- United Nations Educational, Scientific and Cultural Organization
- UNGASS Country Progress Reports 2008
- WHOSIS
- WHO, UNICEF, UNFPA and The World Bank, 2007
- WHO/UNICEF estimates of national coverage for year 2004 (as of September 2005).
(http://www.who.int/immunization_monitoring/routine/immunization_coverage/en/index4.html)
- WHO/UNICEF, 2008
- World Bank
- World Health Statistics 2008, WHO

Websites

Annex: HIV surveillance prevalence by site

Group	Area	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
-------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------