

2006 Update



Nicaragua

EPIDEMIOLOGICAL FACT SHEETS ON HIV/AIDS AND SEXUALLY TRANSMITTED INFECTIONS

December 2006



HIV/AIDS estimates

The estimates and data provided in the following tables relate to 2005 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* 2006, 82 (Suppl x). 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/AIDS, end of 2003 and 2005

These estimates include all people with HIV infection, whether or not they have developed symptoms of AIDS.

	2003	2005
Adults (15+) and children	5900	7300
Low estimate	3200	3900
High estimate	14 000	18 000
Adults (15+)	5800	7200
Low estimate	3100	3900
High estimate	14 000	17 000
Children (0-14)	N/A	N/A
Low estimate	N/A	N/A
High estimate	N/A	N/A
Adult rate (15-49) (%)	0.2	0.2
Low estimate	0.1	0.1
High estimate	0.5	0.6
Women (15+)	1300	1700
Low estimate	580	780
High estimate	3100	4200

Source: 2006 Report on the global AIDS epidemic

Estimates 2005	Men	Women
Prevalence among 15-24 year olds	N/A	N/A
Low estimate		
High estimate		

Source: 2006 Report on the global AIDS epidemic

HIV prevalence among young people

	2000	2001	2002	2003	2004	2005
Prevalence among 15-24 year olds						
Prevalence among 15-24 pregnant women						

Source: 2006 Report on the global AIDS epidemic

Estimated number of deaths due to AIDS

Estimated number of adults and children who died of AIDS:

	2003	2005
Adults and children	<500	<500
Low estimate	N/A	N/A
High estimate	<1000	<1000

Source: 2006 Report on the global AIDS epidemic

Estimated number of orphans due to AIDS

Nb: only for 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 at the end of 2005:

Estimated number of orphans	2003	2005
Current living orphans	N/A	N/A
Low estimate	N/A	N/A
High estimate	N/A	N/A

Source: 2006 Report on the global AIDS epidemic

	2003	2005
Maternal orphans		
Low estimate		
High estimate		
Paternal orphans		
Low estimate		
High estimate		
Dual orphans		
Low estimate		
High estimate		

Source:

	Year	Total
Education ratio		
External support for OVC		

Source:

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 WHO and UNAIDS. 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 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 behaviour (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 2005. 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 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.

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)	2005	5487	UN Population Division
Population aged 15-49 (thousands)	2005	2808	UN Population Division
Female population aged 15-24 (thousands)	2005	598	UN Population Division
Annual population growth rate (%)	1995-2004	1.8	UN Population Division
% of population in urban areas	2005	58.1	UN Population Division
Crude birth rate (births per 1000 pop.)	2005	27.9	UN Population Division
Crude death rate (deaths per 1000 pop.)	2005	4.9	UN Population Division
Maternal mortality rate (per 100 000 live births)	2000	230	World Health Report 2006, WHO
Life expectancy at birth (years)	2004	69	World Health Report 2006, WHO
Total fertility rate (per woman)	2004	3.2	World Health Report 2006, WHO
Infant mortality rate (per 1000 live births)	2004	31	UNICEF / WHO
Under 5 mortality rate (per 1000 live births)	2004	38	World Health Report 2006, WHO

SOCIO-ECONOMIC DATA	YEAR	ESTIMATE	SOURCE
Gross national income, ppp, per capita (Int.\$)	2004	3300	World Bank
Per capita total expenditure on health (Int.\$)	2003	208	WHO
UN Human Development Index (ranking)	2005	112	UNDP Human Development Report 2005
General government expenditure on health as % of total expenditure on health	2003	48.4	WHO
Adult literacy rate (%)	2000-2004	76.7	UNESCO
Male literacy rate (%)	2000-2004	76.8	UNESCO
Female literacy rate (%)	2000-2004	76.6	UNESCO
Net primary school enrolment ratio, male (%)	1998-2004	86	World Bank
Net primary school enrolment ratio, female (%)	1998-2004	85	World Bank
Human Poverty Index (ranking)	2005	40	UNDP Human Development Report 2005

	2001	2002	2003	2004	2005
National funds spent by governments on HIV/AIDS from domestic sources (US\$)	3 462 620	3 371 617	3 513 100	3 260 503	

Source: UNGASS CR and SIDALAC

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HIV prevalence in different populations

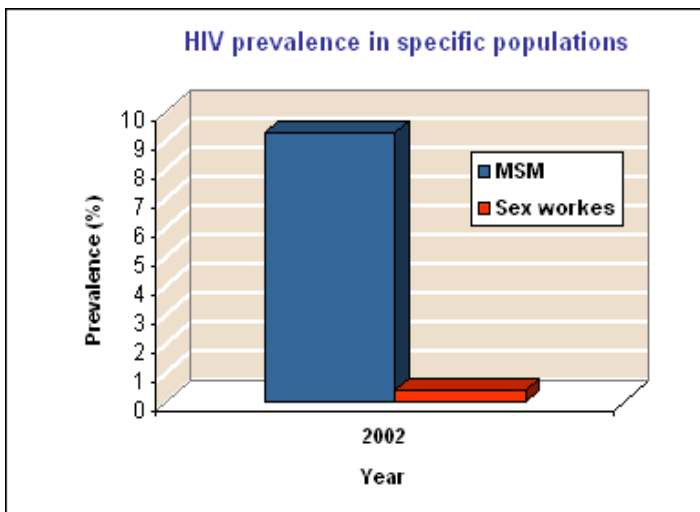
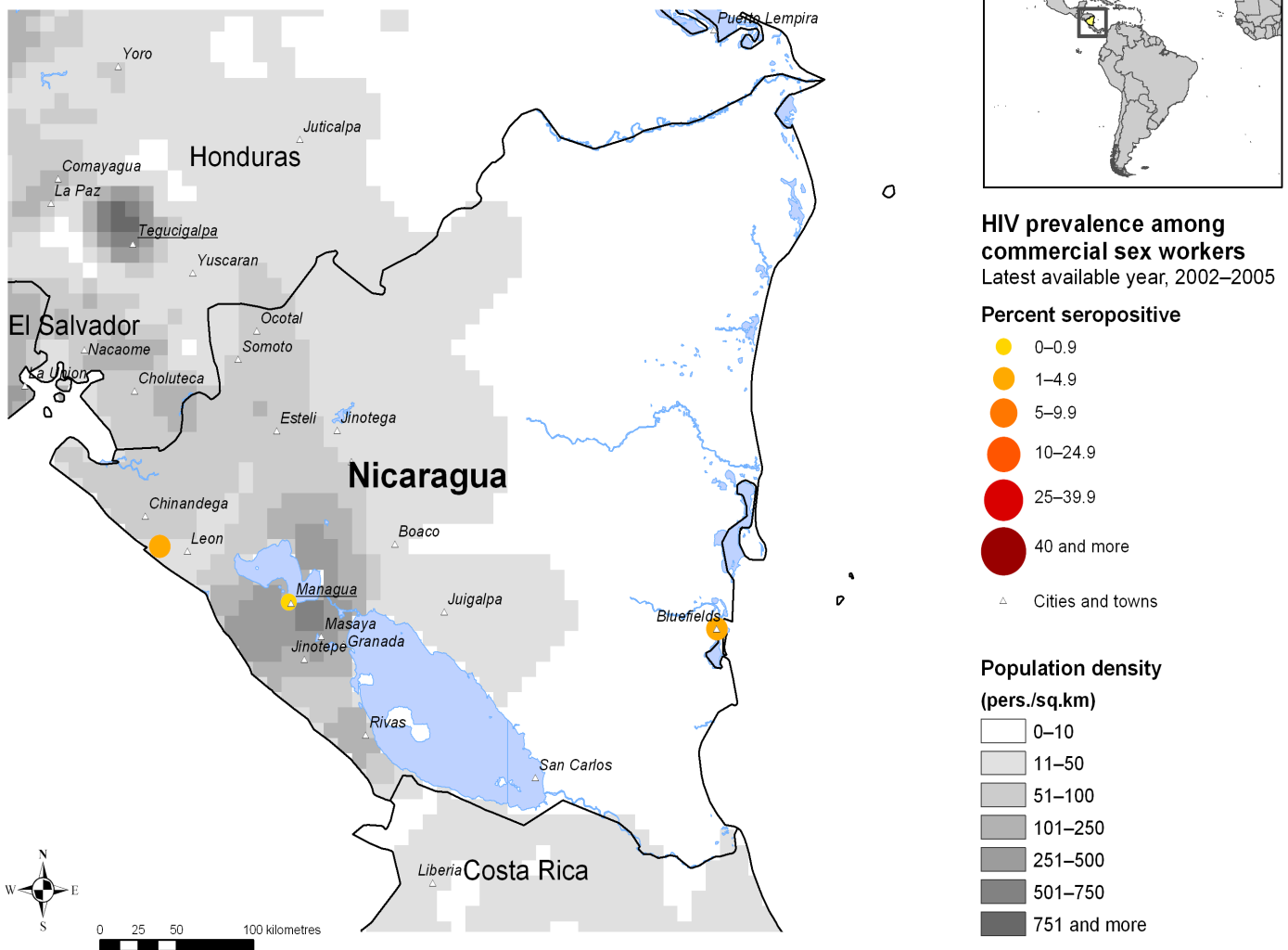
This section contains information about HIV prevalence in different populations. The data reported in the tables below are mainly based on the HIV database maintained by the United States Bureau of the Census where data from different sources, including national reports, scientific publications and international 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 prevalence

Group	Area	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
Pregnant women																		
Sex workers	Major urban areas	N-Sites	1	1				1	1		1	1		1				
		Minimum	1.6	0.8					1.5	1.3		2	0.9		0			
		Median	1.6	0.8					1.5	1.3		2	0.9		0.2			
		Maximum	1.6	0.8					1.5	1.3		2	0.9		0.4			
	Outside major urban areas	N-Sites							1	1					2			
		Minimum							0.2	0.2					1.1			
		Median							0.2	0.2					1.5			
		Maximum							0.2	0.2					1.9			
Injecting drug users																		
STI patients																		
Men having sex with men	Major urban areas	N-Sites												1				
		Minimum												9.3				
		Median												9.3				
		Maximum												9.3				
	Outside major urban areas	N-Sites							1									
		Minimum							1.5									
		Median							1.5									
		Maximum							1.5									
Tuberculosis patients	Major urban areas	N-Sites	1															
		Minimum	0															
		Median	0															
		Maximum	0															
	Outside major urban areas	N-Sites				1												
		Minimum				0												
		Median				0												
		Maximum				0												

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 and GIS 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.



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 2006, all rights reserved.

Reported HIV/AIDS cases

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).

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Males																	
Females																	
Total									34	45	67	80	72	105	90	23	786

Reported HIV cases

A case of HIV infection is defined as an individual with HIV infection irrespective of clinical stage (including severe or stage 4 clinical disease) confirmed by laboratory criteria according to country definitions and requirements.

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Males											
Females											
Total											

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.

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 syndromatic reporting

Genital discharge

Reported cases	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Males											

Source:

Genital ulcers

Reported cases	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Males											
Females											
Total											

Source:

STI etiological reporting

Chlamydia

Reported cases	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Males											
Females											
Total											

Source:

Gonorrhoea

Reported cases	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Males											
Females											
Total											

Source:

Syphilis

Reported cases	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Males											
Females											
Total											

Source:

Herpes simplex

Reported cases	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Males											
Females											
Total											

Source:

Syphilis prevalence, women

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

Syphilis prevalence, ANC women

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total											

Prevalence of curable STIs among specific populations

Prevalence of curable STIs among female sex workers

	Year	Area	Rate	Range
Chlamydia				
Source:				

	Year	Area	Rate	Range
Gonorrhoea				
Source:				

	Year	Area	Rate	Range
Syphilis				
	2002-2003	Urban	7.8	
Source: Ministerio de Salud de Nicaragua. Estudio Multicéntrico Centroamericano de Prevalencia de VIH/ITS y Comportamientos en Mujeres Trabajadoras Comerciales del Sexo en Nicaragua.				

	Year	Area	Rate	Range
Trichomoniasis				
	2002-2003	Urban	12.6	
Source: Ministerio de Salud de Nicaragua. Estudio Multicéntrico Centroamericano de Prevalencia de VIH/ITS y Comportamientos en Mujeres Trabajadoras Comerciales del Sexo en Nicaragua.				

Prevalence of curable STIs among other specific populations

Specific populations according to the epidemic pattern of the country

	Year	Area	Rate	Range
Chlamydia				
<i>Source:</i>				

	Year	Area	Rate	Range
Gonorrhoea				
<i>Source:</i>				

	Year	Area	Rate	Range
Syphilis				
<i>Source:</i>				

	Year	Area	Rate	Range
Trichomoniasis				
<i>Source:</i>				

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 (%)	2001	68.6	UNPOP
Percentage of contraceptive users using condoms			
% of births attended by skilled health personnel	2001	67	UNICEF
% of 1-yr-old children fully immunized - DPT	2004	79	WHO/UNICEF
% of 1-yr-old children fully immunized - Measles	2004	84	WHO/UNICEF
% of ANC clinics where HIV testing is available			

Estimated number of adults (15+) in need of treatment

Total number of adults needing antiretroviral therapy

	2003	2005
Both sexes	600	800
Low estimate	300	400
High estimate	900	1200

Source: WHO and UNAIDS, March 2006

Estimated number of people receiving antiretroviral therapy

Total number of people receiving antiretroviral therapy at end of each year

	2003	2005
Males		
Females		
Both sexes	<200	<200

Source: Based on the most recent calculated ART need estimates by WHO and UNAIDS, as of March 2006.

Coverage	2003	2005
Both sexes	2%	16%

Source: WHO and UNAIDS, March 2006

Comments: See also the paediatrics estimates section on the next page, as the ART need among children should also be taken into account for estimating ART coverage.

Services providing antiretroviral therapy

Reported number of sites that are providing antiretroviral therapy

	2003	2005
Public		
Private		
Total		6

Source: (total 2005) Annex 3: Progress on Global Access to HIV Antiretroviral Therapy, A Report on "3 by 5" and Beyond. Geneva, WHO and UNAIDS, March 2006.

Comments:

Paediatrics estimates, 2005

	Total	Source
Children living with HIV		
Low estimate		
High estimate		
Children in need of ART	N/A	
Low estimate	N/A	
High estimate	N/A	<i>WHO and UNAIDS, March 2006</i>
Children receiving ART		
Children in need of cotrimoxazole	N/A	
Low estimate	N/A	
High estimate	N/A	<i>WHO and UNAIDS, March 2006</i>
Children receiving cotrimoxazole		

Comments:

Coverage of HIV testing and counselling

Number of public, private and NGO sites providing testing and counselling services.

	Year	Area	Total number of sites
Public sector			
Private sector			
NGOs			
Total			

Source:

Number of people counselled and tested over time

Number of people who have been tested and counselled in the country.

	2003	2004	2005
Males			
Females			
Both sexes			

Source:

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.

	Total	Urban	Rural	Year
Males				
Females				

Source:

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.

	Total	Urban	Rural	Year
Males				
Females	17			2001

Source: DHS

Age-mixing in sexual partnerships among young women

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

	Total	Urban	Rural	Year
Females				

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	Males	Females

Source:

Ever used a condom

Percentage of people who ever used a condom.

	Age	Total	Urban	Rural	Year
Males					
Females					

Source:

Adolescent pregnancy

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

	Year	Percentage

Source:

Age at first sexual experience

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

	Year	Males	Females

Source: DHS

Prevention indicators

Prevention of mother-to-child transmission (PMTCT) nationwide

Infection of HIV from an HIV-positive mother to her child during pregnancy, labour, delivery of breastfeeding is called mother-to-child transmission (MTCT). An estimated 530 000 (410 000 - 660 000) children were newly infected in 2006, mainly through mother-to-child transmission. The vast majority of these infections are preventable, yet coverage levels are remarkably low in most resource-limited countries.

Prevention mother-to-child transmission

	Total	Year	Comment
Antenatal care coverage (%), 1997--2005*	86	2005	
Number of pregnant women counselled on PMTCT services	3545	2005	
Estimated number of HIV-infected pregnant women	<200	2005	
Number of HIV-infected pregnant women who received ARVs for PMTCT	29	2005	
% of HIV-infected pregnant women who received ARVs for PMTCT	19	2005	

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

Source: UNAIDS/Unicef/WHO. *Children and AIDS: A stocktaking report, Actions and progress during the first year of "Unite for Children, Unite against AIDS".* New York, 2007.

Prevention indicators among injecting drugs users

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

Source:

	Estimated number of IDUs aged 15-65	IDU prevalence(%)	Year
Needle exchange programs			

Source:

Screening of blood transfusions nationwide

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.

	Percentage
Percentage of blood units transfused in the last 12 months that have been adequately screened for HIV according to national or WHO guidelines.	100%

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.

- Annex 3: Progress on Global Access to HIV Antiretroviral Therapy, A Report on "3 by 5" and Beyond. Geneva, WHO and UNAIDS, March 2006.
- 2006 Report on the global AIDS epidemic
- Based on the most recent calculated ART need estimates by WHO and UNAIDS, as of March 2006.
- Demographic Health Survey
- United Nations Population Division
- UNAIDS/Unicef/WHO. Children and AIDS: A stocktaking report, Actions and progress during the first year of "Unite for Children, Unite against AIDS". New York, 2007.
- UNDP Human Development Report 2005
- United Nations Educational, Scientific and Cultural Organization
- UNGASS CR
- UNGASS CR and SIDALAC
- UNICEF Global Database on Skilled Attendant at Delivery. The United Nations Children's Fund. (<http://www.childinfo.org/areas/deliverycare/countrydata.php>)
- UNICEF / WHO
- World Contraceptive Use 2005 database. Population Division, Department of Economic and Social Affairs, United Nations.
- UNPOP Dept. Of Economic and Social Affairs
- World Health Organization
- WHO - Regional Office for AMRO
- World Health Organization, 3 by 5
- WHO and UNAIDS, March 2006
- 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)
- World Bank
- World Health Report 2006, WHO
- Demographic Health Survey
- Ministerio de Salud de Nicaragua. Estudio Multicéntrico Centroamericano de Prevalencia de VIH/ITS y Comportamientos en Mujeres Trabajadoras Comerciales del Sexo en Nicaragua.
- Gorter, A. C., Z. E. Segura, E. Zuniga, et al. 2004 Scaling Up a Successful Research Project to Reach Vulnerable Populations with STI/HIV Care Through a Competitive Voucher... XV International AIDS conference, Bangkok, Thailand, 7/11-16, Poster WePeC6175.
- Nicaragua 1991 PAHO/WHO HIV Surveillance Pan American Health Organization/World Health Organization.
- PASCA 2000 Analisis de la Situacion de Nicaragua 1999 Proyecto Accion SIDA de Centro America (PASCA) CD-ROM.
- Low, N., G. D. Smith, A. Gorter, et al. 1990 AIDS and Migrant Populations in Nicaragua Lancet, vol. 336, no. 8782/8783, pp. 1593-1594.
- Nunez, C. A., R. J. Soto, K. G. Foreit, et al. 2002 Prevalence of HIV/STD among Men Who Have Sex with Men and Female Sex Workers - The Central American Multicenter Study of ... XIV International AIDS Conference, Barcelona, Spain, 7/7-12, Abstract LbOr03.
- Prado, F. 1997 Seroprevalencia de VIH y Sifilis en Trabajadoras Comerciales del Sexo en Nicaragua V Pan-American Conference on AIDS and XI Latin American Congress on STD, Lima, Peru, 12/3-6, Abstract PCS386.
- Segura, A. E., A. C. Gorter, E. Zuniga, et al. 2002 A Voucher Scheme to Reach Young Sex Workers (Including Glue-Sniffing Girls), to Treat Sexually Transmitted Infections and to ... XIV International AIDS Conference, Barcelona, Spain, 7/7-12, Abstract TuPeF5463.

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
Pregnant women																	
Sex workers	Major urban areas	Managua	1.6	0.8				1.5	1.3		2	0.9		0.2			
	Outside major urban areas	Bluefields												1.9			
		Corinto												1.1			
		Not specified							0.2	0.2							
Injecting drug users																	
STI patients																	
Men having sex with men	Major urban areas	Managua												9.3			
	Outside major urban areas	Not specified						1.5									
Tuberculosis patients	Major urban areas	Managua	0														
	Outside major urban areas	Not specified				0											