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WHO Report on Global Surveillance of Epidemic-prone Infectious Diseases

World Health Organization

Department of Communicable Disease Surveillance and Response

CHAPTER 9
HUMAN IMMUNODEFICIENCY VIRUS AND ACQUIRED IMMUNE DEFICIENCY SYNDROME (HIV/AIDS)

Background of the disease

AIDS (Acquired Immune Deficiency Syndrome) is caused by a virus, HIV (Human Immunodeficiency Virus) first isolated in 1983. It has been identified in over 200 countries and territories worldwide and is spreading rapidly in many affected populations, particularly in developing countries.

HIV belongs to an unusual group of viruses called retroviruses, which include viruses causing leukaemia in humans, cats, cattle and other animals, and certain other viruses found in monkeys, apes, sheep and pigs. Retroviruses also belong to a subgroup called lentiviruses, because they are slow to cause disease.

There are two main strains of HIV: HIV-1 that has caused the majority of infections and AIDS cases and HIV-2, which is concentrated in selected countries. Of the other known related viruses, a type of retrovirus found in many other primates (Simian Immunodeficiency Virus, SIV) may be the most likely contender for the origin of HIV. Different strains of SIV have been found in various monkey and ape species in Africa, and some cause an AIDS-like disease in their host. One of the most similar to HIV-1, however, is the SIV found in chimpanzees. Many viruses mutate, or change, more easily than more complex organisms. HIV itself has numerous varieties and has been shown to mutate even within an individual during the progress of the infection. AIDS develops in a HIV-positive person after years of infection, as HIV steadily weakens the body's immune system and increases its vulnerability to pneumonia, tuberculosis, diarrhoea, tumours and other opportunistic illnesses. With the number of people infected with HIV continuing to rise, the number of people falling sick and dying of AIDS will multiply.

While the origins of AIDS remain obscure, it is known that HIV occurred as long ago as the 1950s in isolated individuals. It began to be widespread in the mid- to late-1970s but, because of the long incubation period, the virus did not cause widespread disease until the 1980s. In its early stages the viral epidemic progresses unseen.

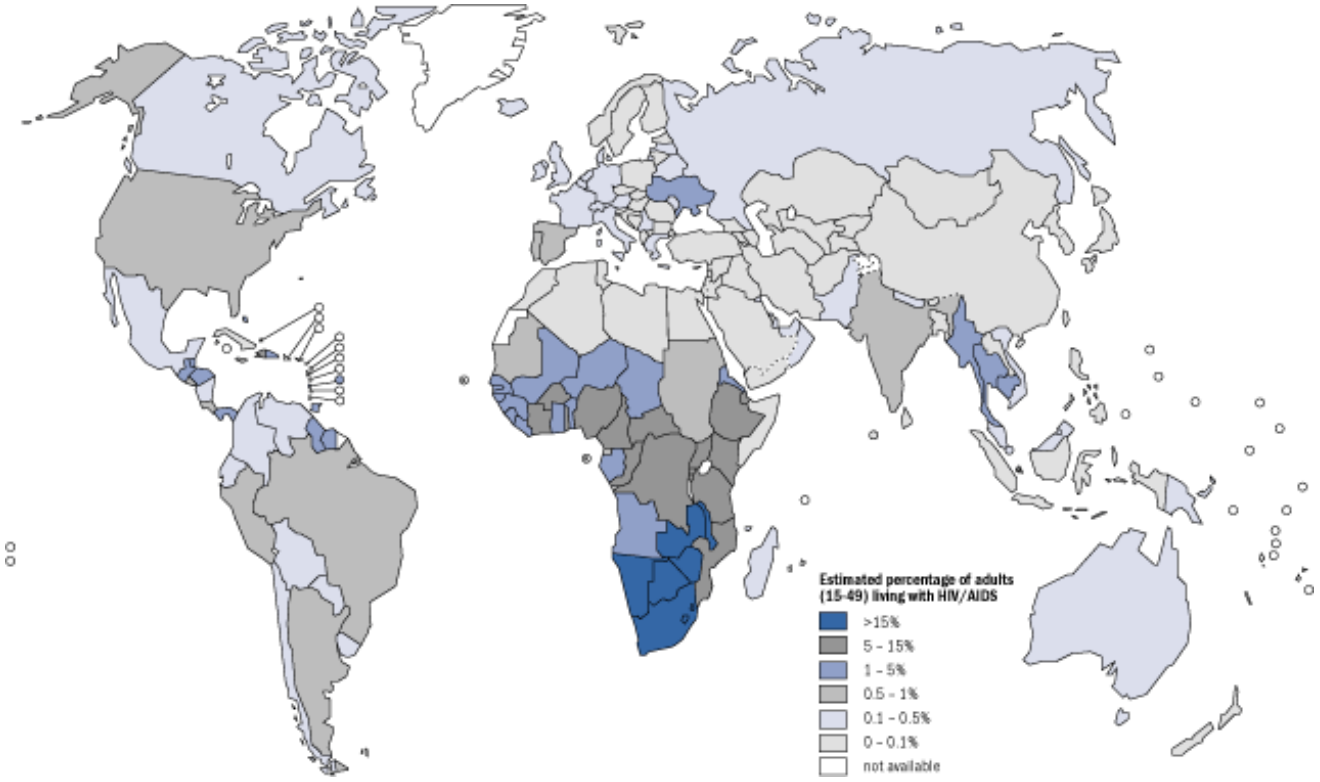
By the 1990s, however, AIDS itself reached epidemic proportions in many countries. Of the estimated 34.3 million people living with HIV at the end of 1999, 24.5 million live in sub-Saharan Africa, the hardest hit region. The estimated percentage of adults living with HIV reaches up to 26% in some countries in this region (Map 9.1). AIDS has become the main cause of death in parts of Africa and is responsible for the majority of adult hospital admissions in some cities. Many AIDS patients are never diagnosed, and their deaths may be attributed to other causes.

Transmission

HIV is easily killed outside the human body and therefore can only be transmitted directly from person to person, either by sexual contact, exchange of blood or body fluids or from mother to child. Sexual transmission of HIV is relatively inefficient and repeated unprotected exposures are normally required. Since the global HIV epidemic is driven mainly by sexual transmission, the level and intensity of risk behaviours (vaginal or anal unprotected sex) in a given community are the main determinants of the spread of the virus. Therefore, HIV incidence and prevalence can vary greatly from country to country and even within countries, depending on several factors, some well documented and others still being investigated. These factors may determine the probability of exposure to HIV infection (e.g. level and extent of risk behaviours, high HIV prevalence in the community), others may influence the probability of HIV transmission per exposure (e.g. the prevalence of other sexually transmitted infections (STIs), levels of condom use, circumcision). In view of the importance of these determinants, information

from behavioural surveillance studies and STI incidence and prevalence can help better explain epidemic curves and monitor the impact of interventions. The concept of 2nd generation HIV surveillance, introduced by WHO and UNAIDS, integrates AIDS and HIV surveillance with additional sources of essential data to better monitor the epidemic.[1]

Map 9.1 Estimated percentage of adults (15–49 years old) infected with HIV, as of 1999[2]



Description of the data

The worldwide spread of HIV and the development of AIDS are being closely monitored worldwide. HIV surveillance is carried out to assess the seriousness of the situation, to monitor the rate of HIV spread (its incidence and prevalence), to increase awareness of the medical, social, economic, political impact of the disease and to promote effective planning and policy in relation to HIV/AIDS.

For most purposes precise data are not needed, as long as the general trends and the range or order of magnitude of the existing infection can be measured. However, for some purposes, such as measuring the impact of specific interventions, or for testing the efficacy of vaccines and treatments, precise data must be obtained.

Both data on the reported number of clinical AIDS cases and on seroprevalence of HIV infection are being collected. In assessing the seriousness of the AIDS pandemic, the level of HIV infection in a population is more informative than the number of people who have already progressed to AIDS. HIV infection is usually measured by sentinel seroprevalence studies, that is, the regular testing of selected groups of people for the presence of antibodies to HIV.

[1] *Guidelines for second generation HIV surveillance*. World Health Organization and UNAIDS, 2000, WHO/CDS/EDC/2000.5.

[2] Source: Report on the global HIV/AIDS epidemic, UNAIDS/CO.13E.

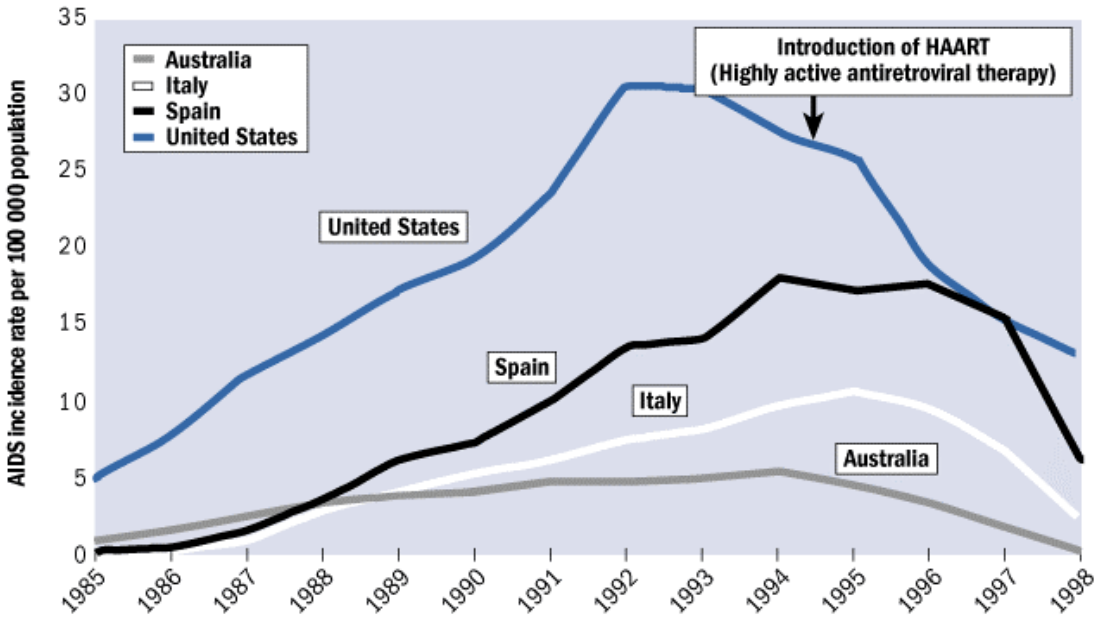
AIDS case surveillance

WHO has requested countries to submit regular reports on cases of AIDS since 1981 (Table 9.1). Updates on aggregated information by sex, age and presumed mode of transmission are gathered annually. The reported AIDS figures give a useful general overview but cannot be assumed to give an accurate or strictly comparable picture of the epidemic in different countries. While giving a general idea of the increase of AIDS in a population, the figures do not reflect the actual prevalence of AIDS disease so much as the accuracy of detection, diagnosis and reporting of the disease syndrome.

Nearly all countries have AIDS case-reporting systems in place, but the quality of the AIDS case reports varies significantly. The considerable variation in the percentage of AIDS cases that are reported to WHO from different countries reflects differences in the quality and extent of available services and testing facilities and the extent to which the population has access to and uses the facilities. Other main reasons for the variation in reporting between countries are the AIDS case definitions used, whether HIV testing is required or not for reporting, the availability and use of guidelines for diagnosing and reporting AIDS, the availability of HIV testing, the willingness and capacity to collect, compile and analyse the information and the regularity and completeness of reporting to WHO.

In spite of the limitations, information from reported AIDS cases is used in different ways. These include alerting countries to the presence of HIV in new areas or population groups, to assess the disease burden and AIDS-associated morbidity, to raise awareness and commitment, to provide information on the sociodemographic characteristics of the groups most affected, including sex ratios, age groups and main modes of transmission, and, in some situations, to estimate HIV prevalence and incidence through back-calculation.

Fig. 9.1 Reported cases of AIDS in industrialized countries[3]



[3] Source: UNAIDS/WHO working group on HIV/AIDS and STI surveillance.

HIV sentinel surveillance

The main epidemiological tool used to monitor trends in HIV infection prevalence in population groups is HIV sentinel surveillance. This is HIV screening of selected groups in the population, including those who are easily accessible, such as pregnant women (whose blood is routinely taken for other reasons) and people thought to be at high risk of HIV. This may include men who have sex with men, intravenous drug injectors, sex workers and people attending sexually transmitted infections (STI) clinics. Surveillance is usually repeated at the same sites at regular intervals (serial surveillance) to indicate how levels of infection are changing over time in specific areas and certain population groups. Levels of HIV in the wider population and among those at low risk are also important indicators of the parameters of the epidemic. Data may sometimes be obtained by screening blood donors, although their representativeness of the wider population is limited. Population-based studies, though complex and costly, can provide a better measure of the prevalence of HIV in the general population. However, the results of several population-based studies have shown that, in generalized epidemics, sentinel surveillance in pregnant women can be used as an indication (a proxy) for the prevalence in the adult, sexually-active population.

Strengths and weaknesses of the data

AIDS case surveillance

A number of factors need to be kept in mind when interpreting these data. In the first place, they come from surveillance systems of varying quality, and as such are subject to all the limitations of international comparisons. For example, the proportion of AIDS cases which are reported ranges widely, from less than 10% in some countries to almost 90% in others. In addition, countries use different AIDS case definitions. Stigma and discrimination associated with the disease may contribute to the reluctance in diagnosing and reporting AIDS cases. Next, the development of AIDS occurs fairly late in the natural history of the disease. For the most part, those who have developed AIDS in 1999 are those who were infected 5-10 years ago or even earlier. Thus, the AIDS data presented here reflect HIV transmission patterns that took place years ago. Also, there is considerable variation in the speed of progression from HIV to AIDS between children and adults. Very few of the children infected at birth survive beyond the age of five. Progression rates have also changed dramatically in industrialized countries, where the introduction of Highly Active Anti-Retroviral Therapy has contributed to decreases of up to 70% in the number of reported AIDS cases and related AIDS deaths (Fig. 9.1).

The term AIDS refers to the most severe clinical manifestations of infection with HIV. It includes a number of specific opportunist infections and/or associated diseases or cancers. People with AIDS usually die of associated illnesses like tuberculosis, chronic diarrhoea and wasting, pneumonia, meningitis, tumours or other infections that their immune system can no longer fight. The underlying cause of death, immunodeficiency caused by HIV, may not be recognized.

The AIDS figures given are reported numbers, not percentages of respective populations. This may lead to a biased perception of the seriousness of the epidemic in different populations unless relative population sizes are taken into account. Furthermore, AIDS figures only reflect the final, terminal stage of HIV infection, not the number of people who have the virus . The term "AIDS case" refers only to those people with full AIDS syndrome, that is, the final stage of HIV infection, who meet the national AIDS case definition. It does not include anyone with only mild symptoms of disease or those with HIV infection but no symptoms. Some people may even die of HIV-related problems without meeting the strict criteria for AIDS. Some claim that the term "AIDS case" itself is becoming less useful over time. Many medical practitioners are tending to use terms such as HIV or AIDS related illness instead.

HIV sentinel surveillance

HIV sentinel surveillance can provide more accurate indications of trends of HIV infection in the selected population groups and sites, particularly when conducted regularly at yearly intervals. HIV sentinel surveillance is a relatively simple and cheap epidemiological tool. Its flexibility and low cost make it feasible and sustainable even in resource poor settings. More than 10 years of experience have shown that, when conducted regularly, HIV sentinel surveillance can provide valuable information on the general trends in HIV prevalence in different population groups.

HIV sentinel surveillance may be conducted in existing health facilities (e.g. antenatal clinics (ANC), STI clinics) or in communities or sub-population groups, often through outreach work (e.g. sex workers, injecting drug users). Most surveys of HIV seroprevalence, particularly sentinel surveillance, are not based on a representative sample of the national populations but on convenient samples in selected sites that may at best represent only the specific population at the selected site. Therefore, while the use of unlinked anonymous testing methodologies can reduce the potential participation bias, selection biases remain a potential source of error. Other sources of bias or confounding surrounding HIV estimates based on limited convenient samples include:

Non-representative samples:

Samples of convenience, may be used, e.g. hospital or ANC patients. These people may not be truly representative and have higher or lower levels of HIV than the general population or population sub-groups.

Geographic bias:

If more easily accessible populations are sampled, they may represent people at higher risk than those in less accessible areas where there is lower prevalence of HIV; where facilities are used for sentinel surveillance, only areas with functioning facilities and sufficient patient load can be included in the system.

Trends

- WHO and UNAIDS have estimated that by the end of 1999, 34.3 million people were living with HIV worldwide. It is also estimated that during 1999, 5.4 million people (including 620 000 children below 15 years of old) became infected. (Table 9.2).

- Of the 5.4 million people newly infected with HIV in 1999, 4 million live in sub-Saharan Africa, the hardest-hit region. There are now more women than men among the 24.5 million adults and 1 million children estimated to be living with HIV/AIDS in sub-Saharan Africa.

- Asia continues to have relatively low prevalence rates. There are an estimated 5.6 million adults and children living with HIV/AIDS in South-East Asia.

- An estimated 1.3 million adults and children live with HIV in Latin America and the Caribbean. These are mainly men who have unprotected sex with other men and injecting drug users who share needles.

- In 1999, Eastern Europe and Central Asia have seen the sharpest increase in HIV infections. Most of the 420 000 people living with HIV/AIDS in these countries have been infected through injecting drug use.

- In the industrialized countries of North America, Western Europe and the Pacific, the availability of antiretroviral therapy has continued to reduce progression to AIDS, deaths and mother-to-child transmission of HIV. In most of these countries, however, the number of new HIV infections has remained relatively constant in recent years, with an estimated 1.5 million people living with HIV at the end of 1999.

- Unsafe blood transfusions, a largely preventable mode of transmission, are causing a relatively small but still significant number of AIDS cases in many regions, particularly in the Middle East. Perinatal transmission, now also preventable to a large extent, is an important cause of AIDS in sub-Saharan Africa. However, paediatric AIDS is more likely to be underreported due to the diagnostic difficulties in resource-poor settings.

- Assumed modes of HIV transmission in AIDS cases reported during recent years vary considerably from region to region For example, about 90% of reported AIDS cases in sub-Saharan Africa have reportedly been infected through heterosexual transmission. The proportion is much lower in other regions, although a substantial number of AIDS cases have been infected heterosexually in Asia, Latin America and North Africa/Middle East. The pattern in industrialized countries is mixed but it should be noted that heterosexual transmission is increasingly a cause of HIV infection in reported AIDS cases in these countries. In industrialized countries, Eastern Europe and Asia, a high proportion of reported infections is due to injecting drug use.

Conclusions

1. HIV/AIDS continues to spread in all regions of the world but at very different rates. The situation is most dramatic in sub-Saharan Africa, where the highest HIV prevalence rates are found and the number of AIDS cases will continue to rise in the next 5-10 years. An estimated 55% of infected adults in sub-Saharan Africa are women. Meanwhile, the introduction of effective therapies has reduced dramatically the progression to AIDS and death in industrialized countries.

2. The gap between rich and poor countries seems to be widening owing to the lack of access to effective therapies and to means for preventing mother-to-child transmission. On the other hand, the success in reducing AIDS mortality and perinatal infections in the industrialized countries cannot mask the failure of preventive programmes in reducing the rate of new infections.

3. Surveillance of HIV infections and AIDS cases remains an essential tool to monitor the epidemic, assess its impact and for planning effective interventions at national level. Collection and analysis of information at regional and global levels enables the close monitoring of the spread of HIV, the assessment of the burden of disease and advocacy for an intensified response to the epidemic.

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Publications and Documents

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WHO recommended surveillance standards, World Health Organization, 1999, WHO/CDS/CSR/ISR/99.2.

AIDS epidemic update, World Health Organization and UNAIDS, 1999.

Global AIDS Surveillance Part I, *Weekly Epidemiological Record*, 1999, 74**:** 401-408.

Global AIDS Surveillance Part II, *Weekly Epidemiological Record*, 1999, 74**:** 409-420.

Chin J, Public health surveillance of AIDS and HIV infections, *Bulletin of the World Health Organization*, 1990, 68(5):529-536.

Chin, J. and Mann JM, Global surveillance and forecasting of AIDS. *Bulletin of the World Health Organization*, 1989, 67:1-7 (1989).

Report on the global HIV/AIDS epidemic, World Health Organization and UNAIDS, 1998.

Web pages

WHO HIV/AIDS/STI web pages:
http://www.who.int/health-pages/hiv.htm

UNAIDS web pages:
http://www.unaids.org

Monitoring the AIDS Pandemic network:
http://www.hri.ca/partners/fxbcenter/aidsprogram/index.htm

United States Bureau of the Census:
http://www.census.gov:80/ftp/pub/ipc/www/hivaidsn.html

Centers for Disease Control:
http://www.cdc.gov/nchstp/hiv_aids/surveillance.htm

Table 9.1 AIDS, cases reported to WHO and number of countries reporting, 1979-1999[1]

Africa	1979-1996	1997	1998	1999	Total [2]	Last report
Algeria	298	39	49	24	410	15/Nov/99
Angola	1,510	416	507		2,433	26/Mar/99
Benin	1,783	1,030			2,813	06/Jun/98
Botswana	4,815	2,335	2,992		10,142	10/Jun/99
Burkina Faso	9,136	2,216	2,166		13,518	11/Jun/99
Burundi	8,776	470	581	2,187	12,014	30/Jun/99
Cameroon	9,626	3,950	5,410		18,986	29/Oct/99
Cape Verde	187	39	43		269	29/Jan/99
Central African Republic	7,016	0			7,016	30/May/97
Chad	5,239	2,753	2,129		10,121	03/Jun/99
Comoros	15	3	2		20	12/Oct/99
Congo	10,223	0			10,223	06/Sep/96
Cote d'Ivoire	37,898	5,949	5,685		49,532	30/Aug/99
Dem. Rep. of the Congo	38,841	4,948	3,746	22	47,557	20/Oct/99
Djibouti	1,238	434	111		1,783	06/Apr/99
Egypt	143	25	33	14	215	04/Aug/99
Equatorial Guinea	231	90			321	03/Nov/98
Eritrea	2,917	1,260	1,610	1,086	6,873	30/Jun/99
Ethiopia	21,579	7,981	8,314		37,874	04/Jul/99
Gabon	1,660	0			1,660	31/Dec/97
Gambia	437	74	126		637	15/Jun/99
Ghana	20,859	3,833	4,854		29,546	20/May/99
Guinea	3,080	1,005	1,222		5,307	14/Jun/99
Guinea-Bissau	823	0			823	31/Oct/96
Kenya	74,042	4,885	2,565		81,492	28/Sep/98
Lesotho	1,872	2,203	3,242		7,317	31/Dec/98
Liberia	128	104	40		272	26/Oct/98
Libyan Arab Jamahiriya	20	7	5		32	25/May/99
Madagascar	29	6	2		37	07/Oct/99
Malawi	47,270	3,705			50,975	21/May/98
Mali	3,642	711	620	290	5,263	14/Oct/99
Mauritania	532				532	31/May/97
Mauritius	34	7	5	4	50	12/Nov/99
Morocco	372	92	93		557	24/Feb/99
Mozambique	4,826	1,661	4,376		10,863	25/Mar/99
Namibia	5,977	807			6,784	30/Sep/99
Niger	3,002	217	425		3,644	11/Jun/99
Nigeria	6,057	745	18,490	984	26,276	13/Sep/99
Reunion	166	0			166	31/Dec/95
Rwanda	14,553	1,350			15,903	31/Dec/97
Sao Tome and Principe	24	11	25	10	70	14/Oct/99
Senegal	1,982	411	151	144	2,688	30/Sep/99
Seychelles	23	4	5		32	09/Jun/99
Sierra Leone	224	67	26		317	21/Aug/98
Somalia	13	-	-	-	13	05/Oct/99
South Africa	12,825				12,825	30/Oct/96
Sudan	1,562	270	511	392	2,735	05/Oct/99
Swaziland	1,329	1,466	733		3,528	15/Jul/99
Togo	7,993	1,211	1,623		10,827	08/Mar/99
Tunisia	393	62	44	20	519	21/Jul/99
Uganda	51,344	1,962	1,406		54,712	31/Mar/99
United Rep. of Tanzania	92,593	10,592	8,867		112,052	11/Aug/99
Zambia	43,266	1,676			44,942	31/Jul/97
Zimbabwe	63,937	6,732	4,113		74,782	30/Nov/98
Total no. of cases	628,360	79,814	86,947	5,177	800,298	
No. of countries reporting	54	51	40	12	54	

[1] AIDS cases reported to WHO as of 15 November 1999.

[2] Total includes cases with unknown date of reporting.

-. No AIDS surveillance.

Table 9.1 AIDS, cases reported to WHO and number of countries reporting, 1979-1999[1]

The Americas	1979-1996	1997	1998	1999	Total [2]	Last report
Anguilla	5	0			5	30/Dec/95
Antigua and Barbuda	87	7	2		96	31/May/99
Argentina	11,357	2,058	1,492	259	15,166	01/Oct/99
Aruba	22	2			24	30/Apr/97
Bahamas	2,475	389	234		3,098	28/Feb/99
Barbados	762	113	168		1,043	16/Sep/99
Belize	198	0			198	30/Apr/97
Bermuda	322	13	5	6	346	15/Nov/99
Bolivia	149	21	9		179	16/Apr/98
Brazil	120,576	17,187	7,564		145,327	30/Nov/98
British Virgin Islands	12	3	1	0	16	31/Oct/98
Canada	15,386	444	105		15,935	31/Aug/98
Cayman Islands	21	1	2		24	31/May/99
Chile	1,976	435	366	44	2,821	31/Mar/99
Colombia	7,844	589			8,433	31/Dec/97
Costa Rica	1,166	233	162	19	1,580	31/May/99
Cuba	578	128	140		846	31/Aug/99
Dominica	51	19	12	5	87	15/Nov/99
Dominican Republic	4,021	392	320		4,733	10/Sep/99
Ecuador	610	128	134		872	28/Feb/98
El Salvador	1,823	409	146		2,378	15/Nov/99
French Guiana	606	35			641	31/Dec/97
Grenada	99	4			103	30/Nov/97
Guadeloupe	752	38			790	31/Dec/97
Guatemala	1,639	760	993		3,392	31/Aug/99
Guyana	842	115	96		1,053	31/Oct/98
Haiti	4,967	3,932			8,899	28/Feb/99
Honduras	7,288	929			8,217	28/Jan/98
Jamaica	2,060	370	320	225	2,975	31/May/99
Martinique	413	23			436	31/Dec/97
Mexico	34,406	3,364	1,905		39,675	31/May/99
Montserrat	7	0	1		8	31/May/99
Neth. Antilles and Aruba	233	0			233	31/Mar/96
Nicaragua	152	18	10	2	182	30/Apr/99
Panama	1,357	341	195	49	1,942	15/Nov/99
Paraguay	294	96	34		424	15/Jul/98
Peru	6,618	1,058	954	310	8,940	30/Sep/99
Saint Kitts and Nevis	54	4			58	08/Sep/97
Saint Lucia	90	15	6		111	28/Feb/99
Saint Vincent & the Grenadines	87	24	28		139	31/Dec/98
Suriname	211	0			211	31/Dec/96
Trinidad and Tobago	2,495	118			2,613	02/Jul/97
Turks and Caicos Islands	39	0			39	03/Nov/93
United States of America	622,898	50,000	44,532		717,430	15/Nov/99
Uruguay	840	173	180		1,193	22/Sep/99
Venezuela	7,088	194			7,282	24/Apr/98
Total no. of cases	864,976	84,182	60,116	919	1,010,193	
No. of countries reporting	46	46	30	10	46	

[1] AIDS cases reported to WHO as of 15 November 1999.

[2] Total includes cases with unknown date of reporting.

Table 9.1 AIDS, cases reported to WHO and number of countries reporting, 1979-1999[1]

Asia	1979-1996	1997	1998	1999	Total [2]	Last report
Afghanistan	-	-	-	-	-	17/Oct/99
Armenia	10	2	2	1	15	02/Nov/99
Azerbaijan	4	5	3	0	12	02/Nov/99
Bahrain	40	15	11	4	70	28/Jun/99
Bangladesh	7	3	0		10	31/Mar/98
Bhutan	0				0	30/Nov/96
Brunei Darussalam	10	2	0	0	12	31/Jul/99
Cambodia	1,312	572	1,494	1,456	4,834	30/Jun/99
China	155	126	136	2	419	15/Oct/99
Cyprus	75	10	6	6	97	09/Aug/99
Dem. Peoples Rep. of Korea	0	0			0	30/Nov/96
Georgia	16	6	2	3	27	02/Nov/99
Hong Kong SAR	245	64	63	37	409	30/Jun/99
India	5,182	2,108	1,148		8,438	31/Aug/99
Indonesia	119	34	74	38	265	15/Nov/99
Iran (Islamic Republic of)	154	40	21		215	25/Jan/99
Iraq	102	2	4	0	108	18/Apr/99
Israel	420	45	36	47	548	02/Nov/99
Japan	1,437	250	231	148	2,066	27/Jun/99
Jordan	47	12	11	1	71	10/Aug/99
Kazakhstan	7	8	9	1	25	02/Nov/99
Kuwait	24	2	19	1	46	18/May/99
Kyrgyzstan	19	2	6		27	30/Jun/98
Lao People's Dem. Rep.	30	48	27		105	07/Oct/99
Lebanon	104	8	35		147	02/Mar/99
Macao SAR	9	2	4	2	17	30/Jun/99
Malaysia	911	568	875	540	2,894	30/Jun/99
Maldives	4	1	0		5	30/Apr/97
Mongolia	0	0	0	1	1	04/Aug/99
Myanmar	1,783	554	231		2,568	31/Mar/98
Nepal	118	101	42		261	30/Jun/99
Oman	288	36	33	10	367	11/Aug/99
Pakistan	128	19	23	3	173	24/May/99
Philippines	299	23	41	41	404	11/Oct/99
Qatar	84	4	1	4	93	10/Jun/99
Republic of Korea	63	33	37	14	147	10/Oct/99
Saudi Arabia	237	112	39	26	414	01/Aug/99
Singapore	271	88	125	61	545	15/Oct/99
Sri Lanka	69	9	15		93	11/Feb/99
Syrian Arab Republic	45	8	8	4	65	28/Jul/99
Tajikistan	-	-	-	-	-	02/Nov/99
Thailand	63,158	26,000	25,847	13,601	128,606	31/Oct/99
Turkey	221	33	34	16	304	02/Nov/99
Turkmenistan	1	0			1	30/Nov/95
United Arab Emirates	8				8	28/Feb/91
Uzbekistan	4	1	2	0	7	02/Nov/99
Viet Nam	1,082	400	935	319	2,736	07/Aug/99
West Bank and Gaza Strip	20	9	3	1	33	21/Aug/99
Yemen	82	40	34		156	25/Feb/99
Total no. of cases	78,404	31,405	31,667	16,388	157,864	
No. of countries reporting	47	45	43	32	47	

[1] AIDS cases reported to WHO as of 15 November 1999.

[2] Total includes cases with unknown date of reporting.

-: No AIDS surveillance.

Table 9.1 AIDS, cases reported to WHO and number of countries reporting, 1979-1999[1]

Europe	1979-1996	1997	1998	1999	Total [2]	Last report
Albania	8	2	1	0	11	02/Nov/99
Austria	1,643	130	110	32	1,915	02/Nov/99
Belarus	15	2	4	2	23	02/Nov/99
Belgium	2,213	136	166	84	2,599	02/Nov/99
Bosnia and Herzegovina	17	0			17	25/Jun/97
Bulgaria	45	8	3	4	60	02/Nov/99
Croatia	108	12	17	7	144	02/Nov/99
Czech Republic	90	21	8	6	125	02/Nov/99
Denmark	1,994	108	71	43	2,216	02/Nov/99
Estonia	14	3	4	1	22	02/Nov/99
Finland	251	17	20	6	294	02/Nov/99
France	44,559	2,836	2,026		49,421	02/Nov/99
Germany	15,615	1,414	922	288	18,239	02/Nov/99
Greece	1,501	238	143	82	1,964	02/Nov/99
Hungary	245	32	35	16	328	02/Nov/99
Iceland	41	2	2	5	50	02/Nov/99
Ireland	578	31	41	24	674	02/Nov/99
Italy	37,139	3,782	2,484	1,111	44,516	02/Nov/99
Latvia	17	3	11	6	37	02/Nov/99
Lithuania	11	3	8	4	26	02/Nov/99
Luxembourg	117	10	10	2	139	02/Nov/99
Malta	41	2	4	0	47	02/Nov/99
Monaco	39	1	0	0	40	02/Nov/99
Netherlands	4,288	342	291	133	5,054	02/Nov/99
Norway	561	38	39	0	638	02/Nov/99
Poland	477	117	132	68	794	02/Nov/99
Portugal	3,781	919	888	432	6,020	02/Nov/99
Republic of Moldova	7	10	4	2	23	02/Nov/99
Romania	4,485	650	645	148	5,928	02/Nov/99
Russian Federation	255	13	98	29	395	02/Nov/99
San Marino	4	4	4	2	14	02/Nov/99
Slovakia	13	5	3	1	22	02/Nov/99
Slovenia	60	1	14	6	81	02/Nov/99
Spain	42,783	6,068	4,202	1,911	54,964	02/Nov/99
Sweden	1,481	77	63	42	1,663	02/Nov/99
Switzerland	5,527	567	428	119	6,641	02/Nov/99
The F.Y.R. of Macedonia	23	0	3	3	29	02/Nov/99
Ukraine	226	193	287	316	1,022	02/Nov/99
United Kingdom of G.B. and N.I	13,682	1,379	964	412	16,437	02/Nov/99
Yugoslavia	608	56	114	28	806	02/Nov/99
Total no. of cases	184,562	19,232	14,269	5,375	223,438	
No. of countries reporting	40	40	39	38	40	

[1] AIDS cases reported to WHO as of 15 November 1999.

[2] Total includes cases with unknown date of reporting.

Table 9.1 AIDS, cases reported to WHO and number of countries reporting, 1979-1999[1]

Oceania	1979-1996	1997	1998	1999	Total [2]	Last report
American Samoa	0	0	0		0	27/Sep/98
Australia	7,466	357	273	44	8,140	30/Jun/99
Cook Islands	0	0	0		0	28/Sep/98
Fiji	8	0	0		8	11/Aug/98
French Polynesia	54	0	0		54	02-Sep-98
Guam	42	5	7	6	60	31/Jul/99
Kiribati	3	1	2		6	31/Jul/99
Mariana Islands	7	1	0		8	15/Apr/98
Marshall Islands	2	0	0		2	27/Feb/98
Micronesia (Federated States of)	2	0	0		2	01/Apr/98
Nauru	0	0	0		0	20/Oct/97
New Caledonia and Dependencies	55	8	3	1	67	12/Jul/99
New Zealand	615	31	26	9	681	30/Jun/99
Niue	0	0	0		0	08/Sep/98
Palau	1	0	0		1	28/Feb/98
Papua New Guinea	225	120	232	41	618	31/Mar/99
Samoa	6	0	0		6	28/Sep/98
Solomon Islands	0	0	0		0	03/Aug/97
Tokelau	0	0			0	02/Sep/97
Tonga	13	0	1		14	03/Sep/98
Tuvalu	0	0	0		0	08/Oct/97
Vanuatu	0	0	0		0	21/Sep/98
Wallis and Futuna Islands	1	0	0		1	17/Aug/98
Total no. of cases	8,500	523	544	101	9,668	
No. of countries reporting	23	23	22	5	23	

[1] AIDS cases reported to WHO as of 15 November 1999.

[2] Total includes cases with unknown date of reporting.

Table 9.2 Regional HIV/AIDS statistics and features, end of 1999[1]

	Epidemic started	Adults & children living with HIV/AIDS	Adults & children newly infected with HIV in 1999	Adult prevalence rate[2]	% HIV positive women	Main mode(s) of transmission for those living with HIV/AIDS
Sub-Saharan Africa	late '70s – early '80s	24.5 million	4 million	8.57%	55%	Hetero
North Africa and Middle East	late '80s	220 000	20 000	0.12%	20%	IDU, Hetero
South and South- East Asia	Late '80s	5.6 million	800 000	0.54%	35%	Hetero, IDU
East Asia and Pacific	Late '80s	530 000	120 000	0.06%	13%	IDU, Hetero, MSM
Latin America	Late '70s – early '80s	1.3 million	150 000	0.49%	25%	MSM, IDU, Hetero
Caribbean	Late '70s – early '80s	360 000	60 000	2.11%	35%	Hetero, MSM
Eastern Europe and Central Asia	early '90s	420 000	130 000	0.21%	25%	IDU
Western Europe	late '70s – early '80s	520 000	30 000	0.23%	25%	MSM, IDU
North America	late '70s – early '80s	900 000	45 000	0.58%	20%	MSM, IDU, Hetero
Australia and New Zealand	late '70s – early '80s	15 000	500	0.13%	10%	MSM, IDU
Total		34.3 million	5.4 million	1.07%	47%	

[1] Source: Report on the global HIV/AIDS epidemic, UNAIDS/CO.13E.
[2] The proportion of adults (15-49 years of age) living with HIV/AIDS in 1998 using 1999 population numbers.