

Research Report

Epidemiological Characteristics of HIV and AIDS in Japan based on HIV/AIDS Surveillance Data : An International Comparison

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Objective : The aim of this study was to compare the annual trends in the reported number of Japanese HIV/AIDS cases, and the distribution of sex, age and route of infection. The increasing trend of reported AIDS cases at the onset of the Japan epidemic was also compared with those of other industrialized countries.

Materials and Methods : HIV/AIDS surveillance data through December 2001 were utilized. As for the comparison of increasing trends at the onset of the epidemic, the Epidemiological Facts Sheets organized by the UNAIDS/WHO (United Nations Programme on AIDS/World Health Organization) were used. Nine industrialized countries, the USA, EU (European Union) (51 countries of the WHO European Region), Canada, Australia, UK, Germany, Italy, Spain, and France were selected for comparisons.

Results : Comparisons of Japanese HIV/AIDS with other industrialized countries revealed that the annual trend in reported cases was still increasing. The proportion of people with HIV aged 40 or above was high, and the proportion of males with HIV infected through heterosexual contact was extremely high. The increasing trend in reported AIDS cases at the onset of the Japan epidemic was extremely slow compared to that in other countries. In particular, there were differences in the number of cases infected through MSM (men who have sex with men), including bisexual contact, and or IDU (injecting drug use).

Conclusion : The epidemiological characteristics of HIV/AIDS in Japan, such as annual trends, and the distribution of sex, age and route of infection were revealed by comparisons with the surveillance data from nine other countries.

Key words : HIV, AIDS, surveillance, international comparison

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Introduction

HIV/AIDS surveillance systems have been established in many countries¹⁻⁵⁾ to estimate the prevalence and incidence of

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HIV/AIDS. They have provided some of the most important data available for determining the course of the epidemic and identifying high-risk population subgroups.

In Japan, HIV/AIDS surveillance has been fully operational since 1984, and several studies have been conducted to facilitate the interpretation and understanding of the surveillance data⁶⁻¹⁴⁾. In particular, trends in the number of reported HIV/AIDS cases^{7-9,11)} and reported deaths¹²⁾, the issues related to reporting delays^{9,11)}, estimations of the coverage rate of reported individuals with HIV^{7,9,11)}, and future predictions of the number of people with HIV and AIDS^{6,13)}, have been investigated in detail. However, only few studies have tried to

compare the characteristics of Japan's epidemic with those of the industrialized countries that first encountered the HIV epidemic. Umeda *et al.*¹⁴⁾ compared the epidemiological characteristics of Japanese AIDS cases infected through heterosexual contact with those of the UK (United Kingdom) and the USA (United States of America) based on surveillance data through 1996. Although the number of people with HIV and AIDS in Japan is still low compared to other industrialized countries, it is important to internationally examine the similarities and/or differences in the epidemiological characteristics of HIV/AIDS in Japan.

In this study, after examining the situations for surveillance systems in other industrialized countries, we compared the annual trend in the reported number of Japanese HIV/AIDS cases, and the distribution of sex, age and route of infection with those of other industrialized countries based on available HIV/AIDS surveillance data through December 2001. The increasing trends in reported AIDS cases at the onset of the epidemic in each country were also compared.

Materials and Methods

HIV/AIDS surveillance in Japan

AIDS surveillance in Japan began in 1984 and was legalized through the implementation of the "Act of AIDS Prevention" in 1989^{10,15)}. Following enactment of the "Law Concerning the Prevention of Infectious Diseases and Patients with Infectious Diseases" in 1999, the "Act of AIDS Prevention" was abolished and AIDS surveillance was integrated into the "National Epidemiological Surveillance of Infectious Diseases" organized by the Ministry of Health, Labor and Welfare, Japan.

Both AIDS and HIV infections are notifiable conditions and must be reported to the Public Health Center authorities by the diagnosing physician within 7 days. Each Public Health Center reports the information to the Prefectural/Municipal City Health authorities and the Infectious Diseases Surveillance Center (IDSC) through an online system. Two types of notification forms were created: the First Report is utilized when a physician has identified an HIV-positive case or AIDS case for the first time, and the Second Report is used when a physician has recognized a change in the pathological status of a case, such as from HIV-positive to AIDS or from AIDS to death. It should be noted that filing the Second Report was changed to be optional under the "Law Concern-

ing the Prevention of Infectious Diseases and Patients with Infectious Diseases". Both reports are examined and approved every three months by the AIDS Surveillance Committee of the Ministry of Health, Labor and Welfare, Japan. Cases caused by blood-derived coagulation products are not reported.

AIDS notification must indicate the distinction between HIV-positive and AIDS, nationality, route of infection, sex, age at diagnosis, suspected place of infection (in Japan/abroad), place of residence, diagnosis method, symptoms at diagnosis, AIDS indicator diseases, and the date of first HIV or AIDS infection, diagnosis and reporting. The Second Report includes the nationality, sex, age at diagnosis, the date of HIV or AIDS diagnosis and reporting, and any additional information describing the changes that have occurred and the date of occurrence. Neither report includes information regarding the name, address, or date of birth of the patient or any notes that might lead to personal identification.

Surveillance data and analysis method

The number of people reported with HIV or AIDS was calculated based on the annual report of HIV/AIDS surveillance in Japan⁵⁾. Only Japanese individuals with HIV and AIDS were included in this study, because there are known differences in the epidemiological characteristics such as the trend in the number of reported cases, distribution of sex and route of infection between Japanese and non-Japanese residents of Japan^{8,11)}. The cumulative reported number of HIV and AIDS cases among the Japanese through 2001 were 2915 and 1654, respectively. Note that the reported number of AIDS cases does not include the cases from the Second Report after April 1, 1999, as stated above.

Nine industrialized countries/regions, the USA¹⁾, EU (European Union, 51 countries of the WHO European Region)²⁾, Canada³⁾, Australia⁴⁾, UK¹⁶⁾, Germany¹⁷⁾, Italy¹⁸⁾, Spain¹⁹⁾, and France²⁰⁾ were selected for comparisons between countries. About 80% of the AIDS cases reported in the HIV/AIDS Surveillance of Europe²⁾ conducted by the European Centre for Epidemiological Monitoring of AIDS (EuroHIV programme) occurred in five of the selected countries; UK, Germany, Italy, Spain, and France.

The number of people reported with HIV and AIDS by sex, age, route of infection, and the calendar year of diagnosis was calculated based on the annual HIV/AIDS surveillance report from each country through December 2001. Because the surveillance reports from Australia and France did not include the number of cases according to age category, age

distribution was not evaluated in these two countries. Regarding HIV infection, only 6 countries/regions were used in these comparisons because HIV surveillance was not conducted in France or throughout Spain and Italy where information on sex, age, and route of infection was unavailable.

The definition of an AIDS case was the presence of indicator diseases such as *Pneumocystis carinii* pneumonia, pulmonary tuberculosis, or oesophageal candidiasis, as well as a positive HIV test. Although in 1993, the case definition was expanded in the USA to include HIV-infected persons with CD4+ T-lymphocyte counts less than 200 per μ l or a CD4+ percentage less than 14, the other criteria were essentially the same between all countries/regions and Japan.

Route of infection was divided into six categories : heterosexual contact (male), heterosexual contact (female), men who have sex with men (MSM), including bisexual contact, injecting drug use (IDU), other routes, and risk not reported or identified. The category of "other routes" comprises mother-to-child infection, blood transfusion, tissue or organ transplantation from HIV-infected donors, and cases that have more than one probable route of infection (e.g., MSM with a reported history of IDU). Infection through hemophilia/coagulation disorder was excluded from the investigation. "Risk not reported or identified" includes those with no reported history of HIV exposure, including people whose exposure history is incomplete because of death, refusal of interview, or inability to follow-up. It should be noted that, in all countries except Japan, this category also includes those cases in which the route of infection is under investigation.

Comparisons of the increasing trends at the onset of the epidemic in each country were conducted using data on AIDS cases reported in the Epidemiological Facts Sheets²¹⁾ organized by the UNAIDS/WHO (United Nations Programme on AIDS/World Health Organization) Working Group on Global HIV/AIDS and STI Surveillance. Since the onset of the epidemic, the annual trends in the number of people reported with AIDS are shown for 10 countries, including Japan, while the trends according to the route of infection are shown for 5 countries where information on exposure categories was available.

Results

Table 1 and Table 2 show the annual trends in the reported number of people with AIDS and HIV, respectively, in each

country. Figure 1 shows a semi-logarithm plot of the reported cases per 1,000,000 individuals. The reported number of AIDS cases peaked in the USA and Canada in 1993, in the EU, Australia, UK, Germany, Spain, and France in 1994, and in Italy in 1995, and decreased thereafter. In contrast, the reported number in Japan continued to exponentially increase even after 1993.

Table 3 shows the cumulative number of AIDS and HIV cases according to sex and age up until 2001. In Japan, the proportion of people reported with AIDS and HIV aged 40 years or older was 64.4% and 35.0%, respectively. In other industrialized countries, these percentages were, at the most, 41.9% and 25.7%, respectively.

Table 4 shows the total number of cumulative AIDS and HIV cases according to the route of infection up until 2001. In Japan, the proportion of males infected through heterosexual contact was extremely high (42.4%) compared to other industrialized countries. The ratio of males and females who contracted HIV as a result of heterosexual contact was extremely imbalanced in Japan (8.5 : 1). The proportion of AIDS cases whose risk was not reported was extremely high (20.9%) in Japan.

Figure 2 shows the increasing trend in reported AIDS cases at the onset of the epidemic in each country. The trend in Japan was extremely slow compared to other industrialized countries. Figure 3 shows the trends according to the route of infection in the countries in which this data was available. The increasing trend was again slow in Japan. There were apparent differences in the reported cases infected through MSM (including bisexual contact) and IDU.

Discussion

Analysis of surveillance data

This study was based on the reported number of people with HIV and AIDS obtained from annual reports of HIV/AIDS surveillance and Epidemiological Fact Sheets from each country. The problems that must be considered in the analysis of the surveillance data are the completeness of coverage, reporting delays, and duplicate reports.

The coverage rate of AIDS cases will be high because AIDS cases have specific symptoms and tend to make more use of medical facilities. In Japan, the reported rate of AIDS diagnosis in the HIV/AIDS surveillance was more than 90%²²⁾. This rate was about 85% in the USA¹⁾, 95% in

Canada³), 90% in Australia⁴), 80% in the UK¹⁶) and 85% in Germany¹⁷). On the other hand, HIV infection data should be interpreted more cautiously. HIV surveillance reports might not be representative of all individuals infected with HIV, because most HIV-infected individuals have no specific symptoms for a long time after HIV transmission, and not all infected individuals have been tested, hence identified. Particular care should be taken when interpreting the annual trends in reported HIV cases (Table 2 and Figure 1 (b)).

Reporting delays refer to the time between diagnosis of HIV infection or AIDS and the reporting of those events to the surveillance system. Reporting delays might vary according to exposure, geography, age, and sex, and might constitute

several years for some AIDS cases. In Japan, about 95% of Japanese HIV cases and 85% of Japanese AIDS cases were reported to the surveillance system within 1 year of diagnosis¹¹). In the USA, the proportions were about 93% and 88%, respectively¹), while overall in the EU about 90% of the diagnosed AIDS cases were reported within 1 year²). Considering the effects of these reporting delays, recent trends in the number of reported AIDS cases should be assessed by analyzing the data according to the year of diagnosis rather than the year when reported. In this study, the analyses were performed based on the year of diagnosis, except in a few countries in which the year when reported was used. However, the effect of using the year when reported on the recent

Table 1 Annual trends in the number of people reported with AIDS by country and sex.

Country	Sex	Calendar year of diagnosis																	Total
		85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	
Japan ^a	Male	5	3	6	9	15	18	24	36	53	91	108	156	170	158	212	239	221	1,524
	Female	0	0	3	2	2	3	0	1	5	9	11	15	12	10	12	21	24	130
Total		5	3	9	11	17	21	24	37	58	100	119	171	182	168	224	260	245	1,654
USA		23,205 ^b	19,404	29,105	36,126	43,499	49,546	60,573	79,657	79,879	73,086	69,984	61,124	49,379	41,829	38,811	36,087	24,855	816,149
EU ^c		—	—	—	—	—	—	—	21,380	23,256	26,605	25,980	22,769	16,036	12,853	11,788	11,075	9,890	255,621 ^d
Canada	Male				7,273 ^f				1,604	1,634	1,595	1,451	939	597	517	376	349	184	16,519
	Female				471 ^f				120	125	149	141	137	107	95	76	45	35	1,501
Total ^e		646 ^b	628	950	1,162	1,377	1,430	1,551	1,724	1,759	1,745	1,593	1,076	705	612	453	394	221	18,026
Australia	Male					4,065 ^g			799	905	771	636	350	296	166	214	127	8,329	
	Female					152 ^g			46	49	38	33	31	19	20	22	17	427	
Total						4,217 ^g			845	954	809	669	381	315	186	236	144	8,756	
UK	Male	391 ^b	461	659	870	1,016	1,147	1,250	1,404	1,549	1,628	1,485	1,162	852	585	548	546	417	15,970
	Female	17 ^b	13	22	38	66	97	138	173	237	225	281	268	216	190	185	234	200	2,600
Total		408 ^b	474	681	908	1,082	1,244	1,388	1,577	1,786	1,853	1,766	1,430	1,068	775	733	780	617	18,570
Germany	Male	453 ^b	525	964	1,163	1,448	1,386	1,578	1,656	1,711	1,796	1,610	1,320	807	689	576	502	339	18,523
	Female	23 ^b	46	69	104	128	157	183	230	262	256	260	250	203	145	145	101	104	2,666
Total		476 ^b	571	1,033	1,267	1,576	1,543	1,761	1,886	1,973	2,052	1,870	1,570	1,010	834	721	603	443	21,189
Italy		244 ^b	458	1,030	1,775	2,482	3,134	3,827	4,261	4,814	5,524	5,662	5,051	3,370	2,418	2,111	1,876	1,296	49,333
Spain	Male	222 ^b	403	897	1,868	2,635	3,221	3,720	4,101	4,423	5,904	5,655	5,201	3,758	2,746	2,299	1,966	1,590	50,680 ^h
	Female	24 ^b	92	192	401	522	693	839	958	1,047	1,450	1,424	1,368	982	752	595	578	390	12,322 ^h
Total		246 ^b	495	1,089	2,269	3,157	3,914	4,559	5,059	5,470	7,354	7,079	6,569	4,740	3,498	2,894	2,544	1,980	63,002 ^h
France	Male				17,174 ^f				4,305	4,418	4,601	4,202	3,185	1,774	1,488	1,360	1,218	1,009	44,734
	Female				3,136 ^f				887	1,103	1,161	1,089	824	493	430	430	456	361	10,370
Total					20,310 ^f				5,192	5,521	5,762	5,291	4,009	2,267	1,918	1,790	1,674	1,370	55,104

^a Calendar year is year of report. ^b Cumulative reported numbers until the end of 1985. ^c Reported numbers in each year was adjusted for reporting delay.

^d Cumulative total since the beginning of reporting (not adjusted for reporting delay). ^e Includes 6 persons whose sex is unknown.

^f Cumulative reported numbers until the end of 1991. ^g Cumulative reported numbers until the end of 1992.

^h Includes 86 persons (male 71, female 15) whose year of diagnosis is unknown.

Table 2 Annual trends in the number of people reported with HIV by country and sex.

Country	Sex	Calendar year of diagnosis																		Total	
		85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01			
Japan ^a	Male	0	0	34	15	35	27	52	108	102	134	147	189	234	261	379	336	475	2,528		
	Female	0	0	11	4	18	10	17	16	22	32	19	41	34	36	45	32	50	387		
Total		0	0	45	19	53	37	69	124	124	166	166	230	268	297	424	368	525	2,915		
USA ^b																	19,393	21,419	22,144	35,575	174,026 ^c
EU ^d									9,617	9,931	11,665	17,705	24,748	24,397	36,578	82,316	112,210	403,359 ^c			
Canada	Male						27,771 ^f						1,988	1,785	1,746	1,653	1,557	1,601	38,101		
	Female						3,342 ^f						541	457	499	543	494	535	6,411		
Total ^g							36,075 ^f						2,785	2,541	2,328	2,239	2,119	2,172	50,259		
Australia	Male				13,060 ^h				997	921	854	838	729	661	649	664	680	20,053			
	Female				893 ^h				81	94	76	77	86	99	76	82	97	1,661			
Total					13,953 ^h				1,078	1,015	930	915	815	760	725	746	777	21,725 ^h			
UK ⁱ	Male	7,085 ^k	2,199	1,719	1,866	2,169	2,269	2,201	2,084	2,039	2,070	2,100	2,063	2,052	2,113	2,420	2,685	39,134			
	Female	513 ^k	302	231	270	369	446	539	529	532	568	584	658	746	926	1,352	1,733	10,298			
Total ^l		7,613 ^k	2,509	1,952	2,140	2,543	2,715	2,741	2,614	2,571	2,640	2,684	2,723	2,799	3,042	3,772	4,419	49,477			
Germany ^j									2,417	2,334	2,277	1,907	2,096	1,959	1,769	1,712	1,482	17,953			

^a Calendar year is year of report.

^b Before 1991, surveillance of HIV infection was not standardized. The numbers of reported areas is 33, 34, 36, and 39 in calendar year order.

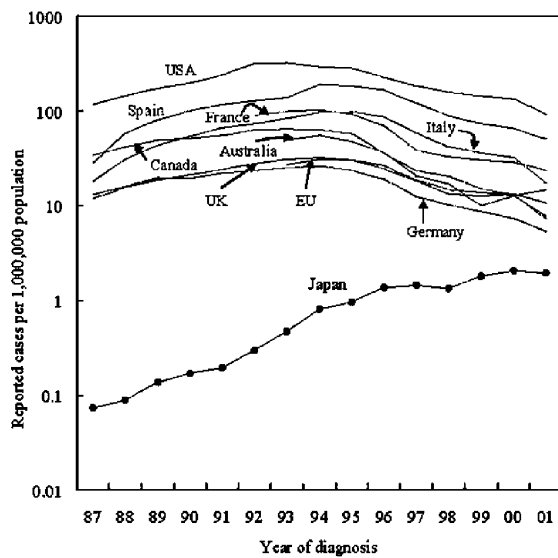
^c Cumulative total since the beginning of reporting which includes persons whose year of report is unknown.

^d Calendar year is year of report. Individual data on all cases are reported since 1997 according to a standard data file.

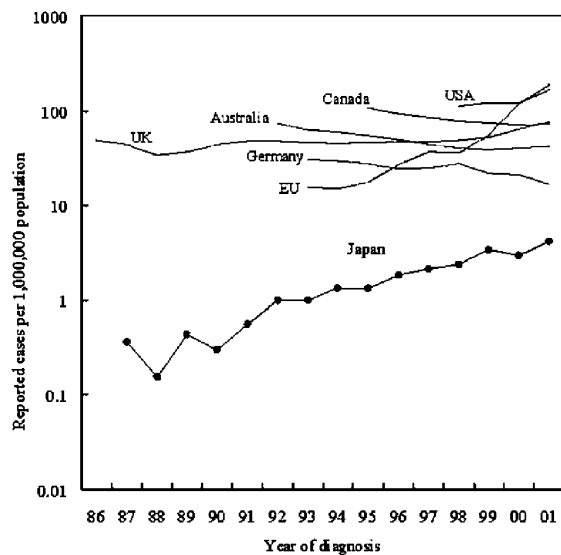
^e Includes 5,747 persons whose sex is unknown. ^f Cumulative reported number until the end of 1995. ^g Cumulative reported number until the end of 1992.

^h Includes 11 persons whose year of diagnosis is unknown. ⁱ Includes AIDS or death cases without the report of HIV infection.

^j Includes 45 persons whose sex is unknown. ^k Cumulative reported number until the end of 1986. ^l Reporting is started from 1993.



(a) AIDS cases



(b) HIV-infected cases

Figure 1 Annual trend in the reported number of people with (a) AIDS and (b) HIV per 1,000,000 individuals (the vertical axis is a common logarithm scale).

trend in the reported numbers of AIDS cases would be small.

Duplicate positive HIV test reports (repeated testing of the same HIV-positive individual) results in an overestimation of the number of positive reports. In Japan, if new AIDS cases that have already been reported as HIV-positive in the first HIV infection report visit different hospitals, the physicians are likely to mistake such AIDS cases for first report cases and will file the First Report. The removal of duplicates or linking the First and Second reports is difficult because of the anonymous nature of the HIV/AIDS reports in Japan. In contrast, all other countries^{1-4,16-20} with HIV/AIDS surveillance systems include an identification number or code name such as the first two letters of the family name and the given name. Using such information along with the date of birth and sex data allow the detection and elimination of possible duplicate reports. This is therefore one of the defects in the HIV/AIDS

surveillance system in Japan. In the future, if certain individual information is included in the surveillance data, it will be possible to exclude duplicate reports.

Differences in the hierarchy of exposure categories between countries

In all countries, HIV-infected and AIDS cases were counted only once in a hierarchy of exposure categories for surveillance purposes. This hierarchy varied slightly between countries. In this study, exposure was divided into six categories, excluding infection through hemophilia/coagulation disorders. In some countries, however, infection through "MSM + IDU" was included in the "IDU" category and infection through hemophilia/coagulation disorders was included in the "others" category. However, it is unlikely that these differences significantly change the comparative results in Table 4.

Table 3 AIDS cases and HIV infection cases by sex or age reported through the end of 2001.

HIV/ AIDS	Country	Cumulative total	Sex (%)		Age (%)							
			Male	Female	-14	15-19	20-29	30-39	40-49	50-59	60-	Unknown
AIDS	Japan	1,654	92.1	7.9	0.7	0.1	10.1	24.7	31.4	23.6	9.4	0.0
	USA	816,149 ^a	82.2	17.8	1.1	0.5	16.4	44.4	26.5	8.1	3.0	0.0
	EU	255,621 ^b	80.7	19.3	3.8	0.7	23.6	44.3	17.5	10.1 ^c		0.1
	Canada	18,026 ^d	91.7	8.3	1.1	0.3	15.9	43.9	27.3	8.4	3.1	0.0
	Australia	8,756	95.1	4.9					— ^e			
	UK	18,570 ^f	86.0	14.0	2.7	0.5	19.5	42.6	23.4	8.4	2.9	0.0
	Germany	21,189	87.4	12.6	0.7	0.5	15.5	41.6	25.4	12.9	3.6	0.0
	Italy	49,333	77.9	22.1	1.5	0.2	25.8	50.9	14.0	5.2	2.4	0.0
	Spain	63,002 ^g	80.4	19.6	1.6	0.6	30.4	47.8	12.6	4.2	2.5	0.3
	France	55,104	81.2	18.8								
	HIV	Japan	2,915	86.7	13.3	0.6	1.4	32.9	30.0	18.8	10.8	5.4
USA		174,026 ^h	70.6	29.4	2.2	3.8	30.2	38.1	18.9	5.2	1.6	0.0
EU		403,359 ⁱ	75.0	25.0	2.7	11.8	44.5	19.9	6.4	3.0 ^c		11.7
Canada		50,259 ^j	85.6	14.4	1.4	1.3	24.6	37.8	18.3	7.4 ^c		9.2
Australia		21,725	92.3	7.7					— ^k			
UK		49,477 ^l	79.2	20.8	2.4	2.3	34.2	38.5	14.9	5.2	1.7	0.8
Germany		17,953 ^m	77.4	22.6	2.1	2.4	29.5	38.0	14.5	8.0	3.1	2.4

^a Includes 1 person whose sex is unknown and 1 person whose age is unknown.

^b Includes 7 persons whose sex is unknown and 265 persons whose age is unknown. ^c Proportion of people (%) aged 50 or older.

^d Includes 6 persons whose sex is unknown and 2 persons whose age is unknown. ^e Median age is 37 for males and 33 for females.

^f Includes 3 persons whose age is unknown. ^g Includes 174 persons whose age is unknown.

^h Includes 9 persons whose sex is unknown. ⁱ Includes 44,116 persons whose sex is unknown and 47,304 persons whose age is unknown.

^j Includes 5,747 persons whose sex is unknown and 4,631 persons whose age is unknown (two regions does not collect data on sex and age before 1998).

^k Median age is 32 for males and 29 for females. ^l Includes 45 persons whose sex is unknown and 405 persons whose age is unknown.

^m Includes 592 persons whose sex is unknown and 435 persons whose age is unknown.

Table 4 AIDS cases and HIV infection cases by route of infection reported through the end of 2001.

HIV/AIDS	Country	Route of infection (%)					
		Heterosexual contact Male	Heterosexual contact Female	MSM ^a /Bisexual contact	IDU ^b	Others	Risk not reported
AIDS	Japan	42.4	5.0	28.6	0.3	2.8	20.9
	USA	4.0	7.1	45.5	24.9	8.5	10.0
	EU ^{c,d}	10.0	7.7	31.4	38.3	6.5	6.1
	Canada	8.0	5.1	69.6	6.6	7.1	3.6
	Australia	4.0	2.5	80.3	3.2	6.5	3.5
	UK	11.3	11.0	65.0	6.3	5.2	1.2
	Germany ^{d,e}	4.1	4.7	63.2	15.5	4.7	7.8
	Italy	9.6	8.2	15.7	59.6	4.1	2.8
	Spain ^e	8.7	5.6	13.8	65.5	2.0	4.4
	France ^d	12.3	9.7	42.8	22.5	6.8	5.9
HIV	Japan	30.3	10.9	45.2	0.3	2.7	10.6
	USA	4.9	11.0	30.1	13.6	6.3	34.1
	EU ^d	5.8	6.5	11.2	39.5	2.6	34.4
	Canada ^{e,f}	2.7	2.3	31.4	8.2	4.9	50.5
	Australia		8.9 ^g	65.0	3.8	4.8	17.5
	UK	12.8	17.3	54.7	7.8	3.8	3.6
	Germany ^{c,e}	12.5	12.9	35.0	10.5	2.4	26.7

^a Men who have sex with men. ^b Injecting drug use.

^c Excludes heterosexual contact cases whose sex is unknown.

^d Infection through hemophilia/coagulation disorder is included in the "Others" category.

^e Infection through MSM+IDU is included in the "IDU" category.

^f One province does not collect data on the route of infection.

^g No classification between males and females.

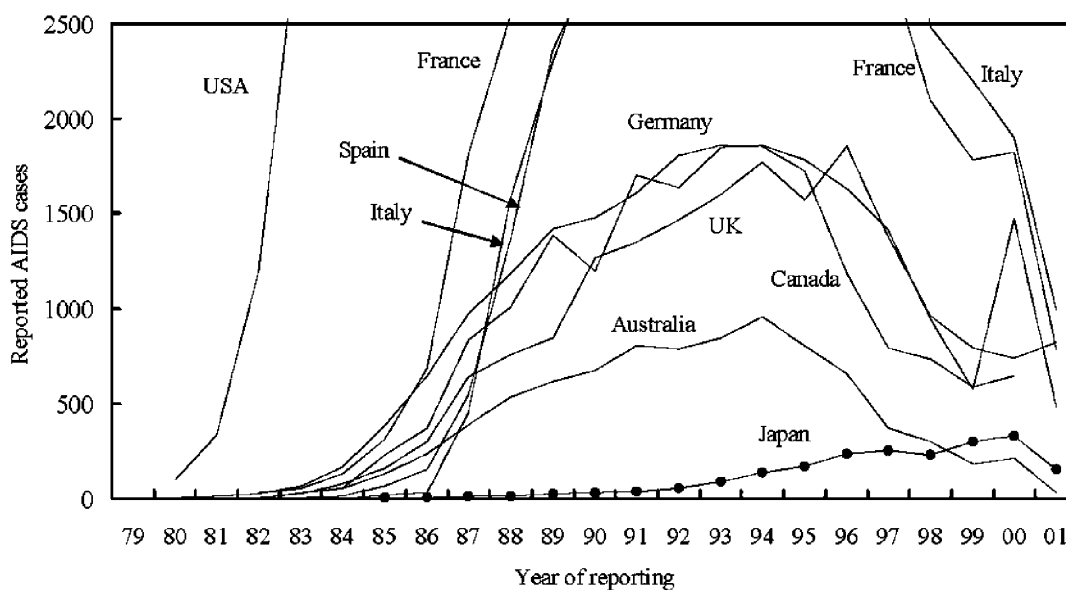
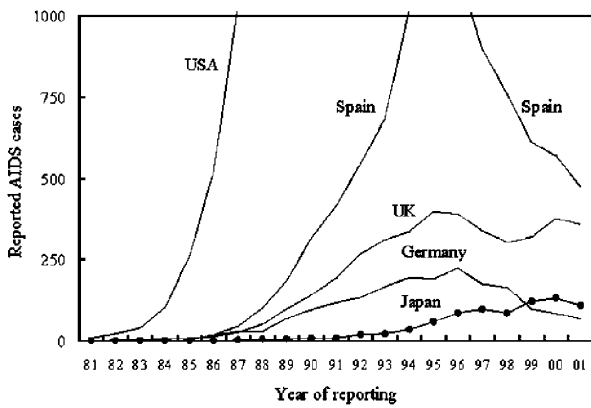
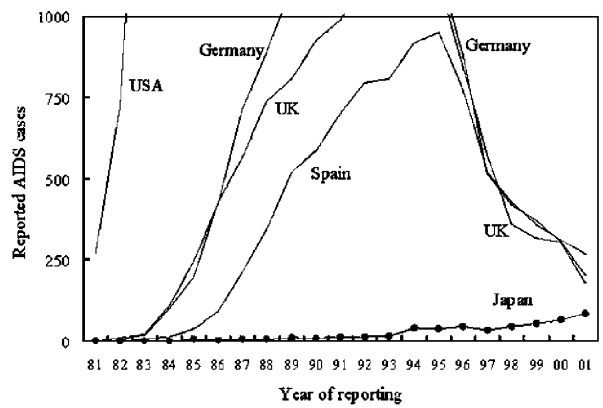


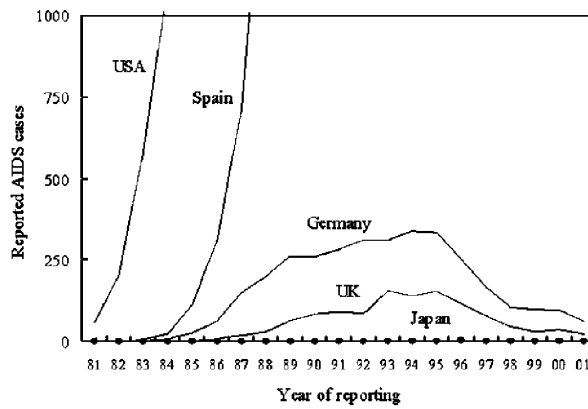
Figure 2 Increasing trends at the onset of the AIDS epidemic in each country.



(a) Heterosexual contact

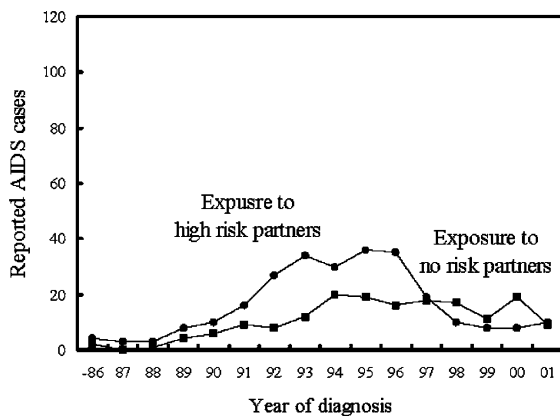


(b) MSM (men who have sex with men)
/Bisexual contact

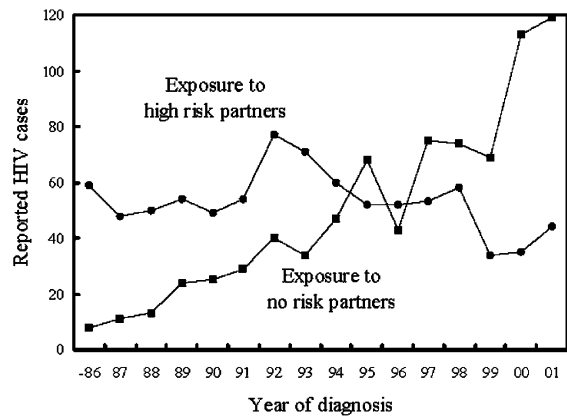


(c) IDU (injecting drug use)

Figure 3 Increasing trends at the onset of the AIDS epidemic according to the route of infection.



(a) AIDS cases



(b) HIV-infected cases

Figure 4 Annual trends in the number of women infected through heterosexual contact in the UK¹⁶ according to the risk of partners.

The proportion of AIDS cases whose risk was not reported was extremely high in Japan. This is due to the fact that, in Japan, the physician in charge investigates the route of infection only at the time of diagnosis, and further inquiries are not conducted. For HIV-infected cases, the proportions were also substantially high in other countries. However, it should be noted that, in all countries, except Japan, this exposure category included cases that were currently being followed up by local health department officials. Individuals whose routes of infection are identified in the follow-up will be reclassified into the appropriate exposure categories.

Increasing trends at the onset of the epidemic

The increasing trend in Japan at the onset of the epidemic was extremely slow compared to other industrialized countries. This was due to the fact that, in Japan, there were few cases infected through MSM and/or IDU. The increasing trend in the number of cases infected through heterosexual contact was also relatively slow in Japan. The reason for this seems to be that in Japan those who tested positive were older as shown in Table 3. It is assumed that the sexual activity of such individuals is lower than that of individuals in their 20's and 30's. Information regarding heterosexual contact according to the exposure risk of partners was obtained from the UK surveillance¹⁶⁾. Figure 4¹⁶⁾ shows the trends for the number of women infected through heterosexual contact. At the onset of the epidemic, there were more cases with partners at high risk such as IDU and MSM, and the cases whose partners were not at high risk began to increase thereafter. This result suggests that, in Japan, it might be necessary to examine trends in the number of reported cases through heterosexual contact according to the risk of partners. Such analysis will be possible if such information is added to the current surveillance report forms in the future.

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