

1 Sexual Networks

The spread of HIV occurs when people are linked by sexual activity or injecting drug use - in other words, when a network is formed and when one person has on average more than one partner¹⁾. Figure 1 was published by the US Centers for Disease Control and Prevention (CDC)²⁾. It shows the spread of HIV and the heterosexual network in a small town in the United States. Two conclusions can be drawn from this diagram:

1. Within the sexual network, those people who have many partners ("cores") play a major role.
2. If a person is connected to the network, they are at risk of contracting HIV even if they only have one partner.

In societies or groups where this kind of sexual network is well developed, the first result is the spread of sexually transmitted diseases (STDs), followed by the spread of HIV.

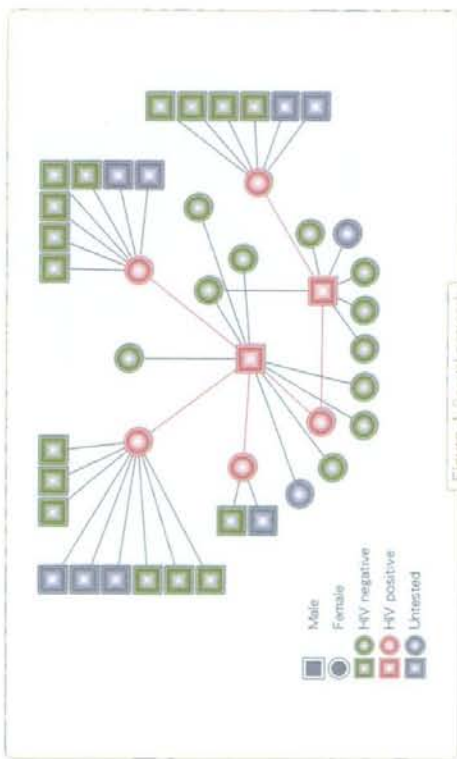


Figure 1 Sexual network

2 Interaction between Sexually Transmitted Diseases (STDs) and HIV

Because STDs cause irritation and ulceration of the genitalia they also create an environment where HIV is more easily transmitted. It is considered that in cases where there is ulceration, men are 10-50 times more likely and women 50-300 times more likely to contract HIV. Even when there is no ulceration, the presence of STDs makes the transfer of HIV 2-5 times more likely for both men and women³⁾. In other words, when STDs are prevalent, HIV spreads more easily.

3 Epidemic Stages

Theoretically, the spread of HIV comes in two waves that form two peaks when graphed (Figure 2)⁴⁾. The first peak results from actions that spread HIV easily - high risk activities such as unprotected male-to-male sexual contact, commercial sex, and drug injection. However after this, the HIV epidemic spreads to people involved in unprotected heterosexual contact, with more people affected than in the first wave. This second wave has the potential to develop into a long-term epidemic lasting for over 100 years.

UNAIDS and WHO divide these epidemics into three stages⁵⁾. First is the "low epidemic" stage where HIV infection rates in the general population are less than 1% (measured as infection rate among pregnant women) and less than 5% for people in the high-risk groups. If effective measures are not taken, then the epidemic moves into the "concentrated epidemic" stage. This stage sees infection rates in the general population at less than 1% and at over 5% in high-risk groups. Then the epidemic enters the "generalized epidemic" stage. This is where infection rates are greater than 1% in the general population and greater than 5% for those in the high-risk category. Japan is currently in the low epidemic stage with rising infection rates through male-to-male sexual contact and rates slowly increasing through heterosexual contact. However, it is considered that a transition to the concentrated epidemic stage is currently underway.

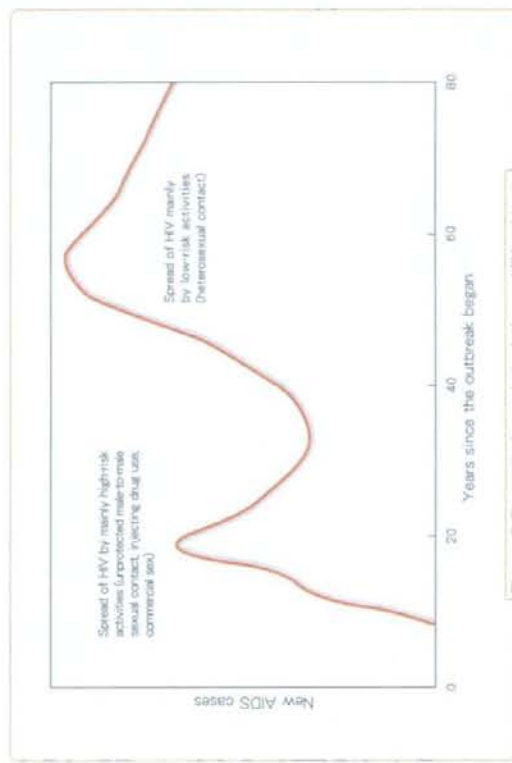


Figure 2 Theoretical model simulating an HIV epidemic

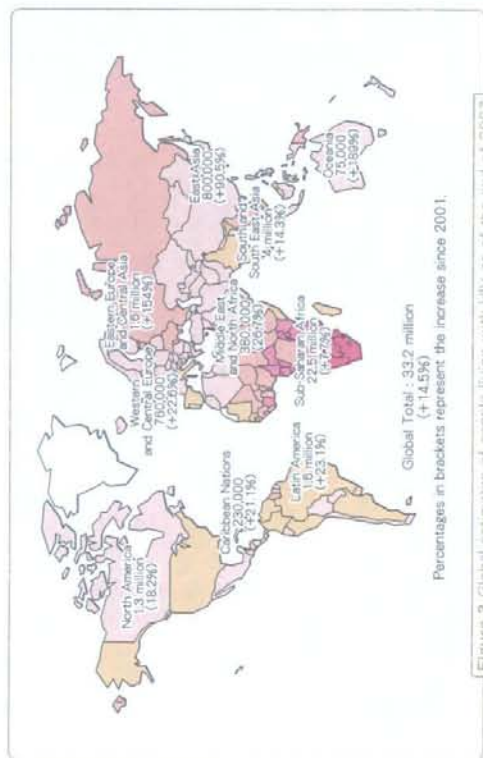


Figure 3 Global estimates of people living with HIV as of the end of 2007

DNA analysis shows that HIV most likely emerged 70-80 years ago in Africa, and from there developed into a pandemic. According to UNAIDS estimates, by the end of 2007 there were 33.2 million (see Note) people living with HIV (of which 15.4 million were women), and that the number of people living with HIV had increased by 450% in the years since 1990 (6). By the end of 2007, the death toll from HIV/AIDS was greater than 21 million. It is estimated that the number of new infections in 2007 was 2.5 million, and the number of deaths that year, 2.1 million. The number of deaths from AIDS now surpasses tuberculosis and malaria making it the communicable disease responsible for the greatest number of deaths worldwide (7).

Figure 3 shows the distribution of the 33.2 million people living with HIV worldwide, with the increase from 2001 shown in brackets. Roughly two thirds of people living with HIV are concentrated in Sub-Saharan Africa. Next is Southern and Southeast Asia with 4 million. Eastern and Central Europe along with Oceania have the greatest rate of increase in the number of people living with HIV (greater than 150%), with East Asia having the next highest rate of increase (90%). However, the new infection rate is slowing in Eastern and Central Europe so that currently East Asia and Oceania are displaying the strongest increases in numbers of infected persons.

Note: The 2007 estimates are lower than the figures published for 2005 (39.5 million). However these figures were revised, mainly on the basis of the availability of more reliable data for India and several African nations, and thus the numbers of people living with HIV continue to rise as before.

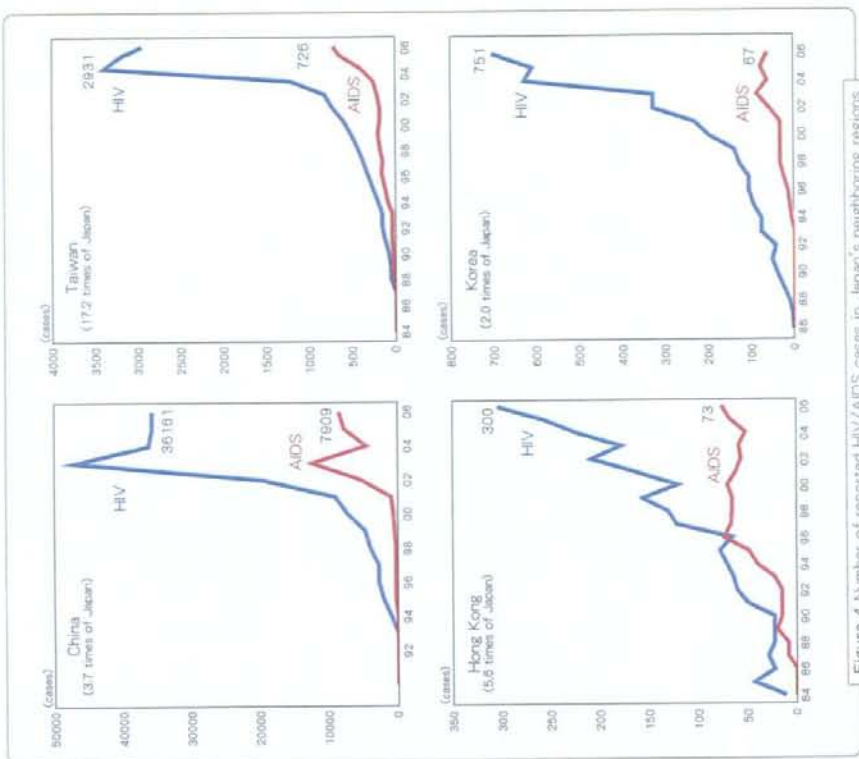


Figure 4 Number of reported HIV/AIDS cases in Japan's neighboring regions

(Numbers in brackets represent the number of reported cases per unit of population in 2006 as a ratio of the Japanese figures.)

The spread of HIV in East Asia is worsening by degrees (8). It is estimated that by the end of 2007 there were 800,000 people living with HIV, and that there were 92,000 new cases and 32,000 deaths in the region in 2007 (9).

1 The United States

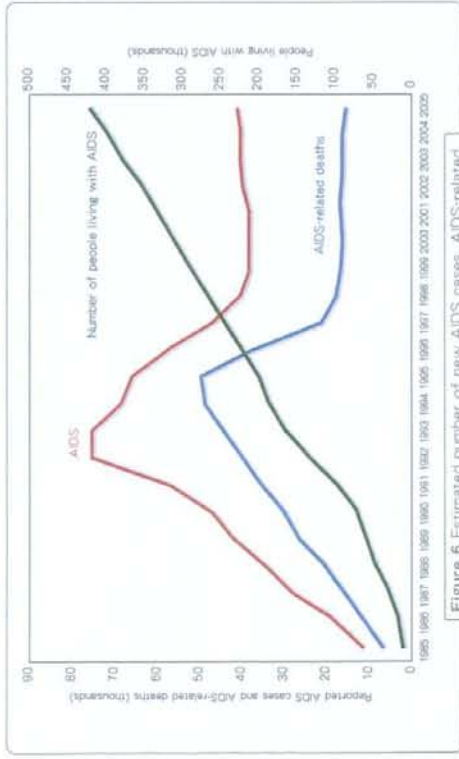


Figure 6 Estimated number of new AIDS cases, AIDS-related death and people living with AIDS in the US, 1985-2005

In recent years the spread of HIV has leveled out in the US, however even now each year around 40,000 people are diagnosed with AIDS in all states and about 37,000 new infections are reported across 33 states of the US (see Note). The epidemic has moved from one concentrated among white people to one mainly affecting African Americans. Initially the leading cause of transmission was male-to-male sexual contact and intravenous drug use, however, while these are now decreasing, transmission as a result of heterosexual contact is increasing with the result that the figures for 2005 show that 53% of transmissions occurred through male-to-male sex, 32% occurred heterosexually and 18% through injecting drug use. However, it is said that in recent years, transmissions through male-to-male sex is again on the rise. The use of highly active antiretroviral therapy (HAART) to prevent HIV infection developing into AIDS has meant that the reported numbers of AIDS cases has fallen. However, the cumulative number of HIV cases are increasing and as of 2005, the estimated number of people living with HIV in the US was 1.2 million (the 8th largest HIV population in the world), and of this, 430,000 to 440,000 are estimated to be AIDS patients (Figure 6) (17).

Note: AIDS figures are available for all of the US, however figures for HIV cases are only reported for 33 of the 50 states and do not include New York and California States both of which have large HIV positive populations. Thus it is not possible to ascertain the total numbers of new HIV cases discovered in the US in one year (17).

2 Western Europe

In Western Europe, like the US, the number of reported AIDS cases has fallen due to the use of HAART but the cumulative number of people living with AIDS has risen (Figure 7a). Among HIV cases, transmission resulting from heterosexual contact has increased dramatically in the 21st century (particularly in the United Kingdom and France). Furthermore, transmissions as a result of male-to-male sexual contact have also risen (particularly in the United Kingdom and Germany). In 2005, 54% of new infections were as a result of heterosexual contact, 37% as a result of male-to-male sexual contact, and 8% were from intravenous drug use. Reports show that 43% of heterosexually acquired infections occurred in people who had emigrated to Europe from countries with an HIV epidemic (Figure 7b) (18).

Thus the US and Western Europe are considered to be moving from the concentrated to the generalized epidemic stage, and at the same time they face the problem of an increasing accumulation of people living with HIV each year.

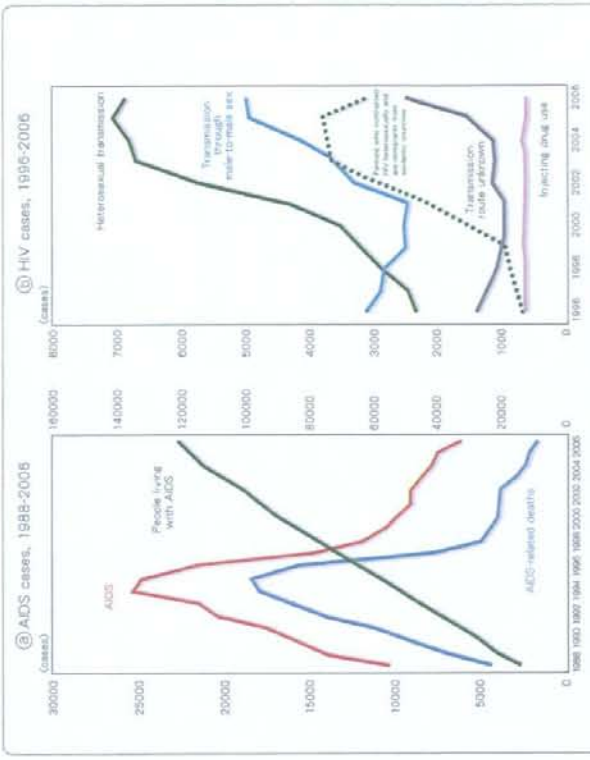


Figure 7 Number of reported AIDS cases, AIDS-related death, people living with AIDS and reported HIV cases in Western Europe

1 General Overview

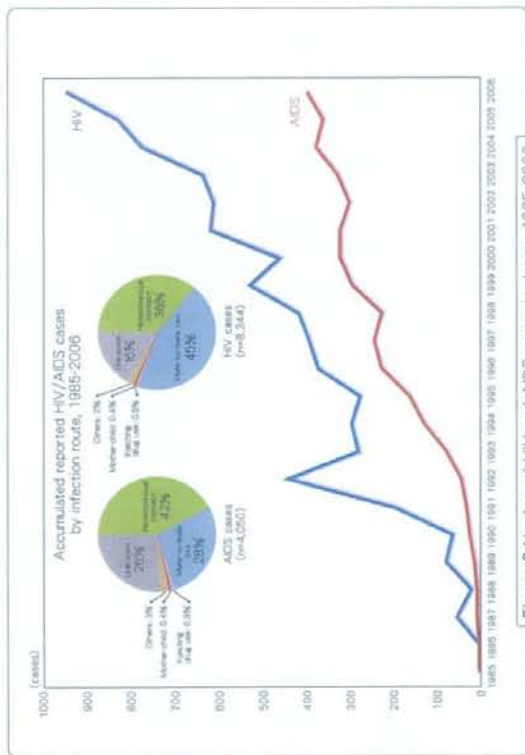


Figure 8 Number of HIV and AIDS cases in Japan, 1985-2006

According to the Ministry of Health, Labour and Welfare's 2006 Annual HIV/AIDS Surveillance Report (19), as of the end of 2006 the number of reported HIV and AIDS cases in Japan were 8,344 and 4,050 respectively (Figure 8). In addition, there are 1,438 confirmed cases of HIV transmission resulting from HIV-tainted blood coagulants. The main cause of infection both for HIV cases and for AIDS cases is sexual transmission.

The numbers of reported HIV cases continues to rise, and in 2006 there were 836 new cases reported (see Note), the largest number on record. Although the numbers of people developing AIDS have slowed since the introduction of the HAART in 1996, the numbers continue to rise with 2006 seeing the largest number of new AIDS cases reported on record - 406 (Figure 8). Among major developed countries, Japan is the only country not to see a dramatic fall in new AIDS cases following the introduction of the HAART. In the 21st century the annual number of reported HIV and AIDS cases among foreign nationals has leveled off at around 100 and 60 respectively.

Note: The preliminary numbers for 2007 are 1,036 HIV cases and 400 AIDS cases.

2 Trends in the Reported HIV Cases

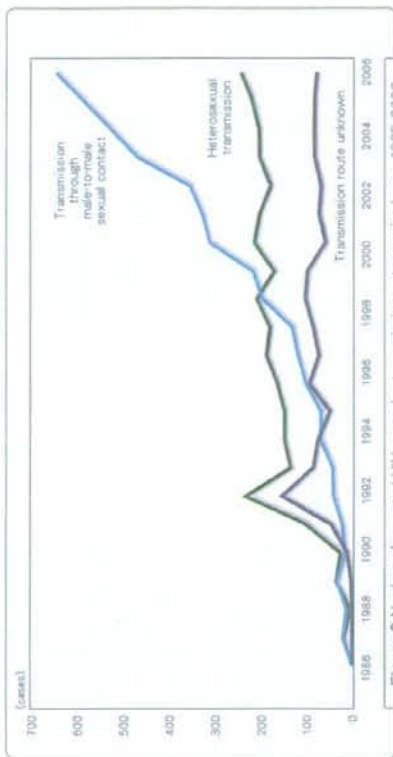


Figure 9 Number of reported HIV cases by transmission category in Japan, 1985-2006

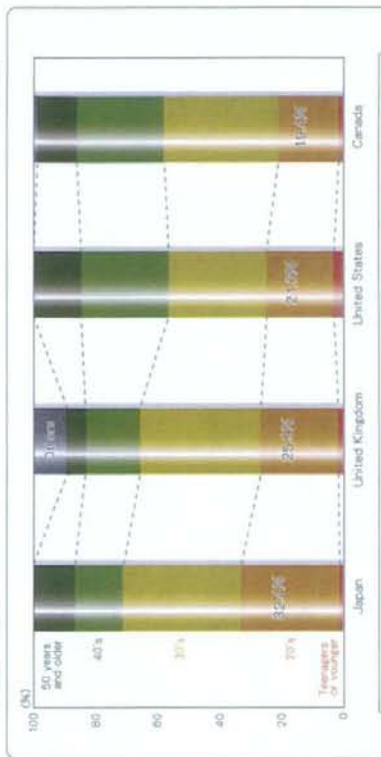


Figure 10 Age distribution of HIV cases reported in 2003-2005 in selected developed countries

Since the turn of the century, while the number of reported cases of infected through male-to-male sexual contact has been increasing rapidly, the heterosexual infection figures are slowly rising (Figure 9). In 2006, 63% of transmissions were through male-to-male sexual contact, and 23% were from heterosexual contact. The highest infection rates were among people in their 30's and 20's, with 41% and 28% respectively. When compared with the US, United Kingdom (20) and Canada (21), Japan had the highest infection rates in these age groups for 2003-2005 (Figure 10).

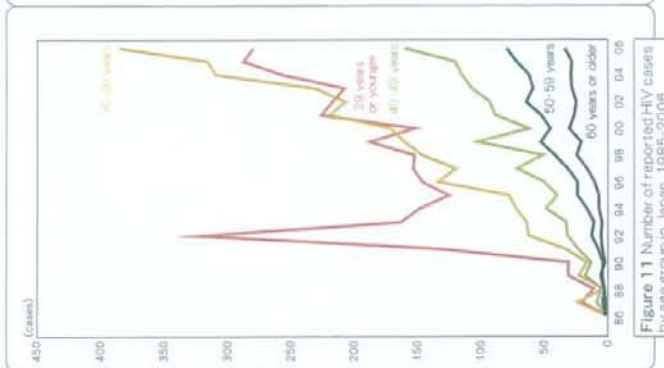


Figure 11 Number of reported HIV cases by age group in Japan, 1985-2006

The annual numbers for reported HIV cases are growing in every age group (Figure 11). When broken down by region Tokyo has the largest, however there is a striking increase in reported infections in the Kinki and Tokaido regions, and furthermore the Kyushu, Hokkaido, Tohoku, Chugoku and Shikoku regions are increasingly displaying more new infections (Figure 12).

When examined by prefecture, the five prefectures with the greatest average number of HIV cases reported in the past 5 years (per 100,000 of population, for people aged 15-59), are Tokyo with 3.96 cases, Osaka with 1.98, Aichi with 1.24, Okinawa with 1.05, and Tochigi with 1.03. However, the prefectures in which the number of reported cases is increasing most rapidly are Oita with 6.50, Miyazaki with 6.50, Okinawa with 3.87, Ishikawa with 3.57 and Okayama with 3.50 (Table 1) (the top five based on the cumulative number of HIV cases as of the end of 2005 divided by the cumulative number of HIV cases as of the end of 2001).

3 Trends in the Reported AIDS Cases

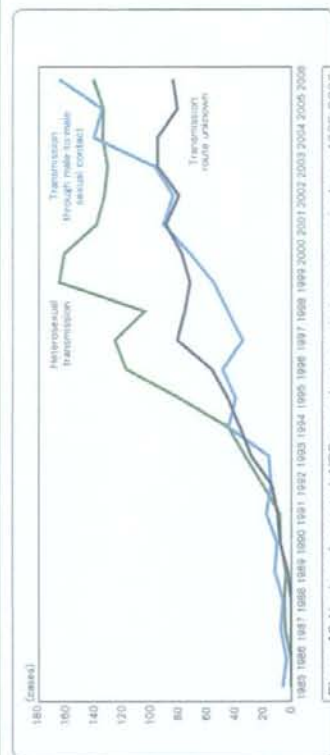


Figure 13 Number of reported AIDS cases by transmission category in Japan, 1985-2006

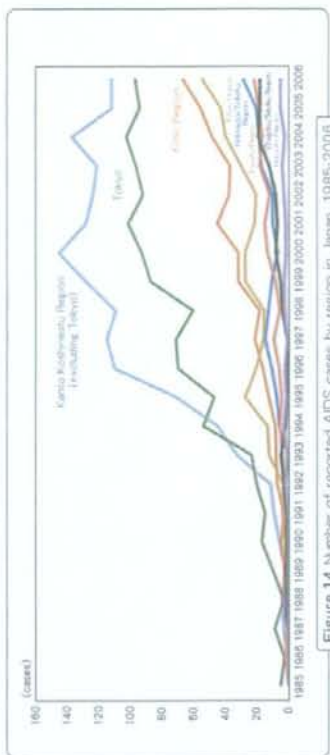


Figure 14 Number of reported AIDS cases by region in Japan, 1985-2006

The numbers of AIDS cases who were infected as a result of male-to-male sexual contact are also increasing sharply and in 2004 overtook the numbers of cases who acquired HIV heterosexually (Figure 13). Numbers are leveling out in the Kanto/Koshinetsu and Tokai regions, however with the exception of Hokuriku, the number of cases is increasing in all other regions (Figure 14). The five prefectures with the greatest average number of AIDS cases reported in the past 5 years (per 100,000 of population, for people aged 15-59), are Tokyo with 1.27, Nagano with 1.18, Ibaraki with 1.04, Tochigi with 0.69 and Gumma with 0.66. The prefectures in which the number of reported AIDS cases is increasing most rapidly are Kagawa with 7.00, Okayama with 4.00, Tottori with 4.00, Tokushima with 3.50 and Miyazaki with 3.33 (the top five based on the cumulative number of AIDS cases as of the end of 2005 divided by the cumulative number of AIDS cases as of the end of 2001).

Table 1. Reported Number of HIV/AIDS Cases per Unit of Population and Growth Rates by Prefecture

Prefecture	15-59 year old population (x10 ⁵)	Average in the past 5 yrs*1 (x10 ⁵) ⁻²	Number of reported HIV cases	Average in the past 5 yrs*1 (x10 ⁵) ⁻²	Number of reported AIDS cases	Average in the past 5 yrs*1 (x10 ⁵) ⁻²	Total Average in the past 5 yrs*1 (x10 ⁵) ⁻²	Increase in the past 5 yrs*1 (x10 ⁵) ⁻²		
Hokkaido	3,306	10.2	0.31	2.46	7.4	0.22	2.16	0.53	2.31	
Aomori	816	3.0	0.37	2.50	1.4	0.17	1.89	4.4	0.54	2.22
Iwate	767	1.2	0.16	1.82	1.5	0.21	2.00	2.8	0.37	1.93
Miyagi	1,411	7.8	0.55	2.05	3.2	0.23	2.00	11.0	0.78	2.53
Akita	616	1.2	0.20	2.00	1.2	0.09	2.60	2.4	0.89	2.00
Yamagata	661	1.2	0.18	2.20	1.4	0.21	1.98	2.6	0.59	2.00
Fukushima	1,173	1.6	0.14	1.31	2.8	0.24	2.08	4.4	0.38	1.58
Ibaraki	1,743	1.30	0.75	1.19	1.82	1.04	1.59	31.2	1.79	1.31
Tochigi	1,188	1.22	1.03	1.84	8.2	0.69	1.56	20.4	1.32	1.80
Gunma	1,150	6.8	0.59	1.49	7.6	0.66	1.83	14.4	1.25	1.63
Saitama	4,599	18.6	0.36	1.41	18.6	0.43	1.74	34.2	0.79	1.54
Chiba	3,654	24.6	0.67	1.36	23.4	0.64	1.01	46.0	1.31	1.45
Tokyo	7,881	304.2	3.86	1.90	97.4	1.27	1.70	401.6	5.23	1.64
Kanagawa	5,599	50.6	0.54	1.05	26.2	0.49	1.54	76.8	1.42	1.56
Chigaki	1,251	3.0	0.22	1.36	2.0	0.15	1.40	5.0	0.37	1.39
Tochigi	616	1.8	0.29	1.00	1.8	0.29	2.13	3.6	0.58	2.00
Ibbiwa	676	3.6	0.53	3.67	10.1	0.16	2.26	4.6	0.68	3.09
Fuku	462	1.8	0.40	1.95	1.0	0.22	1.71	2.8	0.02	1.01
Yamaguchi	463	4.0	0.81	1.33	3.0	0.91	1.79	7.0	1.42	1.44
Nagano	1,182	12.0	1.02	1.34	14.0	1.18	1.90	26.0	2.20	1.52
Gifu	1,186	4.4	0.37	2.00	3.8	0.32	1.72	8.2	0.69	1.89
Shizuoka	2,150	19.8	0.92	1.86	9.2	0.43	1.72	29.0	1.35	1.56
Aichi	4,296	43.2	1.24	2.68	20.2	0.47	2.83	79.4	1.71	2.67
Mie	1,044	5.2	0.50	1.43	4.4	0.42	1.79	9.6	0.82	1.55
Shiga	816	4.4	0.54	3.20	2.6	0.34	2.27	7.2	0.88	2.71
Kyoto	1,539	13.6	0.86	2.45	4.8	0.31	1.89	18.4	1.20	2.24
Osaka	5,135	100.6	1.96	2.71	24.8	0.48	2.08	125.4	2.44	2.53
Hyogo	3,210	17.2	0.53	2.48	10.2	0.32	2.38	27.4	0.85	2.44
Nara	628	4.0	0.48	1.80	4.0	0.48	3.00	8.0	0.87	2.14
Wakayama	563	2.2	0.39	2.00	2.4	0.43	1.00	4.6	0.82	1.96
Tottori	364	0.8	0.64	3.00	0.6	0.18	4.00	1.4	0.42	3.33
Shimane	369	1.0	0.26	2.25	0.4	0.10	3.00	1.4	0.36	2.40
Okayama	1,091	4.0	0.37	3.50	3.6	0.33	4.00	7.6	0.70	3.71
Hiroshima	1,639	8.8	0.54	3.00	3.2	0.20	2.00	12.0	0.73	2.88
Yamaguchi	505	2.0	0.29	2.29	0.4	0.05	1.33	2.4	0.30	1.86
Tokushima	449	0.8	0.18	3.00	1.0	0.22	3.50	1.8	0.40	3.26
Kagawa	666	1.6	0.28	3.00	2.4	0.42	7.00	4.0	0.71	3.00
Ehime	810	4.0	0.49	2.18	2.6	0.32	2.44	6.6	0.81	2.27
Kochi	432	1.4	0.82	1.78	0.8	0.19	2.00	2.2	0.15	1.85
Fukuoka	2,676	15.2	0.51	2.36	7.2	0.24	2.23	22.4	0.75	2.33
Saga	462	0.4	0.09	2.00	0.4	0.09	3.00	0.6	0.17	2.33
Nagasaki	819	1.2	0.15	1.00	0.6	0.07	1.59	1.8	0.22	1.50
Kumamoto	1,025	3.0	0.29	2.16	1.4	0.14	1.88	4.4	0.43	2.06
Oita	663	2.2	0.33	6.50	1.0	0.15	2.28	3.2	0.48	3.07
Miyazaki	639	2.2	0.34	6.50	1.4	0.22	3.38	3.6	0.95	4.00
Kagoshima	1,017	2.4	0.24	1.92	2.0	0.20	2.28	4.4	0.43	2.06
Okinawa	822	8.6	1.06	3.87	3.4	0.41	1.77	12.0	1.46	2.62

*1. Average for 2000-2005.
 *2. Based on the 15-59 year old population in 2005.
 *3. Based on the cumulative number of HIV or AIDS cases as of the end of 2005 divided by the cumulative number of HIV or AIDS cases as of the end of 2001.

4 Trends in the HIV Positive Results in Donated Blood

The percentage of donated blood testing positive to HIV is growing every year (Figure 15), and in 2007, 2.1 cases were found per 100,000, the highest result on record 22). Thus it could be said that the increase in reported HIV cases is a reflection not only of an increase in the number of HIV tests being carried out but also reflects the growing HIV epidemic.

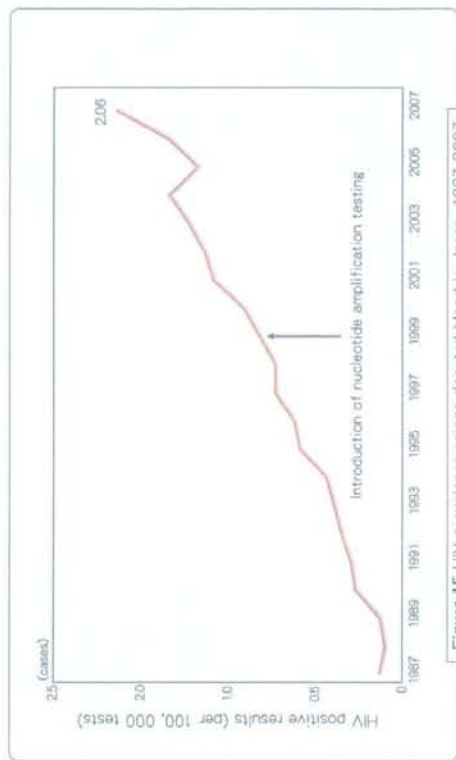


Figure 15 HIV prevalence among donated blood in Japan, 1987-2007

5 Summary

Thus it can be seen that the spread of HIV in Japan is displaying the pattern typical of a low epidemic where infection from male-to-male sexual contact is most prevalent while at the same time the change is occurring to a concentrated epidemic. The epidemic is mainly among those of a young age and is considered to be spreading throughout the country.

1 Sexual Activity

Since 1990, Japan has been experiencing a dramatic change in the sexual behaviors of young people (23). According to serial surveys conducted in the Tokyo metropolitan area among students (24), there has been a change most notably in the sexual activity of female students, with the percentage of them who have had a sexual experience overtaking that of male students in the mid 1990's. In 2005, 46% of female students in the 3rd year of high school reporting having had a sexual experience compared to 38% of male students of the same age (Figure 16).

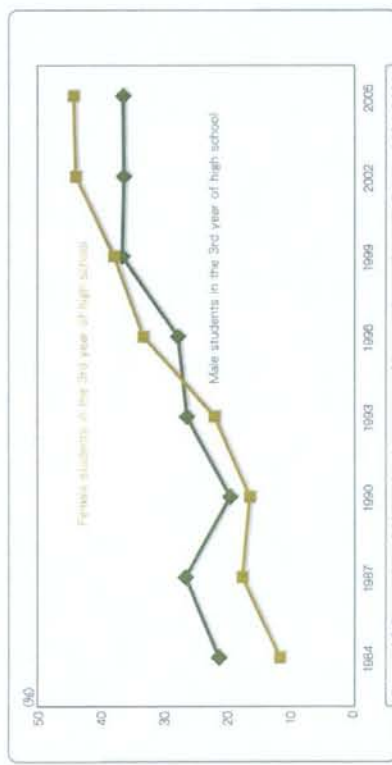


Figure 16 Proportion of high school students with sexual experience in Tokyo, 1984-2005

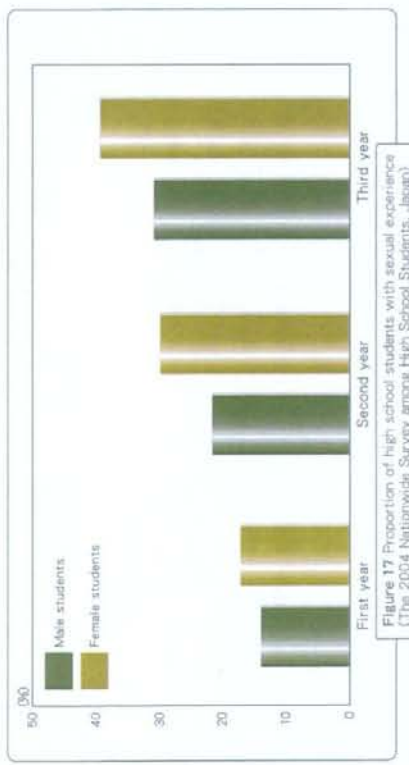


Figure 17 Proportion of high school students with sexual experience (The 2004 Nationwide Survey among High School Students, Japan)

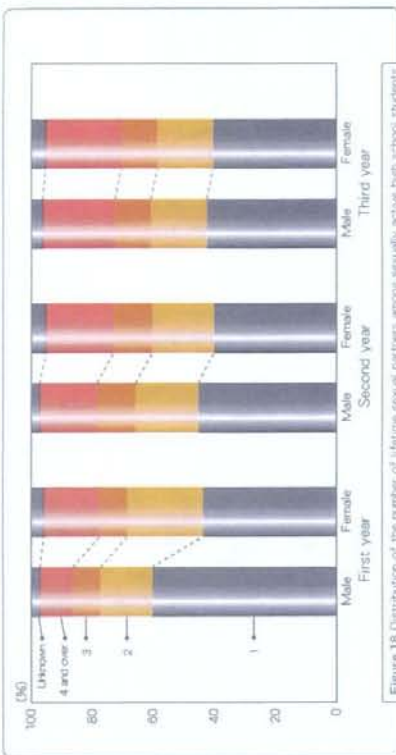


Figure 18 Distribution of the number of lifetime sexual partners among sexually active high school students (The 2004 Nationwide Survey of High School Students, Japan)

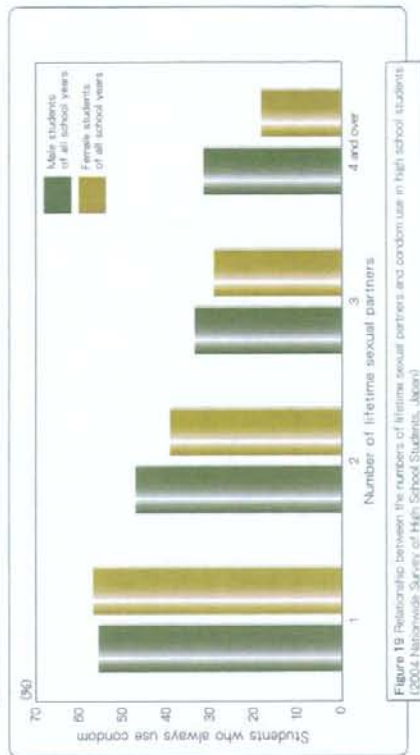


Figure 19 Relationship between the numbers of lifetime sexual partners and condom use in high school students (2004 Nationwide Survey of High School Students, Japan)

A 2004 survey (25) of high school students nationwide conducted by the Federation of All-Japan Senior High School PTAs in cooperation with the Research Group sponsored by the Ministry of Health, Labour and Welfare (headed by Masako Ono-Kihara) revealed that female students were in fact more likely to be sexually experienced than male students (Figure 17) and furthermore revealed that of those students with sexual experience, many had had multiple partners (Figure 18) and those with more partners were more likely not to use condoms (Figure 19). A widespread sexual network with the potential to spread STDs and HIV can be developed among young people.

2 STDs, Teenage Abortion, and Numbers of Condoms Shipped Domestically

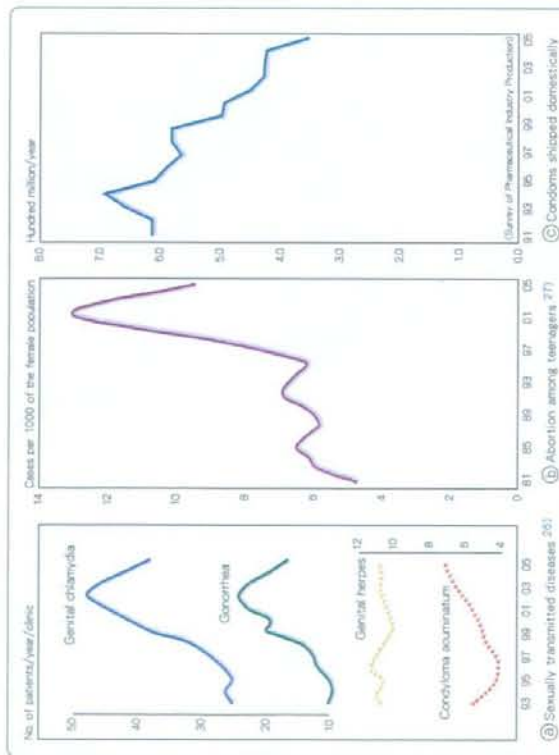


Figure 20. Changes in the incidence of STDs and induced abortion among teenagers, and numbers of condoms shipped domestically in Japan

It is likely that the mid 1990's increase in STDs and in induced abortions among those in their teens and early twenties (Figures 20a and b) 26,27) reflects the changes in Japanese sexual activity patterns noted above. Recently the figures for bacterial STDs (genital chlamydia and gonorrhoea) and induced abortion have been decreasing, however, viral STDs (genital herpes and condylooma acuminatum) continue to increase and the numbers of condoms shipped domestically has halved from 630 million in 1993 to 320 million in 2005 (Survey of Pharmaceutical Industry Production) (Figure 20c). From these facts, it is necessary to carefully consider whether the decrease in bacterial STDs and abortion reflects an increase in so called "sexual activity safer for HIV infection". It is necessary to investigate the influence of emergency contraception, internet-based testing, and medicines purchased online.

Note: The pre-1999 data on STDs has been revised and supplemented based on the 2002 Report by the Ministry of Health, Labour and Welfare's STD Sentinel Surveillance Study Group (headed by Yoshiaki Kuramoto) 28).

3 Changes in Social Environment

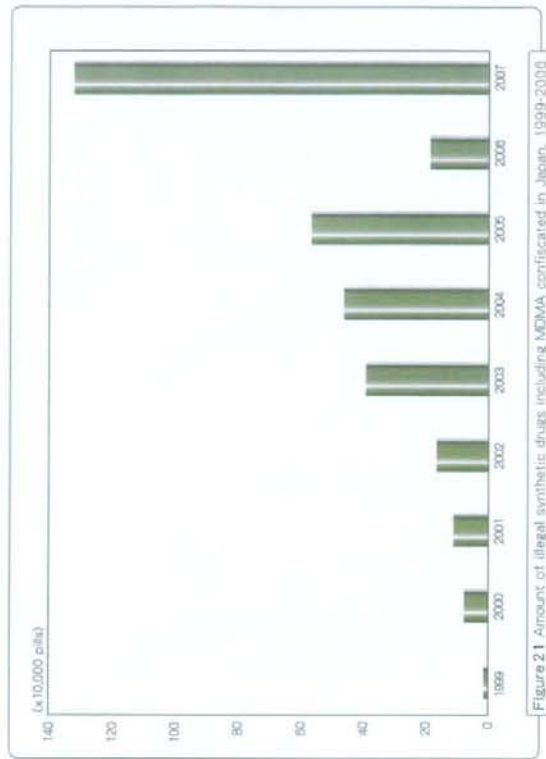


Figure 21. Amount of illegal synthetic drugs including MDMA confiscated in Japan, 1999-2007

Japan has one of the highest prevalence of commercial sex among the major developed countries 29), and the 21st century has seen a sharp increase in internet- or mobile phone-based commercial sex business (known as "delivery fashion health") with this type of commercial sex becoming overwhelmingly the main focus of the industry. As of 2006, 9,000 shops had been registered nationwide 30), and it can be said that this makes Japan uniquely vulnerable when it comes to the spread of HIV.

It is known that drug use, as a result of intravenous injection and the unprotected sexual contact under the influence of drugs, has the effect of speeding up the spread of HIV. In recent years, there has been a sharp rise in the amount of illegal drugs seized by Japanese Customs or Police, and there are concerns that drug use is becoming widespread (Figure 21) 30). In addition to these illegal drugs, so called "law-evading drugs" (substances which are out of the regulation of the law) are also becoming popular. There is data available for Japan which suggests a link between drug use and HIV infection 31), thus there is a need for greater education about the dangers of drug use.

4 Migration

The state of migration must be monitored carefully from the perspective of its effects on the spread of HIV in Japan in future. Between 1995 and 2007 the numbers of Japanese nationals who go overseas each year leveled off at between 16-17 million. However for the same period, due to an increase in the number of foreign nationals who enter Japan from Asia, the number of foreigners entering Japan each year has more than doubled and in 2007 broke the 9 million mark for the first time²². In recent years the number of people overstaying their visa is decreasing, however the numbers of visa overstays from Korea, China, and Philippines are high, with the rate of decrease for China and the Philippines leveling off (Figure 22)³³. The numbers of Japanese nationals on extended stays overseas are on the rise with numbers of Japanese staying in the US, China and Thailand increasing. In particular, the number of Japanese nationals staying for extended periods in China is on the increase. When looked at by city, the increase in Japanese nationals staying in Shanghai is particularly noteworthy, and numbers for Los Angeles and Bangkok are also on the rise (Figure 23)³⁴.

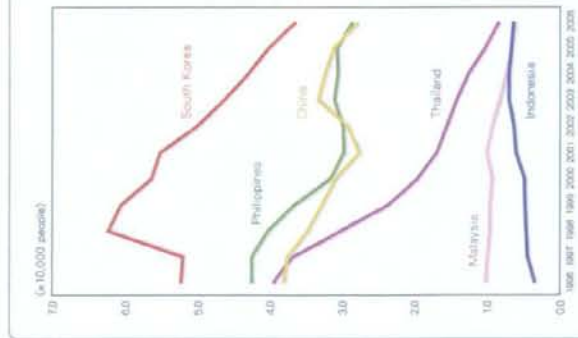


Figure 22 Number of people who overstay their Japanese visa, 1995-2008

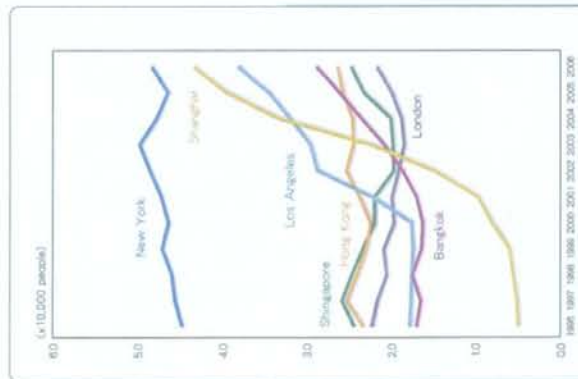


Figure 23 Number of Japanese nationals on extended stays overseas, 1995-2008

5 Trends in Media Coverage of AIDS

Since the 1996 settlement between the victims of HIV contaminated blood products and the Government, articles on AIDS in the four major newspapers have declined dramatically (Figure 24a). Since 1992-4, when it was reported that many HIV positive foreign women were reported to the surveillance and for a brief period media coverage increased, there have been virtually no articles about the sexual transmission of HIV, the need for HIV prevention or the need for education about HIV (at present, only the Asahi and Yomiuri newspapers have been surveyed) (Figure 24b). This is no doubt a major factor in the lack of awareness of HIV/AIDS in Japanese society³⁵.

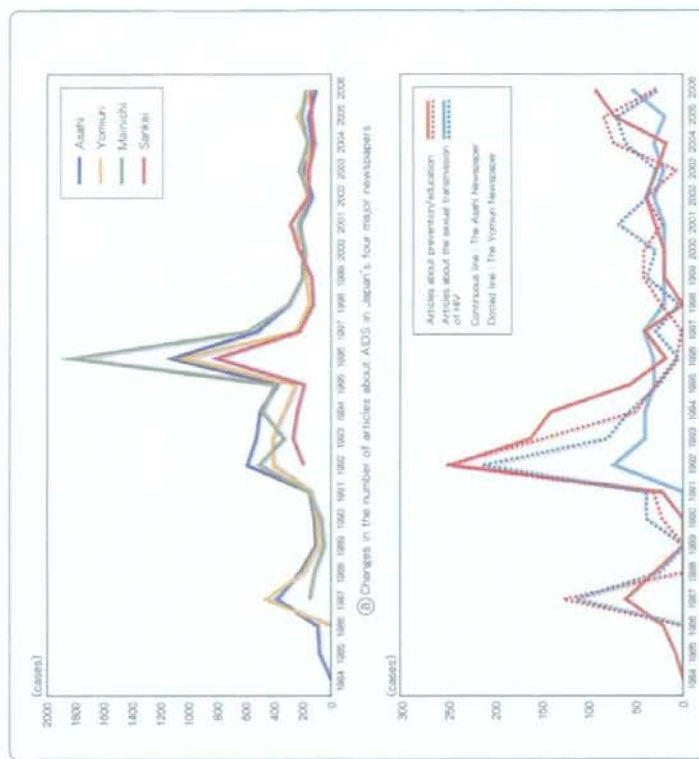


Figure 24 Number of articles about HIV/AIDS in major newspapers in Japan, 1984-2008

1 Trends in the Number of HIV Tests and HIV-related Consultation Visits

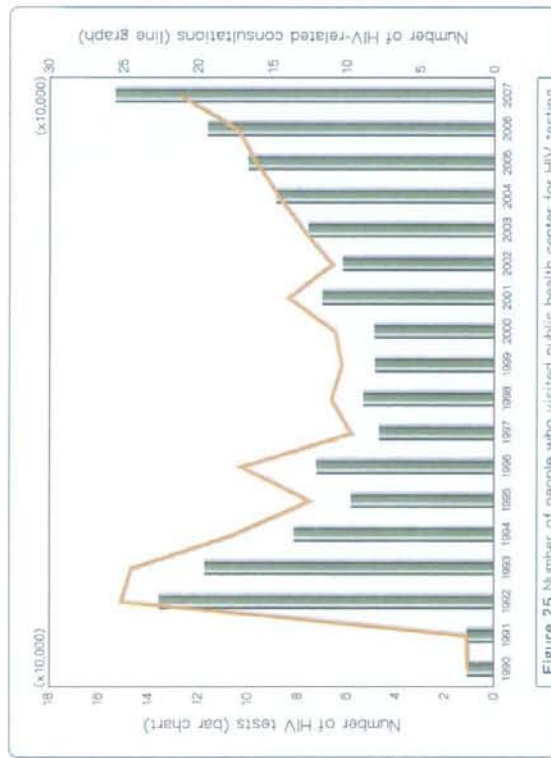


Figure 25 Number of people who visited public health center for HIV testing and HIV-related consultation in Japan, 1990-2007

Since 2003, the numbers of people who visited public health centers for HIV testing or of those who made contact with public health centers for HIV-related consultation have grown considerably. From the 2006 establishment of HIV-test promotion week in June, this upward trend has grown even stronger (Figure 25 36). Locked at by individual prefecture, the five highest numbers of HIV tests per 100,000 people between ages 15 and 59 in 2007 were Okinawa with 457, Tokyo with 377, Osaka with 343, Nagano with 310, and Aichi with 282. The five prefectures with the greatest rates of increase were (comparing 2002 and 2007) Kagoshima with 4.9, Okinawa with 4.5, Tottori with 4.5, Yamagata with 4.3, and Fukui with 4.0 (Table 2).

The prefectures with the five highest numbers for HIV-related consultation per 100,000 people between ages 15 and 59 in 2007 were Tokyo with 780, Nagano with 495, Kanagawa with 398, Saitama with 394, and Osaka with 391, in terms of rate of increase (comparing 2002 and 2007), the top five prefectures are as follows: Kagoshima with 5.2, Fukui with 4.1, Nagano with 4.1, Tokyo with 3.5, and Niigata with 3.3.

Table 2: Number of HIV Tests and Consultation Visits at Public Health Centers per Unit of Population by Prefecture

Prefecture	15-59 year-old population in 2005 (x10 ⁵)	HIV Testing		HIV-related Consultation			
		Total Number of Tests per Year	Number per 10 ⁵ of Population #1	Total Number of consultations per Year	Number per 10 ⁵ of Population #1		
Hokkaido	3,336	3,019	110	283	3,375	102	180
Aomori	816	583	72	206	1,581	195	191
Iwate	767	728	96	233	254	95	051
Niigata	1,411	2,087	148	315	796	56	054
Akita	615	672	109	382	65	64	095
Yamagata	661	864	131	430	191	29	036
Fukushima	1,173	1,177	100	338	1,760	145	204
Ibaraki	1,743	2,714	156	369	3,738	214	205
Tochigi	1,186	2,979	218	289	3,023	331	248
Gunma	1,150	1,942	160	312	745	65	095
Saitama	4,309	5,388	124	344	10,068	364	277
Chiba	3,654	6,309	174	249	8,222	229	295
Tokyo	7,661	26,993	377	200	66,994	780	348
Kanagawa	5,399	11,769	218	202	21,411	398	276
Niigata	1,381	1,482	110	275	3,718	275	331
Tohama	616	780	127	297	1,314	213	169
Ishikawa	675	1,230	192	334	524	78	068
Fukui	452	581	129	401	1,195	202	407
Yamanashi	493	943	191	264	383	78	051
Nagano	1,182	3,659	310	331	6,885	495	407
Gifu	1,180	814	69	240	1,196	97	243
Shizuoka	2,190	3,821	178	275	3,663	172	084
Aichi	4,296	11,240	262	254	8,191	190	088
Mie	1,044	1,383	132	258	1,190	114	157
Shiga	816	787	98	212	2,293	281	208
Kyoto	1,539	3,373	219	288	882	95	041
Osaka	5,133	17,669	343	218	20,077	391	149
Huigo	3,216	5,531	175	218	2,706	86	065
Nara	828	1,125	136	358	500	60	221
Wakayama	563	521	93	210	450	80	098
Tottori	334	791	228	449	133	40	085
Shimane	389	471	121	259	307	90	125
Okayama	1,091	1,138	104	201	2,184	200	103
Hiroshima	1,639	3,189	194	330	5,061	341	284
Yamaguchi	895	1,418	163	351	1,016	126	118
Tsushima	449	833	186	356	1,144	265	298
Kagawa	595	931	156	312	1,492	297	276
Ehime	810	1,562	193	357	2,705	334	317
Kochi	432	759	169	264	154	31	034
Fukuoka	2,978	7,520	253	226	8,786	329	124
Saga	462	1,061	230	244	1,001	217	099
Nagasaki	819	1,180	144	238	983	118	123
Fukuoka	10,025	22,830	219	340	29,111	295	292
Oita	663	853	129	285	2,147	324	196
Miyazaki	659	1,017	159	323	985	154	088
Kagoshima	1,017	1,271	125	493	1,925	196	517
Okinawa	822	3,755	457	451	2,778	338	144

#1. Based on the 15-59 year-old population in 2005.
#2. Based on the number in 2007 divided the number in 2002

2 HIV/STD-related Knowledge Awareness among General Population

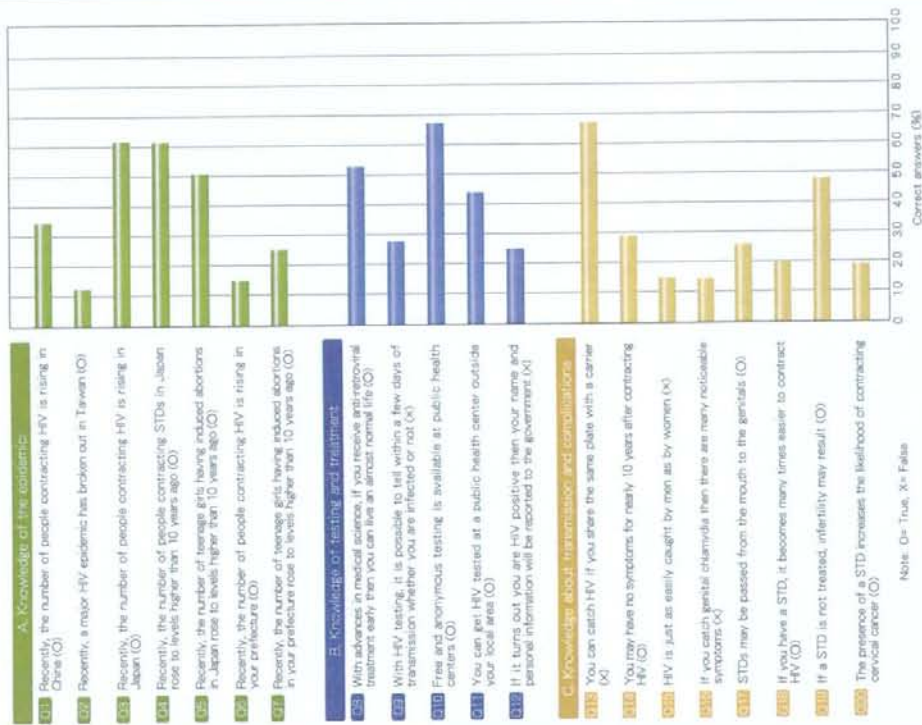


Figure 26 Results of a nationwide household survey on HIV/STD-related knowledge in Japan, 2007

According to a nationwide household survey conducted in March 2007 (15,018 subjects, two-stage random sampling, response rate of 83.4%, focused on the middle-aged and older persons)³⁷, awareness of many important HIV/STD-related knowledge was very low. Correct answer to the questions on the following facts were only in 10% range (maximum 100%): the spread of HIV in Taiwan, the spread of HIV in the prefecture they reside, differences for men and women in the ease of HIV transmission, that symptoms of genital chlamydial infection often go unnoticed, and that it is easier to be infected by HIV after being infected by a STD. Responses to the following facts were in 20% range: the best time to receive an HIV test, that the latency period for HIV is close to ten years, that STDs can be passed from the mouth to the genitalia, and that information from the testing process that might identify an individual is not given to the government (Figure 26). For individual prefectures, the top three prefectures were Tokyo with 41.2, Okinawa with 40.2, and Kanagawa with 40.1. However, no municipality showed more than 50 percent, and the national average represents a rather low percentage of 38.1 (Table 2).

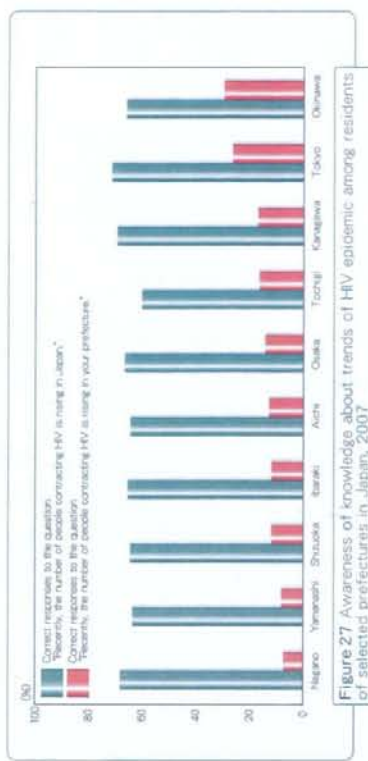


Figure 27 Awareness of knowledge about trends of HIV epidemic among residents of selected prefectures in Japan, 2007

As seen in ten prefectures which have the highest total number of HIV/AIDS cases reported during 2002-2006 per unit of population (Table 1), knowledge about the spread of HIV at the national level is comparatively high with an average percentage of 53. In contrast, knowledge about the spread at the local level is very low at 16% (Figure 27). The same trend can be seen with the tendency in teenage induced abortions, where not enough is being done to disseminate epidemiological information at the local level. For individual prefectures, the top three for awareness about local HIV information are Ishikawa with 31.3, Okinawa with 30.8%, and Tokyo with 27.1%, and the top three for awareness about local information on the artificial termination of pregnancies among teenagers are Okinawa with 39.7%, Tottori with 36.5%, and Saga with 33.9%. While these scores are high in comparison to other prefectures, no municipality showed more than 40 percent (Table 2).

The surveys discussed above suggest that the dissemination of information about HIV and STDs to the public remains at a low level nationwide.

Table 3: Percentage of Correct Answers for Knowledge about HIV/STD by Prefecture

Prefecture	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Hokkaido	566	324	104	635	650	538	177	323	515	680
Aomori	187	348	112	545	503	444	129	203	463	615
Iwate	176	313	86	534	466	438	97	387	432	614
Miyagi	200	335	130	593	538	440	162	233	410	519
Akita	162	313	52	552	460	375	151	309	478	619
Yamagata	128	237	70	414	414	344	80	188	351	458
Fukushima	213	399	164	601	582	498	113	288	657	756
Ibaraki	299	375	217	625	602	515	120	231	609	612
Tochigi	312	363	138	574	606	474	178	360	577	605
Gunma	178	433	281	652	573	444	84	140	646	682
Saitama	667	337	154	643	515	126	208	556	513	758
Chiba	597	329	101	622	501	520	131	239	530	724
Tokyo	1312	368	134	691	607	528	271	323	575	783
Kanagawa	1033	360	133	673	607	558	170	319	591	795
Igashi	566	310	101	587	518	469	153	209	488	568
Tohru	174	305	144	509	509	443	195	184	477	649
Ishikawa	259	338	81	691	629	456	313	216	564	714
Fukui	158	323	82	532	506	364	51	152	424	601
Yamanashi	190	368	126	611	600	442	95	211	479	637
Nagano	188	378	128	654	644	548	85	223	511	739
Gifu	188	348	146	608	604	493	66	208	614	622
Shizuoka	451	337	105	614	603	492	120	175	520	621
Aichi	610	412	100	620	626	575	135	261	620	651
Mie	253	368	111	694	618	458	73	200	602	636
Saga	171	404	123	667	661	515	170	298	644	661
Kyoto	112	404	123	670	670	548	154	256	577	724
Osaka	834	352	107	642	678	576	148	299	621	719
Hiroshima	635	378	128	660	655	599	145	277	653	714
Nara	196	362	112	617	626	536	92	230	556	663
Wakayama	136	331	132	507	493	425	81	184	434	609
Tottori	170	259	47	518	535	529	100	365	429	629
Shimane	187	326	118	492	551	503	91	187	497	603
Okayama	280	300	139	600	618	532	145	239	511	664
Hokkaido	309	353	140	587	550	489	106	243	514	629
Yamaguchi	234	355	137	677	675	419	103	360	595	688
Tokushima	169	414	178	657	675	527	83	225	515	625
Kagawa	185	361	205	632	609	519	135	249	573	714
Ehime	165	242	73	588	552	479	139	200	521	600
Kochi	181	271	127	541	549	514	122	331	431	543
Fukuoka	453	322	108	616	649	512	183	300	521	702
Saga	127	465	244	654	622	559	105	339	512	663
Nagasaki	229	354	122	655	628	568	153	279	515	703
Kumamoto	235	355	124	658	641	438	142	223	464	640
Oita	185	351	103	605	681	551	135	270	551	641
Miyazaki	169	319	138	545	519	519	127	280	503	643
Kagoshima	202	315	147	575	565	538	168	271	507	661
Okinawa	224	313	129	638	665	540	300	397	567	700
Average	190/18	347	121	620	613	511	153	259	531	673

Question contents (as on the questionnaire):
 Q1: Recently, the number of people contracting HIV is rising in China.
 Q2: Recently, the number of people contracting HIV is rising in the United States.
 Q3: Recently, the number of people contracting HIV is rising in Japan.
 Q4: Recently, the number of people contracting HIV is rising in the United States.
 Q5: Recently, the number of people contracting HIV is rising in Japan.
 Q6: Recently, the number of people contracting HIV is rising in the United States.
 Q7: Recently, the number of people contracting HIV is rising in the United States.
 Q8: Recently, the number of people contracting HIV is rising in the United States.
 Q9: Recently, the number of people contracting HIV is rising in the United States.
 Q10: Recently, the number of people contracting HIV is rising in the United States.

Table 3 (continued): Percentage of Correct Answers for Knowledge about AIDS by Prefecture

Prefecture	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Average
Hokkaido	427	227	855	310	133	148	289	106	508	170	365
Aomori	265	176	615	267	171	267	165	444	193	221	221
Iwate	415	208	619	260	119	148	305	182	403	208	317
Miyagi	402	244	581	244	158	128	287	192	361	180	300
Akita	495	177	563	224	68	115	263	130	422	146	306
Yamagata	289	160	409	237	80	193	133	250	125	245	245
Fukushima	469	266	648	254	109	113	277	239	479	216	382
Ibaraki	411	221	699	421	187	184	314	187	445	177	370
Tochigi	458	234	641	349	192	147	260	208	513	215	371
Gunma	455	275	719	369	124	90	275	208	556	303	392
Saitama	459	274	747	309	135	190	273	202	562	305	379
Chiba	428	239	729	278	107	167	252	166	549	184	365
Tokyo	485	291	748	308	156	185	313	242	591	282	412
Kanagawa	489	285	741	294	109	172	307	227	568	213	401
Igashi	417	215	647	202	113	107	212	135	393	144	312
Tohru	408	230	598	276	132	144	253	208	443	207	337
Ishikawa	485	251	726	286	147	147	236	208	462	166	372
Fukui	392	184	637	300	121	153	242	179	437	184	390
Yamanashi	395	189	637	300	121	153	242	179	437	184	390
Nagano	295	206	670	277	181	117	250	197	479	207	308
Gifu	413	200	670	277	181	117	250	197	479	207	308
Shizuoka	453	193	645	293	135	124	255	187	483	149	343
Aichi	433	231	723	294	143	137	223	198	460	151	360
Mie	364	201	603	217	134	120	233	123	423	154	305
Saga	352	219	667	267	211	187	284	216	459	158	308
Kyoto	474	321	702	337	173	183	314	196	535	247	400
Osaka	426	251	700	271	141	140	214	182	498	184	360
Hiroshima	449	282	687	363	170	162	285	208	524	228	382
Nara	367	204	628	311	173	132	260	209	444	204	348
Wakayama	397	162	537	250	125	90	169	147	353	132	281
Tottori	395	188	612	271	112	106	200	141	382	135	306
Shimane	439	283	631	273	176	134	182	187	433	176	328
Okayama	414	230	669	282	164	179	243	207	525	211	368
Hokkaido	432	255	657	304	140	178	213	168	483	185	345
Yamaguchi	474	274	670	326	141	137	248	154	457	154	346
Tokushima	379	219	630	331	195	100	207	189	402	213	350
Kagawa	438	319	692	319	216	200	286	211	481	215	387
Ehime	430	224	630	285	109	73	267	184	529	164	320
Kochi	370	189	541	232	110	94	232	188	436	210	315
Fukuoka	494	256	682	269	146	163	305	216	485	219	373
Saga	488	299	709	346	228	150	323	220	492	220	409
Nagasaki	403	253	659	310	218	140	310	179	459	189	371
Kumamoto	369	169	571	206	160	108	219	180	396	137	308
Oita	462	361	730	346	141	141	373	184	514	184	302
Miyazaki	381	180	598	286	123	90	185	192	349	180	310
Kagoshima	435	260	610	271	108	100	257	212	414	212	346
Okinawa	481	290	737	363	183	129	346	232	487	223	402
Average	442	249	674	263	152	150	263	188	484	184	361

Q10: If you catch genital chlamydia, men from an STD clinic should be tested for HIV.
 Q11: You can get HIV from a public health center outside your town.
 Q12: If you have HIV, you should get your partner tested for HIV.
 Q13: If you have HIV, you should get your partner tested for HIV.
 Q14: If you have HIV, you should get your partner tested for HIV.
 Q15: If you have HIV, you should get your partner tested for HIV.
 Q16: If you have HIV, you should get your partner tested for HIV.
 Q17: If you have HIV, you should get your partner tested for HIV.
 Q18: If you have HIV, you should get your partner tested for HIV.
 Q19: If you have HIV, you should get your partner tested for HIV.
 Q20: If you have HIV, you should get your partner tested for HIV.

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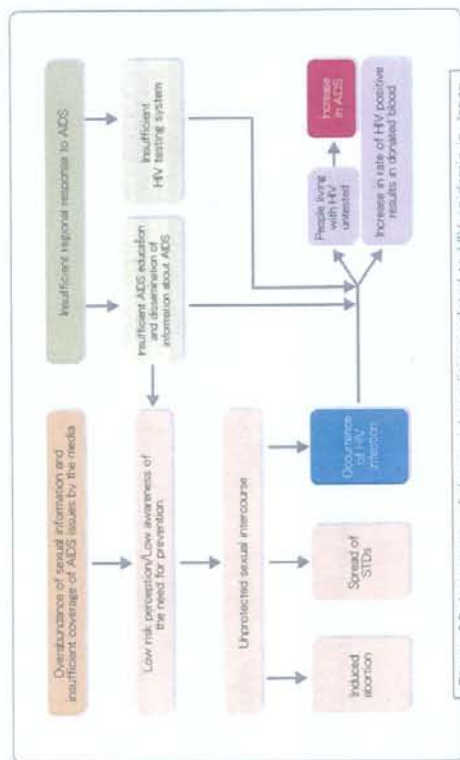


Figure 28 A. summary of the social conditions related to HIV epidemic in Japan

The above information shows how Japan is surrounded by countries and regions where the HIV epidemic is more advanced. Given the situation with immigration and the recent spread of HIV in Taiwan, this is a time when we must prepare for the possible influence of the HIV epidemic abroad. However, despite the overabundance of sexual information in our country, knowledge necessary for the prevention of HIV and STDs has not sufficiently permeated society because information through educational programs and the media is insufficient. For this reason, an increase in unprotected sex has led to a growth in the number of induced abortion and incidence of STDs among the younger age groups and is believed to be related to the recent increase in HIV infection. Though the HIV testing campaign has intensified, because there is still no adequate system of testing, number of cases where HIV carriers who become AIDS patients without being tested continues in an upward trend and the dramatic drop in the number of AIDS patients that has been seen in Europe and the United States has still not been observed in Japan (particularly among those who infected through male-to-male sexual contact). Also, problems in the testing system may be reflected in the increase in positive results from HIV blood testing among donated blood.

Even though Europe and the United States experienced HIV epidemics earlier than Japan, their epidemics remain as high as ever, and may even be worsening. Moreover, as the cumulative number of patients infected with HIV continues to increase each year, these countries are struggling with their own policies. Keeping in mind the difficulty of controlling the spread of HIV, we must begin quickly to establish scientific AIDS policies in each municipality³⁸⁾.

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Information Resources

1. UNAIDS (<http://www.unaids.org>)
2. UNAIDS Collaborating Centre on Socio-epidemiological HIV Research (http://www.unaids.jp_under_construction/)
3. World Health Organization (<http://www.who.int/en/>)
4. US Centers for Disease Control and Prevention (CDC) (<http://www.cdc.gov>)
5. Japanese Foundation for AIDS Prevention (<http://iaj-net.iaj.or.jp>)
6. Japan Infectious Disease Surveillance Centre (<http://idsr.nhs.go.jp/index.html>)
7. Japan Foundation for Sexual Health Medicine (<http://www.jfshm.org>)

Appendix



AIDS Data Book Japan 2007: Social Context and Current State of the HIV Epidemic in Japan

March 2008

By the Study Group for the Trends and Impact of HIV Epidemic and Monitoring of HIV/AIDS Policy (PI: Masahiro Kihara), Ministry of Health, Labour and Welfare AIDS Research Project, FY2007

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11. 研究成果の刊行に関する一覧表

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III. 研究成果の刊行物・別冊(抜粋)

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