HIV SURVEILLANCE REPORT – 2005 UPDATE

Special Preventive Programme
Centre for Health Protection
Department of Health
Hong Kong Special Administrative Region
December 2006

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PREFACE

Hong Kong locates in Asia, the new burning place of HIV infection, but still enjoying a low-prevalence of HIV infection. While sexual transmission was the predominant route of transmission in Hong Kong, an outbreak in injecting drug users was worried as taking reference from the experience in other Asian areas. Various public health measures have kept the prevalence of drug users at exceptional low level, as comparing with our neighbouring cities. This year, an increasing trend was detected in Men who have Sex with Men (MSM) in Hong Kong. The report analysed the attributes of the increase of HIV infections in MSM observed. A HIV-1 Subtype B cluster of similar gene sequencing affecting 20 individuals, mostly MSM, was firstly detected in Hong Kong. It signified the increased risk of local transmission of HIV among MSM.

Public health surveillance is an ongoing systematic collection, analysis, and interpretation of health data, essential to the planning, implementation, and evaluation of public health practice. The process is all closely integrated with timely dissemination of HIV/AIDS data to those who need to know. Information of the HIV/AIDS epidemic in Hong Kong has been regularly disseminated to different target audience through various means. The *fourth annual surveillance report on HIV/AIDS* is an initiative of Special Preventive Programme (SPP) of the Department of Health, Centre for Health Protection. This report serves to provide information for strategic planning of services and intervention activities for the prevention, care and control of HIV/AIDS. Following a commentary, data collected from the four main components of our surveillance programme (the HIV/AIDS voluntary reporting system, serosurveillance studies, Social Hygiene Service caseload statistics and risk behaviour studies) are presented in form of tables and graphs.

Electronic copy of this report is accessible in our website www.aids.gov.hk, so are the quarterly bulletins and other information relating to HIV surveillance and epidemiology. Your comments and suggestions are always welcome.

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ACKNOWLEDGEMENTS

The synthesis of this report is only made possible with the concerted efforts contributed by many people. First and foremost, we must thank our colleagues of the Social Hygiene Service, the Methadone Treatment Programme and the Government Virus Laboratory of the Department of Health who have provided the necessary information over the years. For data collected in the prison setting, we are indebted to the staff of the Correctional Service Department for their invaluable assistance in carrying out HIV risk behaviours questionnaire surveys and prevalence studies on a regular basis.

Next come the many agencies including the Hong Kong Red Cross Blood Transfusion Service, the Society for the Aid and Rehabilitation of Drug Abusers, the Narcotic Division of the Security Bureau, the Department of Microbiology of the University of Hong Kong, the Centre for Epidemiology and Biostatistics of the Chinese University of Hong Kong, many of our local AIDS non-governmental organisations and various public hospitals, in particular Queen Elizabeth Hospital and Prince of Wales Hospital, which have helped collect and update the relevant statistics referred by this report.

Finally, this update would not have been possible without the usual excellent support from the SPP staff in terms of collating and compiling the information as well as the design and production of the report.

1. SUMMARY REVIEW

Background

1. The HIV surveillance system comprises 4 main programmes to provide a detailed description of HIV/AIDS situation in Hong Kong. They are (a) voluntary HIV/AIDS case-based reporting; (b) seroprevalence studies; (c) Sexually Transmitted Disease (STD) caseload statistics; and (d) behavioural studies. The data is collected, analyzed and disseminated regularly by staff of the Surveillance team of Special Preventive Programme (SPP), Centre for Health Protection (CHP), Department of Health (DH). At present, the latest HIV/AIDS statistics are released at quarterly intervals at press media briefings and in electronic format (www.aids.gov.hk). Data from various sources are compiled annually and released in this Report.

2. The following paragraphs highlight the main findings from HIV/AIDS surveillance activities undertaken in 2005. Please refer to the following pages for the details of the programmes. Surveillance information gathered from two large public health HIV testing programmes (namely universal urine testing programme at methadone clinics and universal antenatal testing programme) is also included in the report.

HIV Surveillance system	Page Number
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(d) Behavioural studies	Page 67-68

HIV/AIDS reporting system

HIV Surveillance at a glance (2005)

- 313 HIV reports and 64 AIDS reports
- Gender: 82% male
- Ethnicity: 62% Chinese
- Age: Median 36
- Risks:
  - 33.5% Heterosexual contact
  - 30.7% Homo/bisexual contact
  - 8% Injecting drug use
  - 1.3% Blood contact
  - 0.6% perinatal contact
  - 25.9% undetermined
- CD4 at reporting: 203
- Subtypes: commonest are 258 (82%)
- Primary AIDS defining illness: PCP
- Seroprevalences
  - Blood donors: 0.002%
  - Antenatal women 0.01%
  - STI clinics attendees 0.072
  - Methadone clinics attendees 0.322%

3. The Department of Health implemented a voluntary anonymous HIV/AIDS reporting system since 1985. The system received reports from medical doctors and laboratories. Medical doctors reported newly diagnosed positive cases by a standard form (DH2293). In 2005, the department received 313 HIV reported cases and 64 AIDS reports, which increased 17% in HIV cases and 31% in AIDS cases as compared with 2004. It made the cumulative totals reached 2825 and 782 for HIV and AIDS reports respectively. Public hospitals/clinics/laboratories were still the commonest source of HIV reports in 2005, which accounted for over half of the reports. Private hospitals/clinics/laboratories were another common source of HIV reports (17.6%). Notably, the AIDS service organisations played a more significant role in HIV reporting in 2005. AIDS service organisations reported 19 cases (6.1%) this year when compared to 8 cases (3%) in 2004. The number of reports from other sources has remained stable.

4. Eightly percent of reported HIV cases were male. The male to female ratio rose from 3.3:1 in 2004 to 4.5:1 in 2005. About 60% of reported cases were Chinese. Asian accounted for nearly one fifth of reports. The median age of reported HIV cases was 36. Over 60% of reported cases were believed to acquire the virus through sexual transmission in 2005. Injecting drug use accounted for 8% of HIV infections in 2005. There were reports of HIV transmission through blood contact (4 cases) and perinatal contact (2 cases) in 2005. The suspected routes of transmission were not reported in about a quarter of cases. This means that sexual transmission has accounted for nearly 90% of HIV reports with defined risks. Over 80% of HIV reported cases were men. Male accounted for a higher proportion as compared with previous year.

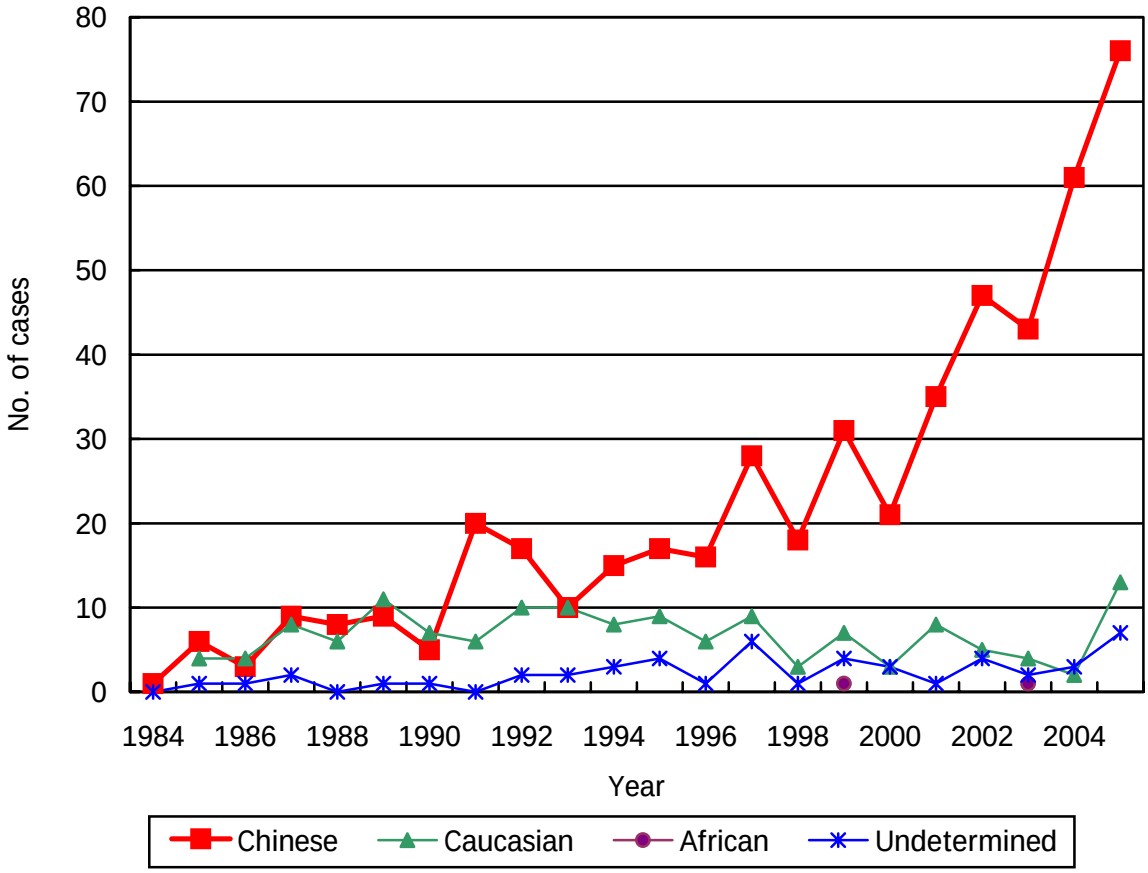
Rising trend in men who have sex with men persisted

5. Sexually transmission was the commonest route of transmission in Hong Kong. Both heterosexual and homosexual/bisexual contacts were important risk factors. It used to report more cases from men who have sex with men, including both homosexual and bisexual contacts, in 80s and early 90s, the early years of AIDS epidemic in Hong Kong. The trend reversed with more heterosexual transmission reported since 1993. A rising trend in MSM was observed last year. The situation was worsening this year. The number of MSM cases was increasing from 66 cases in 2004 to 96 cases in 2005, showing a 45% increase. At the same time, the number of heterosexual male cases dropped from 72 to 66.

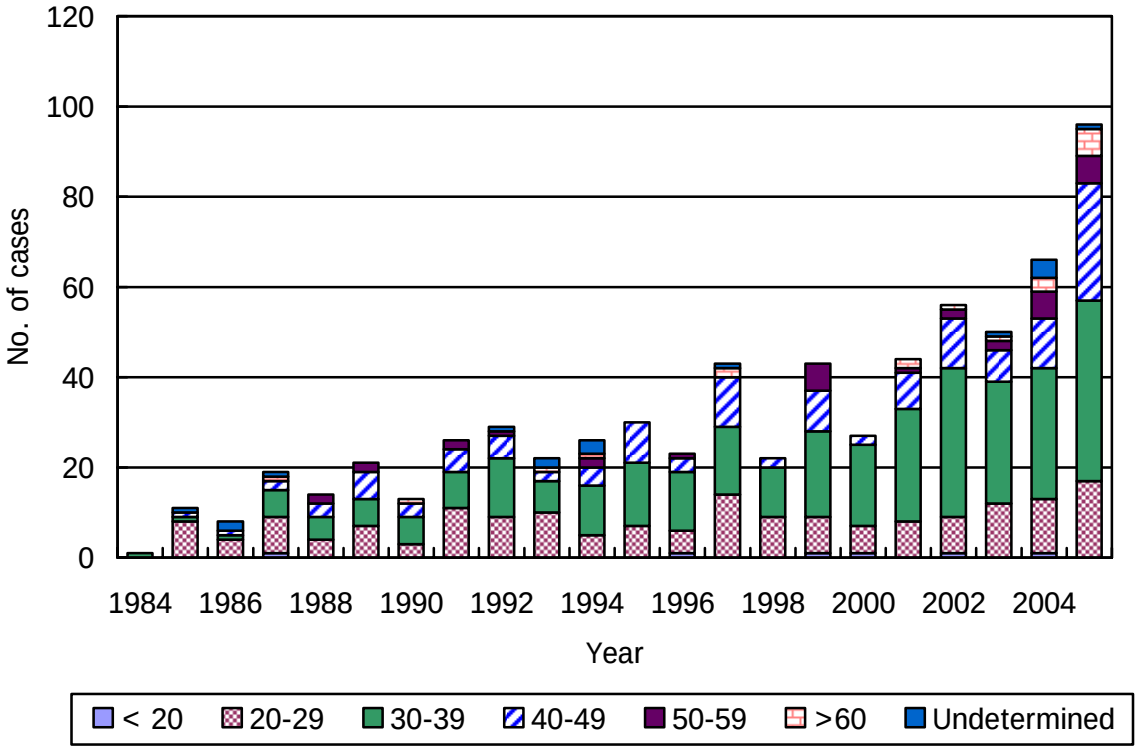
6. Nearly 40% of male HIV cases' routes of transmission were homosexual or bisexual contact. Heterosexual contact in male cases accounted for about 25%, whereas the routes of transmission were not reported in another 25% of male cases. This meant half of the male cases with defined route of transmission acquired the virus through homosexual contact. The ratio of heterosexual men against MSM dropped from its peak of 4.1:1 in 1998 to 0.7:1 in 2005. More men were infected through homosexual/bisexual contact than heterosexual contact this year, which was a reverse of the situation in previous years. MSM transmission now overtook heterosexual contact as the most important risk factor of HIV infection in male.

7. The major attributes of the rise in MSM were Chinese, aged 30-39. Nearly 80% of MSM cases in 2005 were Chinese. Caucasians accounted for 14%. A rising trend in number of reported Chinese MSM cases was observed in recent years. The median age of MSM cases at report was 37, as compared to 44.5 of heterosexual man cases. Age group 30-39 was the commonest age of reporting in MSM, which accounted for 42% in 2005. A rising trend was observed in the age of sexual active, 20-49. The obvious increase in number of cases was observed in the group 30-39 and 40-49, which increased 38% and 136% as compared with last year.

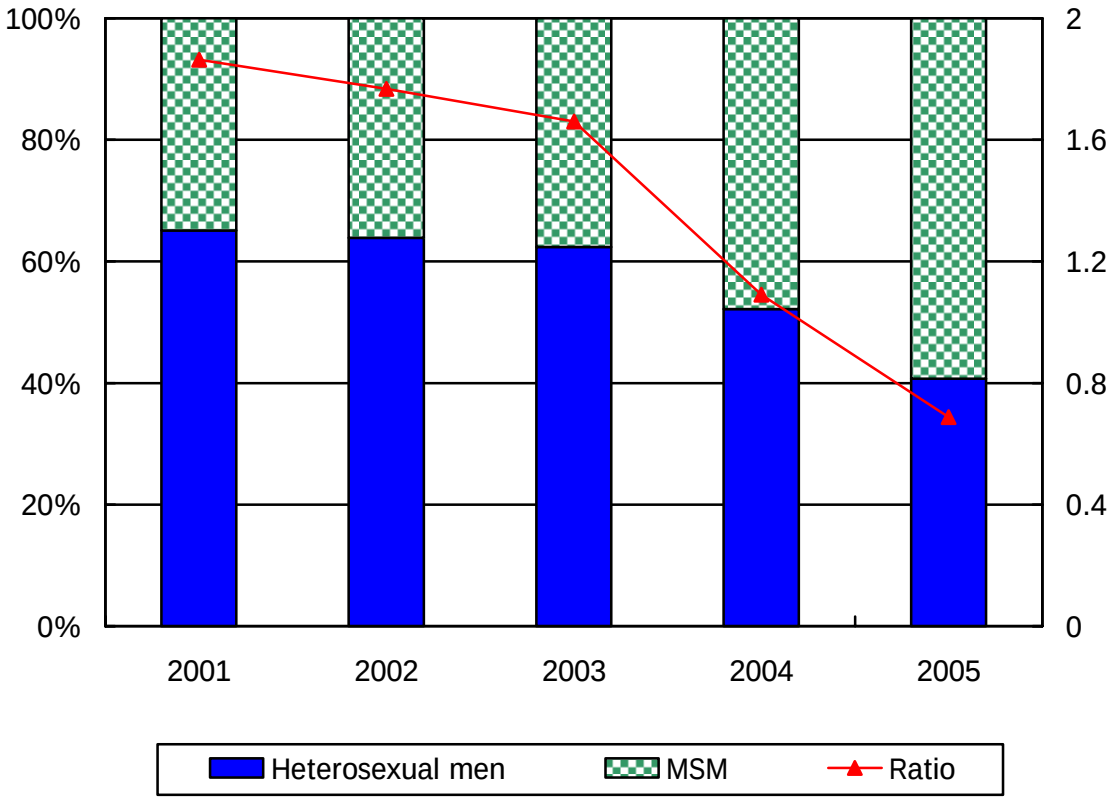
Box 1.1 Ethnicity Breakdown of HIV-infected MSM cases (1984-2005)



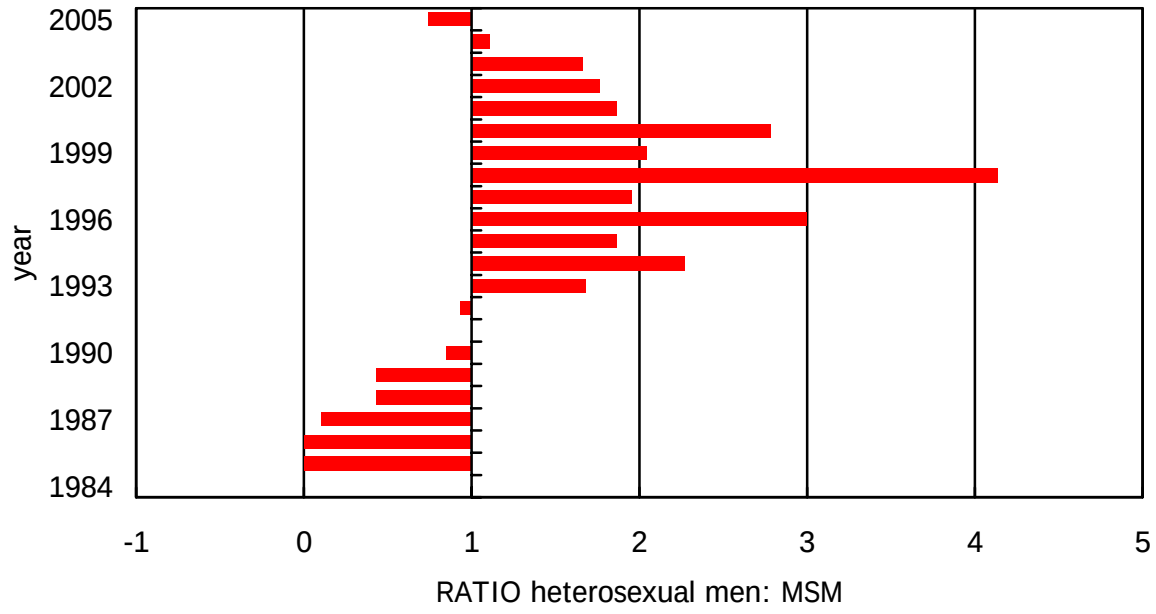
Box 1.2 Age breakdown of HIV-infected MSM cases (1984 - 2005)



Box 1.3 Ratio of heterosexual men and MSM cases in the reporting system (2001-2005)



Box 1.4 The number of MSM cases is taking over heterosexual men cases in the reporting system again.



The number of heterosexual contact cases remained stable

8. The number of heterosexual cases remained stable in 2005. Totally 105 cases was reported, as compared with 110 cases in 2004. Because of increasing number of reported cases in other areas, the proportion accounted for heterosexual contact decreased from 41% in 2004 to 33.5% in 2005. The male to female ratio of heterosexual cases is 1.7:1. The median age of heterosexual cases in 2005 was 39.

9. The attendees of Social Hygiene Clinics commonly reported an unprotected heterosexual contact. The seroprevalence of Social Hygiene Clinic attendees remained stable at below 0.1% (0.072% in 2005). On the other hand, the trend of sexually transmitted infections (STI) provides information for the understanding of risk of HIV infection in the community. Although it was estimated that Social Hygiene Clinics took care of only 20% of STI cases in the territory, it was still a very important sentinel site. There was a slight decrease in the total number of STI cases in Social Hygiene Clinics, an aggregate of 18435 in 2005 as compared with 21818 cases in 2004. A 10% decrease was observed in all the common STI diagnosis. The decrease of cases was more obvious in gonorrhoea, from 2492 cases in 2004 to 1748 cases in 2005 (30% drop).

Small but significant numbers of infection in injecting drug users reported

10. In 2005, the reporting system recorded 25 cases of HIV transmission through injecting drug use. The number was similar to that of 2004, but at a higher level as compared with several years ago. Most of the cases were Asian, non-Chinese. The median age was 31. The implementation of universal urine testing in methadone clinic might partially explained the rise. 20% of injecting drug user cases was reported from methadone clinics.

11. It was estimated that over 70% of heroin users attended methadone clinics at any one time. The Universal HIV Antibody (Urine) Testing Programme replaced the unlinked anonymous screening (UAS) in methadone clinic as the seroprevalence study in 2004. 8749 tests were done in the programme in 2005 with the coverage of 91%. The coverage of the programme was similar to that of 2004. The programme tested 11 positive cases in 2005 and with the 17 previously known positive cases still attending methadone clinics, totally there were 28 HIV positive drug users attending methadone clinic this year. The seroprevalence over the year, including the UAS period, were stably below 1%. The seroprevalence of methadone clinic attendees in 2005 was 0.322%, which was not significant higher than previous years.

Cases of blood borne transmission and perinatal transmission recorded

12. In 2005, 4 cases reported blood contact transmission. The last case was reported in 1999. Two cases contracted the virus from contaminated blood or blood products outside Hong Kong. The other two cases were diagnosed HIV more than 10 years ago but just reported this year. Actually no HIV infection from local contaminated blood or blood product was found in the recent several years. The seroprevalence of blood donors at Hong Kong Red Cross Blood Transfusion Service was at a low level of around 0.001% in 2005.

13. In 2005, 2 perinatal HIV infections were reported. These children were born several years ago but physicians reported to the surveillance office this year. The Universal Antenatal HIV Testing was implemented in 2002. About 40,000 pregnant women attending public antenatal services were tested every year and the coverage of the programme reached 98.1% in 2005 and revealed the seroprevalence of HIV infection in pregnant women of 0.01%, which is similar to that of previous years. Five pregnant women were tested positive in the programme this year. Two terminated the pregnancy and the other three women delivered the baby by Caesarean Section.

Cases with undetermined risk factor on the increase

14. The information of voluntary reporting was becoming incomplete as there are an increasing proportion of cases reported without a risk factor. Similar to last year, over a quarter of cases reported without a suspected route of transmission. This is especially so for cases without clinical reporting. Undetermined risk is commoner in cases reported by private hospitals/clinics/laboratories. (21%) While it is understandable that the route of transmission may not be determined in every single case, every effort should be made to report this crucial information, if known, so that meaningful aggregate data could be generated and disseminated for better understanding of local HIV epidemiology in Hong Kong.

Tuberculosis takes over and becomes the commonest Primary AIDS Defining Illness

15. The annual number of reported AIDS cases was dropping since 1997, the year of introducing highly active antiretroviral therapy (HAART) in Hong Kong but the trend halted this year. Sixty-four AIDS cases were reported as compared with 49 cases in 2004. 57 cases (89.1%) of the AIDS reports this year has their AIDS reported within 3 months.

16. The primary AIDS defining illness (ADI) pattern of the reported cases also changed slightly this year. *Pneumocystic jirovechi* pneumonia (previously named *Pneumocysitc carinii*) has been the commonest ADI in Hong Kong. This year, *Mycobacterium tuberculosis* accounted for 25 AIDS cases (39.1%) and became the single most important ADI of the year. It was followed by Pneumocystic pneumonia (20, 31.3%), Penicilliosis (7, 10.9%), and fungal infections (5, 7.8%). On the other hand, unlinked anonymous testing in tuberculosis patients demonstrated a seroprevalence of 0.833% in 2005. An increasing trend was showed and stayed at a high level since 2002. This figure was even higher than that of Methadone Clinic attendees and Social Hygiene Clinic attendees.

17. The median CD4 of HIV cases was 192. Reporting of CD4 level is becoming a route practice in physician. It provides useful information on timing of diagnosis in the course of HIV infection. 65% of HIV cases in 2005 reported the CD4 level at the diagnosis. There was a continued decreasing trend in median CD4 count among those who are aged 55 and above. The median CD4 for those aged less than 55 has been stable at around 200 (192 – 258.5) for the past 5 years.

Box 1.5 – Reported CD4 levels at HIV diagnosis

Year	No. of HIV reports	No. of CD4 reports (%)		Median CD4 (cell/ul)	CD4>=200 (cell/ul) (%)	
1999	213	141	(66.2%)	216	75	(53.2%)
2000	183	127	(69.4%)	97	52	(40.9%)
2001	213	162	(76.1%)	233.5	85	(52.5%)
2002	260	200	(76.9%)	198.5	100	(50.0%)
2003	229	166	(72.5%)	205	85	(51.2%)
2004	268	176	(65.7%)	211.5	94	(53.4%)
2005	313	203	(64.9%)	192	99	(48.8%)

Box 1.6 – CD4 Reports by age group

Year	Age	No. of CD4 reports (%)		Median CD4 (cell/ul)	% of CD4 >= 200 (cell/ul)
2001	<55	146	(90%)	258.5	(54%)
	>=55	16	(10%)	96	(38%)
2002	<55	182	(91%)	198	(50%)
	>=55	18	(9%)	212.5	(50%)
2003	<55	139	(84%)	228	(53%)
	>=55	27	(16%)	108	(44%)
2004	<55	155	(88%)	223	(56%)
	>=55	21	(12%)	82	(33%)
2005	<55	181	(89%)	192	(49%)
	>=55	22	(11%)	205.5	(50%)

The commonest HIV subtypes were CRF01_AE and B

18. About 82% of HIV reports in 2005 had their subtypes documentated in a project jointly conducted by the University of Hong Kong and the Department of Health. Until the end of the year 2005, CRF01_AE, Subtype B and C of HIV-1 strains were the most common subtypes identified in Hong Kong. They all together accounted for 88.4% of all HIV cases with subtype identified. CRF_01AE was found to be more common in female, Asians non-Chinese, heterosexuals and IDU; the subtype B is more common in Caucasian, MSM and C subtypes in females, Asians and sexually transmitted cases. An increasing diversity of subtypes and its circulating recombinant forms was also noted.

Box 1.7 – HIV Subtypes in Hong Kong

	2001	2002	2003	2004	2005
Annual HIV Reports	213	260	229	268	313
No of reports with subtypes (%)	90 (42%)	228 (88%)	204 (89%)	202 (75%)	258 (82%)
Subtype (%)					
CRF01_AE	56 (26%)	122 (47%)	99 (43%)	95 (35%)	125 (40%)
B	24 (11%)	78 (30%)	60 (26%)	71 (26%)	101 (32%)
08_BC	0 (0%)	1 (<1%)	4 (2%)	10 (4%)	6 (2%)
C	5 (2%)	15 (6%)	21 (9%)	3 (1%)	2 (1%)
Others	5 (2%)	12 (5%)	20 (9%)	23 (9%)	24 (8%)

19. A cluster of HIV-1 Subtype B Infections was detected. As of December 2005, upon testing of newly reported and prior blood samples, twenty individuals have been identified to fall within the cluster. These cases have been reported between fourth quarter of 2003 and fourth quarter 2005. All were men and belonged to the age range 21-60 years. Risk factors for HIV infection were reported as unprotected homosexual/bisexual contact in 15 cases. Further epidemiological investigations have been conducted for control of spread of infection beyond the cluster. The following were identified as risk factors for this cluster: having unprotected sex (anal sex and possibly oral sex) between men who have sex with men; using internet as the platform to know sexual partners; having sex with non-regular, non-commercial partners; and using soft drugs during sexual activities

Discussion

20. The number of HIV reports received is on a rise in 2005. The annual HIV reports were used to be around 250. The total number of HIV reports in 2005 breakthrough the “three-hundred” juncture and reached 313. The rise was mainly contributed by increasing reports from Men who have Sex with Men whereas the number of reports from heterosexuals, injecting drug users remained stable as compared with 2004. The late and overseas reports of

blood contacts and perinatal infections, which have not been received for several years, also contributed for the high number this year.

21. The HIV infection among MSM was raised in the HIV surveillance reports in previous years. The situation was worsening and the MSM cases in the reporting system was accounting for a larger proportion this year. It was expected that the trend would not reverse in the coming years because 1) the increasing prevalence in MSM noticed and 2) no significant change in the condom usage rate. The positive rate of AIDS Concern's HIV testing service targeting MSM was increasing from 1.8% in 2004 to 2.5% in 2005. This signified that the rise in HIV reports could not be solely explained the increased testing. We are a genuine rising trend in HIV infections in MSM. With a persistent relatively low level of condom use in MSM, more HIV infections in MSM were expected in the coming years, unless effective interventions were implemented.

22. Although the number of HIV-infected injecting drug users was persistently at a high level, a growing number of HIV infections in injecting drug users were not projected. Among 25 HIV infections in injecting drug users reported, only eight were Chinese. The others except one of unknown were all Asian. It was believed that those non-Chinese acquired the infection outside Hong Kong. Therefore, only one of third of reported HIV infections in drug users were contributed by the local infections. The actual number was not largely different from previous years.

23. The massive universal testing programmes were playing an important role in the surveillance system and it was partially taking over the role of unlinked anonymous screening in the seroprevalence surveillance. With the coverage over 95% in Universal Antenatal Testing programme and Methadone Urine Testing programme, these programmes provided representative data on seroprevalence based on a large sample size. The data of Methadone Urine Testing programme concluded the HIV infection in injecting drug users in Hong Kong was still enjoying of low prevalence, though certain proportion of methadone clinic attendee did not inject. The seroprevalence of Methadone Urine testing Programme is 0.32% in 2005. On the other hand, early diagnosis with prompt referral was achieved in these priority populations. The accessibility of HIV testing was improved through these programmes.

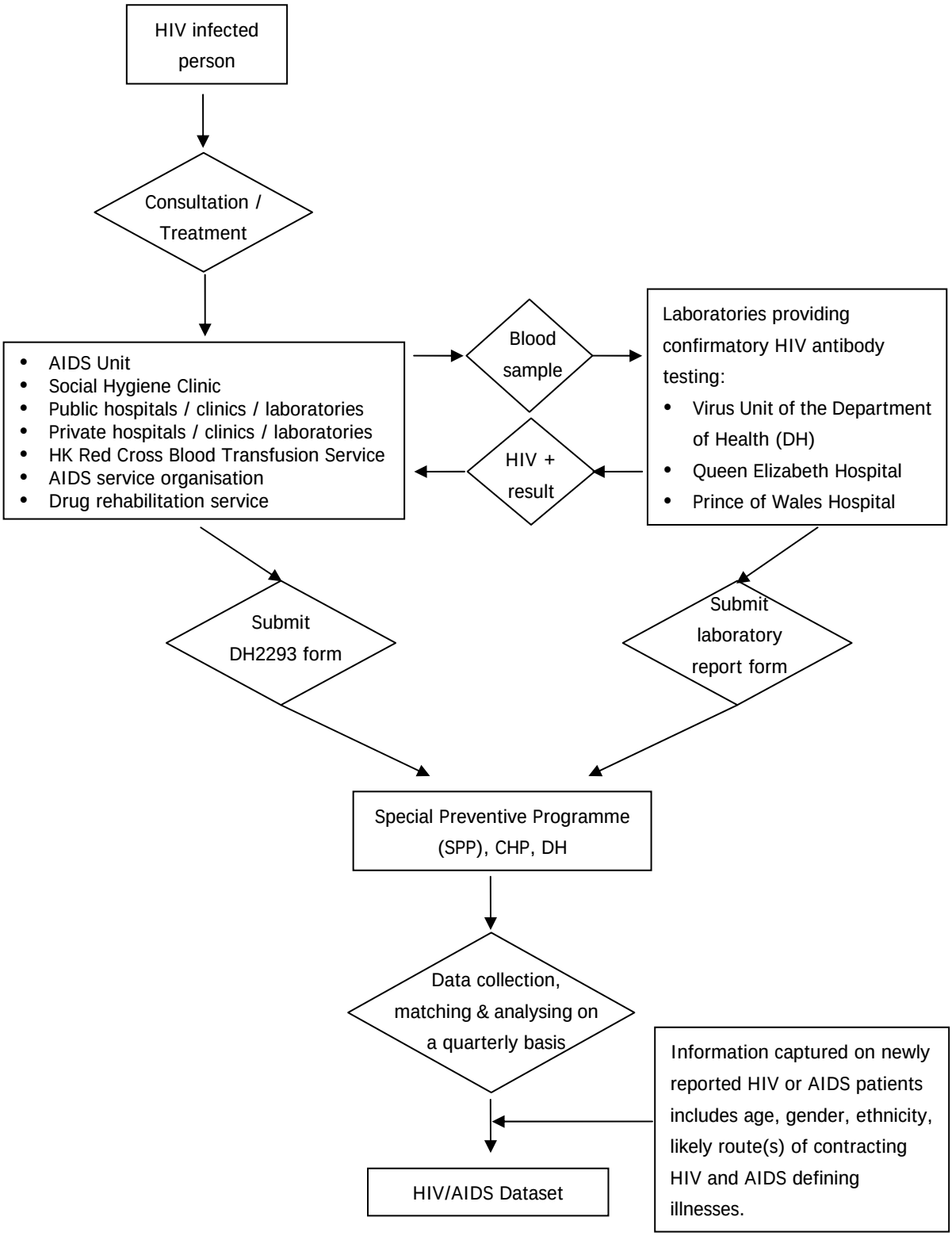
24. Over past years, clusters of HIV infections have been detected over past years. Most belonged to couples who are known to be regular sexual partners or mother-child pairs, while others involved non-locals who reported to have acquired HIV infection through injecting drug use outside Hong Kong. The cluster detected this year is the largest clusters ever detected. This cluster of 20 HIV infection indicated extended and intensified spread of HIV infections, in contrast to isolated transmission. It further supported an increased risk of HIV transmission among MSM in Hong Kong.

2. TABULATED RESULTS OF HIV/AIDS REPORTING

System description

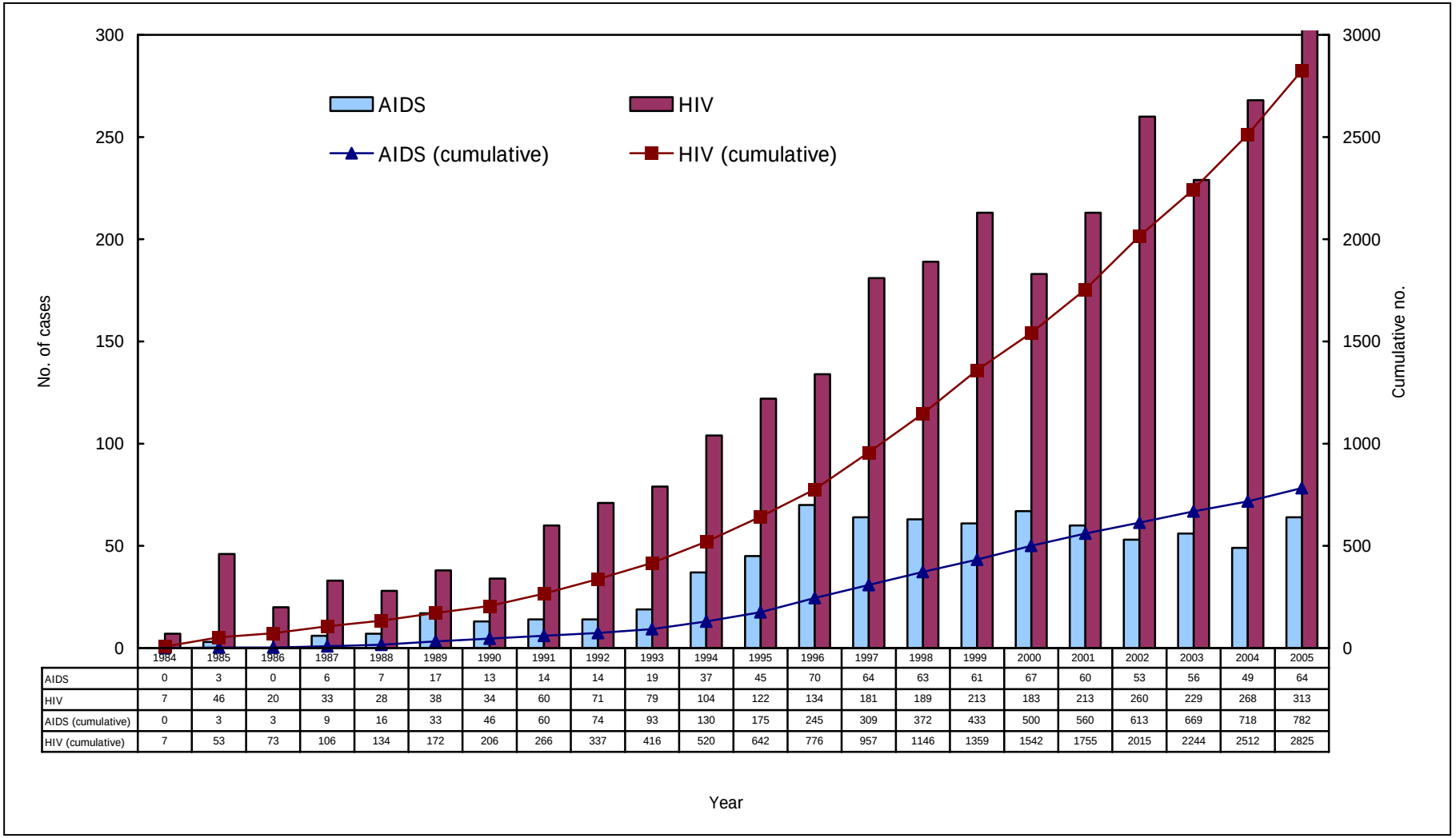
- The HIV/AIDS reporting system is a case-based notification system conducted on a voluntary basis since 1984, with input from clinicians and laboratories.

System layout



Tables & Figures

Box 2.1 Annual and cumulative reports of HIV/AIDS cases

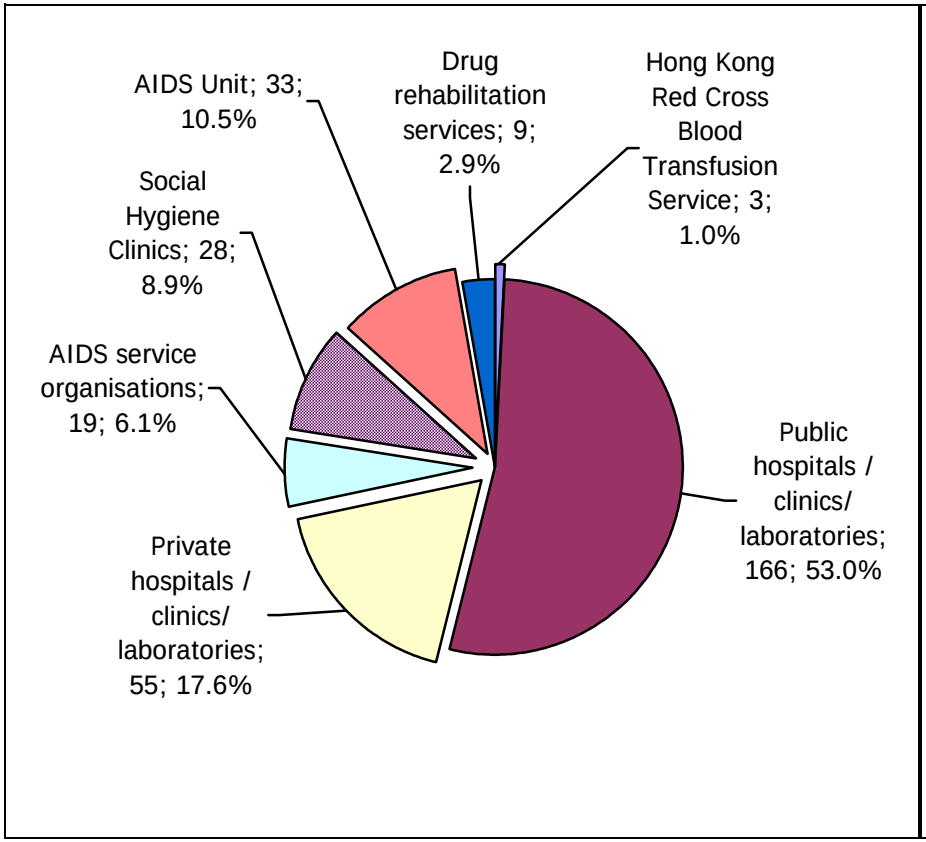


	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
AIDS	0	3	0	6	7	17	13	14	14	19	37	45	70	64	63	61	67	60	53	56	49	64
HIV	7	46	20	33	28	38	34	60	71	79	104	122	134	181	189	213	183	213	260	229	268	313
AIDS (cumulative)	0	3	3	9	16	33	46	60	74	93	130	175	245	309	372	433	500	560	613	669	718	782
HIV (cumulative)	7	53	73	106	134	172	206	266	337	416	520	642	776	957	1146	1359	1542	1755	2015	2244	2512	2825

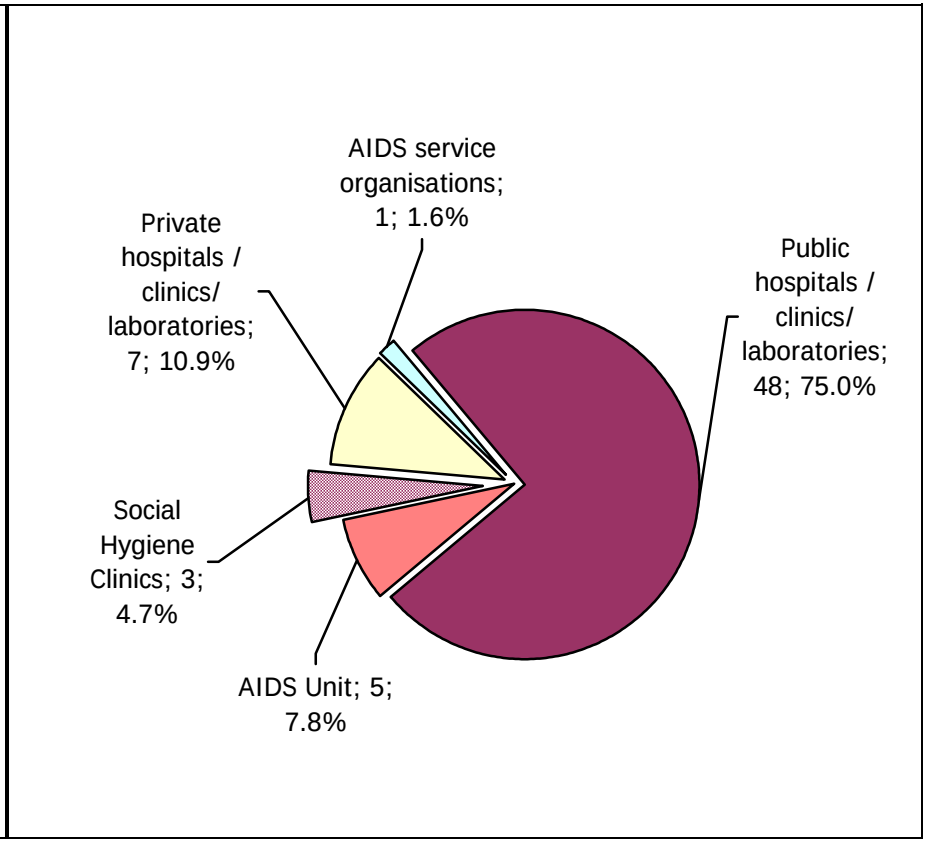
Box 2.2 Source of reporting of HIV/AIDS cases

(a) Year 2005

(i) HIV

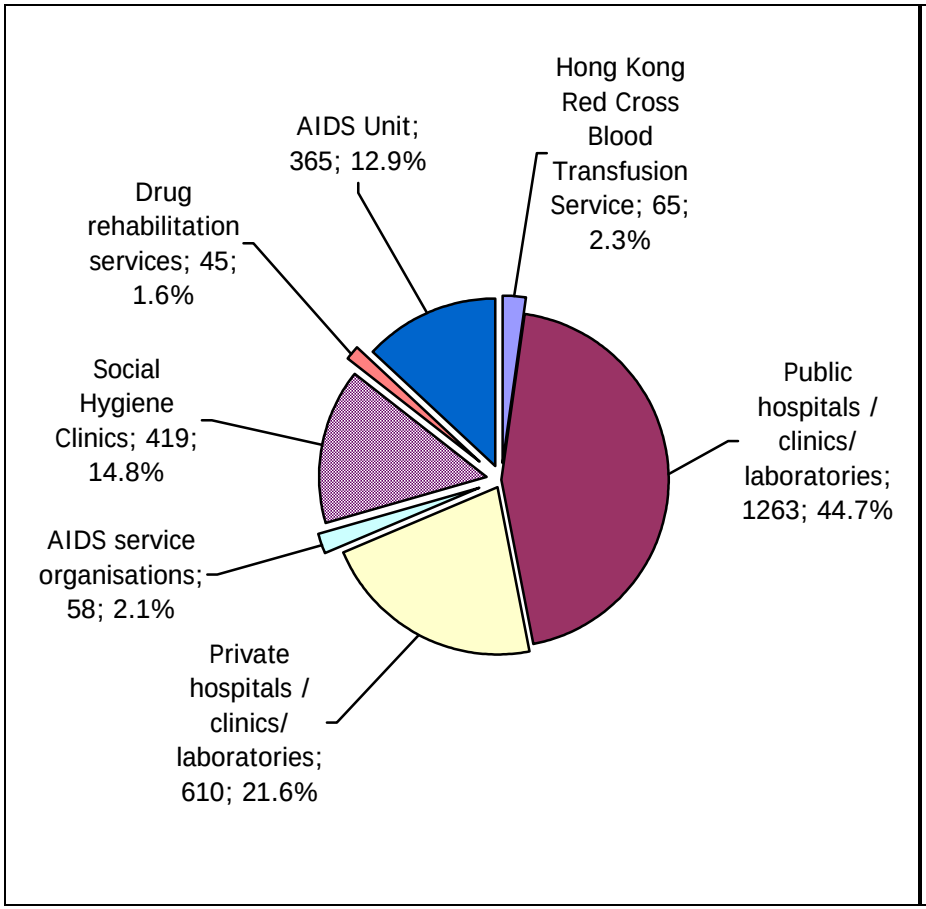


(ii) AIDS

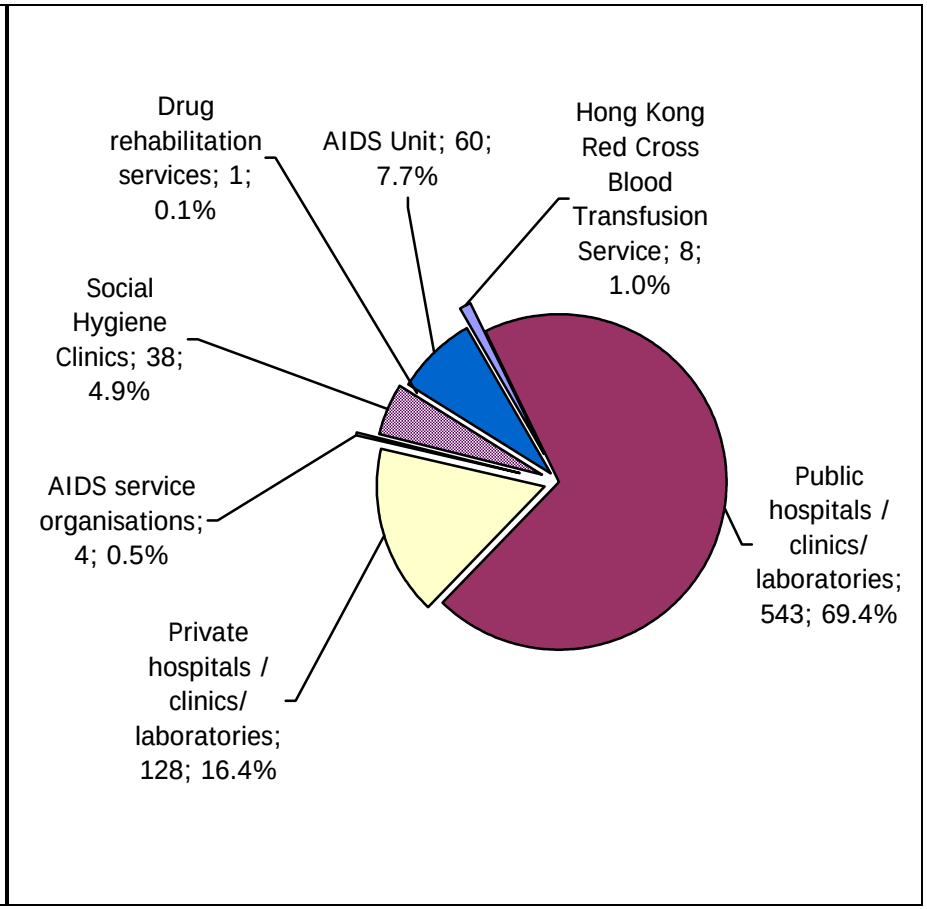


(b) Cumulative (1984 - 2005)

(i) HIV



(ii) AIDS



Box 2.3 Ethnicity & gender of reported HIV/AIDS cases

(a) Year 2005

Ethnicity	HIV						AIDS					
	Male		Female		Total		Male		Female		Total	
Chinese	165	(64.5%)	29	(50.9%)	194	(62.0%)	46	(88.5%)	6	(50.0%)	52	(81.3%)
Asian	43	(16.8%)	16	(28.1%)	59	(18.8%)	3	(5.8%)	6	(50.0%)	9	(14.1%)
White	15	(5.9%)	0	(0.0%)	15	(4.8%)	2	(3.8%)	0	(0.0%)	2	(3.1%)
Black	2	(0.8%)	2	(3.5%)	4	(1.3%)	1	(1.9%)	0	(0.0%)	1	(1.6%)
Unknown	31	(12.1%)	10	(17.5%)	41	(13.1%)	0	(0%)	0	(0%)	0	(0%)
Total	256	(100%)	57	(100%)	313	(100%)	52	(100%)	12	(100%)	64	(100%)

(b) Cumulative (1984 - 2005)

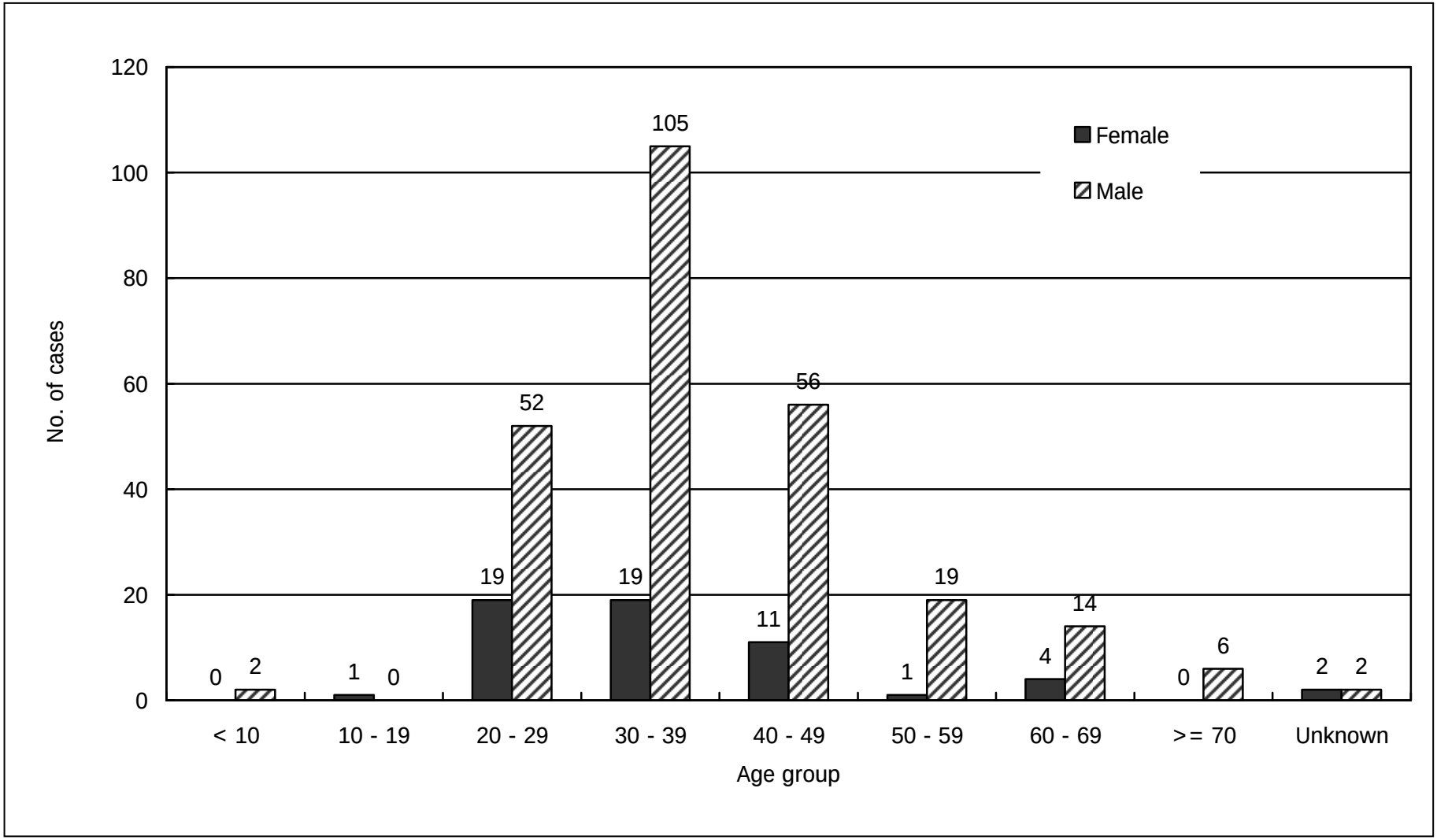
Ethnicity	HIV						AIDS					
	Male		Female		Total		Male		Female		Total	
Chinese	1,691	(74.4%)	241	(43.7%)	1,932	(68.4%)	567	(84.4%)	43	(39.1%)	610	(78.0%)
Asian	232	(10.2%)	232	(42.0%)	464	(16.4%)	40	(6.0%)	65	(59.1%)	105	(13.4%)
White	219	(9.6%)	10	(1.8%)	229	(8.1%)	59	(8.8%)	0	(0.0%)	59	(7.5%)
Black	25	(1.1%)	9	(1.6%)	34	(1.2%)	5	(0.7%)	1	(0.9%)	6	(0.8%)
Unknown	106	(4.7%)	60	(10.9%)	166	(5.9%)	1	(0.2%)	1	(0.9%)	2	(0.3%)
Total	2,273	(100%)	552	(100%)	2,825	(100%)	672	(100%)	110	(100%)	782	(100%)

Box 2.4 Age distribution of reported HIV/AIDS cases

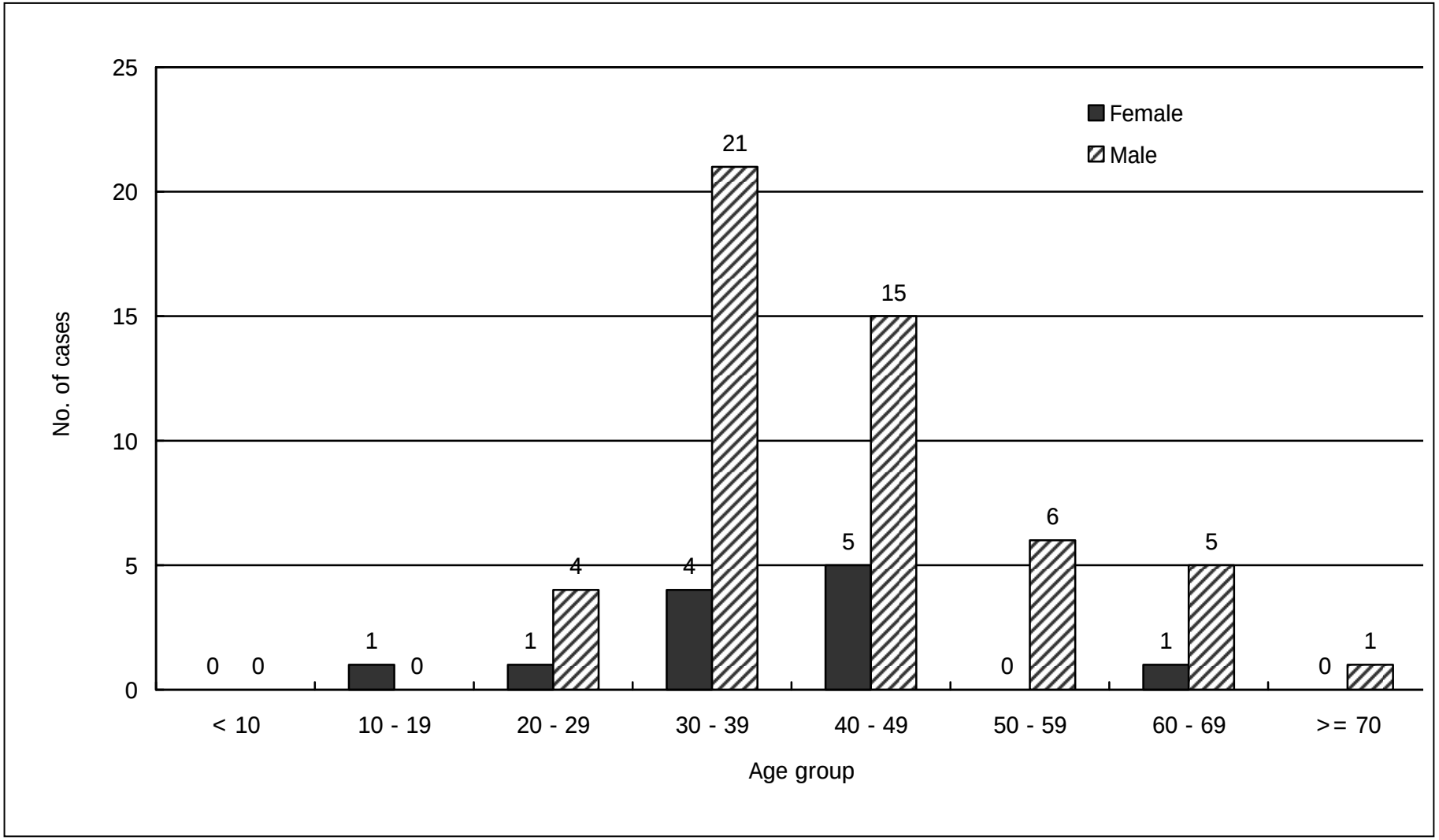
(a) Median age of reported HIV/AIDS cases

Year	HIV			AIDS		
	Median age	Inter quartile range		Median age	Inter quartile range	
		25%	75%		25%	75%
1984	11	6	32	---	---	---
1985	21	13.5	28.5	33	28	46
1986	26	15	41	---	---	---
1987	29	24	38.5	42.5	35.3	51.3
1988	35	25.8	42.3	39	24	43
1989	36	28	46	38	31.5	46.5
1990	33	28	39	35	28.5	50.5
1991	31.5	26	39.8	34	27	44
1992	34	28	40	39	34.8	45.5
1993	33	27	39	38	29	41
1994	34	28	40	36	33	40.5
1995	32	26	40	36	30	44.5
1996	34	30	41.5	38	31.8	43
1997	35	28.5	42	37	32	48
1998	34	29	40	39	32	48
1999	35	29	43	40	34	51
2000	35	29	43	40	33	50
2001	34.5	29	42	38	30.3	46.8
2002	36	30	44	41	34	48
2003	36	30	45	39	35	49.8
2004	36	30	44.5	42	35	51
2005	36	30	44	40	33.3	47.8
Total	35	29	42	38	32	47

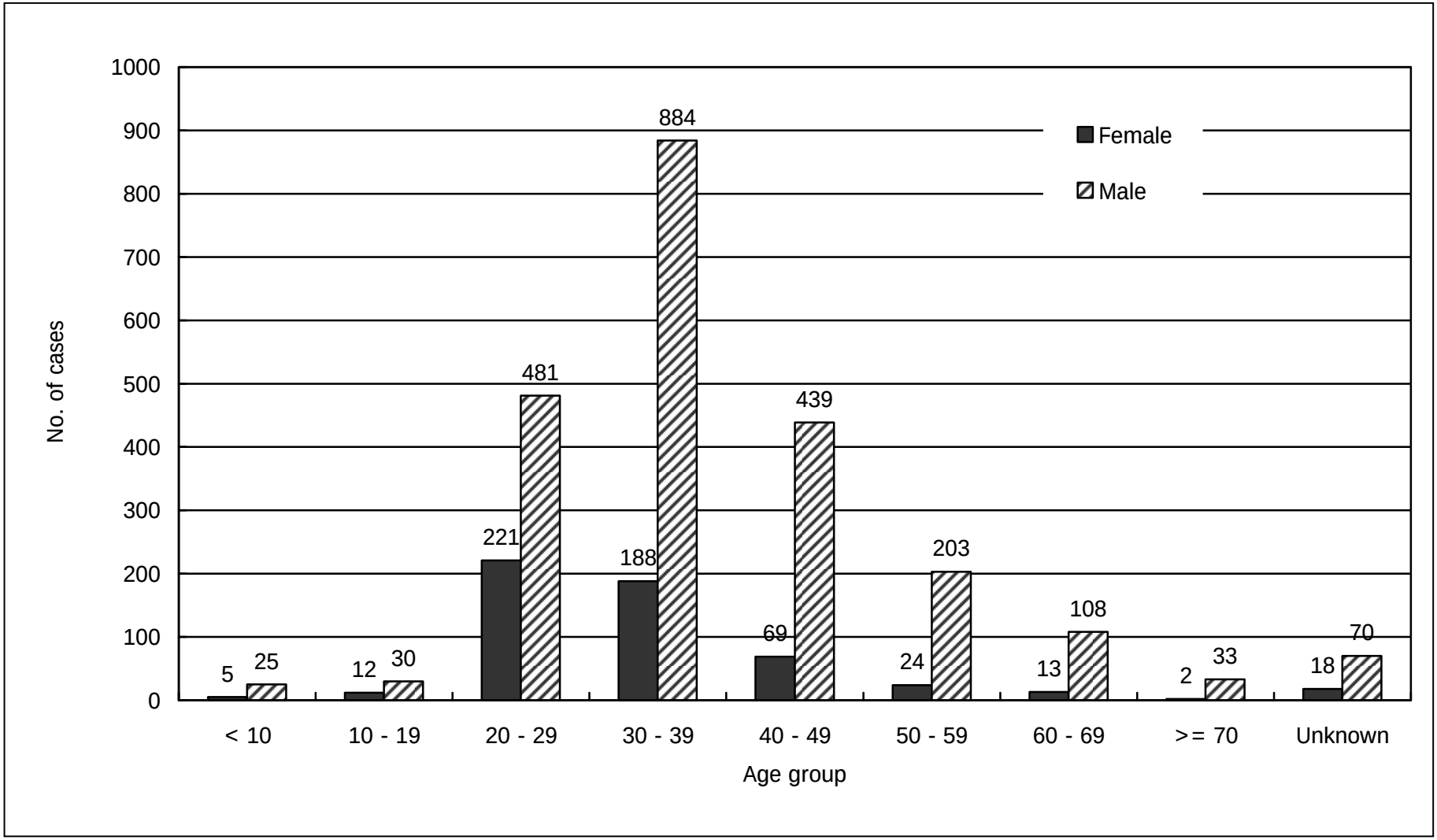
(b) Age & gender of reported HIV cases (Year 2005)



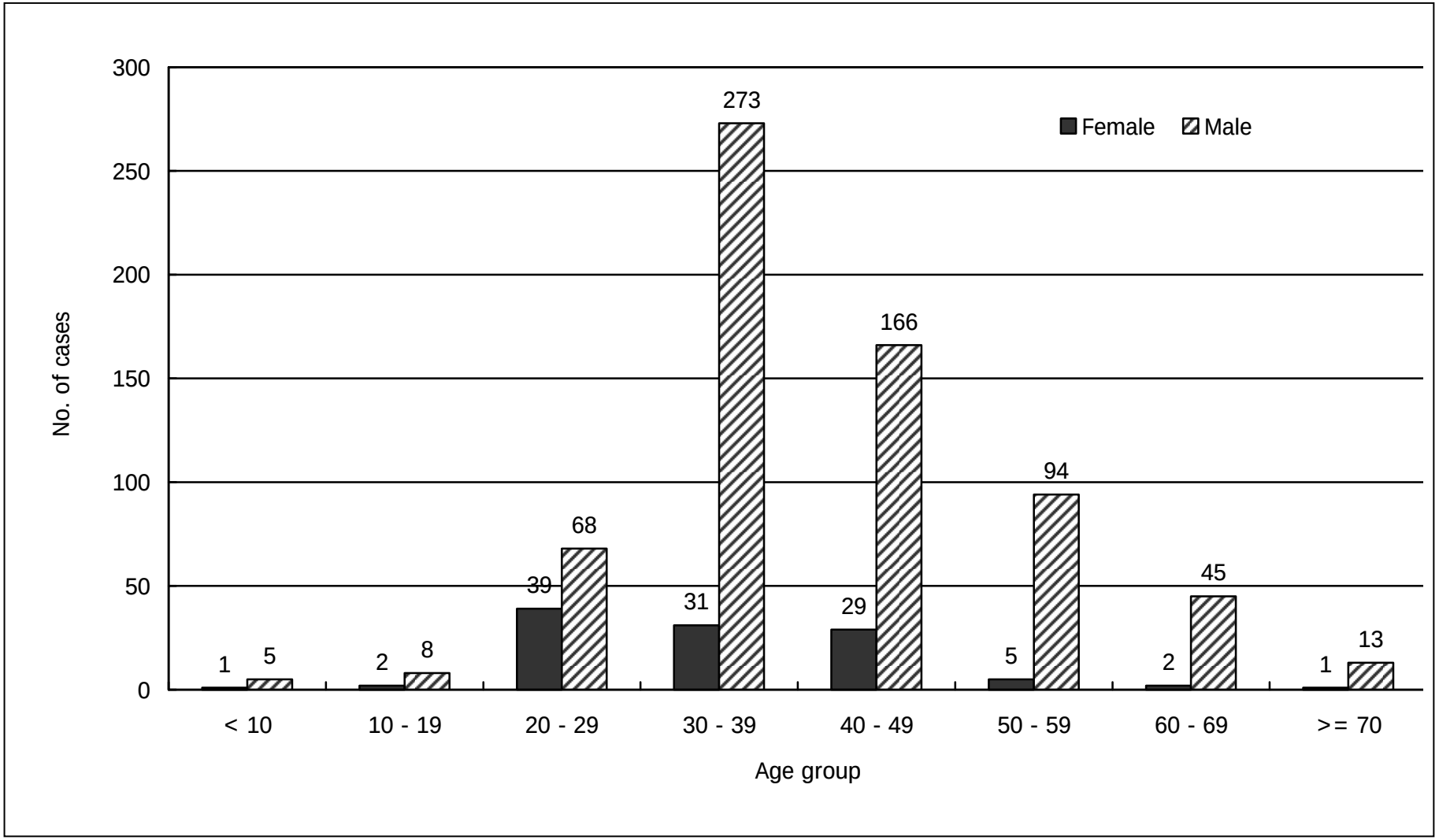
(c) Age & gender of reported AIDS cases (Year 2005)



(d) Age & gender of reported HIV cases (cumulative, 1984 - 2005)



(e) Age & gender of reported AIDS cases (cumulative, 1985 - 2005)



(f) Adults & children with reported HIV/AIDS in 2005

Age	HIV			AIDS		
	Male	Female	Total	Male	Female	Total
Adult	254	57	311	52	12	64
Children (age <=13)	2	0	2	0	0	0
Total	256	57	313	52	12	64

Box 2.5 Exposure category of reported HIV/AIDS cases

(a) Distribution of reported HIV cases by exposure category (1984 - 2005)

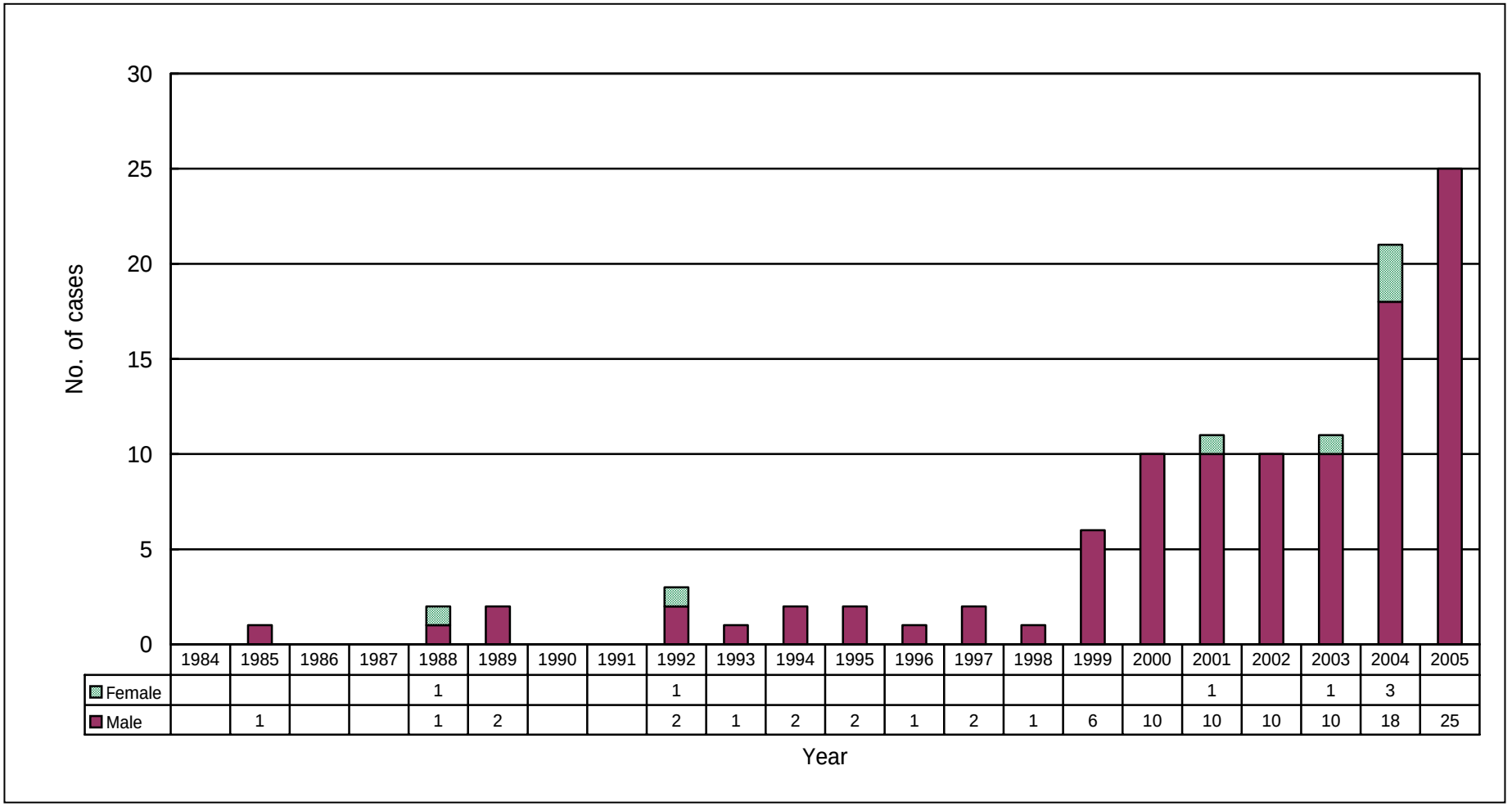
Year / Exposure Category (%)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Heterosexual	1 (14.3)	0 (0.0)	0 (0.0)	3 (9.1)	6 (21.4)	11 (28.9)	12 (35.3)	29 (48.3)	32 (45.1)	47 (59.5)	73 (70.2)	81 (66.4)	93 (69.4)	117 (64.6)	132 (69.8)	127 (59.6)	115 (62.8)	125 (58.7)	146 (56.2)	116 (50.7)	110 (41.0)	105 (33.5)	1481 (52.4)
Homosexual	1 (14.3)	10 (21.7)	6 (30.0)	12 (36.4)	12 (42.9)	15 (39.5)	8 (23.5)	18 (30.0)	27 (38.0)	20 (25.3)	22 (21.2)	26 (21.3)	20 (14.9)	33 (18.2)	16 (8.5)	33 (15.5)	21 (11.5)	37 (17.4)	47 (18.1)	45 (19.7)	60 (22.4)	86 (27.5)	575 (20.4)
Bisexual	0 (0.0)	1 (2.2)	2 (10.0)	7 (21.2)	2 (7.1)	6 (15.8)	5 (14.7)	8 (13.3)	2 (2.8)	2 (2.5)	4 (3.8)	4 (3.3)	3 (2.2)	10 (5.5)	6 (3.2)	10 (4.7)	6 (3.3)	7 (3.3)	9 (3.5)	5 (2.2)	6 (2.2)	10 (3.2)	115 (4.1)
Injecting drug use	0 (0.0)	1 (2.2)	0 (0.0)	0 (0.0)	2 (7.1)	2 (5.3)	0 (0.0)	0 (0.0)	3 (4.2)	1 (1.3)	2 (1.9)	2 (1.6)	1 (0.7)	2 (1.1)	1 (0.5)	6 (2.8)	10 (5.5)	11 (5.2)	10 (3.8)	11 (4.8)	21 (7.8)	25 (8.0)	111 (3.9)
Blood contact	5 (71.4)	32 (69.6)	10 (50.0)	7 (21.2)	2 (7.1)	2 (5.3)	5 (14.7)	0 (0.0)	1 (1.4)	1 (1.3)	1 (1.0)	0 (0.0)	0 (0.0)	1 (0.6)	0 (0.0)	1 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	4 (1.3)	72 (2.5)
Perinatal	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.0)	2 (1.6)	1 (0.7)	0 (0.0)	2 (1.1)	4 (1.9)	2 (1.1)	2 (0.9)	1 (0.4)	0 (0.0)	0 (0.0)	2 (0.6)	17 (0.6)
Undetermined	0 (0.0)	2 (4.3)	2 (10.0)	4 (12.1)	4 (14.3)	2 (5.3)	4 (11.8)	5 (8.3)	6 (8.5)	8 (10.1)	1 (1.0)	7 (5.7)	16 (11.9)	18 (9.9)	32 (16.9)	32 (15.0)	29 (15.8)	31 (14.6)	47 (18.1)	52 (22.7)	71 (26.5)	81 (25.9)	454 (16.1)
Total	7 (100)	46 (100)	20 (100)	33 (100)	28 (100)	38 (100)	34 (100)	60 (100)	71 (100)	79 (100)	104 (100)	122 (100)	134 (100)	181 (100)	189 (100)	213 (100)	183 (100)	213 (100)	260 (100)	229 (100)	268 (100)	313 (100)	2825 (100)

(b) Distribution of reported AIDS cases by exposure category (1985 - 2005)

Year / Exposure Category (%)	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Heterosexual	1 (33.3)	---	1 (16.7)	0 (0.0)	3 (17.6)	3 (23.1)	2 (14.3)	5 (35.7)	10 (52.6)	16 (43.2)	31 (68.9)	55 (78.6)	44 (68.8)	50 (79.4)	44 (72.1)	56 (83.6)	48 (80.0)	37 (69.8)	46 (82.1)	35 (71.4)	37 (57.8)	524 (67.0)
Homosexual	1 (33.3)	---	3 (50.0)	4 (57.1)	8 (47.1)	2 (15.4)	6 (42.9)	8 (57.1)	7 (36.8)	13 (35.1)	9 (20.0)	6 (8.6)	10 (15.6)	6 (9.5)	8 (13.1)	1 (1.5)	5 (8.3)	8 (15.1)	7 (12.5)	8 (16.3)	13 (20.3)	133 (17.0)
Bisexual	1 (33.3)	---	0 (0.0)	1 (14.3)	3 (17.6)	3 (23.1)	2 (14.3)	1 (7.1)	1 (5.3)	4 (10.8)	3 (6.7)	1 (1.4)	3 (4.7)	1 (1.6)	1 (1.6)	1 (1.5)	2 (3.3)	2 (3.8)	0 (0.0)	0 (0.0)	3 (4.7)	33 (4.2)
Injecting drug use	0 (0.0)	---	0 (0.0)	0 (0.0)	1 (5.9)	0 (0.0)	0 (0.0)	0 (0.0)	1 (5.3)	0 (0.0)	1 (2.2)	1 (1.4)	1 (1.6)	0 (0.0)	1 (1.6)	2 (3.0)	1 (1.7)	1 (1.9)	0 (0.0)	3 (6.1)	1 (1.6)	14 (1.8)
Blood contact	0 (0.0)	---	0 (0.0)	1 (14.3)	2 (11.8)	3 (23.1)	3 (21.4)	0 (0.0)	0 (0.0)	3 (8.1)	0 (0.0)	2 (2.9)	1 (1.6)	1 (1.6)	2 (3.3)	1 (1.5)	0 (0.0)	0 (0.0)	1 (1.8)	0 (0.0)	1 (1.6)	21 (2.7)
Perinatal	0 (0.0)	---	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (2.7)	1 (2.2)	0 (0.0)	0 (0.0)	1 (1.6)	1 (1.6)	1 (1.5)	1 (1.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	6 (0.8)
Undetermined	0 (0.0)	---	2 (33.3)	1 (14.3)	0 (0.0)	2 (15.4)	1 (7.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (7.1)	5 (7.8)	4 (6.3)	4 (6.6)	5 (7.5)	3 (5.0)	5 (9.4)	2 (3.6)	3 (6.1)	9 (14.1)	51 (6.5)
Total	3 (100)	---	6 (100)	7 (100)	17 (100)	13 (100))	14 (100)	14 (100)	19 (100))	37 (100)	45 (100)	70 (100)	64 (100)	63 (100)	61 (100)	67 (100)	60 (100)	53 (100)	56 (100)	49 (100)	64 (100)	782 (100)

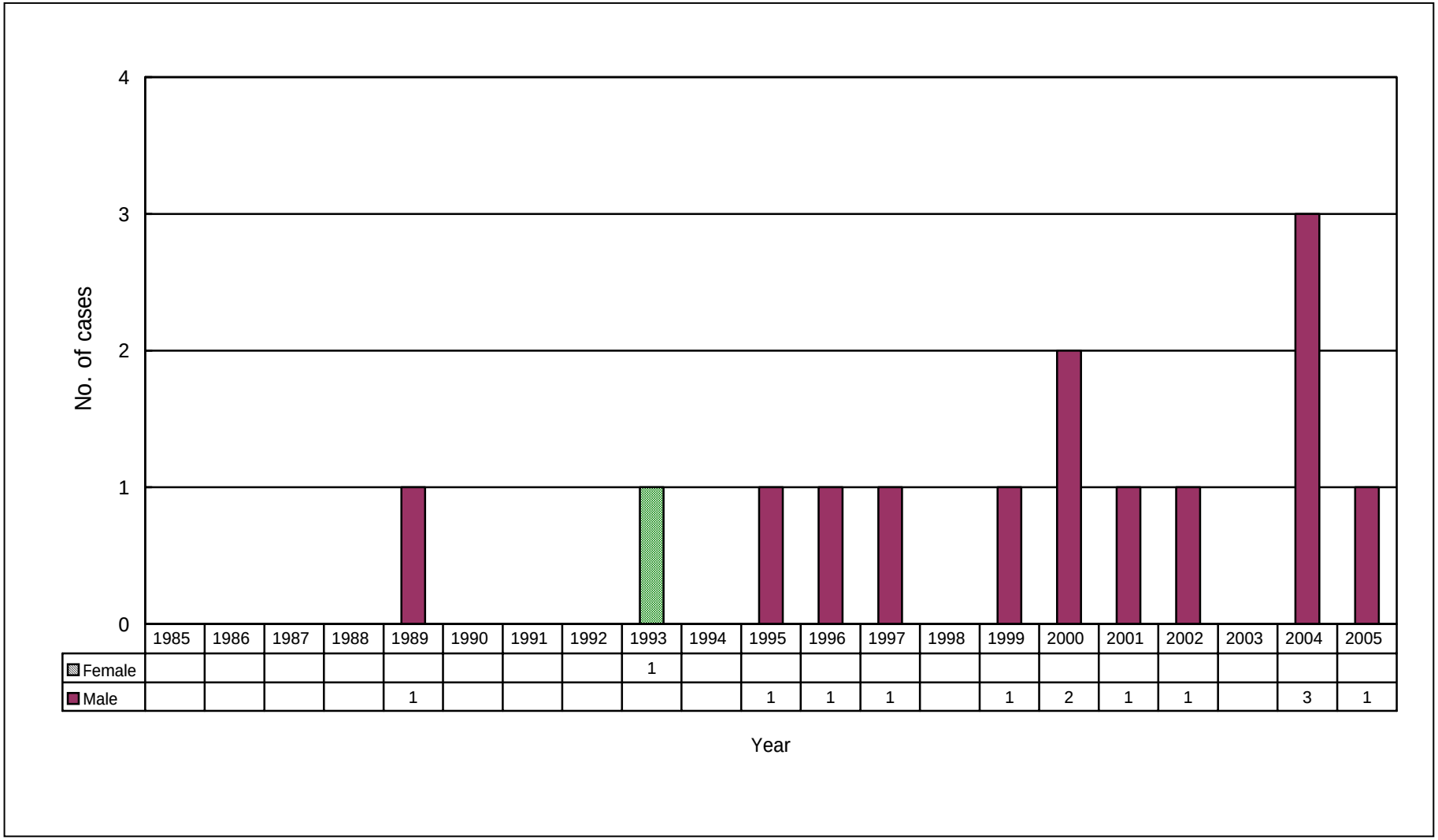
Box 2.6 Reported HIV/AIDS cases in injecting drug users

(a) Reported HIV-infected injecting drug users - by gender



	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Female					1				1									1		1	3	
Male		1			1	2			2	1	2	2	1	2	1	6	10	10	10	10	18	25

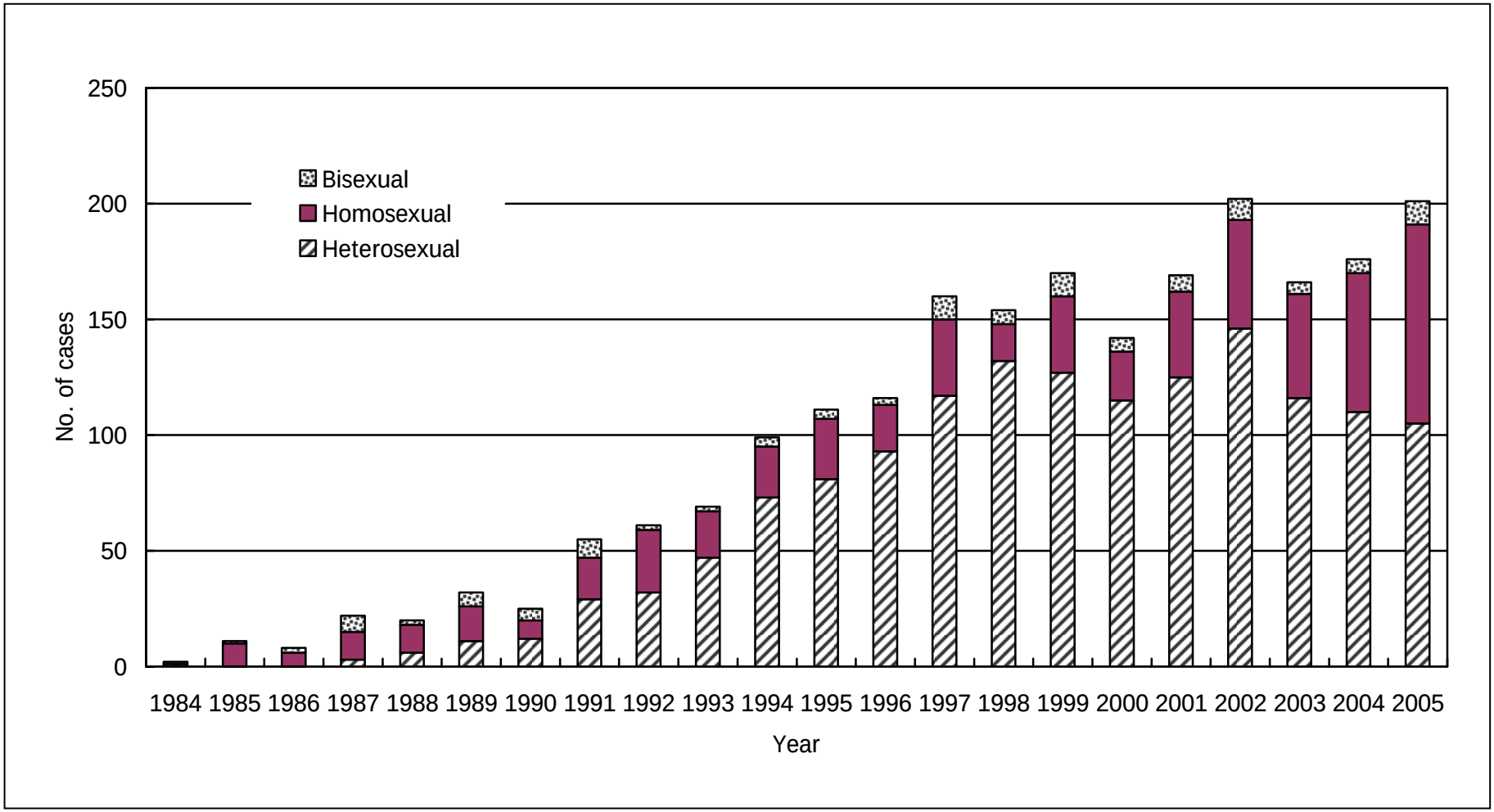
(b) Reported AIDS case in injecting drug users - by gender



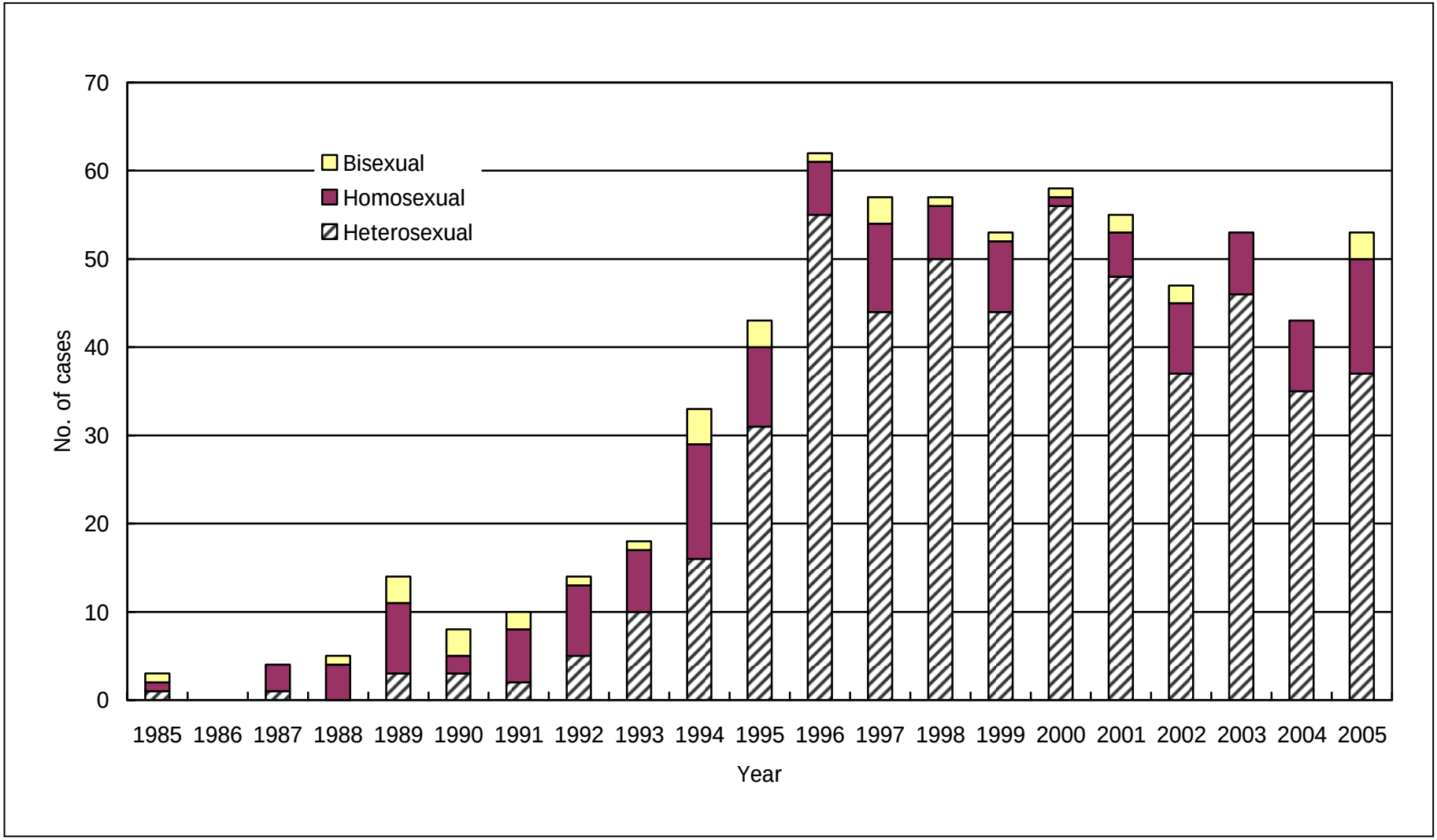
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Female									1												
Male					1						1	1	1		1	2	1	1		3	1

Box 2.7 Reported sexually acquired HIV cases

(a) Yearly reports of sexually acquired HIV cases



(b) Yearly reports of sexually acquired AIDS cases



(c) Ratio of heterosexual vs. homosexual/bisexual men reported with HIV/AIDS

Year	HIV	AIDS
1984	1.0 : 1	---
1985	0.0 : 1	0.5 : 1
1986	0.0 : 1	---
1987	0.1 : 1	0.0 : 1
1988	0.4 : 1	0.0 : 1
1989	0.4 : 1	0.3 : 1
1990	0.8 : 1	0.6 : 1
1991	1.0 : 1	0.3 : 1
1992	0.9 : 1	0.6 : 1
1993	1.7 : 1	0.9 : 1
1994	2.3 : 1	0.8 : 1
1995	1.9 : 1	2.0 : 1
1996	3.0 : 1	7.1 : 1
1997	2.0 : 1	2.5 : 1
1998	4.1 : 1	5.9 : 1
1999	2.0 : 1	4.2 : 1
2000	2.9 : 1	23.5 : 1
2001	1.9 : 1	5.1 : 1
2002	1.8 : 1	2.6 : 1
2003	1.7 : 1	4.9 : 1
2004	1.1 : 1	3.8 : 1
2005	0.7 : 1	1.7 : 1
Total	1.5 : 1	2.5 : 1

Box 2.8 Age-specific rate of sexually acquired HIV infection

(a) Age-specific rate of sexually acquired HIV infection in men

Year / Age group	Age-specific rate (per 100,000 population)				
	2001	2002	2003	2004	2005
0 - 4	0	0	0	0	0
5 - 9	0	0	0	0	0
10 - 14	0	0	0	0	0
15 - 19	0.44	0.44	0	0.44	0
20 - 24	2.22	3.59	1.80	3.09	2.64
25 - 29	7.06	7.60	6.97	6.20	7.98
30 - 34	12.10	13.01	9.57	9.27	12.72
35 - 39	9.27	10.59	10.86	8.00	11.52
40 - 44	4.47	7.71	4.76	6.62	7.94
45 - 49	4.07	3.18	3.02	2.89	5.16
50 - 54	2.64	4.68	2.91	4.44	5.03
55 - 59	2.21	4.68	8.53	2.78	1.40
60 - 64	2.99	5.44	1.61	3.22	3.95
65 - 69	1.56	2.33	3.92	4.74	5.54
>= 70	0.91	0.00	1.24	1.97	2.23
Total	3.83	4.70	4.01	4.04	4.83

* Populations are taken from The Census & Statistics Department: Population and Vital Events –mid-year population

(b) Age-specific rate of sexually acquired HIV infection in women

Year / Age group	Age-specific rate (per 100,000 population)				
	2001	2002	2003	2004	2005
0 - 4	0	0	0	0	0
5 - 9	0	0	0	0	0
10 - 14	0	0	0	0	0
15 - 19	0	0.47	0	1.38	0.46
20 - 24	3.31	1.32	0.90	1.74	1.67
25 - 29	4.22	2.91	3.83	3.13	3.51
30 - 34	2.44	4.48	1.19	2.11	2.18
35 - 39	1.88	2.68	1.65	1.96	1.42
40 - 44	0.87	0.56	0.81	1.84	0.52
45 - 49	0.74	2.08	0.65	0	2.03
50 - 54	0	0	0.42	0	0.37
55 - 59	0.86	0.75	1.31	1.16	0
60 - 64	0.85	0.89	0.93	0	1.76
65 - 69	0.82	0	0	0	0.84
>= 70	0	0	0.33	0	0
Total	1.25	1.35	0.94	1.07	1.07

* Populations are taken from The Census & Statistics Department: Population and Vital Events –mid-year population

Box 2.9 Profile of primary AIDS defining illnesses (ADI) (1985 - 2005)

Year / ADI (%)	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Pneumocystic Pneumonia (PCP)	1 (33.3)	---	2 (33.3)	4 (57.1)	8 (47.1)	5 (38.5)	4 (28.6)	7 (50.0)	10 (52.6)	12 (32.4)	17 (37.8)	21 (30.0)	20 (31.3)	26 (41.3)	23 (37.7)	30 (44.8)	26 (43.3)	25 (47.2)	22 (39.3)	22 (44.9)	20 (31.3)	305 (39.0)
Mycobacterium Tuberculosis	0 (0.0)	---	0 (0.0)	0 (0.0)	1 (5.9)	2 (15.4)	3 (21.4)	1 (7.1)	2 (10.5)	4 (10.8)	8 (17.8)	21 (30.0)	17 (26.6)	18 (28.6)	13 (21.3)	19 (28.4)	17 (28.3)	9 (17.0)	15 (26.8)	13 (26.5)	25 (39.1)	188 (24.0)
Other fungal infections	0 (0.0)	---	3 (50.0)	0 (0.0)	3 (17.6)	0 (0.0)	2 (14.3)	2 (14.3)	1 (5.3)	4 (10.8)	7 (15.6)	6 (8.6)	10 (15.6)	8 (12.7)	5 (8.2)	4 (6.0)	5 (8.3)	8 (15.1)	4 (7.1)	6 (12.2)	5 (7.8)	83 (10.6)
Penicilliosis	0 (0.0)	---	0 (0.0)	0 (0.0)	0 (0.0)	1 (7.7)	1 (7.1)	0 (0.0)	1 (5.3)	6 (16.2)	7 (15.6)	7 (10.0)	5 (7.8)	2 (3.2)	7 (11.5)	5 (7.5)	1 (1.7)	7 (13.2)	5 (8.9)	4 (8.2)	7 (10.9)	66 (8.4)
Cytomegalovirus diseases	1 (33.3)	---	0 (0.0)	0 (0.0)	0 (0.0)	1 (7.7)	1 (7.1)	1 (7.1)	2 (10.5)	1 (2.7)	3 (6.7)	4 (5.7)	4 (6.3)	3 (4.8)	2 (3.3)	3 (4.5)	2 (3.3)	0 (0.0)	3 (5.4)	1 (2.0)	2 (3.1)	34 (4.3)
Non-TB mycobacterial infections	0 (0.0)	---	0 (0.0)	0 (0.0)	1 (5.9)	0 (0.0)	3 (21.4)	0 (0.0)	1 (5.3)	0 (0.0)	0 (0.0)	2 (2.9)	1 (1.6)	0 (0.0)	5 (8.2)	1 (1.5)	5 (8.3)	2 (3.8)	1 (1.8)	2 (4.1)	0 (0)	24 (3.1)
Kaposi's sarcoma	1 (33.3)	---	0 (0.0)	1 (14.3)	2 (11.8)	1 (7.7)	0 (0.0)	2 (14.3)	0 (0.0)	4 (10.8)	1 (2.2)	2 (2.9)	3 (4.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.8)	0 (0)	1 1.6)	19 (2.4)
Others	0 (0.0)	---	1 (16.7)	2 (28.6)	2 (11.8)	3 (23.1)	0 (0.0)	1 (7.1)	2 (10.5)	6 (16.2)	2 (4.4)	7 (10.0)	4 (6.3)	6 (9.5)	6 (9.8)	5 (7.5)	4 (6.7)	2 (3.8)	5 (8.9)	1 (2.0)	4 (6.2)	63 (8.1)
Total	3 (100)	---	6 (100)	7 (100)	17 (100)	13 (100)	14 (100)	14 (100)	19 (100)	37 (100)	45 (100)	70 (100)	64 (100)	63 (100)	61 (100)	67 (100)	60 (100)	53 (100)	56 (100)	49 (100)	64 (100)	782 (100)

3. TABULATED RESULTS OF SEROSURVEILLANCE STUDIES

System description

- This is a collection of data from seroprevalence studies and public service records that contribute to the understanding of the HIV situation in selected community groups or settings.

System layout

	Setting	System	Since	Sample size	Data available in 2005
(a) Community with predisposing risk factors					
STD patients	Social Hygiene Clinics	Voluntary testing offered to clients	1985	30000 – 40000 / year	Yes
*Drug users (1)	Methadone Clinics	Unlinked anonymous screening using urine samples	1992 (to 2003)	2000 – 4000 / year	No
Drug users (2)	Different treatment and rehabilitation services	Voluntary testing	1985	300 – 1000 / year	Yes
Drug users (3)	Street addicts approached by outreach workers	Voluntary testing on unlinked saliva samples	1993 (to 1997)	200 – 500 / year	No
(b) Community without risk factors					
Blood donors	Hong Kong Red Cross Blood Transfusion Service	A requirement for all potential donors	1985	150000 – 200000 / year	Yes
Antenatal women	All maternal and child health centres and public hospitals	Universal voluntary testing	Sept 2001	Around 40000 / year	Yes
*Neonates	Testing of Cord blood from delivering women	Unlinked anonymous screening on blood samples	1990 (to 2000)	4000 / year	No
Civil servants	Pre-employment health check	Unlinked anonymous screening on blood samples	1991 (once)	1553	No
(c) Community with undefined risk					
TB patients (1)	TB and Chest Clinics of the Department of Health	Unlinked anonymous screening	1990	1000 / year	Yes
TB patients (2)	TB and Chest Clinics of the Department of Health	Voluntary testing	1993	2000 – 3500 / year	Yes
Prisoners	Penal institutions	Unlinked anonymous screening on blood / urine samples	1992	1000 – 2000 / year	Yes

*replaced by methadone clinics universal HIV testing programme and universal voluntary testing of antenatal women respectively

Tables & Figures

Box 3.1 HIV seroprevalence in blood donors at Hong Kong Red Cross Blood Transfusion Service

(a) HIV detection rate by number of donated blood units (1985 - 2005)

Year	Units of blood donated	No. of units anti-HIV+	Positive detection rate of donated units (%)	95% C.I. for prevalence (%)
1985	58,563	2	0.003	(0.0004 - 0.0123)
1986	146,639	1	0.001	(0.00002 - 0.0038)
1987	155,079	2	0.001	(0.0002 - 0.0047)
1988	152,319	2	0.001	(0.0002 - 0.0047)
1989	156,587	3	0.002	(0.0004 - 0.0056)
1990	168,082	4	0.002	(0.0006 - 0.0061)
1991	181,756	3	0.002	(0.0003 - 0.0048)
1992	176,492	9	0.005	(0.0023 - 0.0097)
1993	165,053	3	0.002	(0.0004 - 0.0053)
1994	172,151	7	0.004	(0.0016 - 0.0084)
1995	178,447	4	0.002	(0.0006 - 0.0057)
1996	190,257	5	0.003	(0.0009 - 0.0061)
1997	187,753	7	0.004	(0.0015 - 0.0077)
1998	200,197	7	0.003	(0.0014 - 0.0072)
1999	189,959	7	0.004	(0.0015 - 0.0076)
2000	189,532	9	0.005	(0.0022 - 0.0090)
2001	193,835	3	0.002	(0.0003 - 0.0045)
2002	193,702	3	0.002	(0.0003 - 0.0045)
2003	179,962	6	0.003	(0.0012 - 0.0073)
2004	198,420	1	0.001	(0.00001 - 0.0028)
2005	197,974	3	0.002	(0.00031 - 0.0044)

(b) HIV seroprevalence in new and repeat blood donors (1991 - 2005)

Year	New donors			Repeat donors		
	No. of donors	No. of donors anti-HIV+	HIV positivity rate (%) (95% C.I. (%))	No. of donors	No. of donors anti-HIV+	HIV positivity rate (%) (95% C.I. (%))
1991	48,769	0	0 (----)	132,987	3	0.002 (0.0005 - 0.0066)
1992	43,674	1	0.002 (0.0001 - 0.0128)	132,818	8	0.006 (0.0026 - 0.0119)
1993	36,146	1	0.003 (0.0001 - 0.0154)	128,907	2	0.002 (0.0002 - 0.0056)
1994	38,077	2	0.005 (0.0006 - 0.0190)	134,074	5	0.004 (0.0012 - 0.0087)
1995	39,778	2	0.005 (0.0006 - 0.0182)	93,280	2	0.002 (0.0003 - 0.0077)
1996	40,875	1	0.002 (0.0001 - 0.0136)	99,294	4	0.004 (0.0011 - 0.0103)
1997	40,419	1	0.002 (0.0001 - 0.0138)	81,906	6	0.007 (0.0027 - 0.0159)
1998	43,756	3	0.007 (0.0014 - 0.0200)	92,511	4	0.004 (0.0012 - 0.0111)
1999	40,960	1	0.002 (0.0001 - 0.0136)	76,098	6	0.008 (0.0029 - 0.0172)
2000	41,116	5	0.012 (0.0039 - 0.0284)	148,366	4	0.003 (0.0007 - 0.0069)
2001	43,415	0	0 (---)	150,420	3	0.002 (0.0004 - 0.0058)
2002	42,292	1	0.002 (0.0001 – 0.0132)	151,410	2	0.001 (0.0002 – 0.0048)
2003	36,732	3	0.008 (0.0017 – 0.0239)	143,230	2	0.001 (0.0002 – 0.0050)
2004	41,679	0	0 (---)	156,741	1	0.001 (0.00002 – 0.0036)
2005	42,643	1	0.002 (0.0001 – 0.0131)	155,331	2	0.001 (0.00016 – 0.0047)

Box 3.2 HIV seroprevalence in clients attending Social Hygiene Services, from voluntary blood testing (1985 - 2005)

Year	No. of blood samples	No. of samples tested anti-HIV+	Prevalence (%)	95% C.I. for prevalence (%)
1985	7,911	5	0.063	(0.021 - 0.147)
1986	27,179	2	0.007	(0.001 - 0.027)
1987	33,553	2	0.006	(0.001 - 0.022)
1988	33,039	3	0.009	(0.002 - 0.027)
1989	29,663	6	0.020	(0.007 - 0.044)
1990	27,045	9	0.033	(0.015 - 0.063)
1991	27,013	19	0.070	(0.042 - 0.110)
1992	27,334	12	0.044	(0.023 - 0.077)
1993	28,736	16	0.056	(0.032 - 0.090)
1994	30,162	29	0.096	(0.064 - 0.138)
1995	33,896	14	0.041	(0.023 - 0.069)
1996	37,126	25	0.067	(0.044 - 0.099)
1997	38,779	27	0.070	(0.046 - 0.101)
1998	46,127	27	0.059	(0.039 - 0.085)
1999	51,639	31	0.060	(0.041 - 0.085)
2000	51,197	20	0.039	(0.024 - 0.060)
2001	51,209	31	0.061	(0.041 - 0.086)
2002	53,363	41	0.077	(0.055 - 0.104)
2003	42,764	34	0.080	(0.055 - 0.111)
2004	43,980	46	0.105	(0.077 - 0.140)
2005	38,978	28	0.072	(0.048 - 0.104)

Box 3.3 HIV seroprevalence in drug users attending methadone clinics

(a) HIV seroprevalence in drug users attending methadone clinics from unlinked anonymous screening (1992 - 2003)*

Year	No. of urine samples	No. of samples tested anti-HIV+	Prevalence (%)	95% C.I. for prevalence (%)
1992	2,189	0	0	(--- - ---)
1993	3,219	0	0	(--- - ---)
1994	4,113	2	0.049	(0.006 - 0.176)
1995	2,240	1	0.045	(0.001 - 0.249)
1996	3,714	1	0.027	(0.001 - 0.150)
1997	1,816	0	0	(--- - ---)
1998	2,838	6	0.211	(0.078 - 0.460)
1999	2,674	3	0.112	(0.023 - 0.328)
2000	3,644	10	0.274	(0.132 - 0.505)
2001	3,811	4	0.105	(0.029 - 0.269)
2002	4,037	10	0.248	(0.119 - 0.456)
2003	1,949	5	0.257	(0.083 - 0.599)

* Replaced by MUT programme since 2004

(b) HIV seroprevalence in drug users attending methadone clinics from voluntary testing (1991 - 2003)**

Year	*No. of blood samples	No. of samples tested anti-HIV+	Prevalence (%)	95% C.I. for prevalence (%)
1991	379	0	0	(--- - ---)
1992	212	0	0	(--- - ---)
1993	198	0	0	(--- - ---)
1994	296	1	0.338	(0.009 - 1.882)
1995	102	0	0	(--- - ---)
1996	302	0	0	(--- - ---)
1997	254	0	0	(--- - ---)
1998	250	1	0.400	(0.010 - 2.229)
1999	599	3	0.501	(0.103 - 1.464)
2000	602	1	0.166	(0.004 - 0.926)
2001	363	0	0	(--- - ---)
2002	318	0	0	(--- - ---)
2003	148	0	0	(--- - ---)

* all were blood samples, with a small proportion being urine samples since late 1999
** Replaced by MUT programme since 2004

(c) HIV seroprevalence in drug users attending methadone clinics from Universal HIV Antibody (Urine) Testing Programme (2003 - 2005)

Year	No. of Urine samples	No. of samples tested anti-HIV+	Prevalence (%)	95% C.I. for prevalence (%)
2003 (July – September)	1,834	9	0.491	(0.224 - 0.932)
2004	8,812	18	0.204	(0.121 - 0.323)
2005	8,696	28	0.322	(0.214 - 0.465)

Box 3.4 HIV seroprevalence in drug users attending inpatient drug treatment centres / institutions, from unlinked anonymous screening (1998 - 2005)

Year	No. of urine samples	No. of samples tested anti-HIV+	Prevalence (%)	95% C.I. for prevalence (%)
1998	2,286	3	0.131	(0.027 - 0.384)
1999	1,675	3	0.179	(0.037 - 0.523)
2000	1,165	7	0.601	(0.242 - 1.238)
2001	1,137	2	0.176	(0.021 - 0.635)
2002	761	0	0	(--- - ---)
2003	361	1	0.277	(0.007 - 1.543)
2004*	---	---	---	(--- - ---)
2005	630	0	0	(--- - ---)

* Unlinked anonymous screening was not performed in 2004

Box 3.5 HIV seroprevalence in newly admitted prisoners from unlinked anonymous screening (1995 - 2005)

Year	No. of Samples*	No. of samples tested anti-HIV+	Prevalence (%)	95% C.I. for prevalence (%)
1995	653	3	0.459	(0.095 - 1.343)
1996	1,503	6	0.399	(0.147 - 0.869)
1997	1,474	3	0.204	(0.042 - 0.595)
1998	1,571	4	0.255	(0.069 - 0.652)
1999	1,580	10	0.633	(0.480 - 1.841)
2000	1,516	4	0.264	(0.072 - 0.676)
2001	1,502	5	0.333	(0.108 - 0.777)
2002	1,500	6	0.400	(0.147 - 0.871)
2003	1,502	5	0.333	(0.108 - 0.777)
2004	1,980	7	0.354	(0.142 - 0.728)
2005	2,007	6	0.299	(0.110 - 0.651)

* Only samples of 1995 were blood samples. All others were urine samples.

Box 3.6 HIV seroprevalence in patients with tuberculosis

(a) HIV seroprevalence in patients attending government TB & Chest Clinics, from unlinked anonymous screening (1990 - 2005)

Year	No. of urine samples	No. of samples tested anti-HIV+	Prevalence (%)	95% C.I. for prevalence(%)
1990	1,548	0	0	(--- - ---)
1991	485	0	0	(--- - ---)
1992	1,469	2	0.136	(0.016 - 0.492)
1993	1,173	0	0	(--- - ---)
1994*	-	-	-	(--- - ---)
1995	895	2	0.223	(0.027 - 0.807)
1996	998	4	0.401	(0.109 - 1.026)
1997	1,003	2	0.199	(0.024 - 0.720)
1998	833	4	0.480	(0.131 - 1.229)
1999	1,166	8	0.686	(0.296 - 1.352)
2000	1,018	5	0.491	(0.159 - 1.146)
2001	1,071	4	0.373	(0.102 - 0.956)
2002	1,000	8	0.800	(0.345 - 1.576)
2003	920	6	0.652	(0.239 - 1.420)
2004	1,041	9	0.865	(0.395 - 1.641)
2005	840	7	0.833	(0.335 - 1.717)

* Unlinked anonymous screening was not performed in 1994

(b) HIV seroprevalence in patients attending government TB & Chest Clinics, from voluntary blood testing (1993 - 2005)

Year	No. of blood samples	Coverage*		No. of anti-HIV+	Prevalence (%)	95% C.I. for prevalence (%)
		A	B			
1993	2,116	---	---	0	0	(--- - ---)
1994	2,534	---	---	2	0.079	(0.010 - 0.285)
1995	2,548	---	---	2	0.078	(0.010 - 0.284)
1996	3,157	---	---	2	0.063	(0.008 - 0.229)
1997	3,524	---	---	2	0.057	(0.007 - 0.205)
1998	3,726	---	---	6	0.161	(0.059 - 0.350)
1999	3,633	---	---	11	0.303	(0.151 - 0.542)
2000	3,426	*92.8%*	48.3%	3	0.088	(0.018 - 0.256)
2001	3,404	*94.2%*	48.1%	9	0.264	(0.121 - 0.502)
2002	3,186	*94.2%*	50.3%	7	0.220	(0.088 - 0.453)
2003	3,122	*92.3%*	54.5%	2	0.064	(0.008 - 0.231)
2004	3,202	*93.1%*	47.5%	10	0.312	(0.150 - 0.574)
2005	3,934	81.2%	68.3%	10	0.254	(0.122 - 0.467)

* coverage A is the proportion of patients attended government TB & Chest Clinics who have been tested for HIV in TB Clinic. (For year 2000-2004, it used to be the proportion of patients who started on TB tx at government TB & Chest Clinics who have been tested for HIV in TB Clinic)
B is the proportion of total TB notifications who have been tested for HIV at government TB & Chest Clinics.

Box 3.7 HIV prevalence among antenatal women

(a) HIV prevalence among antenatal women from unlinked anonymous screening (1990 - 2000)

Year	No. of blood samples	No. of anti-HIV+	Prevalence (%)	95% C.I. for prevalence (%)
1990	993	0	0	(--- - ---)
1991	5,253	0	0	(--- - ---)
1992	5,796	0	0	(--- - ---)
1993	4,532	0	0	(--- - ---)
1994	4,762	0	0	(--- - ---)
1995	4,648	1	0.02	(0.0005 - 0.1199)
1996	3,968	1	0.03	(0.0006 - 0.1404)
1997	3,331	0	0	(--- - ---)
1998	3,031	1	0.03	(0.0008 - 0.1838)
1999	3,125	1	0.03	(0.0008 - 0.1783)
2000	3,478	1	0.03	(0.0007 - 0.1602)

(b) HIV prevalence among antenatal women from Universal Antenatal HIV Antibody Testing Programme (2001 - 2005)

	Number of tests	Coverage*	Number of positive tests	Prevalence (%)	95% C.I. for prevalence (%)
2001 (Sep-Dec)	12,965	96.6%	7	0.05	(0.0217 - 0.1112)
2002	41,932	97.2%	8	0.02	(0.0082 - 0.0376)
2003	36,366	96.9%	6	0.02	(0.0061 - 0.0359)
2004	41,070	97.9%	6	0.01	(0.0054 - 0.0318)
2005	42,750	98.1%	5	0.01	(0.0038 - 0.0273)

* coverage is the proportion of women attending public antenatal services who have been tested for HIV

4. TABULATED RESULTS OF STATISTICS ON SEXUALLY TRANSMITTED INFECTIONS (STI)

System description:

- This is a clinic based disease reporting system contributed by Social Hygiene Service, Department of Health. Summary tables are submitted quarterly by Social Hygiene Service. The clinics included in this surveillance system are: Chai Wan, Lek Yuen[1], Wan Chai, Western[2], Yau Ma Tei, South Kwai Chung[3], Yung Fung Shee, Tuen Mun, Fanling ITC[4] , Tai Po[5], and Shek Wu Hui[5].

Remark:

[1] Leck Yuen Clinic was closed since April 2005

[2] Western Social Hygiene Clinic was merged with Wan Chai Social Hygiene Clinic and Sai Ying Pun Dermatology Clinic wef 2.7.2003.

[3] South Kwai Chung Clinic was closed on 27.3.2004

[4] Venereal Diseases Clinics in Fanling ITC was commenced operation in part-time basis on 1.9.2003 by appointment only.

[5] Tai Po and Shek Wu Hui clinics were closed since 2001

Tables & Figures

Box 4.1 Total number of STI reported by individual Social Hygiene Clinic

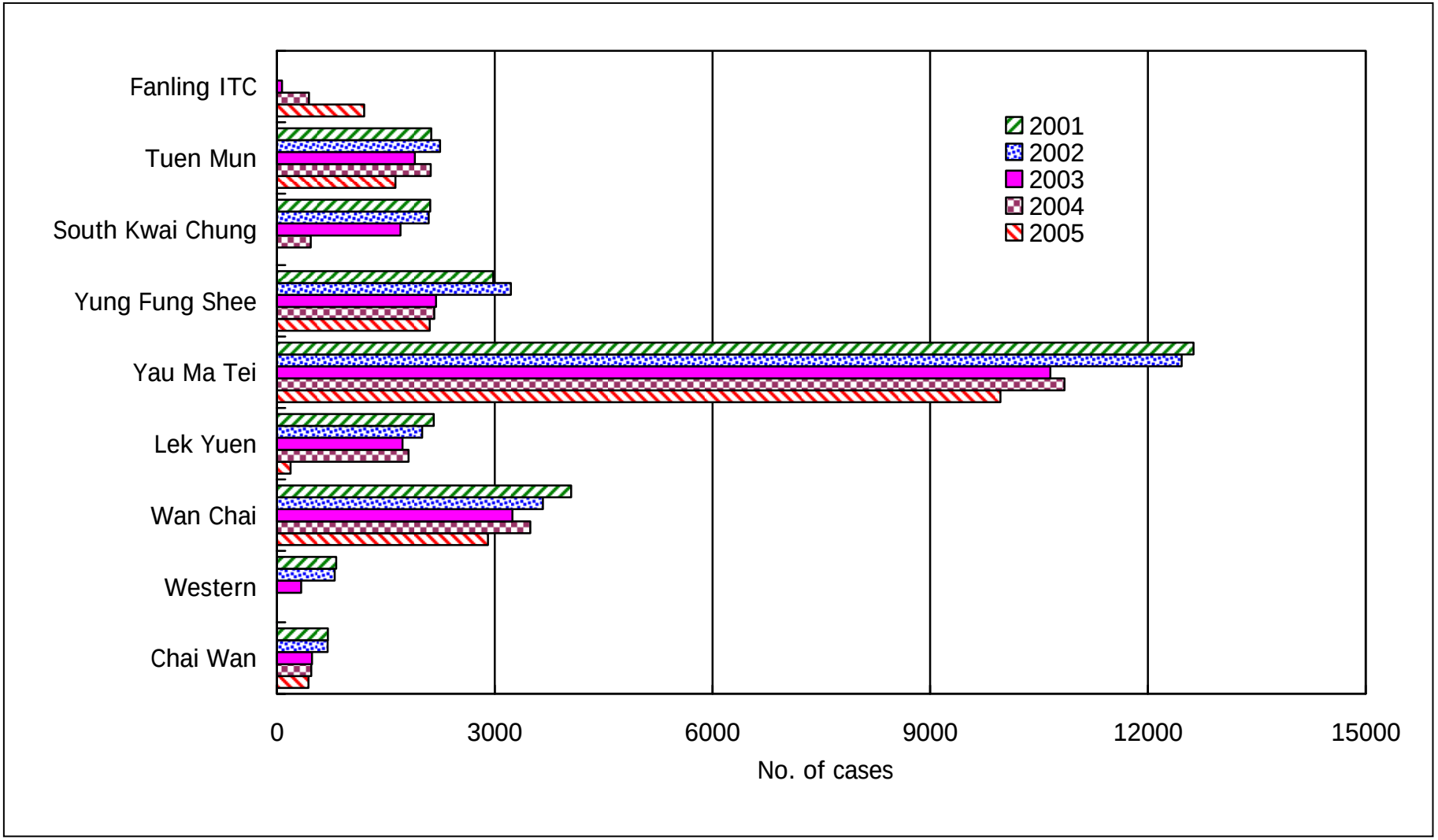
(a) Year 2005

	Chai Wan	Lek Yuen*	Wan Chai	Yau Ma Tei	Yung Fung Shee	Tuen Mun	Fanling ITC#
Male	232	100	1,749	5,458	1,363	834	622
Female	202	86	1,158	4,511	742	799	579
Total	434	186	2,907	9,969	2,105	1,633	1,201

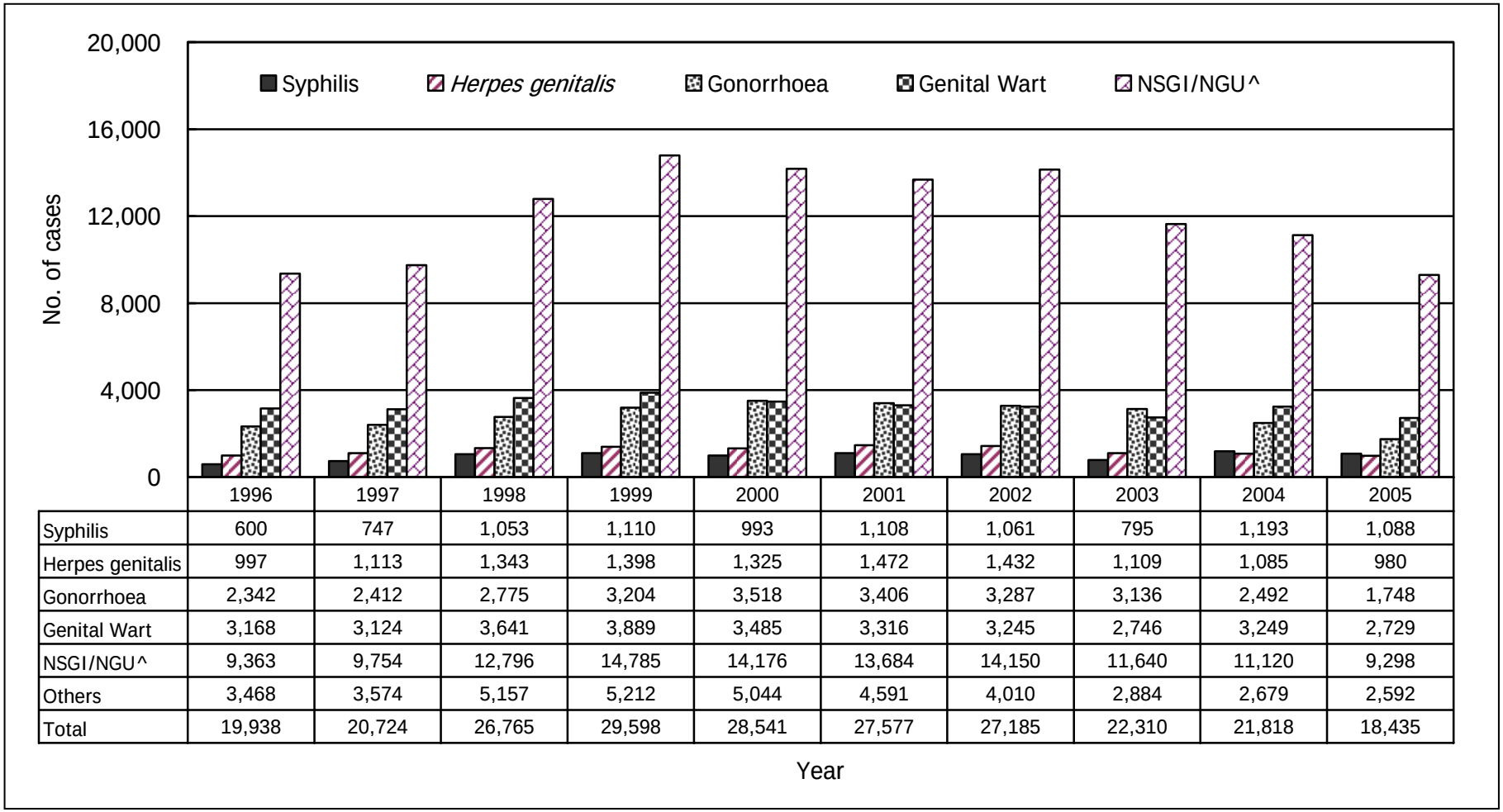
* Lek Yuen Clinic was closed since April 2005.

Venereal Diseases Clinics in Fanling ITC commenced operation in part-time basis on 1.9.2003 by appointment only.

(b) 2001 - 2005


Fanling ITC
Tuen Mun
South Kwai Chung
Yung Fung Shee
Yau Ma Tei
Lek Yuen
Wan Chai
Western
Chai Wan
2001
2002
2003
2004
2005
0
3000
6000
9000
12000
15000
No. of cases

Box 4.2 Annual reported STIs in Social Hygiene Clinics



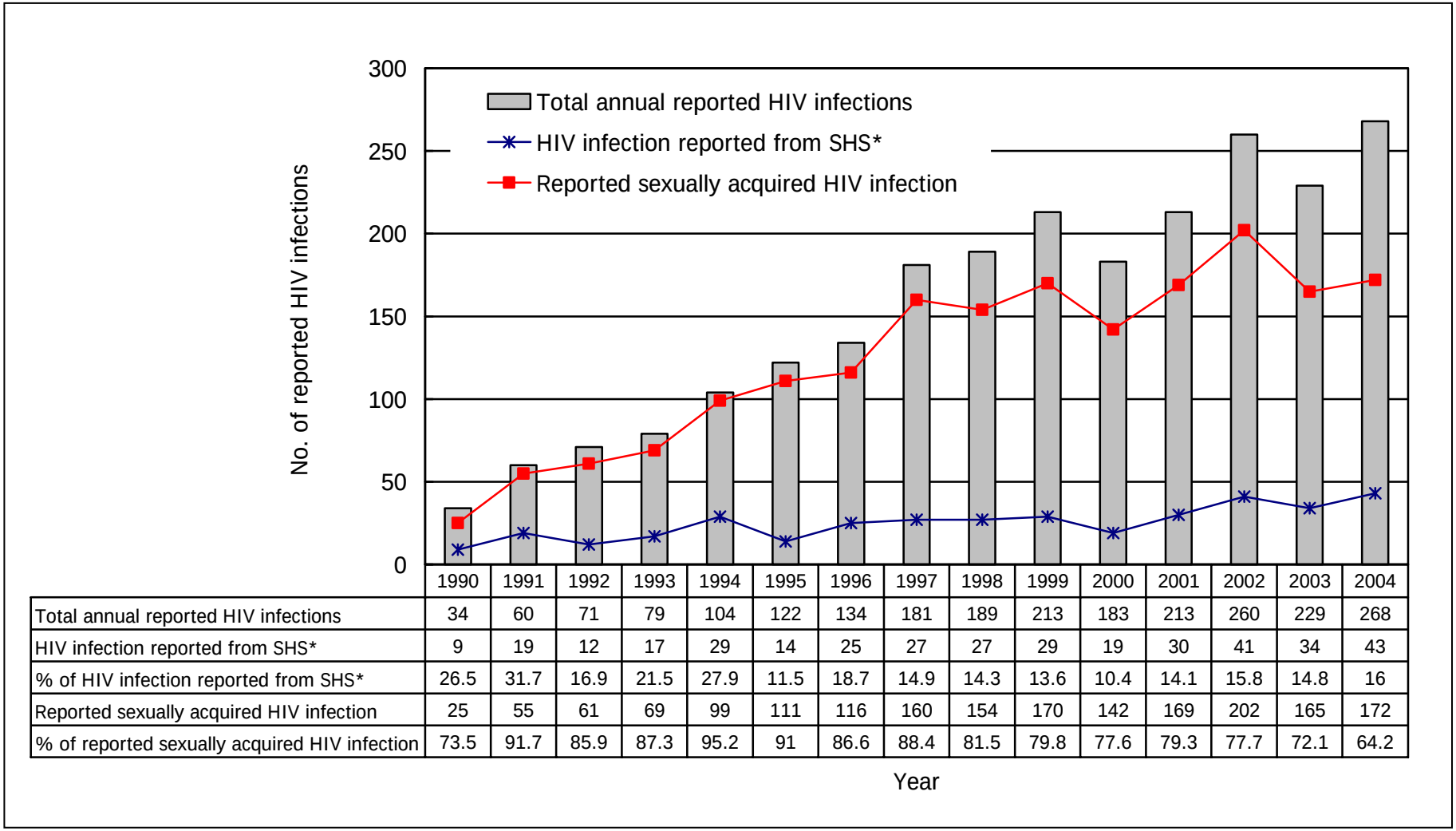
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Syphilis	600	747	1,053	1,110	993	1,108	1,061	795	1,193	1,088
Herpes genitalis	997	1,113	1,343	1,398	1,325	1,472	1,432	1,109	1,085	980
Gonorrhoea	2,342	2,412	2,775	3,204	3,518	3,406	3,287	3,136	2,492	1,748
Genital Wart	3,168	3,124	3,641	3,889	3,485	3,316	3,245	2,746	3,249	2,729
NSGI/NGU^	9,363	9,754	12,796	14,785	14,176	13,684	14,150	11,640	11,120	9,298
Others	3,468	3,574	5,157	5,212	5,044	4,591	4,010	2,884	2,679	2,592
Total	19,938	20,724	26,765	29,598	28,541	27,577	27,185	22,310	21,818	18,435

^ NSGI / NGU : Non-specific Genital Infection / Non-gonococcal Urethritis

Box 4.3 Syphilis reported by Social Hygiene Clinics (2001 - 2005)

Year / Syphilis	2001	2002	2003	2004	2005
Primary	221	174	115	124	72
Secondary	60	67	68	49	36
Early latent	295	243	144	132	130
Late latent	528	573	466	877	845
Late (cardiovascular / neuro)	3	2	1	10	5
Congenital (early)	0	0	0	0	0
Congenital (late)	1	2	1	1	0
Total	1,108	1,061	795	1,193	1,088

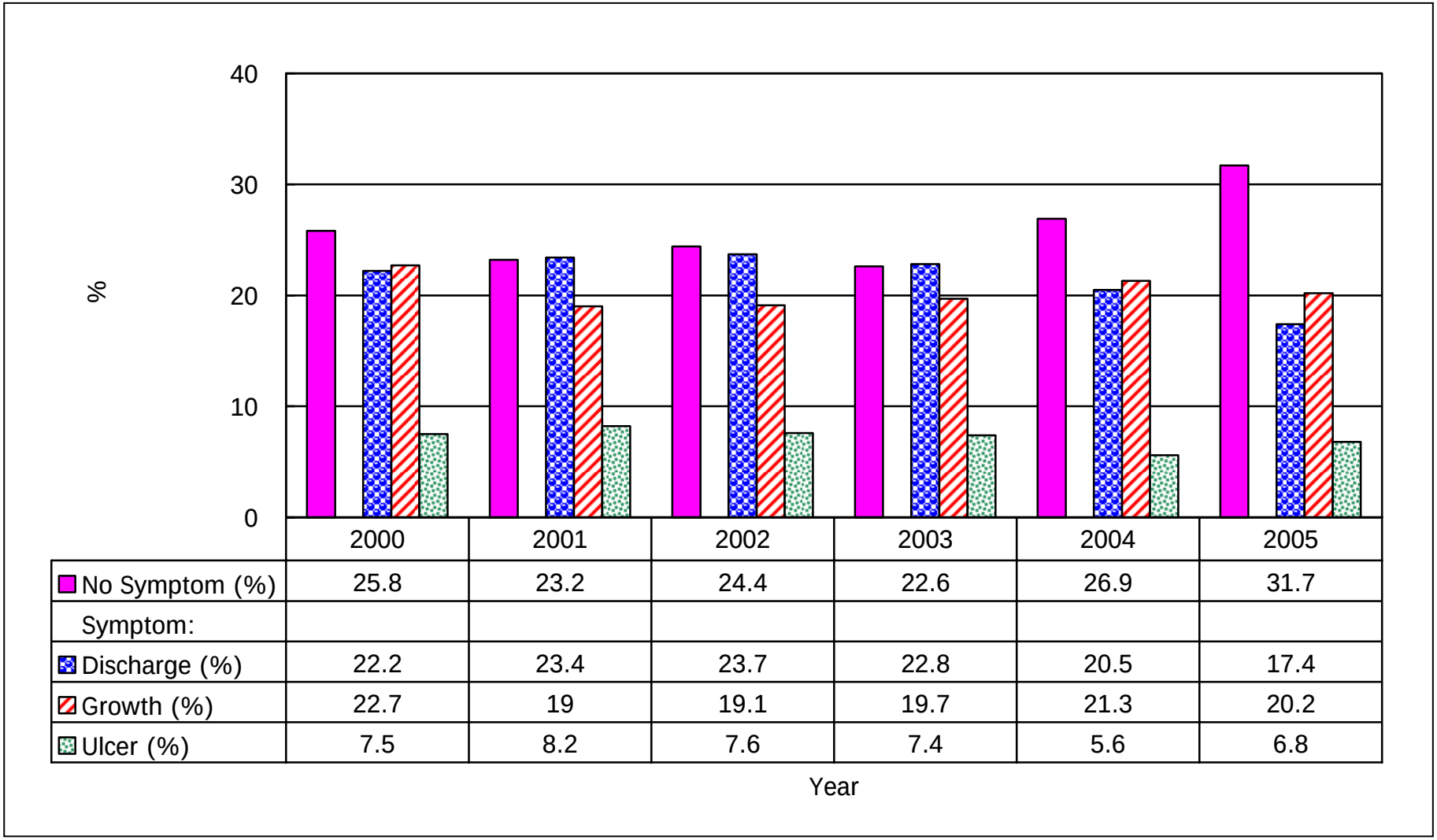
Box 4.4 Sexually acquired HIV infection in Hong Kong



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total annual reported HIV infections	34	60	71	79	104	122	134	181	189	213	183	213	260	229	268
HIV infection reported from SHS*	9	19	12	17	29	14	25	27	27	29	19	30	41	34	43
% of HIV infection reported from SHS*	26.5	31.7	16.9	21.5	27.9	11.5	18.7	14.9	14.3	13.6	10.4	14.1	15.8	14.8	16
Reported sexually acquired HIV infection	25	55	61	69	99	111	116	160	154	170	142	169	202	165	172
% of reported sexually acquired HIV infection	73.5	91.7	85.9	87.3	95.2	91	86.6	88.4	81.5	79.8	77.6	79.3	77.7	72.1	64.2

* SHS: Social Hygiene Service

Box 4.5 Syndromic presentations of STI from Behavioural Survey of Social Hygiene Service



	2000	2001	2002	2003	2004	2005
No Symptom (%)	25.8	23.2	24.4	22.6	26.9	31.7
Symptom:						
Discharge (%)	22.2	23.4	23.7	22.8	20.5	17.4
Growth (%)	22.7	19	19.1	19.7	21.3	20.2
Ulcer (%)	7.5	8.2	7.6	7.4	5.6	6.8

5. TABULATED RESULTS ON BEHAVIOURAL MONITORING

System description

- This is a tabulation of behavioural data relating to HIV risk collected from different sources in Hong Kong

System layout

Source	Sexual behaviour	Drug-taking behaviour	Data available in 2005
AIDS Counselling Service (ACS)	- Median no. of sexual partners among men - Recent history of commercial sex - Condom use in men - No. of sexual partners and Condom use in MSM		Yes
Social Hygiene Service (SHS)	- Recent history of commercial sex - Condom use in heterosexual men		Yes
Methadone clinics (DRS-M)		- Proportion of injectors - Practice of needle-sharing	Yes
Shek Kwu Chau (SKC) Treatment and Rehabilitation Centre (DRS-S)		- Proportion of injectors - Practice of needle-sharing	No
Central Registry of Drug Abuse (CRDA)		- Proportion of injectors in all drug users - Proportion of injectors in new drug users	Yes
Street Addict Survey (SAS) (From the society for the Aid and Rehabilitation of Drug Abusers)		- Proportion of injectors - Practice of needle-sharing	Yes
Community Research Programme on AIDS (CRPA-H and –T H: Household; T: Travellers) (From Centre for Epidemiology and Biostatistics)	- Condom use in heterosexual men		No

Tables & Figures

Box 5.1 Median number of sex partners in the previous year among adult heterosexual men / MSM attending AIDS Counselling and Testing Service (ACTS)

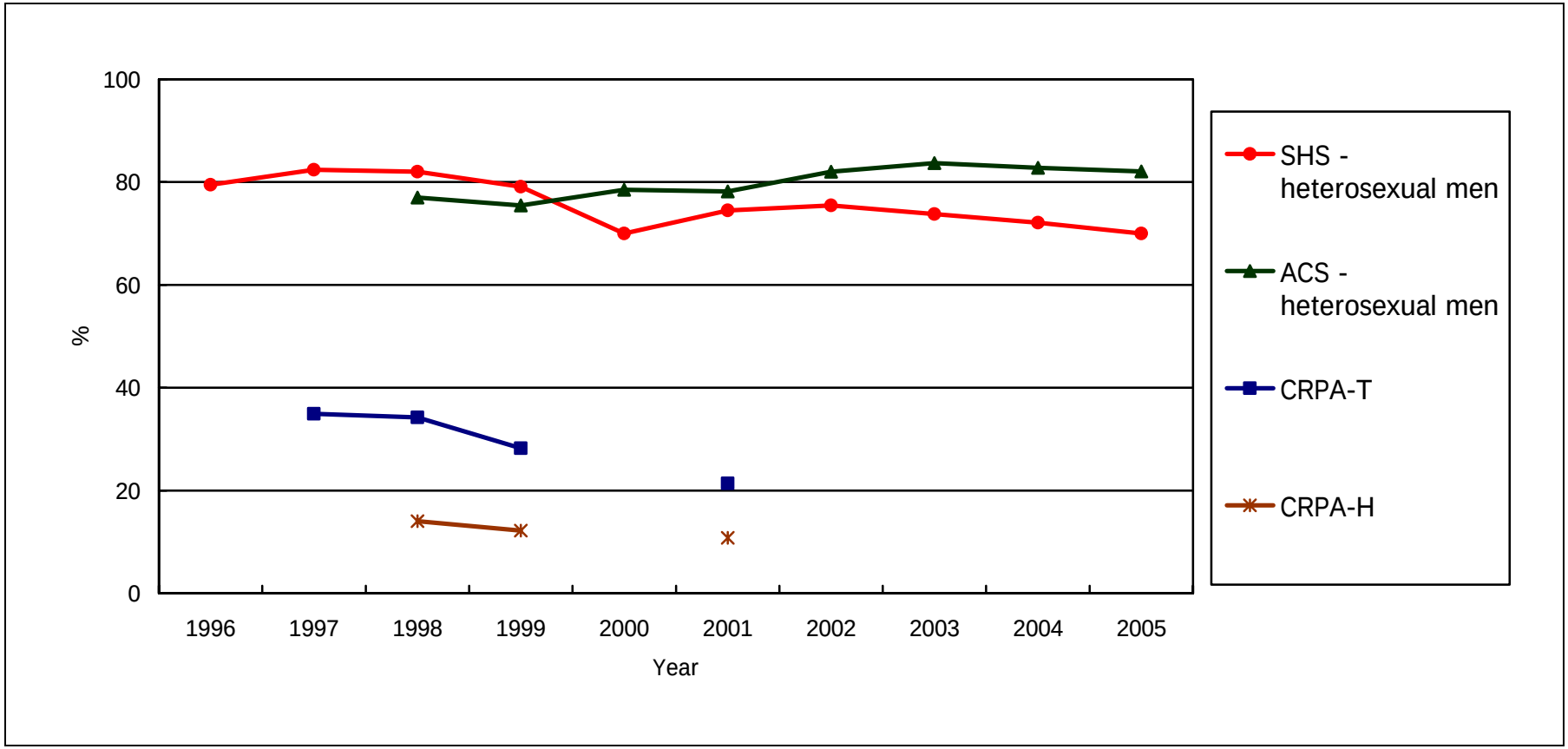
	2000	2001	2002	2003	2004	2005
Heterosexual men - Regular sex partners*	1	1	1	1	1	1
Heterosexual men - Commercial sex partners**	2	2	2	2	2	2
Heterosexual men - Casual sex partners***	1	1	1	1	1	1
MSM - Regular sex partners*	1	1	1	1	1	1
MSM - Commercial sex partners**	5	1	2	2.5	2	1
MSM - Casual sex partners***	4	3	3	3	4	3

* Regular sex partners refer to the spouse or other long-term sex partners for at least one year, or if less than one year, one with whom you expect to continue sexual relationship. This include spouse, mistress, and steady boy/girl friends.

** Commercial sex partners are defined as those who have sexual intercourse in exchange for money, goods or services. Examples are prostitutes and customers of prostitutes.

*** Casual sex partners, the two do not have steady relationship.

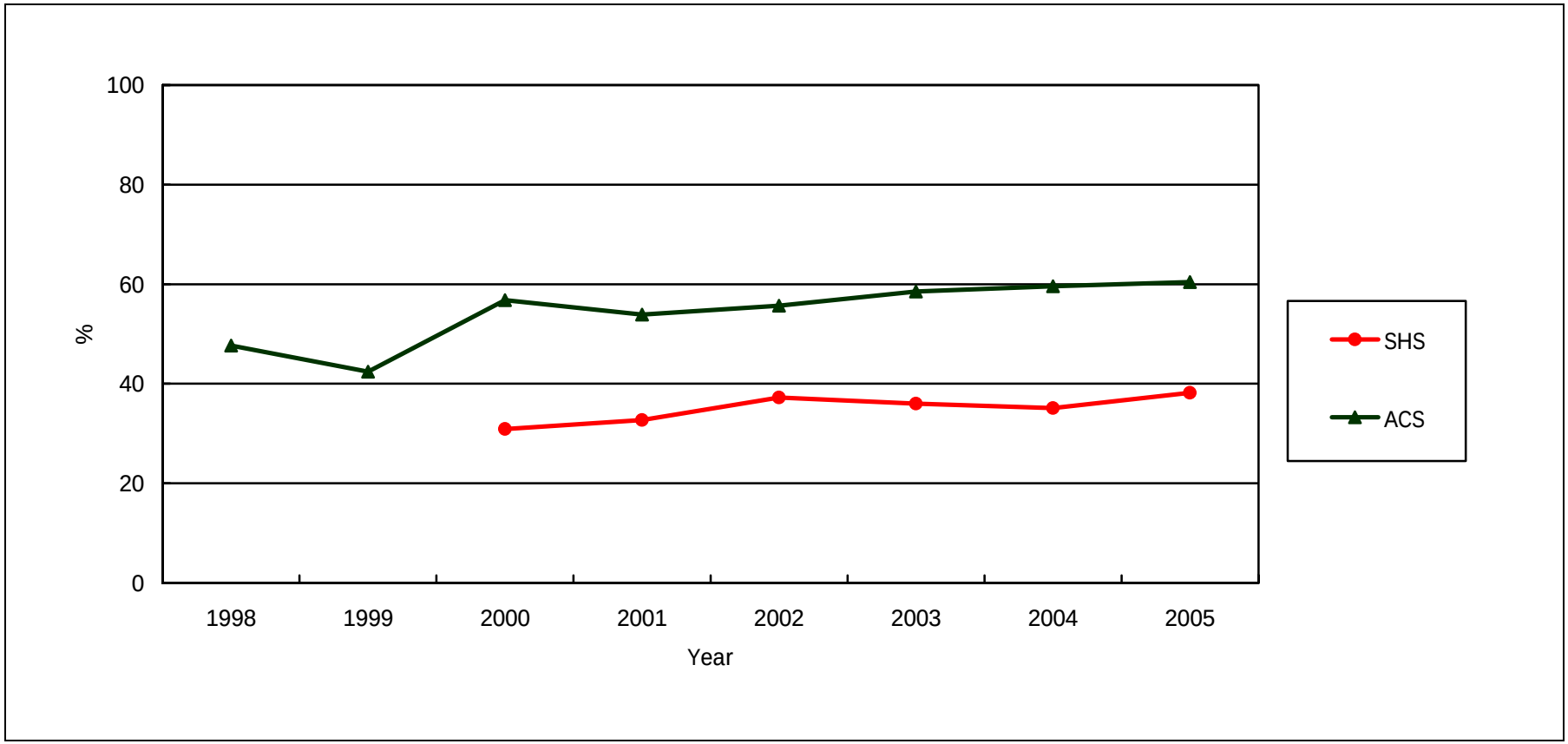
Box 5.2 Recent history* of commercial sex among adult men



* Time period: SHS & ACS : past one year / CRPA : past 6 months

Remarks : Data of CRPA of 2000 is not available, and suspended since 2002
SHS – Social Hygiene Services
ACS - AIDS Counselling Service
CRPA - Community Research Programme on AIDS from Centre for Epidemiology and Biostatistics (H: Household; T: Travellers)

Box 5.3 Regular condom use* with regular partners among adult heterosexual men**

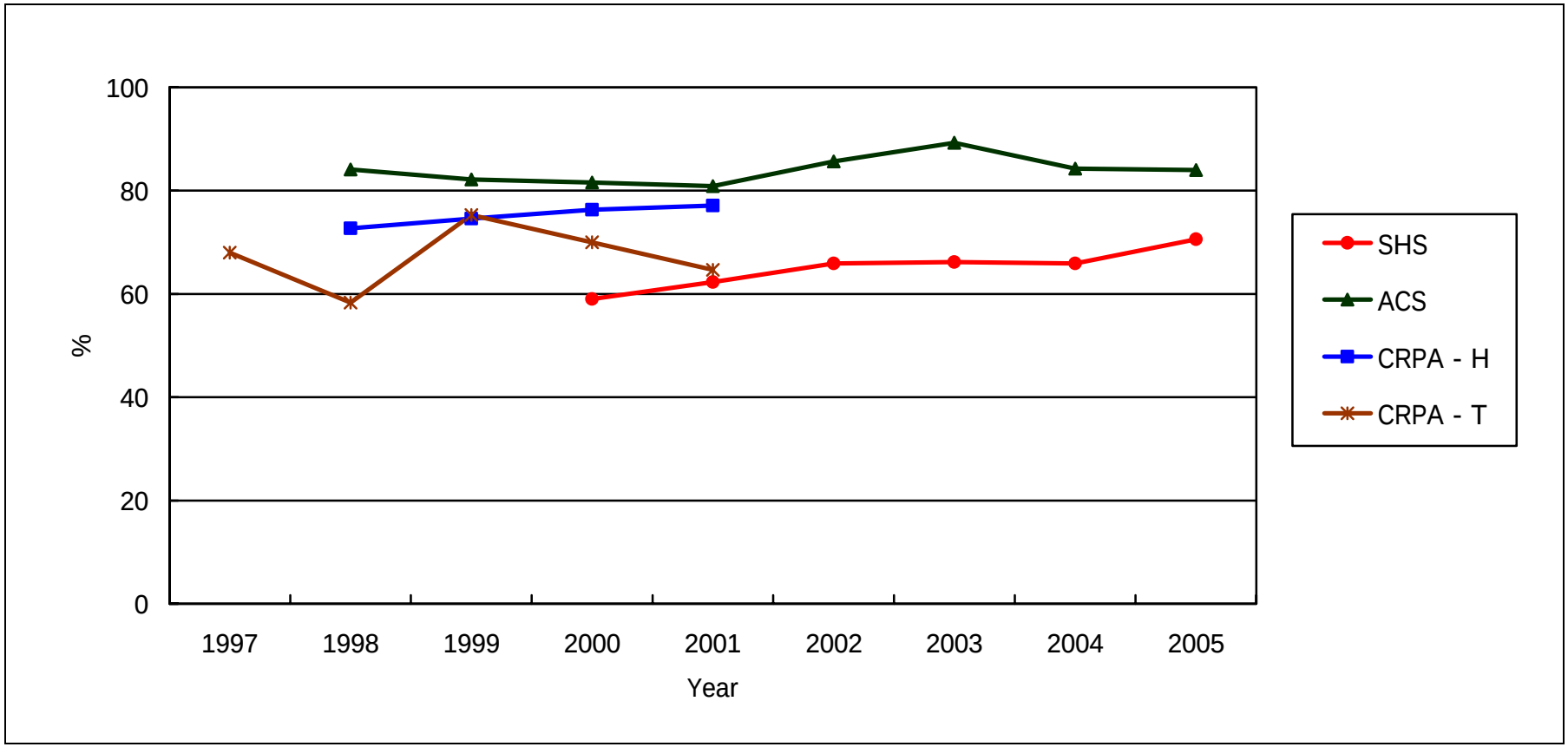


* Regular condom use is defined as always or usually using a condom on a 4-level scale

** Regular partners refer to the spouse or other long-term sex partners for at least one year, or if less than one year, one with whom you expect to continue sexual relationship. This include spouse, mistress, and steady boy/girl friends

Remarks : SHS – Social Hygiene Services
ACS - AIDS Counselling Service

Box 5.4 Regular condom use* with commercial partners among adult heterosexual men**

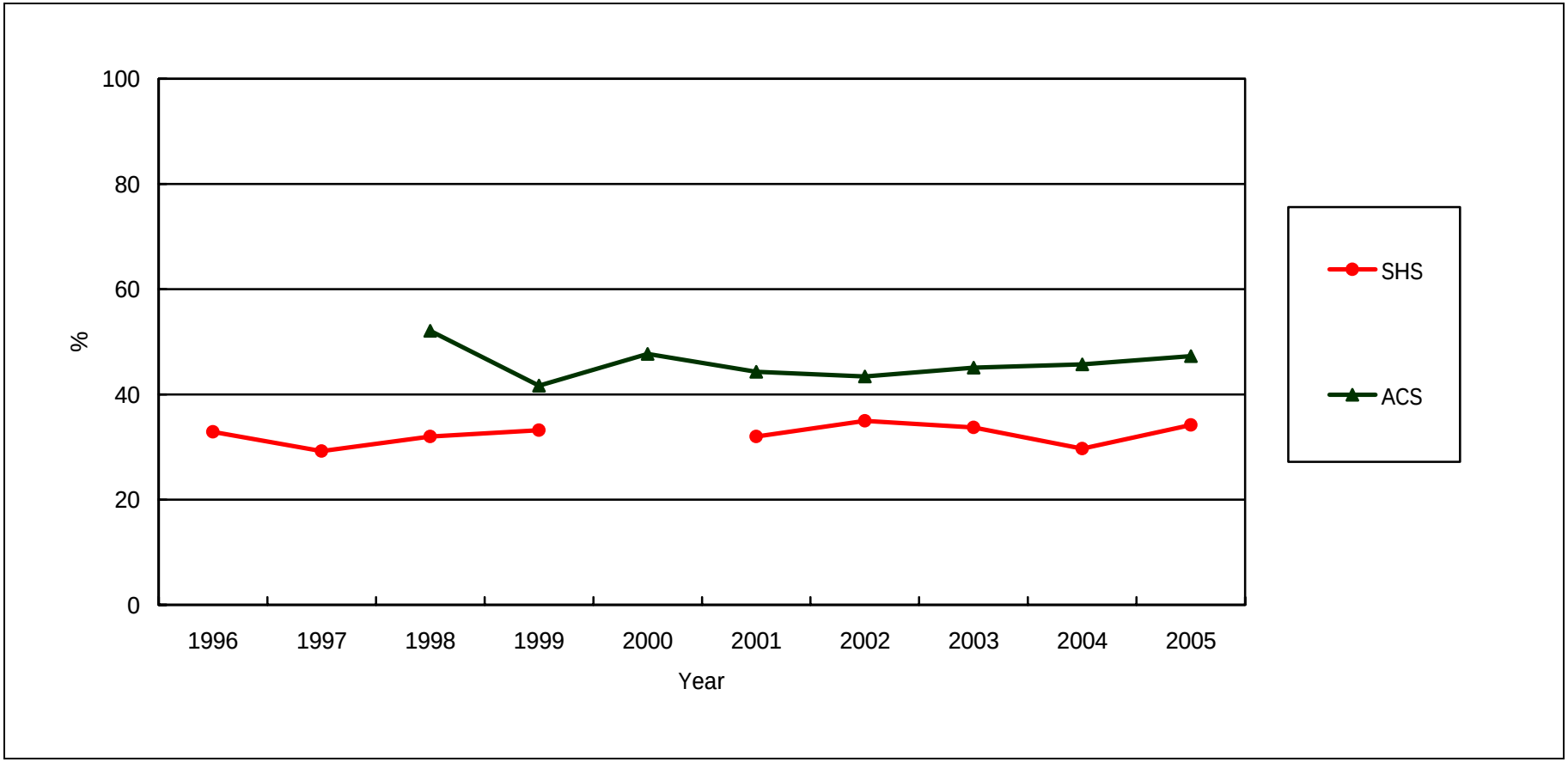


* Regular condom use is defined as always or usually using a condom on a 4-level scale

** Commercial sex partners are defined as those who have sexual intercourse in exchange for money, goods or services. Examples are prostitutes and customers of prostitutes.

Remarks : Data of CRPA suspended since 2002
SHS – Social Hygiene Services
ACS - AIDS Counselling Service
CRPA - Community Research Programme on AIDS from Centre for Epidemiology and Biostatistics (H: Household; T: Travellers)

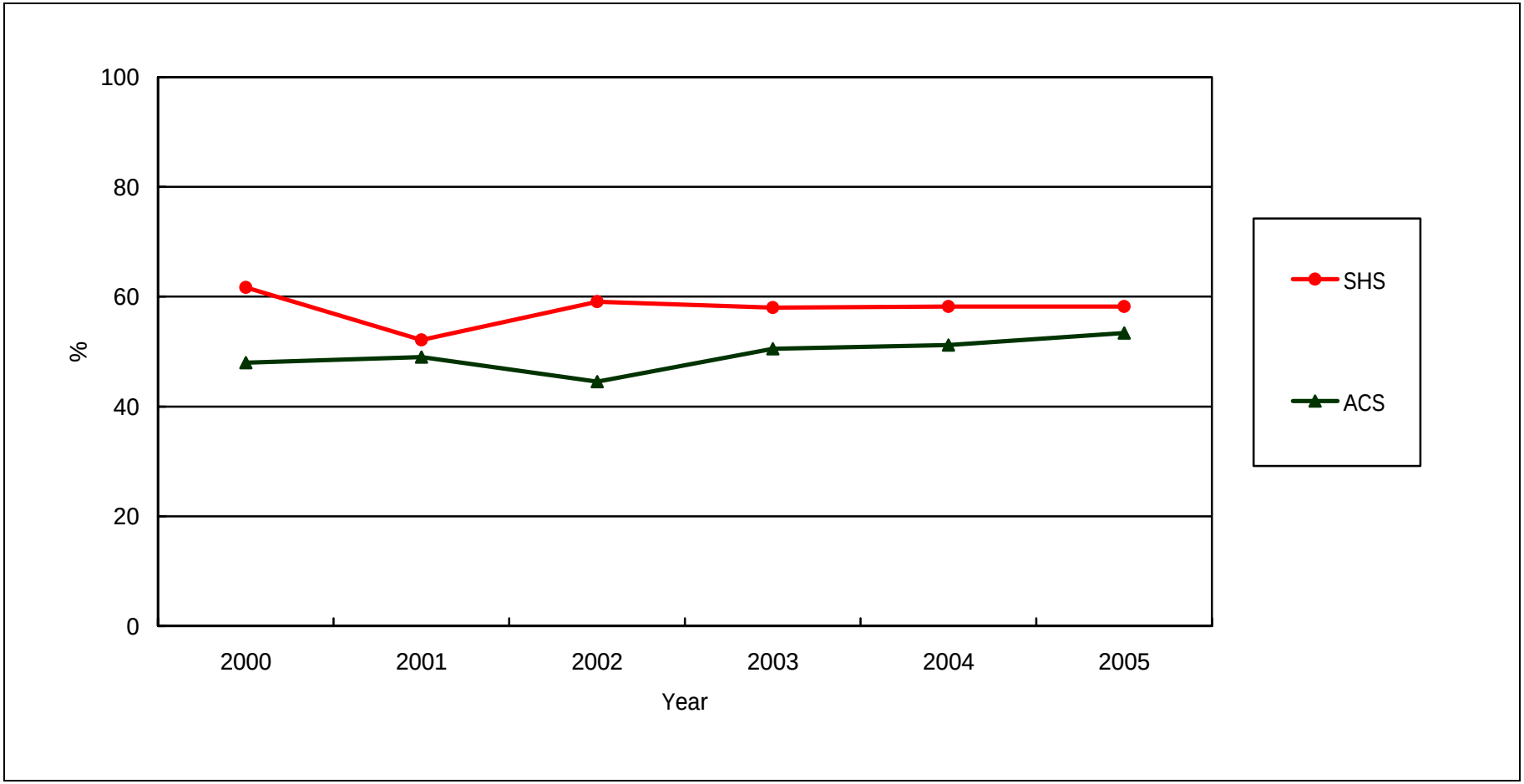
Box 5.5 Condom use for last sex with regular partners* among adult heterosexual men



* Regular sex partners refer to the spouse or other long-term sex partners for at least one year, or if less than one year, one with whom you expect to continue sexual relationship. This include spouse, mistress, and steady boy/girl friends.

Remarks : Data from SHS of 2000 is not available
SHS – Social Hygiene Services
ACS - AIDS Counselling Service

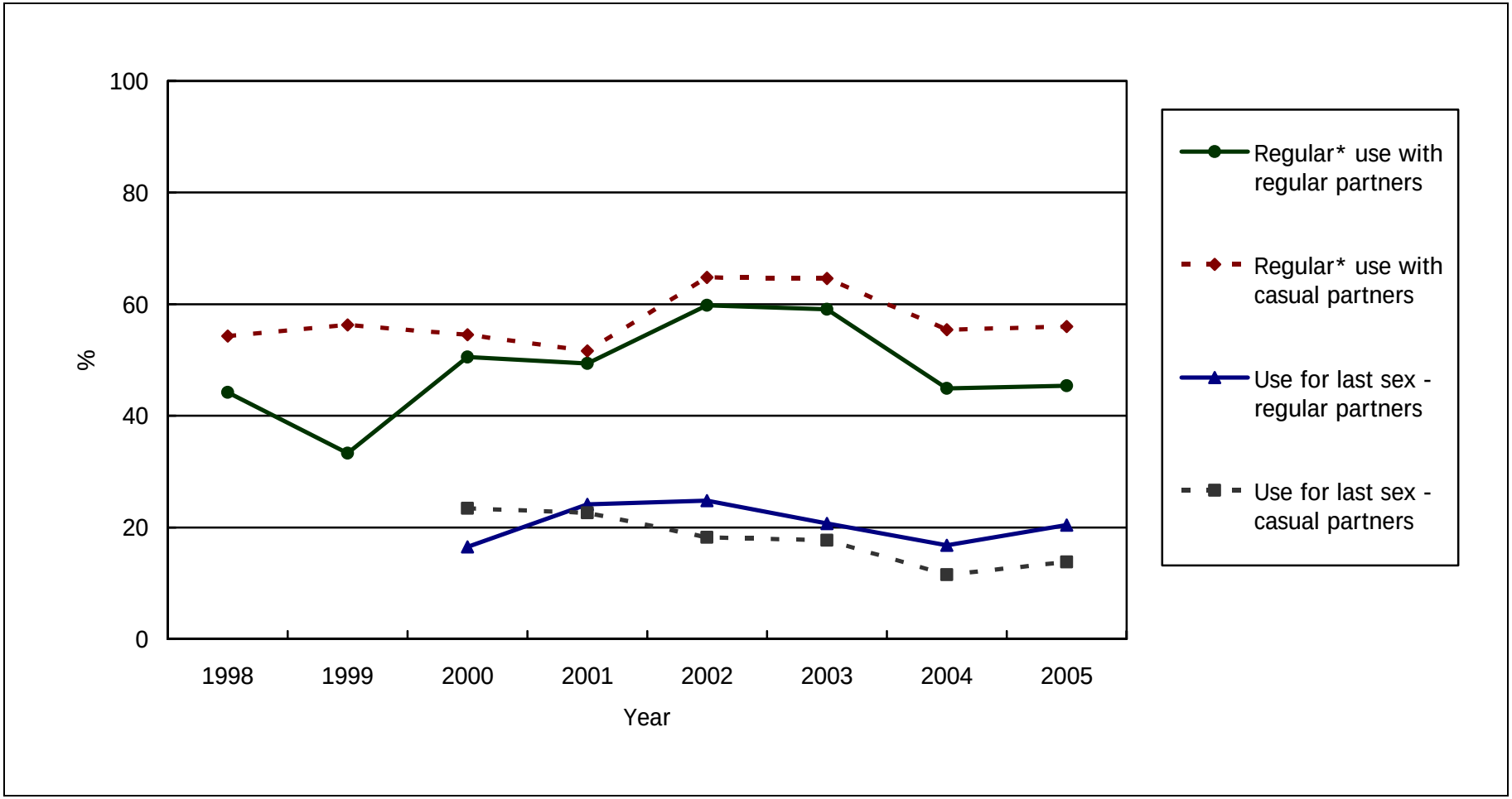
Box 5.6 Condom use for last sex with commercial partners* among adult heterosexual men



* Commercial sex partners are defined as those who have sexual intercourse in exchange for money, goods or services. Examples are prostitutes and customers of prostitutes.

Remarks : SHS – Social Hygiene Services
ACS - AIDS Counselling Service

Box 5.7 Condom use among adult MSMs attending AIDS Counselling and Testing Service (ACTS)

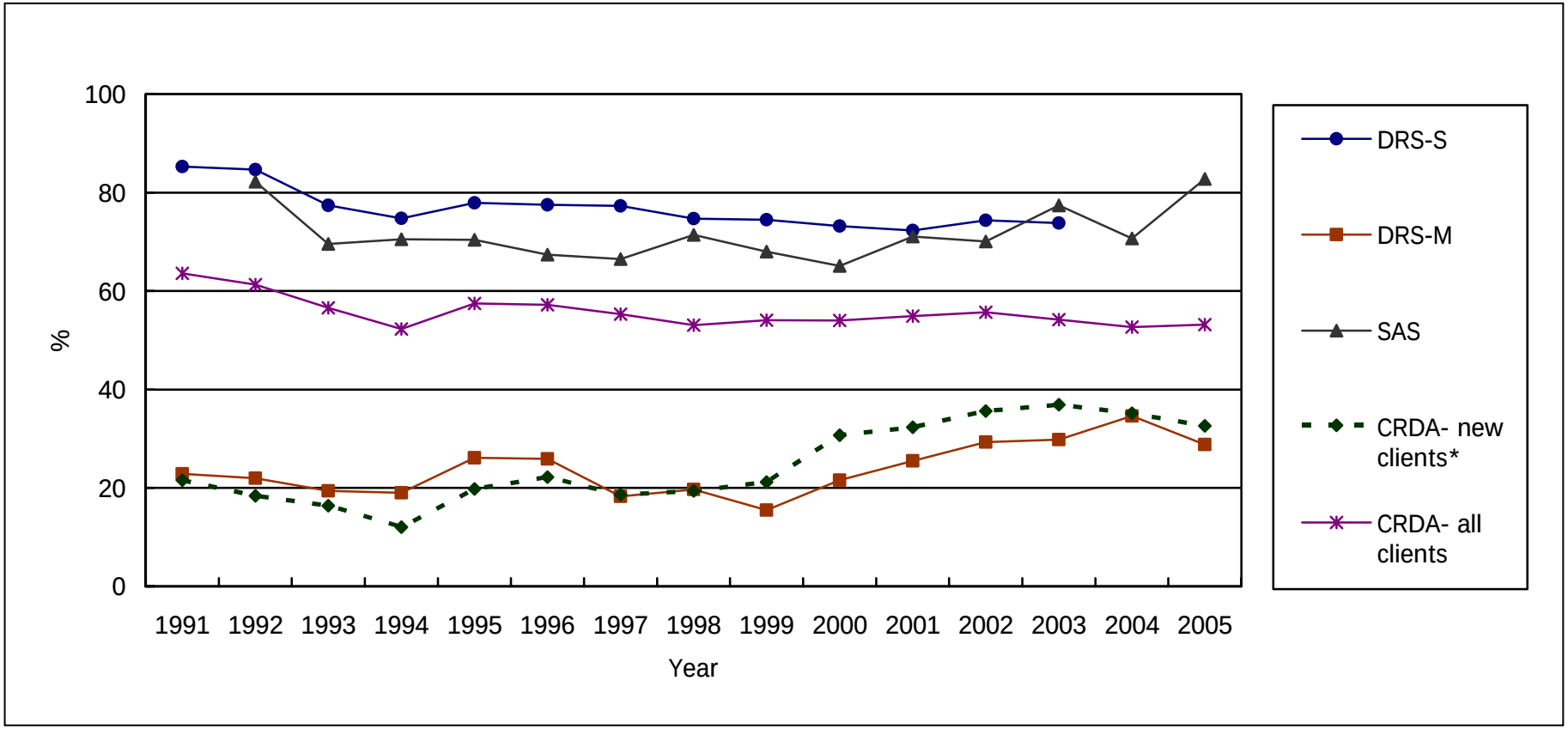


* Regular condom use is defined as always or usually using a condom on a 4-level scale

** Regular sex partners refer to the spouse or other long-term sex partners for at least one year, or if less than one year, one with whom you expect to continue sexual relationship. This include spouse, mistress, and steady boy/girl friends.

*** Casual sex partners, the two do not have steady relationship.

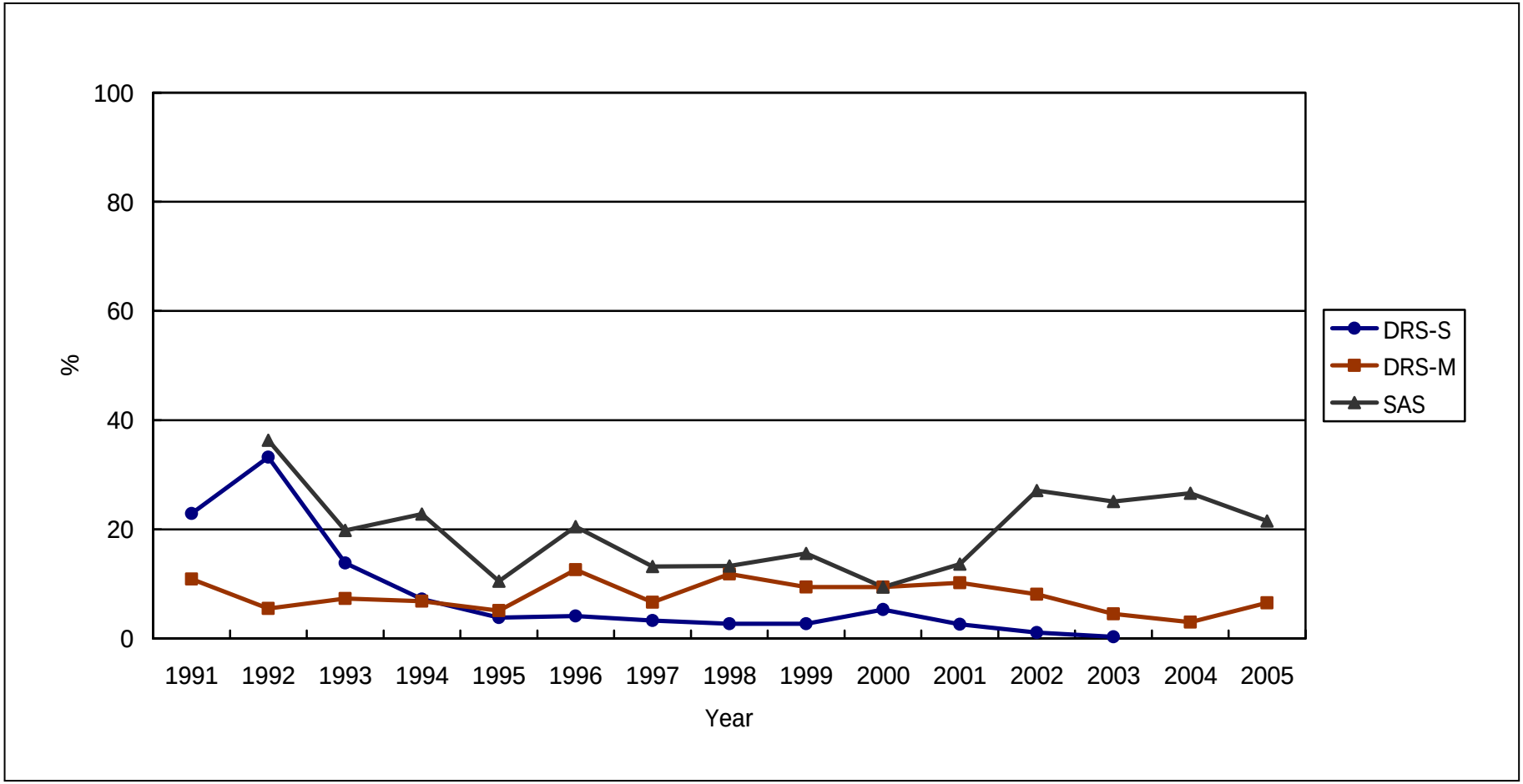
Box 5.8 Proportion of injectors



* New clients refer to people who are known to the CRDA for the first time in a period. For a particular period, a person will be regarded as a newly reported person if and only if the person does not have any report before the specified period.

Remarks: DRS-S - Shek Kwu Chau Treatment and Rehabilitation Centre
DRS-M - Methadone clinics
SAS - Street Addict Survey (From the society for the Aid and Rehabilitation of Drug Abusers)
CRDA - Central Registry of Drug Abuse

Box 5.9 Proportion of needle-sharers



Remarks: DRS-S - Shek Kwu Chau Treatment and Rehabilitation Centre
DRS-M - Methadone clinics
SAS - Street Addict Survey (From the society for the Aid and Rehabilitation of Drug Abusers)
Data of DRS-S suspended since 2004

Appendix I: HIV/AIDS report form (DH2293)

DEPARTMENT OF HEALTH
HIV/AIDS Report Form

The HIV/AIDS voluntary reporting system has been in place since 1984. All doctors are encouraged to report patients with HIV/AIDS and to update status of the previously reported cases where appropriate. This is an anonymous and confidential system. Data collected is crucial for understanding the HIV epidemiology in Hong Kong and is used in global analysis only. Aggregated statistics are released quarterly and can be obtained at www.aids.gov.hk. For any query please call 2780 8622 or email us at aids@dh.gov.hk.

Please complete ALL sections and '✓' in the appropriate box.

Section (A) – Report of HIV

[1] THIS is a ☐ NEW report or ☐ UPDATE of previous reported case

[2] Your reference code number[1]: _____ [3] Does the patient have a HK identity card? ☐ Yes ☐ No

[4] Sex : ☐ M ☐ F For female, is she pregnant? ☐ No ☐ Yes If yes, go to Box I

[5] Date of birth: ___ / ____ / ____ (ddmmyyyy) OR Age at last birthday: _____

[6] Ethnicity: ☐ Chinese ☐ Non-Chinese (Specify for Non-Chinese: ☐ Asian ☐ Caucasian ☐ Black ☐ Others: (_____)

[7] Suspected risk(s) for HIV infection[2]

- ☐ Sex (☐ Heterosexual ☐ Homosexual ☐ Bisexual)
- ☐ Injecting drug use
- ☐ Transfusion of blood/blood products (Haemophilia: ☐ Yes ☐ No)
- ☐ Perinatal
- ☐ Others, please specify:
- ☐ Asked, but risk undetermined
- ☐ Not asked

Box 1
Gravida ___ Para ____ LMP ___ / ___ / ____ (dd/mm/yyyy)
Obstetric follow up clinic/ hospital : _____
Plan: ☐ TOP ☐ Continue pregnancy
Expected hospital/place of delivery: _____

[8] Suspected place of infection: ☐ Hong Kong ☐ Others, specify: _____☐ Asked, but undetermined ☐ Not asked

[9] Date of laboratory diagnosis in HK: ____ / ____ / ____ (dd/mm/yyyy) [10] Western blot confirmation: ☐ Yes ☐ No

[11] Name of Laboratory: _____ [12] Laboratory Number, if a/v: _____

[13] Previous HIV diagnosis outside HK: ☐ No ☐ Yes If yes, date: ____ / ____ / ____ (dd.mm.yyyy) place: _____

[14] CD4 (cells/μl): _____ Date ____ / ____ / ____ (dd/mm/yyyy)

[15] HIV status of spouse/regular partner: ☐ HIV positive ☐ HIV negative ☐ Unknown

Section (B) – Report of AIDS

[16] Has the patient developed AIDS[3]: ☐ Yes ☐ No (Go to Section C)

[17] If yes, the AIDS defining illness(es) is (are):

(i) _____ Date of diagnosis: ____ / ____ / ____ (dd.mm.yyyy)

(ii) _____ Date of diagnosis: ____ / ____ / ____ (dd.mm.yyyy)

(iii) _____ Date of diagnosis: ____ / ____ / ____ (dd.mm.yyyy)

[18] CD4 (cells/μl) at AIDS: _____ Date: ___ / ____ / ____ (dd/mm/yyyy)

Section (C) – Report of deaths and defaults

[19] Has the patient died? ☐ Yes ☐ No If yes, date of death: ____ / ____ / ____ (dd/mm/yyyy) Cause: _____

[20] Has the patient left HK/defaulted follow up? ☐ Yes ☐ No If yes, last seen on: ____ / ____ / ____ (dd/mm/yyyy)

Section (D) – Correspondence

Name of medical practitioner: _____ ☐ in private practice ☐ in public service

Correspondence Address: _____

_____

Tel: _____ Fax: _____

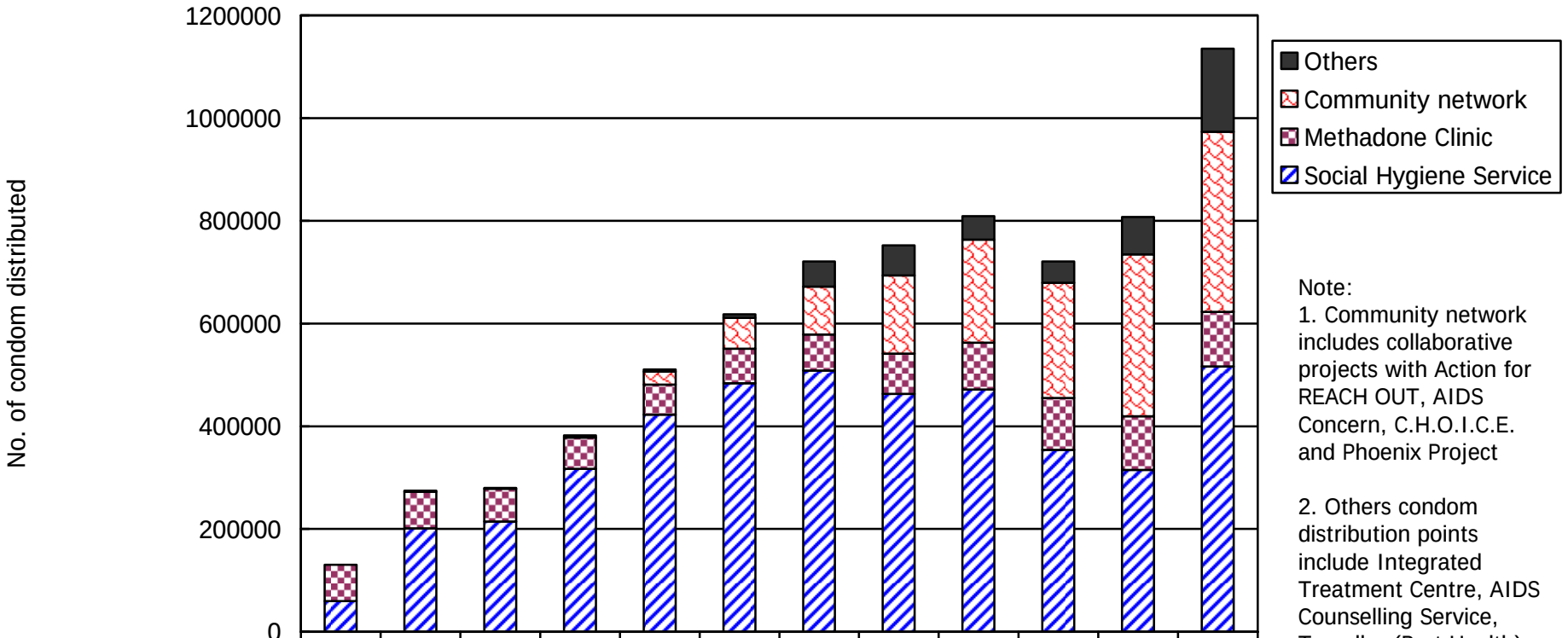
Email: _____ Date: ___ / ____ / ____ (dd/mm/yyyy)

[1] Please put down any code of your choice (e.g., case number) for matching purpose only.
[2] Please tick the most likely risk for contracting HIV infection. If there is more than 1 suspected risks, please put down 1 & 2 in descending order of the two most likely risks.
[3] Surveillance definition of AIDS: a definitive laboratory diagnosis of HIV infection AND one or more of the AIDS indicator conditions (*July 1995, Scientific Committee on AIDS. Available at www.aids.gov.hk/report.htm).*

Appendix II: Classification system for HIV infection and surveillance case definition for AIDS in adolescents and adults in Hong Kong.

A definitive laboratory diagnosis of HIV infection normally by a positive screening test for HIV antibody (e.g. ELISA) supplemented by a confirmatory test (e.g. western blot) + one or more of the AIDS indicator conditions	
AIDS indicator conditions	Candidiasis of bronchi, trachea, or lungs Candidiasis, oesophageal Cervical cancer, invasive Coccidiodomycosis, disseminated or extrapulmonary Cryptococcosis, extrapulmonary Cryptosporidiosis, chronic intestinal (>1 month's duration) Cytomegalovirus disease (other than liver, spleen or nodes) Cytomegalovirus retinitis (with loss of vision) Encephalopathy, HIV-related *Herpes simplex*: chronic ulcer(s) (>1 month's duration); or bronchitis, pneumonitis, or oesophagitis Histoplasmosis, disseminated or extrapulmonary Isosporiasis, chronic intestinal (>1 month's duration) Kaposi's sarcoma Lymphoma, Burkitt's (or equivalent term) Lymphoma, primary, of brain *Mycobacterium tuberculosis*; extrapulmonary or pulmonary/cervical lymph node (only if CD4<200/ul) Pneumonia, recurrent Penicilliosis, disseminated Mycobacterium, other species or unidentified species, disseminated or extrapulmonary *Pneumocystis carinii* pneumonia Progressive multifocal leukoencephalopathy Salmonella septicaemia, recurrent Toxoplasmosis of brain Wasting syndrome due to HIV
Hong Kong has adopted the 1993 Centers for Disease Control and Prevention (CDC) AIDS classification with 3 modifications: (1) disseminated penicilliosis is added as one AIDS-defining condition, (2) pulmonary or cervical lymph node tuberculosis included only if CD4 < 200 µl, (3) a CD4 < 200 µl without any AIDS-defining condition is not counted as AIDS.	

Appendix III: Condom distribution from Department of Health



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Others	0	2018	1478	4434	4320	6871	48690	58427	46045	41742	73042	161334
Community network	0	0	0	0	25200	60192	93456	152352	200609	224147	315110	350517
Methadone Clinic	71086	71477	63970	60797	58523	67243	70388	78192	90901	101357	104609	106750
Social Hygiene Service	59535	201262	214456	317246	422549	483761	508174	463324	471854	353810	315015	516185

Year

Note:
1. Community network includes collaborative projects with Action for REACH OUT, AIDS Concern, C.H.O.I.C.E. and Phoenix Project

2. Others condom distribution points include Integrated Treatment Centre, AIDS Counselling Service, Traveller (Port Health) Clinics and Correctional Service Department