

# **HIV SURVEILLANCE REPORT – 2002 UPDATE**

**Special Preventive Programme  
Department of Health  
Hong Kong Special Administrative Region  
November 2003**

# **HIV SURVEILLANCE REPORT – 2002 UPDATE**

**Special Preventive Programme  
Department of Health  
Hong Kong Special Administrative Region  
November 2003**

***This report is produced and published by:***

Surveillance Team  
Special Preventive Programme  
Department of Health  
Hong Kong Special Administrative Region

**Team members:**

Dr SS Lee  
Dr KH Wong  
Dr Kenny Chan  
Dr KT Chan  
Dr WY Wan  
Dr K Lee  
Ms WK Chan  
Ms WY Ng  
Ms HY Wong  
Ms LS Cheng

**Correspondence:**

Special Preventive Programme, Department of Health  
c/o Red Ribbon Centre, 2/F Wang Tau Hom Jockey Club Clinic,  
200 Junction Road East, Kowloon, Hong Kong  
Tel: (852) 2304 6268 Fax: (852) 2338 0534  
Website: <http://www.aids.gov.hk>  
E-mail: [aids@dh.gov.hk](mailto:aids@dh.gov.hk)

## CONTENTS

	Pages
Preface	5
Acknowledgements	7
1. Summary review of HIV/AIDS in Hong Kong 2002	9
2. Tabulated results of HIV/AIDS reporting	19
3. Tabulated results of sero-surveillance studies	41
4. Tabulated results of statistics on sexually transmitted infections	55
5. Tabulated results on behavioural monitoring	63
<u>Appendix I:</u> HIV/AIDS report form (DH2293)	79
<u>Appendix II:</u> Classification system for HIV infection and surveillance case definition for AIDS in adolescents and adults in Hong Kong.	80



## PREFACE

This is the second annual surveillance report on HIV/AIDS published by the Special Preventive Programme (SPP) of the Department of Health. It aims to disseminate the updated information on local HIV/AIDS epidemiology as of the year 2002 to those working in this field and those who need to know.

The format of this annual report is the same as its precedent. Following an article highlighting the main features of the data collected and collated, there are sets of tables and figures on the four main components of our surveillance programmes. They are the HIV/AIDS reporting, HIV seroprevalence studies, Social Hygiene Service caseloads and risk behaviour surveillance studies. New topics incorporated in this report are the reported CD4 levels at HIV diagnosis, distribution of HIV-1 subtypes and the various data obtained from the Universal Antenatal HIV Antibody Testing Programme, which was implemented in September 2001.

The switch from publication of quarterly bulletins, to quarterly electronic copies of tables of statistics (*Hong Kong STD/AIDS Update* accessible from [www.aids.gov.hk](http://www.aids.gov.hk)) together with a consolidated annual report on HIV/AIDS last year has been smooth and satisfactory. The internet is reckoned to be a convenient and environment-friendly access to information by a majority of our readers without geographical boundary. To continue improving our quality and meeting our readers' needs, your comments and suggestions are most welcomed.

Surveillance Team  
Special Preventive Programme  
Department of Health  
November 2003



## **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 Maintenance and 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 and many of our local AIDS non-governmental organisations 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 OF HIV/AIDS IN HONG KONG 2002**

### **HIV/AIDS surveillance systems in Hong Kong**

1. The HIV/AIDS surveillance system comprises the following programmes: (a) HIV/AIDS reporting; (b) Seroprevalence studies; (c) STD surveillance and (d) Behavioural surveillance and other research activities. Surveillance activities are undertaken through the Surveillance Office of the Special Preventive Programme, Department of Health. The tabulated results of the four systems are incorporated in this annual report, while quarterly summary tables can be viewed and downloaded from the Virtual AIDS Office at <http://www.aids.gov.hk>

2. The HIV/AIDS reporting programme is a dual mechanism involving the voluntary reporting of newly diagnosed HIV and AIDS cases by attending physicians using the DH 2293 form (Appendix I) and by laboratories providing confirmatory tests in the public service. Seroprevalence studies are conducted on selected communities. These include the groups at risk of contracting HIV infection (patients attending the STDs clinics, drug users in methadone clinics and rehabilitation centres), groups without additional risk (blood donors and antenatal women) and in groups whose risk is undetermined (patients with tuberculosis and prisoners). Unlinked anonymous screenings have been applied to enhance our understanding of the HIV situation. STD surveillance is a separate system coordinated in conjunction with the Social Hygiene Service. Finally, behavioural surveillance is a rather new concept in HIV epidemiology. It was initiated as a pilot project in collaboration with the Department of Microbiology of The University of Hong Kong in 1994, and is now a regular programme contributed by different agencies.

## Highlights of HIV/AIDS surveillance in 2002

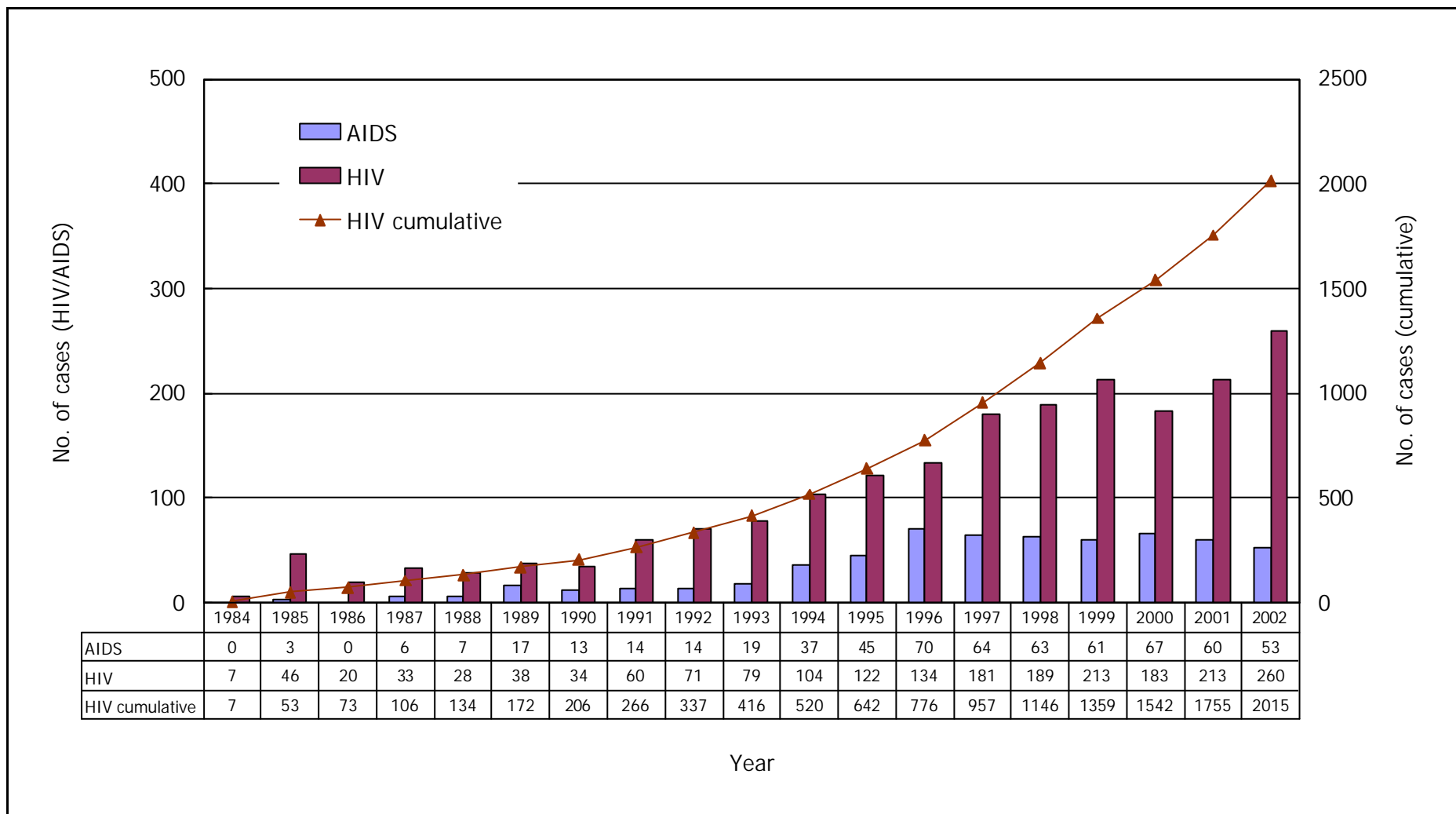
3. In the year 2002, 260 HIV infections have been reported to the Department of Health. This highest yearly figure has put the cumulative total of HIV reports (inclusive of those who had progressed to AIDS) high at 2015. In the same period, there were a total of 53 AIDS reports and the cumulative total has reached 613 (Box 1.1). The first HIV and AIDS case were reported in 1984 and 1985 respectively.

4. Among the 260 newly reported HIV cases, 201 (77.3%) were male. The male to female ratio was 3.4:1. It denoted the first rebound in the past 6 years during which the male to female ratio dropped from 4.2:1 to 2.9:1. Overall, 71.2% of the HIV reports were Chinese. Yet, only about half of the female were Chinese and more than 40% originated from other Asian countries. The median age at HIV reporting was 34 (interquartile range 28-42), similar to figures in the past years. All cases, except one perinatal HIV infection, reported in the year 2002 were adult cases. The proportion of various sources of reporting was similar to that of previous years. The main source of reporting was public hospitals/clinics/laboratories which altogether reported half of the HIV cases. The Social Hygiene Clinics, the public STD clinics, reported 41 HIV cases (15.8%) in 2002 (See Section 2).

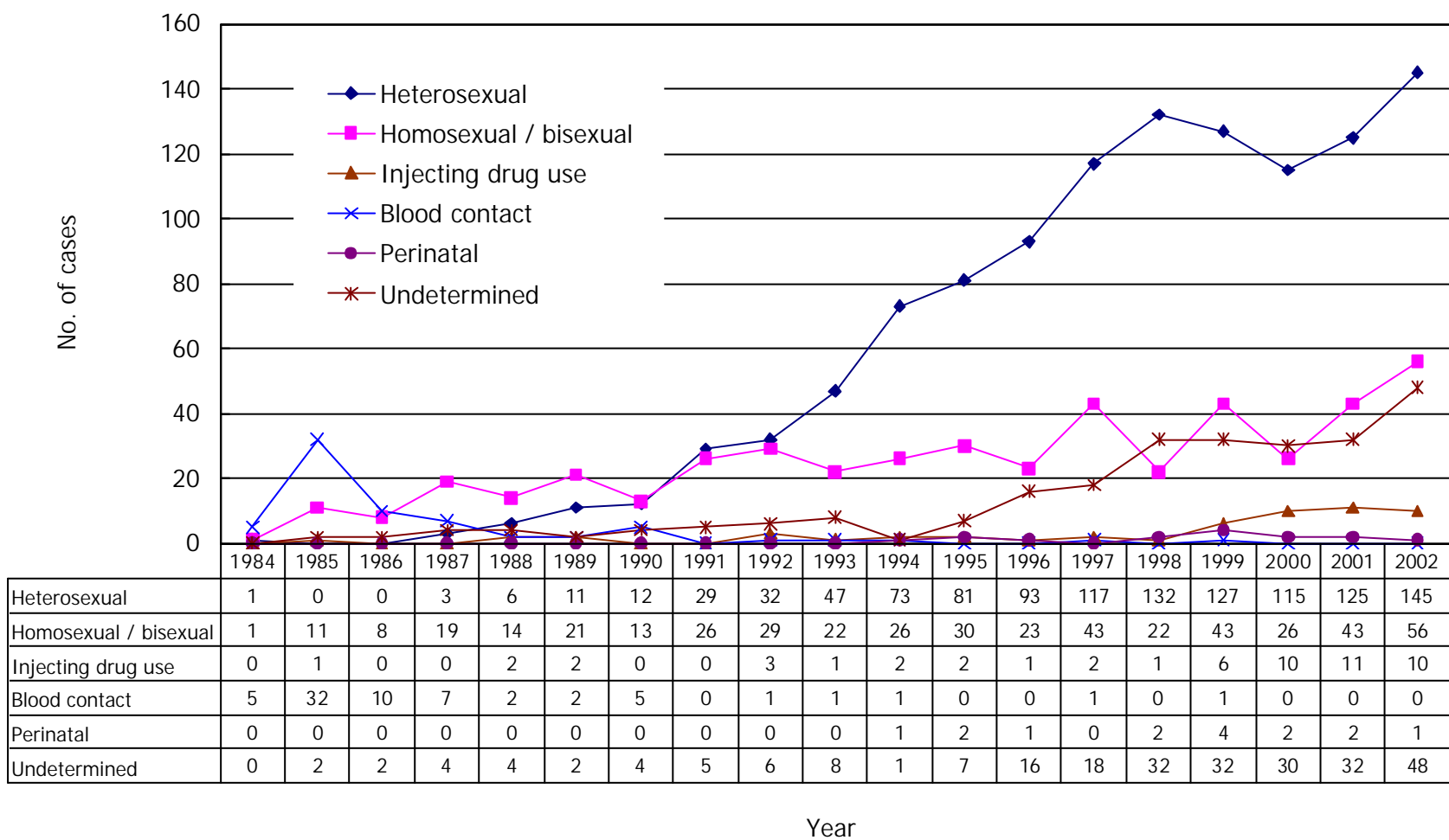
5. **Sexual transmission** remained the commonest reported risk factor for HIV infection locally. Among the 260 new HIV reports, 201 (77.3%) were transmitted sexually, 145 (55.8%) heterosexually and 56 (21.6%) homosexually or bisexually (Box 1.2). It was noted that the proportion of heterosexual transmission gradually decreased from its highest of 70% in 1994 to 56% in 2002. Whereas the proportion of homosexual and bisexual (MSM) transmission slowly crept up from its nadir of around 10% in 1998 to 21% in 2002. The heterosexual to homosexual or bisexual men among the HIV reports in fact decreased from 4.1:1 to 1.8:1 during the same period (Box 2.5 and 2.7). The frequency of condom use among men, one of the behavioural markers regularly monitored in HIV surveillance, however, remained similar to that in previous years (See Section 5).

6. There has been an increase in number of HIV reports among **injecting drug users** in recent few years. In 2002, 10 (3.8%) HIV cases reported were transmitted through injecting drug use. This was similar to the figures in 2000 and 2001. Unlinked anonymous testing of methadone clinic attendants revealed a yearly positive rate of less than 0.1% up to 1997. It has been rising gradually to between 0.1 to 0.3% recently. The seroprevalence in 2002 was 0.25% (Box 3.3). There has also been an increasing proportion (from about 20% in 1999 to 35% in 2002) of injecting drug users among the new clients known to the Central Registry of Drug Abuse (CRDA). The proportion of needle sharers obtained from the Street Addict Survey (SAS) has also increased from 10% in 2000 to more than 25% in 2002 (See Section 5). Although these data may not represent the complete and actual situation of HIV infection among the population of drug users in Hong Kong, they again have alerted us the possible spread of the infection among them locally. The health education and HIV preventive effort is never enough in this very marginalized group in the society. Moreover, it was noted that the number of methadone users participated in voluntary HIV testing decreased from 600 in 1999 to about 300 in 2002 (Box 3.3 (b)). No positive case was diagnosed and reported from any drug related institution in 2002.

Box 1.1 HIV/AIDS reports in Hong Kong (1984 - 2002)



**Box 1.2 Reported risks of HIV infection in Hong Kong (1984 - 2002)**



7. More physicians are now reporting the **CD4 levels at HIV diagnosis** to the Department. In recent 2 years, more than 70% of the HIV reports included the CD4 levels at HIV diagnosis. Knowing that these results could be biased towards the more symptomatic patients, the figures might have underestimated the actual immunity level among HIV infected individuals (Box 1.3). Yet, an improving trend of CD4 levels has been observed. The median CD4 level increased from below 100 cells/ $\mu$ l in 2000 to above 200 cells/ $\mu$ l in 2002. The percentage of CD4  $\geq$  200 cells/ $\mu$ l at HIV reporting increased from 41% to 50% in the same period.

**Box 1.3 Reported CD4 levels at HIV diagnosis (1996 - 2002)**

Year	Number of HIV reports	Number of CD4 reports (%)	Median CD4 (cells/ $\mu$ l)	Number of reported CD4 $\geq$ 200 (%)
1996	134	82 (61%)	128	36 (43.9%)
1997	181	66 (36%)	80	27 (40.9%)
1998	189	78 (41%)	60	18 (23.1%)
1999	213	116 (54%)	149	53 (45.7%)
2000	183	127 (69%)	97	52 (40.9%)
2001	213	157 (74%)	228	81 (51.6%)
2002	260	191 (73%)	200	96 (50.3%)

8. We continued to observe a gradually decreasing trend in the number of **AIDS reports**. In fact, the annual reported number of AIDS cases has been stable at 60-70 since 1996, the year when highly active antiretroviral therapy (HAART) was introduced. There were a total of 53 AIDS reports in year 2002. When defining late HIV diagnosis as the reporting of AIDS within 3 months of HIV reporting, the number of late HIV diagnoses actually has remained stable since 1997. There were 52-56 cases reported every year. In fact, 52 (98.1%) of the 53 AIDS reports in 2002 had their AIDS reported within 3 months of HIV reports. That is, nearly all the reported AIDS cases presented late in their course of illness in recent years. This finding suggested that a fraction of HIV infected patients were unaware of their HIV status before they became symptomatic, whereas those who knew that they were HIV positive seldom progressed to AIDS. This is based on the assumption that the level of under-reporting of AIDS cases in the past years has been stable. A previous local study has pointed out that the independent attributes associated with late diagnosis included older age ( $>35$ ), male sex, Chinese ethnicity and being heterosexual (*AIDS Patient Care STDS*, under press). Again, the importance of raising the awareness and promotion of early HIV testing in the general public and communities at risk cannot be overemphasized.

9. The **primary AIDS defining illness (ADI) patterns** of the reported AIDS cases remained similar to previous years (Box 2.9). Pneumocystic pneumonia (PCP) (renamed *P. jirovechi*) continued to be the single most important ADI in the year and accounted for 25 (47%) AIDS cases. This was followed by tuberculosis infection (9, 17%), fungal infections (8, 15%) and penicilliosis (7, 13%). On the one hand, the number of tuberculosis as ADI decreased from around 20 (30%) since 1996 to just 9 (17%) in 2002. On the other hand, unlinked anonymous testing actually demonstrated a seroprevalence of 0.9% among patients with tuberculosis in 2002. This was the highest figure ever obtained since 1990

during which the prevalence fluctuated between 0 and 0.6%. With the approximately 7000 cases of tuberculosis in Hong Kong yearly, it is probable that a significant portion of patients with tuberculosis remain untested and unnoticed of their HIV status.

10. The **HIV-1 subtypes** of a proportion of the reported HIV infections have been determined in a pilot project jointly conducted by The University of Hong Kong and The Department of Health. Preliminary data of the past 2 years are shown in the table below (Box 1.4). Subtypes CRF01\_AE and B have been the most common subtypes identified locally, each accounting for one half and one third of the reported HIV cases respectively. New subtypes of A, AG, BC, B' and D have also been identified in 2002. The CRF01\_AE was more common in female, Chinese, heterosexuals and injecting drug users whereas B subtype in male, White and MSMs.

11. Molecular epidemiology is an important tool to identify any common source of HIV infection in Hong Kong. Genetic clustering was found only in a few MSM pairs, perinatal infections and a number of non-Chinese injecting drug users over the past years. There has been no genetic clustering identified among the reported infections in 2002.

#### Box 1.4 HIV subtypes in Hong Kong

	2001		2002	
Annual number of HIV reports	213		260	
Number of reports with subtypes identified	79	(37.1%)	249	(95.8%)
Subtypes				
CRF01_AE	45	(57.0%)	126	(50.6%)
B	24	(30.4%)	85	(34.1%)
C	5	(6.3%)	17	(6.8%)
Others	5	(6.3%)	21	(8.4%)

Others include A(3), B'(1) and B/C(1) in 2001 and BC(4), A(2), AG(1), B'(1), D(1) and unknown (12) in 2002. (number of cases identified)

#### Accounting for the increase in HIV reports in 2002

12. Since the implementation of the **Universal Antenatal HIV Antibody Testing Programme** in September 2001, all expectant mothers attending the public antenatal clinics have been routinely tested for HIV. This has replaced the previous unlinked anonymous screening of the newborn babies first initiated in 1990. It aims to identify the HIV positive pregnant women so that they can benefit from receiving appropriate treatment and perinatal HIV transmission be ideally prevented. Theoretically, the Programme would lead to an increase in HIV diagnosis among women and their partners, at least in the early years of its implementation.

13. A separate system has been set up to monitor the progress of the Programme. So far, less than 4% of the women attending the public antenatal services opted out from the testing programme (Box 1.5). Seven women were diagnosed and reported HIV positive through the Programme in the last 4 months of 2001. An additional 2 partners of these

women were also later tested and reported HIV positive in the same year. For year 2002, we received 8 HIV reports from the Programme with another 1 male partner, i.e., an addition of 9 HIV reports in the year. This finding could therefore possibly explain the increases in female HIV cases but not the male cases in the past 2 years (Box 1.6 (a)).

### Box 1.5 The Universal Antenatal HIV Antibody Testing Programme

	2001 (Sep-Dec)	2002
Number of tests	12,965	41,932
Coverage*	96%	97%
Number of positive tests	7	8
Prevalence	0.05%	0.02%

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

14. In fact, an increase in the number of HIV reports from **adult Chinese men** was observed (Box 1.6 (c)). While the increase in number of women cases could be attributed to the Programme as mentioned above, the increase in positive cases in men from around 150-170 in the past few years to more than 200 cases in 2002 needs an alternative explanation. Both **heterosexual and homosexual** transmissions in men increased in the past 2 years. Although the seroprevalence and behavioural studies among people with high risk sexual behaviours have not revealed a remarkable change in the patterns lately (See Section 5), this rising trend in HIV reports among men is worrying. Moreover, the fact that the increase mainly occurred in the young Chinese MSMs (Box 1.6 (d)) and the lack of a regular seroprevalence surveillance system among them make this group particularly vulnerable. It should also be noted that the number with undetermined risk factor continued to increase in the past years. Forty-eight (18.5%) reported cases in 2002 had their risk undetermined.

### Conclusions

15. A total of 260 HIV infections, the highest figure ever obtained for a year, were reported in 2002. Cumulative reported number of HIV cases has exceeded 2000. Seroprevalence studies, however, have not indicated a significant increase in HIV seropositivity among at risk groups or the general population. The **population seroprevalence remained low** at <0.1% in 2002.

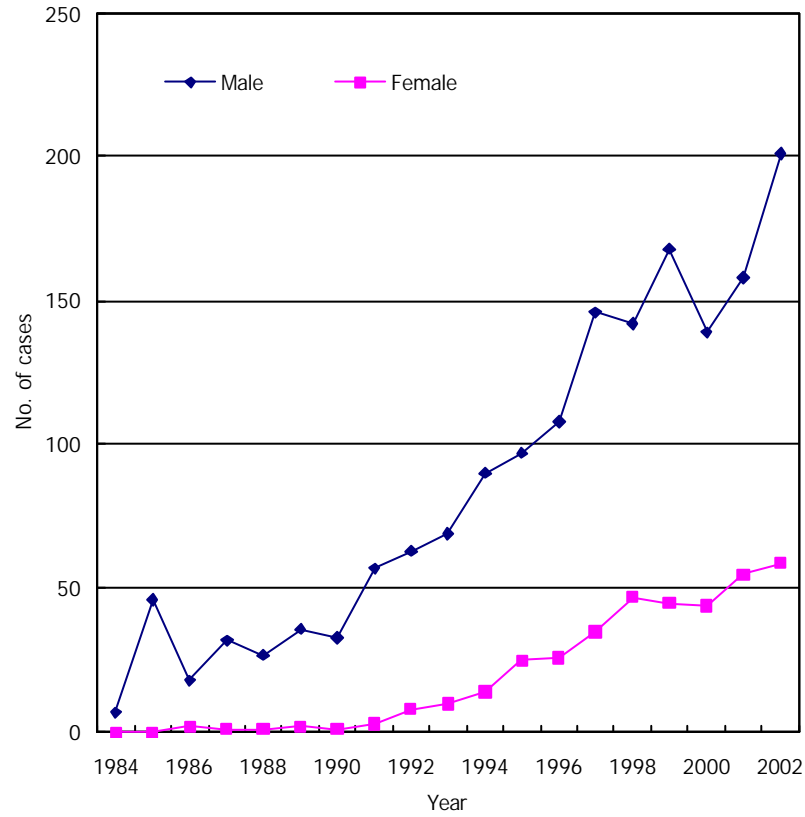
16. **Sexual transmission**, especially among Chinese men, remains an important risk of HIV infection in Hong Kong. Although the results of molecular epidemiology have not indicated any common source of infection locally, the recent disturbing trend of HIV reports among Chinese MSMs has to be monitored.

17. The number of AIDS reports continued to decline, however, the fact that almost all of these cases presented late in their course of illness underscored the importance of **early testing and diagnosis**. A decreasing trend in the number of voluntary HIV antibody tests done among at-risk groups (e.g. methadone clinics attendants) was observed. With reference to the seroprevalence obtained from unlinked anonymous screening at various sentinel sites (methadone clinics and tuberculosis clinics), a considerable portion of HIV infected persons might have remained undiagnosed in Hong Kong.

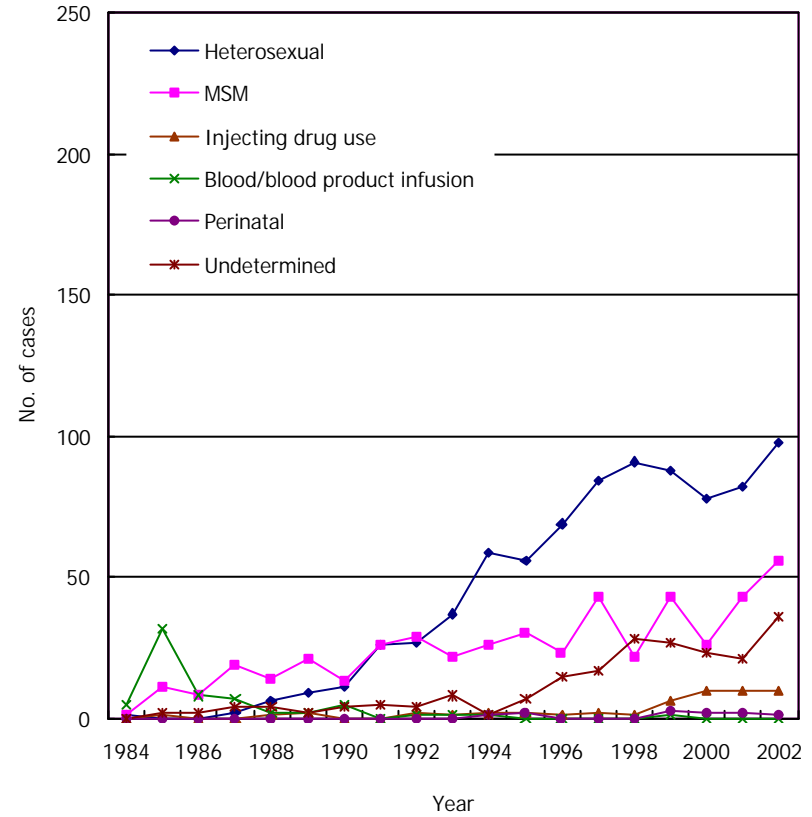


**Box 1.6 Trends in HIV reports (1984 - 2002)**

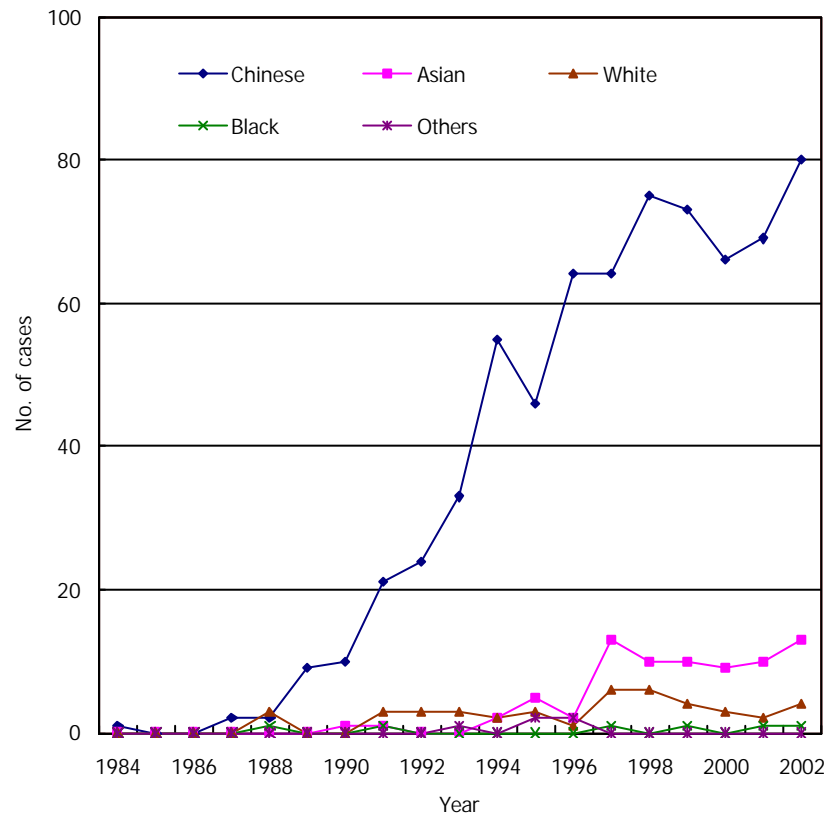
**(a) HIV reports - by gender**



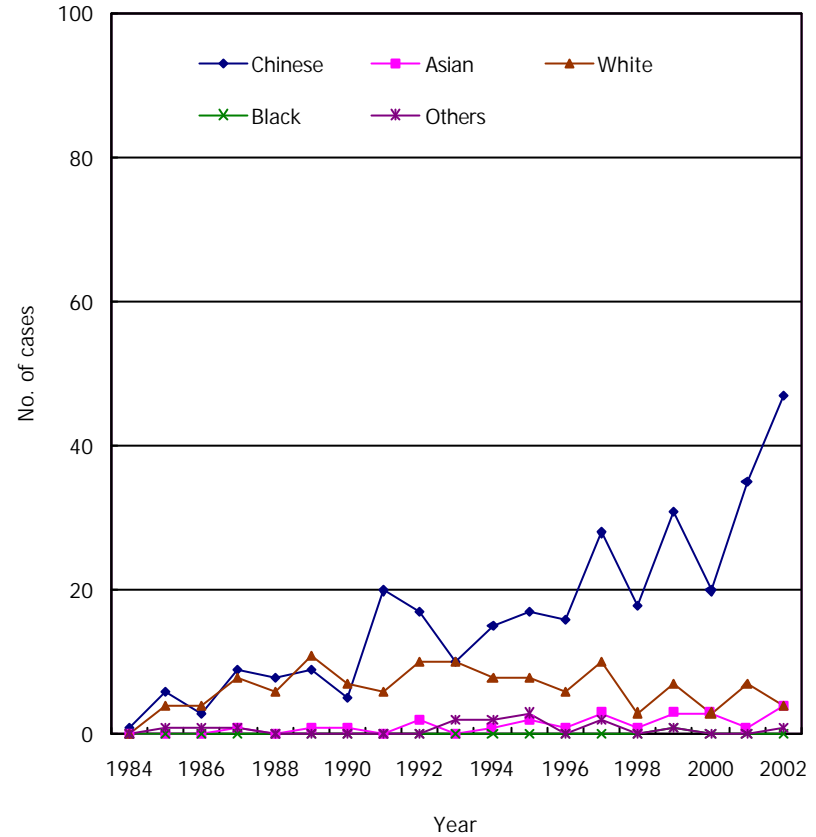
**(b) HIV reports in men - by risk**



(c) HIV reports in heterosexual men - by ethnicity

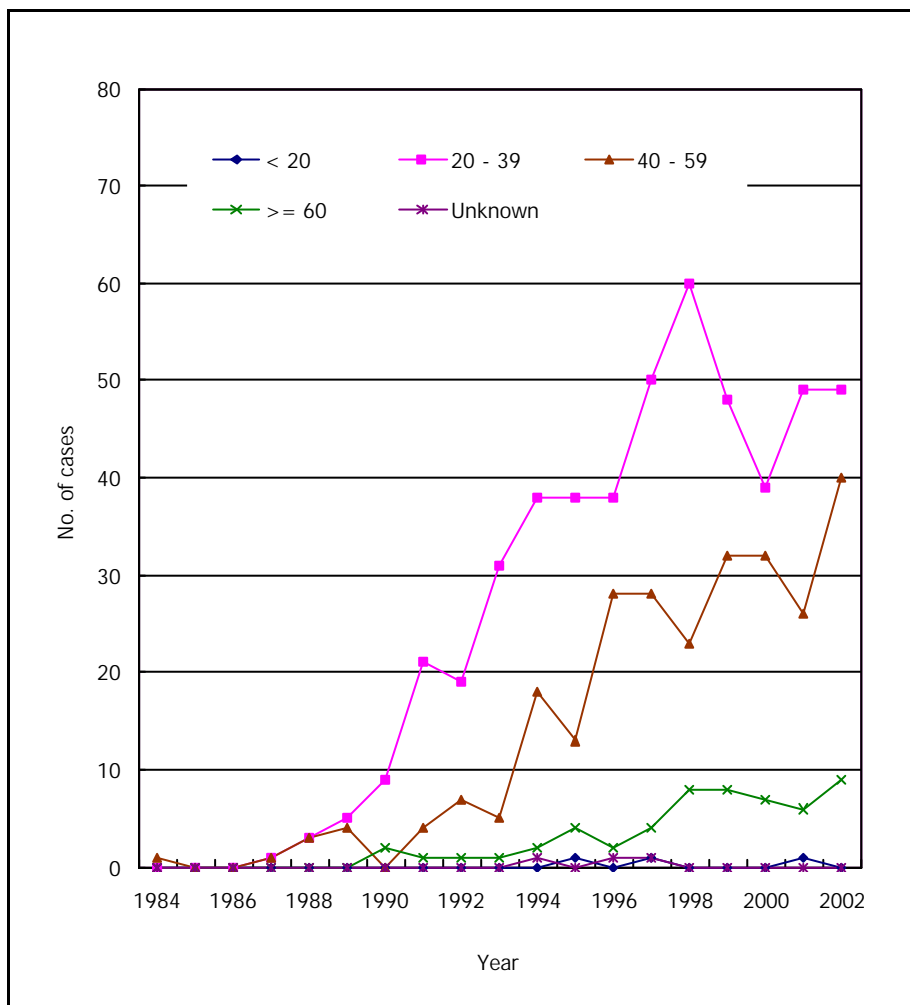


(d) HIV reports in MSM\* - by ethnicity

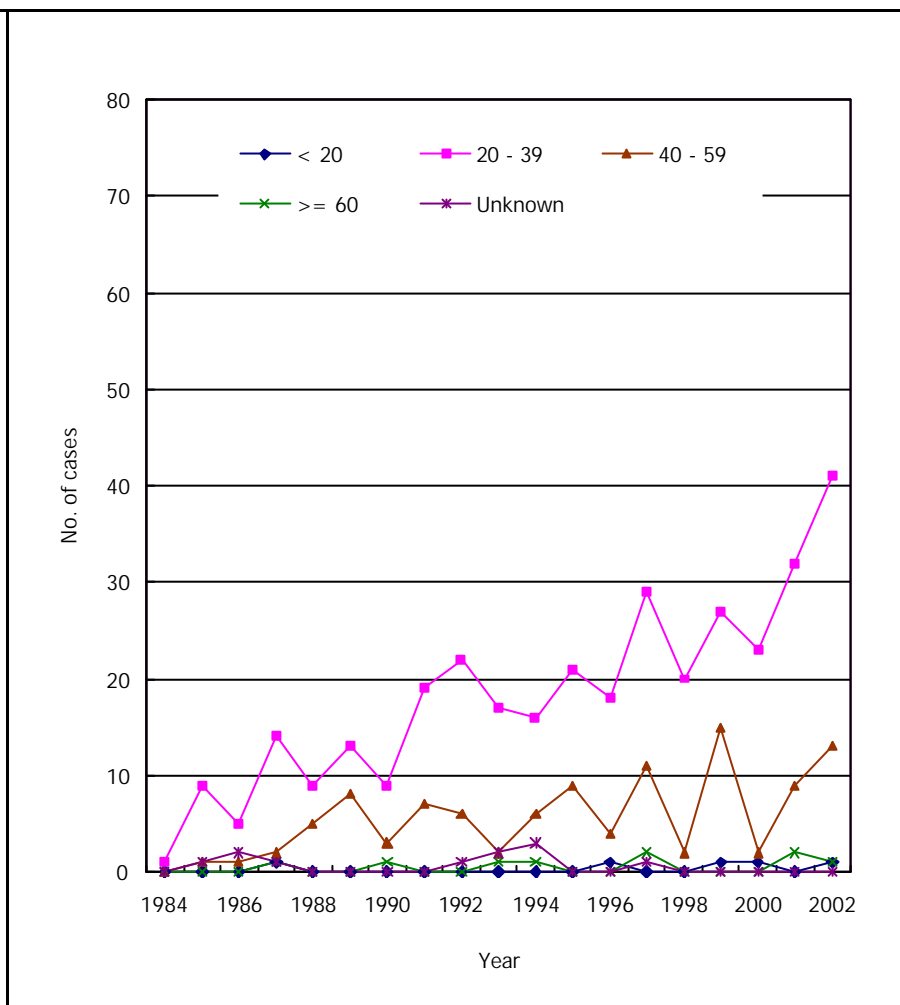


\* MSM - men having sex with men, inclusive of both homosexuals and bisexuals

(e) HIV reports in heterosexual men - by age



(f) HIV reports in MSM\* - by age



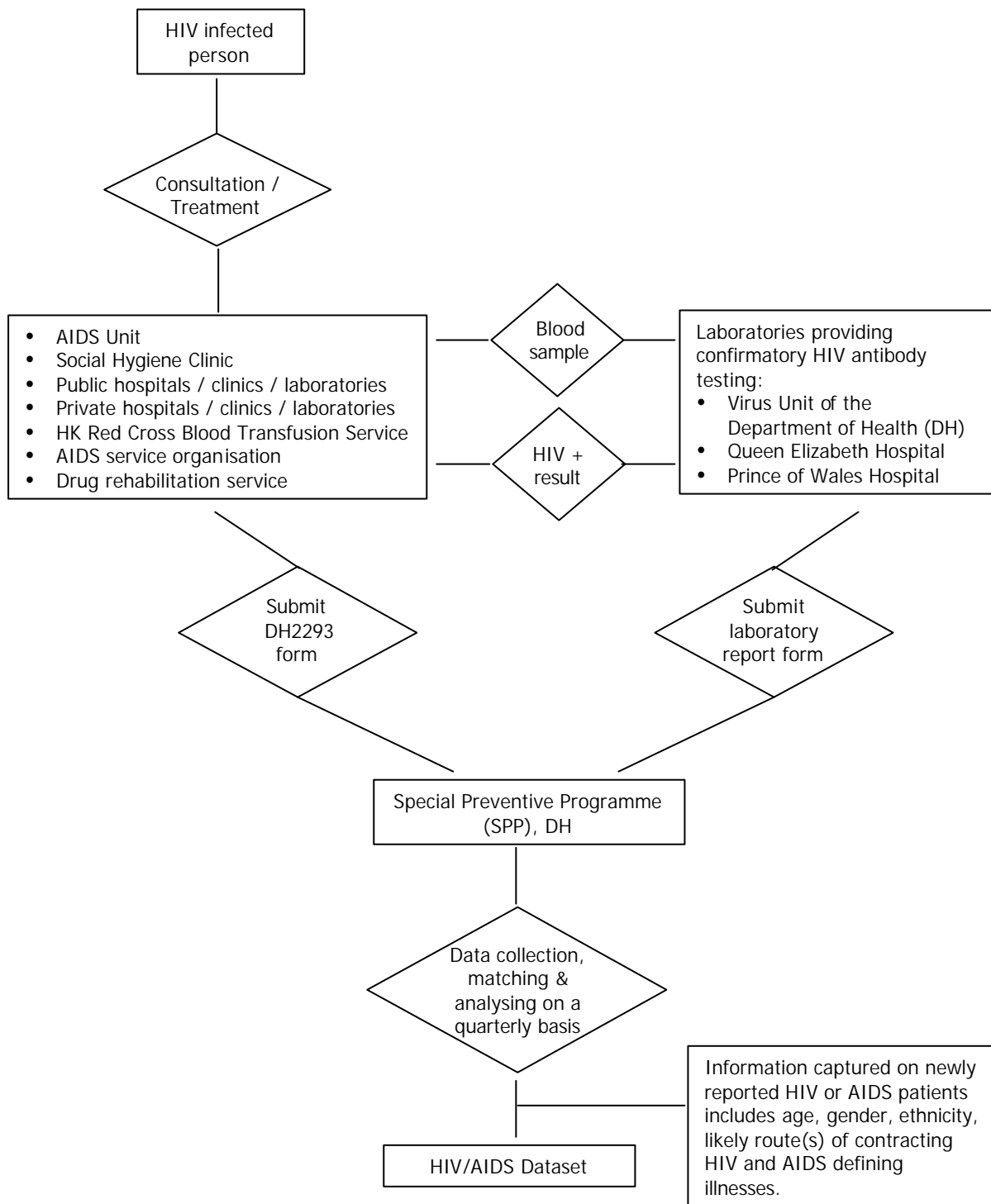
\* MSM - men having sex with men, inclusive of both homosexuals and bisexuals

## **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.

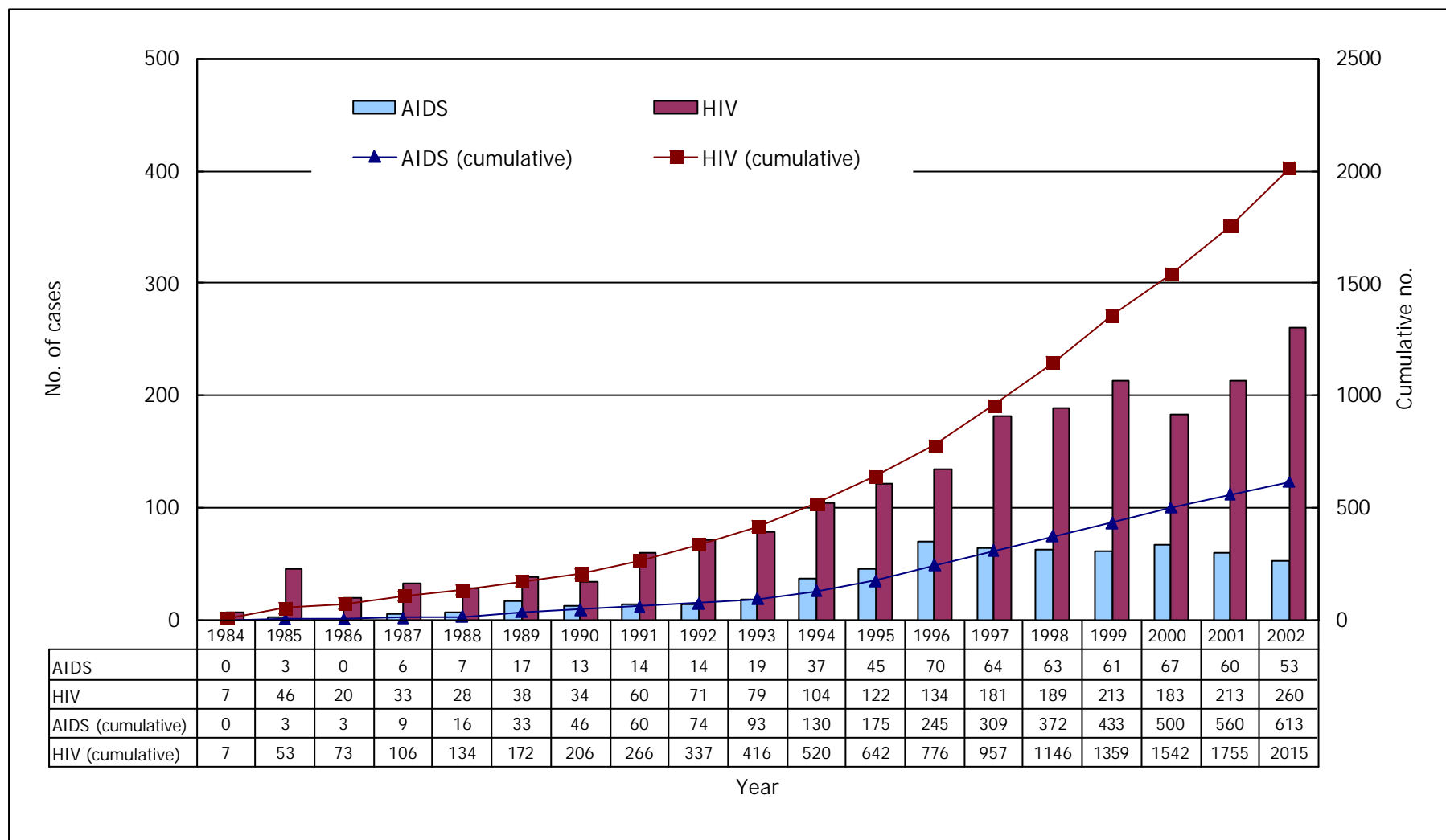
System layout



## Tables & Figures

<b>Box</b>	<b>Content</b>	<b>Page</b>
Box 2.1	Annual reports of HIV/AIDS cases	22
Box 2.2	Source of reporting of reported HIV/AIDS cases	
	(a) Year 2002	23
	(b) Cumulative (1984 - 2002)	24
Box 2.3	Ethnicity & gender of reported HIV/AIDS cases	
	(a) Year 2002	25
	(b) Cumulative (1984 - 2002)	26
Box 2.4	Age distribution of reported HIV/AIDS cases	
	(a) Median age	27
	(b) HIV cases - by age & gender (cumulative, 1984 - 2002)	28
	(c) AIDS cases - by age & gender (cumulative, 1985 - 2002)	29
	(d) Adults & children with reported HIV/AIDS cases in 2002	30
Box 2.5	Exposure category of reported HIV/AIDS cases	
	(a) HIV cases	31
	(b) AIDS cases	32
Box 2.6	Reported HIV/AIDS cases in drug users	
	(a) HIV cases - by gender	33
	(b) AIDS cases - by gender	34
Box 2.7	Reported sexually acquired HIV/AIDS cases	
	(a) HIV cases	35
	(b) AIDS cases	36
	(c) Ratio of Heterosexual vs. homo/bisexual men reported with HIV/AIDS	37
Box 2.8	Age-specific rate of sexually acquired HIV infection	
	(a) in men	38
	(b) in women	39
Box 2.9	Profile of primary AIDS defining illnesses (1985 - 2002)	40

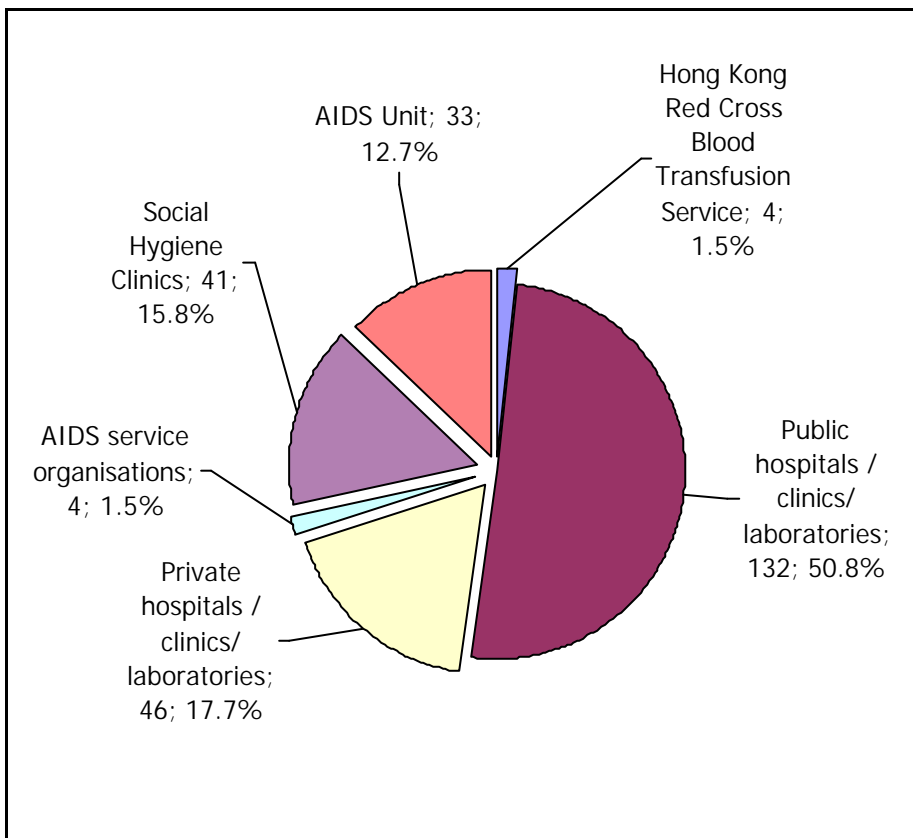
### Box 2.1 Annual reports of HIV/AIDS cases



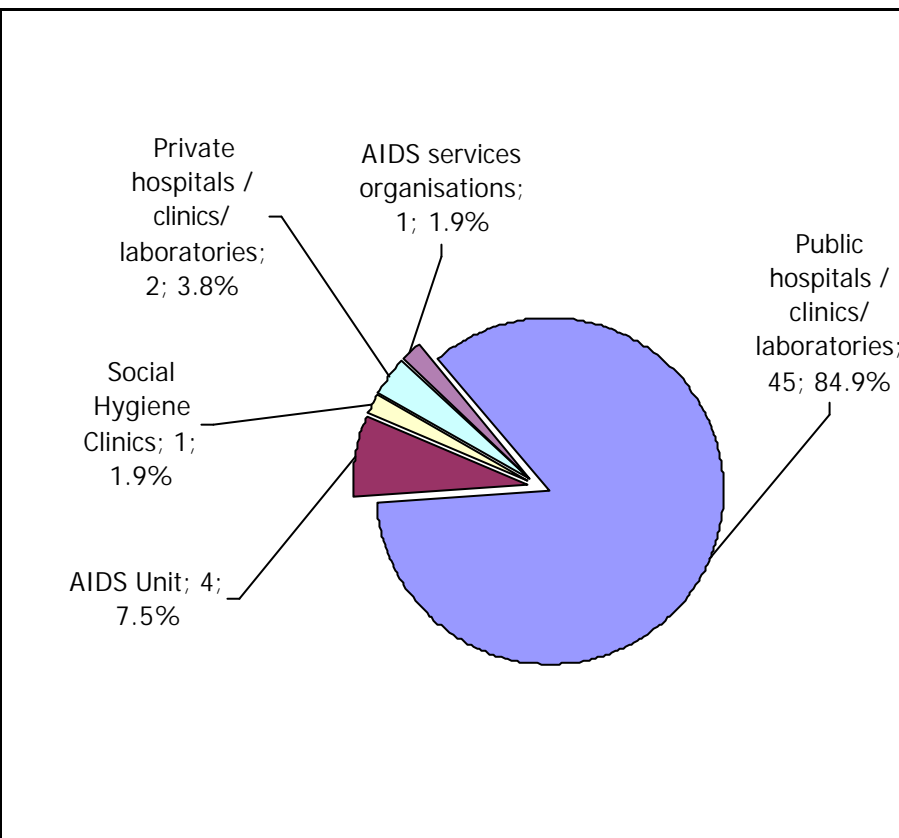
**Box 2.2 Source of reporting of HIV/AIDS cases**

**(a) Year 2002**

**(i) HIV**



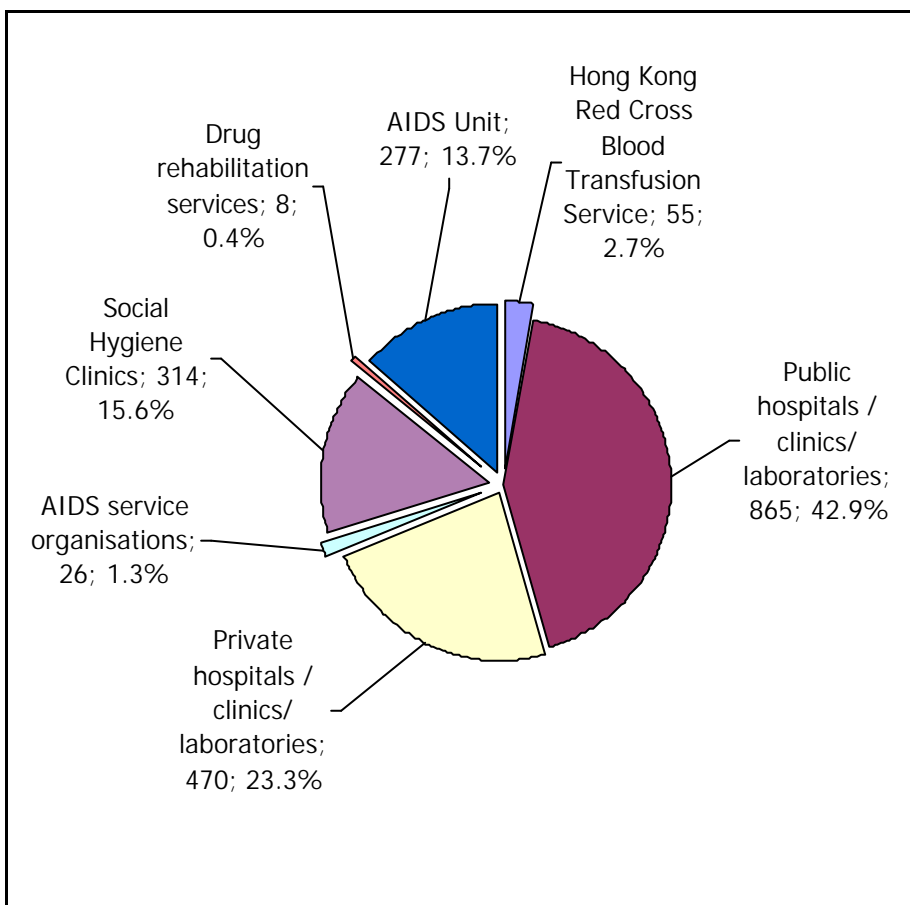
**(ii) AIDS**



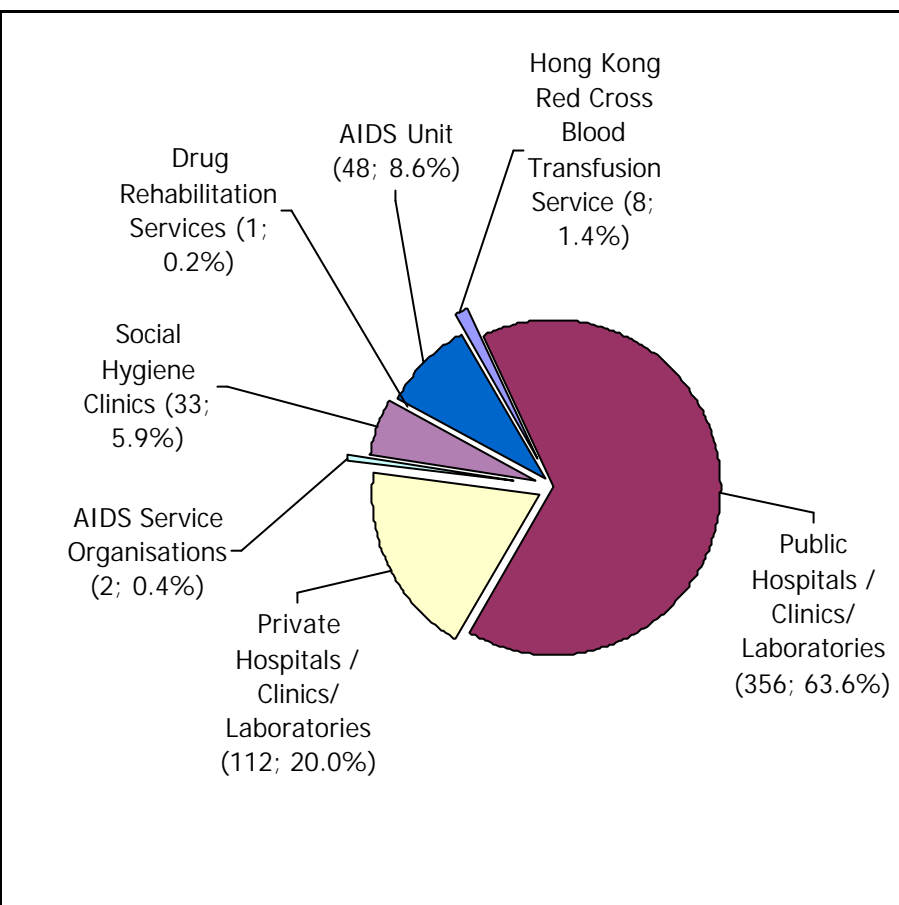


(b) Cumulative (1984 - 2002)

(i) HIV



(ii) AIDS



**Box 2.3 Ethnicity & gender of reported HIV/AIDS cases**

**(a) Year 2002**

Ethnicity	HIV						AIDS					
	Male		Female		Total		Male		Female		Total	
Chinese	157	(78.1%)	28	(47.5%)	185	(71.2%)	37	(90.2%)	5	(41.7%)	42	(79.2%)
Asian	24	(11.9%)	25	(42.4%)	49	(18.8%)	4	(9.8%)	7	(58.3%)	11	(20.8%)
White	8	(4.0%)	0	(0%)	8	(3.1%)	0	(0%)	0	(0%)	0	(0%)
Black	2	(1.0%)	0	(0%)	2	(0.8%)	0	(0%)	0	(0%)	0	(0%)
Unknown	10	(5.0%)	6	(10.2%)	16	(6.2%)	0	(0%)	0	(0%)	0	(0%)
Total	201	(100%)	59	(100%)	260	(100%)	41	(100%)	12	(100%)	53	(100%)

(b) Cumulative (1984 - 2002)

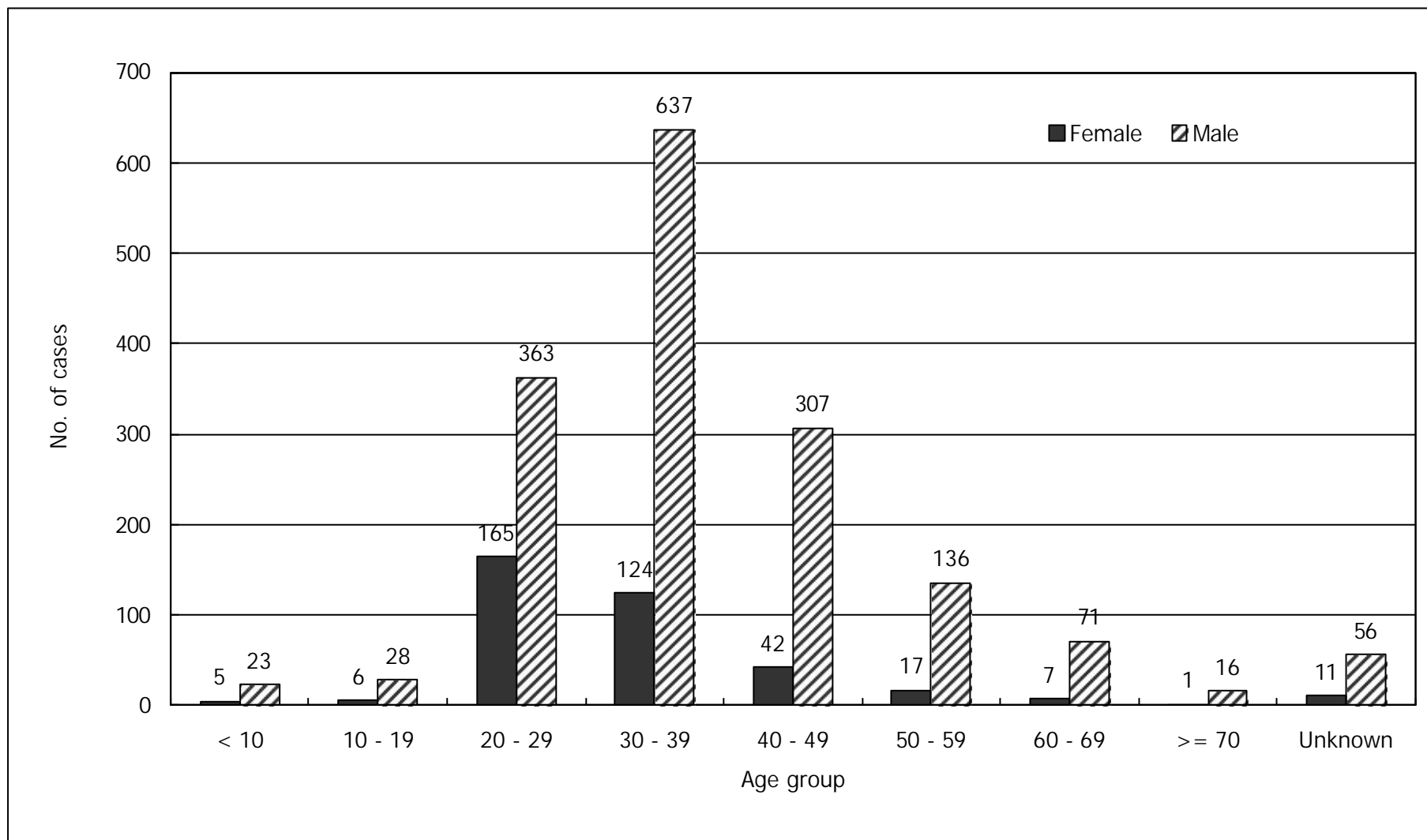
Ethnicity	HIV			AIDS		
	Male	Female	Total	Male	Female	Total
Chinese	1237 (75.6%)	162 (42.9%)	1399 (69.4%)	450 (84.6%)	28 (34.6%)	478 (78.0%)
Asian	143 (8.7%)	178 (47.1%)	321 (15.9%)	26 (4.9%)	51 (63.0%)	77 (12.6%)
White	185 (11.3%)	9 (2.4%)	194 (9.6%)	54 (10.2%)	0 (0%)	54 (8.8%)
Black	14 (0.9%)	5 (1.3%)	19 (0.9%)	1 (0.2%)	1 (1.2%)	2 (0.3%)
Unknown	58 (3.5%)	24 (6.3%)	82 (4.1%)	1 (0.2%)	1 (1.2%)	2 (0.3%)
Total	1637 (100%)	378 (100%)	2015 (100%)	532 (100%)	81 (100%)	613 (100%)

## Box 2.4 Age distribution of reported HIV/AIDS cases

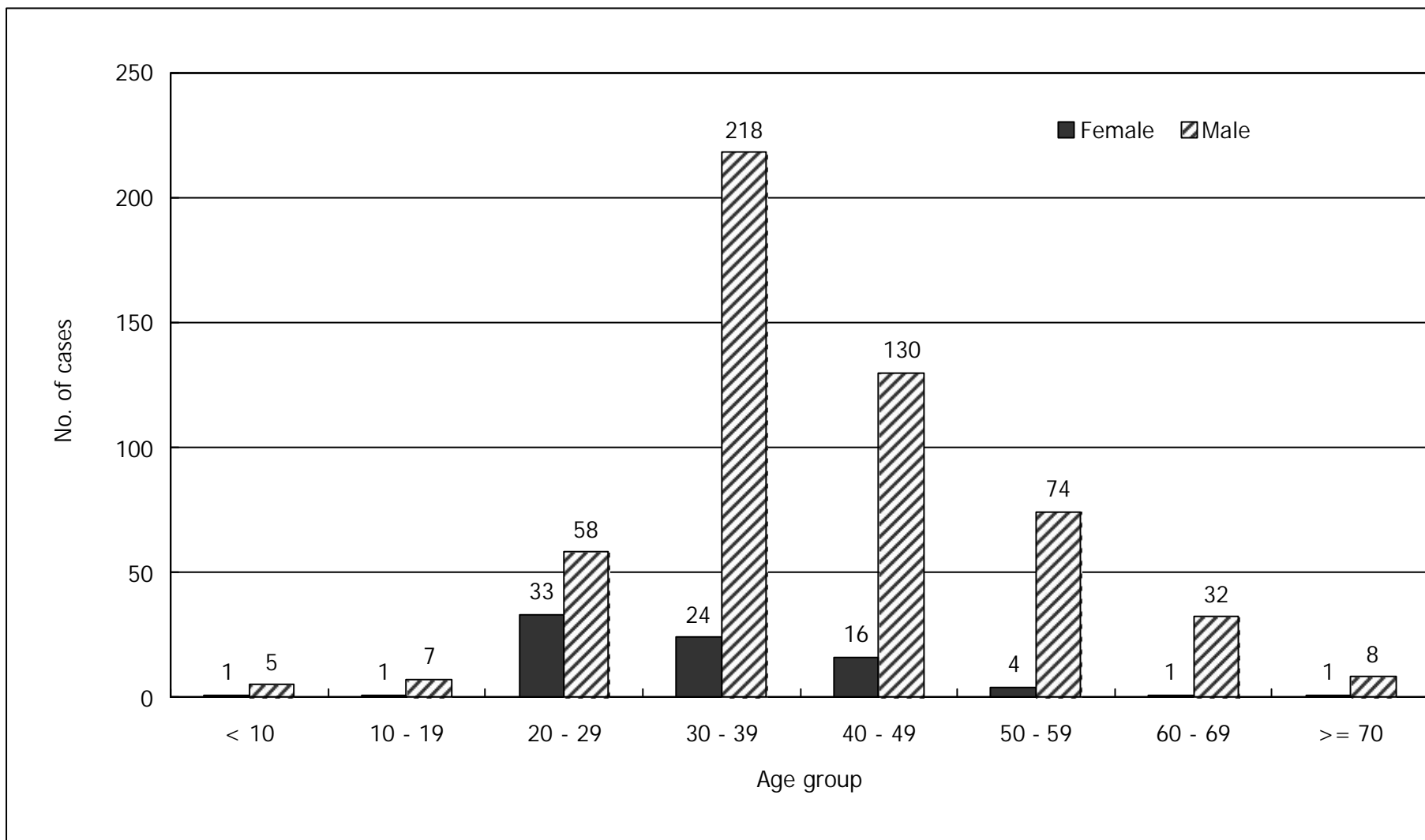
### (a) Median age of reported HIV/AIDS cases

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
Total	34	28	42	38	32	47

(b) Age & gender of reported HIV cases (cumulative, 1984 - 2002)



(c) Age & gender of reported AIDS cases (cumulative, 1985 - 2002)



(d) Adults & children with reported HIV/AIDS in 2002

Age	HIV			AIDS		
	Male	Female	Total	Male	Female	Total
Adult	200	59	259	41	12	53
Children (age <=13)	1	0	1	0	0	0
Total	201	59	260	41	12	53

**Box 2.5 Exposure category of reported HIV/AIDS cases**

**(a) Distribution of reported HIV cases by exposure category (1984 - 2002)**

Exposure Category (%)	Year																			
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	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)	145 (55.8)	1149 (57.0)
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)	20 (10.9)	36 (16.9)	47 (18.1)	382 (19.0)
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)	94 (4.7)
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)	54 (2.7)
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)	68 (3.4)
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)	15 (0.7)
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)	30 (16.4)	32 (15.0)	48 (18.5)	253 (12.6)
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)	2015 (100)

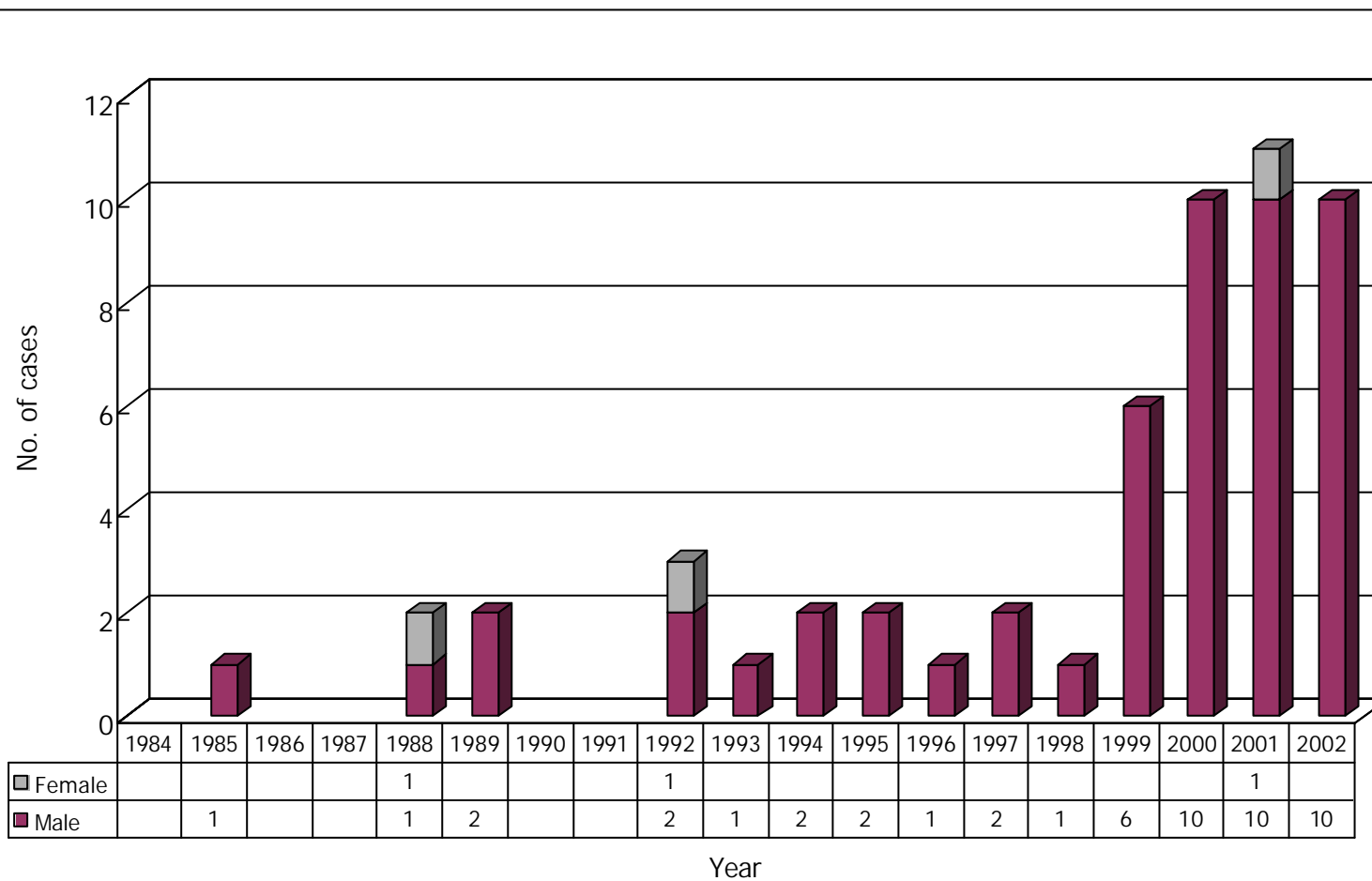


**(b) Distribution of reported AIDS cases by exposure category (1985 - 2002)**

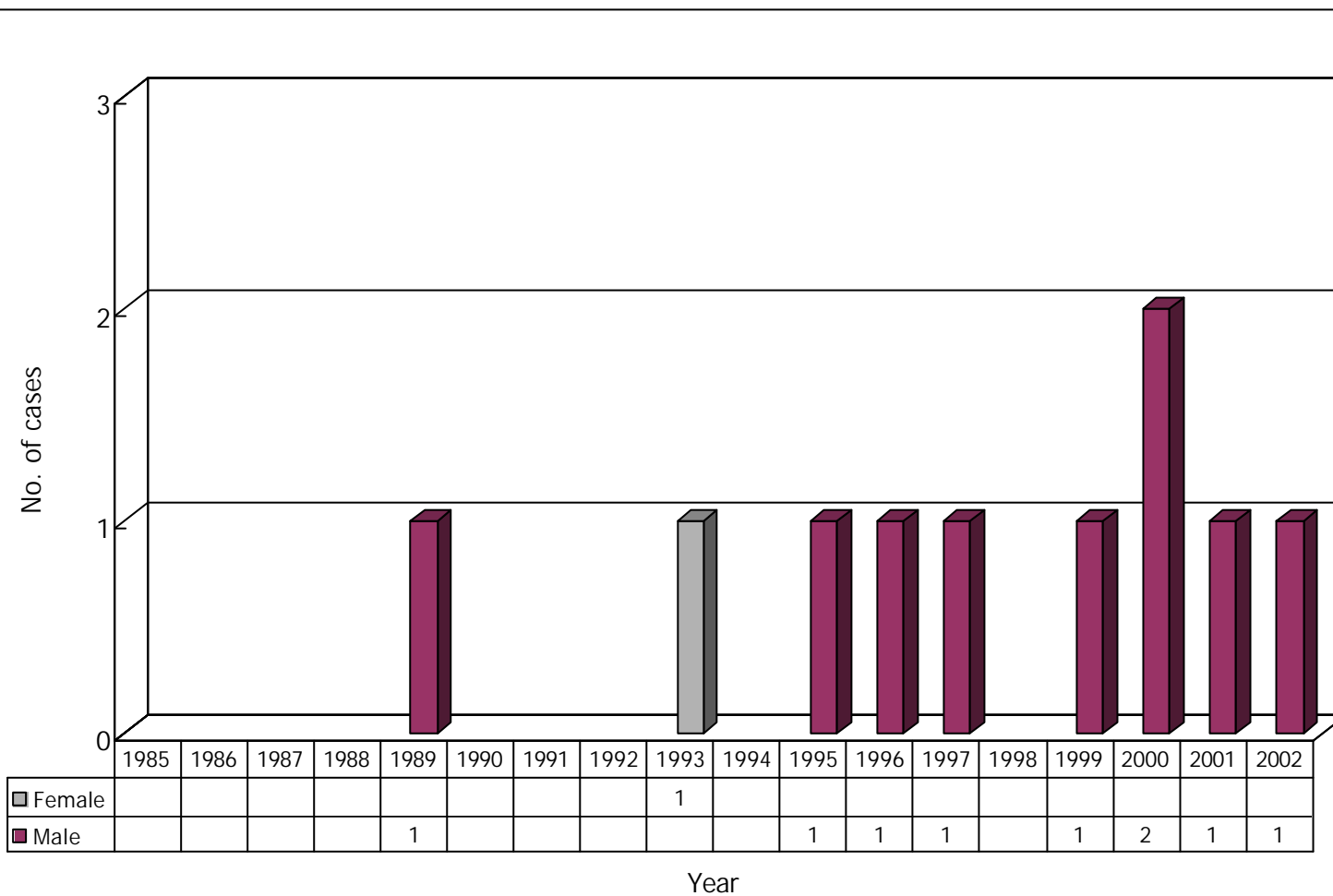
Exposure Category (%)	Year																		
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total
Heterosexual	1 (33.3)	0 (0.0)	1 (16.7)	0 (0.0)	3 (17.6)	3 (23.1)	2 (14.3)	5 (35.7)	10 (52.6)	16 (43.2)	31 (68.9)	55 (78.6)	44 (68.8)	50 (79.4)	44 (72.1)	56 (83.6)	48 (80.0)	37 (69.8)	406 (66.2)
Homosexual	1 (33.3)	0 (0.0)	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)	105 (17.1)
Bisexual	1 (33.3)	0 (0.0)	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)	30 (4.9)
Injecting drug use	0 (0.0)	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)	10 (1.6)
Blood contact	0 (0.0)	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)	19 (3.1)
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)	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)	6 (1.0)
Undetermined	0 (0.0)	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)	37 (6.0)
Total	3 (100)	0 (0.0)	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)	613 (100)

**Box 2.6 Reported HIV/AIDS cases in drug users**

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

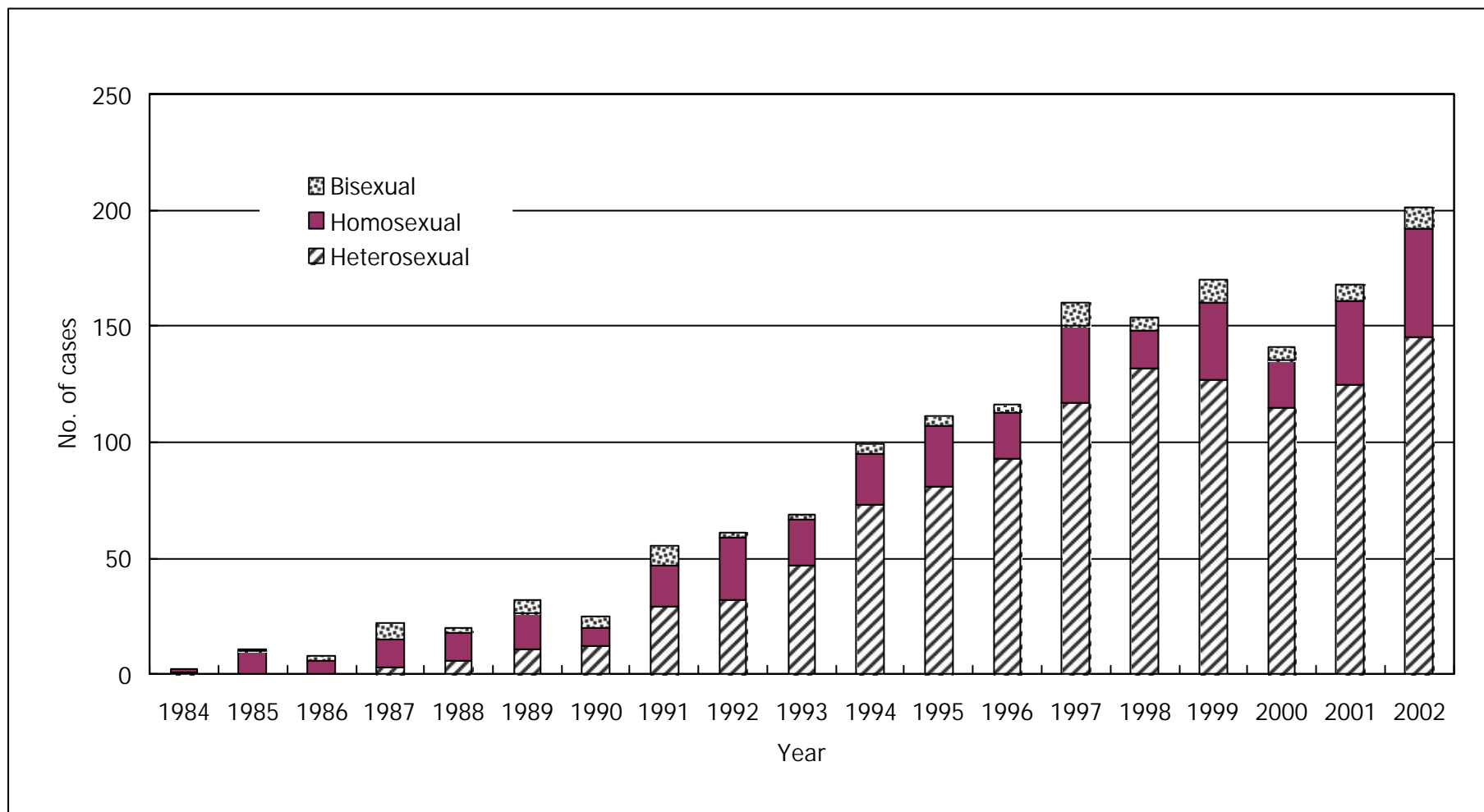


(b) Reported AIDS case in drug users - by gender

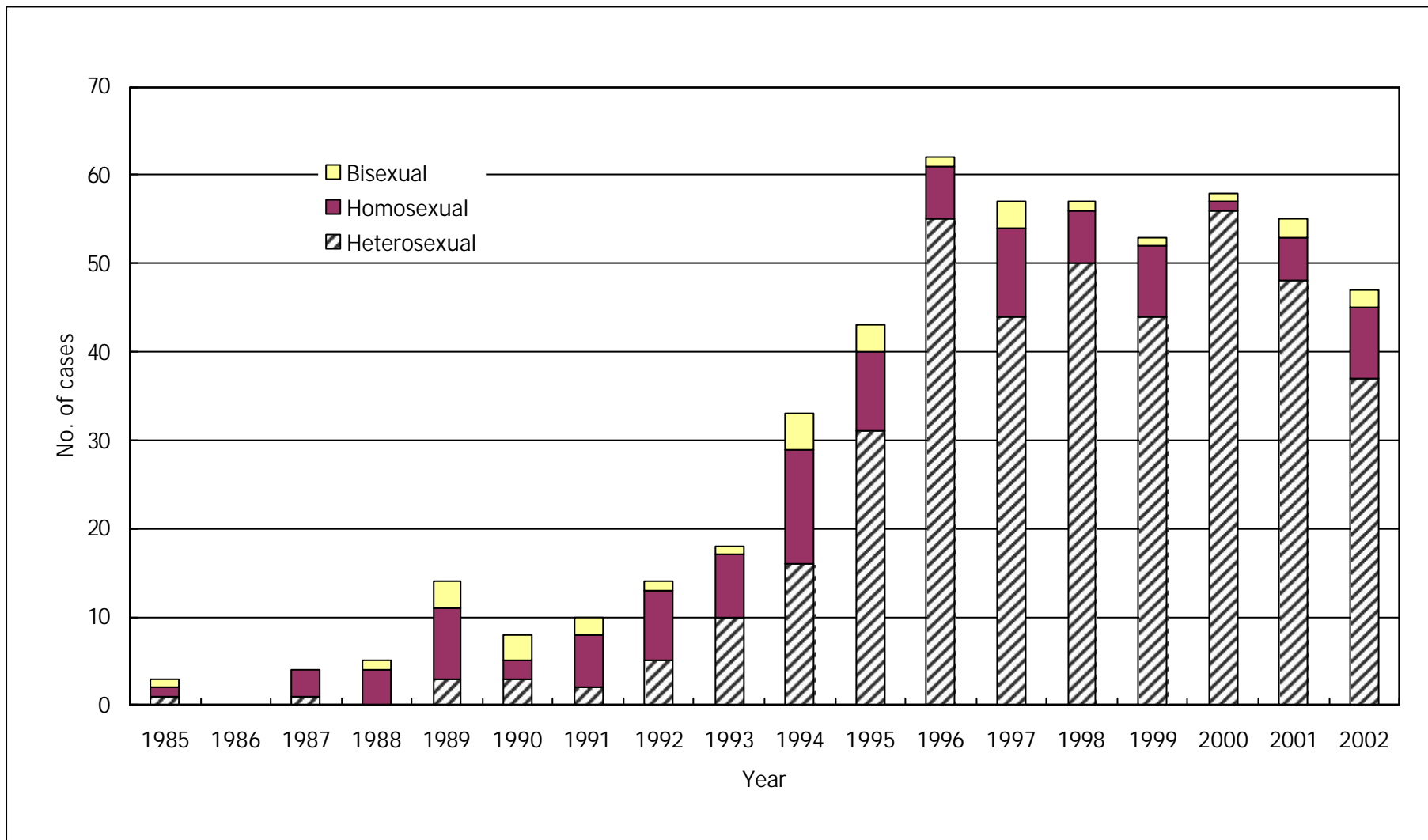


**Box 2.7 Reported sexually acquired HIV cases**

**(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	3.0 : 1	23.5 : 1
2001	1.9 : 1	5.1 : 1
2002	1.8 : 1	2.6 : 1
Total	1.7 : 1	2.4 : 1

### Box 2.8 Age-specific rate of sexually acquired HIV infection

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

Age group \ Year	Age-specific rate (per 100,000 population)				
	1998	1999	2000	2001	2002
0 - 4	0	0	0	0	0
5 - 9	0	0	0	0	0
10 - 14	0	0	0	0	0
15 - 19	0	0.42	0.42	0.44	0.44
20 - 24	1.73	2.64	2.67	2.22	3.59
25 - 29	7.34	6.98	4.12	7.06	7.60
30 - 34	9.83	12.17	8.36	11.71	13.01
35 - 39	8.96	5.74	7.43	9.27	10.26
40 - 44	3.62	6.01	5.81	4.47	7.71
45 - 49	2.40	3.52	2.69	4.07	3.18
50 - 54	1.72	6.38	2.38	2.64	4.68
55 - 59	3.77	5.26	2.27	2.21	4.68
60 - 64	3.60	2.20	2.95	2.99	5.44
65 - 69	1.58	0.77	1.55	1.56	2.33
>= 70	0.53	2.03	0.48	0.91	0
Total	3.48	4.01	3.17	3.80	4.67

\* 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**

Age group \ Year	Age-specific rate (per 100,000 population)				
	1998	1999	2000	2001	2002
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	0	0	0.47
20 - 24	2.91	3.30	1.65	3.31	1.32
25 - 29	5.52	3.83	3.10	4.22	2.91
30 - 34	2.43	1.85	2.79	2.44	4.48
35 - 39	1.13	2.21	1.09	1.88	2.68
40 - 44	0.67	0.63	0.30	0.87	0.56
45 - 49	0.42	0.41	1.97	0.74	2.08
50 - 54	0.66	0.59	1.57	0	0
55 - 59	0	0	0.91	0.86	0.75
60 - 64	0.80	0.81	0	0.85	0.89
65 - 69	0	0	0	0.82	0
>= 70	0	0	0.37	0	0
Total	1.24	1.17	1.09	1.25	1.35

\* 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 - 2002)**

Year \ ADI (%)	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total
<i>Pneumocystic Pneumonia (PCP)</i>	1 (33.3)	0 (0.0)	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)	241 (39.3)
<i>Mycobacterium Tuberculosis</i>	0 (0.0)	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)	135 (22.0)
Other fungal infections	0 (0.0)	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)	68 (11.1)
Penicilliosis	0 (0.0)	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)	50 (8.2)
Cytomegalovirus diseases	1 (33.3)	0 (0.0)	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)	28 (4.6)
Kaposi's sarcoma	1 (33.3)	0 (0.0)	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)	17 (2.8)
Non-TB mycobacterial infections	0 (0.0)	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)	21 (3.4)
Others	0 (0.0)	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)	53 (8.6)
Total	3 (100)	0 (0.0)	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)	613 (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 2002
<b>(a) Community with predisposing risk factors</b>					
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	2000 – 4000 / year	Yes
Drug users (2)	All 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>(b) Community without risk factors</b>					
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
<b>(c) Community with undefined risk</b>					
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 universal voluntary testing of antenatal women since Sep 2001

## Tables & Figures

<b>Box</b>	<b>Content</b>	<b>Page</b>
Box 3.1	HIV seroprevalence in blood donors at Hong Kong Red Cross Blood Transfusion Service	
	(a) By number of donated blood units (1985 - 2002)	44
	(b) By new and repeat blood donors (1991 - 2002)	45
Box 3.2	HIV seroprevalence in clients attending Social Hygiene Services, from voluntary blood testing (1985 - 2002)	46
Box 3.3	HIV seroprevalence in drug users attending methadone clinics	
	(a) From unlinked anonymous screening (1992 - 2002)	47
	(b) From voluntary testing (1991 - 2002)	48
Box 3.4	HIV seroprevalence in drug users attending inpatient drug treatment centres / institutions, from unlinked anonymous screening (1998 - 2002)	49
Box 3.5	HIV seroprevalence in newly admitted prisoners from unlinked anonymous screening (1995 - 2002)	50
Box 3.6	HIV seroprevalence in patients with tuberculosis	
	(a) From unlinked anonymous screening (1990 - 2002)	51
	(b) From voluntary blood testing (1993 - 2002)	52
Box 3.7	HIV prevalence among delivering women	
	(a) From unlinked anonymous screening (1990 - 2000)	53
	(b) From voluntary blood testing (September 2001 - 2002)	54

**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 - 2002)**

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 )

**(b) HIV seroprevalence in new and repeat blood donors (1991 - 2002)**

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 )

**Box 3.2 HIV seroprevalence in clients attending Social Hygiene Services, from voluntary blood testing (1985 - 2002)**

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 )

**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 - 2002)**

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 )



(b) HIV seroprevalence in drug users attending methadone clinics from voluntary testing (1991 - 2002)

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	( --- - --- )

\* all were blood samples, with a small proportion being urine samples since late 1999

**Box 3.4 HIV seroprevalence in drug users attending inpatient drug treatment centres / institutions, from unlinked anonymous screening (1998 - 2002)**

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	( --- - --- )

**Box 3.5 HIV seroprevalence in newly admitted prisoners from unlinked anonymous screening (1995 - 2002)**

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 )

\* 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 - 2002)**

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	866	8	0.924	( 0.399 - 1.820 )

\* Unlinked anonymous screening was not performed in 1994

**(b) HIV seroprevalence in patients attending government TB & Chest Clinics, from voluntary blood testing (1993 - 2002)**

Year	No. of blood samples	No. of anti-HIV+	Prevalence (%)	95% C.I. for prevalence (%)
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	3	0.088	( 0.018 - 0.256 )
2001	3,404	9	0.264	( 0.121 - 0.502 )
2002	3,186	7	0.220	( 0.088 - 0.453 )

**Box 3.7 HIV prevalence among delivering women**

**(a) HIV prevalence among delivering 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 delivering women from Universal Antenatal HIV Antibody Testing Programme  
(Since 2001 September)**

	Number of tests	Coverage*	Number of positive tests	Prevalence	95% C.I. for prevalence (%)
2001 (Sep-Dec)	12,965	96%	7	0.05%	( 0.0217 - 0.1112 )
2002	41,932	97%	8	0.02%	( 0.0082 - 0.0376 )

\* 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, Tang Shiu Kin, Western, Yau Ma Tei, South Kwai Chung, Yung Fung Shee, Tuen Mun, Tai Po, and Shek Wu Hui. Tai Po and Shek Wu Hui clinics were closed since 2001



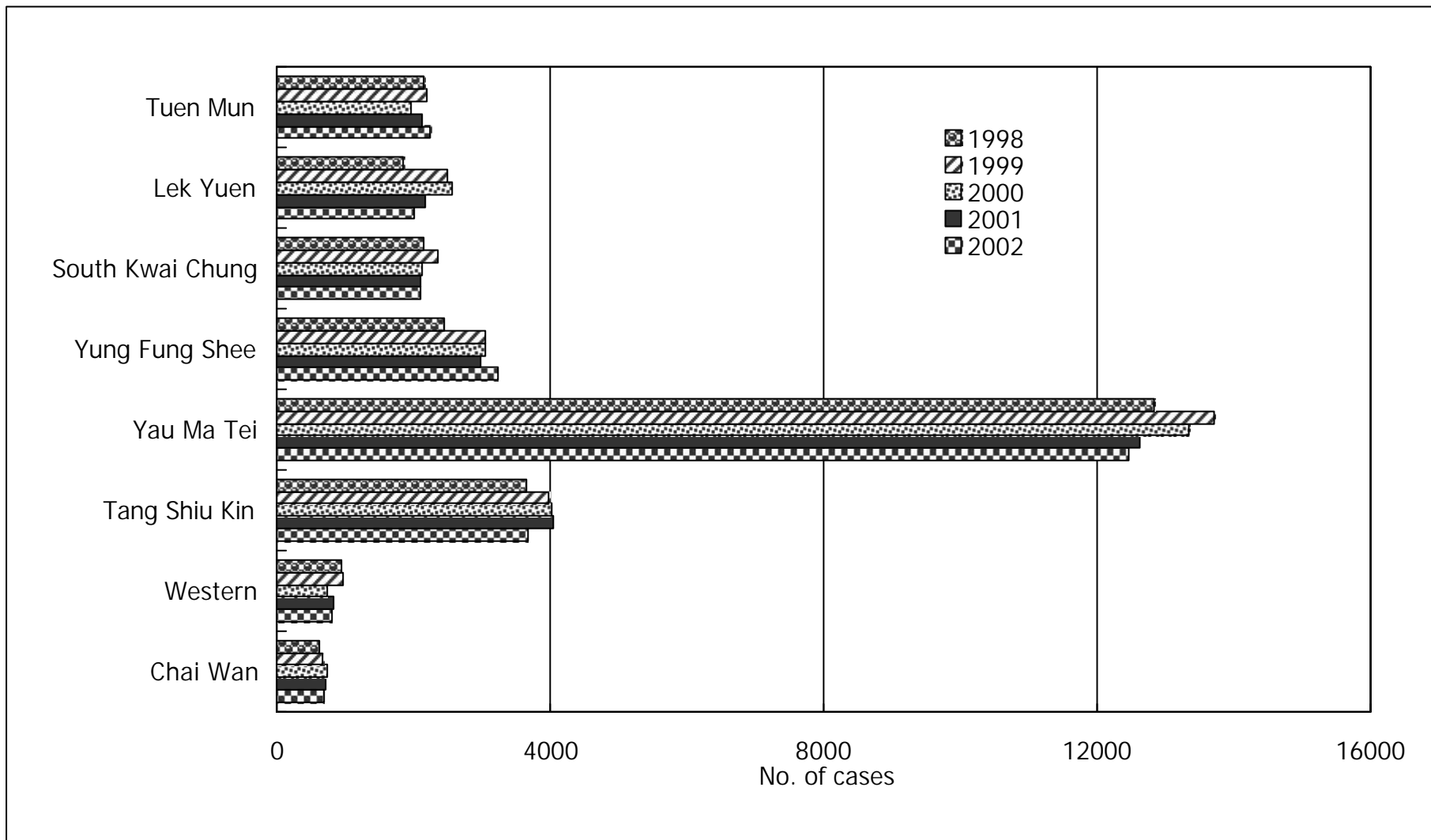
## Tables & Figures

<b>Box</b>	<b>Content</b>	<b>Page</b>
Box 4.1	Total number of STI reported by individual Social Hygiene Clinic	
	(a) Year 2002	57
	(b) 1998 - 2002	58
Box 4.2	Annual reported STIs in Social Hygiene Clinics	59
Box 4.3	Syphilis reported by Social Hygiene Clinics (1997 - 2002)	60
Box 4.4	Sexually acquired HIV infection in Hong Kong	61
Box 4.5	Syndrome presentations of STI from Behavioural Survey of Social Hygiene Service	62

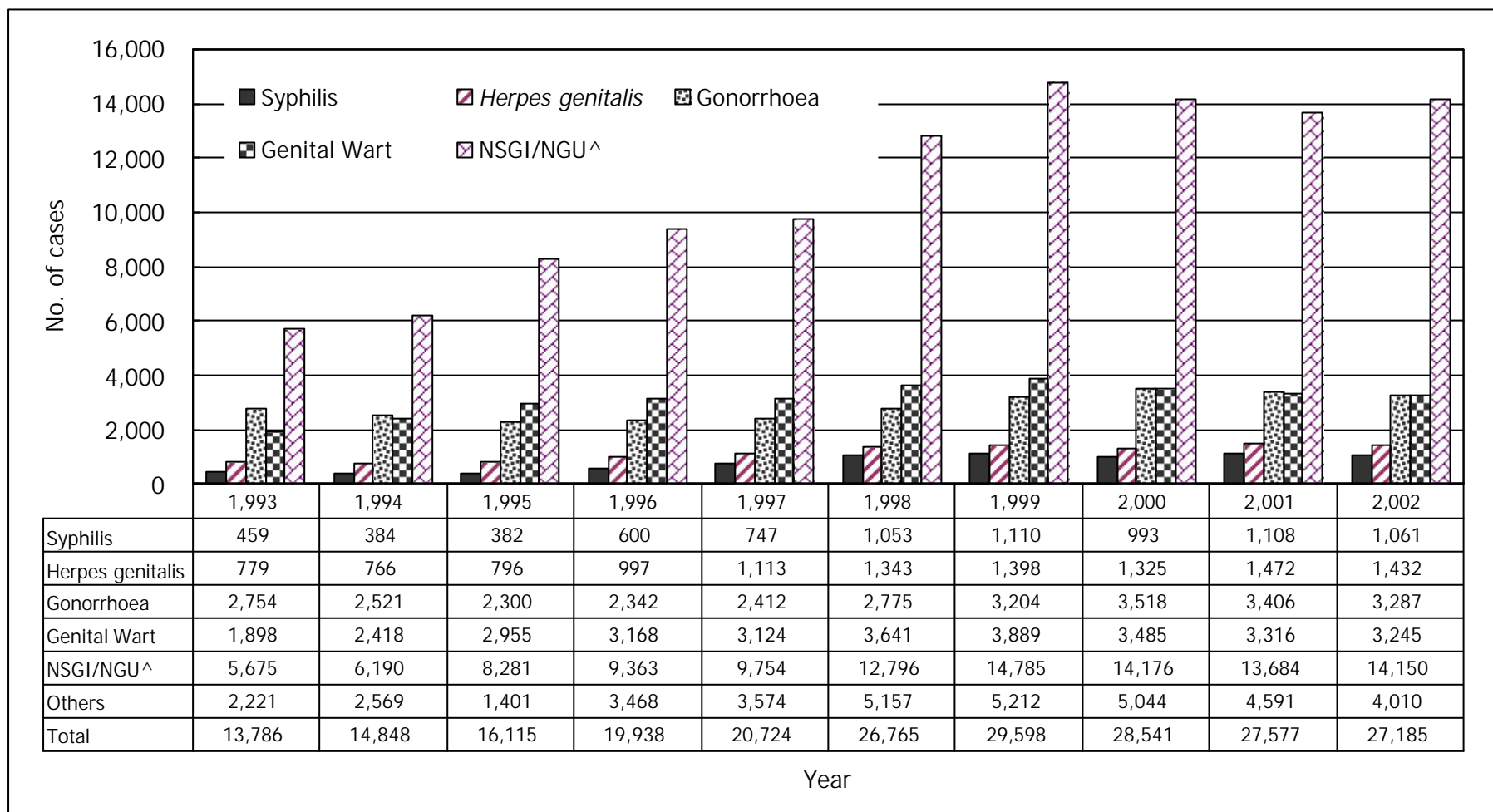
**Box 4.1 Total number of STI reported by individual Social Hygiene Clinic****(a) Year 2002**

	Chai Wan	Western	Tang Shiu Kin	Yau Ma Tei	Yung Fung Shee	South Kwai Chung	Lek Yuen	Tuen Mun
Male	387	474	2,101	6,901	2,004	1,397	1,078	1,183
Female	311	322	1,562	5,563	1,220	695	922	1,065
Total	698	796	3,663	12,464	3,224	2,092	2,000	2,248

(b) 1998 - 2002



**Box 4.2 Annual reported STIs in Social Hygiene Clinics**

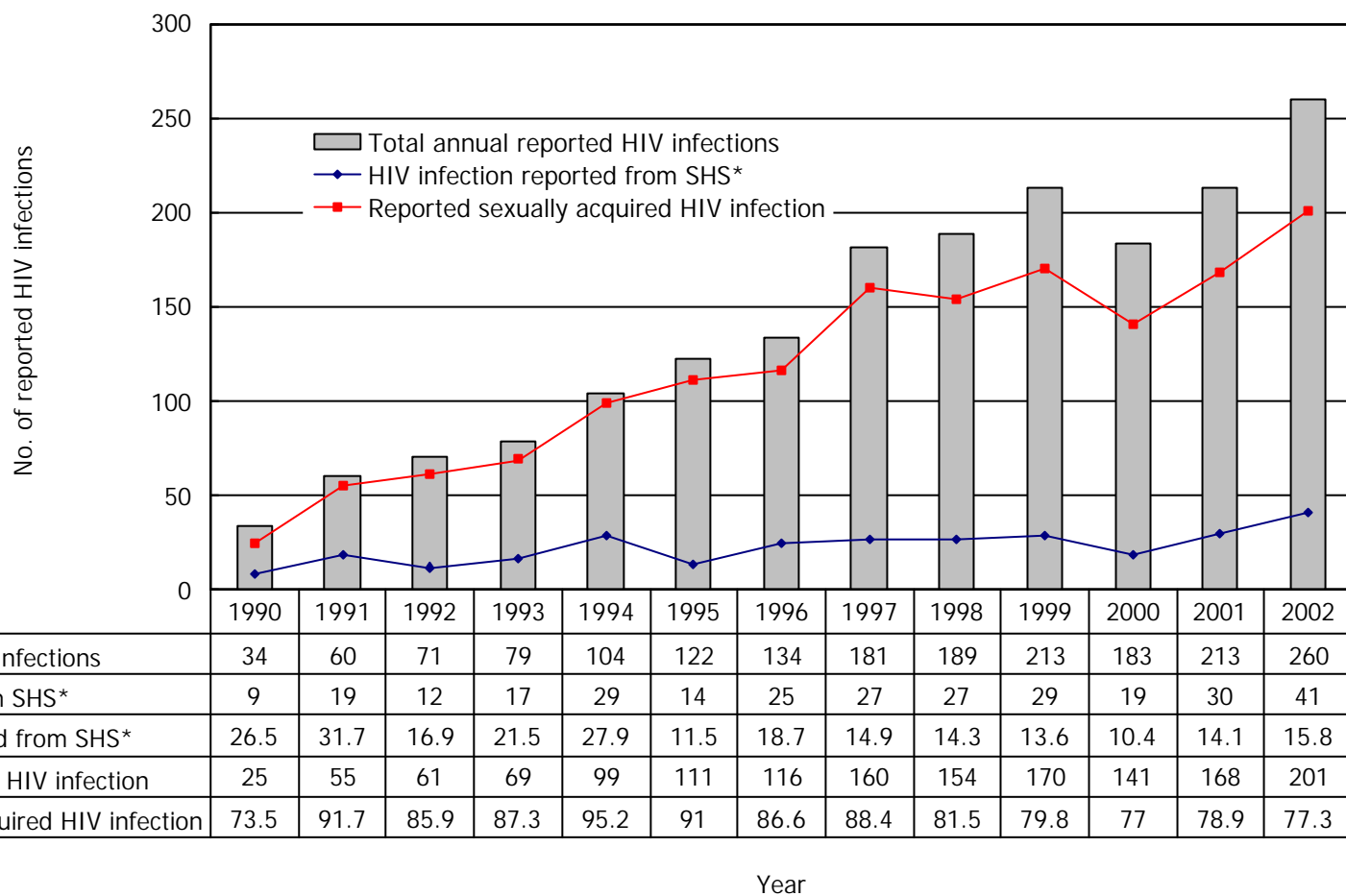


^ NSGI / NGU : Non-specific Genital Infection / Non-gonococcal Urethritis

**Box 4.3 Syphilis reported by Social Hygiene Clinics (1997 - 2002)**

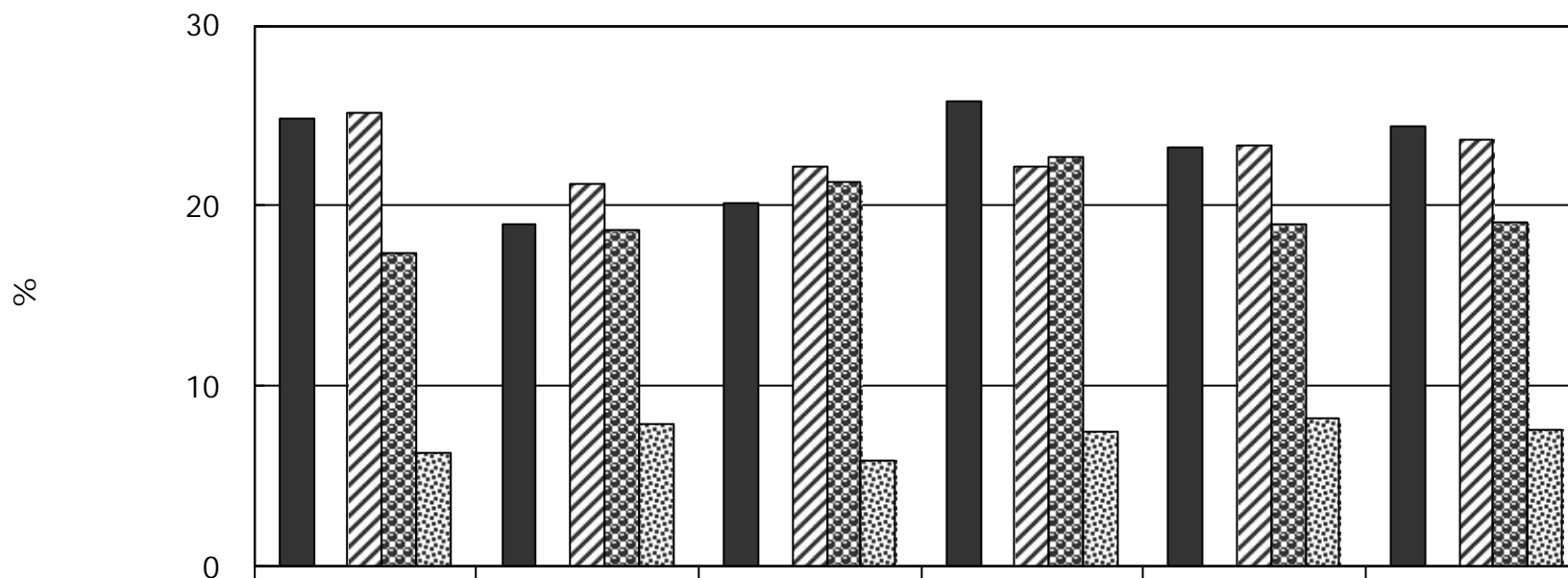
Syphilis \ Year	1997	1998	1999	2000	2001	2002
Primary	228	293	289	271	221	174
Secondary	66	69	75	87	60	67
Early latent	186	314	321	278	295	243
Late latent	249	372	419	354	528	573
Late (cardiovascular / neuro)	15	4	1	0	3	2
Congenital (early)	1	1	0	0	0	0
Congenital (late)	2	0	5	3	1	2
Total	747	1,053	1,110	993	1,108	1,061

### Box 4.4 Sexually acquired HIV infection in Hong Kong



\* SHS: Social Hygiene Service

**Box 4.5 Syndrome presentations of STI from Behavioural Survey of Social Hygiene Service**



■ No Symptom (%)	24.8	19	20.1	25.8	23.2	24.4
Symptom:						
▨ Discharge (%)	25.2	21.2	22.2	22.2	23.4	23.7
▩ Growth (%)	17.4	18.7	21.3	22.7	19	19.1
▤ Ulcer (%)	6.3	7.9	5.9	7.5	8.2	7.6

Year

## 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

<b>Source</b>	<b>Sexual behaviour</b>	<b>Drug-taking behaviour</b>	<b>Data available in 2002</b>
AIDS Counselling Service (ACS)	<ul style="list-style-type: none"> <li>- Median no. of sexual partners among men</li> <li>- Recent history of commercial sex</li> <li>- Condom use in men</li> <li>- No. of sexual partners and Condom use in MSM</li> </ul>		Yes
Social Hygiene Service (SHS)	<ul style="list-style-type: none"> <li>- Recent history of commercial sex</li> <li>- Condom use in heterosexual men</li> </ul>		Yes
Methadone clinics (DRS-M)		<ul style="list-style-type: none"> <li>- Proportion of injectors</li> <li>- Practice of needle-sharing</li> </ul>	No
Shek Kwu Chau (SKC) Treatment and Rehabilitation Centre (DRS-S)		<ul style="list-style-type: none"> <li>- Proportion of injectors</li> <li>- Practice of needle-sharing</li> </ul>	Yes
Central Registry of Drug Abuse (CRDA)		<ul style="list-style-type: none"> <li>- Proportion of injectors in all drug users</li> <li>- Proportion of injectors in new drug users</li> </ul>	Yes
Street Addict Survey (SAS) (From the society for the Aid and Rehabilitation of Drug Abusers)		<ul style="list-style-type: none"> <li>- Proportion of injectors</li> <li>- Practice of needle-sharing</li> </ul>	Yes
Community Research Programme on AIDS (CRPA-H and -T H: Household; T: Travellers) (From Centre for Epidemiology and Biostatistics)	<ul style="list-style-type: none"> <li>- Condom use in heterosexual men</li> </ul>		No

## Tables & Figures

<b>Box</b>	<b>Content</b>	<b>Page</b>
Box 5.1	Median number of sex partners in the previous year among heterosexual men / MSM attending AIDS Counselling Service	66
Box 5.2	Recent history of commercial sex among adult men	67
Box 5.3	Regular condom use with regular partners among adult heterosexual men	68
Box 5.4	Regular condom use with commercial partners among adult heterosexual men	69
Box 5.5	Condom use for last sex with regular partners among adult heterosexual men	70
Box 5.6	Condom use for last sex with commercial partners among adult heterosexual men	71
Box 5.7	Condom use among adult Men have Sex with Men (MSMs) attending AIDS Counselling Service	72
Box 5.8	Proportion of injection drug users (the “injectors”)	73
Box 5.9	Proportion of needle-sharers	74
Box 5.10	Age and duration of drug use	
	(a) Mean duration of drug use	75
	(b) Mean age of drug users	76
	(c) Mean age of initiating drug use	77

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

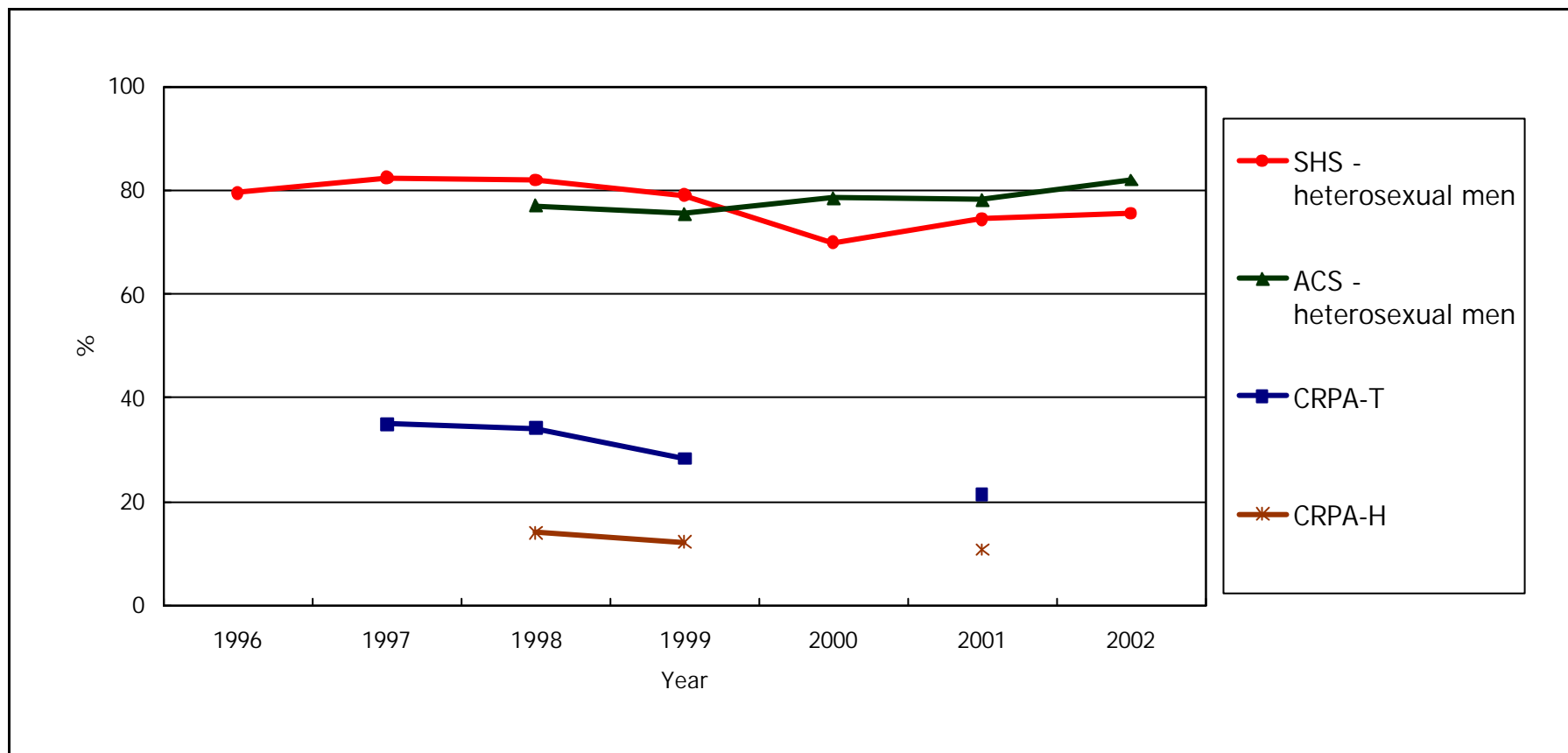
	1998	1999	2000	2001	2002
Heterosexual men - Regular sex partners*	1	1	1	1	1
Heterosexual men - Commercial sex partners**	2	2	2	2	2
Heterosexual men - Casual sex partners***	1	1	1	1	1
MSM - Regular sex partners*	1	1	1	1	1
MSM - Commercial sex partners**	6	4.5	5	1	2
MSM - Casual sex partners***	2.5	3	4	3	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.

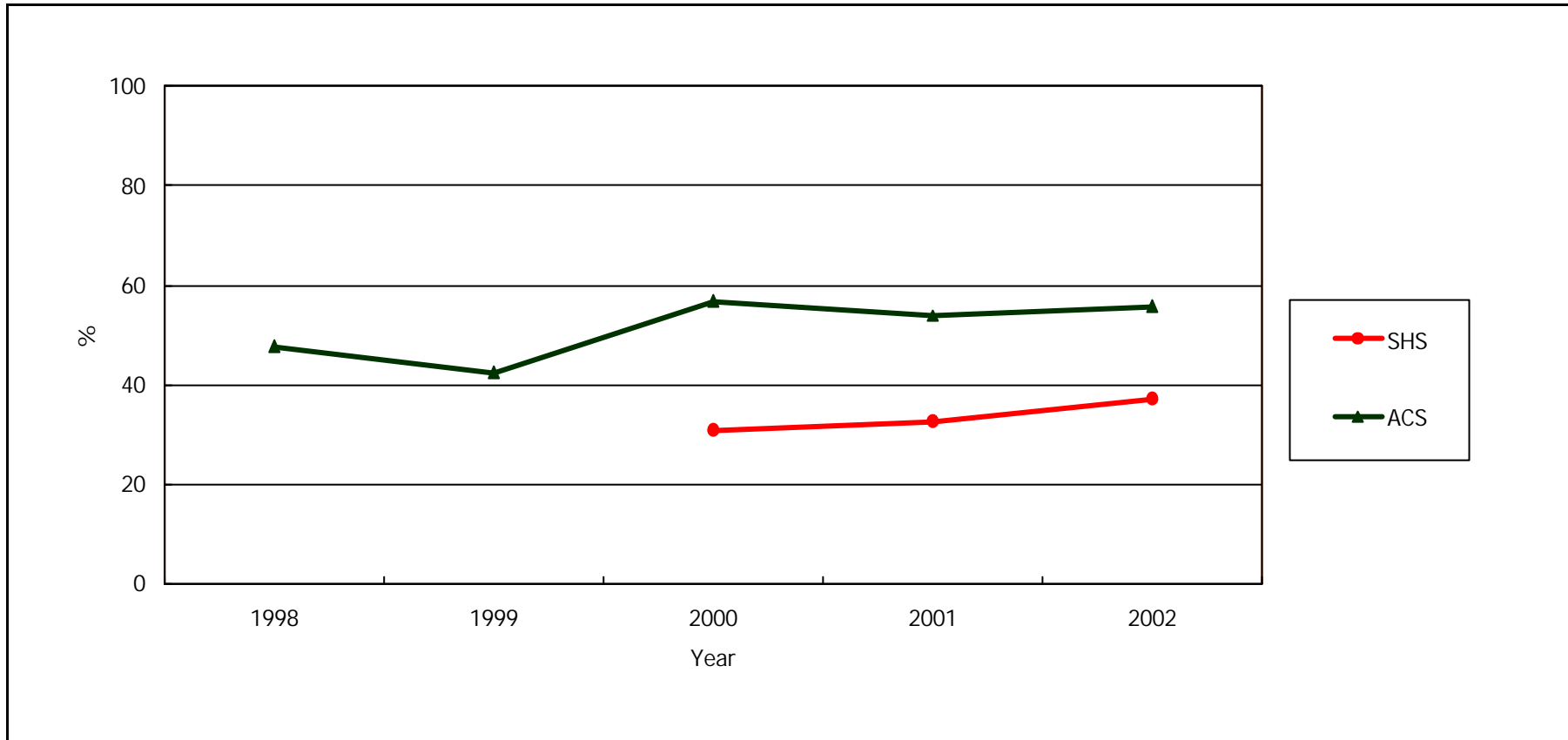
### Box 5.2 Recent history\* of commercial sex among adult men



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

Remarks : Data of CRPA of 2000 and 2002 is not available  
 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

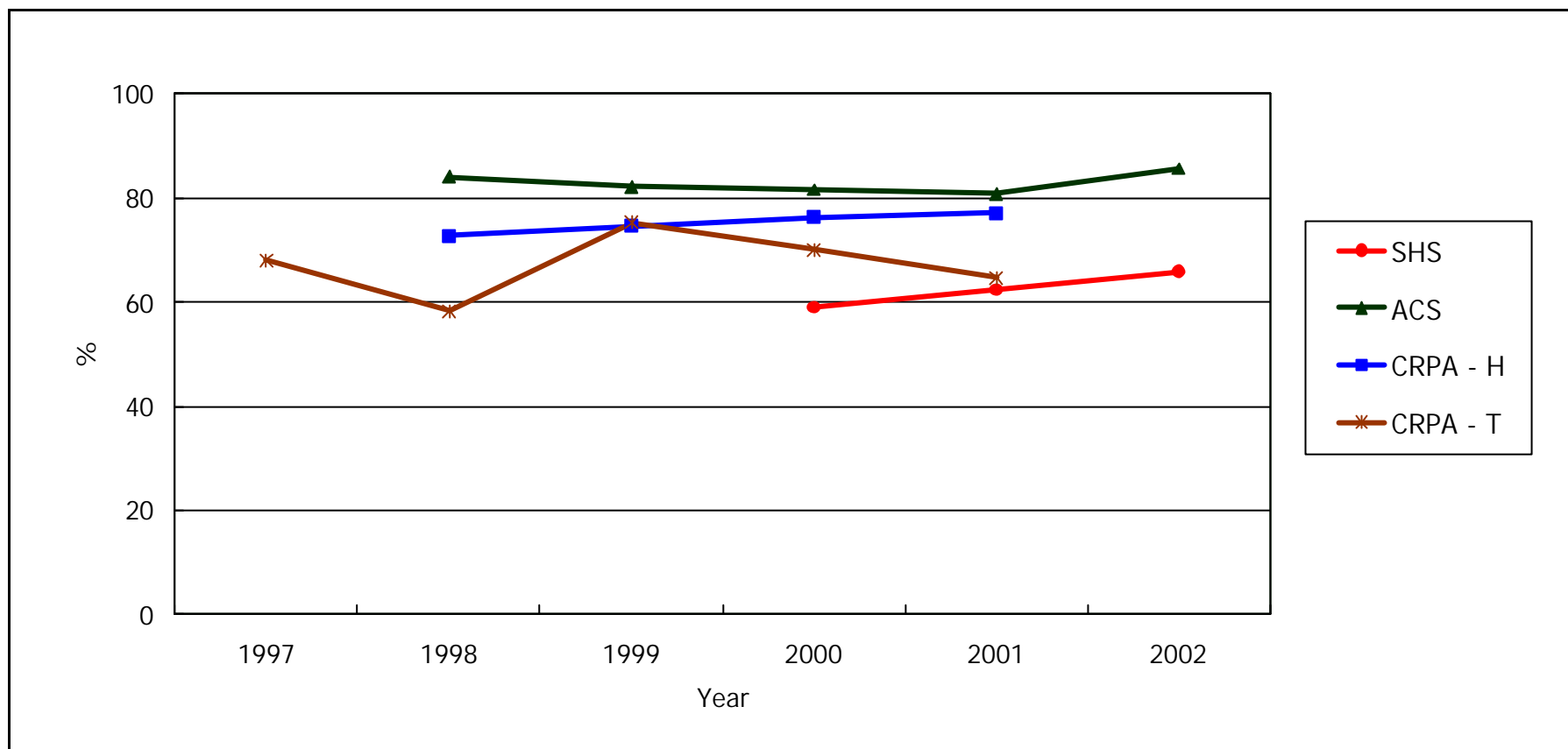


\* Regular condom use is defined as always or usually using a condom on a 4-level scale

\*\* 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.

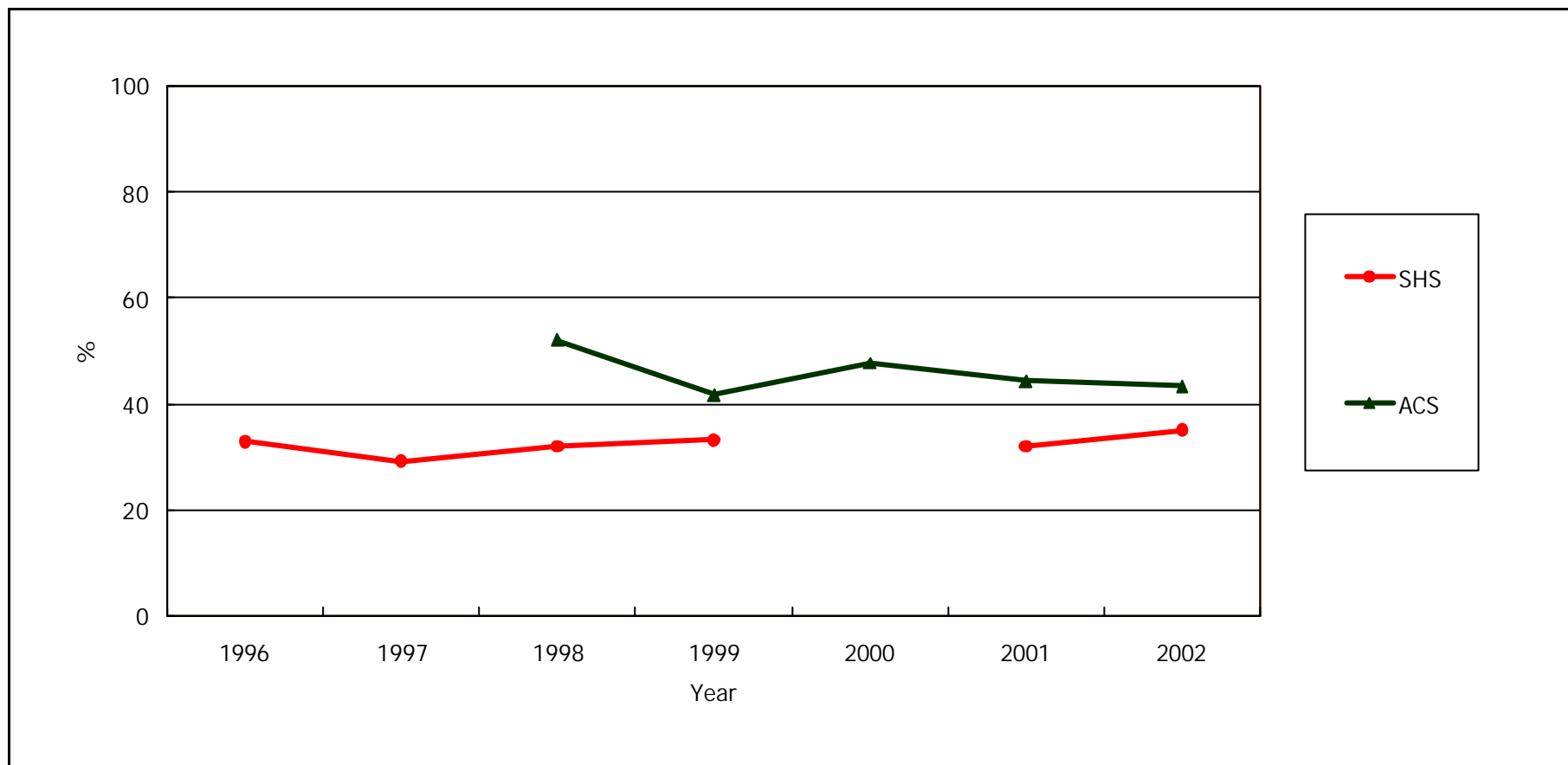
Remarks : Data of CRPA of 2002 is not available

SHS – Social Hygiene Services

ACS - AIDS Counselling Service

CRPA - Community Research Programme on AIDS from Centre for Epidemiology and Biostatistics (H: Household; T: Travellers)

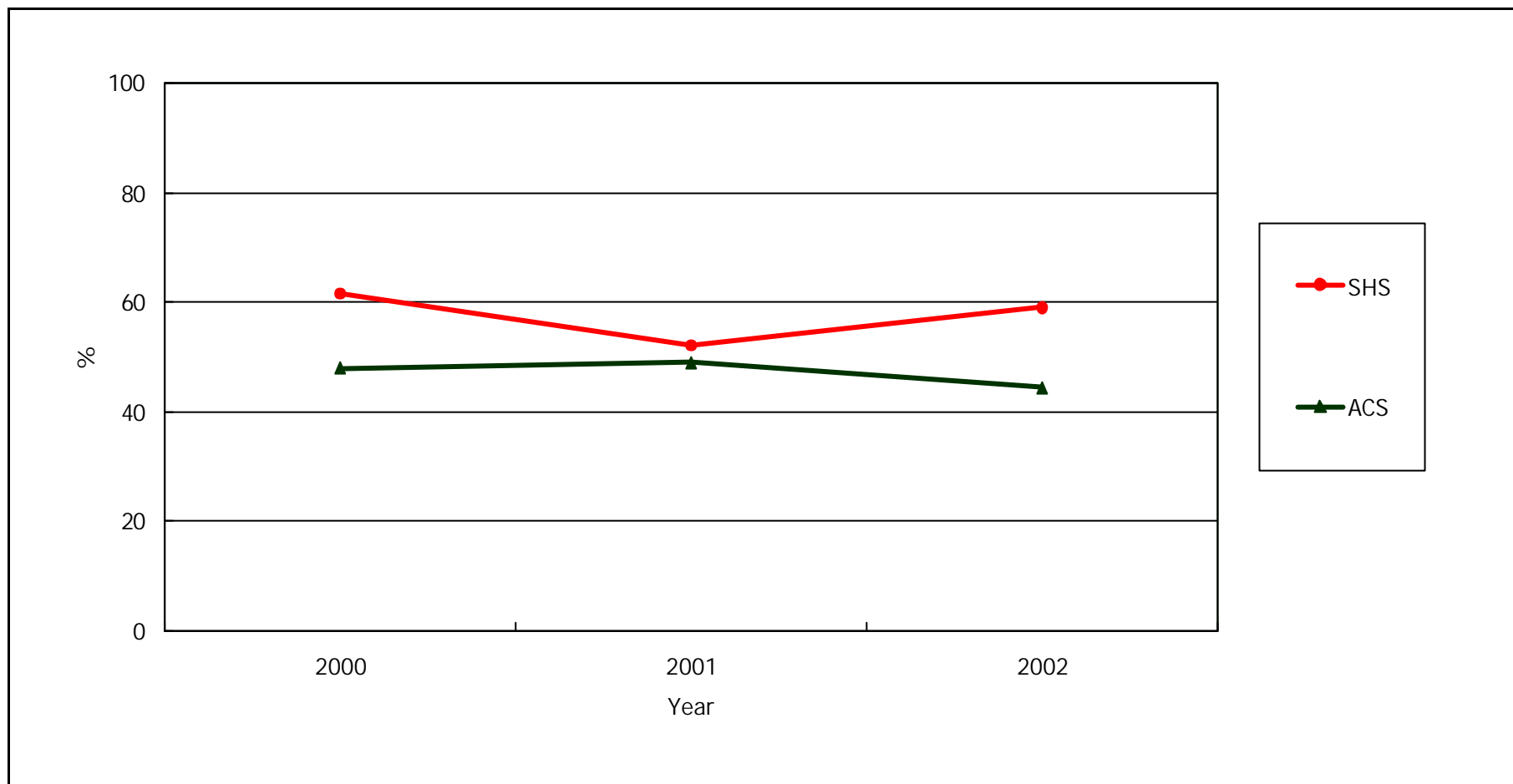
Box 5.5 Condom use for last sex with regular partners\* among adult heterosexual men



\* 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**

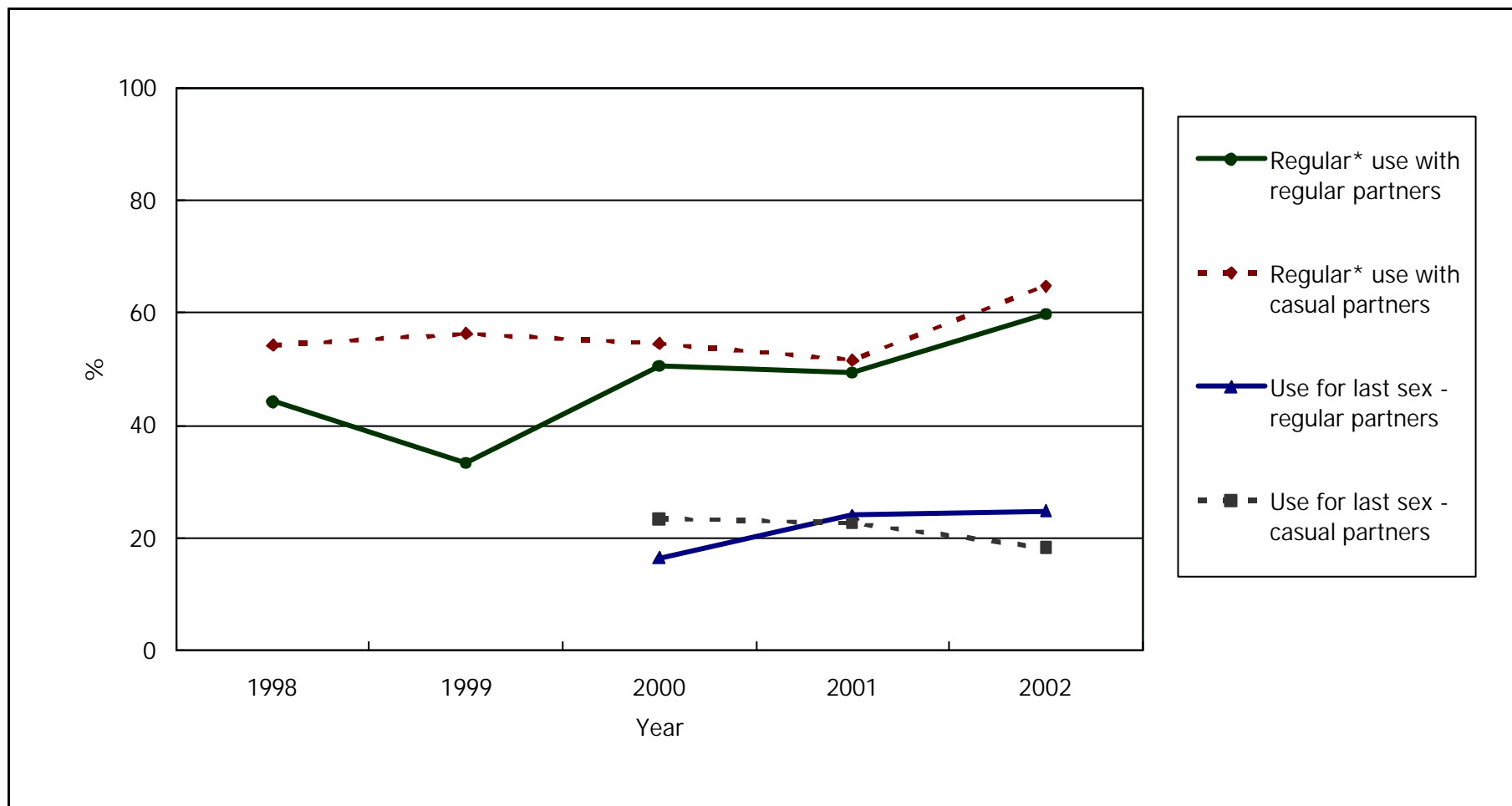


\* Commercial sex partners are defined as those who have sexual intercourse in exchange for money, goods or services. Examples are prostitutes and customers of prostitutes.

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



Box 5.7 Condom use among adult MSMs attending AIDS Counselling Service (ACS)

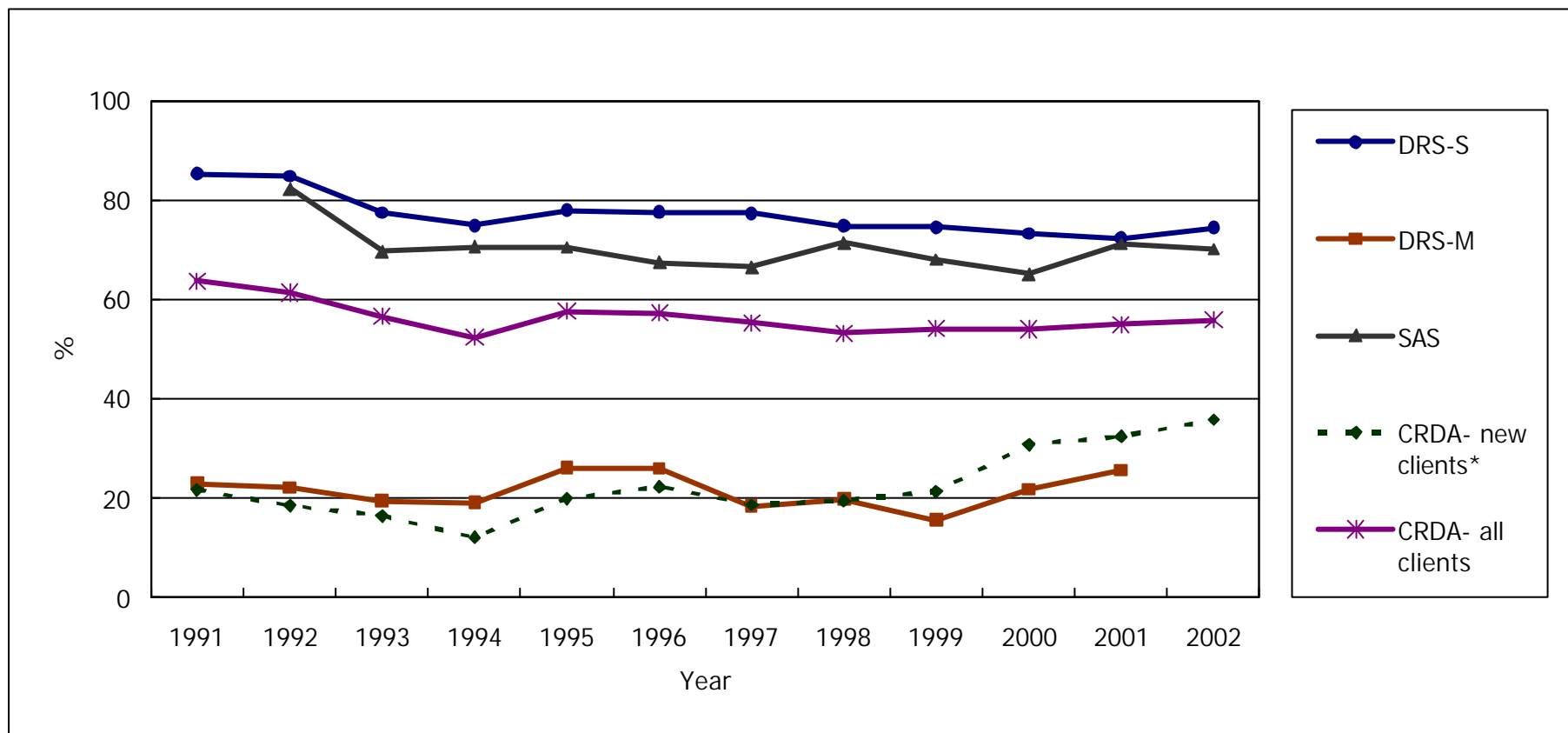


\* Regular condom use is defined as always or usually using a condom on a 4-level scale

\*\* 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.

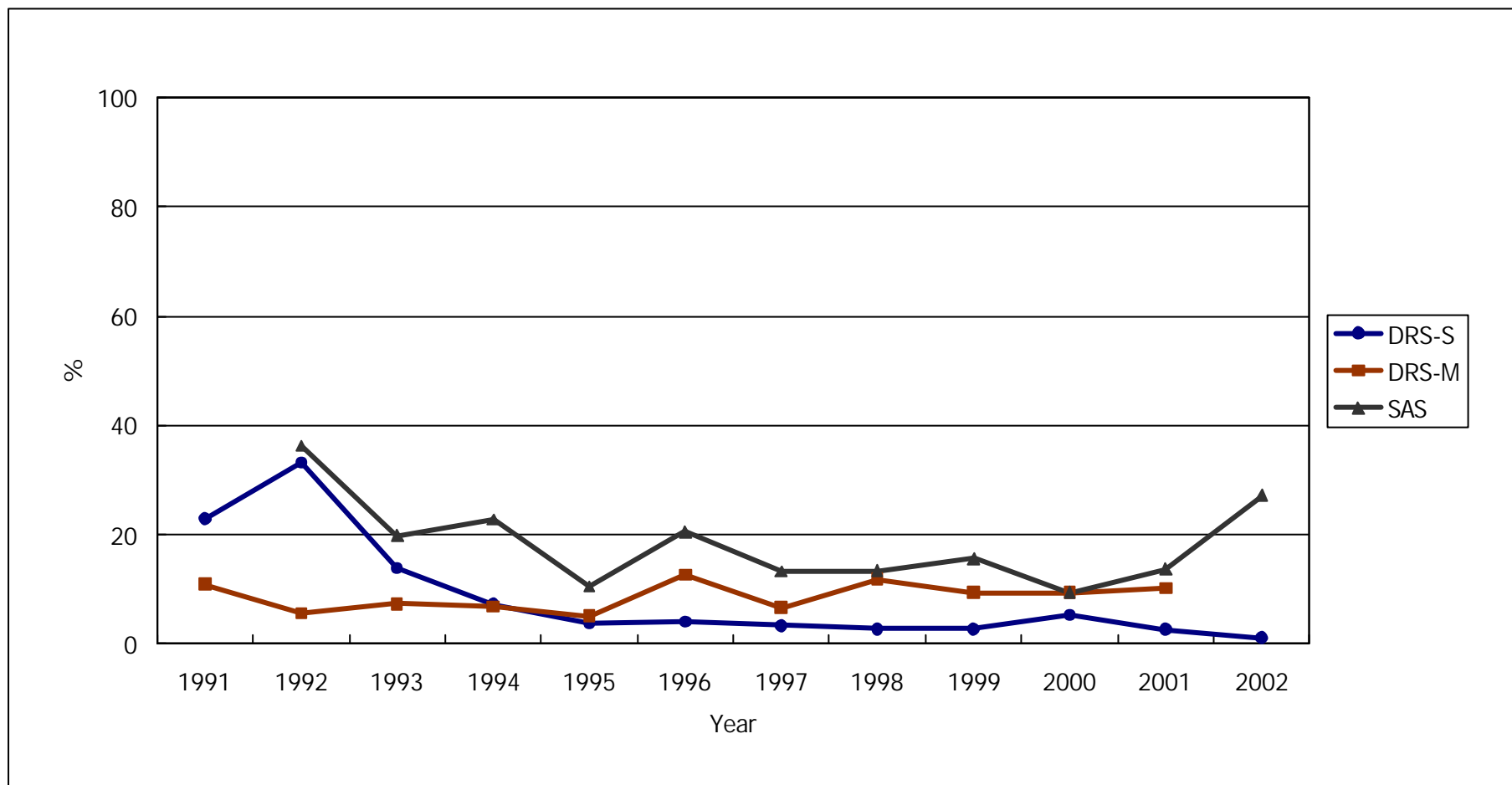
### Box 5.8 Proportion of injectors



\* 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: Data of DRS-M of 2002 is not available  
 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: Data of DRS-M in 2002 is not available  
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)

### Box 5.10 Age and duration of drug use

#### (a) Mean duration of drug use

Year Source	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
DRS-S	14.7	14.1	13.7	13.4	14.0	15.6	17.8	18.3	19.2	19.8	19.8	22.0
CRDA (new clients*)	4.1	3.2	3.4	3.2	3.1	2.9	3.4	3	3.6	2.7	2.6	3.3
CRDA (All clients)	17	16.1	15.3	15.1	14.6	14.8	15.1	15.3	16.2	14.1	14.1	15.3

\* 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  
CRDA - Central Registry of Drug Abuse

(b) Mean age of drug users

Source \ Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
DRS-M	29.6	27.5	26.3	26.5	25.0	26.3	26.2	26.8	28.7	27.9	28.7	N.A.
DRS-S	36.4	36.2	36.1	35.9	36.4	37.4	38.9	39.3	40.3	40.7	41.4	42.9
CRDA (new clients*)	25.5	23.8	23.2	22.3	23.2	23.8	24.4	24.4	24.8	23.1	23.3	24.5
CRDA (All clients)	36.3	35.3	34.2	33.7	33.1	33.4	33.6	33.8	34.6	32.4	32.5	33.7

\* 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-M - Methadone Clinics  
DRS-S - Shek Kwu Chau Treatment and Rehabilitation Centre  
CRDA - Central Registry of Drug Abuse

(c) Mean age of initiating drug use

Source \ Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	DRS-S *	21.7	22.1	22.4	22.5	22.3	21.9	21.2	21.0	21.1	20.9	21.5
CRDA (new clients**)	21.4	20.6	19.8	19.1	20.1	20.9	21	21.4	21.2	20.4	20.7	21.2
CRDA (All clients)	19.3	19.2	18.9	18.6	18.5	18.6	18.5	18.5	18.4	18.3	18.4	18.4

\* The figures are obtained assuming that the respondents have been on drug continuously without interruption

\*\* 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  
CRDA - Central Registry of Drug Abuse



Appendix I: HIV/AIDS report form (DH2293)

**DEPARTMENT OF HEALTH  
HIV/AIDS Report Form**

**Please read the following instructions:**

1. This is a voluntary report form for reporting:
  - (i) newly diagnosed HIV infection;
  - (ii) newly diagnosed AIDS;
  - (iii) change(s) of status of previously diagnosed HIV/AIDS cases
2. Only sections, (A), (C) & (D) need to be completed for reporting HIV infection.
3. All sections, (A), (B), (C) & (D) have to be completed for reporting AIDS or updating information.
4. All individual's information will be treated as strictly confidential and used in global analysis only.
5. Please mark CONFIDENTIAL on the envelope and mail the completed form to:

Consultant Physician  
Special Preventive Programmes  
Department of Health  
5/F Yaumatei Jockey Club Clinic  
145 Battery Street, Yaumatei,  
Kowloon.

**Section (A) Reporting HIV Infection**

Your reference code number: \_\_\_\_\_ (HK resident/non-resident\*)  
 Sex: M/F\* Date of birth: (dd/mm/yyyy) \_\_\_\_\_ or age (at last birthday) \_\_\_\_\_  
 For female: Is she pregnant: Yes/No\* (complete Box 1 if "Yes")  
 Ethnicity: Chinese/non-Chinese\* (Asian/Caucasian/Black/others, please specify \_\_\_\_\_)\*  
 Marital status: married/widowed/separated/never married\*  
 Date of laboratory diagnosis in HK (dd/mm/yyyy): \_\_\_\_\_ Western Blot Confirmation: Yes/No\*  
 Name of Laboratory : \_\_\_\_\_  
 Previous HIV positive result outside Hong Kong: No/Yes\*  
 (specify place: \_\_\_\_\_; date: (dd/mm/yyyy) \_\_\_\_\_)  
 Main route of transmission (please tick; if >1, put down 1 & 2 in descending order of the two most likely routes)  
 \_\_\_\_\_ sex: ( \_\_\_\_\_ heterosexual / \_\_\_\_\_ homosexual / \_\_\_\_\_ bisexual )\*  
 \_\_\_\_\_ transfusion of blood – local/overseas\* (specify date : \_\_\_\_\_ )  
 \_\_\_\_\_ haemophilia  
 \_\_\_\_\_ injecting drug use  
 \_\_\_\_\_ perinatal  
 \_\_\_\_\_ others; specify \_\_\_\_\_  
 \_\_\_\_\_ not known  
 CD4 count per u1 (if known): \_\_\_\_\_ date: (dd/mm/yyyy): \_\_\_\_\_  
 HIV status of spouse, if any: unknown/positive/negative\*

<b>Box 1</b>	
Gravida _____	Para _____
LMP (dd/mm/yyyy) _____	
Obstetric follow-up at:	
hospital/clinic _____	
Expected hospital/place of delivery:	
_____	
Current plan: Continue pregnancy/ T.O.P.*	

**Section (B) Reporting AIDS**

Is this an update of a previously reported HIV + case: Yes/No\*  
 Date of diagnosis: (dd/mm/yyyy) \_\_\_\_\_  
 AIDS defining illness(es):  
 1. \_\_\_\_\_ clinical Dx/pathological Dx\*  
 2. \_\_\_\_\_ clinical Dx/pathological Dx\*  
 3. \_\_\_\_\_ clinical Dx/pathological Dx\*  
 CD4 count per u1 (if known): \_\_\_\_\_ Date: (dd/mm/yyyy) \_\_\_\_\_

**Section (C)**

Current status (please tick the right choice):  
 An outpatient  
 An inpatient (Hospital : \_\_\_\_\_ )  
 Died (date : (dd/mm/yyyy) \_\_\_\_\_ : cause of death: \_\_\_\_\_ )  
 Left HK/defaulted follow-up (date last seen: (dd/mm/yyyy) \_\_\_\_\_ )

**Section (D)**

Name of medical practitioner: \_\_\_\_\_ in private practice/public service\*  
 Correspondence Address:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Date: \_\_\_\_\_ Tel. no.: \_\_\_\_\_ Fax no.: \_\_\_\_\_ E-mail : \_\_\_\_\_

*\*delete whichever inappropriate*

DH 2293, revised August 2001

**ALL INFORMATION WILL BE TREATED IN STRICT CONFIDENCE**



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

<p><b>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)</b></p> <p style="text-align: center;">+</p> <p><b>one or more of the AIDS indicator conditions</b></p>	
<p><b>AIDS indicator conditions</b></p>	<p>Candidiasis of bronchi, trachea, or lungs  Candidiasis, oesophageal  Cervical cancer, invasive  Coccidioidomycosis, disseminated or extrapulmonary  Cryptococcosis, extrapulmonary  Cryptosporidiosis, chronic intestinal (&gt;1 month's duration)  Cytomegalovirus disease (other than liver, spleen or nodes)  Cytomegalovirus retinitis (with loss of vision)  Encephalopathy, HIV-related  <i>Herpes simplex</i>: chronic ulcer(s) (&gt;1 month's duration); or bronchitis, pneumonitis, or oesophagitis  Histoplasmosis, disseminated or extrapulmonary  Isosporiasis, chronic intestinal (&gt;1 month's duration)  Kaposi's sarcoma  Lymphoma, Burkitt's (or equivalent term)  Lymphoma, primary, of brain  <i>Mycobacterium tuberculosis</i>; extrapulmonary or pulmonary/cervical lymph node (only if CD4&lt;200/ul)  Pneumonia, recurrent  Penicilliosis, disseminated  Mycobacterium, other species or unidentified species, disseminated or extrapulmonary  <i>Pneumocystis carinii</i> pneumonia  Progressive multifocal leukoencephalopathy  Salmonella septicaemia, recurrent  Toxoplasmosis of brain  Wasting syndrome due to HIV</p>
<p>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 &lt; 200 µl, (3) a CD4 &lt; 200 µl without any AIDS-defining condition is not counted as AIDS.</p>	