Hong Kong STD/AIDS Update

- a quarterly surveillance report

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Editorial

In the fourth quarter of year 2000, 51 HIV infections were reported, of which 40 were male and 11 female. Sixty-one percent of them were ethnic Chinese. The proportion of sexual transmission in this quarter was 59 % while homosexual and bisexual contacts accounted for 9.8% and 5.9% respectively. Sexual transmission continues to be the most common route of HIV transmission in Hong Kong. Men having sex with men (MSM) is still one of the high risk communities, just like many other western countries. Besides, four more HIV cases were reported due to injecting drug use.

There was one perinatal transmission case reported in this quarter. Unfortunately, this little baby had already developed AIDS at the time of HIV diagnosis. Under the unlinked anonymous screening programme conducted by the Department of Health, the HIV prevalence in pregnant mothers was about 0.03%[1]. A study conducted at Kwong Wah Hospital in 1999 revealed a positive rate of 0.06% (3 out of 5067)[2]. There was an estimated 15 to 30 HIV positive pregnancies each year in Hong Kong. Between 1992 and 1999, 38 such pregnancies were actually recorded in an unofficial pregnancy registry maintained by the Department of Health's Special Preventive Programme. As an unofficial system, problems are inevitable e.g. lack of standardised entry format and missing data. Planning is being considered to track on these data in future.

Perinatal HIV infection is a potentially preventable condition. Nowadays, prophylaxis using various antiretroviral medication such as AZT, Nevirapine initiated in different stages of the antenatal and perinatal period could reduce the transmission rates. PACTG 076[3,4] a randomised controlled trial of the use of zidovudine had demonstrated a 66% reduction of mother-to-child transmission (MTCT) in women with CD4 count above 200/ul. Besides, studies have validated the independent protection from MTCT conferred by elective cesarean section before the rupture of membrane[5,6]. It is estimated that about 3 to 6 HIV positive babies would be born each year in Hong Kong[1]. This number would be reduced to just one or two if antiretroviral treatment is provided. This number would be even smaller if the effects of termination of pregnancy and caesarian section are added.

The Hong Kong Advisory Council on AIDS recently recommended that universal antenatal screening be adopted in Hong Kong. The government had reaffirmed its support of the policy. While a timetable has yet to be worked out, professional bodies and the public service had already started to make efforts on the implementation of universal antenatal HIV testing. The success of this programme need the support and cooperation of various stakeholders from both public and private sectors as well as the community.

(For the references of this editorial, please refer to the last page)

Contents

Reported HIV/AIDS Quarterly Statistics

4th Quarter (October - December) 2000

	This Quarter		Cumulative	
	HIV	AIDS	HIV	AIDS
Sex				
Male	40	9	1277	443
Female	11	4	265	57
Ethnicity/race				
Chinese	31	11	1066	387
Non-Chinese	20	2	476	113
Asian	*12*	*2*	*227*	*57*
White	*1*	*0*	*177*	*53*
Black	*1*	*0*	*15*	*2*
Others	*6*	*0*	*57*	*1*
Age at diagnosis				
Adult	50	12	1509	491
Child (age 13 or less)	1	1	33	9
Exposure category				
Heterosexual	22	10	876	321
Homosexual	5	0	298	92
Bisexual	3	0	78	26
Injecting drug use	4	0	32	8
Blood/blood product infusion	0	1	68	19
Perinatal	1	1	12	5
Undetermined	16	1	178	29
Total	**51**	**13**	**1542**	**500**

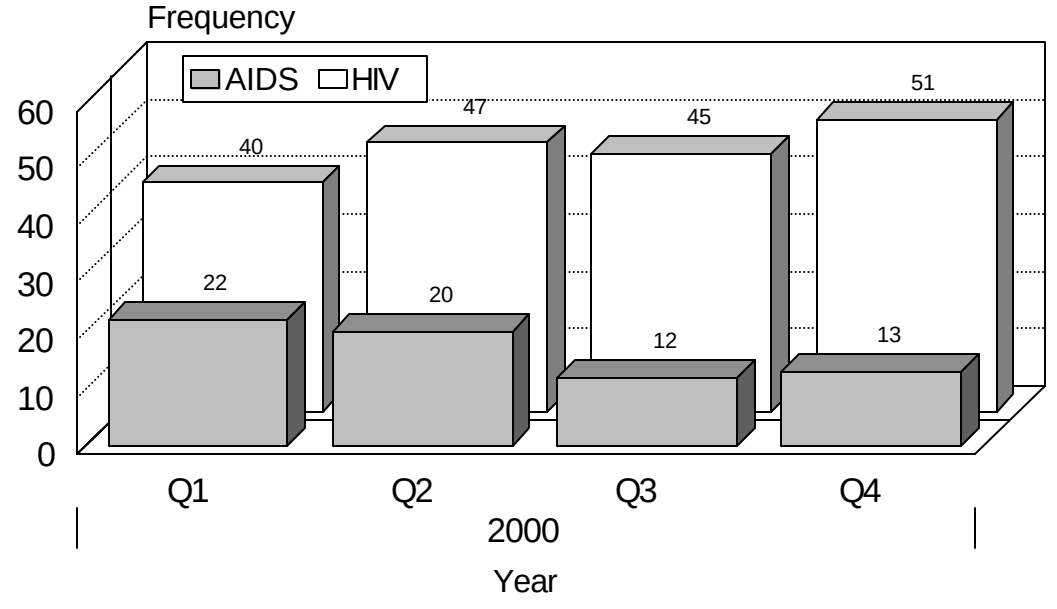
Sexually Transmitted Diseases Reporting at Government Social Hygiene Service

4th Quarter (October - December) 2000

	This Quarter	Same Quarter Last Year
Syphilis		
Primary	64	58
Secondary	29	14
Early latent	65	62
Late latent	80	66
Late (cardiovascular/neuro)	0	0
Congenital (early)	0	0
Congenital (late)	0	3
Total	**238**	**203**
Gonorrhoea	873	815
Non-gonococcal urethritis (Male)	1651	1940
Non-specific genital infection (Female)	1727	1810
Genital wart	912	855
Herpes genitalis	342	350
Pediculosis pubis	107	110
Trichomonas	269	192
Genital ulcer	196	173
Chancroid/Lymphogranuloma venereum	2	2
Others	847	826
Total	**7164**	**7276**

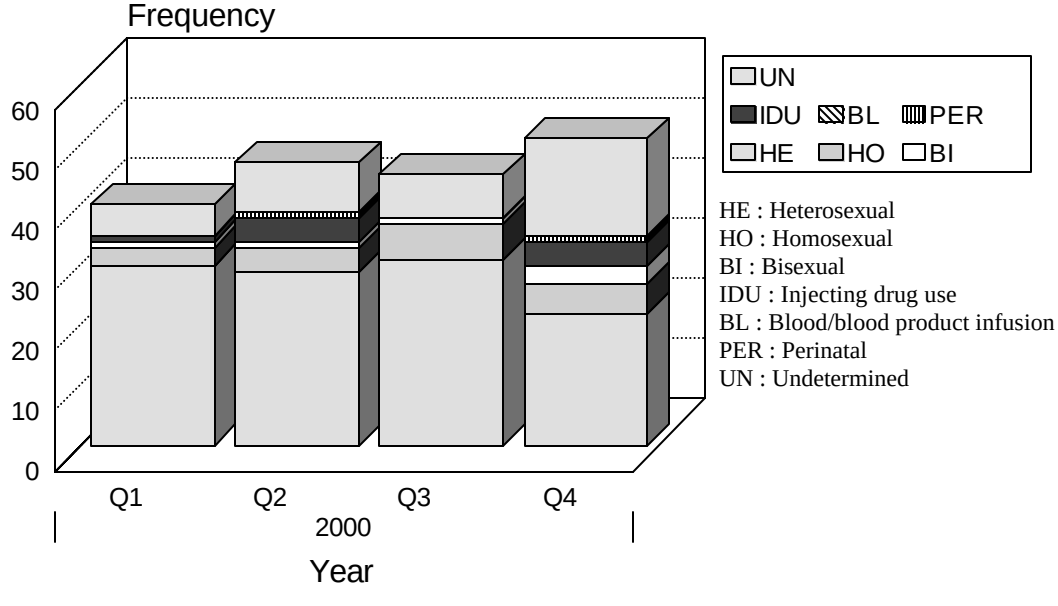
Hong Kong HIV/AIDS Voluntary Reporting

(4th Quarter, 2000) Hong Kong



Hong Kong HIV Voluntary Reporting

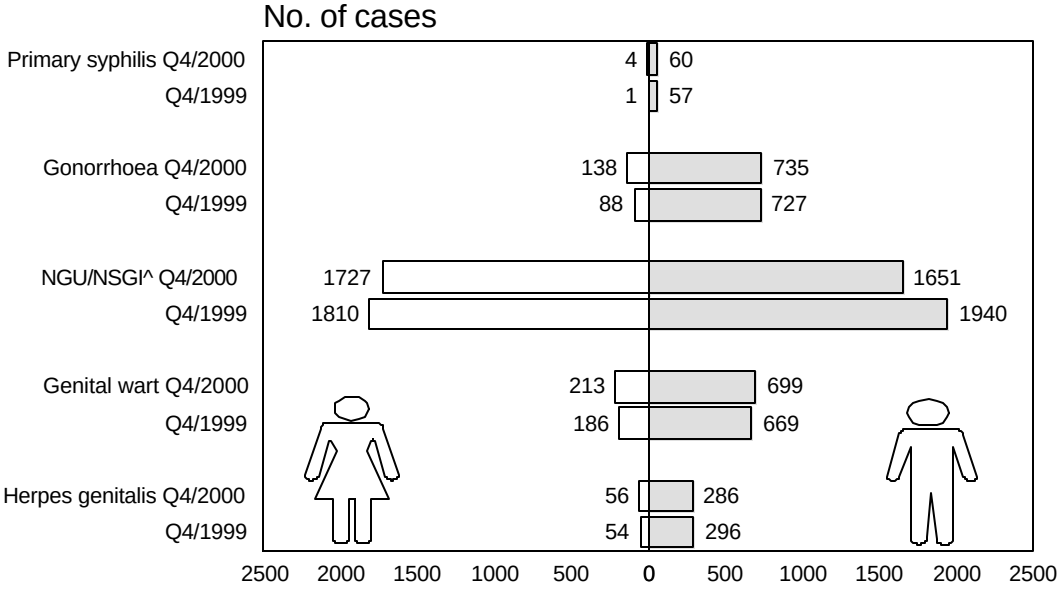
By Exposure Category (4th Quarter, 2000) Hong Kong



HE : Heterosexual
HO : Homosexual
BI : Bisexual
IDU : Injecting drug use
BL : Blood/blood product infusion
PER : Perinatal
UN : Undetermined

Sexually Transmitted Diseases Reporting at GSHS*

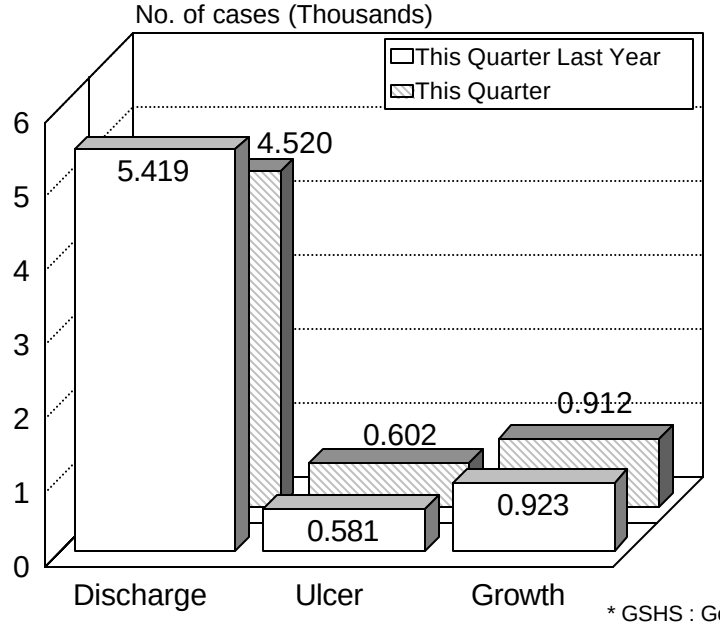
By sex (4th Quarter, 2000) Hong Kong



* GSHS : Government Social Hygiene Service ^ NGU/NSGI : Non-gonococcal urethritis/Non-specific genital infection

Syndrome Presentations of STD in GSHS*

(4th Quarter, 2000) Hong Kong



Diseases included under the various syndrome:

Discharge: Gonorrhoea
Non-gonococcal urethritis
Non-specific genital infection
Trichomonas
Ulcer: Chancroid
Primary syphilis
Herpes genitalis
Non-specific genital ulcer
Growth: Genital wart

* GSHS : Government Social Hygiene Service

An Overview of HIV Infection and AIDS in Hong Kong

Introduction

In Hong Kong, the first case of HIV and AIDS was reported in 1984 and 1985 respectively. Since then, the reported cases have been growing steadily. The recognition of human immunodeficiency virus (HIV) as the cause of AIDS allowed us to refine our understanding of who is at risk and of the full spectrum of HIV infection.

Voluntary HIV/AIDS reporting is a case-based HIV/AIDS surveillance system which is a two part programme, namely voluntary reporting by doctors and laboratory reporting. Data collected through the two systems are collected, matched and analysed on a quarterly basis.

Under this reporting system, medical doctors are encouraged to supply information of newly diagnosed HIV infection and/or AIDS to the AIDS Unit of the Department of Health. A standard form is used to systematically collect details such as the demographic characteristics, suspected exposure category, clinical status, and AIDS defining illness of the infected. Each reported case is assigned a unique code to facilitate subsequent follow up of complications. Anonymity and confidentiality are preserved in this system.

The second source of data is that obtained through laboratory reporting, which has been started since 1985. The laboratories that provide confirmatory HIV antibody tests on voluntary basis submit reports of the infected. Currently, they are the Virus Unit of the Department of Health, Queen Elizabeth Hospital and Prince of Wales Hospital which all belong to the public sector.

Overview of voluntary reporting figures

The cumulative number of HIV infections as at the end of year 2000 was 1,542, and 500 of them had progressed to AIDS. The encouraging news with respect to treatment is tempered by the fact that there are still a steady increase in the number of newly reported HIV diagnosis each year. But the number have been rather stable in recent few years (Figure 1). The number of reported AIDS cases also increased especially in 1996 which was partly related to a change in the local AIDS cased definition in 1995. The number of newly reported AIDS cases then stabilized at about 61 to 67 cases per year in the past 4 years. A total of 183 people with the HIV infection were reported in 2000, a 14.1% drop from 1999. During the year, sixty-seven AIDS patients were reported, a 9.8% increase from 1999. This paper is about the cumulative figure up to the end of 2000.

Demographics

The majority (67%) of the 1,542 cases of HIV infection were 20 to 40 years old at the time of diagnosis. The age specific morbidity rate was highest in the 25 – 34 year age

group as compared to other age groups since 1990 (Table 1). The age specific morbidity rate increased from 7 per million mid-year population in 1986 to 115 per million mid-population in 2000. The age distribution is shown in figure 2(a). In the mid and late 80's, the cases were relatively younger with a median age ranging from 11 to 29. They were mostly homosexual male or hemophilia male. The median age became quite stable at around 32 to 36 since the early 1990's. Only 24 cases (1.6%) were youth aged between 13 and 19.

In order to eliminate the effect of other risk exposure categories such as injecting drug use, perinatal transmission and blood/blood product infusion which involve different pockets of at risk population, the yearly age profile was constructed again for those infected through sexual route only (including heterosexual, homosexual and bisexual contact) and is shown in figure 2(b). There is little fluctuation of the median age over the years. The median age ranged from 26 to 39 (regression coefficient 0.20, 95% CI : -0.14 to 0.55, p=0.23). If HIV prevention programmes were successful, the incidence of newly reported HIV should theoretically intensify in older age group who belonged to those infected earlier. Since no ageing cohort effect was observed, it may mean that young adults were still getting new infections, reflecting partially the inadequacy of effectiveness of HIV prevention programmes.

Concerning the ethnicity, a substantial proportion of female HIV cases were Asian non-Chinese which constituted 48% of the cumulative total followed by Chinese (42%). It was in contrast to male patients who were mainly Chinese (74.7%) while Asian non-Chinese accounted for only 7.9%. On a yearly basis, there was inconsistent pattern of the proportion of Asian non-Chinese which fluctuated between 36% to 100% in the past 10 years among female cases. In male cases, the proportion of Asian non-Chinese increased from 6.1% in 1990 to 15.1% in 2000.

Two hundred and sixty-five cases (17%) were females and 1,277 cases (83%) were male. The overall male-to-female ratio was 4.8 to 1. However, there was a narrowing of the ratio in recent years. The ratio was 7.8:1 in 1992, 3.9 :1 in 1995 and leveled off to 3. 2 to 1 in year 2000 (Figure 3). It means heterosexual transmission of HIV is increasingly popular in Hong Kong. However, these increments have not been as dramatic as in many developing countries in which heterosexual transmission is the major driving force of the HIV epidemic. The fact that a majority of the reported female HIV cases were Asian non- Chinese (48%) as well as a preponderance of male HIV infections indicate that a true heterosexual epidemic has not yet taken place in Hong Kong.

Exposure category

The exposure category of the 1542 HIV infected cases is shown in Table 2. The main risk exposure was sexual route (81.2%). Heterosexual transmission accounted for 56.8% while homosexual and bisexual transmission were 19.3% and 5.1% respectively. Over the years, there was increasing absolute number of people infected by HIV each

year. The proportion of heterosexual contact was highest in 1994 and then slightly dropped later (21.4% in 1988, 48.3% in 1991, 70.2% in 1994, 64.6% in 1997 and 62.3% in 2000) (Figure 4).

Two hundred and ninety-eight cases were homosexual (19.3%) and 78 cases bisexual (5.1%). The absolute number of homosexual ranged from 18 to 33 cases per year in the past ten years. The relative proportion of homosexual was high in the late 80's (36.4% in 1987, 39.5% in 1989). But it started to decline since the mid 1990's (21.2% in 1994, 18.2% in 1997, 10.4% in 2000) although the absolute number was still rising. Similar trend was observed in bisexual. However, the proportion of MSM may have been underestimated because of the nature of the self reported data. Among those homosexual and bisexuals, 233 cases (62%) were Chinese and their median age was 33.

Majority of the female HIV cases acquired the infection through heterosexual contact (89.1%). The absolute number of female HIV cases infected heterosexually was increasing especially in the last five years (figure 5). Only two were infected by injecting drug use.

Cumulatively, there were 32 HIV cases due to injecting drug use. It corresponds to 2.1% of the cumulative total HIV infections. Thirty drug users were male and 20 were Chinese. Their median age was 32.5. Although the absolute number is still small, it is the persistent rising trend of IDUs being reported that concerns. The number of IDUs reported to have HIV infection was increasing each year (figure 6). In last two years alone, 15 cases were reported which constituted 47% of the cumulative total HIV infected IDUs. It reminds us of the seriousness of the HIV infection through injecting drug use in the region. HIV infected many drug users in the East and South Asian countries: a mean of 62% of IDU in Myanmar, between 30 to 40 % in Thailand, 77% in Malaysia, 69.4% in China and 65.5% in Vietnam[1].

Cumulatively, twelve children (0.8%) were infected through the perinatal route. Since the first case of perinatal transmission was reported in 1994, there were a few cases reported each year. With the increasing number of women being infected with HIV, it is not surprising to see more HIV infected babies in the coming years although it is a preventable condition through early antenatal screening and initiation of appropriate antiretroviral therapy.

Cumulatively, sixty-eight patients (4.4%) got the infection through the transfusion of HIV contaminated blood or blood products though most of them were infected prior to the introduction of HIV screening of donated blood and detergent or heat treated blood products. There was only one local case of HIV infection due to transfusion of blood from a donor who was originally tested negative during the window period in 1997.

Sources of referral

Majority of cases (40.8%) were reported by the public hospital/ clinic/ laboratory. The other common sources of referral included private hospital/clinic/laboratory (24.8%), Social Hygiene Clinic (15.8%), AIDS Unit (13.9%), AIDS Services Organisations (1.2%), Hong Kong Red Cross Blood Transfusion Service (HKRCBTS) (3%) and Drug rehabilitation service (0.5%).

The annual figures of the referring source is shown in table 3. The absolute number of cases referred by various sources increased steadily over the years in most of the institutions.

Although the HKRCBTS has contributed only 3% of all reported cases, it might not be a good sign to see an increasing number of HIV infected blood donors being detected by them. Of note, 7 new cases were reported in year 2000, leading to a cumulative total of 47 since 1985. About 62% of them were detected on or after 1995. The annual number of cases detected through blood screening was no more than 2 cases per year before 1991. However, the number started to pick up afterwards reaching a record high in 2000. The inappropriate use of blood donation as a HIV testing method by the public is an issue requiring attention.

Clinical presentation of AIDS

The majority (38%) of the 500 AIDS patients presented with *Pneumocysitis carinii* pneumonia (PCP) as the primary AIDS defining illness (ADI) (Table 4). A total of 109 patients (21.8%) had tuberculosis infection, 42 patients (8.4%) had penicilliosis, 26 patients (5.2%) had cytomegalovirus infection, 57 patients (11.4%) had fungal infections other than penicillosis, 14 patients (2.8%) had mycobacterium infection other than tuberculosis, and Kaposi ' s Sarcoma was diagnosed in 17 patients (3.4%).

On a yearly basis, PCP was also the commonest ADI and increased steadily over the years. It ranged from 29% to 53% in the past ten years. In 2000, it contributed to 45% of all primary ADI. The high frequency of PCP in recent years reflects late diagnosis in a significant proportion of those infected with HIV.

Since 1995, the number of tuberculosis as a primary ADI has increased, contributing to 21% to 30% of the overall yearly new AIDS cases. The rising number of tuberculosis diagnosis could be partly due to the adoption of a new definition. The expanded case definition for tuberculosis, since 1995, to include those with a low CD4 count together with pulmonary tuberculosis had contributed to more tuberculosis cases. Prior to 1995, no more than 8 cases per year were reported. Since 1996, 13 to 21 cases of tuberculosis were reported each year. It accounted for 28% of primary ADI in 2000.

The inclusion of *Penicillium marneffei* infection as a local ADI underlines the importance of adapting the system to better meet local needs. It is a unique clinical presentation here and some other South East Asian countries. An annual incidence of 2 to 7 cases per year were noted since 1994. It accounted for 7% of primary ADI in 2000.

Late presentation of patients with advanced HIV disease was common. This phenomenon of late presentation had not changed over the past 16 years (Table 5). Over the last five years, the proportion of simultaneous reporting of AIDS and HIV ranged between 26.3% to 34.1%. Though Highly Active Antiretroviral Therapy (HAART) could potentially reduce AIDS morbidity and mortality, its benefits could not be maximized if patients present late for treatment.

Conclusion

Although the early AIDS cases in Hong Kong were discovered initially in the homosexual and haemophilia population, the epidemiology of AIDS has evolved and become more heterogeneous involving MSM, IDUs, women and men infected heterosexually and children infected perinatally. Members of all ethnic groups and age have been reported with HIV infections. The spread continues to evolve with predominant heterosexual transmission. However, the potential for rapid spread of HIV among IDUs in Hong Kong should not be taken lightly in view of the proximity of Hong Kong to Mainland China where 69.4% of identified HIV cases were IDUs[1].

Although advances have been made in the past two decades, there is more to be achieved in effective HIV prevention, earlier detection of disease, and the provision of appropriate treatment to accomplish optimal public health control. It is hoped that this article will allow our readers and colleagues to get an overview of how the epidemic is evolving in Hong Kong and to better define areas that need services and prevention activities.

Reference

1. Task Force on Drug Use and HIV Vulnerability. *Drug Use and HIV Vulnerability: Policy Research Study in Asia*, UNAIDS & UNODCCP 2000.

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Table 1 : Age-specific Morbidity Rate (expressed in no. per 1,000,000 mid-year population)

Age Group	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
0 to 4	0	0	0	0	0	0	0	0	3	5	3	0	6	9	6
5 to 9	7	0	0	0	0	0	0	0	0	0	0	0	0	2	0
10 to 14	2	0	2	0	0	0	0	0	0	0	2	2	0	0	0
15 to 19	2	5	2	0	2	0	2	5	0	2	4	2	0	2	2
20 to 24	5	11	4	8	4	22	18	18	13	44	11	26	26	33	38
25 to 29	7	13	10	14	13	25	22	28	42	28	40	71	68	66	55
30 to 34	0	7	4	5	13	22	24	23	31	46	52	52	70	78	60
35 to 39	2	7	11	10	12	12	28	28	34	28	34	42	55	48	44
40 to 44	8	11	13	14	5	17	20	11	21	20	38	37	24	43	39
45 to 49	0	4	12	21	8	12	14	6	19	18	13	29	14	21	28
50 to 54	4	0	7	8	0	8	8	8	17	37	22	23	18	42	22
55 to 59	4	4	0	11	4	8	8	8	15	4	19	20	24	35	15
60 to 64	0	5	0	0	8	0	4	12	8	4	7	30	34	19	15
65 to 69	0	6	0	0	0	0	0	0	5	9	0	8	16	4	8
70 to 74	0	0	0	0	7	7	0	0	0	6	0	0	5	20	10
75+	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0
Overall	3	5	5	6	6	10	12	12	16	19	20	26	27	31	26
Unknown age (No.)	3	3	2	2	1	0	1	8	5	5	5	8	8	2	6
Total HIV (No.)	20	30	28	38	34	60	71	79	104	122	134	181	189	213	183

Table 2 : Distribution of HIV infection cases by exposure category 1984 – 2000

Exposure Category	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
Heterosexual	1	0	0	3	6	11	12	29	32	47	73	81	93	117	131	126	114	876 (56.8%)
Homosexual	1	10	6	12	12	15	8	18	27	20	22	26	20	33	16	33	19	298 (19.3%)
Bisexual	0	1	2	7	2	6	5	8	2	2	4	4	3	10	6	10	6	78 (5.1%)
Injecting drug use	0	1	0	0	2	2	0	0	3	1	2	2	1	2	1	6	9	32 (2.1%)
Perinatal	0	0	0	0	0	0	0	0	0	0	1	2	1	0	2	4	2	12 (0.8%)
Blood /blood product infusion	5	32	10	7	2	2	5	0	1	1	1	0	0	1	0	1	0	68 (4.4%)
Undetermined	0	2	2	4	4	2	4	5	6	8	1	7	16	18	33	33	33	178 (11.5%)
Total	7	46	20	33	28	38	34	60	71	79	104	122	134	181	189	213	183	1,542 (100%)

Table 3 : Sources of referral of HIV/AIDS 1984 - 2000

Year	DRS	ASO	HKRC	PRI	PUB	SHC	SMC	Total
1984	0	0	0	0	7	0	0	7
1985	0	0	0	4	35	4	3	46
1986	0	0	1	7	10	2	0	20
1987	0	0	2	12	10	2	7	33
1988	0	0	1	8	6	2	11	28
1989	1	0	1	13	7	6	10	38
1990	0	0	0	8	9	9	8	34
1991	0	0	1	11	7	19	22	60
1992	0	0	6	25	13	12	15	71
1993	0	7	2	32	12	17	9	79
1994	0	1	4	36	27	29	7	104
1995	0	4	4	39	49	14	12	122
1996	0	0	3	26	62	25	18	134
1997	0	1	5	46	80	27	22	181
1998	1	0	4	47	93	27	17	189
1999	3	2	6	37	107	29	29	213
2000	2	4	7	32	95	19	24	183
Total	7	19	47	383	629	243	214	1,542

Abbreviation:

DRS – Drug rehabilitation centers ASO – AIDS Services Organisations

HKRC – Hong Kong Red Cross Blood Transfusion Center

PRI – Private hospitals/clinics/laboratories PUB – Public hospitals/clinics

SHC – Social Hygiene Service SMC – AIDS Unit screening clinic

Table 4 : AIDS Defining Illness profile over the years

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	**Total**
PCP	1	0	2	4	8	5	4	7	10	12	17	21	20	26	23	30	190 (38%)
TB	0	0	0	0	1	2	3	1	2	4	8	21	17	18	13	19	109 (21.8%)
FUNGAL	0	0	3	1	3	0	2	2	1	4	7	6	11	8	5	4	57 (11.4%)
PEN	0	0	0	0	0	1	1	0	1	6	7	7	5	2	7	5	42 (8.4%)
CMV	1	0	0	0	0	1	1	1	2	1	3	4	4	3	2	3	26 (5.2%)
KAPOSI	1	0	0	1	2	1	0	2	0	4	1	2	3	0	0	0	17 (3.4%)
MOTT	0	0	0	0	1	0	3	0	1	0	0	2	1	0	5	1	14 (2.8%)
OTHERS	0	0	1	1	2	3	0	1	2	6	2	7	3	6	6	5	45 (9%)
Total	3	0	6	7	17	13	14	14	19	37	45	70	64	63	61	67	500 (100%)

Abbreviation:

PCP – *Pneumocystis carinii* pneumonia

FUNGAL –Fungal infections other than penicilliosis

PEN – Penicilliosis

CMV – Cytomegalovirus infection

KAPOSI – Kaposi's sarcoma

MOTT –Mycobacterium other than tuberculosis

TB – Pulmonary tuberculosis + CD4<200/ul or Mycobacterium tuberculosis (extrapulmonary)

Table 5 : Simultaneous reporting of AIDS and HIV (defined as less than 3 months apart of HIV and AIDS diagnosis)

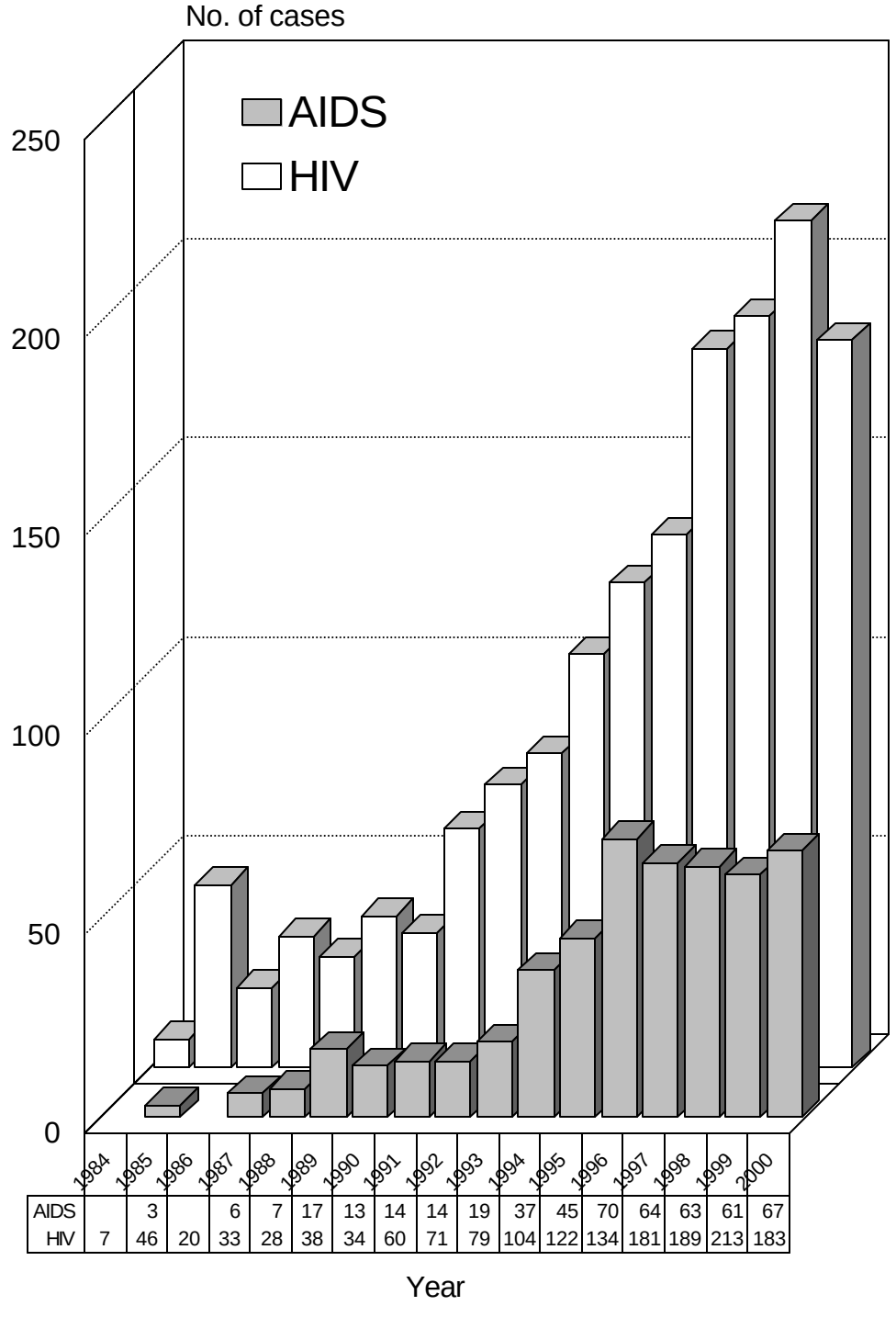
Year	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Late presenter**	2	1	0	4	3	12	7	10	9	11	22	29	44	56	53	56	45*
Total HIV	7	46	20	33	28	38	34	60	71	79	104	122	134	181	189	213	132*
Ratio (%)	28.6	2.2	0	12.2	10.7	31.6	20.6	16.7	12.7	13.9	21.2	23.8	32.8	30.9	28	26.3	34.1

Remark: * denotes the HIV/AIDS figure up to the 3rd Quarter of 2000

**denote the number of HIV cases who were confirmed to have AIDS within 3 months after diagnosis of HIV

Figure 1 : Annual HIV/AIDS Statistics

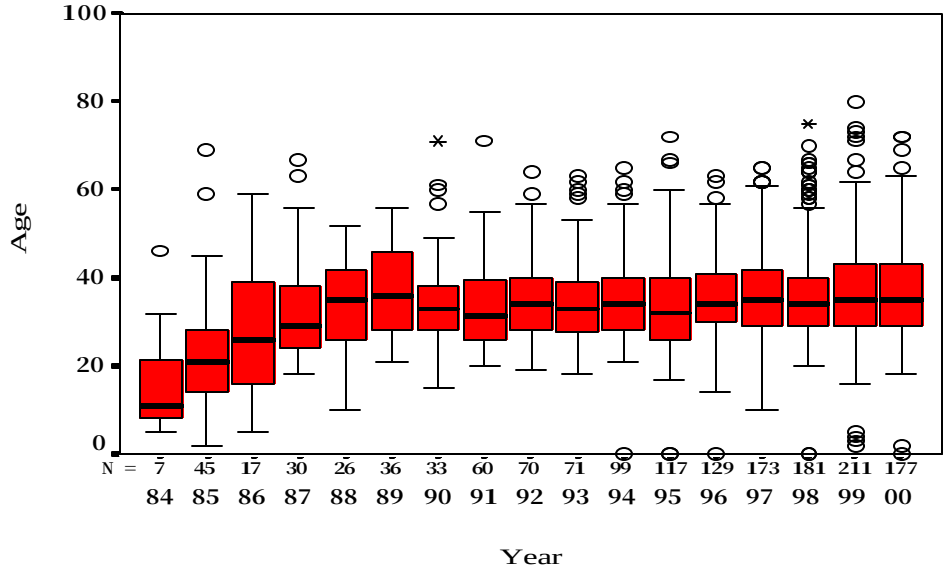
1984 - 2000, Hong Kong (N=1542/500)



	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
AIDS		3		6	7	17	13	14	14	19	37	45	70	64	63	61	67
HIV	7	46	20	33	28	38	34	60	71	79	104	122	134	181	189	213	183

Figure 2(a) : Age Distribution of HIV Cases

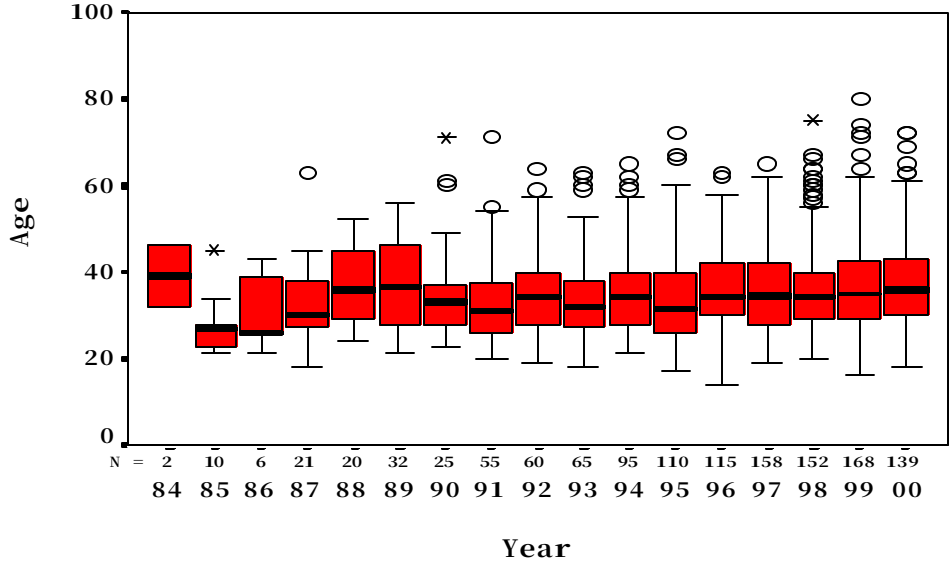
1984 - 2000, Hong Kong (N=1482)



Remarks : The shaded box represents the middle half of all patients' age from the 25th to the 75th percentile with the median line in the middle.

Figure 2(b) : Age Distribution of Sexually Acquired HIV Cases

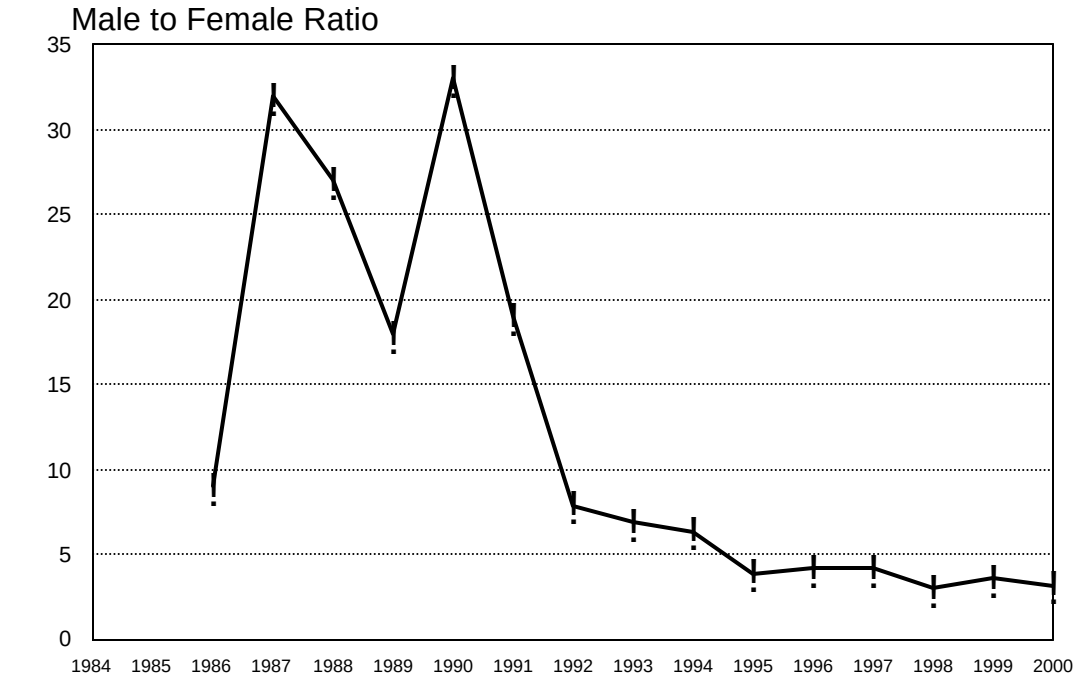
1984 - 2000, Hong Kong (N=1233)

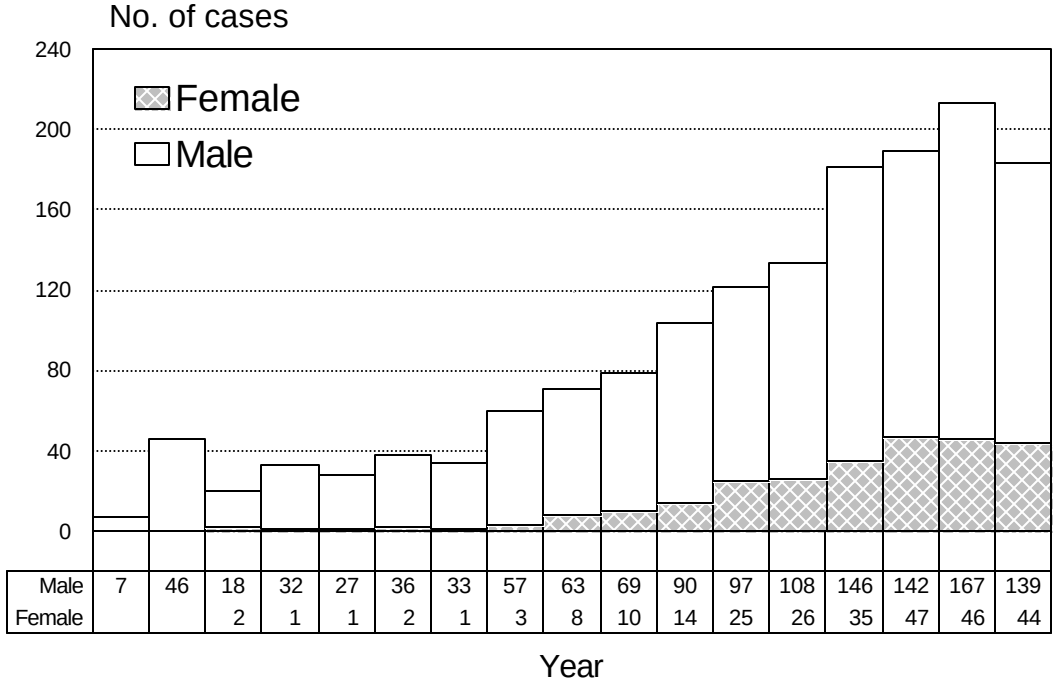


Remarks : The shaded box represents the middle half of all patients' age from the 25th to the 75th percentile with the median line in the middle.

Figure 3 : Annual Reported HIV Infection - by sex

1984 - 2000, Hong Kong (N=1542)





	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Male	7	46	18	32	27	36	33	57	63	69	90	97	108	146	142	167	139
Female			2	1	1	2	1	3	8	10	14	25	26	35	47	46	44

Figure 4 : Proportion of HIV Infection through Sexual Contact
1984 - 2000, Hong Kong (N=1252)

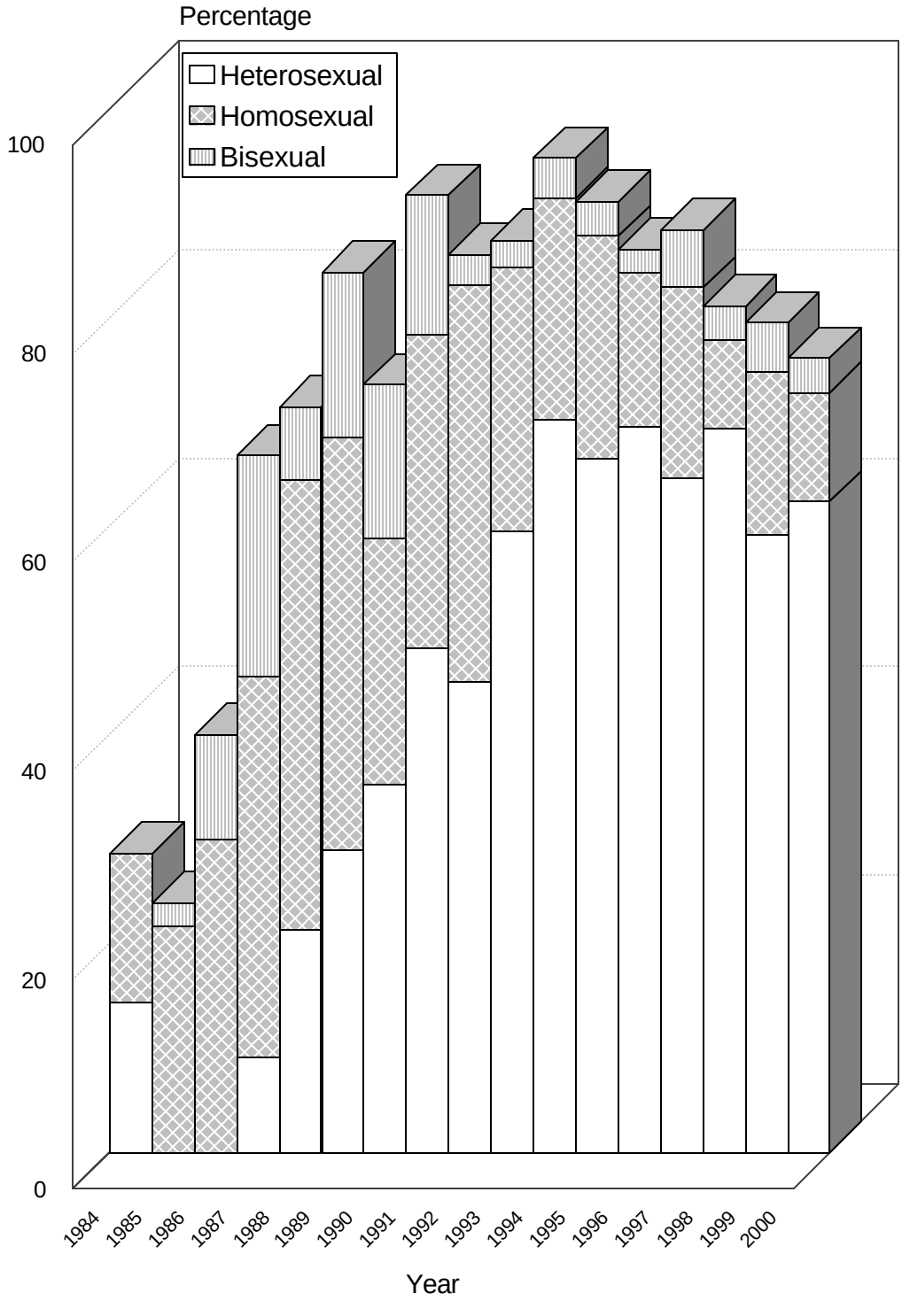


Figure 5 : Annual HIV Infections in Female by Exposure Category

1985 - 2000, Hong Kong (N=261)

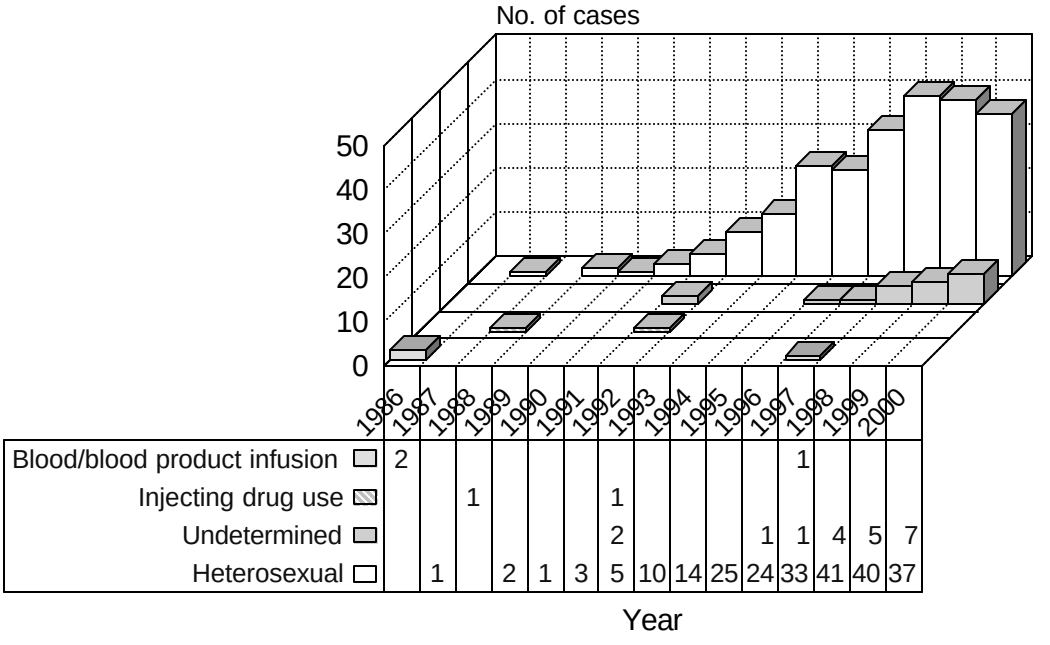
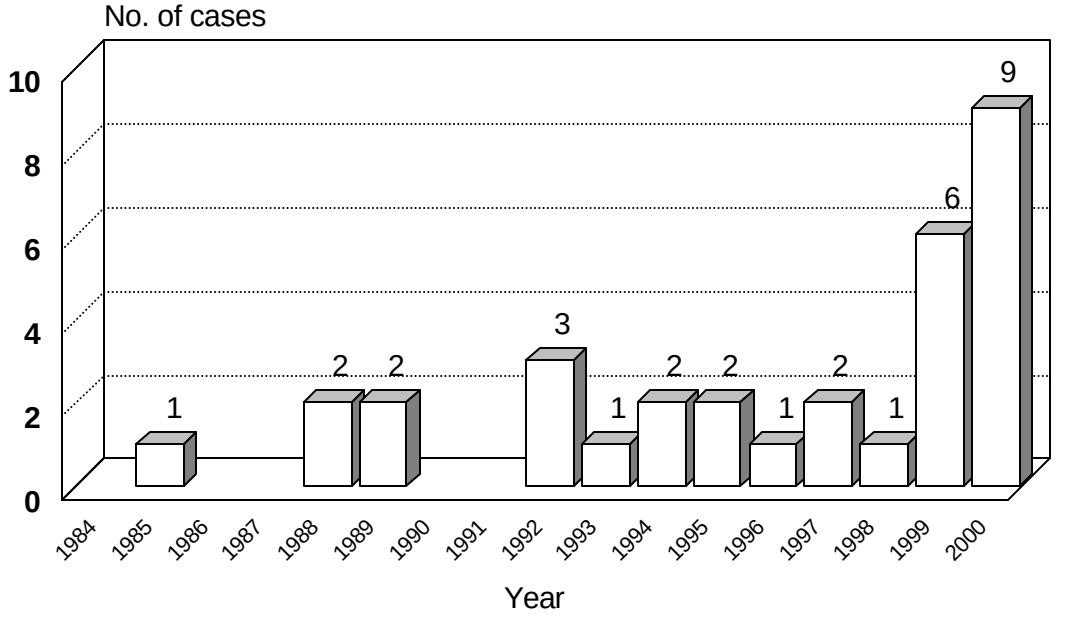


Figure 6 : Annual HIV Infection through Injecting Drug Use

1984 - 2000, Hong Kong (N=32)



References of editorial:

1. Unlinked anonymous screening has been conducted by the Department of Health, Hong Kong since 1990.
2. K M Ho, K K Ho, S S Lee et al. Epidemiology and detection of HIV among pregnant women in HKSAR. *Hong Kong Medical Journal* (in press).
3. Connor EM, Sperling RS, Gelder RD, et al. Pediatric AIDS Clinical Trials Group Protocol 076 Study Group. Reduction of maternal-infant transmission of human immunodeficiency type 1 with zidovudine treatment. *N Engl J Med*. 1994;331:1173-80.
4. Sperling RS, Shapiro DE, Coombs RW, et al. Pediatric AIDS Clinical Trials Group Protocol 076, Maternal viral load, zidovudine treatment, and the risk of human immunodeficiency virus type 1 from mother to infant. *N Engl J Med*. 1996;335:1621-9.
5. The International Perinatal HIV Group. The mode of delivery and the risk of vertical transmission of human immunodeficiency virus type 1: a meta-analysis of 15 prospective cohort studies. *N Engl J Med*. 1999;340:977-87.
6. The European Mode of Delivery Collaboration. Elective caesarian section versus vaginal delivery in prevention of vertical HIV 1 transmission: a randomised clinical trial. *Lancet*.1999;353:1035-39.

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