Tracking the characteristics and outcome of HIV/AIDS patients cared for at the Integrated Treatment Centre

- A Report of 1999 to 2006

Special Preventive Programme
Centre for Health Protection
Department of Health
Hong Kong
August 2007

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http://www.aids.gov.hk

Content

Preface

AIDS was first recognised in 1981 as a new emerging disease of unknown etiology. It being an infectious disease caused by HIV was soon unveiled 2 years later. Todate, more than a quarter century into its surfaced existence in mankind, HIV/AIDS has gone through an unprecedented history in medical, social and other disciplines given its vast and diversified impacts.

Enormous scientific developments have been witnessed in the research of HIV/AIDS, notably represented by the advent of highly active antiretroviral therapy (HAART) a decade ago. HAART brought new hope to the patients but as well ongoing challenges to everybody involved in AIDS work. The bottom-line fact is that HIV/AIDS now becomes a chronic manageable condition which is no longer invariably fatal. Globally, with the efforts of international health authorities and other agencies, access to effective treatment has been expanded in the last few years in the developing world hardest hit by HIV epidemic, to an extent undreamed of before.

Hong Kong is one of the few places in Asia that provides systematic HIV care since late 1980s. Being one of the two HIV clinical services in Hong Kong, Integrated Treatment Centre (ITC) of Centre for Health Protection, Department of Health strives to deliver quality client-oriented services over the years. ITC realizes its dual role of effective management of infected patients as well as public health HIV prevention and control. HIV surveillance and intervention are embedded as integral components of HIV care delivery. We are fully aware of the notion of sustaining quality treatment and care for people living with HIV/AIDS put forth by the Advisory Council on AIDS in its "Recommended HIV/AIDS Strategies for Hong Kong 2007-2011" but also the challenges ahead with the ever-growing number of patients.

This report summarises and presents the features of HIV/AIDS patients managed by the ITC, so as to shed light on the disease pattern and care received in the locality. Information of 8 years since its operation is organized into themes of clinical, epidemiologic and public health significance. We sincerely welcome comments and suggestions, which would be useful for improving care services for the patients and its documentation. We would also like to take this opportunity to express our sincere gratitude to our partners and collaborators for their unfailing support, without which our services would not have been possible.

Foreword

The drawing board of Integrated Treatment Centre depicted a day treatment centre where dying HIV patients were to receive care which prolonged their lives to a certain extent, sometimes alleviated their pain but which eventually would all fail. That was in 1994 and, technically speaking, a century ago. Indeed it also felt like ancient history, as a mere 5 years later when the Centre was commissioned, a most dramatic turnaround in medicine had happened. Highly active antiretroviral therapy or HAART as is commonly known had become widely available. A miracle in every sense of the word, HAART is now spoken in the same breath as Alexander Fleming's penicillin and Edward Jenner's cowpox vaccine.

However, the early euphoria among us care providers was short-lived, quickly taken over by the realization that the challenge of quality care loomed large in the horizon. Patients' life expectancy had had a quantum leap; so had their expectations and sheer number. Quality care as we knew it would be undergoing a major paradigm shift where hospice and palliative care were to be replaced by timely use of therapy, monitoring of adherence and resistance, and aggressive management of complications. Furthermore, quality itself had become a moving target. HIV medicine was evolving at a rapid but often times erratic pace. In fact, conflicting information was the rule rather than the exception. So called authoritative guidelines meant to address confusion were unfortunately never meant for our population.

Thus emerged the initiative of clinical governance which strived for quality care on a consistent and long term basis. One major pillar of good governance is the quantification of data and benchmarking. Mortality and morbidity figures are carefully tracked, as are various aspects of care such as virologic success, appropriate use of medications, monitoring of disease markers, resistance and adherence. Collectively these data help define quality. Anomalies will identify gaps in need of attention or specially designed research.

Indeed, the role of research cannot be overemphasized. It is another pillar of good clinical governance. Whether it be observational or interventional, research answers questions pertinent to the very population we serve. This cannot be replaced by the most exhaustive literature search or the opinion of the most renowned expert worldwide.

Clinical governance as such is pervasive but actually not sufficient, as it does not take

into account resource allocation or address the pivotal role of an HIV clinic as a ‘prevention’ centre. Integrated Treatment Centre thus also tracks patient characteristics. The ‘new patients’ registry helps benchmark public health intervention. Subtyping of their viruses uncovers clusters in need of focused prevention. Monitoring of primary drug resistance is also useful as a reality check of our adherence program as well as for individual patient care.

It would be a mistake to even think that we have achieved a model of success. Any notion of such forestalls flexibility in our response to the highly dynamic epidemic. Besides, a model can only achieve so far as how its staff is trained and driven. In this vein, staff training has been taken seriously in Integrated Treatment Centre. This actually has extended to our collaborators in Hong Kong and overseas.

The HIV epidemic has caused us unspeakable suffering. But over the years we have witnessed how battles have been won by courage and dedication. In one way or another, this report is a tribute to all the staff of the Centre who have shown unwavering dedication to their work and great compassion to their patients.

Dr. Kenny Chan
Integrated Treatment Centre
July 2007

Technical notes for information sources

New case registry

The new case registry (NCR) is an initiative embarked at ITC in 2001 to collect epidemiologic information for all positive patients newly attending the clinic, for supplementing the HIV/AIDS reporting system in Hong Kong. A standard assessment form was designed to collect data. Information of interest under the NCR embraces several key areas: (a) personal particulars and HIV risk factor, (b) where and when infected with HIV, (c) setting leading to HIV diagnosis, (d) impact of the infection, and (e) access to care. Recent HIV infection under NCR is defined as patient (a) with a last negative HIV antibody test within 12 months prior to the first positive result, and/or (b) with seroconversion illness within 12 months prior to the first positive HIV antibody result. Relevant information is elicited through interview by nurse counselors during the first one to two clinic visits. A registry nurse coordinator is responsible for data validation, form censoring and overall coordination of the NCR. The finalized data is entered by a designated research staff into a database constructed using EPI Info (version 6.0), who also cleans and analyzes the data. The dataset is updated at quarterly intervals.

HIV-1 subtype and primary drug resistance

The first available blood sample after HIV diagnosis of newly attending patients were subjected to subtyping and resistance testing. Viral RNA was extracted from serum or plasma and reverse-transcribed into cDNA. The C2-V3 (539bp) region of env gene and p17 (413bp) region of gag gene, PR and RT regions of pol gene (675bp) gene of HIV-1 was amplified by nested polymerase chain reaction (PCR). Purified PCR products were directly sequenced and analysed using an automatic system (ABI Company). The designation of HIV-1 subtype and CRF is based on matching env gene with the reference strains in the Los Alamos National Laboratory (http://www.hiv.lanl.gov/content/hiv-db/HelpDocs/subtypes-more.html#Recombinants%20and%20Circulating%20Recombinant%20Forms).

Genotypic resistance was defined as the presence of one or more major resistance mutation as specified by the consensus mutation figures of International AIDS Society (IAS)-USA (Fall 2006 update). The accumulation of thymidine analogue-associated mutations (TAM) that causes multi-nNRTI resistance is not counted. The list of

resistance-related mutations for each antiretroviral drug is at Appendix 4. Assessment of potential susceptibility or resistance to each drug was performed by use of resistance interpretation Stanford algorithm. The FASTA files of pol gene of strains were uploaded to the Stanford HIVdb database (http://hivdb6.standford.edu). The results, as of interpretation at time of submission, were classified into the following levels of susceptibility: susceptible (susceptible), low-level resistance (potential low-level resistance, low-level resistance) intermediate resistance (intermediate resistance) and high-level resistance (high-level resistance).

Clinical governance

Since 1999, clinical governance has been pursued for monitoring and evaluating the designated HIV clinical services at ITC. Two methods have been used: firstly periodic chart review and later together with enumeration of clinical governance markers. The latter comprises clinic caseload statistics, risk management indices and clinical effectiveness indicators, which were drawn regularly from a clinical information system that tracks our patient cohort. Different areas of HIV care are covered, including CD4/viral load testing, viral suppression, drug adherence, new AIDS events, default follow up and death. For the yearly data which changes with time, it refers to the point prevalence status as of the end of a year.

Pattern of AIDS-defining illnesses, mortality and hospital admission

This is a stand-alone module purposed to track major morbidity and mortality occurring in HIV/AIDS patients after attending care at ITC. Standardised templates were designed on specific related areas, such as primary and secondary AIDS-defining illnesses, immunologic status, time from HIV diagnosis, death in AIDS/non-AIDS patients, hospital admissions and outcome. Data has been drawn at quarterly and yearly intervals since 2002 (2003 for hospital admissions). The information would be of relevance to assessment of quality of care and health resources planning.

A. Presentation profile of newly attending patients (2001-2006)

Box A1. Basic demography

	2001	2002	2003	2004	2005	2006
	No. (%)					
Total	102	141	109	140	172	227
Sex						
Male	76(74.5%)	116(82.3%)	94(86.2%)	115(82.1%)	141(82.0%)	203(89.4%)
Female	26(25.5%)	25(17.7%)	15(13.8%)	25(17.9%)	31(18.0%)	24(10.6%)
Ethnicity						
Chinese	71(69.6%)	109(77.3%)	90(82.6%)	112(80.0%)	127(73.8%)	140(61.7%)
Non-Chinese	31(30.4%)	32(22.7%)	19(17.4%)	28(20.0%)	45(26.2%)	87(38.3%)
Age (year)						
<=19	2(2.0%)	2(1.4%)	1(0.9%)	4(2.9%)	1(0.6%)	6(2.6%)
20-29	28(27.5%)	39(27.7%)	22(20.2%)	32(22.9%)	40(23.3%)	70(30.8%)
30-39	44(43.1%)	53(37.6%)	49(45.0%)	51(36.4%)	59(34.3%)	90(39.6%)
40-49	17(16.7%)	26(18.4%)	16(14.7%)	28(20.0%)	43(25.0%)	37(16.3%)
>=50	11(10.8%)	21(14.9%)	21(19.3%)	25(17.9%)	29(16.9%)	24(10.6%)
Median (year)	34.82	34.82	36.05	35.85	37.97	33.93
HIV risk factor						
Heterosexual	66(64.7%)	86(61.0%)	57(52.3%)	68(48.6%)	77(44.8%)	86(37.9%)
Men who have sex with men (MSM)	30(29.4%)	41(29.1%)	39(35.8%)	50(35.7%)	73(42.4%)	89(39.2%)
Injecting drug use	6(5.9%)	9(6.4%)	12(11.0%)	21(15.0%)	21(12.2%)	47(20.7%)
Other/undetermined	0(0.0%)	5(3.5%)	1(0.9%)	1(0.7%)	1(0.6%)	5(2.2%)

Box A2. Social attributes and residency in Hong Kong

	2001	2002	2003	2004	2005	2006
	No. (%)					
Total	102	141	109	140	172	227
Marital status						
Married	45(44.1%)	52(36.9%)	36(33.0%)	51(36.4%)	51(29.7%)	72(31.7%)
Widowed/separated/divorced	12(11.8%)	16(11.3%)	13(11.9%)	19(13.6%)	25(14.5%)	26(11.5%)
Single	45(44.1%)	73(51.8%)	60(55.0%)	70(50.0%)	96(55.8%)	129(56.8%)
Education						
No schooling	5(4.9%)	8(5.7%)	2(1.8%)	5(3.6%)	9(5.2%)	6(2.6%)
Primary	17(16.7%)	28(19.9%)	20(18.3%)	39(27.9%)	35(20.3%)	46(20.3%)
Secondary	61(59.8%)	73(51.8%)	71(65.1%)	61(43.6%)	79(45.9%)	114(50.2%)
Tertiary/university or above	19(18.6%)	32(22.7%)	16(14.7%)	35(25.0%)	49(28.5%)	61(26.9%)
Occupation						
Labour	42(41.2%)	38(27.0%)	37(33.9%)	34(24.3%)	34(19.8%)	44(19.4%)
Non-labour	23(22.5%)	38(27.0%)	26(23.9%)	47(33.6%)	57(33.1%)	67(29.5%)
Others	37(36.3%)	65(46.1%)	46(42.2%)	59(42.1%)	81(47.1%)	116(51.1%)
Hong Kong resident						
Yes			101(92.7%)	120(85.7%)	151(87.8%)	162(71.4%)
No			8(7.3%)	20(14.3%)	21(12.2%)	65(28.6%)
Duration of stay in Hong Kong						
<1 year			12(11.0%)	19(13.6%)	25(14.5%)	72(31.7%)
1-7 year			15(13.8%)	20(14.3%)	17(9.9%)	18(7.9%)
>7 years			82(75.2%)	101(72.1%)	130(75.6%)	137(60.4%)

Box A3. HIV diagnosis and referral for care

	2001	2002	2003	2004	2005	2006
	No. (%)					
Total	102	141	109	140	172	227
Primary setting leading to first diagnosis						
HIV disease/symptoms	27(26.5%)	49(34.8%)	25(22.9%)	47(33.6%)	66(38.4%)	66(29.1%)
STD screening/treatment	29(28.4%)	37(26.2%)	30(27.5%)	34(24.3%)	24(14.0%)	37(16.3%)
HIV screening at PCRS	18(17.6%)	19(13.5%)	14(12.8%)	15(10.7%)	23(13.4%)	23(10.1%)
HIV screening for self behavioural risk	9(8.8%)	11(7.8%)	10(9.2%)	14(10.0%)	26(15.1%)	49(21.6%)
Others	19(18.6%)	25(17.7%)	30(27.5%)	30(21.4%)	33(19.2%)	52(22.9%)
Source of referral						
SPP VCT clinics	25(24.5%)	23(16.3%)	17(15.6%)	19(13.6%)	19(11.0%)	27(11.9%)
Other VCT services	23(22.5%)	40(28.4%)	41(37.6%)	46(32.9%)	47(27.3%)	52(22.9%)
Public hospital/clinic	40(39.2%)	60(42.6%)	38(34.9%)	60(42.9%)	78(45.3%)	122(53.7%)
Private hospital/ clinic/laboratories	9(8.8%)	16(11.3%)	12(11.0%)	14(10.0%)	24(14.0%)	26(11.5%)
Others	5(4.9%)	2(1.4%)	1(0.9%)	1(0.7%)	4(2.3%)	0(0.0%)

Box A4. Sexually transmitted diseases and sexual debut

	2001	2002	2003	2004	2005	2006
	No. (%)					
Total	102	141	109	140	172	227
Ever history of STD						
Male						
Yes	35(46.1%)	54(46.6%)	49(53.3%)	58(50.9%)	60(42.9%)	86(42.4%)
No	41(53.9%)	62(53.4%)	43(46.7%)	56(49.1%)	80(57.1%)	117(57.6%)
Female						
Yes	5(19.2%)	8(32.0%)	5(33.3%)	9(36.0%)	11(35.5%)	4(16.7%)
No	21(80.8%)	17(68.0%)	10(66.7%)	16(64.0%)	20(64.5%)	20(83.3%)
Age at first sex (year)						
not a/v	0(0.0%)	2(1.4%)	0(0.0%)	0(0.0%)	5(2.9%)	4(1.8%)
<=19	51(50.0%)	67(47.5%)	49(45.0%)	67(47.9%)	80(46.5%)	105(46.3%)
20-29	48(47.1%)	67(47.5%)	54(49.5%)	68(48.6%)	79(45.9%)	108(47.6%)
30-39	3(2.9%)	4(2.8%)	6(5.5%)	4(2.9%)	7(4.1%)	10(4.4%)
40-49	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(0.6%)	0(0.0%)
>=50	0(0.0%)	1(0.7%)	0(0.0%)	1(0.7%)	0(0.0%)	0(0.0%)
Median (year)	19.5	20	20	20	20	20

Box A5. Sexually transmitted diseases and sexual debut in sexually acquired male

	2001	2002	2003	2004	2005	2006
	No. (%)					
Total	102	141	109	140	172	227
Ever history of STD						
Heterosexual male						
Yes	22(52.4%)	36(58.1%)	26(61.9%)	26(56.5%)	21(46.7%)	34(54.0%)
No	20(47.6%)	26(41.9%)	16(38.1%)	20(43.5%)	24(53.3%)	29(46.0%)
MSM						
Yes	11(36.7%)	16(39.0%)	17(45.9%)	27(54.0%)	35(47.9%)	46(51.7%)
No	19(63.3%)	25(61.0%)	20(54.1%)	23(46.0%)	38(52.1%)	43(48.3%)
Age at first sex (year)						
Heterosexual male						
not a/v	0(0.0%)	1(1.6%)	0(0.0%)	0(0.0%)	2(4.3%)	0(0.0%)
<=19	22(52.4%)	30(48.4%)	22(52.4%)	16(34.8%)	17(37.0%)	28(44.4%)
20-29	18(42.9%)	29(46.8%)	17(40.5%)	26(56.5%)	24(52.2%)	29(46.0%)
30-39	2(4.8%)	2(3.2%)	3(7.1%)	3(6.5%)	2(4.3%)	6(9.5%)
40-49	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(2.2%)	0(0.0%)
>=50	0(0.0%)	0(0.0%)	0(0.0%)	1(2.2%)	0(0.0%)	0(0.0%)
Median (year)	19.0	20.0	19.0	20.5	20.0	20.0
MSM						
not a/v	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(1.1%)
<=19	14(46.7%)	19(46.3%)	16(41.0%)	23(46.0%)	38(52.1%)	44(49.4%)
20-29	15(50.0%)	19(46.3%)	22(56.4%)	26(52.0%)	31(42.5%)	42(47.2%)
30-39	1(3.3%)	2(4.9%)	1(2.6%)	1(2.0%)	4(5.5%)	2(2.2%)
40-49	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
>=50	0(0.0%)	1(2.4%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
Median (year)	20.0	20.0	20.0	20.0	19.0	19.5

Box A6. Suspected source person of contracting HIV

	2001	2002	2003	2004	2005	2006
	No. (%)					
Total	102	141	109	140	171	227
Heterosexual female						
Spouse/regular sex partner	20(83.3%)	17(70.8%)	8(53.3%)	16(72.7%)	24(77.4%)	19(82.6%)
Commercial sex partner	2(8.3%)	2(8.3%)	3(20.0%)	1(4.5%)	3(9.7%)	2(8.7%)
Non-regular, non-commercial sex parnter	2(8.3%)	2(8.3%)	4(26.7%)	0(0.0%)	2(6.5%)	1(4.3%)
Other/undetermined	0(0.0%)	3(12.5%)	0(0.0%)	5(22.7%)	2(6.5%)	1(4.3%)
Heterosexual male						
Spouse/regular sex partner	4(9.5%)	6(9.7%)	11(26.2%)	10(21.7%)	6(13.0%)	9(14.3%)
Commercial sex partner	28(66.7%)	40(64.5%)	18(42.9%)	23(50.0%)	21(45.7%)	26(41.3%)
Non-regular, non-commercial sex parnter	6(14.3%)	13(21.0%)	8(19.0%)	10(21.7%)	7(15.2%)	17(27.0%)
Other/undetermined	4(9.5%)	3(4.8%)	5(11.9%)	3(6.5%)	12(26.1%)	11(17.5%)
Men who have sex with men						
Spouse/regular sex partner	4(13.3%)	9(22.0%)	11(28.2%)	5(10.0%)	16(21.9%)	12(13.5%)
Commercial sex partner	1(3.3%)	1(2.4%)	0(0.0%)	1(2.0%)	2(2.7%)	2(2.2%)
Non-regular, non-commercial sex parnter	23(76.7%)	26(63.4%)	22(56.4%)	38(76.0%)	40(54.8%)	53(59.6%)
Other/undetermined	2(6.7%)	5(12.2%)	6(15.4%)	6(12.0%)	15(20.5%)	22(24.7%)

Box A7. Suspected place of contracting HIV

	2001	2002	2003	2004	2005	2006
	No. (%)					
Total	102	141	109	140	172	227
All						
Hong Kong	55(53.9%)	75(53.2%)	64(58.7%)	74(52.9%)	99(57.6%)	115(50.7%)
Mainland China	25(24.5%)	31(22.0%)	25(22.9%)	33(23.6%)	24(14.0%)	34(15.0%)
Other places	22(21.6%)	35(24.8%)	20(18.3%)	33(23.6%)	49(28.5%)	78(34.4%)
Heterosexual female						
Hong Kong	16(66.7%)	17(70.8%)	9(60.0%)	13(59.1%)	17(54.8%)	11(47.8%)
Mainland China	3(12.5%)	4(16.7%)	3(20.0%)	3(13.6%)	6(19.4%)	7(30.4%)
Other places	5(20.8%)	3(12.5%)	3(20.0%)	6(27.3%)	8(25.8%)	5(21.7%)
Heterosexual male						
Hong Kong	19(45.2%)	22(35.5%)	18(42.9%)	19(41.3%)	26(56.5%)	24(38.1%)
Mainland China	17(40.5%)	25(40.3%)	14(33.3%)	15(32.6%)	11(23.9%)	19(30.2%)
Other places	6(14.3%)	15(24.2%)	10(23.8%)	12(26.1%)	9(19.6%)	20(31.7%)
Men who have sex with men						
Hong Kong	19(63.3%)	32(78.0%)	35(89.7%)	39(78.0%)	52(71.2%)	72(80.9%)
Mainland China	2(6.7%)	1(2.4%)	0(0.0%)	1(2.0%)	4(5.5%)	5(5.6%)
Other places	9(30.0%)	8(19.5%)	4(10.3%)	10(20.0%)	17(23.3%)	12(13.5%)

Box A8. Recent infection within one year of HIV diagnosis

	2001	2002	2003	2004	2005	2006
	No. (%)					
Total	102	141	109	140	172	227
**Recent infection*						
Yes	8(7.9%)	19(13.7%)	13(12.1%)	19(13.6%)	31(18.1%)	23(10.1%)
No	93(92.1%)	120(86.3%)	94(87.9%)	121(86.4%)	140(81.9%)	204(89.9%)
Negative HIV antibody within 1 year						
Yes	4(3.9%)	15(10.6%)	11(10.1%)	15(10.7%)	18(10.5%)	17(7.5%)
No	98(96.1%)	126(89.4%)	98(89.9%)	125(89.3%)	154(89.5%)	210(92.5%)
Seroconversion illness within 1 year						
Yes	4(3.9%)	6(4.3%)	6(5.5%)	12(8.6%)	20(11.6%)	15(6.6%)
No	98(96.1%)	135(95.7%)	103(94.5%)	128(91.4%)	152(88.4%)	212(93.4%)

*(a) a last negative HIV antibody test within 12 months prior to the first positive result, and/or (b) seroconversion illness within 12 months prior to the first positive HIV antibody result.

Box A9. Demographics of recent HIV infection by year of attendance

	2001	2002	2003	2004	2005	2006
	No. (%)					
Total	8	19	13	19	31	23
Sex						
Male	6(75%)	17(89.5%)	9(69.2%)	18(94.7%)	28(90.3%)	20(87.0%)
Female	2(25%)	2(10.5%)	4(30.8%)	1(5.3%)	3(9.7%)	3(13.0%)
Ethnicity						
Chinese	6(75%)	17(89.5%)	9(69.2%)	18(94.7%)	22(71.0%)	19(82.6%)
Non-Chinese	2(25%)	2(10.5%)	4(30.8%)	1(5.3%)	9(29.0%)	4(17.4%)
Age (year)						
<=19	1(12.5%)	0(0.0%)	0(0.0%)	1(5.3%)	0(0.0%)	0(0.0%)
20-29	3(37.5%)	7(36.8%)	2(15.4%)	3(15.8%)	8(25.8%)	8(34.8%)
30-39	3(37.5%)	6(31.6%)	9(69.2%)	7(36.8%)	12(38.7%)	4(17.4%)
40-49	1(12.5%)	2(10.5%)	1(7.7%)	3(15.8%)	9(29.0%)	7(30.4%)
>=50	0(0.0%)	4(21.1%)	1(7.7%)	5(26.3%)	2(6.5%)	4(17.4%)
Median (year)	30.21	31.95	34.59	38.75	34.56	38.05
HIV risk factor						
Heterosexual	5(62.5%)	8(42.1%)	5(38.5%)	9(47.4%)	6(19.4%)	12(52.2%)
Men who have sex with men (MSM)	3(37.5%)	10(52.6%)	8(61.5%)	10(52.6%)	23(74.2%)	10(43.5%)
Other/undetermined	0(0.0%)	1(5.3%)	0(0.0%)	0(0.0%)	2(6.5%)	1(4.3%)

Box A10. Self perception of risk of contracting HIV before diagnosis

	2001	2002	2003	2004	2005	2006
	No. (%)					
By gender						
Male	76	116	94	115	141	203
High risk	9(11.8%)	12(10.3%)	9(9.6%)	10(8.7%)	20(14.2%)	19(9.4%)
Moderate risk	12(15.8%)	11(9.5%)	11(11.7%)	12(10.4%)	25(17.7%)	38(18.7%)
Low risk	17(22.4%)	52(44.8%)	47(50.0%)	47(40.9%)	63(44.7%)	75(36.9%)
No risk	32(42.1%)	29(25.0%)	20(21.3%)	23(20.0%)	14(9.9%)	46(22.7%)
Don't know	6(7.9%)	12(10.3%)	7(7.4%)	23(20.0%)	19(13.5%)	25(12.3%)
Female	26	25	15	25	31	24
High risk	2(7.7%)	1(4.0%)	1(6.7%)	2(8.0%)	3(9.7%)	0(0.0%)
Moderate risk	0(0.0%)	0(0.0%)	1(6.7%)	1(4.0%)	4(12.9%)	4(16.7%)
Low risk	3(11.5%)	4(16.0%)	6(40.0%)	6(24.0%)	13(41.9%)	8(33.3%)
No risk	19(73.1%)	14(56.0%)	4(26.7%)	6(24.0%)	6(19.4%)	9(37.5%)
Don't know	2(7.7%)	6(24.0%)	3(20.0%)	10(40.0%)	5(16.1%)	3(12.5%)
By HIV risk factor						
Heterosexual female	24	24	15	22	31	23
High risk	2(8.3%)	1(4.2%)	1(6.7%)	2(9.1%)	3(9.7%)	0(0.0%)
Moderate risk	0(0.0%)	0(0.0%)	1(6.7%)	1(4.5%)	4(12.9%)	4(17.4%)
Low risk	2(8.3%)	3(12.5%)	6(40.0%)	5(22.7%)	13(41.9%)	8(34.8%)
No risk	18(75.0%)	14(58.3%)	4(26.7%)	6(27.3%)	6(19.4%)	9(39.1%)
Don't know	2(8.3%)	6(25.0%)	3(20.0%)	8(36.4%)	5(16.1%)	2(8.7%)
Heterosexual male	42	62	42	46	46	63
High risk	3(7.1%)	5(8.1%)	2(4.8%)	2(4.3%)	4(8.7%)	2(3.2%)
Moderate risk	3(7.1%)	5(8.1%)	3(7.1%)	2(4.3%)	4(8.7%)	8(12.7%)
Low risk	9(21.4%)	27(43.5%)	22(52.4%)	20(43.5%)	19(41.3%)	26(41.3%)
No risk	23(54.8%)	17(27.4%)	12(28.6%)	12(26.1%)	8(17.4%)	15(23.8%)
Don't know	4(9.5%)	8(12.9%)	3(7.1%)	10(21.7%)	11(23.9%)	12(19.0%)
MSM	30	41	39	50	73	89
High risk	6(20.0%)	5(12.2%)	4(10.3%)	7(14.0%)	13(17.8%)	10(11.2%)
Moderate risk	8(26.7%)	6(14.6%)	8(20.5%)	10(20.0%)	18(24.7%)	25(28.1%)
Low risk	8(26.7%)	22(53.7%)	22(56.4%)	19(38.0%)	34(46.6%)	34(38.2%)
No risk	8(26.7%)	7(17.1%)	2(5.1%)	8(16.0%)	4(5.5%)	14(15.7%)
Don't know	0(0.0%)	1(2.4%)	3(7.7%)	6(12.0%)	4(5.5%)	6(6.7%)
Injecting drug user	6	9	12	21	21	47
High risk	0(0.0%)	1(11.1%)	3(25.0%)	1(4.8%)	3(14.3%)	7(14.9%)
Moderate risk	1(16.7%)	0(0.0%)	0(0.0%)	0(0.0%)	3(14.3%)	5(10.6%)
Low risk	1(16.7%)	4(44.4%)	3(25.0%)	9(42.9%)	10(47.6%)	15(31.9%)
No risk	2(33.3%)	2(22.2%)	5(41.7%)	2(9.5%)	2(9.5%)	14(29.8%)
Don't know	2(33.3%)	2(22.2%)	1(8.3%)	9(42.9%)	3(14.3%)	6(12.8%)

Box A11. Access to HIV care and baseline CD4

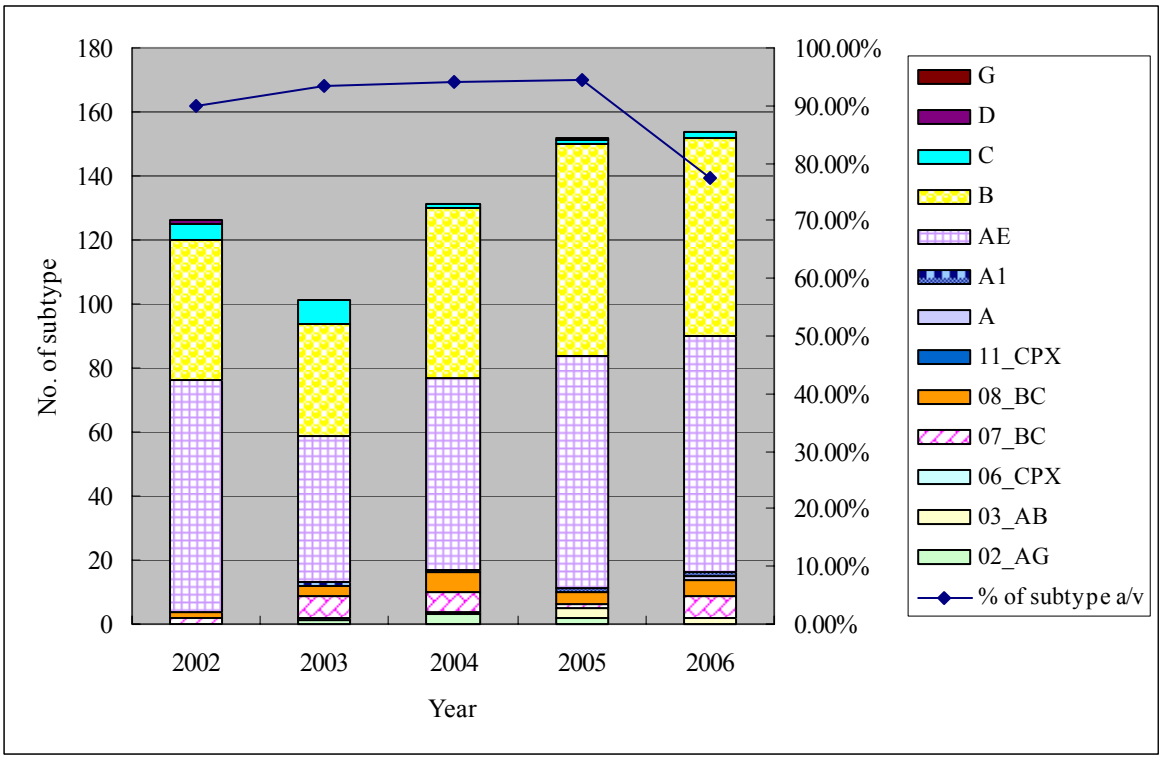
	2001	2002	2003	2004	2005	2006
	No. (%)					
Total	102	141	108	139	172	227
Time lag from diagnosis to designated HIV care (month)						
0-6	98(96.1%)	129(91.5%)	101(93.5%)	127(91.4%)	152(88.4%)	200(89.7%)
>6-12	0(0.0%)	3(2.1%)	2(1.9%)	1(0.7%)	7(4.1%)	2(0.9%)
>12-24	0(0.0%)	4(2.8%)	2(1.9%)	1(0.7%)	3(1.7%)	3(1.3%)
>24-60	3(2.9%)	4(2.8%)	3(2.8%)	5(3.6%)	5(2.9%)	9(4.0%)
>60	1(1.0%)	1(0.7%)	0(0.0%)	5(3.6%)	5(2.9%)	9(4.0%)
Mean	2.74	3.04	2.00	7.77	5.41	6.57
SD	12.18	9.95	5.16	30.34	17.96	22.34
Median	0.43	0.50	0.50	0.53	0.56	0.63
Inter-quartile range	0.40	0.72	0.60	0.73	0.78	0.79
Total	95	135	102	131	159	202
Baseline CD4 at HIV diagnosis (/μl)						
<50	22(23.2%)	29(21.5%)	19(18.6%)	24(18.3%)	35(22.0%)	42(20.8%)
50-199	12(12.6%)	27(20.0%)	19(18.6%)	30(22.9%)	36(22.6%)	44(21.8%)
200-349	22(23.2%)	35(25.9%)	30(29.4%)	34(26.0%)	31(19.5%)	52(25.7%)
350-499	21(22.1%)	25(18.5%)	15(14.7%)	22(16.8%)	24(15.1%)	39(19.3%)
>=500	18(18.9%)	19(14.1%)	19(18.6%)	21(16.0%)	33(20.8%)	25(12.4%)
Mean	303.73	261.54	288.56	276.27	299.72	262.53
SD	233.80	204.71	232.20	232.87	343.48	202.29
Median	313	253	233.5	251	223	248
Inter-quartile range	405	350	332.5	325	396	332

Box A12. HIV status of spouse/regular partner and likely primary source for infected couples

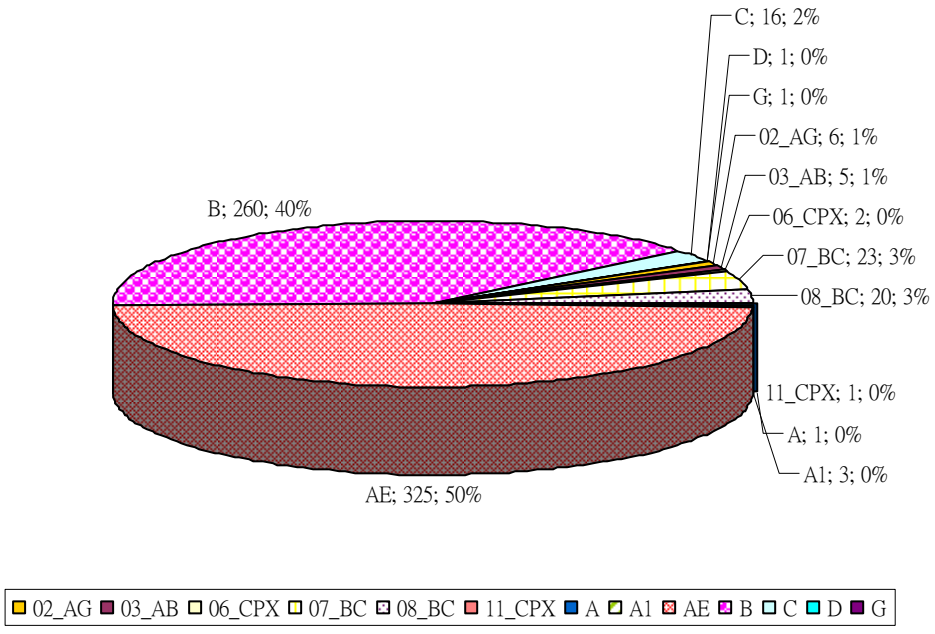
	2001	2002	2003	2004	2005	2006
	No. (%)					
HIV status of spouse/regular partner total	102	141	109	140	172	227
Positive	29(28.4%)	35(24.8%)	28(25.7%)	26(18.6%)	48(27.9%)	45(19.8%)
Negative	22(21.6%)	31(22.0%)	21(19.3%)	41(29.3%)	30(17.4%)	51(22.5%)
Unknown	31(30.4%)	49(34.8%)	38(34.9%)	58(41.4%)	58(33.7%)	96(42.3%)
Not applicable	20(19.6%)	26(18.4%)	22(20.2%)	15(10.7%)	36(20.9%)	35(15.4%)
Likely primary source of HIV for positive couple						
Male	16	24	23	17	33	36
Client	7(43.8%)	11(45.8%)	9(39.1%)	5(29.4%)	13(39.4%)	9(25.0%)
Spouse/regular partner	2(12.5%)	7(29.2%)	9(39.1%)	7(41.2%)	7(21.2%)	15(41.7%)
Undetermined	5(31.3%)	6(25.0%)	4(17.4%)	5(29.4%)	12(36.4%)	9(25.0%)
Both from others	2(12.5%)	0(0.0%)	1(4.3%)	0(0.0%)	1(3.0%)	3(8.3%)
Female	13	11	5	9	15	9
Client	0(0.0%)	0(0.0%)	0(0.0%)	1(11.1%)	1(6.7%)	0(0.0%)
Spouse/regular partner	13(100.0%)	10(90.9%)	4(80.0%)	6(66.7%)	13(86.7%)	9(100.0%)
Undetermined	0(0.0%)	1(9.1%)	1(20.0%)	1(11.1%)	1(6.7%)	0(0.0%)
Both from others	0(0.0%)	0(0.0%)	0(0.0%)	1(11.1%)	0(0.0%)	0(0.0%)
Heterosexual male	21	24	11	16	26	22
Client	7(33.3%)	10(41.7%)	4(36.4%)	3(18.8%)	8(30.8%)	7(31.8%)
Spouse/regular partner	14(66.7%)	13(54.2%)	5(45.5%)	10(62.5%)	15(57.7%)	13(59.1%)
Undetermined	0(0.0%)	1(4.2%)	2(18.2%)	2(12.5%)	3(11.5%)	1(4.5%)
Both from others	0(0.0%)	0(0.0%)	0(0.0%)	1(6.3%)	0(0.0%)	1(4.5%)
MSM	8	9	16	8	20	12
Client	0(0.0%)	0(0.0%)	4(25.0%)	1(12.5%)	5(25.0%)	1(8.3%)
Spouse/regular partner	1(12.5%)	4(44.4%)	8(50.0%)	3(37.5%)	4(20.0%)	5(41.7%)
Undetermined	5(62.5%)	5(55.6%)	3(18.8%)	4(50.0%)	10(50.0%)	4(33.3%)
Both from others	2(25.0%)	0(0.0%)	1(6.3%)	0(0.0%)	1(5.0%)	2(16.7%)

B. Epidemiologic significance per HIV-1 subtype and primary drug resistance (2002-2006)

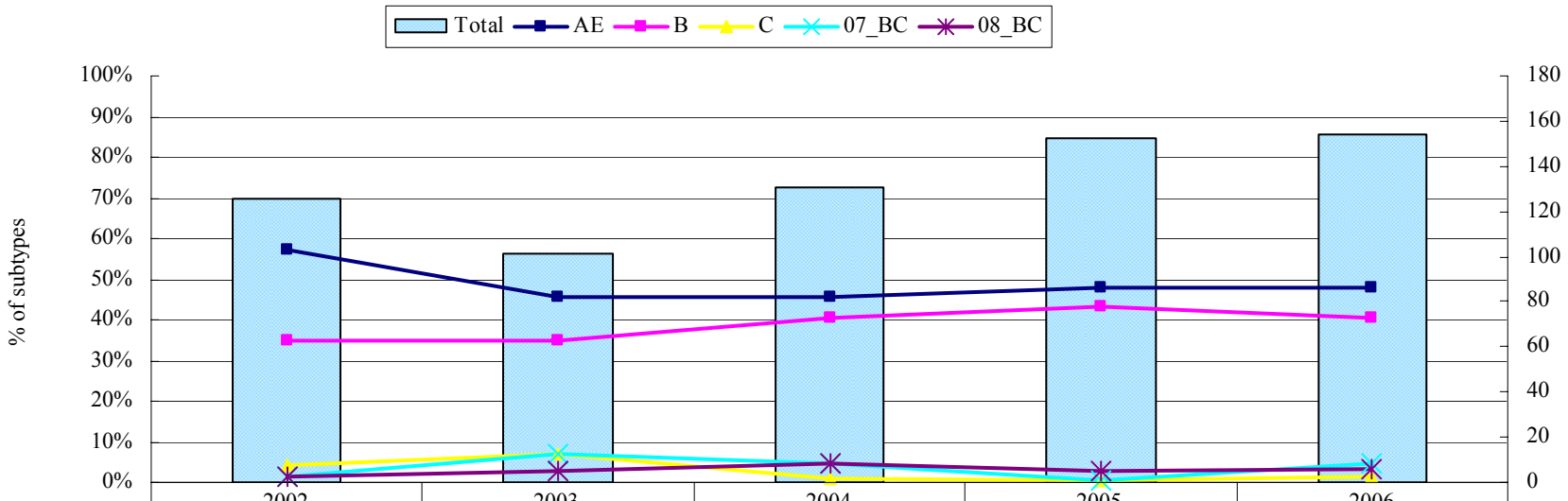
Box B1. Distribution of HIV-1 subtypes across year of HIV diagnosis



Box B2. Overall distribution of HIV-1 subtypes from 2002 to 2006



Box B3. Prevalence of HIV-1 subtypes across year of HIV diagnosis



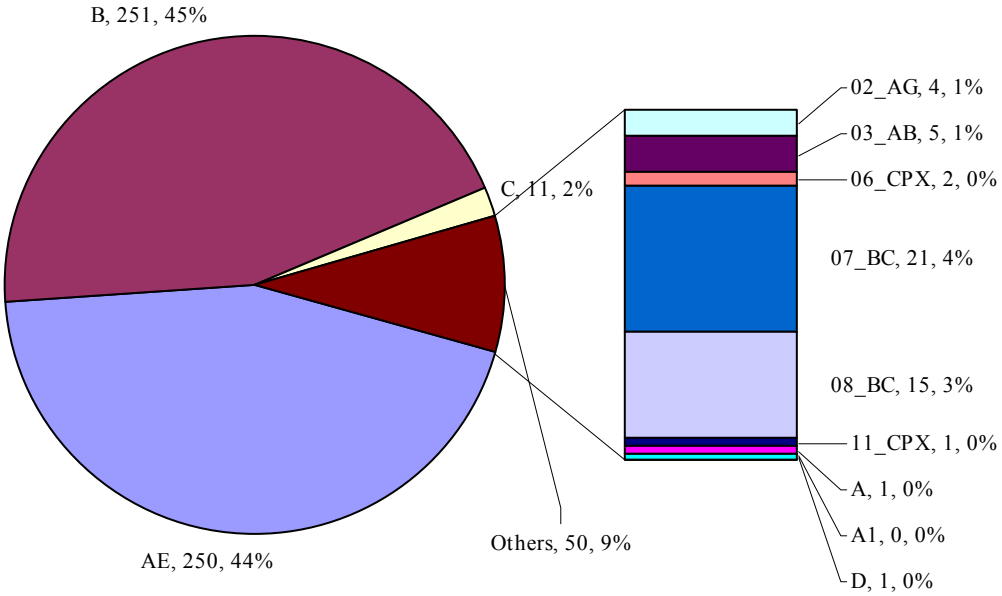
	2002	2003	2004	2005	2006
Total	126	101	131	152	154
AE	57%	46%	46%	48%	48%
B	35%	35%	40%	43%	40%
C	4%	7%	1%	1%	1%
07_BC	2%	7%	5%	1%	5%
08_BC	2%	3%	5%	3%	3%

Box B4. Proportion of different gender, ethnicity and HIV risk factor within each HIV-1 subtype (2002 to 2006, n= 664)

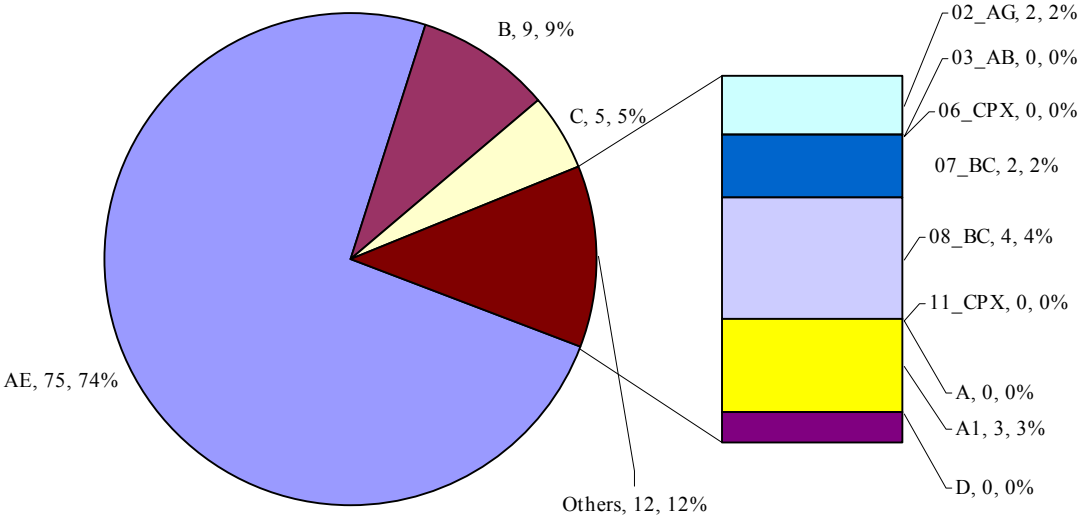
	AE	B	C	02_AG	03_AB	06_CPX	07_BC	08_BC	11_CPX	A	A1	D
Total no.	325	260	16	6	5	2	23	20	1	1	3	1
Gender												
F	75 (23.1%)	9 (3.5%)	5 (31.3%)	2 (33.3%)	0 (0.0%)	0 (0.0%)	2 (8.7%)	4 (20.0%)	0 (0.0%)	0 (0.0%)	3 (100.0%)	0 (0.0%)
M	250 (76.9%)	251 (96.5%)	11 (68.8%)	4 (66.7%)	5 (100.0%)	2 (100.0%)	21 (91.3%)	15 (75.0%)	1 (100.0%)	1 (100.0%)	0 (0.0%)	1 (100.0%)
Ethnicity												
Chinese	222 (68.3%)	238 (91.5%)	3 (18.8%)	3 (50.0%)	4 (80.0%)	1 (50.0%)	21 (91.3%)	11 (55.0%)	1 (100.0%)	0 (0.0%)	1 (33.3%)	0 (0.0%)
Non-Chinese	103 (31.7%)	22 (8.5%)	13 (81.3%)	3 (50.0%)	1 (20.0%)	1 (50.0%)	2 (8.7%)	8 (40.0%)	0 (0.0%)	1 (100.0%)	2 (66.7%)	1 (100.0%)
HIV risk												
Heterosexual	222 (68.3%)	49 (18.8%)	13 (81.3%)	6 (100.0%)	1 (20.0%)	2 (100.0%)	6 (26.1%)	14 (70.0%)	1 (100.0%)	1 (100.0%)	3 (100.0%)	1 (100.0%)
Men who have sex with men	35 (10.8%)	209 (80.4%)	1 (6.3%)	0 (0.0%)	4 (80.0%)	0 (0.0%)	2 (8.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Injecting drug use	68 (20.9%)	0 (0.0%)	1 (6.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	14 (60.9%)	5 (25.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Undetermined	0 (0.0%)	2 (0.8%)	1 (6.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (4.3%)	1 (5.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Others (Blood, 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%)	0 (0.0%)	0 (0.0%)

Box B5. Distribution of HIV-1 subtypes by gender (2002-2006)

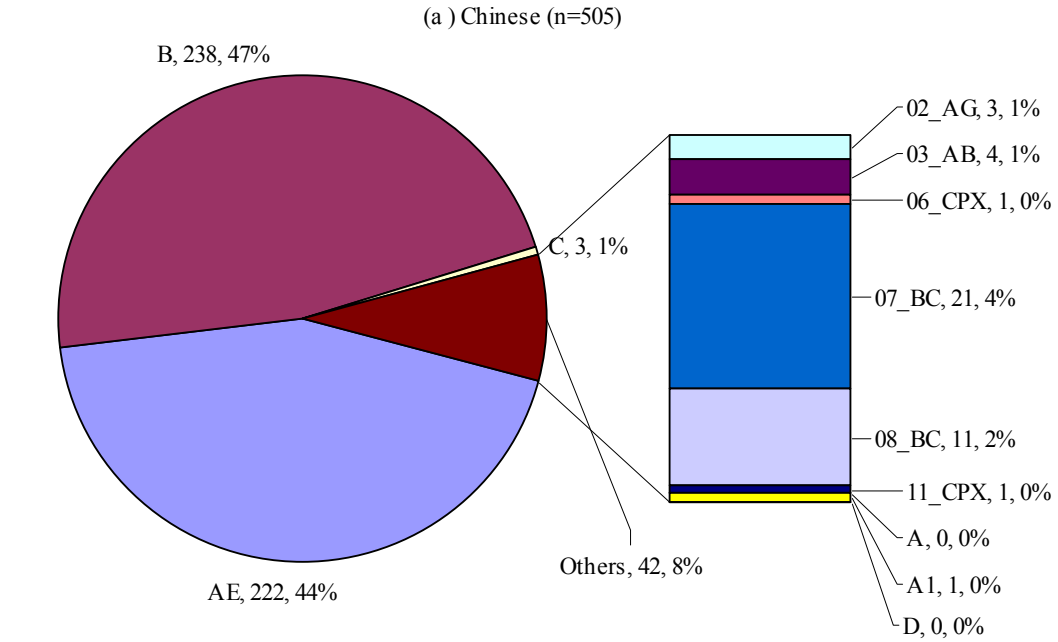
(a) Male (n=562)

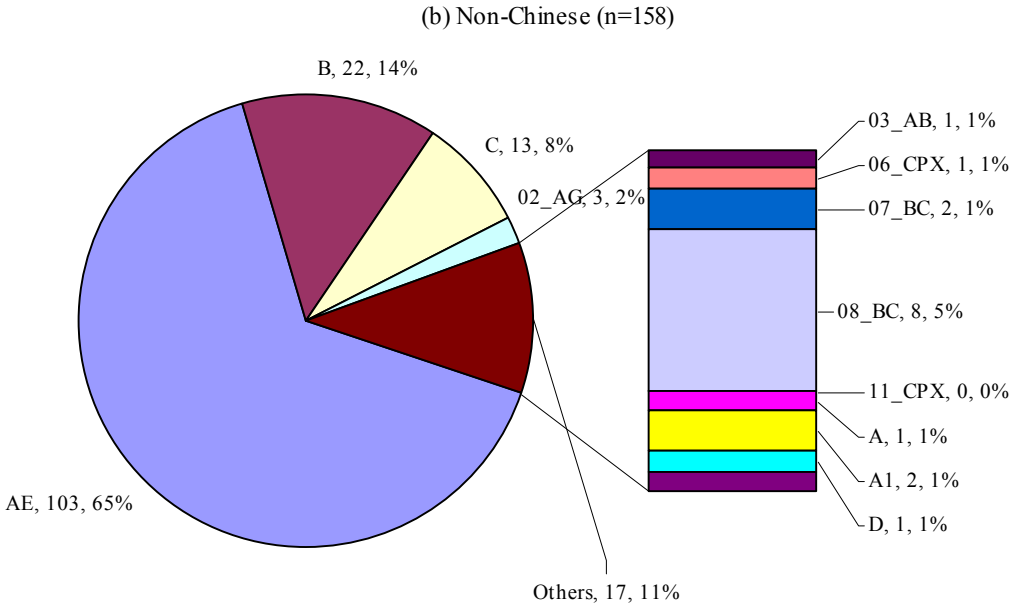


(b) Female (n=101)



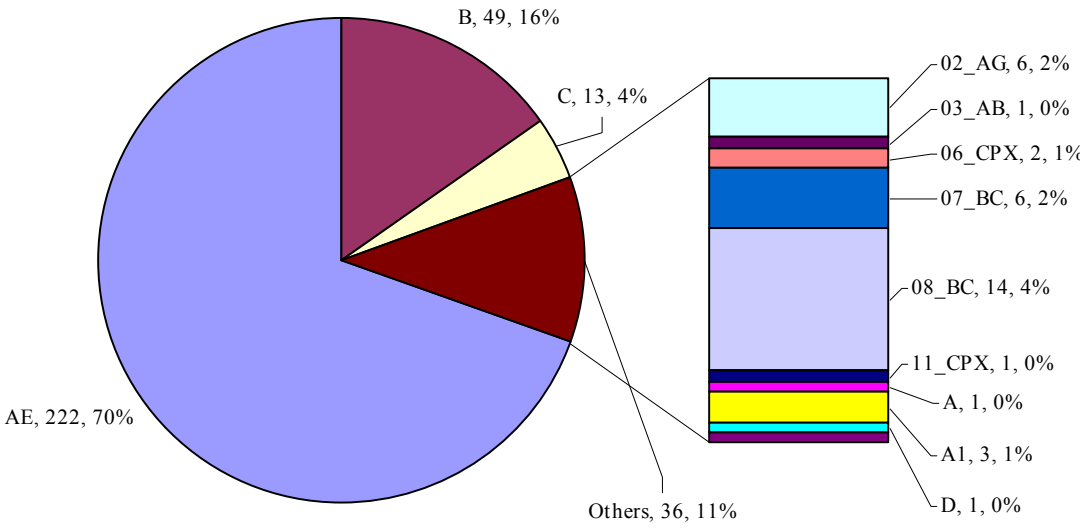
Box B6. Distribution of HIV-1 subtypes by ethnicity (2002-2006)



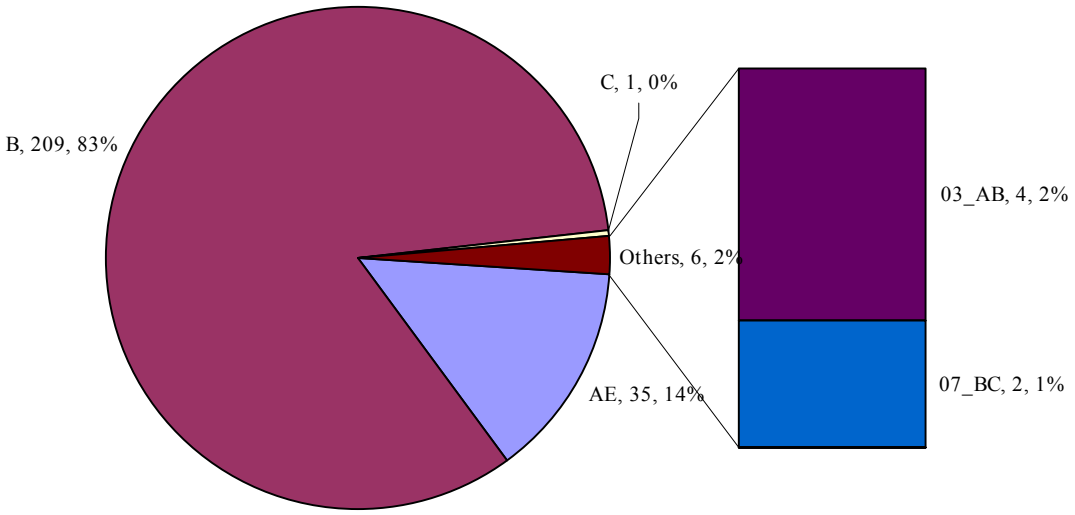


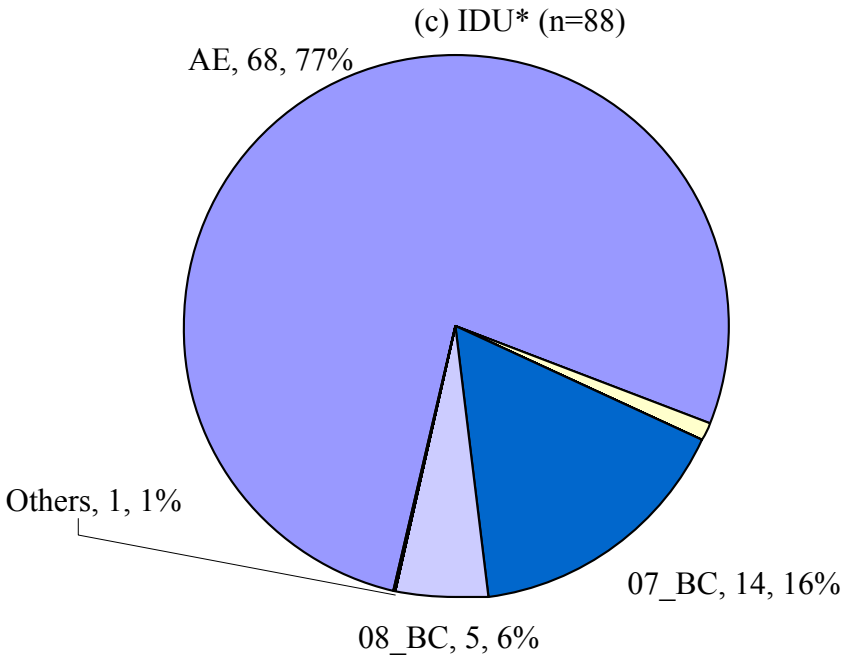
Box B7. Distribution of HIV-1 subtypes by HIV risk factor (2002-2006)

(a) Heterosexually transmitted cases (n=320)



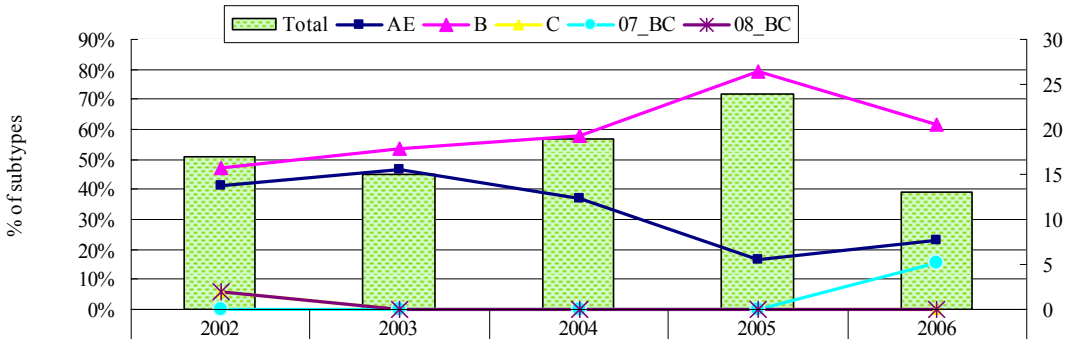
(b) MSM (n=251)





* HIV cases with primary risk for HIV infection as injecting drug use

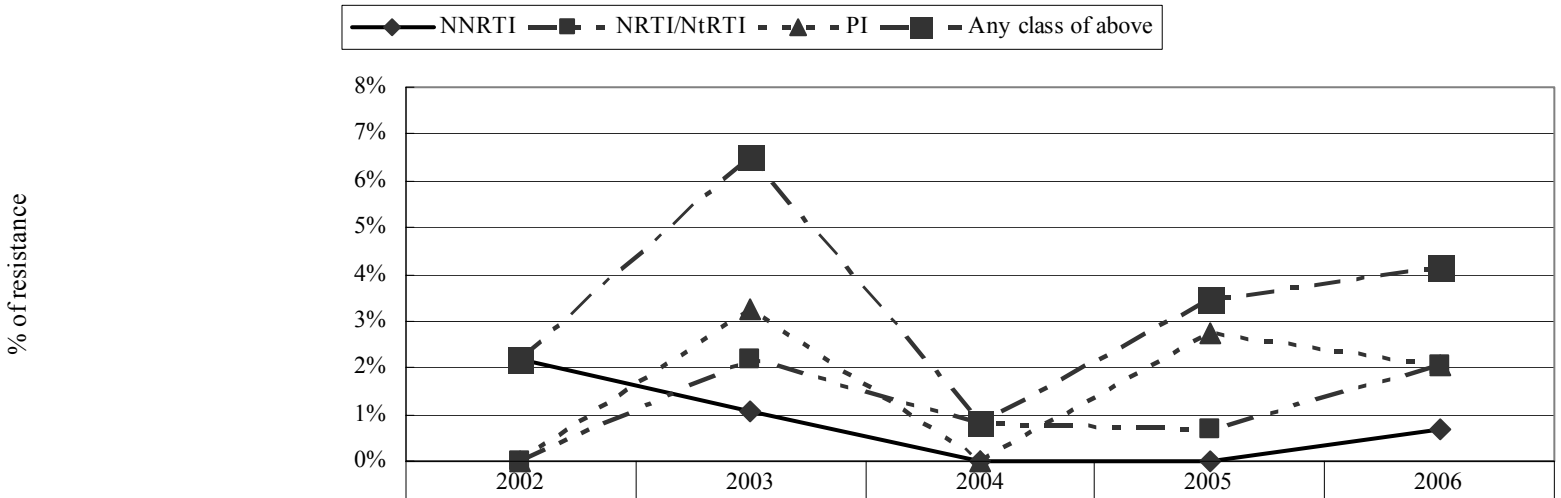
Box B8. Prevalence of HIV-1 subtype among recent HIV infections by year of HIV diagnosis



	2002	2003	2004	2005	2006
Total	17	15	19	24	13
AE	41%	47%	37%	17%	23%
B	47%	53%	58%	79%	62%
C	6%	0%	0%	0%	0%
07_BC	0%	0%	0%	0%	15%
08_BC	6%	0%	0%	0%	0%

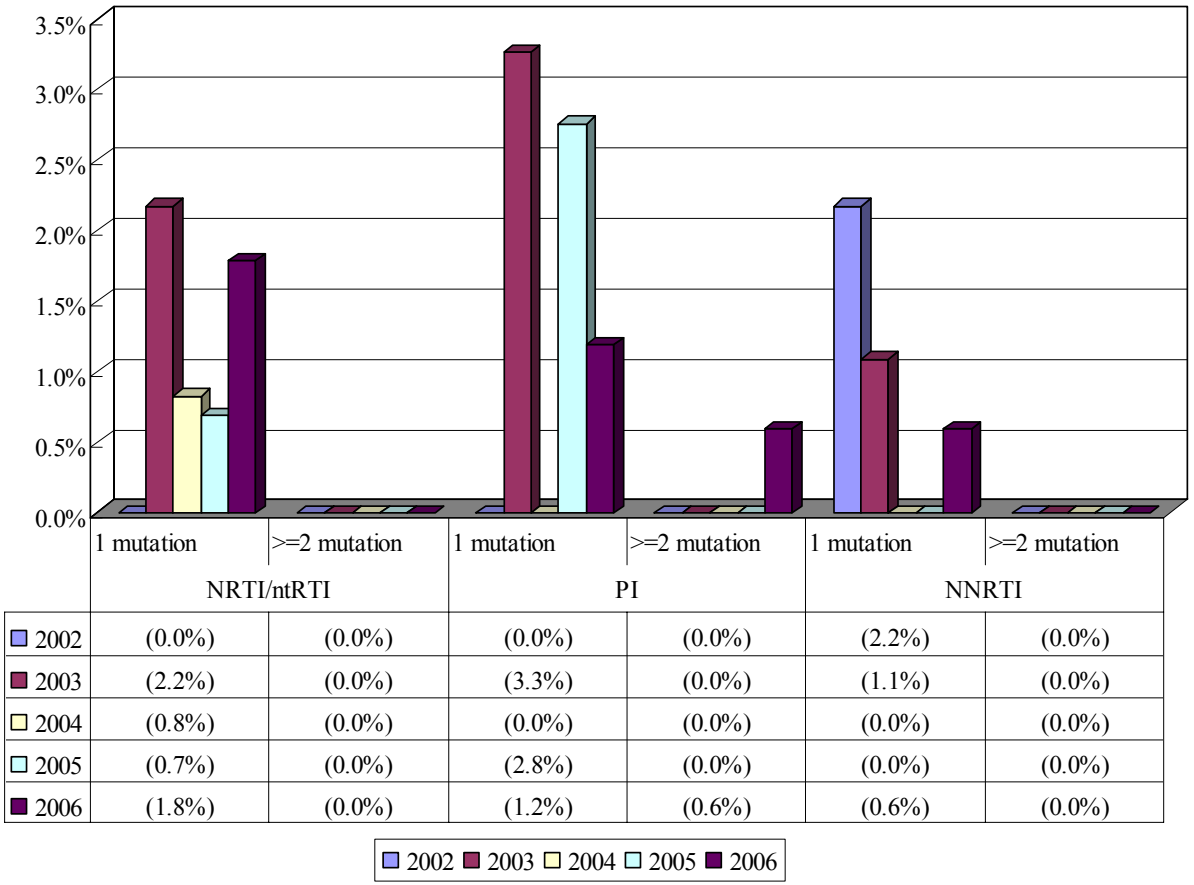
Year of diagnosis

Box B9. Prevalence of resistance to different drug classes by year of HIV diagnosis based on consensus mutation figures of the IAS-USA



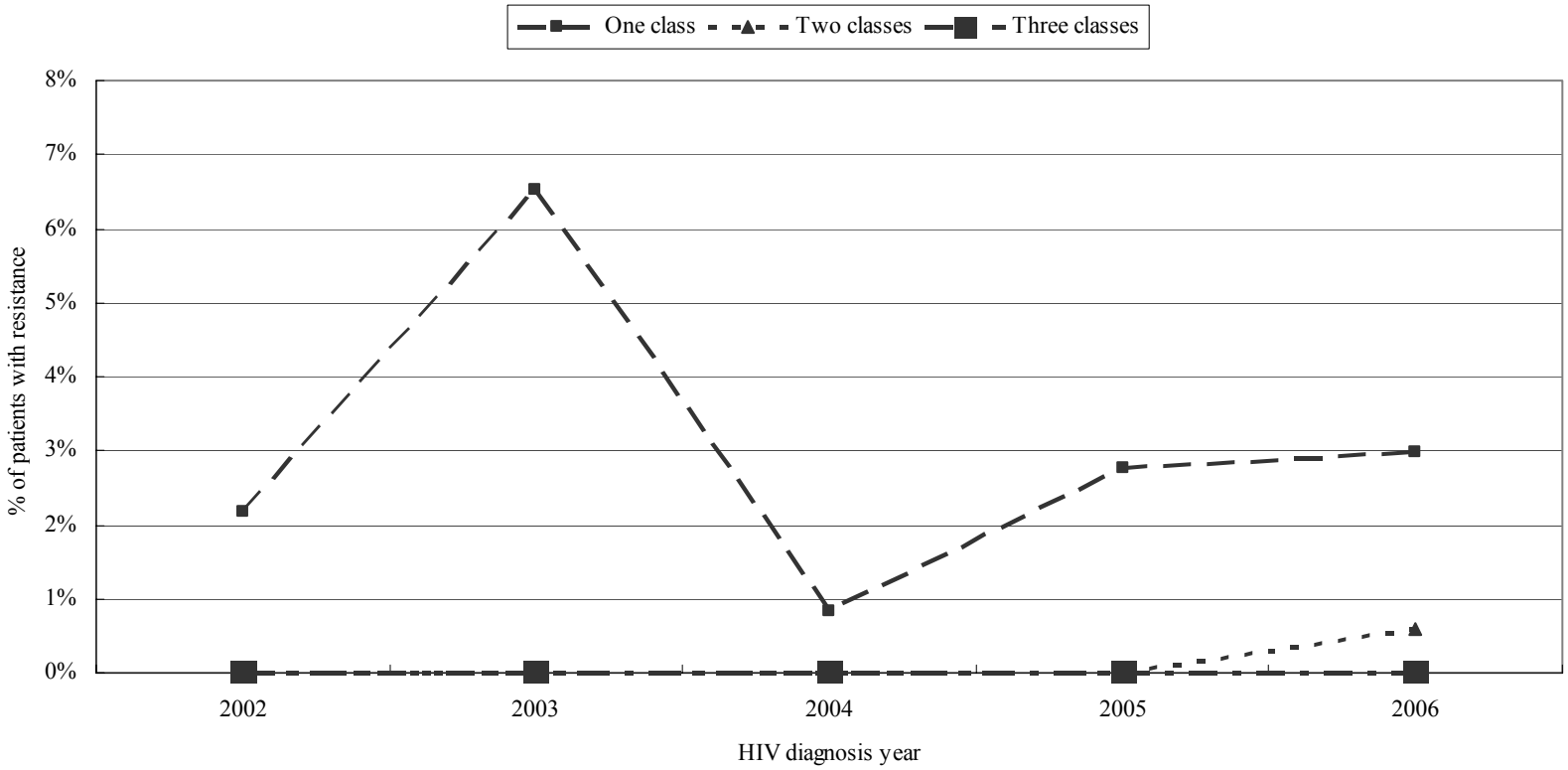
	2002	2003	2004	2005	2006
NNRTI	2.17%	1.09%	0.00%	0.00%	0.69%
NRTI/NtRTI	0.00%	2.17%	0.83%	0.69%	2.07%
PI	0.00%	3.26%	0.00%	2.76%	2.07%
Any class of above	2.17%	6.52%	0.83%	3.45%	4.14%
Total no of patients tested	46	92	121	145	168
No. of patient diagnosis	140	108	139	161	198
% of patients tested	32.86%	85.19%	87.05%	90.06%	84.85%

Box B10. Distribution of one or more mutations to different drug classes by year of HIV diagnosis



	NRTI/ntRTI		PI		NNRTI	
	1 mutation	>=2 mutation	1 mutation	>=2 mutation	1 mutation	>=2 mutation
2002	(0.0%)	(0.0%)	(0.0%)	(0.0%)	(2.2%)	(0.0%)
2003	(2.2%)	(0.0%)	(3.3%)	(0.0%)	(1.1%)	(0.0%)
2004	(0.8%)	(0.0%)	(0.0%)	(0.0%)	(0.0%)	(0.0%)
2005	(0.7%)	(0.0%)	(2.8%)	(0.0%)	(0.0%)	(0.0%)
2006	(1.8%)	(0.0%)	(1.2%)	(0.6%)	(0.6%)	(0.0%)

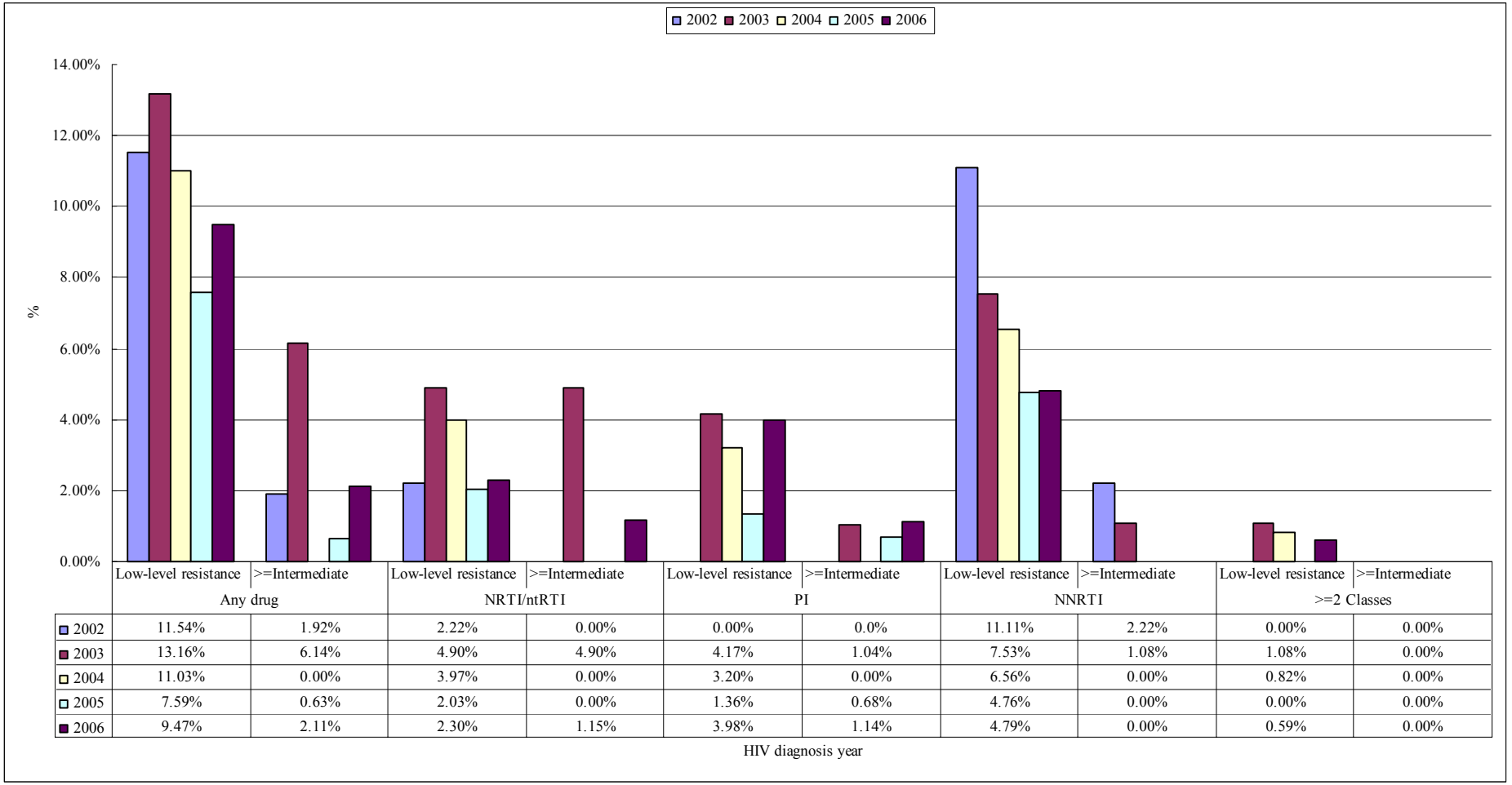
Box B11. Prevalence of resistance categorised by number of antiretroviral classes compromised across year of diagnosis based on consensus mutation figures of the IAS-USA



Box B12. Prevalence of resistance to specific drugs in all patients based on consensus mutation figures of the IAS-USA

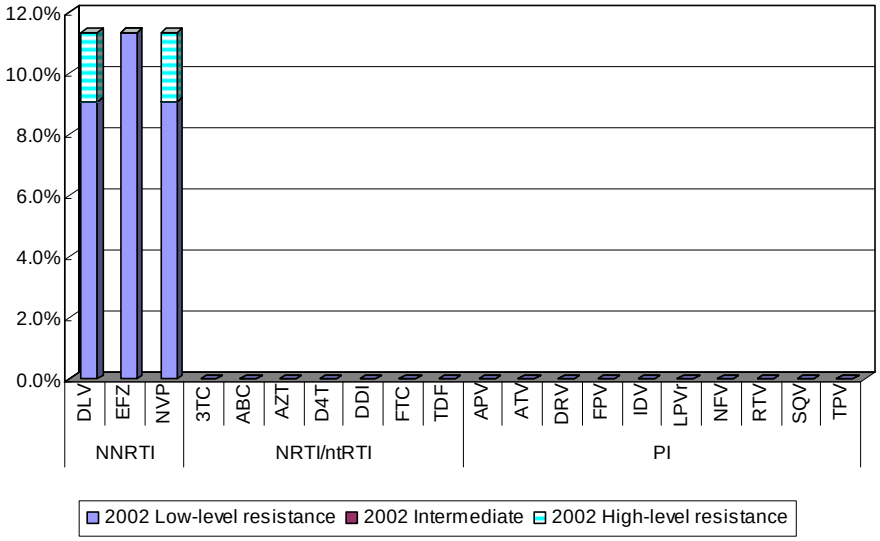
Total no. of patients tested	2002		2003		2004		2005		2006	
	46		92		121		145		168	
NRTI/ntRTI										
3TC	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
ABC	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	1	(0.6%)
AZT	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
D4T	0	(0.0%)	2	(2.2%)	1	(0.8%)	1	(0.7%)	2	(1.2%)
DDI/DDI-EC	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
TDF	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
Any within NRTI/ntRTI	0	(0.0%)	2	(2.2%)	1	(0.8%)	1	(0.7%)	3	(1.8%)
PI										
APV	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
ATV	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
IDV	0	(0.0%)	3	(3.3%)	0	(0.0%)	2	(1.4%)	3	(1.8%)
LPVr	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
NFV	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	1	(0.6%)
RTV	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
SQV	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
TPV	0	(0.0%)	0	(0.0%)	0	(0.0%)	2	(1.4%)	0	(0.0%)
Any within PI	0	(0.0%)	3	(3.3%)	0	(0.0%)	4	(2.8%)	3	(1.8%)
NNRTI										
DLV	1	(2.2%)	1	(1.1%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
EFZ	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
NVP	0	(0.0%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	1	(0.6%)
Any within NNRTI	1	(2.2%)	1	(1.1%)	0	(0.0%)	0	(0.0%)	1	(0.6%)

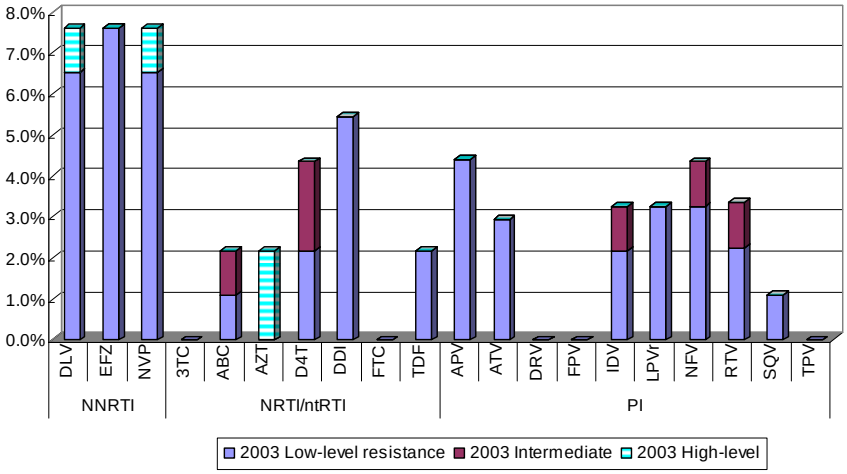
Box B13. Proportion of patients with predicted reduced drug susceptibility by Stanford HIVdb algorithm

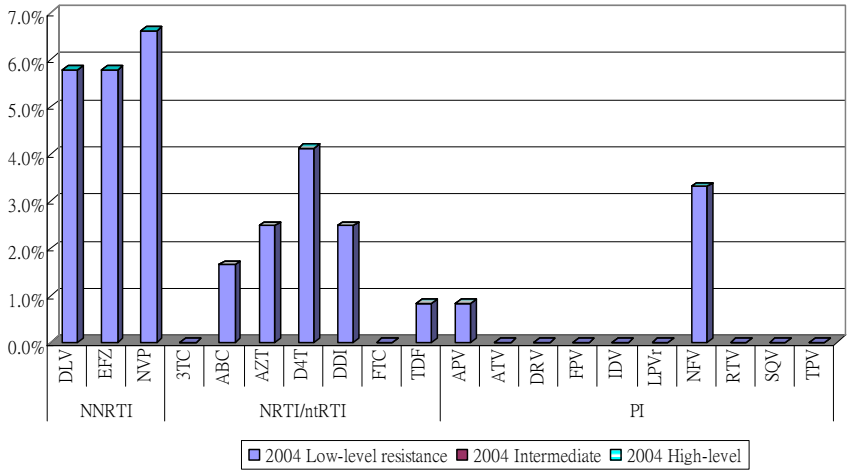


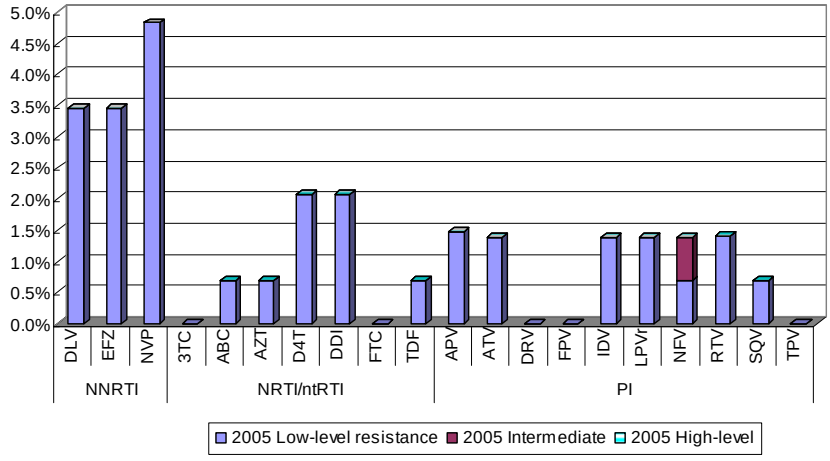
	Any drug		NRTI/ntRTI		PI		NNRTI		>=2 Classes	
	Low-level resistance	>=Intermediate	Low-level resistance	>=Intermediate	Low-level resistance	>=Intermediate	Low-level resistance	>=Intermediate	Low-level resistance	>=Intermediate
2002	11.54%	1.92%	2.22%	0.00%	0.00%	0.0%	11.11%	2.22%	0.00%	0.00%
2003	13.16%	6.14%	4.90%	4.90%	4.17%	1.04%	7.53%	1.08%	1.08%	0.00%
2004	11.03%	0.00%	3.97%	0.00%	3.20%	0.00%	6.56%	0.00%	0.82%	0.00%
2005	7.59%	0.63%	2.03%	0.00%	1.36%	0.68%	4.76%	0.00%	0.00%	0.00%
2006	9.47%	2.11%	2.30%	1.15%	3.98%	1.14%	4.79%	0.00%	0.59%	0.00%

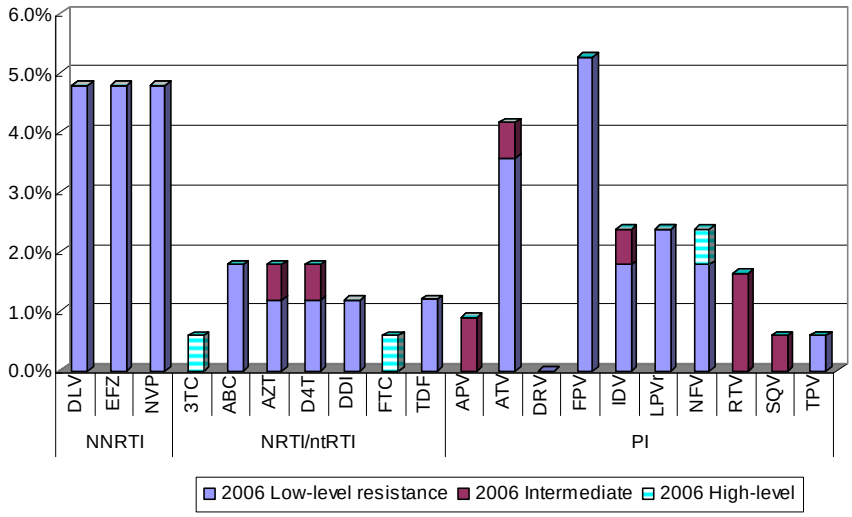
Box B14. Predicted susceptibility of viruses to specific drugs by Stanford algorithm by year of HIV diagnosis (2002-2006)






7.0%
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
DLV
EFZ
NVP
3TC
ABC
AZT
D4T
DDI
FTC
TDF
APV
ATV
DRV
FPV
IDV
LPVr
NFV
RTV
SQV
TPV
NNRTI
NRTI/ntRTI
PI
2004 Low-level resistance
2004 Intermediate
2004 High-level


5.0%
4.5%
4.0%
3.5%
3.0%
2.5%
2.0%
1.5%
1.0%
0.5%
0.0%
DLV
EFZ
NVP
3TC
ABC
AZT
D4T
DDI
FTC
TDF
APV
ATV
DRV
FPV
IDV
LPVr
NFV
RTV
SQV
TPV
NNRTI
NRTI/ntRTI
PI
2005 Low-level resistance
2005 Intermediate
2005 High-level


6.0%
5.0%
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DLV
EFZ
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3TC
ABC
AZT
D4T
DDI
FTC
TDF
APV
ATV
DRV
FPV
IDV
LPVr
NFV
RTV
SQV
TPV
NNRTI
NRTI/ntRTI
PI
2006 Low-level resistance
2006 Intermediate
2006 High-level

C. Clinical governance of new, active and cumulative HIV/AIDS patients (2002-2006)

Box C1. Demography of *active HIV/AIDS patients

	2002	2003	2004	2005	2006
	No. (%)				
Total	605	698	796	919	1089
Sex					
Male	495(81.8%)	576(82.5%)	656(82.4%)	758(82.5%)	916(84.1%)
Female	110(18.2%)	122(17.5%)	140(17.6%)	161(17.5%)	173(15.9%)
Ethnicity					
Chinese	491(81.2%)	569(81.5%)	655(82.3%)	755(82.2%)	859(78.9%)
Non-Chinese	114(18.8%)	129(18.5%)	141(17.7%)	164(17.8%)	230(21.1%)
Age (year)					
<=19	3(0.5%)	1(0.1%)	3(0.4%)	1(0.1%)	1(0.1%)
20-29	76(12.6%)	82(11.7%)	82(10.3%)	77(8.4%)	111(10.2%)
30-39	246(40.7%)	274(39.3%)	300(37.7%)	343(37.3%)	395(36.3%)
40-49	187(30.9%)	222(31.8%)	264(33.2%)	308(33.5%)	363(33.3%)
>=50	93(15.4%)	119(17.0%)	147(18.5%)	190(20.7%)	219(20.1%)
Median (year)	39	39	40	41	40
HIV risk factor					
Heterosexual	401(66.3%)	447(64.0%)	491(61.7%)	553(60.2%)	606(55.6%)
Men who have sex with men (MSM)	171(28.3%)	206(29.5%)	244(30.7%)	307(33.4%)	386(35.4%)
Injecting drug use	16(2.6%)	26(3.7%)	42(5.3%)	41(4.5%)	80(7.3%)
Other/undetermined	17(2.8%)	19(2.7%)	19(2.4%)	18(2.0%)	17(1.6%)

*patients who attended one or more medical follow up in the preceding 1 year

Box C2. Latest immunologic and disease status of active patients

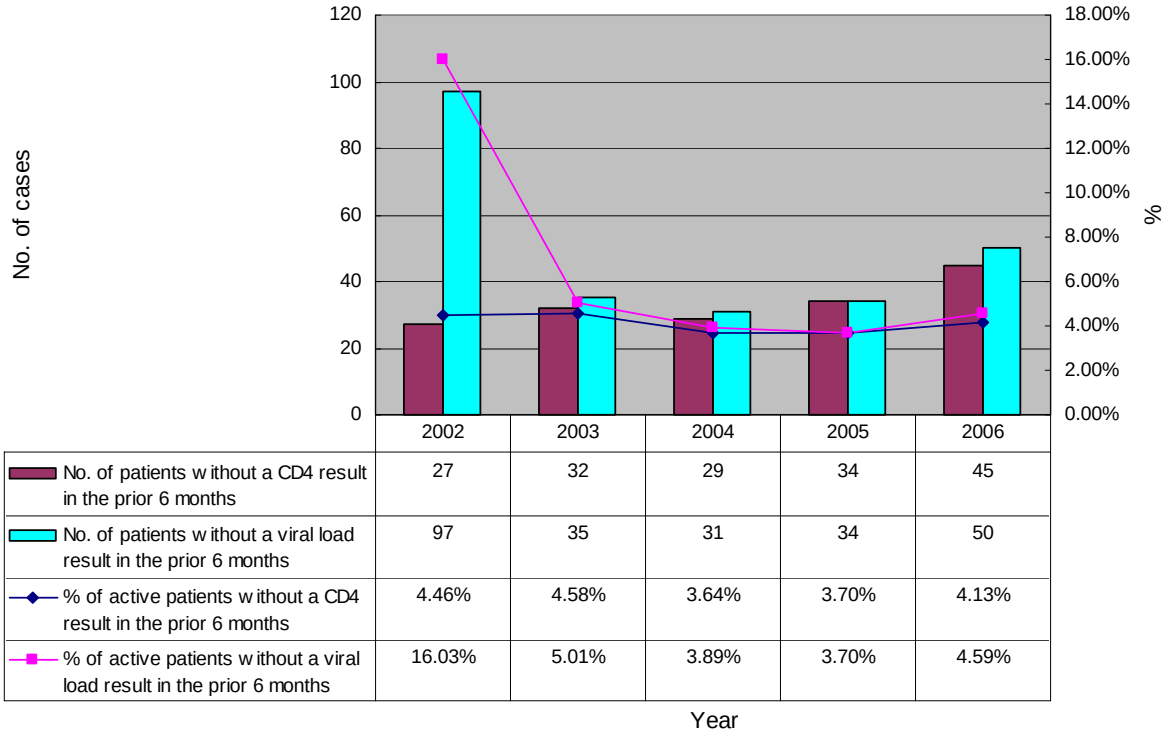
	2002	2003	2004	2005	2006
	No. (%)				
Total	605	698	796	919	1089
CD4 (/ul)					
<50	31(5.1%)	32(4.6%)	28(3.5%)	36(3.9%)	54(5.0%)
50-199	96(15.9%)	145(20.8%)	121(15.2%)	135(14.7%)	185(17.0%)
200-349	181(29.9%)	193(27.7%)	261(32.8%)	285(31.0%)	333(30.6%)
350-499	160(26.4%)	164(23.6%)	176(22.1%)	217(23.6%)	252(23.2%)
>=500	137(22.6%)	162(23.3%)	210(26.4%)	245(26.7%)	264(24.3%)
**AIDS*					
Yes	147(24.3%)	183(26.3%)	203(25.5%)	240(26.2%)	284(26.3%)
No	458(75.7%)	513(73.7%)	593(74.5%)	677(73.8%)	796(73.7%)
Stage					
A1-A3	248(41.0%)	269(38.6%)	305(38.3%)	366(39.9%)	452(41.9%)
B1-B3	210(34.7%)	244(35.1%)	288(36.2%)	311(33.9%)	344(31.9%)
C1-C3	147(24.3%)	183(26.3%)	203(25.5%)	240(26.2%)	284(26.3%)
A3/B3/C3	334(55.2%)	417(59.9%)	482(60.6%)	578(63.0%)	680(63.0%)
Stage C or 3	338(55.9%)	423(60.8%)	491(61.7%)	586(63.9%)	690(63.9%)

*AIDS surveillance case definition for adults and adolescents in Hong Kong (Scientific Committee on AIDS, 1995). Briefly, the system is an adoption of the US CDC 1993 definition, with the following modifications: (a) disseminated penicilliosis is included in the list of ADI, (b) pulmonary or cervical lymph node tuberculosis is counted as ADI only if CD4 count is <200 cells/μL, and (c) a CD4 count of <200 cells/μL alone is not considered as AIDS.

Box C3. Cumulative and active patients against total reported cases in Hong Kong

	2002	2003	2004	2005	2006
Total active	605	698	796	919	1089
No. of cumulative caseload	1072	1179	1318	1490	1717
No. of total reported HIV/AIDS	2015	2244	2512	2825	3198
% total reported cases ever attended ITC	53.2%	52.5%	52.5%	52.7%	53.7%
% total reported cases being active ITC patients	30.0%	31.1%	31.7%	32.5%	34.1%

Box C4. Lack of regular monitor of CD4/CD8 T lymphocyte and lack of regular monitor of plasma viral load



	2002	2003	2004	2005	2006
No. of patients without a CD4 result in the prior 6 months	27	32	29	34	45
No. of patients without a viral load result in the prior 6 months	97	35	31	34	50
% of active patients without a CD4 result in the prior 6 months	4.46%	4.58%	3.64%	3.70%	4.13%
% of active patients without a viral load result in the prior 6 months	16.03%	5.01%	3.89%	3.70%	4.59%

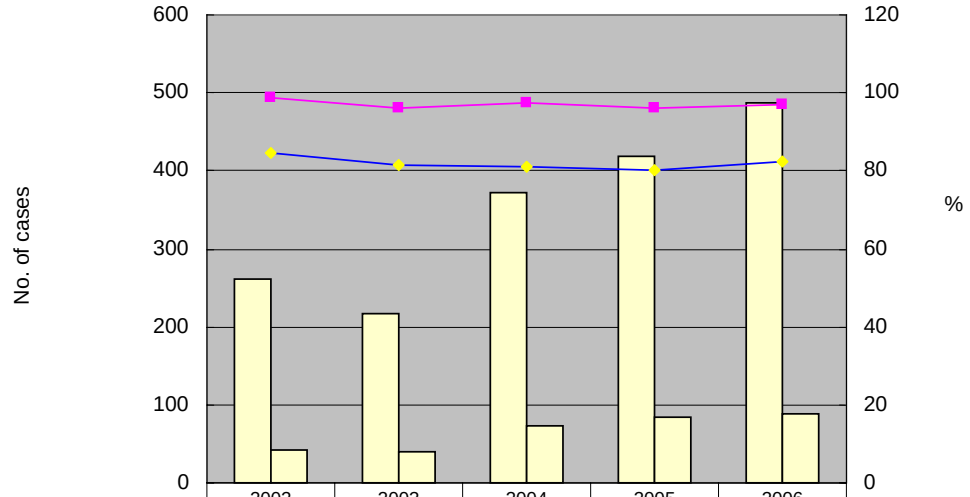
Box C5. Antiretroviral therapy in newly started and active patients

	2002	2003	2004	2005	2006
No. of patients newly started on ART for disease treatment	62	76	98	89	106
No. of patients newly started on ART for MTCT prophylaxis	5	1	2	0	1
No. of active patients	605	698	796	919	1089
No. of patients on ART	366	443	530	605	693
% of active patients on ART	60.5%	63.5%	66.6%	65.8%	63.6%
% regimen					
Monotherapy	1.09%	0.90%	0.57%	0.66%	0.43%
Dual therapy	3.55%	2.03%	0.57%	0.50%	0.00%
HAART (>=3 antiretrovirals)	95.36%	97.07%	98.87%	98.84%	99.57%

Box C6. Newly initiated ART for disease management being HAART

	2002	2003	2004	2005	2006
No. of patients newly started on ART for disease treatment	62	76	98	89	106
No. of patients newly started on HAART (>=3 antiretrovirals) for disease treatment	61	76	97	88	106
% being HAART	98%	100%	99%	99%	100%

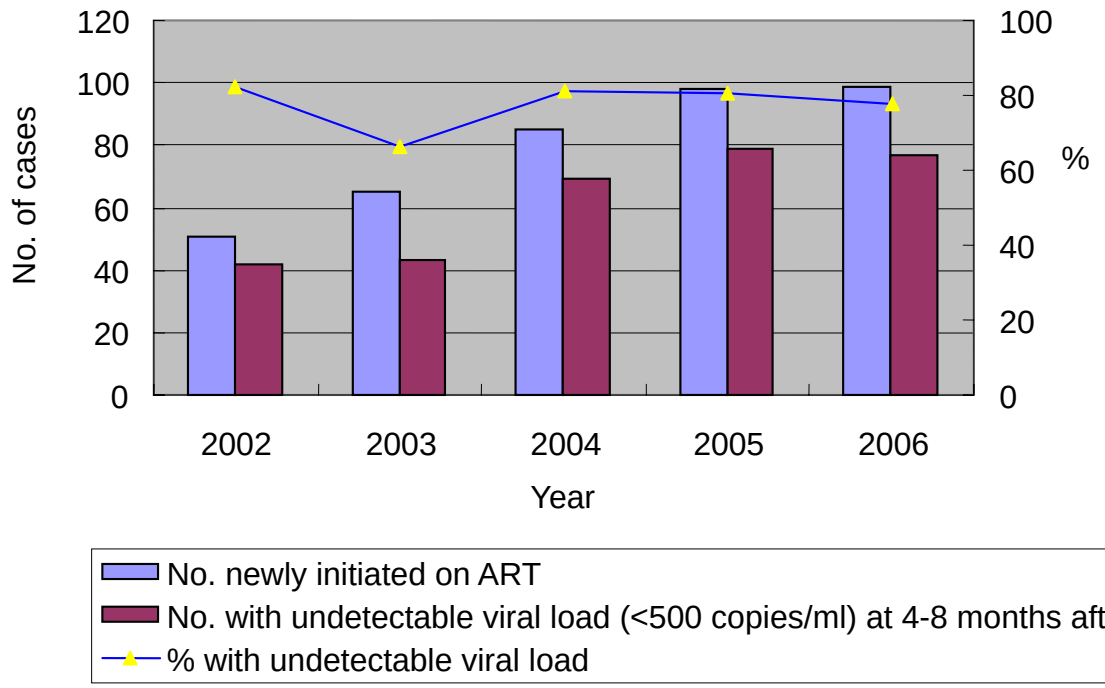
Box C7. Patients on ART have good adherence



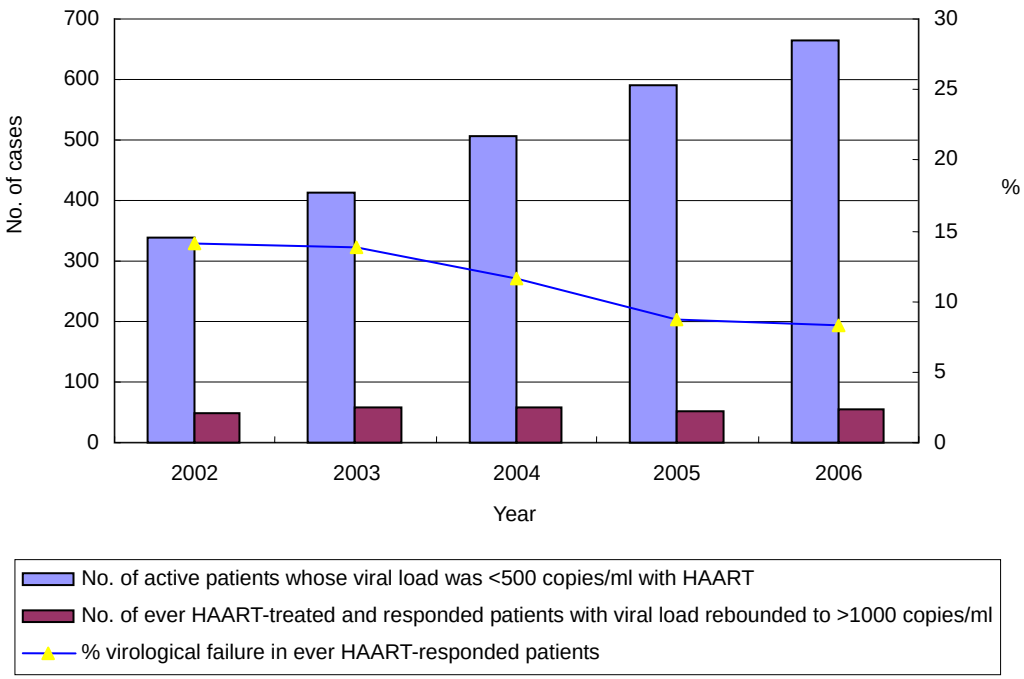
	2002	2003	2004	2005	2006
No. with grade A (100%) adherence at last but one visit	261	217	372	418	488
No. with grade B (95-99%) adherence at last but one visit	43	39	74	84	89
% with grade A adherence	84.74	81.58	81.22	80.08	82.15
% with grade B or A adherence	98.7	96.24	97.38	96.17	97.14

Year

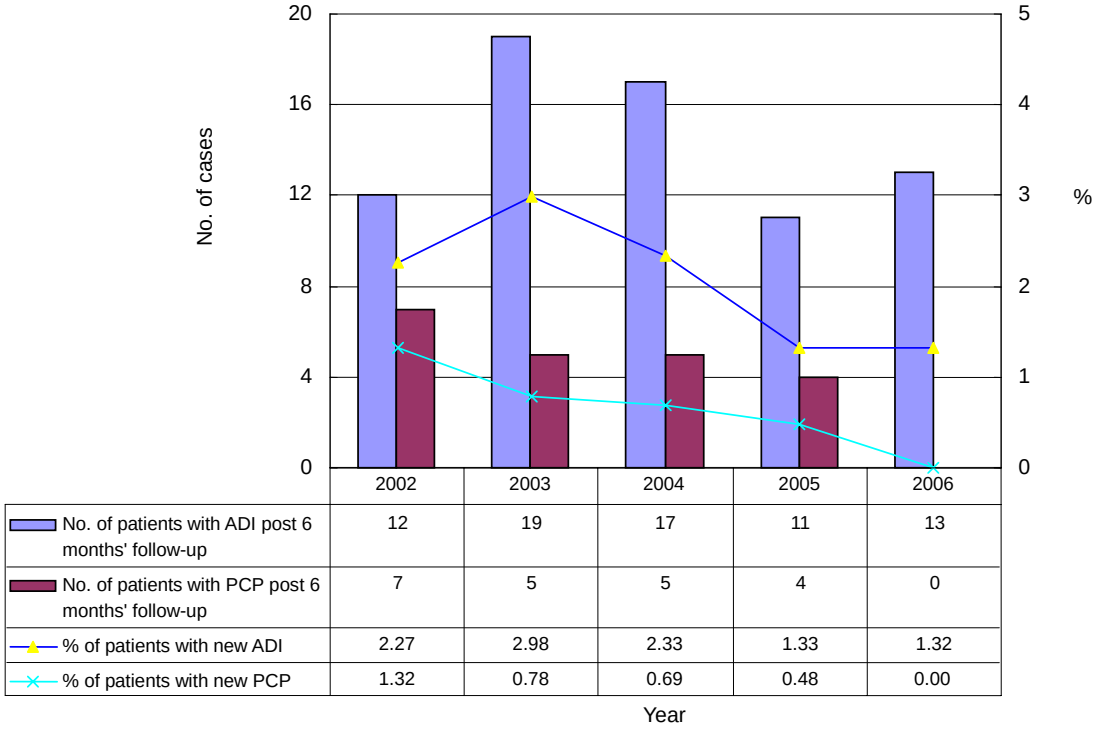
Box C8. Undetectable viral load at 6 months post-ART initiation for disease treatment



Box C9. Virological failure in patients who ever responded to HAART



Box C10. Patients with new PCP or ADI after on track of follow-up



	2002	2003	2004	2005	2006
No. of patients with ADI post 6 months' follow-up	12	19	17	11	13
No. of patients with PCP post 6 months' follow-up	7	5	5	4	0
% of patients with new ADI	2.27	2.98	2.33	1.33	1.32
% of patients with new PCP	1.32	0.78	0.69	0.48	0.00

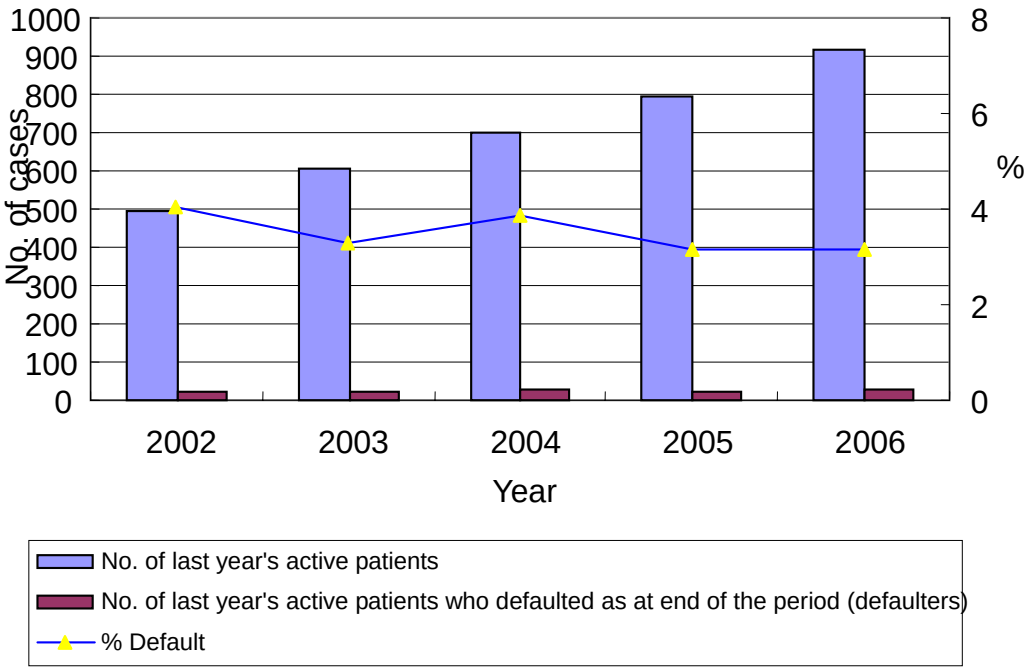
Box C11. *New sexually transmitted diseases (STD) in active patients

	2002	2003	2004	#2005	#2006
No. of patients with new STD	11	15	7	22	26
No. of STD episodes	14	16	7	23	28
Follow-up person-months	6122	7242	8249	9361	11117
New STD incidence density (episodes/person-months)	0.0023	0.0022	0.0008	0.0025	0.0025

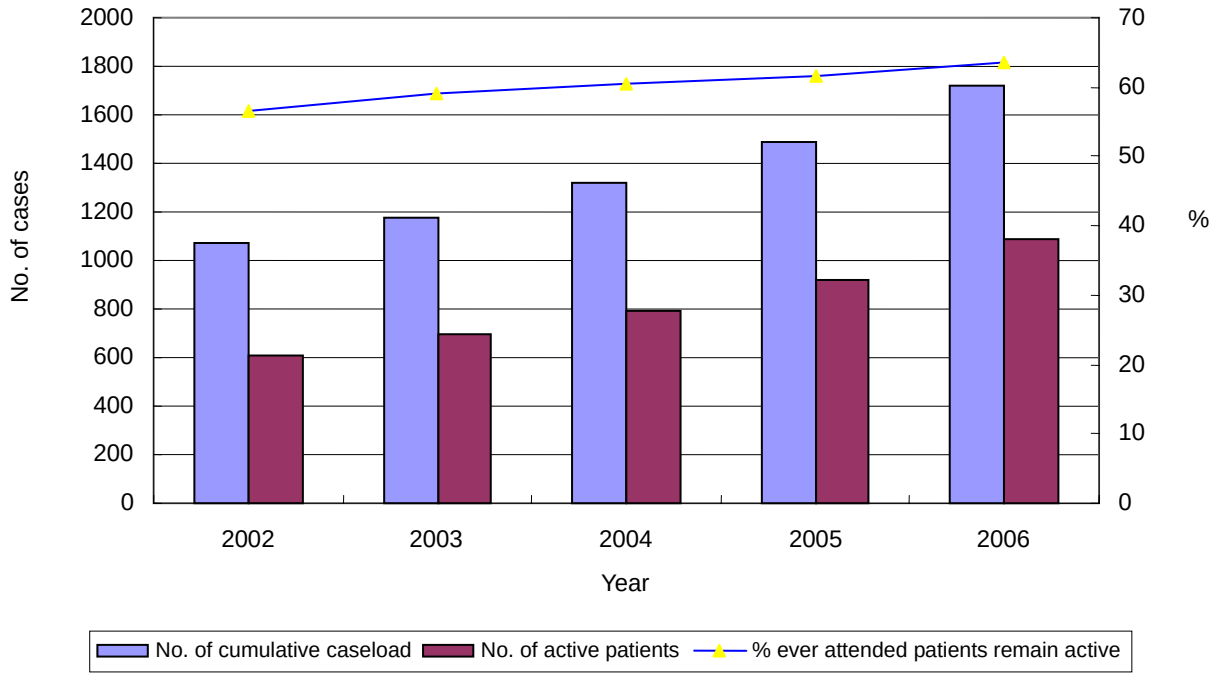
*include primary and secondary syphilis, gonorrhoea, genital Chlamydia and trichomoniasis at or after second clinic visit

#screening for asymptomatic gonorrhoea and Chlamydia using urine samples done in 2005 and 2006

C12. Annual default rate



C13. Patients remain under care



D. Pattern of AIDS-defining illnesses, mortality and hospital admission (2002 – 2006)

Box D1. Prevalence of primary and subsequent AIDS-defining illnesses

	2002	2003	2004	2005	2006
	No. (%)				
No. of active patients	605	698	796	919	1089
No. (%) of patients with ADI	44(7.3%)	42(6.0%)	46(5.8%)	54(5.9%)	72(6.6%)
Episodes of ADI	60	57	57	69	96
Episodes of ADI/100 patients	9.9	8.2	7.2	7.5	8.8

Box D2. Demography and time lag of progression in new AIDS patients

	2002	2003	2004	2005	2006
	No. (%)				
Total	40	37	38	48	62
Sex					
Male	30(75.0%)	33(89.2%)	33(86.8%)	36(75.0%)	58(93.5%)
Female	10(25.0%)	4(10.8%)	5(13.2%)	12(25.0%)	4(6.5%)
Ethnicity					
Chinese	30(75.0%)	32(86.5%)	31(81.6%)	39(81.3%)	42(67.7%)
Non-Chinese	10(25.0%)	5(13.5%)	7(18.4%)	9(18.8%)	20(32.3%)
Age (year)					
<=19	0(0.0%)	0(0.0%)	1(2.6%)	0(0.0%)	0(0.0%)
20-29	6(15.0%)	6(16.2%)	2(5.3%)	4(8.3%)	8(12.9%)
30-39	18(45.0%)	17(45.9%)	15(39.5%)	17(35.4%)	27(43.5%)
40-49	11(27.5%)	5(13.5%)	9(23.7%)	18(37.5%)	13(21.0%)
>=50	5(12.5%)	9(24.3%)	11(28.9%)	9(18.8%)	14(22.6%)
Median (year)	38.0	35.0	40.5	41.0	38.0
HIV risk factor					
Heterosexual	29(72.5%)	27(73.0%)	26(68.4%)	32(66.7%)	30(48.4%)
Men who have sex with men (MSM)	8(20%)	8(21.6%)	10(26.3%)	13(27.1%)	18(29.0%)
Injecting drug use	2(5%)	2(5.4%)	2(5.3%)	3(6.3%)	13(21.0%)
Other/undetermined	1(2.5%)	0(0.0%)	0(0.0%)	0(0.0%)	1(1.6%)
HIV-AIDS interval - No. (%)					
<=3 months	26(65.0%)	18(48.6%)	24(63.2%)	31(64.6%)	43(69.4%)
>3-6 months	2(5.0%)	5(13.5%)	2(5.3%)	3(6.3%)	3(4.8%)
>6 months	12(30.0%)	14(37.8%)	12(31.6%)	14(29.2%)	16(25.8%)
median (months)	0.97	3.23	0.85	1.29	1.55

Box D3. Clinical and immunologic characteristics of primary AIDS-defining illnesses

	2002	2003	2004	2005	2006
	No. (%)				
Primary ADI, No. (% all ADI)	38(63.3%)	36(63.2%)	37(64.9%)	49(71.0%)	63(65.6%)
Distribution – No. (%)					
Pneumocystis jirovecii pneumonia	16(42.1%)	11(30.6%)	13(35.1%)	11(22.4%)	17(27.0%)
Mycobacterium tuberculosis	16(42.1%)	14(38.9%)	14(37.8%)	26(53.1%)	30(47.6%)
Penicilliosis	2(5.3%)	2(5.6%)	1(2.7%)	3(6.1%)	5(7.9%)
Other fungal infections	2(5.3%)	4(11.1%)	4(10.8%)	5(10.2%)	4(6.3%)
Cytomegalovirus diseases	0(0.0%)	1(2.8%)	0(0.0%)	2(4.1%)	1(1.6%)
Non-TB Mycobacterial infections	0(0.0%)	2(5.6%)	2(5.4%)	0(0.0%)	2(3.2%)
Kaposi's sarcoma	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(1.6%)
Others	2(5.3%)	2(5.6%)	3(8.1%)	2(4.1%)	3(4.8%)
CD4 (% of cases)					
<50/ul	22(61.1%)	14(41.2%)	21(58.3%)	18(42.9%)	31(54.4%)
50-100/ul	7(19.4%)	9(26.5%)	7(19.4%)	9(21.4%)	10(17.5%)
101-200/ul	6(16.7%)	8(23.5%)	4(11.1%)	12(28.6%)	12(21.1%)
>200/ul	1(2.8%)	3(8.8%)	4(11.1%)	3(7.1%)	4(7.0%)
median (/ul)	36.5	62	33.5	56.5	37

Box D4. Clinical and immunologic characteristics of subsequent AIDS-defining illnesses

	2002	2003	2004	2005	2006
	No. (%)				
No. of episodes	22	21	20	20	33
No. of patients	17	20	15	17	27
% among year-end AIDS patients	11.6%	10.9%	7.4%	7.1%	9.5%
Distribution of episodes – No. (%)					
Pneumocystis jirovecii pneumonia	2(9.1%)	3(14.3%)	3(15.0%)	4(20.0%)	2(6.1%)
Mycobacterium tuberculosis	2(9.1%)	4(19.0%)	3(15.0%)	5(25.0%)	6(18.2%)
Penicilliosis	4(18.2%)	3(14.3%)	1(5.0%)	0(0.0%)	2(6.1%)
Other fungal infections	4(18.2%)	5(23.8%)	7(35.0%)	5(25.0%)	5(15.2%)
Cytomegalovirus diseases	6(27.3%)	2(9.5%)	5(25.0%)	3(15.0%)	7(21.2%)
Non-TB Mycobacterial infections	3(13.6%)	1(4.8%)	1(5.0%)	1(5.0%)	6(18.2%)
Kaposi's sarcoma	0(0.0%)	1(4.8%)	0(0.0%)	0(0.0%)	0(0.0%)
Others	1(4.5%)	2(9.5%)	0(0.0%)	2(10.0%)	5(15.2%)
CD4 (% of cases)					
<50/ul	9(56.3%)	9(50.0%)	10(66.7%)	9(60.0%)	18(66.7%)
50-100/ul	5(31.3%)	4(22.2%)	3(20.0%)	2(13.3%)	4(14.8%)
101-200/ul	2(12.5%)	4(22.2%)	1(6.7%)	3(20.0%)	3(11.1%)
>200/ul	0(0.0%)	1(5.6%)	1(6.7%)	1(6.7%)	2(7.4%)
median (/ul)	29	45	22	25	37.5

Box D5. Mortality pattern in ever clinic patients

	2002	2003	2004	2005	2006
	No. (%)				
No. active patients	605	698	796	919	1089
No. of deaths					
AIDS patients - No. (%)	3(60.0%)	6(60.0%)	12(85.7%)	13(59.1%)	6(40.0%)
Non-AIDS patients - No. (%)	2(40.0%)	4(40.0%)	2(14.3%)	9(40.9%)	9(60.0%)
Mortality ratio - death/active patients	0.83%	1.43%	1.76%	2.39%	1.38%

Box D6. Category of causes of death and its association with HIV or treatment

	2002	2003	2004	2005	2006
	No. (%)				
Total	5	10	14	22	15
Causes of death					
AIDS-defining infections	0(0.0%)	1(10.0%)	1(7.1%)	7(31.8%)	2(13.3%)
AIDS-defining malignancies/other conditions	0(0.0%)	2(20.0%)	2(14.3%)	0(0.0%)	2(13.3%)
Non-AIDS-defining infections	2(40.0%)	0(0.0%)	5(35.7%)	1(4.5%)	3(20.0%)
Non-AIDS-defining malignancies	0(0.0%)	0(0.0%)	2(14.3%)	2(9.1%)	2(13.3%)
Hepatic diseases	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
Cardiovascular diseases	0(0.0%)	1(10.0%)	0(0.0%)	0(0.0%)	2(13.3%)
Accidental	2(40.0%)	0(0.0%)	1(7.1%)	2(9.1%)	0(0.0%)
Other or unknown	1(20.0%)	6(60.0%)	3(21.4%)	10(45.5%)	4(26.7%)
Association (can be >=1)					
HIV or disease complications	2(40.0%)	7(70.0%)	10(71.4%)	10(45.5%)	7(46.7%)
Treatment of HIV or disease complications	0(0.0%)	0(0.0%)	2(14.3%)	0(0.0%)	0(0.0%)
Non-HIV related	3(60.0%)	1(10.0%)	2(14.3%)	8(36.4%)	7(46.7%)
Undetermined	1(20.0%)	4(40.0%)	4(28.6%)	8(36.4%)	1(6.7%)

Box D7. Frequency and duration of hospital admissions after first presentation

	2003	2004	2005	2006
	No. (%)			
Frequency				
No. of admissions	185	165	154	228
No. of patients admitted	93	95	90	133
No. of active patients	698	796	919	1089
% of patients admitted	13.3%	11.9%	9.8%	12.2%
Duration				
Total no. of patient-days	2441	2590	2285	3022
Mean stay/admission (day)	13.0	16.0	15.0	13.0
Median duration of stay (day)	6	6	7	7

Box D8. Sex and age distribution in the admission episodes

	2003	2004	2005	2006
	No. (%)			
Sex				
Male	158(85.4%)	144(87.3%)	124(80.5%)	179(78.5%)
Female	27(14.6%)	21(12.7%)	30(19.5%)	49(21.5%)
Age (year)				
<=19	0(0.0%)	1(0.6%)	0(0.0%)	0(0.0%)
20-29	25(13.5%)	15(9.1%)	7(4.5%)	17(7.5%)
30-39	74(40.0%)	66(40.0%)	43(27.9%)	95(41.7%)
40-49	63(34.1%)	36(21.8%)	42(27.3%)	53(23.2%)
>=50	23(12.4%)	47(28.5%)	62(40.3%)	63(27.6%)
Median (year)	39.0	40.0	47.0	40.0

Box D9. Characteristics of admissions

	2003	2004	2005	2006
	No. (%)			
Type				
Emergency	112(60.5%)	95(57.6%)	106(68.8%)	131(57.5%)
Clinical	73(39.5%)	70(42.4%)	48(31.2%)	97(42.5%)
Relation to HIV				
HIV-related	147(79.5%)	99(60.0%)	85(55.2%)	110(48.2%)
Non-HIV related	38(20.5%)	66(40.0%)	69(44.8%)	118(51.8%)
Public or private				
Public hospitals	180(97.3%)	163(99.4%)	154(100.0%)	227(99.6%)
Private hospitals	5(2.7%)	1(0.6%)	0(0.0%)	1(0.4%)

Box D10. Categories and outcome of the admissions

	2003	2004	2005	2006
	No. (%)			
Total	185	165	154	228
**Categories of conditions*				
Opportunistic infections	59(31.9%)	57(34.5%)	38(24.7%)	56(24.6%)
Malignancies	4(2.2%)	15(9.1%)	5(3.2%)	6(2.6%)
HIV-related but not clearly defined	41(22.2%)	10(6.1%)	12(7.8%)	21(9.2%)
Others	104(56.2%)	99(60.0%)	102(66.2%)	154(67.5%)
Outcome				
Discharged	177(95.7%)	157(95.2%)	144(93.5%)	218(95.6%)
Died	8(4.3%)	8(4.8%)	10(6.5%)	10(4.4%)

*can be more than one condition for each admission

Appendix 1

HIV clinical services at Integrated Treatment Centre – a FACTSHEET

Background

1. The Integrated Treatment Centre (ITC), located within Kowloon Bay Health Centre, was opened in mid 1999. It is the main premise of the clinical programme of Special Preventive Programme (SPP), Department of Health. With the establishment of the Centre for Health Protection (CHP) in June 2004, SPP became a service of the newly formed Public Health Services Branch of CHP.

2. The ITC provides care to HIV/AIDS patients, through its designated HIV clinical services. The aim of ITC is to provide quality clinical care together with effective primary prevention to HIV patients in an integrated manner. Apart from the major service of HIV care for infected patients, ITC is also involved in other activities such as post-exposure management through its Therapeutic Prevention Clinic (TPC) and hepatitis B vaccination for government health care workers.

3. A multidisciplinary health care team provides ongoing outpatient-based medical care to HIV/AIDS clients. HIV doctors, nurses and experienced medical social workers are the professional members of the care core team. They strive to exercise measures to keep the confidentiality and provide services in a respectful and holistic manner to build up trusting and therapeutic relationship with clients and their families. Minimisation of morbidity and mortality of the infected patients through effective care delivery is the goal. A typical example of care provision to a new patient, which is often more intensive, attending the HIV clinic is shown at Annex 1. An elaboration of the various components of HIV care is depicted below.

Medical management

4. Medical care is largely ambulatory, with regular attendance of patients. There are four main aspects, namely (a) health maintenance, (b) monitoring of clinical, immunologic and virologic status, (c) prevention and treatment of opportunistic complications especially infections, and (d) antiretroviral therapy. Highly active antiretroviral therapy (HAART) has been available since 1997, the use of which depends on clinical indication per case-by-case assessment. For patients who require hospitalisation, arrangement can be made directly with specific hospitals.

Counselling service

5. Nursing interventions and psychosocial support are other major components of HIV care at ITC. The nurse counsellors assess care needs of clients and plan interventions. Counselling includes providing knowledge about HIV and treatment to empower the client to make their best choices in management of disease. On-going counselling would be offered to meet the needs of individual and to provide physical and psychosocial interventions. With the availability of HAART, adherence programme became part and partial of drug treatment, which is spear-headed by nurse counsellors.

Medical social service

6. The ITC is manned by professional medical social worker to render support to HIV/AIDS patients and their families. Objectives of their work are:

(a) to assist clients and their families with social and emotional problems arising from illness, trauma or disabilities;
(b) to enable clients and their families to make the best use of medical/rehabilitative service in medical institutions and in the community;
(c) to contribute to the total rehabilitation of individuals, and their reintegration into the society; and
(d) to strive for the promotion of health for clients, their families and the community

Public health programme

7. Public health control is a focus of ITC in its HIV care. There are several areas namely partner counselling and referral service (PCRS), risk reduction counselling, diagnosis and treatment of sexually transmitted infections, prevention of mother-to-child transmission and drug adherence programme. Programmes are integrated into clinical care activities or packaged as separate activities.

Referral procedure & charges

8. The HIV status of a client should be confirmed with Western Blot before referral to ITC. Clinic attendance is by appointment only and the referring institutes/person shall call ITC at tel: 2117 0333 for appointment. Specialist clinic charge is applicable to HIV clinic at ITC. As of March 2005, HK$100 is charged for first attendance of eligible persons for medical consultation; subsequently HK$60 is charged for each visit. The patients have to pay HK$10 for each unit item of drug. For non-eligible persons, HK$1910 is charged per visit for medical consultation, which is inclusive of basic investigations. Special investigations of CD4/CD8 T lymphocyte subset test and HIV-1 plasma viral load as ordered by doctor is charged at an extra cost of HK$1010 and HK$760 respectively. Drugs prescribed are charged per cost of the drug.

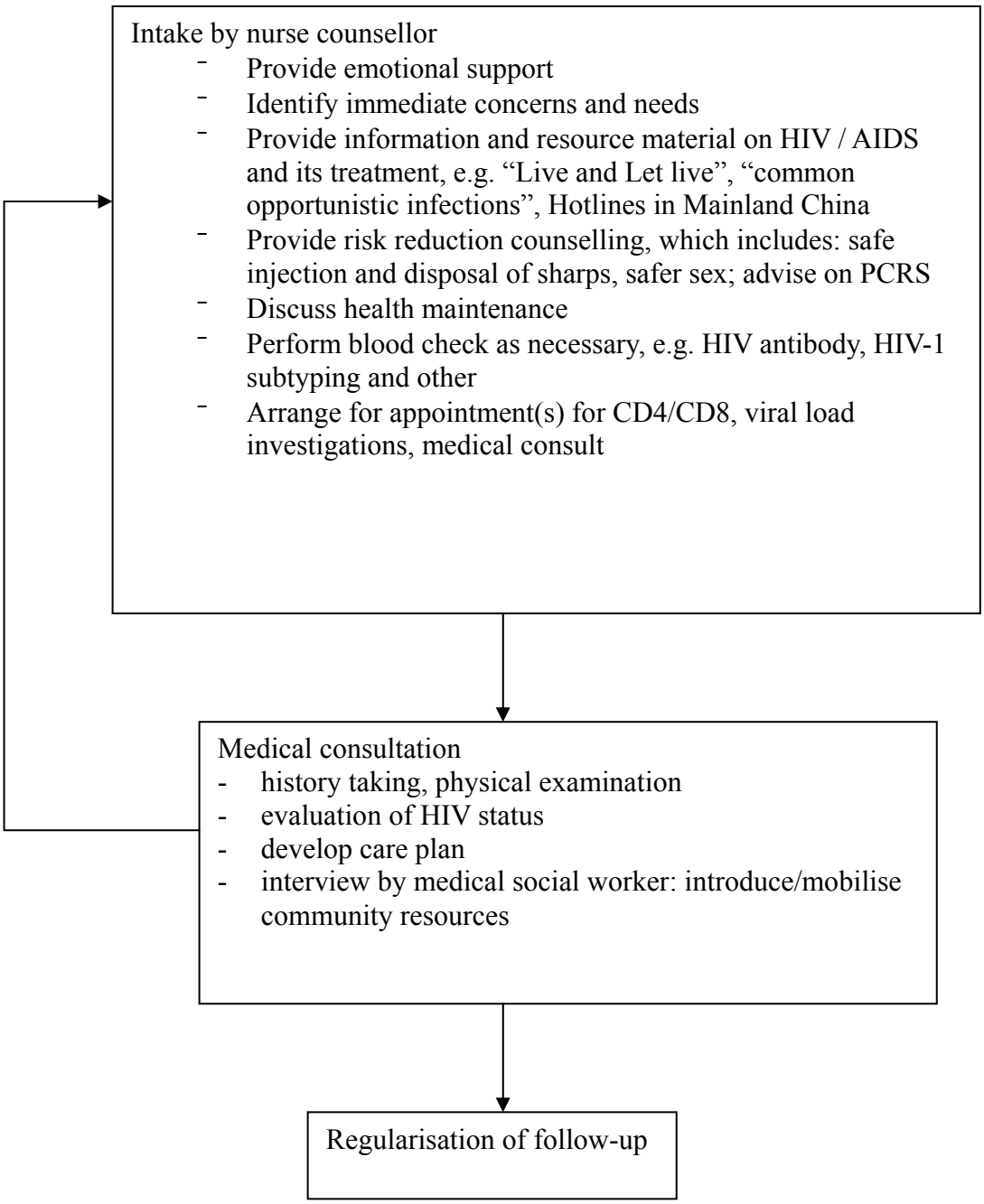
AIDS Counselling & Testing Service

9. Besides providing clinical care to HIV-infected patients, the SPP runs an AIDS Hotline (tel: 2780 2211) and voluntary counselling and testing clinic. Callers to the AIDS Hotline can listen to pre-recorded messages on HIV and sexually transmitted diseases as well as receive telephone counselling from nurse counsellors. When necessary, appointment for anonymous HIV testing and counselling can be arranged through the Hotline. The AIDS counselling and testing services are provided free of charge, and it has received ISO accreditation since 2001.

Integrated Treatment Centre
Centre for Health Protection
Department of Health
March 2005

Annex 1

Prototype of care for new HIV/AIDS patient referred to Integrated Treatment Centre



Appendix 1

綜合治療中心愛滋病臨床服務 － 簡介

背景

1. 座落於九龍灣健康中心的綜合治療中心於 1999 年中旬開幕，是衞生署特別預防計劃主要之臨床項目。隨著 2004 年 6 月衞生防護中心之成立，特別預防計劃也成爲其新組成之公共衞生服務處成員之一。

2. 綜合治療中心透過其指定愛滋病臨床服務爲愛滋病病毒感染者及愛滋病患者提供治療和護理。中心設立的目的是爲病患者提供全面性優質的臨床護理和有效的基本預防。此外，綜合治療中心亦提供其他服務，例如提供風險暴露後之處理的預防治療診所及爲政府醫護人員而設的乙型肝炎預防疫苗注射服務。

3. 中心由一組醫療護理團隊爲愛滋病病毒感染者及愛滋病患者提供持續性門診式醫療服務。團隊的核心成員由不同專業人員所組成，包括愛滋病專科醫生、護士和經驗豐富的醫務社工。他們竭力保障病患者私隱，並以尊重態度提供全人護理，從而與病患者及其家屬建立互信和治療的伙伴關係。透過有效的治療和護理，以減少病患者的發病率和死亡率便是綜合治療中心之主要目標。一個典型的例子就是：團隊會爲新診斷的感染者/患者提供更密切的治療和護理服務 (參看附件一)。

提供愛滋病治療和護理的各種元素描述如下：

醫療服務

4. 主要提供門診醫療護理，病人需要定期覆診。
   醫療護理主要包括 4 個範疇：

   (1) 維持健康狀況；
   (2) 臨床免疫系統及病毒情況監察；

(3) 機會性感染的預防和治療；及

(4) 抗愛滋病病毒藥物治療。

於 1997 年開始採用的高效抗逆轉錄病毒治療，乃依據病人的個別情況經評估而定的治療方案。病人如需要入院，會直接安排到指定的醫院接受進一步的治療。

輔導服務

5. 護理輔導和心理社會支援乃綜合治療中心爲感染者/患者提供愛滋病治療另外的重要服務。護士輔導員先評估病人的需要，然後作出適當的護理介入措施。輔導服務包括爲病人提供有關愛滋病治療的知識，使病人在處理其病情上能作出最佳的選擇。持續的輔導則病人提供生理、心理和社會的介入，使能達到滿足其個人的需要。隨著高效抗逆轉錄病毒治療的出現，堅持服藥計劃便成爲藥物治療的重要部份，而護士輔導員便是負責執行輔導感染者/患者貫徹服藥的工作。

醫務社會服務

6. 中心內的醫務社會服務乃由專業的醫務社工爲愛滋病病毒感染者及其家屬提供援助。

工作目的包括：

(1) 協助病人及其家屬處理因患病、創傷或殘障而引起的社會和情緒上的問題；

(2) 促進病人及其家屬善用醫療機構和社區所提供的各種醫療及康復服務；

(3) 促進病人達致全面康復和重新融入社會；及

(4) 努力促進病人、其家屬及社會的健康。

公共健康計劃

7. 公共健康控制乃綜合治療中心愛滋病治療的重點，主要項目包括伴侶輔導及轉介服務、風險緩減輔導、性病感染診斷及治療、預防母嬰傳染及堅持服藥計劃。這些項目均融合於臨床護理工作內或個別以獨立活動形式進行。

轉介程序和收費

8. 轉介到綜合治療中心的病人，必須已接受西方印迹測試並確定爲愛滋病病毒感染者方可安排預約時間。轉介部門或病者本人須致電綜合治療中心 21170333 作預約的安排。診所的收費與一般專科診所收費相同。自 2004 年 3 月起，符合資格人士的新症收費爲港幣一百元，其後每次覆診費用爲港幣六十元；每項藥物費用爲港幣十元。非符合資格人士每次診症新症及覆診收費則爲港幣一千九百一十元。此收費已包括基本檢驗，而特別的檢查 －CD4/CD8 淋巴細胞數量費用爲港幣一千零一十元，病毒數量則爲港幣七百六十元。藥物費用則按實際成本而定收費。

愛滋病輔導及測試服務

9. 除了爲愛滋病感染者提供臨床服務外，特別預防計劃亦設立愛滋熱線 27802211 及自願性愛滋病輔導及測試服務。致電人士可透過此熱線接聽有關愛滋病及性病的預錄資料，並可直接與護士輔導員對話及接受電話輔導服務。如有需要，可透過熱線安排預約、免費不記名的愛滋病病毒抗體測試及輔導。愛滋病輔導及測試服務經已在 2001 年考獲國際質量管理體系標準(ISO)證書。

綜合治療中心

2005 年 3 月

附件一

愛滋病病毒感染者 / 愛滋病患者轉介到綜合治療中心
接受護理服務的藍本

護士輔導員提供的服務

- 給予情緒支援
- 找出即時的關注及需要
- 提供有關愛滋病及其治療的資料和小冊子，例如《爲了明天》、《常見的機會性感染》、中國有關的熱線電話
- 提供風險緩減輔導，包括安全注射及正確棄置利器的方法、安全性行爲、伴侶輔導及轉介服務
- 討論有關維持健康的方法
- 如有需要，提供驗血檢查，例如愛滋病病毒抗體確證測試、愛滋病病毒 I 的分型測試或其他
- 安排預約時間作 CD4 / CD8 淋巴細胞、病毒數量的血液檢查，醫療診斷

↓

醫療診斷

- 病歷及身體檢查
- 評估愛滋病病況
- 制定治療計劃
- 醫務社工面談：介紹及動員社區資源

↓

定期覆診

Appendix 2

ITC Chronology

1999	♦ Commencement of services on HIV, viral hepatitis and related areas ♦ Setting up of a clinical governance system ♦ Recognition of accreditation of training programmes for higher physician trainees of Hong Kong College of Physicians
2000	♦ Settlement of years of protest by nearby residents ♦ Commencement of operation of clinical information system
2001	♦ Initiation of PMH-ITC Infectious Disease Programme ♦ Start of visiting professor psychiatry service ♦ Embark on collaborative genotypic resistance studies with the University of Hong Kong
2002	♦ Publication of "HIV Manual 2001" ♦ Embark on basic science studies with clinical and public health significance with the University of Hong Kong
2003	♦ Completion of 2-year Clinical Infectious Diseases fellowship training at University of British Columbia, Canada by one lead HIV physician
2004	♦ First joining international multicentre clinical trials – Valtrex study ♦ Evaluation of impacts of highly active antiretroviral therapy and publication of findings
2005	♦ Piloting Therapeutic drug monitoring ♦ Collaborative Metabolic Research Clinic with the Chinese University of Hong Kong in operation ♦ Start of fellowship training programmes for overseas doctors and nurses ♦ Start of attachment teaching for final year medical students of the Chinese University of Hong Kong ♦ Piloting public health programmes targeting HIV positives
2006	♦ Strengthened collaboration between ITC and PMH through enhancement of communication and attachment training to nurses ♦ Active patients surpassed 1000 ♦ 1 senior medical doctor and 1 senior nursing officer paid a consultancy visit to Gansu, China on review of HIV clinical services

Appendix 3

Abbreviations of antiretroviral drugs

Nucleoside and nucleotide reverse transcriptase inhibitors	
3TC	Lamivudine
ABC	Abacavir
D4T	Stavudine
DDI	Didanosine
FTC	Emtricitabine
TDF	Tenofovir
Protease inhibitors	
APV	Amprenavir
ATV	Atazanavir
DRV	Darunavir
IDV	Indinavir
FPV	Fosamprenavir
LPVr	Lopinvair-ritonavir
NFV	Nelfinavir
RTV	Ritonavir
SQV	Saquinavir
TPV	Tipranavir
Non-nucleoside reverse transcriptase inhibitors	
DLV	Delavirdine
EFZ	Efavirenz
NVP	Nevirapine

Appendix 4

List of major mutations used for corresponding antiretroviral drugs as based on IAS-USA consensus (Fall 2006 update)

Nucleoside and nucleotide reverse transcriptase inhibitor (NRTI/NtRTI)	
M41L	AZT, D4T
K65R	3TC, ABC, DDI, FTC, TDF
D67N	AZT, D4T
T69 insertion (as "T69_" in CIS)	3TC, ABC, AZT, D4T, DDI, FTC, TDF
K70R	AZT, D4T, TDF
L74V	ABC, DDI
Y115F	ABC
Q151M	3TC, ABC, AZT, D4T, DDI, FTC
M184I	3TC, FTC
M184V	3TC, ABC, FTC
L210W	AZT, D4T
T215F	AZT, D4T
T215Y	AZT, D4T
K219E	AZT, D4T
K219Q	AZT, D4T
Non-nucleoside reverse transcriptase inhibitor (NNRTI)	
L100I	EFZ, NVP
K103N	DLV, EFZ, NVP
V106A	NVP
V106M	DLV, EFZ, NVP
V108I	EFZ, NVP
Y181C	DLV, EFZ, NVP
Y181I	EFZ, NVP
Y188C	NVP
Y188H	NVP
Y188L	DLV, EFZ, NVP
G190A	EFZ, NVP
G190S	EFZ
P225H	EFZ
P236L	DLV
Protease inhibitor (PI)	
D30N	NFV
V32I	LPV/r
L33F	TPV/r
M46I	IDV +/- r
M46L	IDV +/- r
I47A	LPV/r
I47V	LPV/r
G48V	SQV/r
I50L	ATV +/- r
I50V	DRV/r, FPV/r
I54M	DRV/r

I54L	DRV/r
L76V	DRV/r
V82A	IDV, LPV/r, RTV
V82F	IDV, LPV/r, RTV
V82L	TPV/r
V82S	LPV/r, RTV
V82T	IDV, LPV/r, RTV, TPV/r
I84V	ATV +/- r, DRV/r, IDV, FPV/r, RTV, TPV/r
N88S	ATV +/- r
L90M	NFV, SQV/r

Appendix 5

Abbreviations other than antiretroviral agents

ADI	AIDS-defining illnesses
AIDS	Acquired immunodeficiency syndrome
ART	Antiretroviral therapy
CHP	Centre for Health Protection
CRF	Circulating recombinant form
DH	Department of Health
GRT	Genotypic resistance testing
HAART	Highly active antiretroviral therapy
HIV	Human immunodeficiency virus
IAS-USA	International AIDS Society – USA
IDU	Injecting drug user
ITC	Integrated Treatment Centre
MSM	Men who have sex with men
MTCT	Mother-to-child transmission
NNRTI	Non-nucleoside reverse transcriptase inhibitor
nRTI	Nucleoside and nucleotide reverse transcriptase inhibitor
NRTI	Nucleoside reverse transcriptase inhibitor
NtRTI	Nucleotide reverse transcriptase inhibitor
PCP	*Pneumocystis carinii* pneumonia, now renamed *Pneumocystis jerovecii* pneumonia
PCR	Polymerase chain reaction
PCRS	Partner counseling and referral service
PI	Protease inhibitor
PMH	Princess Margaret Hospital
SPP	Special Preventive Programme
STD	Sexually transmitted diseases
STI	Sexually transmitted infection
TAM	Thymidine analogue-associated mutations
TB	Tuberculosis
TPC	Therapeutic Prevention Clinic
VCT	Voluntary counseling and testing

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3. CF Ho, KH Wong, CW Chan, SS Lee, WF Chiu, YW Ng, WF Lui. The current pattern and course of acute HBV infection in Hong Kong. J Gastroenterol Hepatol 2003; 19:602-603.

2002

1. Ho CF, Fong OW, Wong KH. Patient self-report as a marker of adherence to antiretroviral therapy. Clin Infect Dis 2002;34:1534-1535.

2. Zheng BJ, Zhao XY, Zhu NS, Chan CP, Wong KH, Chan KCW, Yam WC, Yuen KY, SS Lee. Polymorphisms of CCR5 gene in a southern Chinese population and their effects on disease progression in HIV infections. AIDS 2002;16:2480-2482.

3. Chan KCW, Tang HWK, Wong KH. Prevalence of purified protein derivative in human immunodeficiency virus infected individuals in Hong Kong. Chin Med J (Beijing) 2002;115:1091-1092.

4. SS Lee, BWY Young, KH Wong, WL Lim. The implications of a reduced dose hepatitis B vaccination schedule in low risk newborns. Vaccine 2002;20:3752-3754.

2001

1. Wong SS, Wong KH, Hui WT, Lee SS, Lo JY, Cao L, Yuen KY. Differences in Clinical and Laboratory Diagnostic Characteristics of Penicilliosis Marneffei in Human Immunodeficiency Virus (HIV)- and Non-HIV-Infected Patients. J Clin Microbiol 2001;39:4535-4540.

2. Kam KM, Leung WL, Wong KH, Lee SS, Hung MY, Kwok MY. Maturational changes in peripheral lymphocyte subsets pertinent to monitoring HIV infected Chinese pediatric patients. Clin Diagn Lab Immunol 2001;8:926-931.

3. Samaranayake YH, Samaranayake LP, Tsang PC, Wong KH, Yeung KW. Heterogeneity in antifungal susceptibility of clones of Candida albicans isolated on single and sequential visits from a HIV-infected southern Chinese cohort. J Oral Pathol Med 2001;30:336-346.

4. Wong KH, Chan KC, Lee SS. Sex differences in nevirapine rash. Clin Infect Dis 2001;33:2096-2097.

1999

1. Ho TTY, Chan KCW, Wong KH, Lee SS. Indinavir-associated facial atrophy inn HIV-infected patients. AIDS Patient Care and STDs 1999;13:11-16.

2. Ho TTY, Wong KH, Lee SS. low yield of chest radiography in screening for active pulmonary tuberculosis in HIV-infected patients in Hong Kong. Int J of STD & AIDS 1999;10:409-412.

Appendix 7

List of abstract and meeting presentations of ITC (1999-2006)

2006

1. Ho CF, Cheng LS, Wong KH, Chan KCW. Risk of death within the first year of HIV diagnosis for new cases whose presenting CD4 counts are less than 50 cells/ul. Hong Kong Society for Infectious Diseases Annual Scientific Meeting. 18 March 2006. Hong Kong

2. SK Cheng, CK Lee, CF Ho, KH Wong, YW Mak, YT Lee, LM Ho. Collaboration between HIV clinic and methadone clinic for the diagnosis and care of HIV-infected drug users. XVI International AIDS Conference, Toronto, Canada. 13-18 August 2006. [B48, CDB1041]

3. KH Wong, PM Lee, WK Chan, RLM Ho, YL Lau, CH Chen. A four year evaluation of the performance and outcome of an universal antenatal HIV screening programme. 2006. XVI International AIDS Conference, Toronto, Canada. 13-18 August 2006. [C19, CDC0528]

4. Chan KCW, Lam B, Chan WK, Cheng LSK, CF Ho. A low phase angle by bioelectric impedance analysis does not predict clinical outcome in HIV-1-infected Chinese patients in the era of HARRT. 2006. XVI International AIDS Conference, August 13-18 2006, Toronto.

5. SS Lee, K Ma, DKP Tam, EKY Chu, KH Wong, JJY Sung. Discordance between anonymised self-reported missing dose and clinical adherence rating. 2006. XVI International AIDS Conference, Toronto, Canada. 13-18 August 2006. [B34, CDB0934]

6. KH Wong, KCW Chan, ICT Tse, VSC Kwong, WK Chan, KLS Cheng, CHY Wong, CN Chen. Monitoring and evaluation of HIV care in the government HIV clinic in Hong Kong. 2006. XVI International AIDS Conference, Toronto, Canada. 13-18 August 2006. [B52, CDB1284]

7. KH Wong, KCW Chan, SS Lee, ST Lai, N Lee, C Cockram, WS Poon, TY Tsang, YK Tso, KF To. Smooth muscle tumour – an uncommon but existent neoplasia in HIV-infected patients. 2006. XVI International AIDS Conference, Toronto, Canada. 13-18 August 2006.

8. CT Tse, KH Wong, OW Fong, WY Yeung, WK Chan, WC Yam, Prevalence of Asymptomatic Chlamydia trachomatis and Neisseria gonorrhoeae Urethritis Among HIV-infected Patients in Hong Kong**.** 2006. XVI International AIDS Conference, Toronto, Canada. 13-18 August 2006.

9. C.F. Ho, Kathy L.S. Cheng, K.H. Wong, Kenny C.W. Chan. Attributes to death of HIV/AIDS patients in the era of HAART**.** 2006. XVI International AIDS Conference, Toronto, Canada. 13-18 August 2006.

10. Kwong SC V, Wong KH, Lee SS, Kurtland MA, Chu KY E, Wong PS S, Fong

OW, Ho CF, Cheng LS K, Tam D. The prevalence of use of traditional Chinese Medicine in Chinese patients on HAART**.** 2006. XVI International AIDS Conference, Toronto, Canada. 13-18 August 2006.

11. Mak WL, Lee SS, Wong KH, Lau YL. Surveillance of HIV infection through unlinked anonymous screening in different populations 1997 to 2004**.** 2006. XVI International AIDS Conference, Toronto, Canada. 13-18 August 2006.

12. K Lee, KH Wong, W Lim. Surveillance of HIV-1 subtypes informs risk for local spread of infection in Hong Kong. 2006. XVI International AIDS Conference, Toronto, Canada. 13-18 August 2006.

13. Mak WL, Lin P, Lam C, Wong KH, Tsui E, Lee SS, Tso H. Setting up an electronic platform for sharing HIV/AIDS epidemiological information in the Pearl River Delta Region, China. 2006. XVI International AIDS Conference, Toronto, Canada. 13-18 August 2006.

14. PM Lee, RLM Ho, WK Chan, SS Lee, KH Wong. Cost-effectiveness of analysis of universal antenatal HIV screening programme in Hong Kong. 2006. XVI International AIDS Conference, Toronto, Canada. 13-18 August 2006.

15. CN Chen, H Tso, SS Lee, K Lee, KH Wong. Unmet needs of persons with haemophilia and HIV infection addressed two decades after the forgotten tragedy. 2006. XVI International AIDS Conference, Toronto, Canada. 13-18 August 2006.

2005

1. Ho CF, Wong KH, Chan KCW, Lee SS, Lee CK, Mak WL, Kwong SC, Leung KY. Antiretroviral therapy-associated metabolic abnormalities among HIV-infected Chinese patients. 7th International Congress on AIDS in Asia and the Pacific, Kobe, Japan, 1-5 Jul 2005. Poster exhibition [SaPA0013].
2. Chan Chi-wai Kenny, Cheung Lai-sim Kathy, Chan Wai-kit, Wong Ka-hing. Declining mortality and morbidity of advanced HIV disease with the use of HAART in Hong Kong. 2005. 7th International Congress on AIDS in Asia and the Pacific July 1-5, 2005 Kobe, Japan.
3. Ho CF, Wong HY, Wong KH, Chen CN, Cheng SK, Fong OW, Tse WH, Yuen CY, Wong PS, Lam WL. Determinants of quality of life in HIV- infected Chinese patients. 7th International Congress on AIDS in Asia and the Pacific, Kobe, Japan, 1-5 Jul 2005. Poster exhibition [SuPB0053].
4. Zheng BJ, Lee SS, Wong KH, Chan KCW, Zhang HJ, Wu SHW, Lu LW.. Ex vivo expansion of functional CD4 T cells from HIV patients. 2005. The 6th International Workshop on HIV, Cells of Macrophage /Dendritic Lineage and Other Reservoirs. 5-7 October 2005. Varenna, Italy.
5. Wong KH, Chan WK, Chan KCW, Lee SS. Pattern of AIDS-defining illness and mortality in the era of highly active antiretroviral therapy. 2005. 7th International Congress on AIDS in Asia and the Pacific July 1-5, 2005 Kobe, Japan.

6. Zhao XY, Lee SS, Wong KH, Chan KCW, Ng F, Chan CCS, Yam WC, Yuen KY, Ng MH, Zheng BJ. Polymorphisms and Functional Analysis of CCR5 Gene in Southern Chinese HIV Patients and Healthy Controls. 2005. Keystone Symposia HIV Pathogenesis (X7). 9-15 April, 2005. Banff, Alberta, Canada.

2004

1. OW Fong, A Chiu, R Lui, CF Ho, PH Choi. An Evaluation of Infection Control Workshop for Workmen. 2004. 2nd International Congress of the Asia Society of Infection Control, Hong Kong.

2. KCW Chan, MKT Chan, KH Wong, SS Lee . Cardiovascular disease as emerging cause of morbidity and mortality in HIV disease. 2 case reports. 2004. 12th Annual Scientific Congress of Hong Kong College of Cardiology June 4, 2004.

3. KCW Chan, WK Chan, K Cheng, KH Wong. Decreasing mortality of AIDS since the availability of HAART in Hong Kong. 2004. Eighth Annual Scientific Meeting of Hong Kong Society for Infectious Diseases, March 6, 2004.

4. KH Wong, KCW Chan, SS Lee, MKT Chan, K Lee. Delayed death and AIDS progression in an Asian cohort of advanced HIV disease patients in the HAART era. 2004. XV International AIDS Conference, Bangkok, Thailand 10-16 July 2004.

5. Xiu-ying Zhao, SS Lee, KH Wong, KCW Chan, Selene Ma, Mun-hon Ng, Bo-jian Zheng. Effects of single nucleotide polymorphism in the RANTES promoter region on HIV infection and disease progression in indigenous Chinese. 2004. XV International AIDS Conference, Bangkok, Thailand 10-16 July 2004.

6. Wong KH, Chan KCW, Cheng KLS, Chan WK, Kam KM, Lee SS. HAART initiation in Chinese HIV/AIDS patients when their CD4 level is 100-150/ul is not associated with faster clinical disease progression. 2004. 44th Interscience Conference on Antimicrobial Agents and Chemotherapy, Washington, DC, USA. October 30-November 2, 2004.

7. WK Chan, Gladys Yuen, KH Wong. Profiling of HIV clinic patients for determining the prevalence of recent infection. 2004. XV International AIDS Conference, Bangkok, Thailand 10-16 July 2004.

8. KH Wong, WC Yam, MKT Chan, KCW Chan, K Lee, SS Lee. Resistance mutations in patients with HIV-1 subtype A/E failing their first HAART or non-HAART. 2004. XV International AIDS Conference, Bangkok, Thailand 10-16 July 2004.

9. KH Wong. " Making use of the clinical care system for HIV prevention and control". Health Forum for Chinese Community, Taipei. 2004.

10. Zhao XY, Lee SS, Wong KH, Chan KCW, He ZM, Ma S, Ng F, Chan CCS, Ho T, Ng MH, Zheng BJ. A Novel CCR5 Mutation Selectively Affects Immunoreactivity and Fusogenic Property of the HIV Co-receptor in a Slow Progressing HIV Patient.13th International Symposium on HIV & Emerging Infectious Diseases. 3-5 June, 2004. Toulon, France.

11. Wong KH, Chan KCW, Lee SS. Beware of underlying HIV when treatment is contemplated for hepatitis B. The Third International Conference on AIDS and Other Infections, Nanning, China, December 1-3, 2004. Printed Abstract.

12. Wong KH, Chan KCW, Lee SS. Incorporating a clinical information system in the management of HIV infection. The Third International Conference on AIDS and Other Infections, Nanning, China, December 1-3, 2004. Printed Abstract.

2003

1. MKT Chan, KKH Low, KM Ho, KK Lo, SS Lee. Difference in Types and Patterns of Sexually Transmitted Infections Seen by Private and Public Practitioners in Hong Kong. 2003. Seventh Annual Scientific Meeting. The Hong Kong Society for Infectious Diseases 22 March 2003.

2002

1. B J Zheng, S S Lee, K H Wong, K C W Chan, N S Zhu, S C P. A predominant mutation of CCR5 gene and its effect on HIV disease progression in Chinese patients. TuPeA4356. XIV International AIDS Conference. 7-12 Jul, 2002.

2. SS Lee, KH Wong, KCW Chan, NS Zhu, SCP Chan, BJ Zheng. A predominant mutation of CCR5 gene and its effects on HIV disease progression in Chinese patients. 2002. XIV World AIDS Conference (Barcelona) 7-12 July, 2002.

3. Zheng BJ, Leung SK, Wong KH, Lee SS. Expression of CCR5 Expression of CCR5 on dendritic cells is a surrogate marker for HIV disease progression. 2002 9th Conference on Retroviruses and Opportunistic Infections. Seatle, Washington, Feb 2002.

4. Wong KH, Zheng BJ, et al. Mutations of CCR5 Gene in Chinese population of Hong Kong and Their Effects on Disease Progression in HIV Infections. Molecular basis of development and disease. August 17-20, 2002, Zhang Jia Jie, China.

5. WC Yam, KH Wong, SS Lee. Prevalence and pattern of genotypic drug resistance among HIV patients in Hong Kong. 2002. XIV World AIDS Conference (Barcelona) 7-12 July, 2002.

6. KM Ho, KK Ho, CK Lin. Recombinant-antigen enzyme immunoassay (EIA) as a screening test for syphilis in people with HIV infection. 2002. XIV World AIDS Conference (Barcelona) 7-12 July, 2002.

7. WC Yam, KH Wong, SS Lee. Reliability of Genotypic Drug Resistance Testing for B and non-B subtypes HIV-1 from patients in Hong Kong. 2002. 42nd Interscience Conference on Antimicrobial Agents and Chemotherapy.

2001

1. Fong OW, Ho CF, Fung S, Tse F, Yuen G, Sin KP. Determinants of adherence to HAART in Chinese HIV/AIDS patients. 2001. 6th ICAAP. Melbourne.

2. Fan KCM. Review on psycho-social problems and concerns of HIV infected adults in HK. 2001. Hong Kong AIDS Conference 2001, 27-29 August 2001, HKSAR.

3. SS Lee, KH Wong. The age effect on the response to hepatitis B vaccine in children. 2001. Annual Scientific Meeting, Hong Kong Society for Immunology. 21 April 2001.

4. SS Lee, KH Wong. The age effect on the response to hepatitis B vaccine in children. 2001. [Abstract] Asian Pacific Journal of Allergy and Immunology 2001;19:154.

5. Ng YW, Fong OW, Ng SC, Lam WM. To streamline the management of exposure to blood or body fluids under a Therapeutic Prevention Clinic in Hong Kong. 2001. 6th ICAAP. Melbourne.

2000

1. W.K. Tang, K.H. Wong, C.K. Chan, C.M. Tam. Clinical epidemiology of HIV-1 and tuberculosis co-infection in Hong Kong. 2000. XIIIth International Conference on AIDS, Durban, South Africa 9-14 July 2000.

2. K. Chan, K.H. Wong. Correlation between total lymphocyte count and CD4+ count in HIV-infected Chinese. 2000. XIIIth International Conference on AIDS, Durban, South Africa 9-14 July 2000.

3. SS Lee. Maximizing Immunity against Viral Infections-Lessons from HIV and HBV. 2000. The Federation's Anniversary Scientific Meeting 2000, Hong Kong 22 Oct 2000.

4. Wong KH. Clinical profile and treatment of HIV/AIDS – an Update. Hong Kong Medical Forum. Hong Kong. 1-2 July 2000.

5. HWK Tang, KCW Chan, KH Wong, EYY Lai. Prevalence of PPD positivity in HIV-infected Chinese in Hong Kong. [P2.59] 7th Western Pacific Congress of Chemotherapy & Infectious Diseases. Hong Kong.11-14 December. 2000

6. Chan KCW, Wong KH, Lee SS. Setting the agenda for quality assurance in an HIV clinic cum day care centre. 2000. Quality in practice Hong Kong Hospital Authority Convention 2000, Hong Kong, 7-10 May 2000.

1999

1. Wong KH. Opportunistic tumours in HIV infection - an update. 1999
   5th International Congress on AIDS in Asia and the Pacific, Kuala Lumpur, Malaysia, 20-27 October 1999.

2. KH Wong, SS Lee. Rising importance of tuberculosis as a primary AIDS-defining illness in Hong Kong. 1999. 20th Eastern Region Conference of the International Union Against Tuberculosis & Lung Disease, Hong Kong, June 4-7, 1999.

3. KH Wong. The Impact of HAART. 1999. Annual Scientific Meeting of Dermatology and Venereology 1999 and Hair Workshop 1999. Hong Kong, 17-18 July 1999.

4. Chan YV. Using a quality improvement approach to support drug adherence: a Hong Kong experience. 1999. 5th International Congress on AIDS in Asia and the Pacific, Kuala Lumpur, Malaysia, 20-27 October 1999.

5. Wong KH, Chan K, Low K. Using NNRTI (nevirapine) in combination antiretroviral therapy for HIV disease in Hong Kong. 1999. 5th International Congress on AIDS in Asia and the Pacific, Kuala Lumpur, Malaysia, 20-27 October 1999.

Appendix 8

Guidelines, Reports and Books contributed by ITC (1999-2006)

Guidelines

- Scientific Committee on AIDS and STI (SCAS). Centre for Health Protection, Department of Health. Using Antiretrovirals for Post Exposure Prophylaxis against HIV in the Non-occupational Setting – Position Statement of the SCAS. 2006.
- Precautions for Handling and Disposal of Dead Bodies. Department of Health, Hospital Authority, Food and Environmental Hygiene Department. 2005.
- 處理及處置屍體所需的預防措施. 衛生署, 醫院管理局, 食物環境衛生署. 2005.
- Recommendations on Infection Control Practice for HIV Transmission in Health Care Settings. Scientific Committee on AIDS, co-sponsored by the Hong Kong Advisory Council on AIDS and the Centre for Health Protection, Department of Health. 2005, 2003, 2000.
- Scientific Committee on AIDS co-sponsored by the Hong Kong Advisory Council on AIDS and the Centre for Health Protection, Department of Health. Recommended Framework for the Delivery of HIV Clinical Care in Hong Kong. 2005.
- Scientific Committee on AIDS. Recommended Principles of Antiretroviral Therapy in HIV Disease. 2005.
- Recommendations on Hepatitis B Vaccination Regimens in Hong Kong-consensus of the Scientific Working Group on Viral Hepatitis Prevention Addendum 2004. 2001.
- Committee on Promoting Acceptance of People Living with HIV/AIDS (CPA) of the Hong Kong Advisory Council on AIDS. Recommended Ethical Principles on Partner Counselling and Referral for HIV Infected Individuals in Hong Kong. 2004.
- Social Hygiene Service, Centre for Health Protection, Department of Health. Recommendations in Case Management of Sexually Transmitted Infections (STIs) in Hong Kong 2004. 2002.
- Committee on Promoting Acceptance of People Living with HIV/AIDS (CPA) of the Hong Kong Advisory Council on AIDS. Recommended Ethical Principles Regarding the Use of Assisted Reproduction in HIV Infected Individuals. 2004.
- Scientific Committee on AIDS & Scientific Working Group on Viral Hepatitis Prevention. Recommendations on the Management and Postexposure Prophylaxis of Needlestick Injury or Mucosal Contact to HBV, HCV and HIV. 2003. 2000.
- 對被利器刺傷及經黏膜與乙型肝炎、丙型肝炎及愛滋病病毒接觸後的處理方法及預防措施 - 策略原則. 愛滋病科學委員會預防病毒性肝炎科學工作小組. 2003, 2000.

- Scientific Committee on AIDS of Hong Kong Advisory Council on AIDS. Recommended Principles on the Application of the HIV Antibody Rapid Test in Hong Kong. 2003.
- Scientific Committee on AIDS of Hong Kong Advisory Council on AIDS. Recommendations on the Management of HIV Infection in Infants and Children. 2002. 2001.
- Scientific Committee on AIDS of Hong Kong Advisory Council on AIDS. Recommendations on the Treatment of Latent TB infection in HIV-positive Persons in Hong Kong. 2002.
- Scientific Committee on AIDS, Advisory Council on AIDS. Recommended Clinical Guidelines on the Prevention of Perinatal HIV Transmission. 2001.
- 香港愛滋病顧問局愛滋病科學委員會. 預防圍產期愛滋病傳播的建議臨床指引. 2001.

Reports

- Special Preventive Programme, Centre for Health Protection, Department of Health, Hong Kong. Tracking the characteristics and outcome of HIV/AIDS patients cared for at the Integrated Treatment Centre- A Report of 1999 to 2005. 2006.
- Special Preventive Programme, Centre for Health Protection, Department of Health. Surveillance of exposure to blood-borne viruses (HIV, HBV, HCV) and its management 1999 – 2004. 2006.
- Surveillance of Viral Hepatitis in Hong Kong - 2005 Update Report. 2006.
- Scientific Committee on AIDS, co-sponsored by the Hong Kong Advisory Council on AIDS and the Centre for Health Protection, Department of Health. Evaluation of the Effectiveness and Efficiency of Universal Antenatal HIV Testing Programme in Hong Kong – Review of the Years 2001 to 2004. 2005.
- Special Preventive Programme, Centre for Health Protection, Department of Heath. A Clinical Governance Report on the Monitoring and Evaluation of HIV Clinical Management at Integrated Treatment Centre 1999 – 2004. 2005.
- Committee on Promoting Acceptance of People Living with HIV/AIDS (CPA) of the Hong Kong Advisory Council on AIDS. Review on Social and Support Services to People with HIV/AIDS in Hong Kong. 2005.
- Surveillance of Viral Hepatitis in Hong Kong - 2004 Update Report. 2005.
- The Forgotten Tragedy · The Unforgettable Trauma · Addressing the needs of people affected by haemophilia and HIV infection in Hong Kong. *Final report of the Hong Kong Advisory Council on AIDS* Hong Kong Advisory Council on AIDS. 2004.
- Surveillance of Viral Hepatitis in Hong Kong - 2003 Update Report. 2004.

- Scientific Committee on AIDS of the Hong Kong Advisory Council on AIDS. Report on the Implementation of the Universal Antenatal HIV Testing Programme in the Public Service. 2003.
- Surveillance of Viral Hepatitis in Hong Kong - 2002 Update Report. 2003.
- Red Ribbon Centre. Resistance of the Neighbourhood Community to the AIDS Treatment Facilities - Case Study of Kowloon Bay Health Centre. 2002.
- 紅絲帶中心. 鄰近社區對愛滋病治療設施的抗拒 - 九龍灣健康中心個案研究. 2002.
- Surveillance of Viral Hepatitis in Hong Kong - 2001 Update Report. 2002.
- Special Preventive Programme Department of Health. Glossary on HIV/AIDS and Related Terms. 2001.
- 衛生署特別預防計劃. 愛滋病毒愛滋病及其相關的辭語. 2001.
- Scientific Working Group on Viral Hepatitis Prevention. Hepatitis B Vaccination Programme in Public Services in Hong Kong - Protocol update 2001.
- Scientific Working Group on Viral Hepatitis Prevention. A Consensus Paper on the Public Health Significance of Hepatitis C Infection in Hong Kong. 2001
- Surveillance of Viral Hepatitis in Hong Kong - 2000 Update Report. 2001.
- Surveillance of Viral Hepatitis in Hong Kong - 1999 Update Report. 2000.

Books

- HIV Manual 2001. Kenny Chan, KH Wong and SS Lee. Published by the Integrated Treatment Centre, Special Preventive Programme, Department of Health, 2001.
- The First Decade of AIDS in Hong Kong - a collection of essays. Edited by SS Lee and CW Chan. Published by the Advisory Council on AIDS, 1999.

Appendix 9

Selected list of other resource productions on HIV for patients and workers by ITC (1999-2006)

Accessible at http://www.info.gov.hk/aids/english/itc/resource.htm

Resource Book

Year	Title
2006	Anti-retroviral drug
2002	HIV Antibody Testing
2000	Getting Pregnant
2000	New Life
1999	Cholesterol and Triglyceride
1999	Needle stick injury

To Know More Poster Series

Year	Title
2006	Regular exercise improve health
2006	Common fungal infection of skin
2005	More Healthy, Better Figure, Be confident
2005	The story of fire (HIV) and oil (STIs)
2005	Immunocompromised people - Common Oral Problems
2004	Quit Smoking: Stay Healthy 7 Steps to Quit Smoking
2004	Beware of Super-infection with HIV
2004	Why Gynaecological Checkup is Important ?
2003	Human Immunodeficiency Virus (HIV) Infection And Pregnancy
2003	9 Tips on Successful Drugs Taking
2003	Prevention of Respiratory Tract Infection
2002	Oral Candidiasis
2002	Tuberculin Skin Test
2002	Penicillium Marneffei
2002	What is Mycobacterium Avium Intracellulare (MAI)?
2001	Common Viral Diseases of Skin
2001	Cholera
2001	Infections affecting the Gut
2000	Infections affecting the Brain
2000	Taking good care of your health
1999	Opportunistic infections
1999	Tips on traveling
1999	Why do you need to use the condom

Booklet

Year	Title
2004	An Introduction to Antiretroviral Therapy Drug Adherence - A Key to Treatment SUCCESS
2003	Live and Let Live
2003	Opportunistic infection
2001	爲了明天 *Chinese version*

Pamphlet/ Leaflet

Year	Title
2006	Good drug adherence leads to treatment success
2006	I am positive but I want to be pregnant
2004	Management after Needlestick injuries or Mucosal Contacts of Blood and body fluids
1999	Therapeutic Preventive Clinic
1999	Special Preventive Programme Clinical Service

Newsletter - Red Ribbon Bulletin

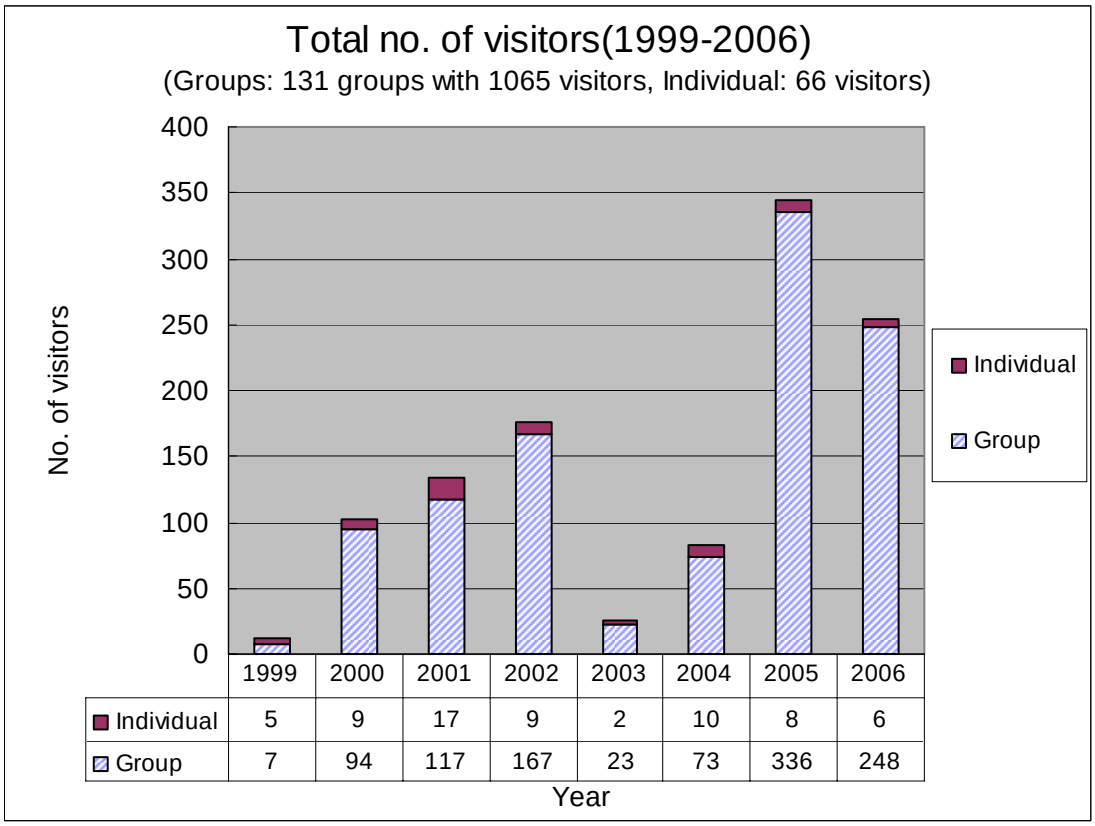
Issue No.	Year
23	2006
22	2006
21	2005
20	2005
19	2005
18	2004
17	2004
16	2004
15	2003
14	2003
13	2003
12	2002
11	2002
10	2001
9	2000
紅絲帶特刊	1999

Drug Information Material

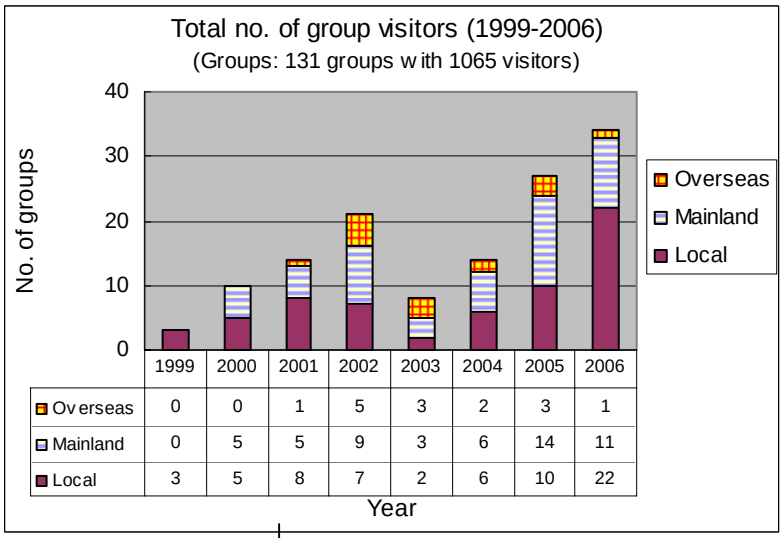
Year	Title
2005	Antiretroviral Drugs

Appendix 10

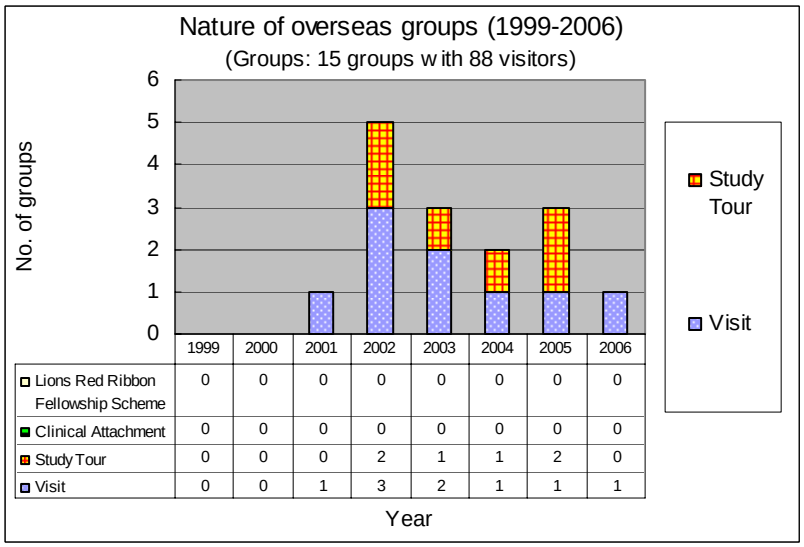
Group and individual visitors of ITC (1999-2006)



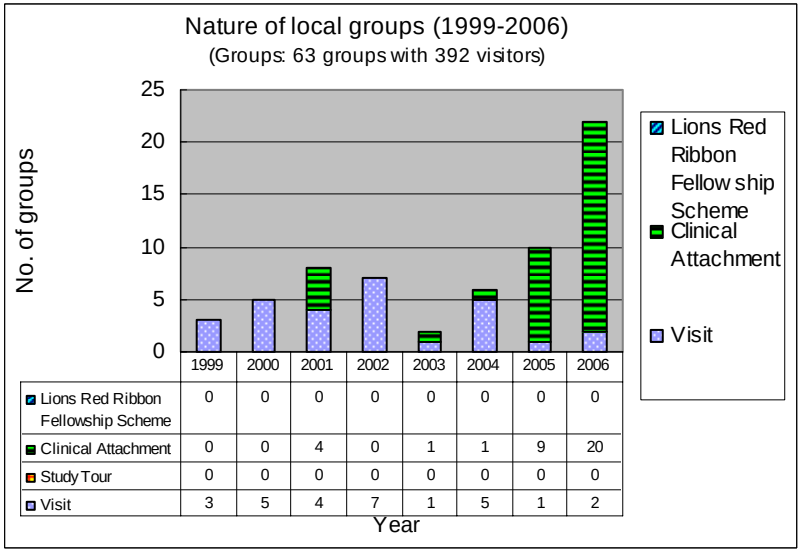
	1999	2000	2001	2002	2003	2004	2005	2006
Individual	5	9	17	9	2	10	8	6
Group	7	94	117	167	23	73	336	248



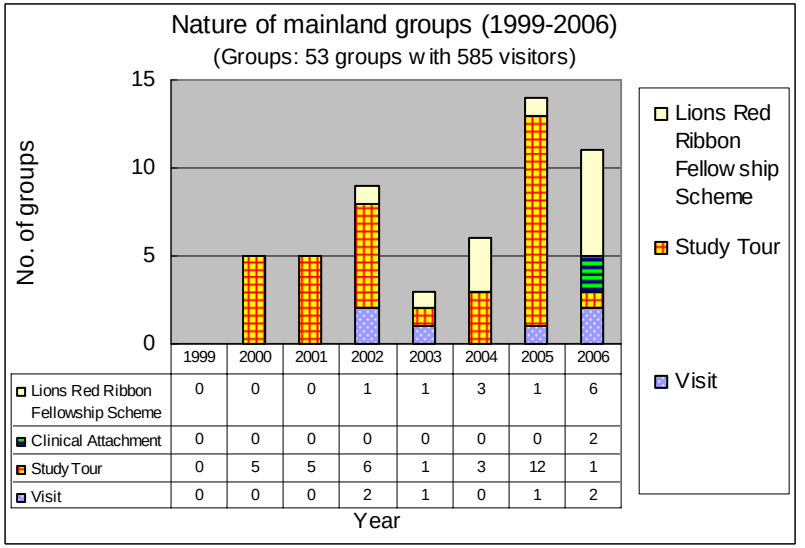
	1999	2000	2001	2002	2003	2004	2005	2006
Overseas	0	0	1	5	3	2	3	1
Mainland	0	5	5	9	3	6	14	11
Local	3	5	8	7	2	6	10	22



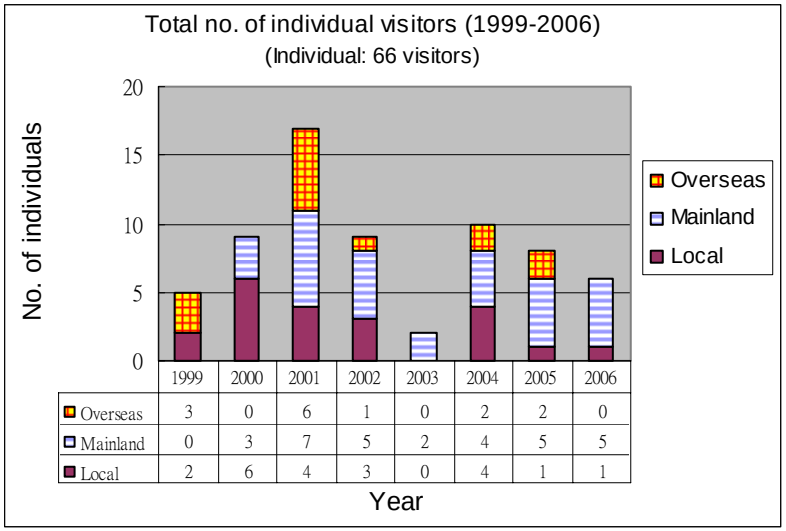
	1999	2000	2001	2002	2003	2004	2005	2006
Lions Red Ribbon Fellowship Scheme	0	0	0	0	0	0	0	0
Clinical Attachment	0	0	0	0	0	0	0	0
Study Tour	0	0	0	2	1	1	2	0
Visit	0	0	1	3	2	1	1	1



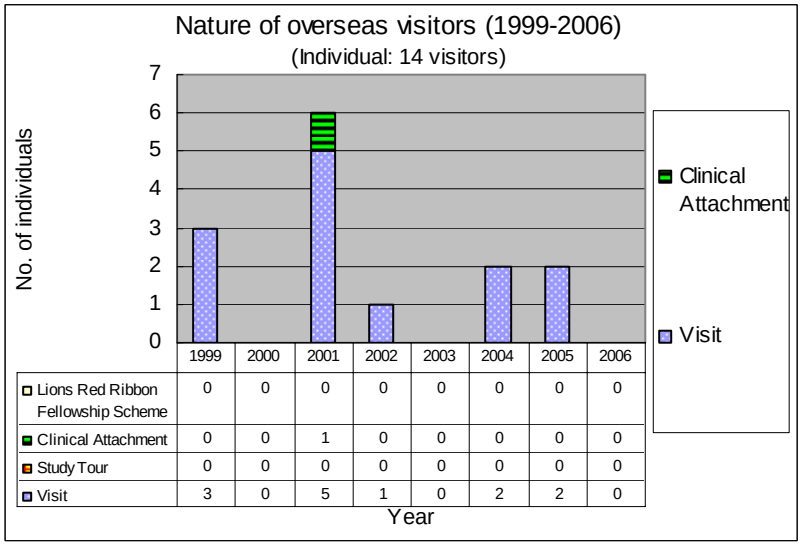
	1999	2000	2001	2002	2003	2004	2005	2006
Lions Red Ribbon Fellowship Scheme	0	0	0	0	0	0	0	0
Clinical Attachment	0	0	4	0	1	1	9	20
Study Tour	0	0	0	0	0	0	0	0
Visit	3	5	4	7	1	5	1	2



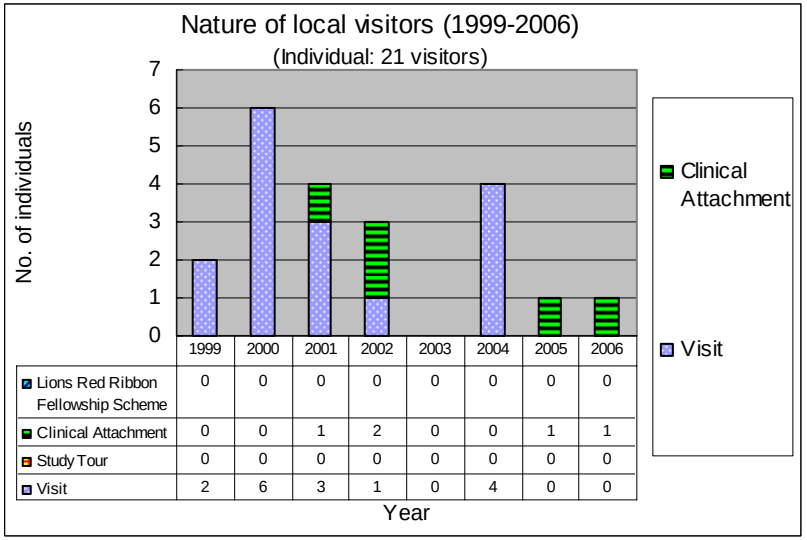
	1999	2000	2001	2002	2003	2004	2005	2006
Lions Red Ribbon Fellowship Scheme	0	0	0	1	1	3	1	6
Clinical Attachment	0	0	0	0	0	0	0	2
Study Tour	0	5	5	6	1	3	12	1
Visit	0	0	0	2	1	0	1	2



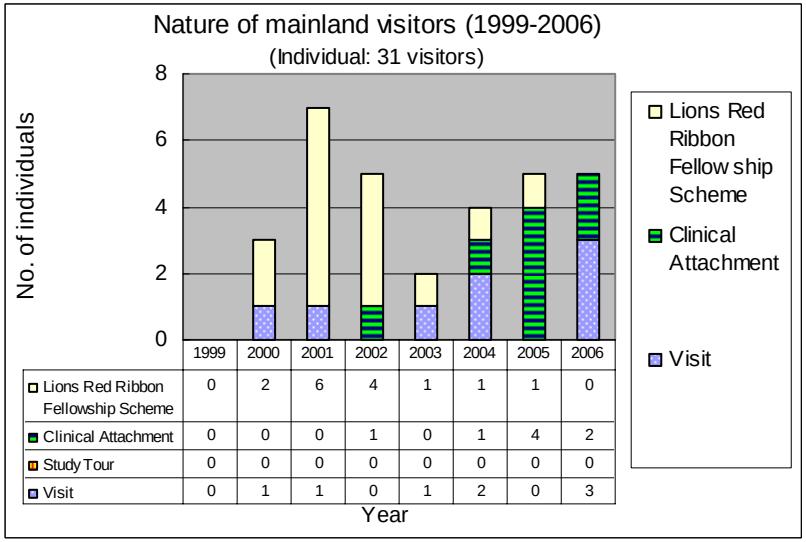
	1999	2000	2001	2002	2003	2004	2005	2006
Overseas	3	0	6	1	0	2	2	0
Mainland	0	3	7	5	2	4	5	5
Local	2	6	4	3	0	4	1	1



	1999	2000	2001	2002	2003	2004	2005	2006
Lions Red Ribbon Fellowship Scheme	0	0	0	0	0	0	0	0
Clinical Attachment	0	0	1	0	0	0	0	0
Study Tour	0	0	0	0	0	0	0	0
Visit	3	0	5	1	0	2	2	0



	1999	2000	2001	2002	2003	2004	2005	2006
Lions Red Ribbon Fellowship Scheme	0	0	0	0	0	0	0	0
Clinical Attachment	0	0	1	2	0	0	1	1
Study Tour	0	0	0	0	0	0	0	0
Visit	2	6	3	1	0	4	0	0



	1999	2000	2001	2002	2003	2004	2005	2006
Lions Red Ribbon Fellowship Scheme	0	2	6	4	1	1	1	0
Clinical Attachment	0	0	0	1	0	1	4	2
Study Tour	0	0	0	0	0	0	0	0
Visit	0	1	1	0	1	2	0	3

Appendix 11

Fellowship and other attachments of non-local health care workers (2004-2006)

Name	Affiliation	Period of attachment
LIU Kuai In	Centro Hospitalar Conde de São Januário CHCSJ	1-26 November, 2004
TSE Maria Fatima	Department of Prevention and Treatment for Drug Dependence, Social Welfare Bureau, Macao	4-30 April, 2005
WU Dongling	Ditan Hospital, Beijing	6 June - 2 July, 2005
Dr. SUN Changyu	First Affiliated Hospital, Zhengzhou University, Henan	25 July - 28 September, 2005
SHENG Yu	Peking Union Medical College, Beijing	15-27 August, 2005
LEI Pou Heng	Centro Hospitalar Conde de São Januário CHCSJ, Macao	5-30 June, 2006
Augusto P. V. Nougeira, Carvalhais, Lao, Alzira Ka Lan	Association of Rehabilitation of Drug Abuser's of Macau (ARTM)	18-19 September, 2006
CHEN Shujing	Ditan Hospital, Beijing	7 November - 2 December, 2006
AN Li	Youan Hospital, Beijing	7 November - 2 December, 2006
Dr. TANG Zhirong	Guangxi CDC, Nanning city, Guangxi	20 November, 2006 – 26 January, 2007

Appendix 12

Selected photos of ITC activities

Greetings from our nurses and social workers at the Lunar New Year of the Boar.

Established by the nurses of ITC to promote partnership with patients in managing HIV, the electronic pill planner programme was being awarded the 2006 Department of Health Staff Suggestion Scheme Bronze Prize.

Dr TANG Zhirong from Guangxi China, had completed the attachment training 'Clinical HIV Medicine Training for Visiting Clinical Fellows' based at ITC and received a certificate issued by Dr KH WONG, Consultant Special Preventive Programme. His attachment period was from 20 November 2006 to 26 January 2007.

Nurses CHEN Shujing and AN Li from Beijing received a certificate after completion of the 'Clinical Attachment Programme for Fellowship in HIV Clinical Nursing' training programme based at ITC. Their training period was from 7 November to 2 December 2006.

Workshop to updating our nurses on Drug Adherence Programme. Photo taken on 28 March 2006 during a role play on advising patient's drug schedule.

Practice makes perfect. A return demonstration by colleagues of Special Preventive Programme. Photo taken during the workshop 'Donning and Removing of PPE' held on 29 April 2006.

On 1 April 2006, Nursing Officer Ms San WONG gave an overview on what she learned after a -week 'Preventive Intervention Targeting HIV Positives' training in New York USA' in January to February 2006.

Staff form Community Psychiatric team of United Christian Hospital and Social Welfare Department was invited to deliver a talk on managing patients with violence. Photo taken on 20 July 2006.

MSM Workshop Series: The speaker Mr Barry Lee reminded us to use gay-friendly jargons when working with MSM. Photo taken on 13 May 2006.

Putonghua tutor Ms WANG Yang was satisfied with this very interactive class. This tailor-made Putonghua in-service training was aimed to provide doctors and nurses opportunity to adequately equip themselves to receive Putonghua-speaking visitors from Mainland. The course lasted from 28 October to 30 December 2006.

Senior Medical Officer Dr Kenny CHAN and Senior Nursing Officer Ms Victoria KWONG paid a consultancy visit to systematically appraise the HIV clinical programme of Gansu Province, China on 11 to 15 July 2006.

Invited by the Faculty of Nursing of the Peking Union Medical College, Senior Medical Officer Dr Kenny CHAN and Nursing Officer Ms San WONG conducted a '3-day Training Workshop on Clinical HIV/AIDS for Mainland Health Care Workers' in Beijing on 13 to 16 November 2006.

Nursing Officer Ms San WONG and Registered Nurse (Health) Ms WY YEUNG posed for a photo after receiving Ms Linda Pei, Programme Officer of the DEFID China British Embassy, Beijing on 17 January 2006.

Nursing Officer Ms OW FONG posed for a photo with a group of non-governmental organisations workers. The study tour was organised by Social Welfare Bureau of Macau SAR Government to visit ITC on 13 June 2006.

Received by Senior Medical Officer Dr Ian TSE, a group of Myanmar psychiatrists visited ITC on 20 July 2006. The main focus of the visit was on methadone treatment and management of HIV infected drug abusers.

A 2-day training attachment programme was organised by and for the health care workers of ARTM, Macau (a non-governmental organisation targeting drugs users) on 18 and 19 September 2006.

Under the exchange programme of professional personnel between Guangdong Provincial Government and HKSARG, Dr LI jianchung from the Health Department of Guangdong Province paid a special visit to the ITC towards the end of the programme on 26 October 2006.

Our honourary guests, doctors, nurses and social workers posed for a photo after the Patient Support Group X'mas Party held on 15 December 2006. The party was joined by more than 120 patients and family members.