

## Calendar

Last meetings of the Council 1999-2001

XXXth Meeting of the Advisory Council on AIDS (ACA)

2:30pm 21 June 2002

IXth Meeting of the AIDS Prevention and Care Committee (APCC)

6pm 6 June 2002

XXVth Meeting of the Scientific Committee on AIDS (SCA)

to be advised

VIIIth Meeting of the Committee on Promoting Acceptance of People Living with HIV/AIDS (CPA)

2:30pm 23 May 2002

## Highlights of this issue:

- \* Council News on page 19
- \* Letter to ACA Newsfile 20
- \* Deriving HIV epidemiology .... on page 21 - 24

## Basis of prioritisation

IN this issue, we publish the letter from Dr Joseph Lau of the Centre for Clinical Trials and Epidemiological Research (CCTER) of the Chinese University of Hong Kong, on his response to an article in the last issue of *ACA Newsfile*. The subject was discussed at the Advisory Council on AIDS Meeting on 22 March. As suggested by the Chairman and the with the Council's permission, the original paper is reprinted here for the easy reference of members of committees working on HIV prevention, and whoever may be interested in the basis of prioritisation contained in the strategy recommended in Hong Kong. - *the editor*

## PUBLICATIONS

THE following documents have recently been published by the ACA Secretariat: *Care and welfare of people living with HIV/AIDS - Strategy Paper (English and Chinese) 2002*, and *Procedure for management of needlestick injury or mucosal contact with blood or body fluids - general guidelines for hepatitis B, C and HIV prevention (amended version, 2000)*.

Members are advised to note that the latter document is being examined by the Scientific Committee on AIDS (of the Council) and the Scientific Working Group on Viral Hepatitis Prevention for possible revision later this year.

The documents can also be downloaded from the Council's webpage at [www.aca-hk.com](http://www.aca-hk.com) ⌘



A delegation from the Jiangxi provincial government visited Hong Kong between 8 and 10 April (Team one only, with the second Team coming in May) to take reference from our mechanisms and strategies of AIDS programme development. Dr Homer Tso (in the middle of the picture), the ACA Chairman, introduced to the visitors the work of the Council. The visitors came from different sectors including health, public security, planning, family planning and finance. ⌘

# Letter

Dear all,  
 I would like to share with you about some thoughts on our surveillance system in Hong Kong, which is obviously important. I read the ACA newsletter and it is so nice for the ACA to have a discussion about it. However, I find confusing to see the statement that "Data collected had lent support to the emphasis on the following priority areas, against the background of a generally low HIV prevalence: sexually transmitted infection (STI) patients, MSM, IDU and young people. THE RELEVANCE OF COMMERCIAL SEX AND HUMAN MOBILITY WAS HOWEVER LESS DIRECT." In fact, according to the world literature, including one on the most prestigious AIDS Journal, (HIV surveillance in hard-to-reach population, April 2001). It stress the importance to have surveillance on sex workers for low prevalence areas, because it would be changing before

the general population is affected. The mobile population is obviously important in our context, because of the HK-China activities.

The fact is that we do not have any credible surveillance on most of our vulnerable populations, the MSM surveillance is on clinic base and is heavily biased, so are the sex workers going to STD clinics, who are in fact, better classified as STD patients rather than sex workers, in surveillance sense. To my limited knowledge, the second generation comprehensive surveillance system should include case reporting biological surveillance of HIV prevalence in different subgroups and behavioral surveillance. The latter two are not what Dr Low suggested, to be "supplementary" to the surveillance system, instead, they are key parts of the system. Countries all over the world have been trying to rely less on case reporting, which is still the core of our surveillance data in HK. We should ask seriously the question: "Is our system adequate?" and/or "What can be improved?" and not feeling as implied by the content of the newsletter, that we have a sound system. In fact, the system

has stayed pretty much the same in the last ten years.

There are academics, both in Hong Kong and in the region that can work together for an improvement. For example, in May, UNAIDS, WHO FHI etc is going to organise a summit on behavioral surveillance in Bangkok. We have been talking about community and academicians' input, but in the process, it is rather weak.

I agree totally with Dr Low that in fact, it should be consistent and regularised, I am not sure it is going to be simple, though of course, it should be as simple as possible.

I sincerely hope that we are going to have a good HIV surveillance system in HK. In practical terms, we have to add HIV surveillance to sex workers and MSM; we should discuss what part of behavioral surveillance are required and how a system can be built us etc..

*Yours sincerely,  
 Dr Joseph Lau,  
 Director  
 Centre for Clinical Trials and  
 Epidemiological Research*

## Reported HIV/AIDS Statistics (updated 31 December 2001)

		HIV		AIDS	
		total	/ Q4 2001	total	/ Q4 2001
<b>Gender</b>	male	1435	49	491	15
	female	320	13	69	1
<b>Ethnicity</b>	Chinese	1214	48	436	14
	non-Chinese	541	14	124	2
<b>Transmission</b>	heterosexual	1001	34	369	11
	homosexual	336	10	97	3
	bisexual	84	3	28	0
	injecting drug use	44	1	9	0
	blood/b products	68	0	19	0
	perinatal	14	0	6	0
	undetermined	208	14	32	2
<b>TOTAL</b>		<b>1755</b>	<b>62</b>	<b>560</b>	<b>16</b>

**NOTE:**

The "total" refers to the cumulative total number reported since 1984, under the voluntary HIV/AIDS Reporting System. "Q4 2001" refers to the period October to December 2001. The "AIDS" number is a subset of the "HIV numbers" and the two should not be added.

**SOURCE:**

Special Preventive Programmes, Department of Health, Hong Kong SAR Government

# Deriving HIV Epidemiology from the Reporting System in Hong Kong

*In the preparation of the new HIV strategies for 2002 to 2006, the epidemiology in Hong Kong was reviewed. The following is the paper discussed at the 39th meeting of the Advisory Council on AIDS, underlining the rationale behind the prioritisation of selected communities in the prevention of HIV infection in Hong Kong. A modified and expanded version of the paper is printed on line in the latest issue of Hong Kong STD/AIDS Update, which can be viewed at the Virtual AIDS Office [www.aids.gov.hk](http://www.aids.gov.hk) (or through the Council's page at [www.aca-hk.com](http://www.aca-hk.com)). The paper was authored by SPP on behalf of ACA Secretariat.*

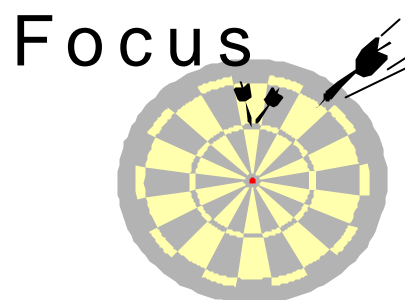
## Background

1. An understanding of the patterns of human immunodeficiency virus (HIV) infection, Acquired Immunodeficiency Syndrome (AIDS), and their associated factors, together constitute the backbone of the necessary knowledgebase that

underlies our fight against HIV/AIDS. In order to ensure the development of thorough and critical analysis, it is necessary to have in place a systematic collection of data through an effective surveillance system. Information derived from this process would then enable policy makers to target limited resources to the areas most needed, health care workers to better focus on local problems, and researchers to carry out studies pertinent to our own situation.

2. To-date, a number of programs have contributed to our HIV/AIDS surveillance system in Hong Kong. They are the (i) HIV/AIDS reporting; (ii) seroprevalence studies; (iii) sexually transmitted infection (STI) surveillance; and (iv) behavioural surveillance. The results were complemented by research activities including molecular biology and HIV immunology studies. Currently HIV/AIDS reporting is the mainstay of our HIV/AIDS surveillance system, which is complemented by other three programs and research activities.

3. Since the first AIDS case was discovered in 1981, a great deal of



work and research had contributed to our understanding of the AIDS virus, the natural history of the infection, rationale for its treatment and control. The ways in which HIV can be transmitted are well-delineated: (i) sexual contact with an infected person; (ii) sharing needles or syringes with others who are infected; (iii) from an infected mother to her baby; and (iv) the transfusion of infected blood or blood products. The latter rarely happens now ever since the introduction of blood screening by the Hong Kong Red Cross Blood Transfusion Service in 1985.

## The HIV/AIDS Reporting System and its Limitation

4. HIV/AIDS reporting in Hong Kong has been in operation since 1984. Attending physicians of newly diagnosed HIV or AIDS cases and laboratories providing confirmatory tests for HIV infection make reports through the submission of DH2293 form (Appendix) and the separate laboratory forms, respectively. The reporting is a case-based notification system conducted on a voluntary basis. Core information reported includes age or date of birth, gender, ethnicity of the HIV-infected person, date of diagnosis and the likely route(s) of contracting HIV. Submission of individual's name is not mandatory so as to protect privacy and confidentiality

5. Understandably, certain inherent limitations do exist in this type of reporting system. The questions of under-reporting and

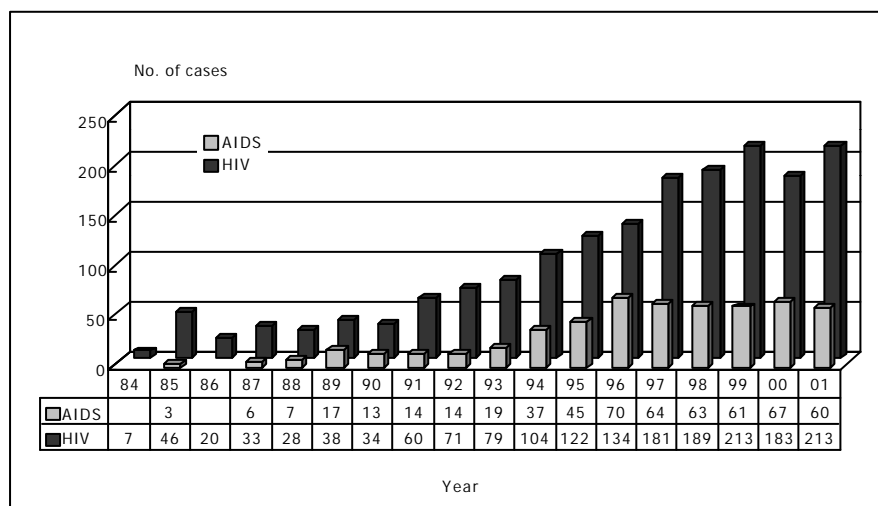
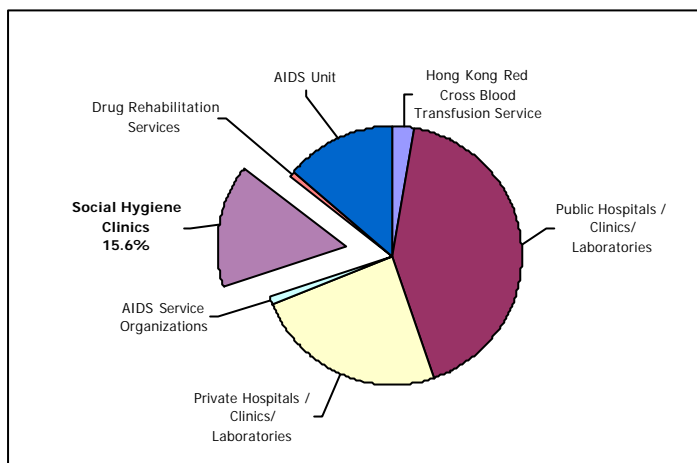


Figure 1. Hong Kong Annual HIV/AIDS Statistics

**Figure 2. Breakdown in Source of reporting**



“under-diagnosis” (i.e. those who are infected with HIV but are unwilling to undertake or have not yet taken the tests) are frequently raised. On the other hand, duplication in cases reported by different attending physicians (resulting in over-reporting) remains a possibility although this is believed to be uncommon since every entry has been doubly checked within the same quarterly period before deposition in the data system.

6. Despite these seemingly non-rectifiable drawbacks, the reporting system has been functioning consistently in the same format for

the analysis supporting the recommended strategies of the Advisory Council on AIDS (1999-2001, and 2002-2006) which aim to focus on priority areas in a low prevalence setting.

**Temporal Trend and Distribution by Gender, Age and Ethnicity**

7. As of the end of 2001, a cumulative total of 1755 HIV infections have been reported to the system and among them, 560 have already progressed to AIDS (Figure 1). On a yearly basis, a rising trend was observed on the reported number of HIV infections over the

almost two decades. An analysis of the temporal trends may therefore still yield meaningful results to facilitate the development of effective strategies. This paper gives an overview of

Retroviral Therapy in late 1996 in Hong Kong.

8. Although the male-to-female ratio of HIV infections has narrowed in recent few years, the actual number of newly diagnosed HIV infections in both males and females is rising. About half of the infected female was non-Chinese Asian (47.8%), followed by Chinese (41.9%). The situation is different from that of male patients who were mainly Chinese (75.3%) while non-Chinese Asian accounted for only 8.3%.

9. The age distribution of HIV infections (all HIV infections and those acquired through sexual contacts) over the past 10 years has remained relatively unchanged. (Table 1) Young people are the ones affected predominantly each year, implying the diagnosis of newly infected cases, rather than the reporting of previously undiagnosed persons. The infections occurring in other age groups should however not be ignored.

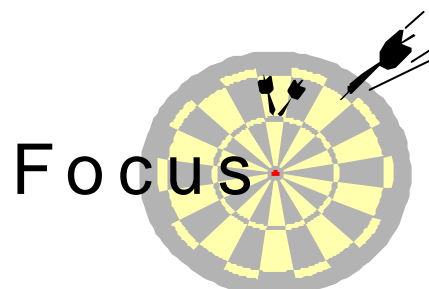
**Factors that Influence Risk of HIV Infection**

Sexual Transmission

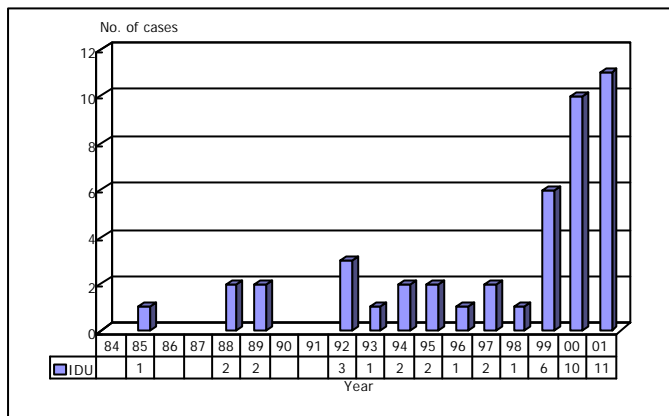
10. Sexual contact is the commonest route of transmission, accounting for 80.9% of all reported HIV infections. Both heterosexual and homosexual intercourses are important causes of infection. Female HIV infection had occurred infrequently at the beginning of the epidemic when many of the infected persons were either (a) haemophiliacs who got infected through the use of contaminated

past 2 decades. Around 200 new HIV infections were reported yearly in the past five years. The number of AIDS cases has plateau off since 1997, probably due to the introduction of Highly Active Anti-

Year	Median age	Inter quartile	
		25%	75%
1984	11	6	32
1985	21	13.5	28.5
1986	26	15	41
1987	29	24	38.5
1988	35	25.75	42.25
1989	36	28	46
1990	33	28	39
1991	31.5	26	39.75
1992	34	28	40
1993	33	27	39
1994	34	28	40
1995	32	26	40
1996	34	30	41.5
1997	35	28.5	42
1998	34	29	40
1999	35	29	43
2000	35	29	43
2001	35	29	42
<b>Total</b>	<b>34</b>	<b>28</b>	<b>41</b>



**Figure 3. Annual HIV Infection through IDU**



blood product or (b) men infected through homosexual contact. This pattern has undergone changes. As a result of increasing heterosexual infections, it is not surprising to see that female has a higher proportional increase in the number of HIV infection given the previous low infection rate.

11. The importance of sexual risk can also be inferred from the proportion of HIV reports submitted by the Social Hygiene Service, Hong Kong' s largest network of STI clinics that manages some 30,000 cases per year. Over the year, 15.6% of the HIV infections were reported from these clinics. (Figure 2)

12. Tables 2, 3 and 4 show an analysis of the incidence rates of HIV infections among men having sex with men (MSM), heterosexual males and females since 1997. Although the relative proportion of female HIV infections has been on the increase in recent years, the incidence rates of HIV infection have been more or less stable. The group specific rates of the other 2 groups have also been stable except some fluctuations in the MSM group. When comparing the yearly incidence rates among the 3 groups, the MSM group specific rate has all

heterosexual men, assuming 10% of population is MSM.

Injection drug use

13. Injection drug use is the most important route of transmission for HIV infection in many Chinese provinces. In Hong Kong, although the cumulative proportion of HIV infection due to injection drug use has remained small (44/1755; 2.5%), the absolute number involved is on the rising trend particularly in the past three years (Figure 3). As the risk of transmission for HIV per act of needle-sharing is much higher than that of sexual contact, the chance of spreading HIV through this route cannot be

ignored. along been higher than that of the other 2 groups. Take 2001 as an example, the rate of HIV infection among MSM is 10 times that in females and 3 times of that in

ignored.

Mother To Child Transmission

14. As of the end of 2001, 14 perinatal infections have been reported, accounting for 0.8% of the total reports. Since the implementation of universal antenatal HIV testing, 6 HIV positive pregnancies were reported in the first three months. This could be

**Table 2. Age-specific rate for HIV Infected Homosexual males (Assuming 10% males in the population are homosexual and bisexual)**

Age group	Age-specific rate (per 100,000 population)				
	1997	1998	1999	2000	2001
0 - 4	---	---	---	---	---
5 - 9	---	---	---	---	---
10 - 14	---	---	---	---	---
15 - 19	---	---	4.22	4.23	---
20 - 24	8.49	13.00	4.40	13.35	13.33
25 - 29	48.78	24.47	28.75	12.37	20.77
30 - 34	30.00	21.07	44.26	34.19	50.72
35 - 39	17.84	14.93	21.15	24.76	31.96
40 - 44	31.24	3.29	15.80	6.12	20.85
45 - 49	8.20	4.00	15.63	---	3.70
50 - 54	---	---	15.94	---	4.41
55 - 59	---	---	22.52	---	---
60 - 64	14.17	---	---	---	7.47
65 - 69	---	---	---	---	---
70 - 74	---	---	---	---	9.76
>= 75	---	---	---	---	---
Unknown	---	---	---	---	---
<b>Total</b>	<b>13.29</b>	<b>6.77</b>	<b>13.17</b>	<b>7.94</b>	<b>13.08</b>

**Table 3. Age-specific rate for HIV Infected Heterosexual Males (Assuming 90% males in the population are heterosexual)**

Age group	Age-specific rate (per 100,000 population)				
	1997	1998	1999	2000	2001
0 - 4	---	---	---	---	---
5 - 9	---	---	---	---	---
10 - 14	---	---	---	---	---
15 - 19	0.48	---	---	---	0.48
20 - 24	3.30	0.48	2.44	1.48	0.99
25 - 29	4.52	5.44	4.56	2.75	5.54
30 - 34	6.67	8.58	8.20	5.49	6.94
35 - 39	4.96	8.30	3.69	5.50	6.39
40 - 44	3.86	3.66	4.92	5.78	2.65
45 - 49	3.64	2.22	2.17	2.98	4.11
50 - 54	3.50	1.91	5.31	2.64	2.45
55 - 59	4.06	4.19	3.34	2.52	2.45
60 - 64	2.36	4.00	2.44	3.27	2.49
65 - 69	0.91	1.75	0.86	1.72	1.73
70 - 74	---	---	3.58	1.14	1.08
>= 75	---	1.12	1.07	---	---
Unknown	---	---	---	---	---
<b>Total</b>	<b>2.88</b>	<b>3.11</b>	<b>2.93</b>	<b>2.61</b>	<b>2.74</b>

**Focus**

translated into a prevalence rate of 0.06%, out of a total of 10328 tests performed (Department of Health press release 7 February 2002 [www.aids.gov.hk](http://www.aids.gov.hk)). The low HIV prevalence rate in expectant mothers is a good reflection of that in the general population.

### Conclusion

15. One obvious conclusion that can be drawn from the results of the reporting system is the low HIV rate in the general population in Hong Kong. This does not however equate an absolute control on the dissemination of the virus. New infections have continued to be diagnosed especially in young people in Hong Kong.

16. Despite a relatively low HIV prevalence in Hong Kong, two observations are particularly worrisome: firstly the high HIV incidence rate in MSM groups, and secondly the rapid increase in the number of HIV infection in injecting drug users. Other important observations are:

- (a) the diagnosis of HIV infections in STI patients
- (b) the high number of local heterosexual men who contracted the virus, compared to the small but

rising number of women infected

17. Despite the limitation of the reporting mechanism, results obtained over the years have lent support to directing HIV prevention efforts to a majority of the priority areas identified by the external consultants of the 1998 review – young people, MSM, injection drug users, STI patients. There is no commonly agreed definition of “travellers” in public health context,

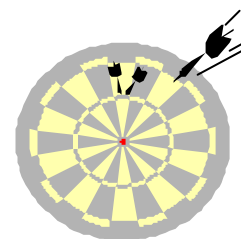
but the practice of risk behaviours in men outside Hong Kong has probably led to a significant proportion of heterosexual infections diagnosed so far. The importance of commercial sex (the remaining priority area) is self-explanatory. Its role in the HIV situation in Hong Kong is a more complex phenomenon that cannot be explained by the results in the reporting system.

**Table 4. Age-specific rate for HIV Infected Heterosexual Female s**

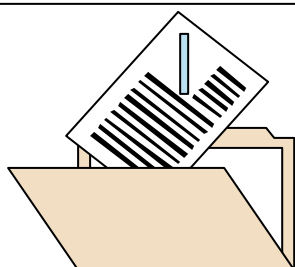
Age group	Age-specific rate (per 100,000 population)				
	1997	1998	1999	2000	2001
0 - 4	---	---	---	---	---
5 - 9	---	---	---	---	---
10 - 14	---	---	---	---	---
15 - 19	---	---	---	---	---
20 - 24	1.25	2.91	3.30	1.65	3.31
25 - 29	4.85	5.52	3.83	3.10	4.22
30 - 34	0.88	2.43	2.16	2.79	2.44
35 - 39	1.17	1.13	2.21	1.09	1.88
40 - 44	0.70	0.67	0.63	0.30	0.87
45 - 49	1.78	0.42	0.41	1.97	0.74
50 - 54	1.49	0.66	0.59	1.57	---
55 - 59	---	---	---	0.91	0.86
60 - 64	0.78	0.80	0.81	---	0.85
65 - 69	---	---	---	---	0.82
70 - 74	---	---	---	0.96	---
>= 75	---	---	---	---	---
Unknown	---	---	---	---	---
<b>Total</b>	<b>1.01</b>	<b>1.24</b>	<b>1.20</b>	<b>1.09</b>	<b>1.25</b>

**Table 5. Sensitivity Analysis of Changes in % of Homosexual and Bisexual Males on HIV Infection Rate**

% of population	Year	group specific rate (per 100,000 population)				
		1997	1998	1999	2000	2001
Heterosexual	90%	2.88	3.11	2.93	2.61	2.74
	94%	2.76	2.98	2.80	2.50	2.62
	98%	2.65	2.86	2.69	2.40	2.51
MSM	10%	13.29	6.77	13.17	7.94	13.08
	6%	22.15	11.28	21.95	13.23	21.80
	2%	66.45	33.85	65.86	39.68	65.41



**Focus**



[www.aca-hk.com](http://www.aca-hk.com)