Proceedings of

Workshop on HIV Surveillance and Epidemiology in the Pearl River Delta Region

11-12 December 1998
Macau

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CONTENT

Language

Presentations were made in either English or Chinese (Putonghua) during the Workshop. Simultaneous interpretation was available throughout the two days.

In the Opening Session, the Welcoming Remarks was made in English; so was Opening Address (2) and (3). Opening Address (3) was in Chinese while the Keynote Address was made in Portuguese.

The Plenaries were delivered in English. The Roundtable Sessions were conducted in English or Chinese depending on the speaker.

For the Closing Session, all had been made in Chinese except for Dr Maria M Morais's remarks in English.

Editorial Introduction

The **Workshop on HIV Surveillance and Epidemiology in the Pearl River Delta Region** is one of the outputs of the research project *Estimation and Projection of HIV/AIDS in the Pearl River Delta Region.* Initiated by the University of Hong Kong and the Department of Health, and with the collaboration of the Macau Medical and Health Department, the project is supported by AIDS Trust Fund. The research team is composed of investigators and advisers from Hong Kong, Macau and the Guangdong Province.

Apart from examining the HIV/AIDS situation in the Pearl River Delta Region, the project aims also to network public health experts and to contemplate the construction of futures scenarios for the region. The Workshop represented the first of such efforts in bringing public health professionals of the region together. The objectives were to: (a) examine the surveillance mechanisms on HIV/AIDS, (b) study vulnerability factors in the region, and (c) share experience in the collection of epidemiological and behavioural data.

The Workshop was participated by some 40 field experts from 12 cities in the Pearl River Delta Region, plus a total of over 200, largely health professionals, in the audience. The Proceedings is a documentation of the presentations and intensive discussion made on 11 and 12 December, 1998.

The Research Project Team would like to acknowledge the efforts of the Organising Committee, and the sponsorship of the Macau Medical and Health Department and Hong Kong AIDS Trust Fund. Finally the publication of the Proceedings would not have been possible without the technical support of the Red Ribbon Centre Hong Kong.

Professor M H Ng
The Research Team
August 1999

Workshop Organisation

Organisers

Public Health Laboratory, Macau Medical and Health Department
Epidemiology Unit, Macau Medical and Health Department
The Macau Association of General Practitioners
Department of Microbiology, The University of Hong Kong

Secretariat

The Macau Association of General Practitioners
Epidemiology Unit, Macau Medical and Health Department
Tel: (853) 533525
Fax: (853) 533524
E-mail: utvepvm@ssm.gov.mo

Mail Address

Dr Carlos Canhota
Secretariat - Workshop on HIV Surveillance and Epidemiology in the Pearl River Delta Region
Unidade de Vigilância Epidemiológica
Av. Sidonio Pais, No. 51, 3rd Floor, Macau

Sponsors

Macau Medical and Health Department
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Scientific Programme Committee

Dr Maria Marcelina Morais
Dr Fernando Costa Silva
Dr Lee Shui Shan
Dr Carlos Canhota
Dr Ip Peng Kei
Dr Carlos Nobre
Dr Teresa Choi
Dr Fung Ming Chuen
Ms Leong Hoi Ang

The Research Team

Investigators:

Hong Kong:	Professor MH Ng
	Dr SS Lee
	Dr Teresa Choi
Macau:	Dr Fernando Costa Silva
	Dr Maria Marcelina Morais
	Dr Carlos Nobre
Guangdong:	Dr Chen Wai-shi
	Dr Feng Tie-jian
	Dr Chu Wei-fong

Consultant:

Professor James Chin, University of California, Berkeley

Advisers:

Professor Zoulou Liu, President of Preventive Medicine Association of Guangdong Province
Dr Emile Fox, UNAIDS Country Programme Adviser, China

Research Assistant:

Miss Emily Lai

Correspondence

Red Ribbon Centre
2/F 200 Junction Road East
Wang Tau Hom
Kowloon, Hong Kong
TEL: (852) 2304 6268
Fax: (852) 2338 0534
Email: rrc@health.gcn.gov.hk

Programme Overview

11 December 1998 (Fri)

0800-0840 Registration

0900-0940 Opening Ceremony

Guests of Honor:

Dr Alarcão Troni
Secretary for Welfare & Budget, Macau

Dr Larguito Claro
Director of Macau Medical and Health Department

Dr Koi Kuok Ieng
Deputy-Director of Macau Medical and Health Department

Dr Li Wan Shan
Chief of The Department of Exterior Affairs, Macau Xinhua Agency

Dr Emile Fox
UNAIDS Country Programme Adviser in China

Dr Liu Zoulou
Vice-Director, Public Health Department of Guangdong Province

Professor M H Ng
The University of Hong Kong

Welcoming Remarks	— Dr Maria Marcelina Morais *Director of Public Health Laboratory, Macau* *Chairman of the Organising Committee*
Opening Address (1)	— Dr Zoulou Liu *Vice-director, Public Health Department of Guandong Province*
Opening Address (2)	— Professor M H Ng *Professor, Department of Microbiology* *Faculty of Medicine, The University of Hong Kong*
Opening Address (3)	— Dr Emile Fox *UNAIDS Country Programme Adviser in China*
Keynote Address	— Dr Alarcão Troni *Secretary for Welfare & Budget, Macau*

0940-1000 Break

1000-1200 Opening Plenaries

(1) The Epidemiology and Surveillance of HIV Epidemics in Asian Countries
Professor James Chin

(2) Behavioural Monitoring for HIV Surveillance — Theory and Practice
Dr Tim Brown

(3) Clinical Management and Public Health Surveillance — the Interface
Dr S S Lee

1200-1400 Lunch

1400-1530	Roundtable (1): HIV Surveillance Mechanisms
1545-1715	Roundtable (2): Risk factor Surveillance
1715-1730	Break
1730-1900	Roundtable (3): Management of HIV infection
1930-2100	Dinner

12 December 1998 (Sat)

0900-1030	Roundtable (4): Human Mobility
1030-1100	Break
1100-1200	Closing plenary
	— Rapporteur
	— Concluding Remarks

OPENING SESSION

Welcoming Remarks

Dr Maria Marcelina Morais, Director of Public Health Laboratory, Macau
Chairman of the Organising Committee

Dr Alarcão Troni, Secretary for Welfare and Budget, Macau

Dr Larguito Claro, Director of Macau Medical and Health Services

Dr Koi Kuok Leng, Deputy-Director of Macau Medical and Health Services

Dr Li Wan Shan, Chief of Department of Exterior Affairs, Macau Xinua Agency

Dr Emile Fox, UNAIDS Country Programme Adviser in China

Dr Liu Zoulou, Vice-Director of Public Health Department of Guangdong Province

Professor M H Ng, Professor of Microbiology, The University of Hong Kong

Distinguished Guests

Ladies and Gentlemen

On behalf of the Macau Medical and Health Services and the Organising Committee, I welcome you all to the Workshop on HIV Surveillance and Epidemiology in the Pearl River Delta Region.

Macau is facing the HIV/AIDS epidemic since twelve years ago. During these years, under the responsibility of the Macau Medical and Health Services, efforts were made towards the prevention and control of this disease. Several programmes were set up and the HIV surveillance in Macau evolved over time with the purpose of keeping the epidemic under control and monitoring trends. Nevertheless, we are aware of the complexity of the HIV/AIDS problem and that we shouldn't be complacent, but stay alert at this stage.

This Workshop is particularly meaningful in providing us with the opportunity to review our past efforts as well as to plan actions for the coming future.

For the HIV virus there are no country boundaries and its spread is influenced by social and behavioural conditions in a certain place and in its neighbours. So, this meeting, joining together representatives from the main places in the Pearl River Delta Region, sharing cultural, social and behavioural similarities, provides a timely and important opportunity to discuss the impact of HIV/AIDS in the region. During these two days, I hope that we'll develop a mutual understanding and consensus on areas of common interest, in order to establish future cooperation and joint strategies to limit the impact of the epidemics in this region.

I foresee this Workshop as a starting point for the development of future cooperation among all of us.

I thank you all for joining this meeting and I wish you a pleasant and fruitful participation.

Macau, 11 December 1998
Maria Marcelina Morais

Opening Address (1)

Dr Liu Zoulou
Vice-Director, Public Health Department of Guangdong Province

Mr. Chairman, Ladies and Gentlemen,

Greetings!

First, on behalf of the Guangdong Association of Preventive Medicine, and the Public Health Department of Guangdong Province, I would like to express my warm congratulations for the grand opening of this conference.

As you all know, since the 1980s, AIDS has swept through the world like lightning. By now, over 33 million people have been infected; and human life is being seriously threatened with an infection rate of 16,000 people per day. As a new infection, it is highly likely that AIDS will be the biggest epidemic in the 21st century. The rapid spread of AIDS worldwide has meant that the achievement in health of the last fifty years would be undermined.

Currently, AIDS in China has entered a rapid growth period. The actual estimate is that over 300,000 people have been infected. If the prevention and control measures are not implemented, and efforts not strengthened, by the year 2000, the actual figure for those infected in China may well exceed 1 million. This trend for an accelerated increase of AIDS in China is already evident, and the situation is quite serious. Since the discovery of the first AIDS patient in 1985, until September last year, there has been a total of 11,170 reported cases of HIV infection in the whole country, including 338 cases of AIDS, and 184 deaths. From 1994, the reported figure has substantially grown annually. The highest accumulated figure reported has been in Yunnan, followed by Xinjiang, Guangxi, Henan, Sichuan, and Guangdong. 67.5% have been infected through intravenous drug use but the percentage of those infected through sexual contact has declined. The situation is similar in Guangdong. As of the end of October, 402 cases of HIV infection had been discovered in Guangdong, and of these 17 were AIDS cases.

In Guangdong Province, a multi-sectoral collaborative project is being developed in the prevention and control of AIDS. This project has received support from the World Bank. Its goal is to identify an effective way, an effective strategy, for the prevention of AIDS through multi-sectoral participation. The project has made tremendous progress in enhancing publicity for the prevention and control of AIDS, health education, the training of staff, and by opening anonymous clinics for STD patients.

The theme of this year's World AIDS Campaign is: Force for Change — World AIDS Campaign with Young People. The whole of Guangdong Province has developed a series of activities centering this theme, like organizing experts to present articles, holding discussions, printing publicity materials, setting up counselling activities on the streets, and organizing AIDS awareness quiz on the prevention and control of AIDS.

I firmly believe that only by strengthening the efforts of the programme for the prevention and control of AIDS; by giving related information to the public, especially the youth; and, starting with "I", by adopting comprehensive preventive measures, in particular, distancing oneself from drugs, not abusing drugs or sharing a syringe, and maintaining one's own purity by not participating in "sex, gambling, and drugs", can the prevention and control of AIDS be effective.

It is anticipated that if the current programme for the AIDS prevention is not strongly reinforced, AIDS will become the greatest disaster in 21st century China. If prevention and control can be strengthened in every respect, then there is a high possibility that the tendency towards an accelerated rate of transmission will be weakened, and it can be controlled gradually.

We hope that the various places in the Pearl River Delta Region can further strengthen their connections, increase their intellectual exchanges, and join hands in facing any new challenges of this disease. Only then can they provide more effective health services for the public, and make the effort to limit AIDS to the current level or even below. We welcome the continued support and assistance given to us in our work by our friends, community organizations, and international agencies.

Allow me to use this opportunity to express my heartfelt gratitude to our hosts for all the efforts they have put in to making this conference a success.

Liu Zoulou
11 December, 1998, Macau

Opening Address (2)

M H Ng, Professor, Department of Microbiology
Faculty of Medicine, The University of Hong Kong

The Workshop on HIV surveillance and epidemiology in the Pearl River Delta region marks the culmination of an effort of over 4 years since 1994. At the beginning, we were intrigued by the relatively small number of HIV infection in Hong Kong, and we were wondering whether the statistic reflected the truth. This led us to two very fruitful collaborative studies with Professor James Chin, one of the key note speaker today, one of these studies is concerned with AIDS Scenario and Surveillance and the second is concerned with Behavioural Surveillance mechanisms. Over the years, these studies gave rise to several reports on estimated HIV/AIDS numbers; qualitative studies on related behaviours and allowed us to establish what would be our behavioural surveillance system in the future. Our report on AIDS Scenario first published in 1994 and revised last year has become the state of the art description of the HIV situation in Hong Kong and these documents provide a useful reference for policy makers and programme designers. One important element contributing to the success of these projects is that they are truly a collaborative effort with input from the Government, Universities and the community.

Hong Kong and the Pearl River Delta share a common ancestry, culture and way of life, and it is only natural to expect that we should also share much commonality with respect to HIV/AIDS in our region. The purpose of this workshop is to allow us to share experience and information between us, with the view to develop consensus in the interpretation of surveillance data. We hope this will initiate a continuous dialog between us in the future, helping one another to better translate surveillance data into an effective intervention programme for our region.

Opening Address (3)

Dr Emile Fox
UNAIDS Country Programme Adviser in China

The AIDS epidemic is spreading quite differently in different parts of the world, among different populations and in different environments and milieux. However, it often remains elusive why HIV infections explode exponentially in some populations and in some places and at certain periods of time, while in neighbouring regions they may remain stable over many years.

A better understanding of the forces driving the various HIV epidemics is of obvious importance for designing better and more adapted responses. It is one of the tasks of epidemiological surveillance to provide us with the necessary data for improving our understanding of the dynamics underlying the various HIV epidemics.

While early epidemiological data for monitoring the AIDS epidemic concentrated on only reporting AIDS cases, AIDS deaths and HIV infection rates in specific sub-populations over time, it has become apparent in recent years that the medical and laboratory data alone are not quite enough, but can be much improved if they are supplemented by additional sets of data describing the potential forces driving the epidemic.

These forces, or determinants of the epidemic, can be divided artificially into two main groups; but in fact these two groups are quite overlapping and inter-dependent. The first group of HIV determinants concerns the various risk behaviours of individuals, and makes up the field of HIV behavioural surveillance. The second group includes the social determinants that underlie the HIV epidemic, and comprises social factors like human migration, marginalisation, discrimination, stigmatization, gender inequalities, and many more.

A careful regional analysis of both behaviour and social factors will lead to a better understanding of the real HIV/AIDS situation and will allow the drawing of a kind of social and behavioural landscape of HIV vulnerability in the Pearl River Delta, whose various populations share many cultural and development similarities.

This type of in-depth analysis of specific HIV/AIDS vulnerability is paramount to the planning of specific AIDS responses, and is part of the strategic planning process that UNAIDS is advocating as optimal approach for planning national and regional HIV/AIDS programmes.

Strategic planning is one of the leitmotifs of UNAIDS in 1998. Another UNAIDS leitmotif concerns the expansion of AIDS responses through promotion of multisectoral involvement, building of new partnerships, regular exchanges of lessons learned and promotion of best examples and interventions, which UNAIDS is compiling into a best practice collection.

The workshop on HIV Surveillance and Epidemiology in the Pearl River Delta Region, held in Macau on 11-12 December 1998 is an outstanding example of an activity that pursues excellence in these two main areas put forward by UNAIDS : Strategic approaches to the epidemic and improved partnerships for the community responses.

The Medical and Health Department of Macau deserves the highest credit for organizing this regional workshop and for supporting so enthusiastically the response of Chinese Communities to HIV/AIDS. And for the UNAIDS secretariat this means getting a new example of best practice to add to its best practice collection, Thank you.

Keynote Address

Dr Alarcão Troni
Secretary for Welfare & Budget, Macau

Honourable Members of the Organising & Scientific Committee of the Workshop

Honourable Specialists of the Unit of United States, Hong Kong, Guangdong and China

Honourable Director of the Macau Health Services

Honourable Guests and Participants

Ladies and Gentlemen

It is my pleasure to be with you to say a few words at the opening of the Workshop. A big welcome to you all and in particular to the specialists from Hong Kong and Guangdong.

It is an honour to have you all in Macau for such an important scientific meeting. As you all know, HIV is a major threat to world health with no precedents. Its speed of development and its complexity varies from location to location.

We, in Macau, are very lucky in that the level of infection of HIV is relatively low, although there are signs of its slow and progressive growth. Since the first detected case of HIV in 1986 until October 1998, there is a record of 190 cases of HIV and 13 patients with AIDS of which 7 have already died.

The Government of Macau considers its first priority, the prevention and control of HIV and AIDS. The anti-AIDS programme consists of health education, vigilance and control of HIV without neglecting the important factor of patient's human rights. The legislation and regulation approved in this field are oriented towards the preservation of confidentiality and the control of the tropical zone and emigration as well as the provision of free health services. In fact, all cases of HIV, AIDS or toxic-dependent cases are treated with extreme confidentiality. The key point of our programme is prevention through education. To this effect, various initiatives are being adopted in the fields of health education, specialized information, counselling and communication to the public, students and groups at risk through various different channels. These initiatives have strongly contributed to the creation of a bigger collective alertness to the change in behaviour and attitudes towards AIDS and to apply the knowledge acquired to help the patients. The vigilance of HIV is also of imperative importance to our programme. In actual sense, since its concession, an active and comprehensive system of prevention and control of HIV is being developed and applied. In 1992 we have introduced the compulsory tests to the workers of specific establishments i.e. nightclubs, saunas, massage parlours etc. and to most of the migrated workforce whose stay in Macau is dependent upon the results of the HIV tests, of which the carriers showing positive signs have already left the Territory. On the other hand, HIV tests are also being applied to blood donors, prisoners, tuberculoses patients and intravenous toxico-dependents. Although progress is made but there are still weak points and resistance. This is the reason why, I believe, the Workshop is particularly opportune and I strongly believe that we could improve the prevention and control of HIV and AIDS with your qualified experience in this field. I am also convinced that the Workshop is an essential landmark to the mutual cooperation with the aim to an efficient control of HIV in the Pearl River Delta Region. The AIDS virus encompasses no timeframe and its complexity is a worldwide problem — there is no frontier. I thereby wish to, once again, reiterate the

Macau Government diligence in the support of efforts towards the prevention, vigilance and control of HIV and AIDS in the Pearl River Delta Region.

Ladies and Gentlemen, we all know that Macau is going through a crucial moment in its history. There is only one year to go before the transition of the Portuguese administration to China and in order that Macau, like Hong Kong, be made a Special Administrative Region, I sincerely hope that after 19 December 1999, the cooperation with yourselves will deepen and be made advantageous.

I wish success to the Workshop and hope Macau proves to be a pleasant stay to our visitors from Guangdong and Hong Kong.

Many thanks to all of you.

PLENARIES

Plenary (1)

The Epidemiology and Surveillance of HIV Epidemics in Asian-Pacific Countries

Professor James Chin

Introduction and Definitions

I'm especially grateful to have the opportunity to speak in Macau today because I was born in a small village within two hours' drive of this city. I won't tell you how young I am but I left the village of my birth well over sixty years ago. Before I begin my formal presentation I'd like to share a couple of definitions with you.

I want to define the meanings of ***Epidemiology*** and ***Public Health Surveillance*** so that when I begin my presentation on the "Epidemiology and Surveillance of HIV and AIDS", we can keep these definitions in mind. The definition that I use for Epidemiology is:

"Epidemiology is the systematic study of the factors that determine or influence the pattern and prevalence of a disease or a condition in populations."

Now, keeping this definition in mind we next need to define Public Health Surveillance. There are many definitions of Public Health Surveillance but the definition that I use is:

"Public Health Surveillance is the routine collection, analysis and distribution of all data that may be relevant for the prevention or control of a disease or a condition."

Using this definition you can collect data on almost anything you want, but if we keep in mind the basic objective for ***Public Health Surveillance***, then we need to focus on collecting data that would be relevant for the prevention and control of a disease or condition. Viewed in this light, ***Public Health Surveillance*** can be considered the measurement tool of Epidemiology. It needs to be stressed that the methods and objectives of the public health surveillance of HIV infection and AIDS cases (HIV/AIDS) are different from that of case finding for HIV/AIDS.

Global Patterns and Prevalence of HIV

I will first present the estimated distribution of HIV infections in different countries throughout the world. Figure 1 is a map that shows the total estimated HIV prevalence for each country in the world. These estimates have been calculated as a rate (percent HIV-infected) for the population aged 15 to 49, so it represents the total HIV prevalence rate in the young and middle-aged adult population in individual countries throughout the world.

You can see from the regional patterns that sub-Saharan Africa clearly has the highest estimated prevalence rates (up to 26 percent) of HIV infection in the total 15 to 49 year old population. These rates are not just urban prevalence rates — these rates are for the whole country. Thus, for countries like Malawi or Kenya, we are talking about 15 to 20 percent of the total 15 to 49 year old age groups in these countries. Urban rates are generally higher than rural rates and in these countries the urban rates may be 20 to 40 percent while the rural rates may be from 5 to 15 percent. The next highest estimated regional HIV prevalence rates are seen in a few countries in the Caribbean. It's hard to see these countries on this map because these countries are so small, but in some Caribbean and northern

South America countries we have some fairly high rates — up to 5 percent in some of those countries. The only other region showing high rates (i.e., more than 1 percent) are in a few countries in Southeast Asia.

All of the other countries in the world have relatively low estimated HIV prevalence rates. The "white" or blank shading in the map shows these very low rates. The estimated HIV prevalence rates in these countries are generally well less than 0.1 percent (1 per 1000).

This map was prepared with data (i.e., estimates) from the ***UNAIDS/WHO Report on the Global HIV/AIDS Epidemic*** that was published in June 1998. This report also presented HIV/AIDS data by probable mode of HIV transmission, i.e., by heterosexual intercourse, by the sharing of injection equipment among injecting drug users (IDU), and by men who have sex with many other men (MSM). If we subtract the estimated HIV infections related to MSM and IDU from each countries estimated total, then the remaining numbers of HIV infections would be mostly HIV infections due to heterosexual transmission. These extrapolated heterosexual HIV prevalence rates are shown in the second map (Figure 2).

You can see there are no major HIV prevalence changes in those countries with the highest rates — in Africa, the Caribbean, and in Southeast Asia compared to the first map. In these region/countries, heterosexual transmission is the predominant mode of HIV transmission in these countries. However in this second map you can see many more "white" or blank areas in North America, Western Europe and Australasia where the estimated HIV prevalence rate related to heterosexual transmission is below 0.1 percent (1 per 1000). This is because in these "Western" developed countries, the vast majority of HIV infections are associated with MSM and IDU.

This concludes my very brief overview of the global patterns and prevalence of HIV infections. From these maps, it is quite clear that tremendously different HIV prevalence rates exist from country to country and from region to region.

HIV Prevalence Rates in Antenatal Females

Figure 3 presents results of HIV testing of antenatal females carried out in 1990, 1993 and 1996, in a large municipal hospital in Malawi, a country in Central Africa.

The bars at the left side of this figure show the results in the under-20 year age group in 1990, 1993, and 1996. The other bars are for different age groups for the same years. The general pattern and prevalence of HIV infection among these antenatal females are quite alarming! The HIV prevalence rates in the youngest age group (15-19) has been consistently around 20 percent which means that there has been virtually no change in the annual incidence of HIV infections in young adolescents in this particular area over the past decade — this is absolutely frightening! You can also see that in the 30-34 year old age group of antenatal females in 1996, that over 40 percent were HIV infected. Antenatal women are considered a relatively lower risk population for HIV, so if we try to estimate the HIV prevalence in males in the same age group (30-34), in that area of Malawi, we may have prevalence rates as high as 50 to 60 percent! It is quite possible that such high rates (more than 50%) may be present in all urban males in the 30-34 year old age group in Malawi! Just try to imagine what the impact would be of having about half of all 30 to 40 year old males in Hong Kong or Macau infected with HIV!

To give you some comparable statistics, the sample size of antenatal females each year in the Malawi surveys was about 4,000 and the average positive rate was from 30 to 35 percent. Hong Kong, I think

last year or the year before, tested about 4,000 antenatal women. They found 1 HIV infection. For about the same sample size in Malawi we would expect from 1,200 to 1,400 positive HIV females. So we're talking about a differential in antenatal female HIV infections between Hong Kong and Malawi of well over a thousand fold. These findings illustrate the extremes of the differentials in HIV prevalence rates in different heterosexual populations.

HIV Prevalence Rates in Asia-Pacific Countries

Again, using HIV prevalence estimates from the UNAIDS/WHO report, but with some slight modifications because I think UNAIDS/WHO over-estimated the HIV prevalence in Hong Kong. The Hong Kong AIDS Programme and I have access to more and better data for Hong Kong. We have reduced the UNAIDS/WHO estimated number of 3,000 HIV infections in Hong Kong to about 2,000 and this drops Hong Kong out of the top ten countries/states in the Asia Pacific region with the highest HIV infection rates among the 15-49 year old population.

In figure 4 you can see the top ten countries/city states in this region listed in rank order of their estimated HIV prevalence rate. Cambodia has the highest estimated HIV prevalence rate in the region with close to 2½ percent of the total 15-49 year old population infected. However, this rate is less than one tenth of the highest rates found in sub-Saharan African countries (highest rate — 26%). Only three countries in the Asia-Pacific region have HIV prevalence rates in their adult populations of greater than 1 percent — Cambodia, Thailand and Myanmar. The vast majority of Asian countries have HIV infection rates well below 1 per 1000 in their adult population.

Heterosexual Transmission of HIV

Now let me get into the epidemiology of HIV transmission to let us look at what may be responsible for these large estimated HIV prevalence differentials. Some of the data and findings I will be presenting regarding HIV transmission rates have been available since the early to mid 1980s, but we have not paid too much attention to them. These are findings with regard to sexual transmission of HIV. Epidemiological studies of the risk of HIV transmission from an infected male to an uninfected male via anal intercourse estimated this risk to be in the order of 1 per 1,000 encounters. In the absence of facilitating factors, sexual transmission of HIV has been known to be very low compared to most other sexually transmitted disease agents.

Just keep this major point in mind — that HIV transmission per single sexual contact (exposure) is extremely low. In order to get large numbers of HIV infections transmitted via sexual intercourse we therefore have to make up for this relatively low transmission rate. On a population basis you can make up for it by increasing the numbers of exposures or episodes of unprotected sexual intercourse. But, before we get into a review of these behavioural factors, we need to review the role of facilitating factors that are known or suspected to increase the efficiency of HIV transmission via penetrative sexual intercourse.

Figure 5 presents some of the findings from Nancy Padian's Sexual Partners studies in California where she concluded that transmission of HIV infection from a male to a female only occurs statistically in 1 out of 1,000 contacts (exposures) — however, it must be kept in mind that transmission of HIV could occur on the first contact or it could occur on the thousandth contact. On an individual basis, it's either zero or a hundred percent, but on a population basis we're talking about a relatively low efficiency of HIV transmission to propagate epidemic spread. The other very interesting finding/

conclusion of her study is that from an infected female to a male the risk of transmission is about 1 per 8,000 contacts. So, if you just do some quick mental calculations as to how many contacts or exposures you need to transmit one infection you're talking about lots and lots of contacts.

At the bottom of Figure 5 is a list of what I believe are the major facilitating factors that may increase the efficiency of HIV transmission via sexual intercourse. It's quite clear from many epidemiologic studies that if an individual has an ulcerative sexually-transmitted-disease (STD), that this would increase the risk of HIV transmission by anywhere from five to tenfold. We also know that individuals who are newly infected by HIV and thus in the very early stages of their acute infection are much more infectious compared to individuals who are past their acute infectious period (about several months after initial infection). We don't know exactly how infectious or increased this factor may be, but some modelers have estimated it to be a hundred times greater — I would say that this factor might account for at least a five to tenfold increase in HIV infectivity.

We also have circumcision or non-circumcision of the male penis as another potential facilitating or protective factor. Male circumcision is considered to be a protective factor. There are some who believe that HIV sub-types may have a greater efficiency of transmission. I myself do not believe this, I think epidemic spread of HIV is mostly related to behavioural parameters. Another facilitating factor may be "dry sex". In many parts of Africa women apparently apply substances to their vagina — astringent substances to dry up their vaginal secretions because they think their male partners may have more enjoyable sexual intercourse if their vaginal secretions can be limited. This "dry sex" can be much more traumatic and that possibly can lead to an increase in HIV transmission rates.

Now, if you take a look at all of these factors, in sub-Saharan Africa most of these are in play. You have lots of new infections that will generate more new infections, you have dry sex, and you have lots of other ulcerative STDs. In many Asian countries most of these factors are either not present or present in only slight degrees.

Primary Determinants of Epidemic Spread of HIV in Heterosexual Populations

Figure 6 lists what I believe to be the primary determinants for extensive spread of HIV infections in heterosexual populations. I consider the most important determinant to be the "sexual mixing pattern". If you do simple modeling and you want to effectively spread a sexually transmitted disease agent, you would have individuals having multiple sexual partners on a concurrent or overlapping basis.

If you have different sexual partners but only one at a time, i.e., serially, like in many "Western" countries, it would be difficult to get rapid or extensive spread of HIV throughout the population. In contrast, having multiple sexual partners on an overlapping or concurrent basis is much more effective in promoting rapid and extensive spread of HIV. Commercial sex is a prime example of this latter pattern of having multiple sex partners. Sex workers will generally have many multiple partners in a single day. Heterosexual commercial sex (male buyer, female seller) is the most common context for people to engage in sexual partnerships outside traditional marriage in most Asian-Pacific countries.

The next major determinant is the prevalence of what I will still refer to as sexual promiscuity, that is, people having multiple sexual partners on a regular basis. Sexual promiscuity is present throughout the world — it's not restricted to any one country or one culture. Multiple sexual partnerism exists throughout the world but, and this is where international epidemiology has failed — we have not quantified it. We have not said in population X, "x" percent of males and females on a regular basis have multiple sexual partners. It obviously can make a big difference in the transmission of a STD

agent, including HIV, whether 100 percent of the population has multiple sexual partners or only 1 or 2 percent — human populations are never 100 percent sexually promiscuous nor are they ever zero in sexual promiscuity. All populations are somewhere in-between and we need to begin to measure what is the prevalence of sexual promiscuity — what percentage of the sexually active population have multiple sexual partners on a regular basis? I don't think most countries can answer this simple question because they have not carried out the quantitative behavioural studies needed to measure this very important parameter. All they will tell you is — Yes; we have an undefined proportion of the population who have multiple sexual partners on a regular basis. However, when you ask whether it is about 1 percent, 5 percent, 20 percent, or 50 percent of their sexually active population, they don't know and that information is critically needed to assess the potential for extensive spread of HIV.

The third major determinant is — of those heterosexuals who have multiple sexual partners, how frequently do they exchange sexual partners — i.e., how many different sexual partners do they have in a given period of time? Do they have one or two different sexual partners per year or are we talking about many different partners per day or week. Some sex workers will have five or ten male clients per day whereas many heterosexuals may only have multiple risky sexual exposures once or twice a year. It makes a big difference in quantitative terms of the frequency of sexual partner exchange, but again, very few, if any national AIDS programmes have carried out social/sexually surveys to measure this important parameter. We haven't measured these factors because they are very difficult to measure. We need to begin to measure these factors in a systematic way so that we can compare one population to another. We can assume that the prevalence rates of these behavioural factors in Africa may be much higher than they are in other parts of the world. However, we don't know what the prevalence of these factors may be in Hong Kong compared to Macau, compared to the Pearl River Delta region, compared to Beijing, etc., etc. We need to measure these factors in order to better estimate what the potentials may be for extensive heterosexual spread of HIV in different populations.

The other major factors would be the other facilitating factors that I have already mentioned — the presence of other STDs, what proportion of HIV infections may be new infections versus older infections, whether or not there's a high level of male circumcision, and the virus sub-types, etc. These latter factors may play some role in facilitating HIV transmission, but I do not believe that they are as important as what I believe to be the paramount factors. I believe the paramount factors are the predominant sexual mixing patterns present in the population, and the percentage of sexually active adolescents and adults who have multiple sexual partners on a regular basis!

The Need for Quantitative Behavioural Surveillance

Dr Tim Brown will be presenting on behavioural risk factors and surveillance but it's quite clear to me that "we" have not, on a quantitative basis, measured sexual risk behaviours.

It just boggles my mind that we haven't done this yet. If you were an epidemiologist in charge of trying to assess what the potential for disease related to tobacco and smoking may be, and you only set up registries for lung cancer to measure the problem, people would look at you and say, "why don't you look at the patterns of smoking, what percentage of the population smokes, how often do they smoke, etc., etc." The same reasoning applies to HIV prevention and control Programmes. We are setting up registries and surveillance systems for HIV and AIDS which are necessary. We need to do this but the more important variables, the more important determinants, and things that we can then do something about in terms of applying behaviour change programmes, will be to identify those populations that

practice the highest risk behaviours. We will need to measure their level of risk behaviour, and then, over time, repeat these surveys to see whether those levels are going up or down because our HIV/AIDS programmes should be reducing these risk behaviours. HIV/AIDS programmes should be reducing those risk behaviours regardless of whether HIV prevalence levels are at the high levels that they are in Africa or at the low levels that we believe they are in most Asian countries. We do not know whether or not the low levels that we think we have now in most Asian countries will persist. Will we slowly build up enough HIV infected persons in the highest risk groups to eventually spark major HIV increases?

I myself doubt that extensive spread of HIV (infecting 1 percent or more of the total 15-49 year old population) will occur in most Asia-Pacific countries, but we have not collected adequate behavioural data to support my conclusion. I think that if nothing else, what I would like people to take away from this workshop are that human behaviours are the primary determinants of HIV spread. We have not done a very good job in measuring, especially measuring quantitatively, human sexual behaviours. We will not know what the potentials of HIV transmission and spread in our populations will be until we have collected sufficient information as to what are the specific patterns, what are the specific frequencies, and prevalence of these risk behaviours. These topics will be discussed more at this workshop.

Let me just conclude by saying that because it's been so difficult to address such sensitive issues as human sexual risk behaviours, many AIDS programmes throughout the world, including many public health professionals and the general public are giving more emphasis and priority to possible biotech solutions — i.e., technical "magic bullets". They want to promote the development of an AIDS vaccine, and they want to develop more effective and inexpensive anti-HIV drugs — all of which are needed! But this search for the "magic bullets" detracts from the main challenge that we have at hand. The main challenge is that we know that HIV will be spread by high prevalence and high frequency of sexual risk behaviour. We have the capabilities and there are some examples of "success stories" from Thailand of reducing or changing these risk behaviours. I myself believe that there will be no major changes in the general patterns and prevalence of HIV from those that I presented with the maps at the beginning of my presentation. However, we can't be confident of this until we can routinely measure the primary determinant factors for extensive heterosexual spread of HIV. Until we establish behavioural surveillance systems that can monitor these behavioural risks, prevalence and frequencies — are they changing, are these parameters going up or are they going down? If they start to go up I think we'd better be very, very concerned.

The job that I think all programmes have to do, is number one, collect these data and make sure that whatever programmes we have are reducing these risk behavioural levels to levels lower than they are now — otherwise I think we're not doing our job.

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Figure 1

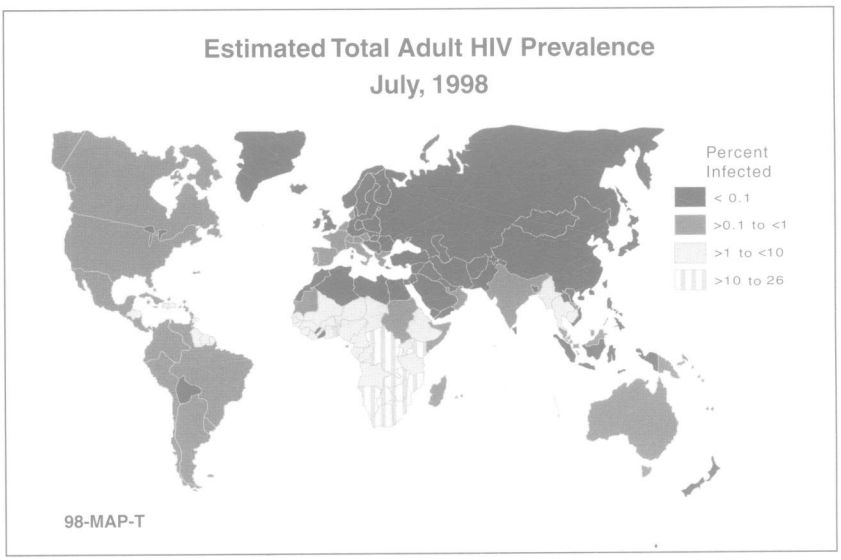


Figure 2

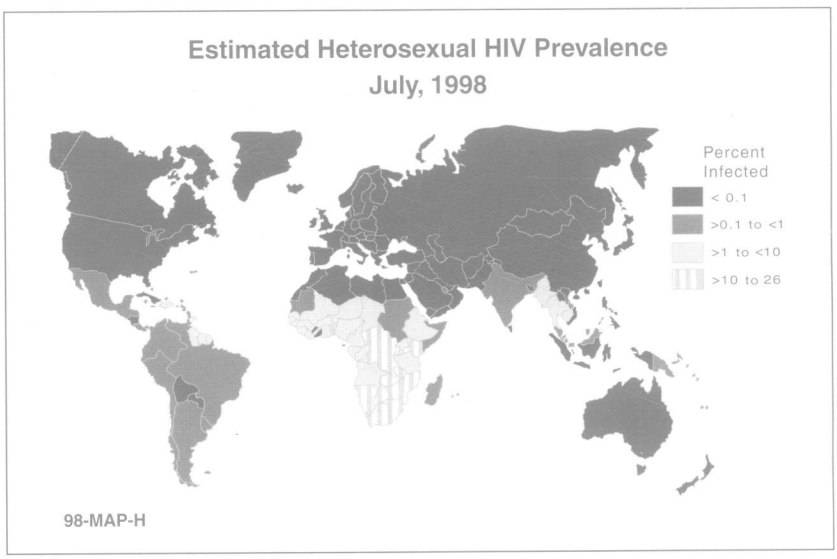


Figure 3

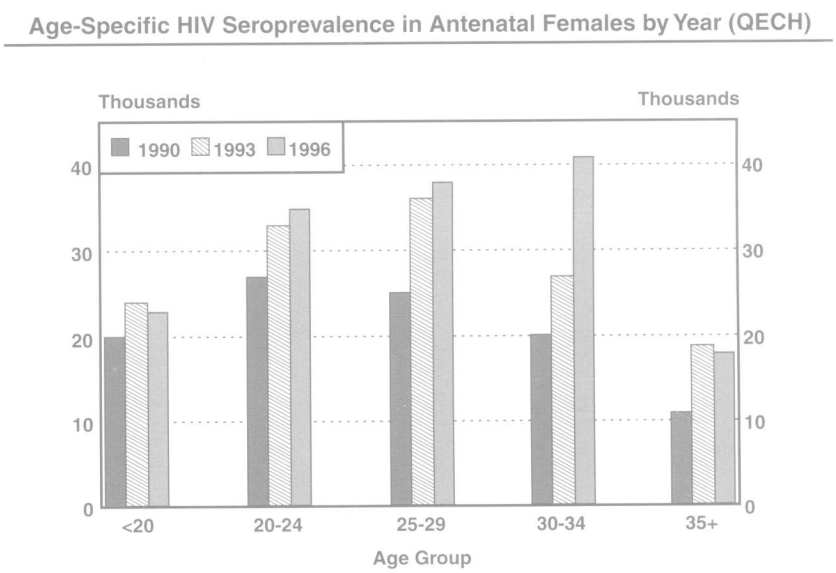


Figure 4

Asian/Pacific Countries with the Highest Estimated HIV Seroprevalence - 1998

Country	*Population aged 15-49	Estimated HIV infections	Adult HIV Prevalence
Cambodia	4.994	120,000	2 40
Thailand	34 433	770,000	2.23
Myanmar	24 361	440,000	1 79
India	494 756	4,100,000	0 82
Malaysia	10 624	66,000	0 62
Nepal	10.404	25,000	0 24
Vietnam	39 722	86,000	0 22
Brunei	0 173	300	0 20
PNG	2 260	4,200	0 19
Singapore	2 030	3,100	0.15

* In millions

Figure 5

Heterosexual Transmission of HIV Infections

In the absence of facilitating factors, the risk of acquiring or transmitting an HIV infection via a single act of heterosexual intercourse is low compared to most other sexually transmitted disease (STD) agents.

HIV transmission from an infected male to a female:
1/1,000

HIV transmission from an infected female to a male:
1/8,000

Facilitating factors:

Presence of an ulcerative STD	↑ 5-10 fold
Early HIV infection	↑ 5-10 fold
Non-circumcised male	↑ 1-2? fold
"Heterosexual" HIV subtype	↑ ??? fold
"Dry sex"	↑ ??? fold

Figure 6

Primary Determinants of HIV Epidemics in Heterosexual Populations

- Pattern of sexual mixing
  Does sexual mixing occur on a concurrent/overlapping basis or serially?
- Prevalence of sexual promiscuity
  What percentage of sexually active males and females have multiple sexual partners on a regular basis?
- Sexual partner exchange rates
  Are these rates high (several per week/month) or low (one to two per year)?
- Major facilitating factors
  Prevalence of other STDs and/or a relatively high proportion of new HIV infections
- Other possible facilitating factors
  Lack of male circumcision, HIV subtype

Plenary (2)

Behavioural Monitoring for HIV Surveillance — Theory and Practice

Dr Tim Brown

Why Study & Track Behaviour?

I'd like to begin by thanking our hosts in Macau for inviting me to speak here. I'm honoured by the invitation. As Dr Chin has mentioned, I would like to start where he left off and discuss some of the reasons for Behavioural surveillance and a few of the details you should consider in establishing behavioural monitoring as part of your HIV surveillance activities. Over the years we have come to understand that it is not enough to monitor HIV or STDs but that we also need to understand what is happening in terms of behaviour. There are several reasons why this is very critical.

In the early stages of an epidemic, you may have a lot of risk activity that can later lead to rapid epidemic growth, but not much HIV yet. If that's the case then the only way to assess what is happening in your population is by actually looking at the behaviours. Thus behavioural monitoring as part of your surveillance system can serve as a very important early warning system. It can help raise awareness of the need to start early to reduce the risk in your populations. It is also a very important tool for advocacy for action in these types of settings, since there is little HIV to motivate policymakers to act.

Another reason for behavioural studies and monitoring is that HIV related programmes are invariably trying to change behaviour, to reduce risk behaviours. If you're going to change behaviour you need to understand what the behaviours are, you need to understand what approaches are effective in producing behavioural change, and you need to be able to measure the amount of behavioural change. This makes behavioural data absolutely essential to the design and evaluation of effective programmes.

Finally, in advanced epidemic situations (where HIV prevalence is already quite high) behavioural data is extremely valuable in helping you understand what is happening. Even if your prevalence is stable, you may still have a continuing incidence, that is continuing new infections, because behaviours haven't changed. But if you don't measure Behaviour, you won't be able to tell whether or not your programmes are producing any impact, because HIV prevalence is very, very slow to change in response to behaviour change. In fact, in some cases prevalence may even seem to be declining because many people are dying from HIV or women with HIV are having fewer children, yet large numbers of young people continue to become infected with HIV each year. If behavioural risk remains high, while prevalence is declining, you need to look very closely at the situation to understand what is really happening.

Forms of Behavioural Assessment

There are actually many different forms of behavioural assessment that may be used by local, provincial, and national programmes. In areas where you know very little about the behaviours, the first step is to do a rapid assessment. Rapid assessment can have several components. For example, one step might be doing a mapping of sites where commercial sex is available and identifying the characteristics of the clients. Rapid assessments will also generally include qualitative components such as focus groups or in-depth interviews with people who are involved in risk behaviour or people who work at sites where risk behaviour occurs (e.g., bartenders or brothel managers). By doing this type of research you

start to get an understanding of what behaviours really need to be measured in your current situation. Until you understand this you can't even begin to design a behavioural surveillance system.

For assessing your own situation at a more global level, you need to know what percent of the overall population is engaging in risk behaviours. To determine this in a country, as Dr Chin pointed out earlier, you need general population surveys. But as he also pointed out, very few countries have actually done any large scale general population surveys. So, on a worldwide basis, there is very little information available about the actual levels of risk behaviour in most of the countries in the world. In addition, since half of new infections occur among youth under age 24, it is important to quantify risk behaviours among the young.

A final approach to Behavioural assessment, which I will focus on for the remainder of this talk, is to do repeat behavioural surveys. In this approach you track behaviours in certain vulnerable populations with higher levels of risk, for example, sex workers or truck drivers. The important groups will vary greatly from country to country. In some countries it might include factory workers, in another country it might include men in the military. This will vary depending on your local situation. However, once you've identified the most relevant groups you then conduct repeated behavioural surveys in those populations so that you can track what is happening to behaviour over time. Is risk going up? Is risk coming down? That's really what you need to know in order to adapt and improve your programmes. If risk is coming down, this may be an indication that what you are doing is working and your programmes are having some impact. This process of doing repeat Behavioural surveys in specific vulnerable populations often goes by the name of behavioural surveillance and that's the terminology I will use for the remainder of this talk.

I should point out that not everybody likes the term behavioural surveillance because they worry that the concept of surveillance means you're watching over people, that you're tracking them. But I think it's important to remember we're talking again in the sense of public health surveillance so the emphasis here really is on getting the information we need to make informed public health decisions and thus prevent HIV transmission. You are not tracking individuals, but behaviours in important populations so that you can mount programmes to *help* those populations.

What is Behavioural Surveillance?

So let me start by addressing the issue of what behavioural surveillance is and how it differs from the other behavioural assessment approaches that I mentioned earlier. To give it a simple definition, behavioural surveillance is systematic, repeated, cross-sectional surveys of risk behaviour in selected populations

Typically one of the things that distinguishes behavioural surveillance from other types of behavioural work is its focus on only a very limited set of behaviours. In behavioural surveillance you are not trying to come up with one hundred behavioural variables and track every conceivable risk behaviour in the population. That takes a very, very long and in-depth survey. It takes a lot of time, and it takes a lot of resources. So in behavioural surveillance you try to narrow down the amount of behavioural information you're collecting to just some of the most important factors, and some of those factors are precisely the ones that Dr Chin just presented to us. These include: the percent of the population who visit sex workers in the last year or the overall percentage of people in the population who have sexual partners other than their spouse or mate in the last year. Condom use with different types of partners is one of the things that you want to measure because it's one of the most effective means of HIV prevention and is usually one of your desired programmatic outcomes.

And, finally, one other thing that distinguishes behavioural surveillance from most other forms of behavioural research is that it aims for very quick and very understandable dissemination. One problem with a lot of behavioural research is that it takes a long time to process the data, analyse it, and produce results and

findings. Because behavioural surveillance is feeding into your programmes and you want to make programmatic changes in response to its findings, the results must come back very quickly. So it's important that the turnaround in a behavioural surveillance system be very, very short. Typically no later than three months after you're collected it, the data should be provided in reports to the people who can act on that information.

Designing Behavioural Surveillance

Now let me turn to the issues of designing a behavioural surveillance system. Since I was asked to talk on theory and practice, I'd like to divide this into five really key questions. I will present the theory behind each, talk about what you'd like to do ideally, and then discuss what you generally can realistically do and what you can actually obtain in terms of behavioural information. The five questions are: 1) what populations does one want to track in a behavioural surveillance system?; 2) how do you sample these populations?; 3) what indicators should be used, that is, what behavioural information should you be collecting about the selected populations?; 4) how do you actually get the information, that is, what methodologies do you use to collect information about risk behaviour?; and 5) what do you do with the results, that is, how should the results of your behavioural surveillance be presented to those who can act on the findings?

What Populations Does One Select?

The first question is what populations does one select for behavioural surveillance? The theory here is relatively simple: you want the populations that are most relevant to your local epidemic. And, again, because the epidemiology of HIV is different from country to country these populations are going to vary from country to country. If I were designing behavioural surveillance in the United States where men having sex with men and injecting drug users still constitute the bulk of new HIV infections then those definitely would be populations that I would include in the behavioural surveillance system. In other countries you might select populations such as truck drivers, free trade zone or overseas contract workers, soldiers, migrant workers or others that you knew had extremely high levels of risk. However, in practice, a lot of different factors influence the choices you make for populations in your surveillance system. A number of "real world" issues arise that influence your choices. And because it is *not* a perfect world, you can't always include those populations which you think are relevant.

The first factor in selecting populations is an analysis of your own local epidemiologic and behavioural situation. For example, if you do an analysis of AIDS cases or HIV infections detected to date and you find that certain populations are showing up at relatively high rates those are probably populations you want to include in your behavioural surveillance system. If you know that certain risk behaviours are occurring frequently in a given population, even if you don't have a good idea of the quantitative level at present, you might want to consider incorporating those in the system early on just so you can understand more about what's happening.

A second and extremely important factor in selecting populations, is the accessibility of those populations with behavioural risk for sampling. Remember we defined behavioural surveillance as a systematic, repeated, cross-sectional survey. That means you have to be able to sample this population in a repeatable fashion. If you don't have some systematic way of locating and sampling sites where the risk behaviour is occurring or enumerating the population to allow for selection of people within that population, then you will not be able to conduct repeatable surveys.

The accessibility issue is often a major limit roadblock to setting up behavioural surveillance in a given population. In many countries, for example, national programmes would like to do behavioural surveillance on men who have sex with men but they may not have the ability to reach into that community. In fact, very often, these populations have had negative past experiences with government or public health officials and do not trust them. Thus, those conducting behavioural surveillance cannot locate enough men who have sex with men in a consistent fashion to actually do a repeat survey. Often these accessibility issues are related to discrimination and stigmatisation. Those populations that are marginalised are often very, very difficult especially for national programmes or government officials to be able to access. So you may want to look at other possible ways of reaching those populations, e.g., working through non-governmental organisations (NGOs) who have the trust of the marginalised communities. And it becomes extremely important that the communities themselves become involved and understand that the information collected will feed back into prevention and care programmes which benefit them.

A third factor to be considered in selecting the populations to be followed is what your current programmes are trying to accomplish. One of the objectives of behavioural surveillance is to help in evaluation of your programmes , so you may want to select some populations which are emphasised in your current programmes. Then you can see whether their risk behaviours are decreasing or increasing, that is, whether your programmes are working.

Next, political and cultural considerations always come into play. Sometimes there are political forces in society that don't want to know about certain behaviours. Certainly this is a problem that we've had repeatedly in the United States, where powerful people have tried to keep us from finding out about sex between men or the sexual behaviour of young people. And if that's the case, you have to consider these people's concerns in selecting your populations. I'm not saying you should accept their opposition as a reason for not selecting a given population but it needs to be factored into your decisions since it may affect your funding or the level of support for your efforts. Often you may need to be very low profile in following certain populations and not publicise the findings outside the affected communities to avoid a political backlash.

Then, although I won't dwell on it in this talk, your choice of populations may also depend on the stage of the epidemic. In early stages, when HIV is largely present among populations with the highest levels of risk, containing HIV spread involves mounting effective prevention and care programmes with these populations. This requires good behavioural monitoring to determine if you are succeeding. In later stages when prevalence starts to get high throughout your population, you will want to expand your system to include some lower risk populations, especially young people.

And one final factor that affects which populations you choose is how much money you have. You cannot survey every population that is out there, perhaps not even all of those with higher levels of risk. You have to make choices. You have to select those that you think are the most important or the most relevant to your current situation.

Now what types of groups have been selected in different countries? Let me provide a few illustrations. In India, the surveillance in Tamil Nadu has looked at female sex workers, male and female factory workers, male and female university students, male truckers, and male STD clinic attendees. In Cambodia, behavioural surveillance includes female sex workers, female beer venders, working women, military and the police, male motorcycle drivers, and male vocational students. In Thailand national behavioural surveillance has included male and female factory workers, male and female students, military conscripts, and antenatal clinic women, while the system in Bangkok also included female sex workers and male STD clinic attendees. Commercial sex has played an essential role in HIV

epidemics in many Asian countries, so many countries follow sex workers. This helps to create an emphasis on the importance of commercial sex to HIV transmission and enables prevention programmes to build support and get started. Ideally, we would include clients as well, but they are often hard to locate for behavioural surveillance. In many countries it has been found that factory workers may be somewhat higher risk than office workers or others, but again this varies greatly from country to country and sometimes even from place to place within countries. The Cambodian situation is interesting in that they look at beer vendors, that is young women who promote beer for local companies, as one of their surveillance populations. This is because it's believed that they are engaged in much higher levels of sexual behaviour with the men with whom they work. This emphasises the importance of knowing your local situation in deciding who you want to be including when you establish your surveillance system.

How Are These Populations Sampled?

One thing that is true of all of these populations is they were accessible in some way. But once you've selected accessible populations, the next question is how do you sample them? And again there is a very simple theoretical answer to this: you want a random sample which is sufficiently large that you can see a specified level of behaviour change. If you can do a random sample, there are simple formulas for calculating how big the sample must be based on the current level of the variable you're measuring and the expected amount of change between two surveys. Unfortunately in the real world there are very few populations where you can actually enumerate or list the entire population and then randomly select people for interviews about risk behaviour. This is particularly true when you're dealing with communities which are marginalised or discriminated against. So in practice what we do is attempt to get as close to a probability based sample as we can. But in doing so we always must remain conscious of cost constraints which limit our sample size.

Ideally, you would love to sample say 3,000 people, but the reality is you don't have enough money to do that — each additional person interviewed about their behaviour adds to the cost. So you often have to settle for a sample of 300 or 400. The cost almost invariably influences the sample sizes you choose. These same cost constraints also affect how many populations you can follow. The more populations you are following, the smaller your sample sizes have to be for each one (assuming a fixed budget for behavioural surveillance). If the sample size gets too small you won't be able to detect behaviour change. Even when behaviour changes rapidly, to be able to measure any behaviour change usually requires samples of at least several hundred. Thus the available budget for behavioural surveillance can seriously limit the number of populations you can follow.

The first thing you have to do in practice is formulate a sample frame. In most countries this is usually site based. You make a list of places where risk behaviour is occurring and where you can sample the people engaging in that risk behaviour. For example, with sex workers you might use brothels. In Thailand, for example, sex workers have been sampled by listing out the brothels in an area, selecting brothels for sampling, and then selecting sex workers within the brothels chosen. With factory workers you might randomly choose and visit factories and do your sampling among the workers there.

Typically, because you still want to be as probability based as possible, you'll lay out *all* of the possible sites, then randomly select from those sites. Then within each selected site you will randomly select people who fit the characteristics that you're seeking. It's not perfect. It's not as good as if you could list everybody and do a truly random choice, but it's the next best thing. You determine the sample size needed from a statistical analysis. Just get a statistician or a good statistics book and tell it what rate of change you've looking for and you can calculate that sample size.

One thing you've got to be very, very careful about is that it is a repeatable sampling system. You want to be able to get a similar sample each time so it's very important that you watch for turnover or changes in the population. If populations are very mobile and constantly moving around then you need to factor that in deciding where you're going to sample or what types of sites you use. You may not want to choose a population which is too mobile for surveillance because you won't be able to get repeatable samples. So you need to think about these issues.

Finally there's the issue of how often do you do this? Usually the answer to this question is based on the expected rate of behaviour change. In general population samples you probably would not want to do it more than once every two years or so because behaviours don't change very quickly. On the other hand, in populations such as sex workers or injecting drug users, behaviours can actually change on a time scale of months. So typically in such populations you would want to do behavioural surveillance about once a year. In most cases doing it more often than once a year, every six months for example, takes a lot of resources and doesn't give you any really useful additional information that really contributes to improvements in your programmes. And that's what you should always be thinking about is: What are the uses of this information? If you can't use it, there's little point in collecting it.

A few other sampling considerations should be mentioned. The first is in regard to choosing sites. There are some who argue that you should go back to the same places each time because you want to get a repeatable sample but there are problems with this in many cases. If you go back to the same site you may end up interviewing some of the same people so they know the questions you're asking and they may respond to what they think you want to hear. If they think you want to hear about more condom use they may just report more condom use because they want to please you. On the other hand, if you randomly select different sites, for example, different factories, you may not get a repeatable sample if the factories are significantly different in some way. However, if you have enough factories in the area and you do a truly random selection among the factories this will probably be okay.

Another important sampling consideration is the characteristics of those you select for interviews or questionnaires. Because you're looking for risk behaviours, another thing that is very often done within the sites is to restrict the age range of the respondents. We know that people don't engage in the same level of risk behaviour as they go through life. When people are very, very young they're typically not engaging in much risk behaviour at all. As they go through adolescence into early adulthood, they often become very sexually active or start to inject drugs — their risk behaviours get very high. As they start to marry and settle down, risk behaviours again start to fall. What you're trying to measure with a behavioural surveillance system is risk behaviour so while it might sound scientifically very nice and rigourous to do a sample of 15 to 49 year olds, most of those who are in the 30 and above range will not be engaging in risk behaviour. Because you've only got limited resources (and consequently can only do so many interviews as part of your system), you may want to restrict the age range. Thus you will find in most behavioural surveillance systems they use a narrower age range for respondents, for example selecting people between the ages of 15 and 29. Again this will vary depending on your local situation. If people don't become sexually active until age 20 then you might want to do 20 to 29 or 20 to 34. But by restricting the age range you increase your ability to measure what the risk behaviour is in the population and to detect changes in that behaviour, which is the ultimate goal of behavioural monitoring.

What Indicators Should Be Used?

The next question is what indicators of risk behaviour you should use. There are a lot of things you might ask about, but information which does not contribute directly to the planning, implementation, or evaluation of your overall programme is not useful to you. Insofar as there's any theory here at all

it's that the information you collect should really be driven by the programmes you're doing — it should be information on which you can act. For example, if I'm running a programme that works with injecting drug users I want one set of information (needle sharing practices, number of sharing partners, equipment cleaning practices, etc.). If somebody else is running a programme that deals with clients of sex workers they want a different set of information (condom use, frequency of visits to sex workers, number of non-commercial sexual partners, etc.). The Department of Education and the Ministry of Health may want yet another set of information, e.g., sexual risk among young people or among out-of-school youth.

If you got everybody to sit down and list for you all the information that they wanted, all the indicators they would like to see, you would probably end up with a list of at least fifty, sixty, or seventy different things. But the reality is that a survey that measures all of those things is probably going to take at least one hour for each individual interview, and most likely even longer. It's going to take a lot of resources, a lot of interviewers, and it's simply not feasible within the cost constraints and the capacity constraints faced by most national or local programmes. So typically in behavioural surveillance you want to choose a much more limited set of the most important behavioural indicators that you're concerned about, selecting only the most important ones.

By doing this you can actually keep the typical interview time down to about fifteen minutes and that means that you can get through interviews very, very quickly so you can get the desired sample size in a relatively short period of time. You might be able to conduct your entire behavioural surveillance within, say, a one month time frame across all populations. Having a more limited set of indicators also means the data can be entered and analysed much more quickly for prompt feedback into ongoing programme activities. Thus you want to limit the set of indicators both for cost and time reasons.

The indicators you choose will vary according to the population you're studying. With sex workers, for example, you may be concerned about issues such as the number of clients they have per night and how often they use condoms with those clients. If they think of their clients as falling into different classes (e.g., those they see often versus those they see only one time), you may want to ask about condom use with each type of client separately. For general population groups there are a number of key indicators that WHO has laid out in the past which are listed in Table 1. If you're looking at youth populations, age at first intercourse is a very, very important indicator because one of the beneficial behaviour changes that can occur is for young men and young women to delay sexual intercourse to protect themselves from HIV. In many heavily affected parts of Africa, young people are now starting sex later in response to the HIV epidemic and to the prevention messages that they've been getting.

Table 1. Some possible indicators recommended by WHO for general population groups

- Age at first intercourse (youth)
- Number/characteristics of sexual partners
  - % ever having sex (for youth)
  - % of population sexually active in last year
  - % having one or more non-regular partner in last year (PI-4)
  - median sexual partners in last year
  - % males visiting sex workers in last year
  - median age non-regular partners (for youth)
- Condom use
  - % ever use condoms (for youth)
  - % of population reporting condom use at last intercourse w/non-regular partner (PI-5)
  - % reporting consistent condom use with non-regular partners in last year

As shown in Table 1, you almost invariably want the types of indicators that Dr Chin was talking about in his speech, those relating to the number and characteristics of different sexual partners. So you might want to know among young people what percent have ever had sex which, is of course, closely related to age at first intercourse. You might want to know the percentage which were sexually active in the last year. In particular, you're less concerned about those who are having sex with their wives than you are about those who are having sex outside of marriage or outside of a committed relationship because that's where most HIV transmission tends to occur. So one of the most common indicators is the percentage who have what we call non-regular sexual partners in the last year. This is, in fact, prevention indicator No. 4 (PI-4) in the WHO list of prevention indicators. Very often you will ask about the number of sexual partners in the last year or the percentage of males who visited sex workers in the last year. One thing we often find is that young women typically have male partners who are older than them. If the HIV prevalence is much higher in older males than in younger ones, this may increase young women's risk.

Several condom use questions will invariably be on any list of key indicators, e.g., among young people the percent who have ever used condoms or in general whether a condom was used at last intercourse with a non-regular partner. It is important in drawing up your indicators that you distinguish condom use with the last partner and consistent condom use, that is, using condoms in *all* intercourse with non-regular partners. All prevention programmes should be seeking to promote consistent condom use, so that is one of the things you should be measuring.

Two final things to consider in selecting indicators: First, you may want to select indicators which are comparable to other sets such as the WHO prevention indicators. This may make it easier to compare across countries or between regions in the same country. Let me say a few words to reinforce what Dr Chin said earlier on the prevention indicators. When I was in Geneva in July we looked at the number of countries that could provide PI4 and PI5 (percent having a non-regular partner in the last year and percent using condoms at the last contact with a non-regular partner). Less than one third of the countries in the world could provide that information and even in those that could provide it, it was typically based upon a very, very small sample or a very limited set of data. It was most often not based on a large enough sample that could be generalised to the population. So the reality today is that we really don't know much about risk behaviour on a global scale.

How Should the Data Be Collected?

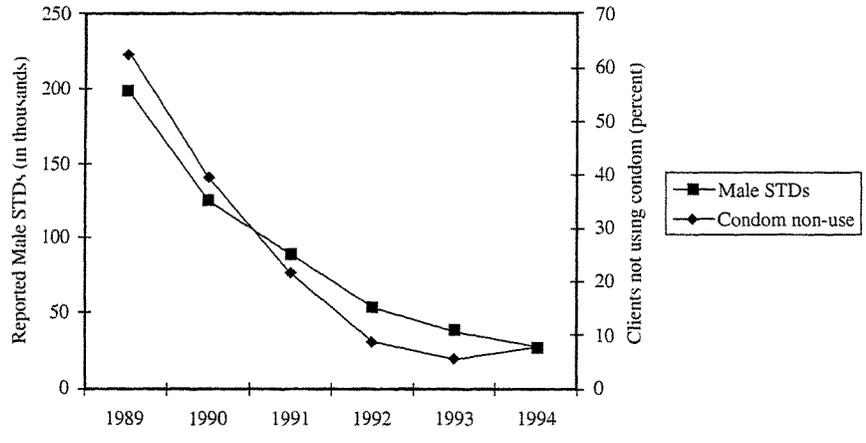
The next question is how should the data be collected? Ideally you want to do it in a valid (you get the correct information) and a reliable (you get the same information every time you ask the same people at the same time) approach. However, in practice, we invariably must depend upon self reports of risk behaviour. And there are many potential problems with self reports of risk behaviour.

The first is that people may not always tell the truth, or may not always accurately assess the truth, about their own risk behaviour. If you ask somebody how many sexual partners they had over a year they may not really think very clearly about how many they had over such a long time frame. The person doing the interviewing very often can affect the results. If the interviewer is uncomfortable asking questions about sexual or drug using behaviour then you're not going to get very reliable results from that interviewer. And finally there are frequently fears about confidentiality and privacy concerns. People do not believe that you will keep what you tell them confidential or that it is truly anonymous, that it can't be traced to them in some way. You need to be thinking about all of these issues and how to address them as you design your own system.

What this means is that it is absolutely essential when you're implementing a behavioural surveillance system that you actually spend some time building the skills of the people involved in that system. They need to be working closely, for example, with social scientists from local universities in terms of developing their own interviewing and personal skills, getting trained in asking questions about risk behaviour. The training is absolutely essential here because if people are well trained in asking risk behaviour questions they'll do a very good job and you'll get very good information. If they're uncomfortable or they have no training at all then probably the results you get will not be worth very much.

Another thing to think about when you're establishing these systems is how to assess the quality of the behavioural data collected. In some cases you might want to use biological indicators as a back-up or as a separate indicator of what is actually happening. Now for those who have serious questions about whether or not self reported behavioural data really relates to biological HIV or STD transmission I'd just like to show you one example of the relationship (Fig 1 below). This figure is prepared from two different data sets in Thailand. One is information about male STDs reported at government clinics, which is represented by the squares. The other is condom non-use, that is the percent of sex workers who reported they did use condoms on their last encounter with clients, collected during the HIV sentinel surveillance in Thailand. These are totally independent data sets from different national level sources, but as you can see they actually track fairly well. That is, as the condom use went up (or the non-use went down) the STDs also fell very, very rapidly and more or less along the same trajectory.

Figure 1. Time trends in condom non-use with direct sex workers and reported national STDs. Source: VD Division, Epidemiology Division, MOPH.



We have seen this same type of finding in Thailand in many, many different smaller samples where we've actually looked at biological indicators and compared them to behavioural reports. Thus I'm confident that if you do a good job of collecting your behavioural data it will give you good information about what is happening with HIV and STD transmission.

How Should the Results Be Disseminated?

Finally, let me just briefly address the issue of how your results should be disseminated. In theory you want to give them to anyone and everyone who can act on them. You're not collecting this information just to put it into reports. You're collecting this information because you're hoping to bring about more effective HIV prevention and care programmes. This means that just writing your data up in a report and sending it to the Minister of Health is not really going to accomplish very much. Instead you need to get the information out to a number of different people: programme managers, policymakers, the public, the communities surveyed, etc. Thus when you design your system you need a plan for

broad dissemination of these results right from the start. Furthermore, if you are to reach everyone who can act on the data, you need multiple forms of dissemination.

First, you do need the detailed reports. Some people want to know all the tiny little details about what happened and what you asked. But you will also need specific press releases for the press or be prepared to give interviews to electronic media. One of the major contributors to continuing HIV transmission is the invisibility of HIV and the behaviours which transmit it. Only by making the public aware of the presence of HIV and the prevalence of risk behaviours can they be convinced to take the problem seriously. The mass media can help greatly in getting the word out to the public at large and they can also be very influential in moving high level policymakers. For example, in the Philippines, when the University of the Philippines and East-West Center did a survey of youth risk behaviour, there was extreme interest in the media in knowing what was happening among young people in the Philippines right now. So for several weeks in the Sunday paper they had a series on changing risk behaviours among Filipino youth. For a time, the researchers at UP were regular figures on television and radio news and talk shows.

Because most policymakers will not read a one inch thick report, you almost certainly want to prepare policy briefs. In fact, they won't read anything that's more than about two pages long. So give them a very, very short policy brief that tells them only the things that are important for them and which explains the implications of your findings for their own activities. Don't tell them all the details. They don't care how many people you sampled or what you did, they want to know the bottom line — only the most essential facts. Tell them if condom use among young people is going up or going down. Tell them what fraction of their economically active population is at risk of HIV. That's what they want to know, that's the kind of data which will move them to act. You may also want to use group meetings with key agencies or ministries to be sure they understand the implications of your findings.

The information you collect should always get back to the population from which you collected it because your main reason for collecting this information is to convince these people to reduce their risk behaviours. So it's important to go back to each community surveyed and say, "this is what's happening with risk behaviour *in your* community. It's going up (or it's going down)." If it's going down it will reinforce the efforts they're making because they will see they're having an impact. If it's going up it may help to motivate many of them to start changing behaviour or to support expanded prevention activities in the community. Thus, it is absolutely essential that you get information back to the groups from which you collected data.

And finally I think it's very important and often neglected — you want to give these results to the most important people. Very often this is best done in a one on one meeting. It's better to just sit down with the Minister of Health and point out to him what's most important rather than just to send him a report or send him a book. That will have much more impact in the long run even if it's only a very brief fifteen or twenty minute meeting. So think about this when you're designing your systems — you need multiple forms of dissemination. Collecting behavioural data which is not disseminated is a waste of time and money.

With that I'll close. As we go into the round table this afternoon I would hope that people are thinking about some of these factors and will consider them when they start to think about what do they want in terms of a behavioural surveillance system. Or if you currently have a behavioural surveillance system, think about whether you have really addressed a lot of the concerns I've raised in this presentation.

Plenary (3)
Clinical Management and Public Health Surveillance — the Interface

Dr S S Lee

Introduction

I shall focus on a little gap that we face when working on HIV infection and AIDS — that between the clinical program and the public health programme. There are clearly some intrinsic differences in the two's objectives and scope. HIV/AIDS is unique, however, as we frequently come across people working on both programmes.

To recapitulate, the definition of public health surveillance is the collection of information of sufficient accuracy, leading to the design, implementation and monitoring of the relevant programmes in a society. One keyword is the "response" which could be generated from the programme. On the other hand we are addressing individual person in clinical care. In the United Kingdom, the General Medical Council has included the following in its definition of good clinical care — adequate assessment, investigation, treatment, and proper referral[1].

Where does the commonality lie? For surveillance, response is made at population level. When a clinical diagnosis is made, a response is delivered to the individual in the form of care. The logic is exactly the same in the thinking process. What constitutes the link? [Figure 1] Case reporting offers one opportunity for filling the gap and providing connection between clinicians and a conventional surveillance system. The latter generates mortality, morbidity and behavioural information, which allows meaningful analysis to be made and disseminated to any health professional involved in expanding the responses.

The link between public health surveillance and clinical care is a complex and delicate one. There are a number of phenomena in the past few years which have been very educational in enabling us to understand the dynamics between public health program and clinical programme on HIV/AIDS.

The Cuban example

The most controversial example is Cuba. Back in 1985, Cuba began HIV-testing all Cubans and by 1993 they had already performed over 12 million tests. By quantity, Cuban has conducted an extensive surveillance exercise. Individuals tested positive are sent to a sanatorium which laid "commandments" prohibiting unprotected sex with infected and uninfected partners[2]. The Cuban government has been criticised for sacrificing individual freedom in exchange of effectiveness in prevention. We should not forget that in order for that programme to be run, a very efficient and effective clinical program is needed. Cuba has thus created a unique community, and after some years probational arrangement was allowed. This is an extreme example of merging clinical care and public health surveillance — the two arms of their HIV/AIDS programme.

Changing pattern of clinical presentations and models of care

The impacts of clinical care on public health surveillance are becoming evident in recent years. In San Francisco, death rate as a result of AIDS has dropped dramatically, as reflected in their updated statistics (Surveillance Report of San Francisco Department of Health AIDS Office). The situation is the same in the

whole of the United States[3]. Precipitous drop in AIDS death is seen in Europe[4] and Australia[5], and is paralleled by fall in the rate of AIDS complications. A similar declining pattern is seen in Hong Kong.

What are the main reasons behind the trend? The most important factors are scientific advances, notably our knowledge in viral dynamics, new treatment and practical application of modern technology for disease monitoring. Medical advances have lowered mortality and improved morbidity of people living with HIV/AIDS. Public health surveillance based on this clinical information is portraying the disease pattern in a very different way compared to that a decade ago.

In the last years, there has been a steady decline in the in-patient caseload on AIDS. Whereas the system of clinical care varies from one country to another, inpatient care has given way to outpatient based HIV specialist care. Hong Kong is no exception. [Figure 2] [Figure 3] It appears that late stage complications are truly declining.

For illustration, let's examine the situation in the United Kingdom. An analysis in 1989 revealed a multitude of models, and the shift towards community-based care[6]. Another study by University College and Middlesex School of Medicine presented at the 1992 International AIDS Conference demonstrated the reversal of inpatient versus outpatient care beginning in the late 1980s. It can be inferred that complications that require very intensive treatment in a hospital setting have declined. Apart from changing care models, there is also the enhanced effectiveness of preventing and treating AIDS-related complications. These have come before the advent of triple therapy.

Impacts of clinical care on HIV/AIDS surveillance

Our understanding of the natural history of HIV/AIDS has changed. This change is altering the meaning of information captured in our surveillance system. AIDS is an example. The collection of AIDS data allows us to assess not just the disease load but enables us to estimate the HIV rate in the community. This has been possible through back calculation if we know the number of AIDS and the proportion of HIV patients progressing to AIDS over a finite time course. Imagine what would happen if treatment leads to less clinical complications, and therefore less AIDS [Figure 4]. The original formula for deriving HIV estimates can no longer be used.

Previously, a decline in the AIDS rate means also that HIV is declining. Today, AIDS numbers coming down just means that the progression rate has fallen, while the HIV rate may or may not be incriminated. The way of looking at HIV infection and AIDS today differs quite a lot compared to that ten years ago. AIDS is no longer a sensitive indicator for evaluating HIV epidemiology in countries where effective antiretroviral treatment is affordable. To a lesser extent it is also true in places where lowered rates of opportunistic infections have resulted from prophylactic treatment.

Defining and redefining AIDS

What does AIDS mean? We have been using the term for over fifteen years. The meaning given to it, in fact, varies from one person to another and, from one country to another.

AIDS is a surveillance definition based on a clinical diagnosis. In clinical practice AIDS refers to the state of an HIV infected person characterised by a profound immune deficiency. It is understandable that in clinical context the way AIDS is defined varies from place to place. In the United States AIDS is defined as HIV positivity plus at least a complication that falls within the list of twenty six indicator diseases that have been drawn up by the Centers for Disease Control and Prevention (CDC). In 1993 another dimension has been added by the inclusion of CD4 count below 200/μl per microlitre. When

we compare AIDS information we must be careful that the same entity is being examined.

Of the twenty-six indicator diseases published[7], three are new ones: pulmonary tuberculosis, recurrent pneumonia and cervical cancer. Tuberculosis (TB) is the one that has a significant impact on AIDS surveillance data in United States and elsewhere. In Italy, for example, a study published in 1993 reported an increase of 188% of the number of AIDS case reported, after adopting the new surveillance definitions. The overall survival has also increased. In Hong Kong, among other differences [Figure 5], pulmonary tuberculosis is included as an AIDS defining illness only when CD4 count is less than 200/μl. One important reason for adopting this approach is that TB is endemic in Hong Kong while the HIV rate is relatively low, very much the reverse in America. Whereas HIV infection might be a predisposing factor for an individual for TB, it's significance in public health context is doubtful in view of the high incidence of reported TB in Hong Kong, amounting to 6000 - 7000 per year diagnosed, which are unrelated to HIV.

[Figure 6] shows all primary AIDS defining conditions that have been reported Hong Kong Department of Health over the last 13 years. The commonest primary AIDS defining condition is *Pneumocystis carinii pneumonia*, followed by *Tuberculosis*, and then *Penicillium marneffei*. Of the tuberculosis cases reported, a significant proportion are pulmonary tuberculosis with a CD4 of less than 200/μl. Without this new definition, the total number of AIDS would not have reached 350. This is however not simply a matter of accuracy but how we interpret epidemiological data. The way that we define AIDS and provide treatment may have an impact on public health surveillance. The surveillance system can only reflect the input captured through the clinical program arm.

To make the picture even more complicated, CD4 count has not been included in AIDS case definition in Hong Kong and many other countries. Apart from social and technical reasons, the CD4 numbers and percentages in healthy individuals and HIV/AIDS patients may not be the same in all populations[8]. Somebody in Hong Kong who has a CD4 number of 200/μl may not be in the same state of health as a Caucasian with the same cell count. Figure 7 presents a summary of the difference of CD4 results between two groups. The reason for this difference is yet to be explained. Here is nevertheless a very good example that research brings in new information which might alter the practice in a local surveillance system, resulting in poor comparability across countries.

Other observations

A few other observations have also impacted on two sides of the AIDS programme, the clinical part and the public health part. One is the ACTG Study 076 which reported the effectiveness of zidovudine in the treatment of pregnant women to prevent perinatal infection. The provision of zidovudine treatment had reduced the perinatal infection rate from 25.5% to 8.3%[9]. The practice has resulted in a reduction in perinatal HIV infection. Moreover, assessment of neonatal infection is no longer a useful means for estimating the HIV rates in women of reproductive age groups.

The setting of HIV diagnosis affects the epidemiological patterns inferred from public health surveillance. A recently published study reported that anonymous and confidential testing resulted in earlier access to care. If these patients are offered effective antiretroviral treatment, a lower AIDS rate would be possible, at least in the short to medium term. In Hong Kong, HIV diagnoses are made in hospitals, clinics, and anonymous testing services. The Government's Social Hygiene Clinics (STD clinics) have accounted for 16.7% (figure 8) of all reported HIV infection. This proportion would likely affect the AIDS pattern as most in this group are asymptomatic on presentation, contrary to those diagnosed in public hospitals. Finally, home collection test is becoming available. A recent report commented that home collection was used by persons at risk who did not present themselves to other means of testing[10]. Its impact on the pattern of HIV/AIDS deduced would be drawing attention in the coming years.

Conclusion

In HIV/AIDS programs, clinical diagnosis plays a central role in both patient care as well as public health surveillance. The provision of care benefits not only the individuals but also contributes towards effective prevention of infection, diseases and negative social impacts, all being objectives of an effective surveillance system. The links between clinical diagnosis and public health programme are shown in figure 9 and 10. The clinical programme provides strong input to the public health surveillance system. There are the intervention parts composing of patient treatment, partner notification and preventive therapy; and relevant research on the natural history and behavioural patterns of the infection. The public health program, in return, provides information on current disease patterns and makes projection for the future. The latter is clearly invaluable in the planning of clinical services for people with HIV/AIDS or those at risk of infection. HIV/AIDS offers an opportunity to examine the interplay of the two programmes at population and individual levels.

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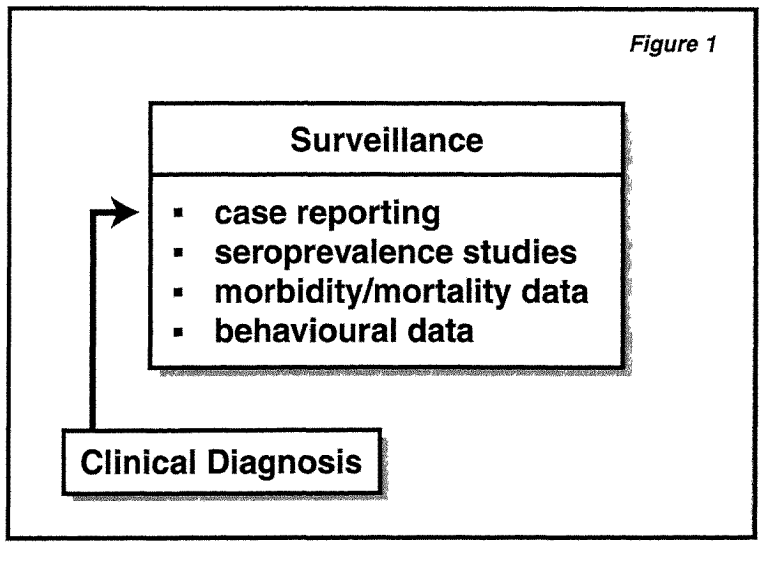


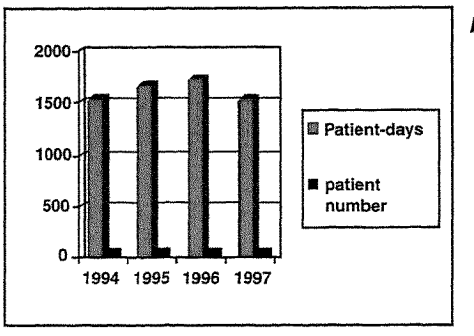
Figure 1

Figure 2

Inpatient Workload

AIDS Service, Queen Elizabeth Hospital

Hong Kong

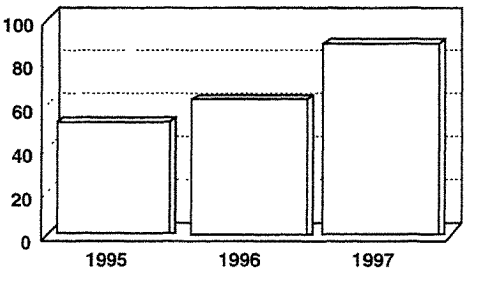


SOURCE: *Internal Assessment Report (AIDS programme and situation review in Hong Kong) Advisory Council on AIDS 1998*

Figure 3

New Clients' Registration

DH HIV Clinic *Hong Kong*



SOURCE: *Internal Assessment Report (AIDS programme and situation review in Hong Kong) Advisory Council on AIDS 1998*

Figure 4

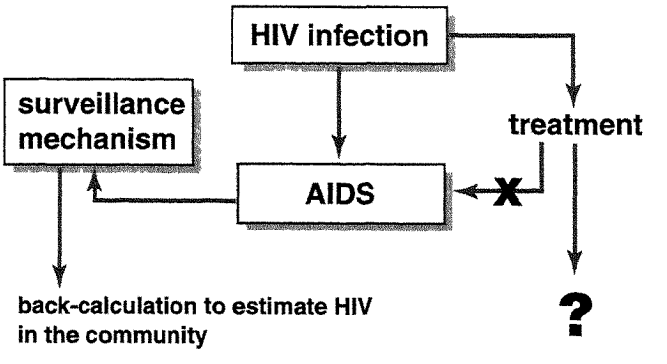


Figure 5

AIDS Case Definition

USA

HIV positive
plus
One of the 26 Indicator diseases
or
CD4 < 200/μl

HONG KONG

HIV positive
plus
One of the 26 Indicator diseases
with modifications
- PTB includeed only if CD4<200
- Penicillium marneffei added

Figure 6

Primary AIDS - defining Conditions

Hong Kong 1985 - June 1998 (n=349)

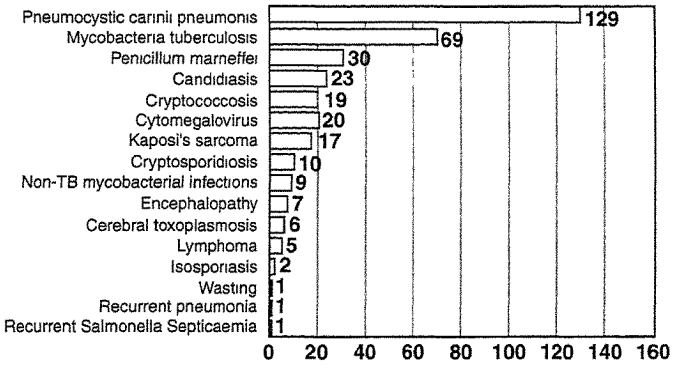


Figure 7

Discrepancy of CD4 Results

	Chinese	Caucasian
CD4%	36	43
CD8%	30	33
NK cells%	20	14

SOURCE Kam KM, Wong KH, Lee SS, Internation of CD4 T lymphocyte values in different HIV infected populations. *J AIDS 1998; 17:185.*

Figure 8

Reporting Sources of HIV Infection and AIDS HONG KONG (to October 1998)

	HIV	AIDS
AIDS services	172 (15.6%)	42 (11.7%)
STD clinics	183 (16.7%)	26 (7.2%)
Public hospitals clinics	406 (36.9%)	204 (56.8%)
Private hospitals/clinics/ lab	301 (27.4%)	83 (23.1%)
Others	36 (3.2%)	4 (1.1%)
TOTAL	1098 (100%)	359 (100%)

Figure 9

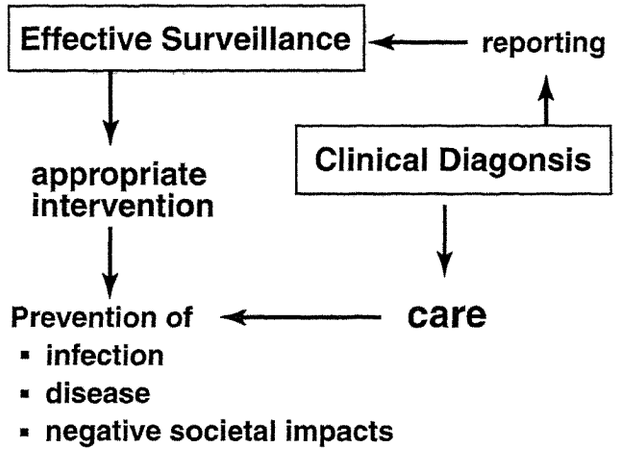
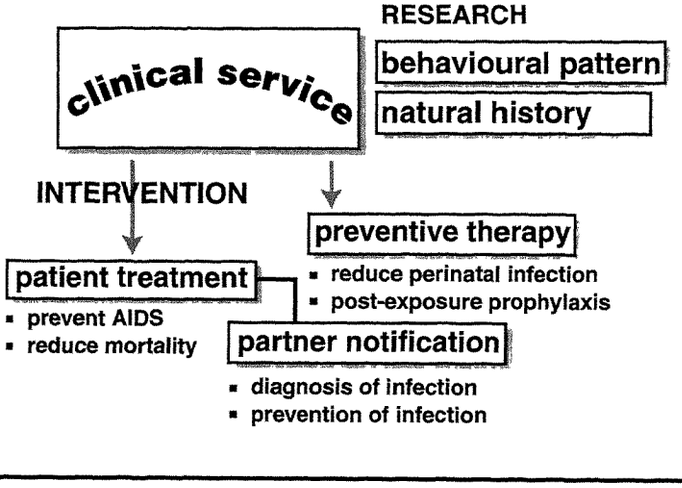


Figure 10



Questions and Answers Session

MODERATOR:

I'd like to invite to the stage Professor Chin, Dr Tim Brown and Dr S S Lee. A short question period follows. Because of time limitation, we should have not more than fifteen minutes for questions and I would like to encourage the audience to make all the questions related with the topics discussed.

Participant A:

It's not so much a question as a comment. Our two speakers, Tim Brown and James Chin, have been talking about numbers — one told us how important the numbers are and the second told us how to get about getting the numbers. We have been reminded how expensive it would be to get numbers and, therefore, it's very important to be very discreet and selective. These pose a very important challenge to this workshop because we share so much in common in terms of culture, in terms of our living conditions. Very likely, we're going to be selecting what we should select. We can select the kind of numbers that will likely be applied to this region as a whole, and I think this actually defines basically, Mr Chairman, what we need to do. But before what we can steer our mind set further what we need to do is to come to a certain consensus in terms of how we are going to interpret data and I think that is what Dr Lee has been telling us. Getting numbers is not about just getting numbers, as there are of a lot of confounding factors. My appreciation of very, very good speeches by the three speakers today. Thank you.

MODERATOR:

Thank you very much. I think most of us share your opinion. More questions please.

Participant B:

I have a question for Dr Brown. You talked about using collected data to fit into the processes of programme evaluation or to changing the programmes. Could you give us some examples on that?

DR BROWN:

I think we need to be a little bit careful in what we mean by evaluation. Behavioural surveillance basically allows you to evaluate on a community level what the combined effect of all programmes which have been going on in that particular community are. It does not allow for evaluation of a particular individual programme. However, from the point of view of larger district, provincial, or national programmes, their real concern is the cumulative impact or the cumulative effect of all of the activities — in that regard behavioural surveillance can be very valuable.

In Thailand, for example, the National Behavioural Surveillance, the Bangkok Behavioural Surveillance which is a smaller city-specific behavioural surveillance system, have all shown very clearly the continuing reductions in risk behaviour which have occurred over time as a function of all of the activities which have been occurring in Thailand and in Bangkok. Many donors would like you to be able to tell them exactly what impact they got for their programme. If you want to do that then you need to do an evaluation which is very specific to that particular project because otherwise you can't control for all of the other variables, all of the other activities which are occurring in the community as a whole.

Participant C:

I should like to put the question to Dr Lee. As a paediatrician, we have had in the last month some problems with illegal immigrants. I think it may be the same in Hong Kong two years ago before the Handover. Because of that we have re-checked those women regarding some diseases, but we are not doing systematically anything regarding HIV. Do you think that it is advisable to investigate along that line to make it part of a good surveillance system? You see these ladies will go back to China after delivery as usual but the children will stay and we must know if they have HIV. I should like to know if you think that it is important to go on regarding this investigation.

DR LEE:

Perhaps I can share with you some of our experience dealing with illegal immigrants, but in a different context. I am referring to our programmes on Vietnamese refugees and boat people in Hong Kong. I believe that the same principle applies. The key question is to think about what would you do after you find a person who is infected, or what sort of intervention do you have in mind. So far we have not been implementing any mandatory testing. This is just one community sector when it comes to HIV status. Instead voluntary testing is provided in STD Clinics and through Community Clinics set up within the Vietnamese Refugee camps. What we should be doing is perhaps not to jump into providing HIV tests but to find out why we need to do it. If we have reason to believe that a certain group has additional risk of infection, then we can consider a programme to provide the testing and to capitalise on each and every opportunity to deliver AIDS education to sexually active people. In your case, your access to young sexually active women may prompt you to start assessing their level of awareness on not just HIV infection but also STDs, and to consider any medical intervention for HIV positive people.

PROFESSOR CHIN:

I'd like to make an additional comment because there's a very important distinction that has to be made between case finding and public health surveillance. In the example that you're pointing out, if the objective is to identify HIV positive women so that you can either deport them or do something you are talking about case finding. If for surveillance purposes you want to find out what in general is the HIV level so that you could perhaps try to make — use that information to make a programme or policy decision then I would call that public health surveillance. You have to be very clear from the outset what the objective of your testing programme or proposed programme, is. Is it case finding or is it public health surveillance?

Participant D:

Thank you very much. I only want to supplement what is being discussed now about the surveillance programmes in Macau. Since 1993 we have implemented an anonymous surveillance programme. In this programme we also include pregnant women and, in fact, we have never found any positive cases. But really we have to distinguish, as you said, case finding from surveillance. What I want to add is that obstetricians may request HIV testing for pregnant women because of an underlying risk factor. If she is an illegal immigrant, the test may not be performed in time but the HIV status is known only after the delivery.

Participant E:

I'd like to ask Professor Chin, as discussed in your presentation, for those infected with HIV there is a one four-thousandth chance for male to female transmission through sexual contact, and a one eight-thousandth chance for female to male transmission. Does this research mean that someone who is

HIV infected has to have sexual relations with four thousand normal females, or he has to have sexual relations four thousand times with one normal female? I'd like to ask how they conducted this research?

[The participant asked how Nancy Padian carried out her sexual partner study/JC]

PROFESSOR CHIN:

It was basically a sexual partner study, that is, what she did was recruited HIV infected men or women and then on a prospective basis very carefully followed their sexual, close sexual contacts — usually a steady boyfriend, or a husband or a wife. The numbers actually were fairly small so she had to use some heavy statistics to generate some of those rates. But that was a result of about a three to five year follow-up in about eighty-two, or close to a hundred, couples, where one was HIV positive, the other was not. Her findings and conclusions are fairly consistent with some of the epidemiologic studies carried out among gay men during the early 1980s when investigators were trying to determine what the rate of HIV transmission from a single sexual contact was. From these epidemiologic studies in the early 1980s, it was estimated that the probability of transmitting HIV from an infected man to a susceptible male was in the range of 1:1000 — although the risk would be increased if you had additional facilitating factors.

So all of these estimates of HIV transmission rates via sexual intercourse are still very, very comparable. It doesn't really change anything because these were basically types of rates that were somewhat assumed or estimated starting from about the early to mid 1980s. But we just really never fully appreciated how low these values were. Nancy Padian's studies just basically confirmed them.

The question was how that study was conducted. Nancy Padian's study was basically a sexual partner study where one partner was identified to be HIV positive. She then prospectively followed-up all of the sexual contacts who usually was a husband or a wife for many years. Using these data she calculated what the transmission rate was per single sexual contact. As I say numbers are relatively small so she had to use a lot of statistics to arrive at her estimates.

Participant F:

Dr Brown, sorry, when I arrived you had already begun speaking. I don't know if you have discussed this question but I still would like to bring it up. You mentioned that condoms are more effective in preventing AIDS, but strictly speaking they cannot prevent it completely. Then how much protection do condoms give? Are there observations in this area?

DR BROWN:

I think there are a number of studies which have looked at the effectiveness of condoms over the years; and basically if condoms are used correctly then the effectiveness is quite high. One of the key factors there, however, is if the condoms are used correctly and so there are issues in terms of the training people to use condoms appropriately.

In general, however, I think, there's very little question as to the effectiveness of condoms if they are used. The real issues in terms of HIV prevention come because condoms aren't used and they aren't used for a number of reasons, most of which are related to lack of accessibility to condoms or just, in some cases, political or legal considerations, such as carrying a condom is seen as presumptive indications of engaging in commercial sex. There are a lot of legal barriers to condom as well as the practical barriers of how do you get to them. But, again, those States which have looked at the actual efficacy of condoms for HIV prevention have generally show fairly good results. Better than what is seen in family planning typically where the condom is not seen as an ideal family planning tool. And

I think, the important thing that we have to be careful about HIV prevention is not to focus too much on the few percent where the condom's failed but we need to be looking much more at the 90% plus where the condoms are working effectively and are, in fact, preventing HIV transmission. That's much, much more important to focus our attention on.

PROFESSOR CHIN:

I'd like to make an additional comment on that question about the effectiveness of condom use because you can look at effectiveness of condom use on an individual basis or you can look at the effectiveness of condom use on a population basis. So some of my presentation was looking at the relatively low efficiency of transmission of HIV so that in order to get an epidemic going you have to have one HIV infected person infecting more than one other HIV infected person. If you then had elevation of consistent condom use in the high risk populations of 20%, 30%, or as much as 50%, you could cut the overall population risk of HIV transmission by 20, 30, etc, percent. Thus, condom use may have a much larger population effect in stopping extensive transmission in high risk individuals compared to just the individual protection that it gives. So we need to look at both individual protection and population effectiveness.

Participant G:

What Dr Lee has talked about just now has to do with HIV policies and clinical management. Will Dr Lee please discuss how we should implement the management of HIV carriers? Since carriers involve individual behaviours, when we discover them we cannot control them. But for the patient, we can provide treatment and education.

DR LEE:

The question is: What shall we do when we detect a person with HIV infection under the surveillance system in the Guangdong Province or the Pearl River Delta region. I think there is no one single answer to that question. What I'm trying to drive at is that for any effective programme we have to consider first what you want to do afterwards. It varies from one place to another and then it also varies from one setting to another. You just can't stop at finding one person who is HIV infected.

Management is a confusing word. I understand that the Chinese translation for the word may be misleading. Can we draw reference from, say, how we handle other diseases, say, for example, STDs. Clinical management often implies monitoring and control in Chinese. But we shall be careful not to mix up with administrative control in, for example, police activities. We shall be focusing on how clinical treatment is offered to a sick person. Another complexity is that we might be puzzled by all the medical advances, say, the antiretroviral treatment. It is not true that when we don't have those treatment we don't have anything to offer. From the data I've shown and from other studies, I think there are a lot we can provide in terms of treatment. One is to prevent development of complications, for example, PCP. The other is to advise the spouse on HIV testing and safer sex precaution. There are numerous other means which need to be individualised. In essence, we cannot rely on public health surveillance to continue the work of taking care of people living with the infection.

MODERATOR:

Thank you very much. We have to end our question period. According to the programme the first Roundtable begins at 2pm.

ROUNDTABLE SESSIONS

Roundtable (1): HIV Surveillance Mechanisms

MODERATOR 1:

According to the agenda, we are having a roundtable discussion this afternoon. First, let me give a brief introduction to the origins of this workshop. It all started a year ago when Dr Lee Shui Shan of the Health Department, Hong Kong, and Director Liu of the Public Health Department, Guangdong Province, discussed and decided to carry out a collaborative research project on the HIV trends in the Pearl River Delta Region, which includes organising training and workshops. I am very happy to see us gather here today. This afternoon, we are holding our roundtable discussion. I hope that all representatives will be able to speak up and contribute to the discussion. First of all, please allow me to introduce our colleagues on stage. Dr Teresa Choi of the Health Department, Hong Kong; Dr Feng of the Anti Epidemic station in Shenzhen; Dr Xu from the Municipal Health and Epidemic station, Guangzhou; and Dr Liang and Dr Ye from the Medical and Health Department, Macau. I am the Deputy Director of the Institute of Epidemic Control of Guangdong Province. We will individually lead discussions under the following four topics: (1) HIV Surveillance Mechanisms; (2) Risk Factor Surveillance; (3) Management of HIV Infection; (4) Human Mobility. The Pearl River Delta Region includes Qinyuan, Zhaoqing, Zhuhai, Zhongshan, Macau, Dongguan, Guangzhou, Shenzhen and Hong Kong. All of you present today have had wide experience in HIV work in the Region, so I hope we can make use of this opportunity for an exchange of ideas, which will certainly be very beneficial to all of us.

MODERATOR 2:

Before we begin, let us take a look at our present position. We need to define the boundary for the Pearl River Delta. Here is a map. Let us first follow the regions in the map and introduce the situation in each city. First, Hong Kong has an area of over 1,000 square kilometres, and a population of over 6 million, most of whom live in the city. The age distribution is mainly young people from over 20 to around 35 years old. People who are over 70 years old are also beginning to increase.

Participant:

Shenzhen can be considered to be a rather unique place in China. The resident population in Shenzhen (we usually categorize the population into resident and temporary) is only 1.08 million. The mobile population is 2.8 million, mostly coming from various parts of China, working in different businesses and trades. Over 20,000 people depart annually for travel abroad. The population distribution of Shenzhen is mainly between 16 to around 30 years old, the average age is only around 24. Their occupation is mainly that of factory worker.

Participant:

Jiangmen is on the western side of the Pearl River Delta. It has 5 county-level townships under its administration: Xinhui, Kaiping, Taishan, Enping, and Heshan. The total population is 3.8 million. There are 410,000 people in the urban Jiangmen. The age distribution in Jiangmen is about 1.2 to 1.5 % for each category. For example, 0 to 7 years old is 1.2%, 8 to 14 years old is 1.5%. This is the resident population. The mobile population is nearly 1 million.

Participant:

Zhuhai is a smaller special economic zone. The mobile population is 340,000, the resident population is over 620,000. Because it is a relatively young city, 45% of the population is between 20 and 39 years old.

MODERATOR 2:

Zhuhai is quite similar to Shenzhen, both are special economic zones and have a higher mobile population which is younger. What about Zhaoqing?

Participant:

The Zhaoqing region has 8 county-level townships under its administration, with a total population of 3.6 million. It is situated in the north-western part of Guangdong, adjacent to Guangxi. The majority of the population in Zhaoqing is agricultural. Its main population is stable and the mobile population is about 78,000.

Participant:

Qinyuan is situated in the north-western area of Guangdong Province, near Hunan. It has 10 county-level townships under its administration, with a total population of 3.7 million. The city proper is located in the south. Its main population is rural. The township population (including rural town population) is only 420,000. There is an urban population of 150,000. Qinyuan is a new town in Guangdong Province and was only built in 1988. Its mobile population is between 40,000 to 50,000.

Participant:

Huizhou is on the eastern side of the Pearl River Delta. There are 5 county-level townships under its administration — Huicheng district, Huiyang, Huidong County, Boluo County, and Longmen County. There is a total of 2.6 million people in the entire region, most of which is rural population. The urban Huizhou has a population of over 300,000.

Participant:

Foshan is right next to Guangzhou; they are basically linked. Foshan administers 6 townships, with a resident population of 2.6 million, about 70% of which are rural. There is a non-native population of 1.2 million, about 60% of which is between 20 and 60 years old.

MODERATOR 1:

Foshan is relatively well-developed economically, so the difference between rural and urban is no longer significant. The so-called "rural" could possibly be better developed than some cities.

Participant:

Zhongshan is right next to Zhuhai, with a population of 1.28 million, and a non-native population of 380,000. There are 30 townships under its administration.

Participant:

Dongguan is situated between Guangzhou and Shenzhen. There are 1.45 million people with local resident status, and 1.5 million people are non-native. The ratio of the two is about 1:1. There are about 780,000 people with local rural residency. The majority of the population of Dongguan is

agricultural but Dongguan also has a relatively high number of its rural population engaged in industry and business. Among the 1.5 million non-native population, 1.09 million is from other provinces; over 20,000 are from Hong Kong and Taiwan; and over 2,700 are from other countries. The rest are mobile but from within Guangdong Province.

Participant:

I assume most of you have heard of Guangzhou or have visited Guangzhou. Guangzhou is the Southern Gate of China; it is also a big city, a provincial capital, and an economic and cultural centre. There is a population of 6.6 million in Guangzhou. It administers 9 districts and 4 county-level towns. Guangzhou is situated on the mouth of the Pearl River. The population distribution in Guangzhou is urban 3.9 million; and rural 2.7 million. Guangzhou is also a place with a relatively large mobile population, the number registered is already over 1 million. But in the city the actual estimate is that the resident population and the mobile population are about the same, that is, over 3 million in each category.

MODERATOR 1:

Finally, I will introduce the situation in Guangdong Province. At the end of 1997, the total population of the province (including Shenzhen) was 71,593,553. If Shenzhen was excluded, then the population was 70,137,262. I refer local population with permanent residence status. The figure on the mobile population is not clear as it is very hard to calculate. As of the end of 1997, in terms of incidence, the first five infectious diseases respectively were viral hepatitis, tuberculosis, dysentery, gonorrhoea and measles. The control of viral hepatitis has become a very important subject for Guangdong Province.

Participant:

You all know now where Macau is. It's a small territory, as you know. We have one small city, two islands. The population is about 422,000 persons. Macau has a young population. It's important to stress that there is a two-way, come-and-go, population in Macau. That's over 5 million a year crossing the borders of Macau.

MODERATOR 2:

We have just finished our introductions. Just like meeting new friends, when we introduce the situation in our respective places, we also want to understand the situation in other cities. I will try to summarize briefly below. If I miss anything, please help me to correct it. We have just mentioned that several cities near the south have a larger mobile population. For example, in Dongguan, there are even people from Hong Kong and Taiwan. Also, the population density is higher, and the population is younger. Other cities like Zhaoqing, Huizhou, and Zhongshan have a larger rural population and the total population is smaller with a lower density. Also, in some cities, the rural population is no longer engaged in agriculture. Because we are all working on public health surveillance, the distribution of population has great importance to us. We will discuss about the categorization of the mobile population tomorrow. Right now, let us return to the focus of today's meeting. You have all prepared reports before arrival. During the discussion, we should not focus only on figures but should open the discussion based on the theories we have heard about this morning. The experts are sitting right next to us. If there are questions or further discussions, you can bring them up. The theme of this conference is public health surveillance. This morning, Dr Lee presented the definition of public health surveillance. We can begin our discussion from here. This definition includes the collection of data, with sufficient

accuracy, so the data can be used to design and promote prevention and other HIV work. This is a definition put forward by the World Health Organisation. Its main emphasis is on the accuracy of the surveillance and the validity of the data. Public health surveillance should stress three areas, that is, collection, analysis, and distribution of data. However, the objective for data distribution has to be resolved. In addition, the subject of surveillance — whether to survey HIV infection or to survey AIDS. What are the responsibilities of health professionals, and what does the collected data represent — all these questions have to be resolved. Lastly, what is surveillance? Is it public health surveillance, or is it case finding?

Participant:

There isn't much difference between surveillance of HIV infection and cases of AIDS, because the meaning of surveillance is to detect people who have been infected, and trace the source of their infection. Whether it is someone who is infected with HIV or a patient with AIDS, they are both infectious. From a public health surveillance point of view, the two have the same meaning. The difference is in clinical treatment. A patient with AIDS requires treatment. For those infected with HIV, there isn't any good treatment at present. The aim of treatment of AIDS patients is in prolonging their lives and reducing their suffering. There isn't any progress in treatment methods that address the eradication of the pathogens. So in terms of surveillance, it is the same whether it involves an AIDS patient or someone who is infected with the virus (HIV carrier). However, for administrators, they will note the difference between the patient and the carrier. According to notification requirement in China, every hospital and every public health worker has the responsibility to report to their superior at a higher level and provide statistics on the conditions of patients and HIV carriers.

MODERATOR 2:

We are now discussing two topics: HIV infection and AIDS. What you meant just now is that there should be surveillance both of the viral infection and on AIDS. So what format should this surveillance take?

Participant:

Our surveillance is mainly carried out like this. HIV surveillance is required on marriages involving foreigners through hospitals and anti-epidemic station. In Jiangmen, starting in 1989, we have begun requesting all couples in marriages involving foreigners that both parties undergo HIV testing. Of course, many other tests besides HIV will be examined.

Participant:

Simply speaking, HIV surveillance is to test whether there are HIV antibodies in the blood. HIV screening will be carried out through the PA method or the ELISA method. If either method has tested positive, then confirmation is performed with Western Blot method. If the result is verified as positive, then the presence of HIV antibodies is confirmed. This shows that the HIV virus is present in the blood. But whether the patient has AIDS still requires further investigation. This morning, Dr Lee discussed the standard in the United States and the standard in Hong Kong. The main thing we must look for is whether there are signs or symptoms. If these are absent and, the person is healthy, it means that he/she is infected with the HIV virus, or is a carrier of the virus. If there is immune deficiency or dysfunction leading to related complications, usually manifesting as high fever, persistent fever, wasting, diarrhoea, a diagnosis of AIDS may be made.

MODERATOR 2:

Thank you. You mean that ordinary HIV surveillance mainly looks at the presence of antibodies, and is essentially an antibody surveillance system. By first using the ELISA method, then with additional confirmation processes, we can determinate if a test is positive.

Participant:

The so-called surveillance is in fact a "surveillance network" of medical establishments.

MODERATOR 2:

So what is HIV surveillance?

MODERATOR 1:

It implies two systems: One is the surveillance of HIV carriers, and the other is the surveillance of AIDS patients. Which surveillance do you think should be undertaken? In fact, the emphasis is on the surveillance of HIV carriers. Evidently, a positive result should be reported. When the infected person develops complications, he may have already been admitted to the hospital. From the perspective of epidemiology, prevention and control, someone infected with HIV is more significant than a patient. Why? It is because AIDS can be diagnosed more easily, but if someone has not got any complication, you will not be able to tell. He will look like a normal person, but he is infectious. That is the key.

Participant:

In practice, if we discover someone who is tested positive for HIV antibody, we will also conduct a questionnaire survey at time of blood-taking, in order to collect more data. During the process, we are not only testing for antibody, but we are also conducting behavioural investigations.

MODERATOR 2:

Dr Brown mentioned about high risk indicators this morning, which we shall discuss later. Let us first explore AIDS surveillance. This surveillance has been carried out in Hong Kong, mostly in hospitals. Is there a similar system in Guangzhou?

Participant:

AIDS surveillance is interpreted like this in Guangzhou. The surveillance includes the detection and reporting of cases. On the other hand, there is a series of systematic and continuous system of HIV surveillance. There are two kinds of HIV surveillance in Guangzhou: Regular surveillance and sentinel surveillance. Regular surveillance is carried out in hospitals and medical units which have the ability to develop testing for HIV antibodies. The targeted population is usually foreign (from outside the country, including Hong Kong, Macau, and Taiwan) in-patients. Due to the higher medical standards in Guangzhou, foreigners, including overseas Chinese, like to get treatment in Guangzhou. Surveillance also cover patients with sexually transmitted diseases, and drug addicts.

MODERATOR 2:

We have just discussed two issues, HIV surveillance and AIDS surveillance. Most of what we have discussed involves HIV surveillance. The question of surveillance methods will be discussed later. As for the uses of collected data and their dissemination, can we have some introduction by different regions.

MODERATOR 1:

We have just discussed HIV surveillance and surveillance of AIDS patients. My personal understanding is that at present, the surveillance done in mainland China is mainly on HIV carriers, which is an active mechanism. The surveillance on AIDS patients is passive. When symptoms appear, a patient comes to the hospital. Through examination of the patient, we try to better understand the situation. Basically we have not yet developed the surveillance system on AIDS patients or relatively little has been developed. This morning, after listening to Dr Lee Shui Shan's introduction, I understand that some of the private or government hospitals in Hong Kong have diagnosed AIDS patients. We hope to hear the opinions of our colleagues from Hong Kong on how to maintain surveillance of AIDS patients, or through what format.

MODERATOR 2:

First, we must clarify the definition of AIDS. Without clarification, the level of accuracy will be affected. In Hong Kong, the most important pre-requisite for AIDS surveillance is to define it. AIDS is defined as HIV infection, along with complications. This disease isn't any ordinary fever, but is any one of over 20 possible complications. As for the way to distribute and report related data on HIV/AIDS, this is a very important question. I am rather interested in the situation in Qinyuan.

Participant:

If we have discovered someone with positive HIV antibody, or who has been diagnosed with AIDS, according to the uniform request from the Guangdong Province, we must report to the provincial surveillance centre immediately and carry out further confirmation. If we have confirmation from the Centre, we will provide feedback in a timely fashion to the local government department responsible for health (that is, the health department). The provincial HIV surveillance centre will also report to the national government at the same time.

Participant:

Let me give some supplementary information. The reporting system in China works like this. The situation regarding HIV infection is reported from the lower level to the higher level step by step. After the local anti epidemic station has discovered a suspected case of HIV infection, they will send details to the local confirmation lab centre. This centre is responsible for testing HIV antibody. If the lab discovers that the sample is positive, they will send it to the provincial HIV confirmation lab, or the HIV antibody confirmation lab in Shenzhen for confirmation. After it has been confirmed, all the epidemic data (investigation results) and related personal data (epidemiology, sources of infection, etc.) will be thoroughly checked, then reported to the local health administration and the HIV confirmation centre in Guangdong Province. The HIV confirmation centre will carry out an analysis. The result of the analysis will be reported to the National HIV prevention and control centre, and then to the Ministry of Health. Finally, the related data will be sent back down the chain.

MODERATOR 1:

The question is : Surveillance is carried out based on the characteristic behaviour of drug users and on those who marry foreigners. Are the surveillance results feedback to the related administration departments, like drug rehabilitation centres or local public secondary bureau, or re-education centres, so that interventions can be developed which are specifically aimed at behaviour related to the spread of the HIV epidemic?

Participant:

My objectives of surveillance is highly important. First, reports are sent step by step to all higher level departments, and to the government at each level. The government will design corresponding policies based on the related data. This then becomes government behaviour. When management and intervention are carried out through the related policies already designed, government behaviour is in turn changed into medical behaviour. When the medical agencies start to educate the public about prevention and disseminate information on the prevention of HIV, this then turns into individual behaviour. So this covers behaviour at three different levels.

Participant:

As we all know, Macau is very small. We are near the top of the hierarchy. In Macau's Health Department, we have several units, among which is one responsible for Epidemiology. We report all our surveillance results to the Epidemiology Unit which then passes the information to the upper authority. The Director of Medical and Health Service is the Coordinator of the HIV Group. We have installed some education programme based on analysis of surveillance collected over the year.

MODERATOR 2:

Earlier, we discussed at some length the distribution of data. That mainly relates to sending the collected material to government agencies, which then distribute it. Are there instances where we have distributed related reports on our own, or through newspapers and reporters?

Participant:

As for providing feedback on the data, we have reported on recent surveillance situations through communications with the news media. For example, on World AIDS Day this year, we proposed suggestions on ways of prevention based on the surveillance situations collected in Shenzhen over the last few years, including which kinds of behaviour among which portions of the population, has led to the rise in the figures for infection. The emphasis was on prevention, but the data is accessible to the public.

Participant:

In Guangzhou, surveillance on HIV/AIDS involves mainly isolation management of the patients, and providing answers to questions raised by the patients' families and the patients themselves. For those who are HIV positive, we carry out surveillance once every 6 months to a year. This includes disease progress, the patient's physical conditions, and whether family members (especially the spouse) had been infected. Our surveillance data have all been reported to the government in a timely fashion. At the end of the 1980's, we discovered a foreign patient who was infected. We reported the situation to the government, and the government gave a timely response, requesting that all foreign patients be tested. The good thing about this is to prevent infection within the hospital, which protects doctors and other patients.

Participant:

HIV is a kind of infectious disease. The management of which has been specified in the "Prevention and Control of Infection Diseases Act". Deadlines have been set in the infectious disease management as regards turnaround time. For instance, we require that cities must make reports within 12 hours. Surveillance agencies, no matter which department, medical unit or our anti-epidemic stations, must report within 12 hours. In rural areas, we consider the factors of transportation and communication,

so they can report within 24 hours. HIV is classified as Category B infectious disease in relation to management. This is explained in great detail in the law. HIV surveillance, like as prevention and control mechanism, is government responsibility. Therefore, surveillance data must first be reported to the local government. We at the Sanitation and Epidemic Prevention Department will receive this information first. The Health and Epidemic station is also a derivative unit of the government. To whom should the data then be given in feedback? After confirmation, whoever is doing the reporting should notify the original unit that initiated the report.

MODERATOR 2:

We are having this discussion about the public health surveillance. Let us listen to the opinions of the experts. Is there any advice about how to do epidemiology work, to distribute data, provide feedback, and make use of the data?

PROFESSOR CHIN:

I want to comment on AIDS case definition first. I understand there is a standard form that's being filled out on each case that's detected. I wonder whether there are questions to determine how the individual may have got the infection. In China, you are probably reporting an HIV infection with or without symptoms. That perhaps may be good enough for the time being, and it doesn't seem to be a high priority to come up with clinical AIDS definition. In terms of the obvious demographic data, age, sex, the probable route of infection are needed for epidemiological analysis.

Participant:

Professor Chin suggested not to pay too much attention to HIV definitions. I don't quite agree. AIDS surveillance is usually very passive. Passive means when a patient is discovered, an HIV antibody test will be carried out. If there is no clear definition, but merely relying on general symptoms like diarrhoea, fever, and the length of the fever, then the HIV antibody test will not be effective as the surveillance system cannot reflect the clinical conditions that the infection has created.

Participant:

In mainland China, HIV infection is defined as positive HIV antibody, plus one of the following diagnosis: 1) Recent (in the past 3-6 months) decrease in body weight of over 10%, with persistent fever of over one month, 2) Recent (in the past 3-6 months) weight loss of over 10% with persistent diarrhoea of 3-5 times a day in the last month, 3) PCP, 4) Kaposi's sarcoma, 5) Clear diagnosis of fungus infection or other opportunistic infections. For those with HIV antibody, symptoms like weight loss, fever, and diarrhoea should alert one of the possible diagnosis of AIDS.

Participant:

As health professionals, we must consider whether this definition is appropriate or not. The present model as a government's administrative tool is acceptable, I accept. But when a definition is not quite ideal, we must point this out.

Participant:

I feel that the definition used on the mainland is not ideal. It is not quite the same as that in other parts of the world. For example, at present CD4 tests are not generally available. Even in some large hospitals, like the city hospital(s) in Guangzhou, the tests have not yet been established. For those whose CD4 fall below 200/μl (CDC criteria for AIDS established in 1993), the number of AIDS could

rise substantially. This is a very good suggestion. Some patients with CD4 under 200, even without any symptoms, will progress rapidly to failure of their immune system, and the patient will eventually die from complications. In my personal opinion, I hope that our government can quickly implement CD4 testing procedures in the first rank city hospitals. This is extremely important. Otherwise, even with our awareness, we cannot detect AIDS patients. In order to develop these kinds of testing procedures, expense is an important consideration.

Participant:

We have met some late stage AIDS patients, and patients suspected of PCP. Simply relying on clinical diagnosis wasn't ideal. Sputum examination did not turn up high positive rates. Also, in some cases the pneumocystis underwent morphological changes. We sent it to the Zhongshan Medical University (a well-known university in Guangzhou), but they couldn't determine whether this was pneumocystis either. Only by performing bronchoscopy of brocho-alvedar lavage, could we discover the typical Pneumocystis carinii. This leads to two observations, there are no fibreoptic bronchoscope in ordinary hospitals, or, if there are, they wouldn't want to use them on HIV patients, for fear of infecting other patients. Nor do they know the infection control procedure. Even when the infection control practice is suggested, the physician still does not believe it. This is a problem.

MODERATOR 2:

What you have just brought up is probably a question of data feedback. When the expert knows the PCP situation, he can tell the physician. This is probably not a publicised process, or not a very direct one. But it can help doctors understand the situation.

PROFESSOR CHIN:

If you go back to history, the only reason for a clinical case definition of AIDS was that at the time we didn't know what the etiology was, and we didn't have a test. It's a big problem in the United States now because of the new definition. In order to have medical care that would be paid by the government, you have to be called an AIDS case. If you've HIV infection and lots of illnesses, you would not be able to get equal treatment as someone with "AIDS". The definition that many national governments apparently have adopted is basically that of WHO which was developed in 1985. But now HIV testing is part of that definition. We know now that the process of HIV infection to death is a clinical continuum. Instead of debating at what point one should be labelled AIDS, really we should be talking about HIV infection with or without symptoms and death.

MODERATOR:

Thank you, Professor Chin. Just now, Professor Chin mentioned the experience in the United States. But there is a great distance between the United States and China. So we have 2 considerations: One, when the experts and the government do not agree, what do we do? Two, can the experiences of the United States be applicable in China?

Roundtable (2): Risk Factor Surveillance

MODERATOR 1:

Risk factor surveillance is also known as high risk indicator surveillance. About high risk indicators, first we must consider that "high risk" means a high degree of risk, or a high degree of proneness to HIV infection. Internationally, there are two areas of research on high risk indicators. One is STD surveillance. (We are more familiar with the STD categories — some are narrowly-defined, some are broadly-defined. In general, the narrow definition of STD is used to include specific diseases, like syphilis, gonorrhea, and herpes). The other relates to high risk behaviour. We are clearer about these categories but I think we can still bring up for discussion. In the process, we may possibly find many areas of commonality. Through discussion, we can raise our awareness, increase our knowledge, and exchange experiences. After we have defined high risk behaviours, we can start considering how to select high risk indicators.

What actually are high risk behaviours? We seem to know them well. Besides these categories, what other behaviours have we neglected? Is there such a possibility? Are these indicators suitable for local surveillance? Also, how do we select high risk indicators? For example, take drug abuse. Simply using drugs does not spread HIV. Simply using one needle for injection also will not spread HIV. Sharing needles does not lead to infection if no one is infected. Only when there is a carrier among the group will there be a spread of HIV. So which indicator should we choose? Maybe we shall choose injection as a direct indicator. Then do we consider inhalational drug use? Perhaps we should. It could be an indirect indicator. This involves the question of a separation into direct or indirect indicators which we can consider. Once the indicator has been selected, who should conduct this kind of surveillance? On the mainland, it could be the Health and Epidemic stations, or STD surveillance centres. And who else? As for coordination, this involves the whole society. At a deeper level, what is the goal for our risk surveillance? This is not surveillance for surveillance's sake, but for the sake of intervention measures there for the prevention and control of HIV.

PROFESSOR CHIN:

On the subject of targeted intervention, let me take Thailand as an example. Thailand clearly had a big problem in terms of commercial sex industry, with a large percentage of males visiting commercial sex workers. That was driving their HIV epidemic. The Thais are also quite astute that they could not abolish the sex industry, so what they did was to reduce the risk of HIV transmission through commercial sex. They promoted the so-called 100% condom use for commercial sex acts. They drove it up to 90% plus and that together with a lot of activities and STD control, did turn the HIV epidemic down. Obviously there is one thing about recommending the use of condom for protection. We are not telling men that they should all go to visit commercial sex workers with the condom. That's not the message. The message is if you are going to continue the risky behaviour of having multiple sexual partners, then at least protect yourself and that partner by using a condom. If everybody uses condoms to prevent the risk of the situations, we would not have HIV epidemic.

MODERATOR 1:

As regards risk indicators, the state has stipulated which community sectors of the population and what kinds of behaviour shall be under surveillance. For now, let us decide on two kinds of behaviours: drug abuse and sex (conventionally called promiscuity). What should we do about these risks?

Participant:

There ought to be a saturation point for the rate of sexually acquired infection in the population. For instance, when people have not reached a certain level of knowledge about condoms, like in Africa, the rate of infection rises to a plateau and then falls. Just now Professor Chin mentioned the example of Thailand, where through promotion and the use of condoms, the rate of HIV infection has dropped. We have also read a lot of material about this. But in reality, condom use is just a measure. If there is no such measures, like in Africa and other places where there are no condoms, what are the factors that have led to the fall in the rate of infection? Is there in existence other determining factors?

Participant:

We really have a lot of commercial sex workers in Macau. Since we started the programme, we emphasized on teaching them how to use the condoms. Many entertainment industry workers, we know, are commercial sex workers who are coming from Thailand. We notice that the positive rate is coming down. With commercial sex workers, we have to emphasize the education of protecting their clients as well as themselves.

MODERATOR 1:

Regarding the use of condoms, did anyone notice that recently the Provincial Bureau of Industry and Commerce disapproved of the condom advertisements in Guangdong, and the advertisement was withdrawn? I thought this was incredible. Nevertheless, this was a kind of progress, and this refers to promoting the use of condoms to prevent STDs, including HIV, and also for birth control. In fact, there is already such an advertisement on CCTV Channel 4. I find it strange that the Provincial Industry and Commerce Bureau still objected to the more. They really didn't understand the message.

Participant:

I'd like to know what the situation is with ranking risk factors in Guangzhou. Will the ranking of high risk factors vary with to the mobile population or the distribution of population, or the different conditions between the rural and the urban population?

Participant:

The ranking of high risk factors in Guangzhou, if analyzed according to the HIV case reports, would still show intravenous drug abuse with needle-sharing in first place, and sexual activities in second place.

Participant:

We have discussed a lot about high risk behaviour. The definition of high risk behaviour is the propensity to person-to-person exchange of blood and body fluids. There are many categories of such of behaviour but can we determine in this discussion whether the target for surveillance should be prostitutes, drug addicts, or others?

Participant:

I agree with many of the points already put forward by our colleagues. STD patients are also the subject of surveillance. In Guangdong Province and the Pearl River Delta, over the last few years, cases of ulcerative STDs like syphilis, and even herpes, have risen. If one is infected with ulcerative STDs and also has high risk behaviour, then the risk of spreading HIV will increase drastically.

MODERATOR 2:

We have just mentioned a number high risk behaviours. But what is the medium for these high risk behaviours? In other words, who are the people practising these behaviour?

MODERATOR 1:

Let us first determine the group, then choose the indicator. For example, the group I've decided on is prostitutes, or sex workers. Then what aspect should be surveyed? Age? Sex? Blood tests?

Participant:

What is the sexual behaviour of the intravenous drug users group? This indicator is very important. We've discovered through our survey of some carriers who are intravenous drug users that they are less interested in sex. Taking drugs gives them the greatest enjoyment so they don't care about any other things. But it's not the same with females drug users who are often accompanied by a high degree of promiscuity?

MODERATOR 2:

How should we look for drug users? In Hong Kong, for example, we can only carry out behavioural surveys on those who are registered in the methadone centres under the government's Health Department. We won't be able to find those who are not receiving treatment.

Participant:

Drug abuse and drug trafficking are forbidden on the mainland, the principle of which is totally different from that in Hong Kong. In Hong Kong, there is also a methadone programme which provides substitution for the convenience of drug addicts. Crackdowns on drug abuse and trafficking is enforced on the mainland. Once arrested, punishment by the law is certain. We mainly go through drug rehabilitation centres to find drug addicts; this is the group of people who undergo rehabilitation after receiving penalty from the Public Security Bureau. Others will be very hard to find. They are usually afraid of any interaction with government or non-government organisation workers. They're afraid that any connection may affect their work in the future.

MODERATOR 2:

Let me clarify a couple of things: In Hong Kong, drug trafficking is also illegal. Hong Kong does not encourage drug abuse. The drug addicts we found were all from drug rehabilitation centres or methadone clinics. These clinics were set up in order to encourage drug addicts not to abuse drugs. Experts have different opinions about the programme. Clinics are places for treatments. Whether the treatment works or not depends on from which angle you are looking at it. In terms of surveillance, our method is to carry out a face-to-face interview with every new patient who arrives at the methadone clinic. There is question to find out whether needles have been shared and the percentage is calculated as a result.

Participant:

What is the needle-sharing rate in your studies, and do you provide any guidance or the suggestions to those detected?

MODERATOR 2:

These are two different issues. The interview contributes towards the behavioural survey. We consider it a surveillance because it is a regular survey. We calculate a percentage every year, which is produced using public health methodology. Then we can do a comparison, to look at the trends. This is the same principle as surveillance of a disease. As for the measures to be taken when the results are higher or lower, that's another task. Basically, we have two areas of work: one is to analyze the trend in the spread of HIV infection through public health surveillance; and the second is to provide personal service to every person who comes for methadone.

Participant:

Concerning the surveillance of high risk behaviours, people on the mainland may not quite understand the practice in Hong Kong and Macau. There are substantial limitations on the mainland, but the policy has now been determined, and that is to put the focus of surveillance on needle-sharing in drug users and sexual promiscuity.

Participant:

These two behaviours both involve populations who are subject to severe crackdown by the government, and they are completely concealed. Drug addicts are afraid of being identified, so are those who engage in the sex trade. Even with effective surveillance, it is not a very thorough measure for the control of HIV. For example, if there are 10,000 drug addicts in Shenzhen, we may be in contact with 1,000 drug addicts and have carried out surveillance on them. But in reality, the larger proportions (90%) which has caused the spread of HIV, may not really been the subject of any surveillance. Neither have we implemented any control or intervention on their behaviours, or raised their awareness. Now despite all the hard work we are doing year after year, the increase in HIV has speeded up. This is the most fundamental problem of a programme. As professional, I feel that we must first go through multi-sectoral participation, then turn the programme into a government strategy. This ought to be the priority. We have all been engaged in the work on high risk behaviours for many years, and we are all aware of it.

Participant:

Just now we were talking about the surveillance of drug addicts in Hong Kong, including interviews conducted at methadone clinics. During the interview, would the drug addict answer the questions truthfully? Also, these patients take a long time to get rid of their drug habits. One could possibly not be able to achieve detoxification in a certain clinic, then after a period of time, he may start using drugs again and go to a second clinic for treatment. Will this create errors or confusion in the statistics?

MODERATOR 2:

About the accuracy of the responses, this is, in fact, a common question for those carrying out behavioural surveys. When we conduct public health surveillance, we ask the same question. If we can use the same methodology, and repeat the procedures regularly, we should be able to see the main trends. For example, if we use the same statistical method this year and last, but the figure for this year suddenly rises by 30%, we must think about where the problem lies. This is the same with

other health surveillance. Our approach is to adopt a fixed format for our survey. With random sampling, we have about the same chances for inaccuracy. As for the second question, we believe that a drug addict can't possibly be treated in several methadone clinics, because methadone use is under very strict control. They must register with their ID cards, and their records are fixed. Each person can have only the one record. As changes in registration are under control, we have great confidence in the method that we have adopted.

Participant:

Methadone is a substitute for drug which is taken orally. How do you obtain the figure for the rate of injection and needle-sharing? Besides conducting surveillance in methadone clinics, have you also conducted surveillance on drug abuse in other places? Have you tried to do comparisons with the data collected? What are the results?

MODERATOR 2:

Just now, I was refering to those who just arrived at the methadone clinics and haven't yet begun drug rehabilitation. In fact, you are asking that since we only conduct one survey, will the data collected reflect the high risk behaviour of the whole population of drug addicts? We are also asking ourselves the same question meaning that we should not be complacent. I hope to use this opportunity to understand the strategy in other places. We have also conducted surveillance in drug rehabilitation centres but the background of the clients is not the same as that in methadone clinics. We can only draw conclusions when we understand the methodology. But that doesn't mean that using this method is sufficient.

MODERATOR 1:

Let's examine sexual transmission again. This morning, Professor Chin mentioned that there is a one-in-one thousand chance of a man infecting a woman, and for a woman to infect a man, the chance is one in eight thousand. If this is true, then male sex workers are more dangerous. Is surveillance being conducted on this group? The selection of the group is probably a new topic. As far as I know, there seems to be very little efforts on this, and we don't seem to have started yet.

Participant:

It's very hard for us to define a male sex worker. Last year, Shenzhen undertook a special survey. Some male masseurs in saunas, and some attendants from karaokes were chosen. A questionnaire was administered in an anonymous manner. There was also blood test for HIV antibody and other STDs. It was discovered that among more than 200 people, one male restaurant attendant had the antibody. His personal life wasn't very complicated, but his girl friend was a masseuse in a sauna. She probably had frequent sexual contact with people returning from abroad.

MODERATOR 2:

Can we return to the question of surveillance? Should we find out who are the people with high risk behaviours, or do we just calculate the situation in form of percentages? The data from abroad is mostly based on the rate of high risk behaviours. Just now we seemed to be discussing the few people being infected. That seems to have been turned into a special investigation, which doesn't seem to be the same as behaviour surveillance.

Participant:

We have difficulties in beginning work with CSW (commercial sex workers). The investigation we conducted last year put us into contact with beauty salon, massage bath-houses, as well as karaokes and saunas. Even though not comprehensive, the sample contained a proportion of people engaged in CSW work. We conducted a behavioural survey and distributed some promotional materials. Surveys conducted in this way seem to be quite satisfactory.

Participant:

I think the experience of Shenzhen mentioned just now was very meaningful. Surveys of sex workers are difficult anywhere. I think the work done in Hong Kong is worse than in the mainland, because we can hardly find any sex workers with whom we can administer surveillance programme. The discussion just now could be a bit confusing, because behaviour surveillance is itself a relatively new concept. None of us, and that includes me, understands it very well. There are 3 areas of confusion: One is the confusion with high risk factors and high risk groups. The surveillance indicator mainly refers to behaviour. When we discuss behaviour, we all talk about how to find which indicator in which group of people. Once we have finished talking about the group, we are through talking about the indicators. The second question is the concept concerning high risk. When there is high risk, naturally there is also low risk. Risk is relative. Perhaps because we are all medical people, we have more understanding about HIV, and we have all thought of many methods of transmission. When we look at behaviour surveillance, we should put the emphasis on high risk behaviours. The lower ones are not unimportant, but their significance for surveillance is smaller. The third point concerns the surveillance of high risk sexual behaviour. We have however put our emphasis on the high risk behaviour of HIV carriers. The two aren't the same. So work on both areas must be done. What we investigate in HIV carriers is the route of their infection. This isn't behaviour surveillance. The main work of surveillance lies in high risk groups. We must study how high is their risk behaviours. But many of us, when we talk about high risk behaviour surveillance, only talk about the behaviour of HIV carriers. I don't think that's enough.

Participant:

Behaviour surveillance and intervention are closely related. Behaviour intervention is definitely a very important measure for the prevention of HIV transmission. But what should be done in reality? That should be based on the different situations in different countries or regions. Looking at the situation in Guangzhou, the first factor is needle-sharing in IDU. The behaviour intervention in Guangzhou is to change such behaviour. This is the key issue and it is the most urgent issue. On the other hand, right now our country has a problem with policies. We want very much to do something yet the government does not allow us to do it. Colleagues from the mainland will probably understand; those from Hong Kong and Macau may not. For example, we all know that condom use is very effective. We called upon the government to allow us to promote this, and to distribute condoms to prostitutes, but that wasn't approved. Also, for those drug addicts who can't quit, we can't establish methadone clinics like Hong Kong and give them long-terms substitutes (we believe that long-term usage of methadone is also drug abuse; our concept is different from yours). Even for temporary use, to allow the drug addict to rid of addiction slowly is not permitted. Distributing clean syringes is commonly recognized as a very simple and very effective control method but the government does not allow us to do so. What can we do?

PROFESSOR CHIN:

Countries are made up of very different population in various proportions. Not every population has 100% multiple sexual partner nor is it 0%. We looked at two sets of countries, Cambodia and Thailand, then Philippines and Indonesia. Cambodia and Thailand both have HIV prevalence rate in their adult population of over 2%, whereas in the Philippines and Indonesia, it's very hard to even find HIV among the commercial sex workers. When we looked at the commercial sex workers, we asked how many different sexual partners on average they had per week. In the Philippines, it was less than one per week, whereas in Cambodia, it was quite high, manifold higher than in Indonesia. The challenge here is, ask yourself the question — What proportion of young males on a regular basis visited a commercial sex worker. What is the sexual partner exchange rate among the commercial sex workers? It's the quantitative aspects which is unclear. It's the types of studies that need to be done right now to give ourselves a base-line of the risk behaviours.

Participant:

In terms of intervention, I believe that if we can implement different programmes in different groups, that's already one kind of intervention. I very much appreciate the peer education and sex partner education in Australia. They have done a lot more, and much better, interactive learning than us. So intervention doesn't only mean distributing needles, syringes, and condoms. Education is also very important.

MODERATOR 1:

The state stipulates that Health and Epidemic stations at every level must carry out intervention against HIV, and there must be pilot projects. May be Hong Kong and Macau are not aware of this. This shows that our country places a lot of emphasis on the control of HIV, and there must be pilot projects. We must choose the test points for piloting intervention programme. The programme chosen is publicity and education, to understand and to increase knowledge of HIV.

Participant:

The distribution of condom is not solving completely the problem, because the problem is more complex. What is more important is the education, campaigns and the propaganda as you said. Although not ideal, in Macau we are also trying to do that. Education is the best way. We should try to find out where the priority target group is.

Roundtable (3): Management of HIV Infection

MODERATOR 1:

We will now begin our third round of discussions: the Management of HIV Infection. As public health professionals, we must all have come across management problems in our work. The rise the number of persons infected with HIV in recent years has brought with it more such problems. Let us use this opportunity to discuss this issue. First, I think we ought to have some common concepts: What is the difference between the management for HIV infection and the management of persons infected with HIV? What do you think?

MODERATOR 2:

In Hong Kong, the management of HIV carriers and of AIDS patients is basically the same. AIDS is a latter stage phenomenon of HIV infection. So, if through testing we diagnose a case of HIV infection, from our perspective that person has acquired the identity of a patient. We basically treat him as a patient. We will see what his needs are, medical or psychological, and we then check out the extent of those needs. Because of the complications involved, the needs of an AIDS patient may be greater. The two are, therefore, essentially the same, the only difference is in the level of their needs.

Participant:

In terms of management, what is the difference between the treatment of local residents in Hong Kong, and foreign citizens, as well as those who have arrived from the mainland, or the children born to the mainland spouses of local residents? Is there any policy?

MODERATOR 2:

This relates to the health care system for patients in Hong Kong. Any Hong Kong citizen with an ID card can have access to health services. The services for HIV infection are basically the same as for any other disease.

Participant:

In Hong Kong treatment for all STDs is free. Since HIV infection is a sexually transmitted disease, are there any regulations in this area? For example, a mainland resident marries a Hong Kong citizen who is infected with the HIV virus, and the virus is then transmitted to the spouse through sex. If the mainland citizen happens to be in Hong Kong, would you request that the person to go back, or how would you manage it?

Participant:

What we are talking about are three main aspects. First, the administration; second, public health; and third, the clinical aspect. The management of each is a little different. In terms of administration, if there is a patient, an HIV carrier or an AIDS patient, who is not a Hong Kong citizen, then, he cannot enjoy the extremely cheap medical services we provide. If one is not a local resident, and he wants to be treated in the public medical system in Hong Kong, he is charged a very high rate. This is not a

matter of clinical HIV management, but a question of administration, which applies to any disease. In terms of clinical management, how much service will be provided depends on local conditions. Some patients may go to a doctor who is a specialist in sexually transmitted diseases, or infectious diseases, or immunology depending on the provision of the clinical system. From the perspective of public health, when a patient is diagnosed through whatever means, then the management of this patient is a clinical one, and shall become the responsibility of the clinical physician. There aren't that many in public health doctors in Hong Kong. Nor will they go and see patients every six months. This isn't their job. Public health is concerned with surveillance, analysis of problems, and provision of information to those who need it. What they generally focus is in the area of prevention. A patient's clinical management rests with his personal physician. A physician in public health can't do that, he doesn't know how to do that.

MODERATOR 1:

This situation is different from what we have on the mainland. Personal management is, in fact, a job for public health doctors. There is such a difference between Hong Kong and Guangzhou, what about Macau?

Participant:

In Macau the treatment for the HIV patients is completely free, whether one is a Chinese or Portuguese that are Macau residents. We treat them all freely. It's the same in Portugal. Of course there are situations concerning HIV management that are difficult to decide. For example, if the patients are illegal immigrants, it's no longer a clinical decision.

Participant:

For patients that need treatment, we are giving 3 drugs. At this moment we have 15 patients on treatment, some with HIV infection and some with AIDS. The CD4 measurement is already here in Macau. We hope very soon we can do also viral load here and do not need to send the samples to Hong Kong.

Participant:

I want to bring up a question: Once we have discovered an HIV carrier, according to our state regulations, he cannot be discriminated against, no matter what the route of their infection was. Except for people in some specific professions, a person ought to be able to work, study, and live normally like other people, if one continues his risky behaviour, for example, sleeping with a prostitute or sharing needles to take drugs, he will transmit the disease to others. At this point, how should he be managed? I think this is a very real problem. Any good solution?

Should we be doing something to prevent the patient from continuing to infect others? This is one of the questions. I want to bring up a second question which may relate to public health practice. That is, should we refer a patient to someone to continue the follow up? For instance, how about the patient's personal needs, who should we hand these over to in order to satisfy them? A third question, is it our duty or responsibility to discuss the matter with his spouse or anyone who is likely to have been infected with HIV through him? Or should they be left alone, so they can work and live just like other people? How can we implement public health management and at the same time not be discriminatory?

Participant:

Let me explain the approach used by our province and our state. There are several aspects in the management of HIV infection: One is the management of carriers. When we discover a carrier, the

frontline operational unit will maintain connection with him/her. So the carrier will come to us for regular check ups. We will also keep track of his whereabouts, and intervene whenever necessary. This is the standard management of HIV carriers. The other is the management of AIDS patients. There are designated hospitals for the treatment of AIDS in Guangdong province. Patients there are not be discriminated against, and the medical personnel there are very willing to serve them. All preventive procedures are up to standard. When the patient develop complication, we refer him to a designated hospital for treatment. For the public, we carry out education campaigns, and organise counselling services. These are also part of the management of HIV infection. Even for people who are not infected, they also need to understand and have some knowledge of HIV infection. This is the same as the STDs hotline, or AIDS hotline in Hong Kong, which provide services in these areas. Clients in our counselling service include some carriers and those who have already got AIDS. We provide them with counselling and education services.

MODERATOR 1:

It seems that there is more work done by public health doctors on the mainland than by our colleagues in Hong Kong, because not only does this include surveillance but also the follow up of the carriers or patients. Even family members are included in the education and the monitoring processes.

Participant:

I imagine the heavy workload of the Health and Epidemic stations on the mainland. There are two questions here. Firstly, besides HIV infection, does the station monitor other patients every six months and observe them for ten to twenty years? Secondly, your treatment of HIV carriers and AIDS patients is not quite the same. AIDS is the responsibility of designated hospitals, but in the case of HIV infection, it is treated in your Health and Epidemic stations. So, after progressing AIDS, and upon referral to the designated hospital, does the patient still have to return to the Health and Epidemic stations for monitoring?

Participant:

Once he goes to the designated hospital, we don't need to track him down.

Participant:

Let me provide some supplementary information. Once a diagnosis of AIDS has been confirmed, the patient will be referred to a designated hospital. This hospital has a very close relationship with our Health and Epidemic stations. Their doctors frequently contact us on the telephone about the situations. There is also regular communication about policies and management. Our management of HIV infection is a bit different from Hong Kong. After we have discovered HIV infection, we carry out more follow up monitoring work. Once HIV infection is detected, how do we prevent it from being transmitted to others? For example, we have frequent telephone communication with the patient. We tell him that if he has relations with other girls then he must wear a condom. In our regular telephone communication, we ask him how many people he has had relations with recently. We also ask him if he is sure that he has used a condom. Of course, we cannot guarantee that he uses one every time. Also, our laboratory has set up CD4 monitoring to check how far the disease has developed, and what kind of guidance and treatment he will need from the hospital. We also carry out regular check-ups on his family. We have been tracking one patient for 5 years. He has 2 children. We have told him about prevention procedures; we have also tested his wife. Now he has developed the disease, but his wife's test result is still negative.

Participant:

As to how to convince HIV carriers, we have a good technique which we can share with you all. We don't say, "Don't spread HIV to others." Instead we say, "If you sleep with a prostitute and you do not wear a condom, you will be infected by other viruses. That will speed up the progression of your disease and death." With such a warning, he will be more than willing to cooperate. To refer back to the monitoring that was mentioned earlier, besides tracking HIV infection, what other diseases are being tracked down?

Participant:

Let me explain the situation in the town of Jiangmen. In 1997, one case of AIDS was diagnosed. The hospital sent over a positive serum. After verification, we made a confirmation and immediately submitted to the provincial department for its confirmation. The very next day, we went to the factory where the patient worked and met with the managing director of the factory, a businessman from Taiwan. Together with a professional from the hospital, we discussed with him the state's related policies. We first helped to eliminate his fear and told him what he needed to do with us. We also carried out blood tests for all the workers in the factory. That is what we do whenever we receive a report about any unit or individual with suspected diseases, especially when there may be an epidemic spread.

PROFESSOR CHIN:

In any discussion or planning either for public health or clinical care of HIV infected persons, I think you have to consider current and projected case loads. It's very simple when you have few cases or just 10 or 20. To do the maximum, you have to think of the next hundred, the next thousand, etc. As to what your capabilities are and what your future budget may permit you to do, a general rule of thumb is that anywhere from 5 to 10 percent of the total HIV cases would require some kind of medical care in any given year. About 5% would probably die each year. So given that kind of crude model, (I've heard national estimates in China anywhere between 300,000 and 400,000) some 20,000 to 30,000 AIDS cases or severe illnesses related to HIV would be current now in China.

Participant:

Let's take a look at two points and see what the directions could be: First, to prevent AIDS patients from being discriminated, so they can carry on a normal life, I'd like to know whether this kind of tracking, such as phone calls, visits to their companies and examining everybody there, would adversely affect his work in the future? If so, what should we do to change this situation, or what kind of compromise could be achieved? How can we carry out public health work, but at the same time reduce discrimination? The second question is what Professor Chin has just mentioned: How many people do we need to care for? If there is only one person infected with HIV in a city of several million people, then, of course, we can do what we are doing. But if the number keeps increasing, do we have the money and the professionals to do the tracking? Or is it worthwhile to spend this kind of money and resources? When the number of HIV cases rises, can we have a management programme which will reduce the expenditure? Let me add something here. Just now Professor Chin provided us with a formula — with any number of persons infected with HIV, 5% to 10% will need clinical management or treatment. Based on the state's estimate of the HIV figure, we can calculate the resources needed.

Participant:

I have not explained in good details just now. When I examined all the workers at the factory, I told

them that it was an investigation for viral hepatitis. I didn't say that it was for HIV infection. Only the manager knew what I was checking on. If it were known that it was an investigation for HIV infection there could have been panic. This is a matter of technique.

MODERATOR 1:

At the beginning, when there were only a few cases, we were all doing this kind of work. But now there are more cases, and with our deepening understanding about HIV infection, we no longer engage in such activities. In actual practice, we want to control the sources of infection and intercept the routes of transmission. In HIV infection, the route of transmission is very specifically defined. We don't need to do such large-scale testing.

Participant:

HIV infection on the mainland has been "imported" from abroad. Our demands on control are quite strict. Based on recommendations by specialists, the management of AIDS patients has to be strengthened. The mode of management is through tracking and investigation, and education. We have determined this approach based on our unique circumstances. If other diseases also required this kind of management, it would be extremely difficult for us. So far the Health and Epidemic stations have not required us to do so. It was mentioned that in the event that there are more cases, how should we deal with this problem? I think this is a good question which we are also considering. Based on the development our plan is that when the patient number reaches a certain level, a corresponding method will be adopted to control it. Right now we are still a region with low incidence. We can still carry out education and tracking. In the future when there are more cases, we must also readjust our strategy. In terms of expenses, our government officials have indicated clearly that they will definitely provide support for work in this area. We feel that work in the area of prevention is most cost-effective. Our government understands this, and the budget invested in AIDS will gradually increase according to what is needed for prevention of the disease.

Participant:

What I understand is that similar management system is available for tuberculosis. We have a special institute for it's prevention and treatment. All tuberculosis patients are managed by the designated institutes, which conduct long-term observation and monitoring. Also, there is continuous surveillance of several diseases in our system. For cholera, there is annual surveillance on diarrhoea and environmental sanitation. Also, in order to eliminate filariasis, we have been carrying out surveillance for many years now.

Participant:

So from what I understood, you checked people for HIV without telling them you were checking for HIV? I don't understand exactly what the ethics is and the privacy for the patient and his family?

Participant:

Ordinary outpatient examination is voluntary. For examination that the patient isn't told about, that's a kind of surveillance under an anonymous system.

Participant:

Let me expand on the system in Guangzhou. The objectives are to protect patient from discrimination, but at the same time, to inform the people concerned. Operationally our method may not be the best.

To eliminate discrimination totally is impossible. Let me give an example. If someone is absent, if we are told that he has flu, then we may experience little reaction. If we are told that he has terminal cancer, we will all have a similar reaction and say that he is very capable and young, and it's a great pity. But if we are told that he has contracted HIV, we will all respond by thinking that he is that kind of person. This kind of reaction is in itself discrimination. So under the current circumstances in our country, it is impossible not to discriminate at all. This is a psychological reaction. Operationally if one is tested positive, our Health and Epidemic station in Guangzhou will tell him. Then we will ask who is the most reliable, the most trustworthy among his relatives. And we will tell only that relative and no-one else. We won't even tell his work unit, because the State has stipulated that he needs to live a normal life and work normally. Others cannot discriminate against him. If we announce the information, everybody will run away and refuse to work with him. So I would only tell his most trusted relative.

Participant:

I'd like to supplement. After a prolonged discussion, we keep saying that Hong Kong is different, and Macau is different. In fact, I think every place is roughly the same. When this disease first began in Hong Kong, there were many difficulties. For instance, how to manage it. If we have to specify any differences that is the long years which gave way to changes. Also, there could be another difference that of the administrative system. I believe that the Health and Epidemic stations on the mainland are really too busy. Right now, people infected with HIV must undergo monitoring at these stations. If the carrier has not yet developed AIDS, can that person go to the outpatient clinic in the hospital to receive clinical examination? This may be helpful both to the patient and to the station?

Participant:

In fact, all our hospitals have a prevention and control department, which is the same as a mini-Health and Epidemic station in terms of capability. At present we have not been working on any HIV patients. In the event that there are many cases, I believe they can shoulder this responsibility.

Participant:

Let me explain the situation in Shenzhen. Our management of an HIV carrier has been, in general, based on the state's non-discrimination and confidentiality policies, and is similar to what is done in Hong Kong. We follow the patient's wish to inform his relatives or spouse. This is quite different to what was done in the past. In Shenzhen, once an HIV carrier has been detected, if he himself is willing to receive treatment at the hospital, we will refer him to the outpatient clinic in a designated hospital for examination and follow up. We won't inform the patient's relatives or others around him, in order to protect the infected person's privacy. However, if this person's moral standards are low, he could possibly transmit this disease to others and violate other people's rights. This is a problem which troubles us. I'd like to ask our colleagues from Macau where attendants at the places of entertainment are tested for HIV antibodies every 3 months. If they are discovered to be positive, they will not be given residency certification. Isn't this in conflict with the laws? For example, are you not discriminating against these people? Do you do this on people from certain regions, or certain special communities?

Participant:

This is part of the policy of Macau concerning people working here but are temporary residents. The employers and the employees know very well when they make contract, that if they are HIV positive,

they cannot live in Macau and have to leave right away. But I want to stress that during their contract, nobody, not even their employer, receives documents saying they are positive. We ask them to come for counselling. We explain very well because we have translators if they don't speak English or Chinese.

Participant:

In Macau the screening of employees in entertainment industry was started in 1992. We understand it was not an easy solution, but a compromise between hiring foreign people who might work in commercial sex industry and keeping the population in a safer situation. People came from places of high prevalences, from Cambodia, Thailand and from everywhere. We don't do it with local commercial sex workers & people coming from across the border in mainland. Foreigners working in entertainment industry include commercial sex workers and people with every type of occupation, like musicians, barmen, etc.

Participant:

When those of us in charge of public heath surveillance discover someone who has a positive result, who should we inform? For example, in Hong Kong, we can only tell the patient and encourage him to tell his spouse. We will also ask him, "Who is the most important person for you?" But this isn't done during public health surveillance, it is the responsibility of the outpatient clinic and is carried out there. Earlier, we talked about calling the patient and telling him not to engage in high-risk behaviour. This kind of advice is given during the clinical stage in Hong Kong, when the patient returns for treatment. Then we don't have to telephone him and disturb him. We put him in an out-patient setting to implement management policies, hoping that we can reduce discrimination. When the patient goes to the hospital or clinic, he will be like other people and not receive any special treatment.

Participant:

This is very enlightening. HIV carriers may be considered a source of infection. So this work can be carried out by the Health and Epidemic station, or the hospital. But who is the best to do this? This question is worth discussing. If we all believe that the hospital is a better location, then why don't we recommend it since the management protocol for HIV infection is only now being designed? The stations are too busy. They can't be in charge of everything. We should liberate ourselves, as a lot of work is waiting for us.

Participant:

But if you tell the patient, and have him find a clinical physician, who should he consult?

Participant:

When HIV infection was first discovered in Hong Kong, there wasn't any special programme. With time, we found out who had treated HIV infection and kept in contact with them. Knowing that these doctors were willing and able to provide treatment, a referral system was set up.

Participant:

That is the designated hospital. We also have it here. For example, Zhongshan Hospital, Infectious Diseases Hospital, Nanfang Hospital are some designated hospitals. People with HIV infection can also go there, one doesn't have to be an AIDS patient. We set up regular counselling, and most go regularly, many out of their own initiative.

Participant:

Regarding management of HIV carriers, there have been changes over time. The implementation of full-scale surveillance and management in Guangdong has moved in stages. Regulations in Guangdong Province came into effect earlier than that of the entire country. The scope of the regulations is however still rather limited. It mainly concerns with how our health department works towards two goals at the same time. When one carrier needs protection, hundreds of thousands of healthy people also need protection. So what kind of work should be done by our health system in order to achieve both goals? In the early days, the number of HIV positive people was small and that they were all foreigners. Under our provincial regulations, the goal for surveillance, the group under surveillance, and even the management conditions, mainly targeted externally.

The second stage isn't quite the same. HIV infection is mainly brought back by those who have travelled abroad. The spouse or others in contact with the index person become infected. At this point, the focus of surveillance and control changes with the different goal, so the question of management arises. Before regulations were passed by the State's seven Ministries and Councils, our provincial government set out the process in which our health system and health departments could better serve people on both sides. At that time, it was stipulated that once a case of positive HIV was discovered, the Health and Epidemic station would carry out visits and investigations. This has actually resulted from experience. At the time when the first or the first few cases were detected, according to the state's confidentiality requirement, important documents were decreed to protect the confidentiality of the people who had been infected and the patients. However, this brought the opposite result, because people reading the documents were mainly government officials and not medical personnel, and we lost the trust of those and the patients. They were unwilling to go to our doctors. Under these circumstances, besides anonymous and voluntary testing, we also requested them to follow our advice and seek treatment at the designated hospitals and watch their own behaviour. But there were always those who didn't do so. I think the principles behind the regulations on management and support for HIV patients, should be established on the voluntary participation of the patients and those infected. If the patient is unwilling to stop his high-risk behaviour, the regulation becomes meaningless. Only through persuasion and education can we help him resolve his problems, and only then shall we be able to reach our goal. With these, we set forward the regulations for the management of HIV infection in Guangdong province. This is, in fact, the same rationale of formulating the Health Ministry's regulation. The regulations set out by the state's seven ministries were all based on this spirit. The management policy has so far not changed.

The questions that were brought up by Professor Chin, Dr Lee and other colleagues were all crucial. They also consider the increasingly heavy burden of the work on HIV infection shouldered by our epidemic stations. When we get more and more busy, we may not be able to pay attention to other work. For this, I am deeply grateful to all of you. At present, all regions of our country have discovered the AIDS problem. In the future, no matter how the regulations may be altered, we will still be carrying them out.

Participant:

In Hong Kong, the first few years were also very painful for us. We witnessed a lot of discrimination. In fact, discrimination within the medical system was also very serious, because medical personnel themselves did not have much understanding about HIV infection. Previously, we had very few doctors who would treat HIV carriers and AIDS patients. But for those few, their experience has become increasingly important. Just like the Health and Epidemic stations on the mainland, they have wide experience with those infected by HIV. However, with the more experience they gain, the

opportunities for the clinical doctor become fewer. They hardly get to see the patients. Participation in clinical AIDS care has one advantage, that is, it becomes a training opportunity. Doctor's training can't be effective if there are no patients, because there is no opportunity to be in touch with them. When we deal with one or two patients, the doctor will find it hard to adjust. When we see three or four patients, there won't be any more problems. Moreover, I mentioned earlier the definition of AIDS. When we make clinical reports, if the doctor has not dealt with AIDS patients, he will miss out on many conditions of the disease. In fact, this is a question of the connection between the clinical system and the public health system. Also, we need a lot of training, so that doctors understand how to look at this problem from a public health angle. In this way, at the same time as the doctor is treating the patient, he will also know how others can coordinate with their preventive measures, which will be helpful in controlling HIV infection.

Participant:

I want to ask a question. In Hong Kong, what is the method for handling HIV carriers who have committed a crime?

Participant:

This is a very complicated question. Work began several years ago. At that time the first problem encountered wasn't how to manage these HIV carriers, but how the management personnel in the prisons treated these people who had been infected with the disease. The government started educational programmes for these workers and provided training. HIV carriers who have committed crimes are given the same clinical services as ordinary people. In the later stages of their illness, some patients may apply for reduced sentences and be released for treatment elsewhere. This is a very individual example.

Roundtable (4): Human Mobility

MODERATOR 1:

The content of today's discussion is: 1. What is human mobility? 2. What is the effect of human mobility in the prevention and transmission of HIV infection? What corresponding policies should be adopted?

MODERATOR 2:

Mobile populations have gradually emerged as a result of the international trade and tourist industry. The numbers continue to rise. The global effect of human mobility is becoming more evident, especially on some problems in public health with which it has a close relationship. I will discuss it under the following areas. One, the definition of a mobile population. Two, the characteristics of a mobile population. Three, the relationship between a mobile population and HIV infection. Four, mobile population and the management of HIV carriers and AIDS patients. First, the definition. There are differences between Mainland China and the United States. On the mainland mobile population is defined as the group of people who do not have regular residency, that is, those who move from the places of their regular residency to other places. In Shenzhen, an additional characteristic is observed which has both a broadly-defined and narrowly-defined concept. The broadly-defined concept refers to the people that do not have Shenzhen residency. However, in Shenzhen, some people only have temporary residency cards or blue seal residency, and that part of the population which is in Shenzhen temporarily, for some short-term activities, is also included in the mobile population. This is the narrowly-defined concept.

Participant:

In Hong Kong, there are no blue seal residents or temporary residents. There is the differentiation into either one is or is not a permanent resident. One can also belong to the mobile population. From the perspective of public health, there are many kinds of mobile population. One type enters Hong Kong from other places especially for work; another type regularly passes through Hong Kong using it as a transit station in order to travel abroad; yet another travels back and forth between Hong Kong and the mainland; and on specific kind engaging in commercial sex of being a sex worker. And there is no special definition in the eyes of the Hong Kong government.

MODERATOR 1:

I think the focus should still be placed on the public health context. When we look at the notification of infectious diseases, someone is mobile even if he/she does not have local residency but is working and living locally. There is limitation here as time is very important. For example, when we are here for two or three days for this conference, we are "mobile" here. Sometimes people come from the north, and live here longer, for one year, two years, or even five years. In terms of statistics, they still belong to the mobile population, because their residency is not here, but relatively speaking, they are permanent. But on the transmission of HIV, the meaning is probably quite different.

Participant:

The situation in Guangzhou is rather complicated. The first gate to Guangzhou is the train station. I personally divide mobile population under four sections. The first covers those persons already registered in the record. They have a clear goal, for example, business. The second includes those who come to Guangzhou to stay for a period of time, but are only passing through, using Guangzhou as a transit station, before going to other cities for certain kinds of jobs (purpose). The third we call the "blind flow " and these people don't have any goals. They are not trying to find jobs, or seeking an opportunity to make a living. They are a group of people without any clear direction. Their number is the largest and their management is the most difficult. It is this group which has the worst public health conditions. The fourth is the group of tourists.

Participant:

The policy in Dongguan is to categorize according to residency. We consider anyone engaging in activities in a foreign location belong to the mobile population. This includes local residents who go to other places.

Participant:

Our representatives have all been talking about populations within our country. In terms of HIV infection, I believe that the most dangerous are the people that come to our country from outside. The carriers discovered in Jiangmen were all foreigners or people who had lived a long time else where. They all have connections with foreign places and they are an important part of the mobile population.

Participant:

In Macau, we have 4 groups of people living and working here. We have around 400,000 residents and a group of non-resident workers, around 30,000. We don't know what kind of mobilities these temporary residents have. We also have a group of foreign residents amounting to 23,000. And we have around 5 million tourists. In primary care, everything is free for residents but for the other group, if they don't have the blue card, they have to pay some fees. But regarding HIV and AIDS, since the number of non-residents is very small, they are also provided with free service. With the increase of this population we might have to change the policy.

Participant:

Whether the population is mobile or not is relative. Its definition varies with the differences in the residency system. In China, there is a total separation between the rural and the urban areas, as well as between different cities and different provinces. Therefore, this isn't quite the same as in the United States and other countries. But on the question of mobile population, in terms of China, once someone leaves the region of their residency, whether they are coming in or going out, they belong to the mobile population. On the question of residency administration, if there is no difference between rural and urban, then no difference will exist between moving from the villages to the city in the same province or from another county to Guangzhou. Besides, I don't quite agree with the popular definition discussed by our colleagues here. That is only a derogatory term. The true definition as we have been discussing here should not have these derogatory meanings. The leaders of Guangdong province have a high opinion of our mobile population. There was once a headline to this effect in the newspaper, "Half the merit for the construction of Guangdong go to non-local labour," and I think this could be another reference for our definition of the meaning of mobile population.

Participant:

I'd like to talk about the situation in Zhuhai. I feel that the definition of mobile population should be generalized to refer to people aside the normal resident. The categorization of mobile population is about the same as for Shenzhen. First, there are those who have already acquired temporary residency cards, who are staying for a short period of time and have registered with the public security department. Another category includes those who are passing through, those who are in transit, or travelling. But in Zhuhai, there is yet another group, made up of people who have lived in Zhuhai for 20 years, but whose residency is only counted as temporary. So how then do we make the distinction? If we distinguish according to residency, there isn't anything more for us to discuss. What if we interpret from the perspective of the disease reporting system, I think we need to examine further.

MODERATOR 1:

This involves the question of residency administration. We have all heard the rumour that mainland China is going to abolish the residency system. However, this has not been carried out because of many problems: 1. The large population. 2. The vast territory and huge amount of resources, involving a lot of other problems. The system has not yet been abolished, but the tendency is to move toward abolition. This is a problem that still has to be resolved.

Participant:

I think when we talk about definition, there are two different perspectives. One concerns the spread of HIV infection, in which case the residency factor and the human mobility are not quite the same. If we want to look at the spread of infectious diseases, we ought to focus our discussion on specific community and their relationship to the spread of HIV infection. For example, sex workers are a group on which we need to do some work. The other perspective relates to management. In managing a person with HIV infection, from both the clinical and administrative viewpoints, we must consider where he comes from, and if he needs local medical services.

Participant:

I agree that residency is only an administrative tool of the government. In public health context, what we are discussing should be the transmission of HIV which entails different mechanisms and the underlying dynamics. I believe we ought to leave aside government definitions, and define human mobility from the perspective of HIV transmission. This is more appropriate than putting too much emphasis on residency.

MODERATOR 2:

If there are no other suggestions, let us move to the next topic of the general characteristics of the mobile population. This topic involves the occupation, cultural backgrounds, gender characteristics, and educational levels of the urban mobile population. These may be more closely related to the spread of HIV infection. The chances for them to indulge in high risk behaviours will probably be higher than for the rest. I'd like to give a brief introduction on the situation in Shenzhen. There are over 3.8 million people in Shenzhen; the non-mobile population is 1.1 million. We believe that the total mobile population is 2.7 million, a large proportion of which, about 65%, are workers in the enterprise. There is also a proportion engaged in business activities, comprising 15%. Another 5% are management personnel, and 5% are other technical people. 10% of the people have no permanent jobs. These 2.7 million people are only those who have already registered with the public security department. Similar to those in Guangzhou, there is a significant number who only have border

documents, but no valid work arrangement or regular residence. They number around 100,000. The characteristics of this group is that they are within the age range of 16 to 40 years old, and are sexually active. Also, on the whole, their educational level is rather low, below High School level. They originate from mostly Sichuan, Hubei, and Jiangxi. There is a much larger number of females among the mobile population, about 65%, whilst only 35% is male. This is the general situation, and the occupations are largely those of factories as well as cultural and entertainment services.

Participant:

It was mentioned that the mobile population is a representative group for HIV surveillance. HIV infections have all been diagnosed among the mobile population. Does it mean all mobile populations have to be tested both on arrival and departure, and non-mobile populations do not have to be tested? This creates the phenomenon of not regularly testing the local population.

Participant:

For Zhuhai, we have not used this demarcation of local-non-local population on the HIV surveillance mechanism. One characteristic, however, is that the mobile populations are largely made up of those who engage in high risk behaviours. For example, there are workers in the tourist industry, saunas, and also the sex industry. These are the occupation that members of mobile populations participate in more frequently. So there are more people being tested from this group. Another characteristic of any mobile population is that its members are younger, which is similar to Shenzhen. There are also more females, because more women work in the service industry, and their educational level is lower. Of course, there are some who enter at management level, but they will quickly be absorbed by the government, with fewer staying as white collar staff. In terms of occupation, more people are working in the service industry, in saunas, massage, and also the sex industry. There are more members of mobile populations within this group; fewer people from the regular population are employed in these occupations. This has to do with educational background, and the condition of the country. In general, these occupations are not highly regarded and local people don't want to be engaged. I feel that the discrepancy in the scope of HIV testing doesn't stem from man-made factors but that, subconsciously, more surveillance is conducted on mobile populations.

Participant:

Our view is that from the government perspective, we refer to the local and non-local population. From the public health perspective, we divide people into regular and temporary residents. Our surveillance does not distinguish between local and non-local. For instance, when local residents of Dongguan have been working elsewhere for a long time, after their return, we also have them tested. HIV testing in Dongguan is still largely performed among the mobile population. For the group who regularly reside locally or who have not been engaged in sex services, we won't generally have them tested. Commercial sex is an illegal activity so we can only determine from the perspective of certain occupations those who may possibly engage in commercial sex, as there is no clear designation of a sex worker.

Participant:

I think the problems we encounter in the surveillance and prevention of HIV infection are about the same. On the mainland, as well as in Hong Kong, being a sex worker is illegal. So we can only look for this group of people among the occupations which may possibly provide sex services and have them tested. I think it's the same in most countries. It may be worse in Hong Kong, because it is even

more difficult to find those who are or may possibly be engaged in the sex industry. So we can only try to use different methods to understand HIV infection within certain community groups. Another question is about residency and its relationship to HIV infection. Here is an example. In Singapore, they announce HIV/AIDS statistics and distinguish between Singaporeans and otherwise. This is totally different from Hong Kong. From the perspective of prevention, the effect of residency isn't so important.

MODERATOR 1:

Of the mobile population, should travellers be included among those to be tested? According to our State regulations, anyone who has been abroad for more than 3 months must be tested for HIV antibody when one returns, otherwise testing is not required. This is a consideration based on the window period, but it is very difficult to enforce. Who should be doing it? The Health and Epidemic stations, the Quarantine Bureaus, the Tourism Bureau, or who else? Maybe there is some rationale for the practice. The purpose of our discussion on human mobility is not simply to analyse that subject, but ultimately has to explore mechanisms to prevent and control HIV infection. The understand of the characteristics of its transmission routes would help adopt the appropriate measures.

MODERATOR 2:

As Dr Lee has said, there is no definite relationship between residency itself and the spread of HIV infection. We do agree on this point. There isn't much correlationship between the place of residency and the HIV rate of mobile populations. But there may possibly be some special factors in any mobile population. These people are far away from home, they need some emotional compensation, and they belong to the vulnerable community. They leave their place of original residence and their families to go to another place and, consequently, morality and family bondage are relatively weaker. Their chance of engaging in high risk behaviours will be higher than that of ordinary people. Combining the age characteristics of this group with their cultural background and educational level, their places of residency are not related to their HIV infection rate, but the latter has a closer relationship with certain specific occupations.

Participant:

I realise that we have all been talking about sex workers. But at present, nobody has registered and identified herself as a sex worker. Whether in Hong Kong, Macau, or on the mainland, there is no such thing. We go to places of entertainment, saunas, and massage parlours, to find these people. It so happens that many of them are from elsewhere. It's their economic condition and their work that link them with HIV infection. They have been targeted but not because of their residency.

Participant:

In fact, this is our biggest problem concerning commercial sex workers in Macau. Since they are hired and contracted by agents, this is easy for us to find them because they need a permit to stay. It's easy to educate, provide condoms, counsel and check the situation. The more dangerous group is those migrants that work in the streets. We don't know where they are, where they come from and where they go. They are in a worse situation than those in the saunas, dancing bars or massage parlours. We don't have any particular policy for these persons. Sometimes they come with the visa for 7 days and then they go back. We don't have time and conditions to educate them and to evaluate the situation.

Participant:

What we are concerned about is HIV infection. Since HIV infection itself is not directly related to human mobility, we shouldn't be looking at the characteristics of the mobile populations but we should be finding out which kinds of people in society are vulnerable to HIV infection, and then carry out either investigation or intervention. It so happens that places like Zhuhai, Shenzhen, Hong Kong and Macau are ahead in economic development, and relatively few local people will engage in these work locally. This has led to the emphasis on the question of human mobility. By contrast, in some regions, there are more people being "exported". Their consideration will not be the same as in Zhuhai and Shenzhen, but rather a matter of infection from outside.

MODERATOR 1:

This is a solid example. For our visit to Macau this time, the Macau government has adopted an "intervention policy". Every representative has been given a condom. For tourists, can't we adopt corresponding intervention measures and distribute some promotional materials and necessary tool? This is a realistic question. A few years ago at the AIDS Conference in Guangzhou, I made a proposal and suggested that we could be one step ahead, and through the Tourist Bureau, distribute a brochure to introduce the message about AIDS prevention to people travelling abroad. However, up to now, we still don't dare to supply these "tools". I believe it will improve soon.

Participant:

This may be the opportunity for carrying out intervention with the mobile populations. When they come to us, we give them something and tell them not to engage in high risk behaviours. When local people go to other places, we also tell them not to engage in high risk behaviours. The mobile population itself is not a surveillance group, instead, it is a community which provides an opportunity for intervention.

MODERATOR 2:

Not all mobile populations are to be targeted. Some of them may not be in high risk occupations. The focus is on certain areas and workers in some occupations which have a higher risk of engaging in sex industry. We call it a "vulnerable group" and we should carry out targeted surveillance on the group. Based on the figures released by public security department in Shenzhen, 94.5% of crimes are attributable to non-local population. Also, 90% of the HIV carriers that we have discovered are people from elsewhere and not from Shenzhen.

Participant:

Among certain mobile populations in the Pearl River Delta, it is appropriate to carry out intervention targeted at certain behaviours. This doesn't mean that the mobile population itself is dangerous. As public health professionals, we understand this very well. Our discussion about mobile populations may not be comprehended by the general public. Believing that "where there is a mobile population, there is HIV/AIDS" is not always true. Some cities may have observed that all HIV carriers came from other places. But this doesn't mean it's a problem of human mobility. For those in administration, the question of residency is more important, because it affects whether the patient can receive medical services. This has however no relationship to public health.

Participant:

I agree with this viewpoint. At present, the focus of our surveillance is on the mobile populations. If

we carry out HIV testing on all local residents, the results may not be the same. We should be looking at the whole picture. Our surveillance results may be misleading, and this will make people think that there are more members of the mobile population under surveillance. This isn't always true.

PROFESSOR CHIN:

I think we need to approach mobile populations properly. We're trying to describe firstly their general sexual behaviours. Once we've described that, then we can perhaps make an evaluation as to if these are very high risky behaviours. I'll give you an example. The large number of males went to construct, say, the Hong Kong airport. That's a good example of mobile population working under specifically a project. What was needed would be that someone would go and study the living arrangements and to find out whether or not these men used sex workers. If yes, then try to find out in general how many sex workers there were and the average number of sexual partners they might have had, whether condoms were used or not and then to make an evaluation of whether or not the prevalence and the intensity of sexual risk behaviours in that population warranted additional HIV surveillance. It could be that some of these men were so tired that they just worked for 3 or 4 months and they went back, in which case the HIV risk of that mobile population would be almost nil. You wouldn't be concerned. So you need to first evaluate the mobile population with regard to the prevalence and the intensity and frequency of high risk behaviours. If they are using sex workers, and do not use condoms, and the prevalence of these activities is very high, then you have to develop some public health surveillance around this problem.

Participant:

Yesterday, in one of the pictures shown by Dr Tim Brown, the target group for surveillance in India was factory workers. There were both males and females, and they ranked number 2 or number 3 in the programme. I'd like to know if they were a mobile population. In many factories on the mainland, especially in the Pearl River Delta, the majority of the workers belong to the mobile population, and they are all young people. Their cultural and educational levels are also relatively low, and they are in the sexually active age range.

DR TIM BROWN:

Often the factory worker populations, whether you were dealing with Thailand or India or other countries, are quite extensively drawn from the mobile populations, because the factories tend to attract younger men and women typically. These workers are removed from their normal social environment, so they are no longer in their villages or in their hometowns. When they are in a factory environment, very often in their dormitory, it maybe more difficult to carry on a courting relationship with somebody within that type of setting. This very often tends to encourage risk behaviour. This is seen across a large number of countries. The same thing is seen with workers in some of the special economic zones in Sri Lanka where young women who come into the factories also tend to be much more sexually active than other young women at those age ranges. You've got to assess your own situation locally, because it may not be the case in all parts of China. To build on what Prof Chin was saying, I would point out that you don't need to necessarily start a survey. Surveys are one approach for looking at this sort of thing. But to do an initial assessment, you can send an anthropologist or a social scientist just to do a rapid assessment. Talk to a lot of people, get a sense of where people are going for sexual outlet or what they are doing for entertainment in their off-times. These can be done in an informal basis without going through the mechanisms of setting up a survey. If doing that doesn't indicate much risk behaviour, then you probably don't have to worry too much about that population. But if that anthropologist or social scientist finds a lot of indications of risk behaviour or

a lot of discussion of different patterns, then that forms the basis for starting some survey to look more quantitatively at what's going on. We need to remember there is a whole spectrum of behavioural methods that can be used, not all of which are time-intensive or require a great deal of resources. The implementation of some of them can be relatively fast and inexpensive, from the manpower point of view. You need to be willing to apply them. Very often that requires making partnerships with the people at the social science institutes or the anthropologists who can assist you, if you don't have the capacity in your own unit. I've worked with a lot of anthropologists and they were very good at going in and very quickly assessing the situation and coming back and telling you if you need to worry about the risk behaviour in the population or not. So think about that when you are trying to decide whether or not these populations are of critical importance as to epidemic or not.

Participant:

I believe that in addressing the management of mobile populations, we must first understand their characteristics. The differences between the mobile population and the local population are quite marked. Their income is unstable, their residency not regular, and their chances of gathering of separation are higher. When their partners are absent, their sexual needs are also greater. So they are more susceptible to high risk behaviours. In regard to the control of infectious diseases, they are more difficult to manage compared to the local regular population. The high risk coefficient for the mobile population ought to be higher than for the local population. Our discussion should, therefore start from this point.

Participant:

I've heard that when non-local residents are infected, they will be sent back to their original places of residence. I'd like to ask if anyone present has received reports about local people who have been sent back after being infected elsewhere? Or whether or not they have been sent back from abroad or other places?

Participant:

Our protocol in Dongguan works like this. The management differs for local and non-local people. We ask the opinion of the non-local residents if they are willing to return to their places of origin. If they are willing, we will send them back. Also, through the Health and Epidemic station we will inform the other party's counterpart at the county level. So the management is transferred to the local station and we will no longer be responsible. If it's someone with local residency, one will be managed by the Health and Epidemic station here. Management only means providing education and some services, treatment is not included.

Participant:

The "Infectious Disease Prevention and Control Act" of this country stipulates a set of guideline. For instance, if I diagnose infection on someone from Hunan and Hubei, I am required to inform the other party. If the other party discovers any cases originally from my area or under my jurisdiction, they should also inform me. If there are notification records on infectious diseases, they will be sent too. Names, genders, and residential addresses are all included.

Participant:

Perhaps the Pearl River Delta is a relatively well developed area, so we only talk about the situation of non-local residents being infected, and we haven't talked about the situation of those infected who

returned home. We should consider the situation of a local resident who goes elsewhere, not necessarily abroad, maybe to another province. If he becomes infected, of course he will return to his own province. This is the same principle as when you discover a HIV carrier and you send him back to his place of origin. If we encounter problems when someone is returned, we will know what we should watch out for when we send someone else back.

Participant:

The State certainly has this regulation, which was set up at the initial stage when HIV infection was first diagnosed on the mainland. Many of the cases were people from abroad, so the idea was to send them back to their original place of residence. Now we have developed to our present stage. If a person infected with HIV does not have local residence, we will ask if he is willing to stay here or go back to his original place of residence. If he stays, we can continue to provide counselling and medical services. Also, we will certainly inform officials at his original place of residence, so they will also understand his condition, where it was discovered, and where he is right now.

MODERATOR:

For example, if someone from Hunan is diagnosed to be HIV positive in Guangdong, we cannot send him back by force. The State regulation requires us to "Persuade him to return to his original place of residency." This is the original wording, it says, "Persuade, or try," not force. If he is unwilling to go back and stays in the local area, the local Health and Epidemic station must be responsible for providing him with public health services. But they must also report to station in his place of residence.

Participant:

Another question: Why is it that other people always come to the Pearl River Delta and found infected? Are they all infected in the Pearl River Delta?

MODERATOR 1:

From the ranking of HIV figures in the national data a few years ago,Yunnan was number 1, Guangdong was number 2. But now Guangdong ranks number 5 or number 6. Provinces like Xinjiang, Guangxi, and Sichuan, all have more cases than Guangdong. That doesn't mean that there are fewer cases in Guangdong; but rather, there are more cases in other provinces. The figure has also risen in Guangdong. The rate of increase in the incidence of HIV infection in Guangdong cannot match that in other provinces. HIV rates do not rise just because people come to the Pearl River Delta.

Participant:

It does not mean that the cases discovered in Guangdong or the Pearl River Delta had all been infected in the Pearl River Delta. The situation isn't like that. The place of discovery is in the Pearl River Delta, but the infection may not be from here.

Participant:

How do you manage patients in Hong Kong? Not long ago, we receive notification from Hong Kong. Someone's husband was a Hong Kong resident; he died after being infected with HIV. She discovered that her husband had died from AIDS only when she was going through his belongings. She was tested HIV positive in Hong Kong and was immediately asked to return to the mainland. How do you manage this type of patient?

Participant:

This could not have happened. The management of HIV infection in Hong Kong is essentially a clinical system. There isn't a huge epidemic prevention system like that in the mainland. Why did she go back? I suspect that she herself might not be a Hong Kong resident, and she did not have the right of abode in Hong Kong. If she had been in Hong Kong for a period of time, say for 3 to 6 months, then after that she would have to leave. This has nothing to do with HIV infection. People in Hong Kong generally don't have a very strong sense of residency. We know that for someone who come from China, he says he has to return to his place of residency. People who have grown up in Hong Kong are more indifferent to this concept.

Participant:

If one is confirmed to be infected in Hong Kong, his period of stay can be one to two years. What will be included in your medical services? Is there any difference from local residents?

Participant:

The services will be the same. But non-residents have to pay a high charge. But this is an administrative arrangement, it has no direct relationship to HIV infection itself.

CLOSING SESSION

Rapporteur's Report

Dr Teresa Choi

Firstly, we all agree that we should emphasize on HIV surveillance. During yesterday's discussion, consensus has been reached on the surveillance definition of HIV infection. ELISA shall be used for the initial screening and, if the result is positive, a confirmatory test should be performed. This is the usual practice in Hong Kong, Macau, and the mainland. As far as data collection is concerned, we basically carry out at a municipal level. Each municipality collects data while conducting HIV surveillance. Surveillance is composed of three parts: data collection, data analysis and reporting.

With regard to the dissemination of information, we do this in the same way — surveillance is primarily performed by the professionals, while reporting is by the government. The data collected from a municipality is sent to the provincial anti-epidemic station (provincial surveillance centre), and then to the provincial government. The state government then carries out an overall analysis. On the mainland, information is released by the government, first by the provincial or state government, and then by the local government. It is actually the same in Hong Kong where the professionals carry out surveillance and submit the data to the government. The only difference is that the process involves only one institution, so it is very simple. The methods of disclosure include press releases and regular reports. Whether or not the release is regular was not discussed yesterday. In Hong Kong, this is carried out on a regular basis.

We also discussed the definition for AIDS surveillance. If a person's HIV antibody test result is positive, HIV inflection is established. HIV infected patients are diagnosed as AIDS by a set of criteria which mainland and Hong Kong hold different views. (Hong Kong adopts the definition transformed from CDC (1993) in the United States, while the mainland and Macau adopt the definition of WHO.) We put forward some questions which had not been discussed. For instance, is the HIV reporting system complete? Are there any HIV cases that had not been diagnosed? Is it because the definition is unclear so doctors are unable to diagnose, and thus produce no reports? Even if cases can be diagnosed, do doctors know that they have to report? We did not discuss these aspects but they may be very important to our work in future.

On the other hand, the targets, accuracy and usefulness of HIV surveillance were discussed yesterday, in addition to high risk indicators. Apart from high risk behaviours, high risk indicators include such things as STDs. We discussed two issues — high risk behaviours and high risk populations. High risk behaviours may refer to sharing of injection equipment, sex without using a condom, or sex with a sex worker. Where can these behaviours be found? First we have to determine the target population. Several factors have to be considered when choosing the population to be monitored. First of all, is this a high risk population, e.g. a population of sex workers? It may not be easy to find sex workers. We may have to go to places of entertainment, and they may be considered as vulnerable population. It is very important to know if such populations can be identified. Drug addicts sharing an injection equipment is a high risk behaviour and can be found in drug-taking communities. We may have to find them in drug addiction treatment centres or methadone clinics in Hong Kong. On the mainland, sex workers may be found in women re-education centres; in Macau (or Zhuhai), we find them in places of entertainment, and it is where surveillance is conducted.

When conducting surveillance on any high risk population, should the focus be on high risk behaviours of HIV carriers or high risk behaviours of the particular population? In other words, is it necessary to perform HIV antibody tests on the same population when monitoring high risk behaviours in sex workers? It is not needed in the case of ordinary behavioural surveillance.

What is the relationship between behavioural surveillance and intervention? How should we make use of the surveillance data to conduct intervention. Should the intervention be done by public health doctors or government departments? Yesterday we discussed public education and peer education. The aim of peer education is to establish a trusting relationship between doctor and the target population, and to rely on the latter to provide education to their peers.

We are all concerned about the problem of infection in the health care setting. When compared with other behaviours, however, this is not the most serious problem. We have to increase medical professionals' awareness of preventing iatrogenic infection and how to handle blood-contaminated appliances. We have also discussed other high risk indicators like STDs. The management of HIV infection and HIV patients is undertaken at three levels — administration, public health, and clinical practice. A person first undergoes a screening and then a confirmatory test. If the result is negative, counselling services including psychological counselling is provided. If the result is positive, the person is immediately referred to the relevant clinical department, or followed up by surveillance staff and sent to hospital only at the onset of symptoms. Different factors have to be considered during each stage of the management. First, we shall examine whether the existing system will increase or decrease discrimination. Although it is hard to avoid discrimination, has the extent of discrimination been lowered as much as possible? Second, there is the problem of resources. If the follow-up is by public health doctors, are there enough human and technical resources to ensure continued support? Third, we have to consider the number of patients and HIV carriers. How do we improve the management system when the number of AIDS patients and HIV carriers increases? At present, the number is quite low, and most problems can be dealt with. Fourth, can existing facilities like hospitals be fully utilized, and whether doctors competent to provide treatment can be mobilized. On the relationship between public health and clinical management, surveillance personnel is responsible for providing clinical staff with relevant information to help them understand the considerations of HIV management.

Lastly, the problem of human mobility was discussed. This definition can be examined from two points of view — that of registered residence management and public health management. HIV prevention and surveillance emphasizes the consideration of human mobility from the public health perspective. This depends on the characteristics of human mobility rather than registered residence. In many cities, the place of origin is used to establish a registered residence management system. Will this change in the future? There are two types of human mobility — those coming to the locality and the others being native people going outside. In general, non-native population is of a lower educational level, a younger age, and many may be unmarried. We have not discussed much about the outgoing population. A mobile population is mobile in terms of registered residence, but the phenomena is not directly related to HIV transmission. We have to determine whether there is a relationship between human mobility and HIV infections and what kind of relationship it is? Such factors as geographical distribution and occupations of the mobile population have to be considered. For instance, the mobile population in Zhuhai and Shenzhen are mostly found in places of entertainment. When its distribution is known, behaviours will then be examined. For example, is there any high risk sexual behaviour? The next steps shall be determined if high risk behaviours are confirmed.

Concluding Remarks

Dr S S Lee, Hong Kong:

We have addressed many different issues during the past two days. These issues cover the following three areas — public health, clinical services, and administration. These three parts can help us pursue further discussion after the seminar. We should not forget that the administration only provides a framework for us to build a better public health system and better clinical services.

In both yesterday's and today's meetings we have discussed the important work of the public health system, which comprises prevention and surveillance. In order to prevent HIV infection from spreading in the Pearl River Delta Region, we need to further explore the following areas. One is behavioural surveillance, but many problems remain that cannot be resolved overnight. With regard to prevention and surveillance, how can the two be integrated? Lots of surveillance work have been done in various cities but the results have not been incorporated in preventive measures. The last area involves the connection between clinical practice and surveillance. Before the meeting, I thought that the HIV problems varied in the different cities of the Pearl River Delta Region. After two days of meetings, however, I have changed my view. They are, in fact, not very different. We share many common points, and in many cases the problems are exactly the same. Every city's system may differ slightly, but in terms of response, the motives and the methods used are very similar. Some of the experiences encountered in Macau and Hong Kong may be useful. For instance, Hong Kong has done some work on the experimentation of behavioural surveillance, but as far as identifying a target population is concerned, not as much work has been done by Hong Kong compared to the mainland. Some of the work has been initiated in Shenzhen. We can increase our experience in behavioural surveillance through further research and exchange. At present, no country in the world can say, "Our behavioural surveillance is the best." Although to date not much has been started, we may be able to exchange more views and experiences when we meet after a year or two. We are facing very similar problems. The mobile population may move from Hong Kong to Jiangmen or from Macau to Hong Kong. Every day a lot of people are on the move. I believe that the Pearl River Delta Region can be viewed as one unique territory. We are linked together by many social and cultural factors and these factors can help us develop more effective means to prevent the spread of HIV infection.

There is another issue that needs further discussion. What we are talking about is HIV infection. Although the term looks very simple, it covers things about which we have totally different interpretations, such as choices of words, definitions, language, etc. HIV infection had a longer history in Europe and the United States, and these countries have done a lot of relevant research. We have to pay attention to the translations of their terminology and definitions. Some of them are not applicable in the Pearl River Delta Region. We may have to re-evaluate the use of each definition. When a particular definition is used in surveillance, we have to consider the needs of the Pearl River Delta Region and the actual requirement of the individual project before deciding on the approach.

Finally, I find the process of development very inspiring. HIV infections occur at different times in various cities in the Pearl River Delta Region. They may occur earlier in Hong Kong and later in the northern area of the Pearl River Delta Region. There are fewer cases on the mainland, and the current

problems look like those which existed in Hong Kong ten years ago. These problems have a commonness and we may consider them from the developmental point of view. Some of the work was not done well in Hong Kong. We may put this forward for discussion and share the unsatisfactory experiences, so that we will be more effective in the future.

Dr Chen Wai-shi, Guangdong:

We are honoured to gather here to discuss several issues on the prevention and control of AIDS during the past day and a half. The three academic reports presented yesterday morning were very informative and enlightening. All of you were eager to participate in the discussions held yesterday afternoon and this morning, which were very fruitful. I think we have found the common ground and the differences, though many participants still have much to say but we could not explore some topics in depth due to the limited time available. Some of the problems have been thoroughly explored whilst a few are still unclear, and others might never be completely understood. But this does not affect our commitment to fight AIDS. Our common goals are to effectively prevent and control the infection and spread of HIV.

I have two hopes: First, to better develop our work in the future — how to enhance HIV surveillance, how to effectively adopt interventionary measures, choose the right population and do the work well. This is one of the aims of our meetings. Second, according to the opinions expressed, representatives from the mainland think that this kind of meeting is useful and fruitful, and hope that it will be held in Hong Kong next year for exchange of views. In future, we may hold the meeting on the mainland. We may choose one city from Zhuhai, Shenzhen, Dongguan, Guangzhou or Qingyuan. It will depend on the actual situation at the time.

Finally, on behalf of the representatives from the mainland, I sincerely thank the Medical and Health Department of Macau, the Macau Public Health Laboratory, the University of Hong Kong, and the Health Department of Hong Kong for their enthusiastic support and sponsorship. I also want to thank all representatives for their participation. Thank you very much.

Dr Morais, Macau:

Thank you very much. Thank you for the nice words and especially for Dr Fox's commendation on this workshop. On behalf of the organising committee and Macau Health Department, I want to thank you all for your active participation. It was very interesting and fruitful. I want to thank our distinguished guests, speakers and our convenors who have fantastically handled the roundtables. And I want to thank you all, participants from mainland, Hong Kong and Macau. During these two days, we have worked together, exchanged our past experiences on HIV infections and its spread in our region. I hope this workshop is the starting point for future meetings in which we work together and review what we have been doing, and to join our thoughts on the control of HIV infection in our region. We feel like all at home. It seems we've known each other for a long time. It's wonderful to have such colleagues with us. I wish you all a good journey back home. I hope to see you soon and to have another successful meeting like today's. Thank you very much.

目錄

語言

研討會的發言以中文（普通話）或英文進行，輔以即時傳譯。

開幕項目的歡迎詞原以英文發表；開幕典禮致詞（一）和（二）都是英文演說；（三）則以中文發表，而嘉賓致詞的原文是葡萄牙文。

專題演講全以英文發表。小組討論中參加者用中文或英文發言。

閉幕項目中的演講全以中文發表，除了康麗明醫生以英文發言之外 。

編輯簡介

「珠江三角洲愛滋病監測與流行病學研討會」是「珠江三角洲愛滋病趨勢」研究的一項成果。研究項目由香港大學及香港衛生署聯手籌劃，得到澳門衛生司的協助，並由香港愛滋病信託基金贊助。研究組的研究員和顧問來自香港、澳門和廣東省地區。

除了鑽研三角洲地區的愛滋病情況外，項目的另一目標是建立一個連繫公共衛生專家的網絡，和探求估計愛滋病的未來趨勢模式。「研討會」成功地為專家們提供了聚會的機會。會議的目標是：(甲)深入研究監測機制； (乙)探討區內導致愛滋病感染的因素和 (丙)分享流行病學及行為監測所匯集的資料。

參與研討會的有四十位來自珠江三角洲十二個城市的專家，並有超過二百名(主要醫療工作者)其他參加者。這份報告記錄了研討會在一九九八年十二月十一及十二日所發表的演講和進行的熱列討論。研究組感謝籌備委員會的努力，澳門衛生司和香港愛滋病信託基金的贊助。最後，這份報告得以順利出版，實有賴香港紅絲帶中心所提供的技術支援。

吳文瀚教授
研究組
一九九九年八月

會議組織

主辦機構

澳門衛生司公共衛生化驗所
澳門衛生司預防傳染組
澳門全科醫生學會
香港大學微生物系

秘書處

澳門全科醫生學會
澳門衛生司預防傳染組
電話：(853) 533525
圖文傳真：(853) 533524
電子郵址：：utvepvm@ssm.gov.mo

通訊地址

珠江三角洲愛滋病監測與流行病學研討會 — 秘書處
預防傳染組
澳門士多紐拜斯大馬路 51 號 3 樓

贊助機構

澳門衛生司
香港大學
科達公司
美國雅培公司

程序委員會

康麗明醫生
Dr. Fernando Costa Silva
李瑞山醫生
Dr. Carlos Canhota
葉炳基先生
Dr. Carlos Nobre
蔡敏欣醫生
馮明銓先生
梁凱鶯小姐

研究組

研究員

香港： 吳文瀚教授
李瑞山醫生
蔡敏欣醫生

澳門： Dr Fernado Costa Silva
康麗明醫生
Dr. Carlos Nobre

廣東： 陳偉師醫師
馮鐵健醫師
徐慧芳醫師

專業顧問

趙雅恩教授　　柏克萊加州大學

名譽顧問

劉鄒魯教授　　廣東省預防醫學會會長
傅愛民醫生　　聯合國愛滋病規劃署駐華辦事處駐華項目顧問

研究助理

賴嫈妍小姐

通訊處

紅絲帶中心
香港九龍橫頭磡聯合道東 200 號 2 樓
電話：(852) 2304 6268
傳真：(852) 2338 0534
電子郵箱：rrc@health.gcn.gov.hk

程序概覽

一九九八年十二月二十一日（星期五）

0800-0840　登記

0900-0940　開幕典禮

名譽嘉賓：

Dr Alarcão Troni
澳門社會事務及預算政務司

Dr Larguito Claro
澳門衛生司司長

瞿國英醫生
澳門衛生司副司長

李萬山先生
澳門新華社外事部部長

傅愛民醫生
聯合國愛滋病規劃署駐華辦事處駐華項目顧問

劉鄒魯教授
廣東省衛生廳副廳長

吳文瀚教授
香港大學醫學院微生物學系教授

歡迎詞　— 康麗明醫生
公眾衛生化驗所總監兼研討會籌備委員會主席

開幕典禮致詞 (1)　— 劉鄒魯教授
廣東省衛生廳副廳長

開幕典禮致詞 (2)　— 吳文瀚教授
香港大學醫學院微生物學系教授

開幕典禮致詞 (3)　— 傅愛民醫生
聯合國愛滋病規劃署駐華辦事處駐華項目顧問

嘉賓致詞　— Dr Alarcão Troni
澳門社會事務及預算政務司

0940-1000　茶點

1000-1200　專題演講

(1) 亞洲國家的愛滋病監測與流行病學
趙雅恩教授

(2) 愛滋病的行為監測 — 理論與實踐
添布朗博士

(3) 公共衛生監測與臨床管理 — 介面
李瑞山醫生

1200-1400　午餐

1400-1530	小組 (1)：愛滋病監測機制
1545-1715	小組 (2)：危險族群監測
1715-1730	茶點
1730-1900	小組 (3)：愛滋病管理
1930-2100	晚餐

一九九八年十二月二十二日（星期六）

0900-1030	小組 (4)：流動人口
1030-1100	茶點
1100-1200	閉幕典禮
	— 小組討論報告
	— 會議總結

閉幕項目

歡迎詞

公眾衛生化驗所總監兼研討會籌備委員會主席
康麗明醫生

澳門社會事務及預算政務司Dr Alarcão Troni
澳門衛生司司長Dr Larguito Claro
澳門衛生司副司長瞿國英醫生
澳門新華社外事部部長李萬山先生
聯合國愛滋病規劃署駐華辦事處項目顧問傅愛民博士
廣東省衛生廳副廳長劉鄒魯教授
香港大學微生物學系吳文瀚教授
尊貴的來賓、女士們、先生們：

本人謹代表澳門衛生司和研討會籌備委員會歡迎各位出席這次珠江三角洲愛滋病監測與流行病學研討會。

澳門在十二年前開始受到愛滋病問題的困擾。在過去十多年來，澳門衛生司一直負責處理這項問題，致力制訂多項計劃，以預防及控制這種病毒，並不斷發展愛滋病的監測工作，以確保病毒受到妥善的監管和控制。然而，我們了解愛滋病問題的複雜性，因此仍時刻保持警惕，絕不能掉以輕心。

這個研討會具有特別的意義，一方面給我們機會回顧過往的成績，另一方面，讓我們能商討和擬訂未來的行動措施。

愛滋病病毒並不受任何國界所限制，它的傳播能力要視乎某個地區及其鄰近地區的社會狀況和行為模式而定。由於珠江三角洲地區各主要城市在文化、社會狀況及行為模式各方面均有共通之處，故研討會可為來自區內各城市的代表提供一個寶貴和合時的機會，讓我們能聚首一堂，探討愛滋病對本區造成的影響。在未來兩天，希望我們可以增加互相的了解，並就彼此感興趣的範疇達成共識，同時制訂日後的合作策略，阻止愛滋病在珠江三角洲地區肆虐。

本人預期研討會將成為我們日後發展合作關係的起點。

本人謹向各位研討會參加者致謝意，並衷心祝願各位在會上暢所欲言，滿載而歸。

澳門，一九九八年十二月十一日

開幕典禮致詞 (1)

廣東省衛生廳副廳長
劉鄒魯教授

主席、女士們、先生們：
大家好！

首先，讓我代表廣東省預防醫學會、廣東省衛生廳、以及以我個人的名義，對這次大會的隆重召開，致以熱烈的祝賀。

眾所周知，艾滋病自80年代以來，以迅雷不及掩耳的速度席捲全球，至今已感染了3300多萬人，並正以每天感染16000人的速度嚴重地吞噬著人類的生命。作為一種新的傳染，艾滋病還將是21世紀的重大瘟疫。完全有可能：由于艾滋病的蔓延，使過去半個世紀以來全球在衛生方面取得的成就被大大削弱。

中國艾滋病目前已進入快速增長期，估計實際感染人數已超過30萬。倘若預防控制措施得不到落實，力度得不到明顯加強的話，到2000年，中國艾滋病實際感染人數完全可能超過100萬。中國艾滋病這種加速流行趨勢已經十分明顯，形勢也十分嚴峻。自1985年發現首例艾滋病人至今年9月，全國共報告艾滋病毒感染者11170例，其中包括艾滋病病人338例，死亡184例。1994年後，報告數逐年大幅度增長，累計報告數最多的是雲南，其次是新疆、廣西、河南、四川和廣東。經靜脈吸毒感染的佔67.5%，經性接觸感染的比例有所下降。廣東的情況類似。廣東至今年10月底已發現HIV感染者402例，其中17例艾滋病人。

廣東省正在開展一個多部門合作預防控制艾滋病的合作項目，這個項目得到世界銀行的支持。項目旨在通過多部門的共同參與，尋找一個防制艾滋病的有效途徑、有效策略。項目在加強艾滋病預防控制的宣傳、健康教育、人員培訓、開設匿名性病門診等方面取得了不少進展。

今年世界艾滋病運動的主題是：青少年 — 迎戰艾滋病的生力軍。廣東省全省圍繞這一主題開展了一系列活動。如組織專家發表文章、召開座談會、印制宣傳資料、開設街頭諮詢活動、組織預防控制艾滋病的知識競賽等。

我堅信，只有加大預防控制艾滋病的力度，將有關的知識交給民眾，尤其是青年人。並以“我”做起：採取綜合性預防措施，尤其是要遠離毒品，不吸毒，不共用注射器，不參與“黃、賭、毒”，潔身自愛。艾滋病的預防控制會是有效的。

可以預見：若現在的控制能力得不到明顯加強，艾滋病將成為21世紀中國的新災難；若能全方位加大防控力度，則完全有可能把加速流行趨勢削弱，並逐步將其控制。

我們希望，珠江三角洲各地進一步加強聯繫，加強學術交流，攜手面對新世紀疾病的新挑戰。為民眾提供更有成效的衛生服務，盡最大努力把艾滋病控制在低流行水平。我們十分歡迎各社會團體、國際友好組織和友人對我們的工作繼續給予大力支持和幫助。

借此機會，對主辦本次會議的東道主為本次會議所作出的努力，表示衷心的感謝。

劉鄒魯
1998年12月11日於澳門

開幕典禮致詞 (2)

香港大學醫學院微生物學系吳文瀚教授

珠江三角洲愛滋病監測與流行病學研討會標誌著自一九九四年以來超過四年的努力所達致的成果。最初，我們對香港愛滋病病毒感染數字偏低的現象感到奇怪，懷疑這些統計數據的真確性，因而促使我們聯同今日研討會的一位主要講者 Prof. James Chin 協力完成兩份成就卓越的研究。第一份研究是有關愛滋病的概況及監測；而另一份研究則有關行為模式的監測機制。在過去數年，這些研究成為多份報告估計愛滋病病毒感染數字、進行行為模式的定性分析，以及建立日後行為模式監測系統的基準。我們有關愛滋病概況的研究報告首次於一九九四年公布，並於去年修訂，是目前最切合香港愛滋病病毒感染情況的報告，為政策制訂者和計劃籌辦者提供非常有用的參考資料。這些研究能達致成功的關鍵，是因為它匯集了政府、大學以及社會各界共同努力的成果。

香港與珠江三角洲地區在祖籍、文化和生活方式各方面均有共通之處，因此估計本區所面對的愛滋病問題同樣具有很多共同的特徵。舉辦這個研討會的目的，是讓我們能分享彼此的經驗和資料，並就如何理解監測數據達成共識。我們期望研討會能為我們日後的持續的對話揭開序幕，協助彼此以妥善的方法將監測數據轉化為一項適用於本區的有效防預計劃。

開幕典禮致詞 (3)

聯合國愛滋病規劃署駐華辦事處駐華項目顧問
傅愛民醫生

在全球不同的地方、民族、環境和背景下，愛滋病的傳染情況亦出現頗大的差異。至今，我們仍然難以理解為何在某些民族和地區，及在某些時間內，愛滋病病毒的感染率會以幾何級數的速度迸發，而鄰近地區的情況卻在多年來維持穩定的水平。

為了確立更妥善和合適的應變措施，了解引發各種愛滋病病毒的動力是一項重要的工作。流行病學監測的任務之一，就是為我們提供所需的數據，讓我們洞悉傳播愛滋病病毒背後的各種因素和動力。

早期監察愛滋病的流行病學數據多是環繞在若干時間內，具體人口組別中的愛滋病個案、死亡率和愛滋病病毒感染率等資料。然而在近年來，這些醫學及研究數據已顯得不敷應用，不過，若輔以額外數據來顯示引發愛滋病的潛在動力，將使這些數據發揮更大的效用。

雖然這些動力（或流行病的決定因素）在某程度上有所重複和互相依存，但我們仍可將它們分為兩個主要類別：第一類愛滋病決定因素關注個人的各種危險行為，並釐定愛滋病行為模式的監測範圍；而第二類決定因素則包括引發愛滋病病毒的社會因素，包括人口遷徙、社會邊緣化、歧視、污名、性別不平等及其他許多社會因素。

珠江三角洲的人口在文化和發展方面有許多共通之處。對行為模式和社會因素進行嚴謹的地區分析，可助我們更了解愛滋病的實況，勾劃導致愛滋病病毒在珠江三角洲地區傳播的社會和行為模式。

這種對愛滋病病毒感染的範圍和特點進行的深入分析，對籌備具體的愛滋病應變措施可說非常重要，也是聯合國愛滋病規劃署所提倡的策略性計劃程序的一部分。這種策略性計劃的目的，是在國家和地區層面推行最有效的愛滋病計劃。

策略性計劃是聯合國愛滋病規劃署在九八年度的一項主題工作，而另一項主題工作是透過推廣社會各階層的參與，讓社區對愛滋病作出廣泛的回應，建立新的夥伴關係模式，定期交流工作經驗和成果，以及推廣最佳實例和介入措施。聯合國愛滋病規劃署正在蒐集這方面的資料，及把這些經驗列入最佳的應用實例手冊內。

在一九九八年十二月十一至十二日舉行的珠江三角洲愛滋病監測與流行病學研討會是一個成功的例子，體現了聯合國愛滋病規劃署所推動的兩個範疇：對愛滋病採取策略性的方針；以及改善夥伴關係，提高社區對愛滋病的回應。

澳門衛生司在籌備這個地區性研討會，以及鼎力支持中國各地對愛滋病的回應方面貢獻良多。而對聯合國愛滋病規劃署秘書處而言，研討會展示了一種嶄新和最佳的實踐方法，可供各地有關人士的參考。多謝各位。

嘉賓致詞

澳門社會事務及預算政務司 Dr Alarcão Troni

尊敬的研討會組織暨科學委員會成員
尊敬的來自美國、中國、廣東和香港的各位專家的專家
尊敬的澳門衛生署署長
尊敬的來賓及與會者
女士們，先生們

本人很榮幸能在研討會開幕儀式上，作此開場白。非常歡迎各位貴賓的光臨，尤其歡迎來自香港和廣東的各位專家。

非常榮幸能邀請到諸位來澳門參加此次重要的科學會議。眾所周知，HIV給人類健康帶來了前所未有的威脅。其發展速度和複雜程度因地域的不同而有所差異。

在澳門，HIV傳染水平儘管有緩慢趨升的跡象，但相對而言還是較低，這堪稱澳門之一幸事。自從1986年檢測到第一例HIV感染起，到1998年10月，共有190個HIV感染案例及13名愛滋病患者，其中有7名已經死亡。

澳門政府把防範及控制HIV和愛滋病的工作視為首要的工作項目。防止愛滋病的計劃包括衛生教育、密切監控HIV，同時又避免侵犯病人的人權。在此領域已獲批准的立法和規定包括嚴守機密、熱帶地區及移民控制、以及提供免費衛生服務。事實上，對於所有HIV、愛滋病或毒性依賴病例，我們在治療過程中都做到嚴守機密。在我們的計劃中，關鍵的一點是透過教育，達到防範目的。為了做到這一點，我們在這方面已經採取了若干積極措施，包括衛生教育、專業資訊、諮詢服務、以及與公眾、學生及可能透過各種不同渠道面臨受感染風險的群體進行溝通。這些積極措施已經起到很大作用，令更多人關注並改變對待愛滋病的行為與態度，並把獲取的知識用於幫助愛滋病患者。警惕防範HIV，亦是我們計劃中的一個至關重要的因素。實際上，自從獲得特許權以來，我們已經發展並應用了積極防止及控制HIV的綜合制度。1992年，我們開始對特定場所的從業人員實行強制檢驗，這些場所包括夜總會、桑拿、按摩院等；接受強制檢驗的對象還包括一些外來勞工，這些外來勞工祇有通過HIV檢測，才能在澳門居留，他們中檢驗呈現陽性者，均已離開澳門。除此以外，捐血者、囚犯、癆病患者及靜脈注射毒性依賴患者亦須接受檢驗。雖然我們的工作已經取得一些進展，但還有一些薄弱環節，也遇到一些阻滯。正因為如此，我認為這次研討會適逢其時；我深深地相信，透過借鑒諸位與會者在本領域的專業經驗，我們在防範及控制HIV和愛滋病方面的工作一定能做得更好。我也相信，在有效控制珠江三角洲地區HIV的雙向合作過程中，本次研討會將是一個重要的里程碑。愛滋病病毒是一個長期問題，就其複雜性而言，又是一個全球性問題 — 並不存在邊界限制。因此，我想再一次重申，澳門政府會為警惕、防範和控制珠江流域地區的HIV和愛滋病問題，努力不懈提供支持。

女士們，先生們，我們都知道，澳門即將迎接其歷史上的一個關鍵時刻。在短短的一年之後，葡萄牙就要將澳門主權交還中國，而澳門亦將像香港那樣，成為一個特別行政區。我衷心希望在1999年12月19日之後，與諸位的合作能夠進一步深化、取得更大成績。

祝願研討會取得圓滿成功，並希望從廣東和香港來的客人，能在澳門渡過愉快的時光。

多謝諸位。

小組

專題演講 (1)
亞太國家的愛滋病毒感染監測與流行病學研究

趙雅恩教授

引言及定義

我出生於一個離澳門兩小時車程的小村落，今天可以有機會在這裏發言，我感到非常榮幸。雖然不便透露自己的年齡，但我離開家鄉已經六十多年了。在講座正式開始前，讓我先和你們分享一些定義。

我希望先界定*流行病學*和*公共衛生監測*的意義，到我開始講述「愛滋病監測及流行病學」的課題時，各位便可以引用這些定義。我對流行病學的定義為：

"*流行病學*意指有系統地研究那些決定或影響人口中某種疾病或情況的型態和流行的因素。"

以此定義作背景，我想解釋公共衛生監測的含義。在眾多解釋中我採用了以下的定義：

"公共衛生監測意指對一切有關預防或控制某種疾病或情況的常規數據搜集、分析及發放。"

根據這個定義，你們差不多可以隨意搜集任何數據，但若果依照*公共衛生監測*的基本目標，我們便需要集中搜集與預防及控制某種疾病或情況有關的數據。從這個角度來看，*公共衛生監測*可說是流行病學的量度工具。有必要強調的是：針對愛滋病感染和愛滋病個案（HIV/AIDS）所進行的公共衛生監測，其方法和目標與找尋愛滋病感染個案有所不同。

愛滋病毒感染的環球型態及流行情況

我將會首先講解按估計愛滋病毒感染在全球各地的分佈情況。圖一顯示估計愛滋病毒感染在全球每一個國家流行的總數。這些估計是以十五至四十九歲的人口中的比率來計算（愛滋病毒感染百分率），所以代表了愛滋病在全球各國的年青及中年人口中的流行比率總數。

從地區型態中各位可以清楚看到，按估計愛滋病毒感染在非洲撒哈拉地區的十五至四十九歲人口中的流行比率最高（高至百分之二十六）。這些比率並不局限於城鎮的流行，而是遍及全國。在馬拉威或肯雅這類國家，十五至四十九歲人口中的感染率是百分之十五至二十。一般來說，城鎮的比率較鄉郊地方的為高，而在這些國家，城鎮的比率可高達百分之二十至四十，鄉郊的則在百分之五至十五之間。按估計，加勒比的幾個國家擁有第二最高的愛滋病毒流行比率。由於面積太小，我們未能在地圖上找到它們，但在部份加勒比及南美洲北部的國家中，有些比率達百分之五。其它高比率（即高於百分之一）的地區還包括幾個東南亞國家。

按估計全球所有其它國家的愛滋病毒流行比率均相對較低。地圖上白色或空白部份顯示了這些低比率的地區。按估計這些國家的愛滋病毒流行比率多少於百分之零點一（即一千分之一）。

這幅地圖所引用的數據（即估計數字）是摘自聯合國愛滋病規劃署／世界衛生組織於一九九八年六月出版的全球愛滋病流行病報告。報告中還顯示了愛滋病毒的可能傳染途徑：即經與異性性交、注射藥物者（IDU）共用針筒，及經與許多男性進行性交的男性（MSM）傳播。若從每個國家的估計總數減去與MSM及IDU有關的估計愛滋病毒感染數目，餘下的數字便主要是經與異性性交傳染的。

經異性性交所致的愛滋病毒感染比率推斷可見於第二幅地圖（圖二）。

你們可以看到，跟第一幅地圖比較，在那些擁有高比率的非洲、加勒比及東南亞國家，愛滋病的流行情況並沒有重大分別。在這些地區及國家，經與異性性交仍然是主要的愛滋病傳播途徑。然而，你們在第二幅地圖中可以看到更多“白色”或空白部分在北美、西歐及澳洲等出現，按估計那裏經與異性性交傳染的愛滋病毒流行比率是低於百分之零點一（即一千分之一）。這是因為在這些西方發展國家，絕大部份的愛滋病毒感染都是和 MSM 及 IDU 有關。

以上概括了我對愛滋病毒感染的環球型態及流行情況的簡介。這些地圖清楚顯示不同國家及地區的愛滋病毒感染比率皆有很大的差別。

懷孕女性的愛滋病毒感染比率

圖三顯示了於一九九零、一九九三及一九九六年在中非國家馬拉威一所大型市區醫院進行的懷孕女性愛滋病毒測試的結果。

圖中左邊的條形顯示在一九九零、一九九三年及一九九六年二十歲以下年齡組別的測試結果。其它條形是代表上述年份不同的年齡組別。

愛滋病毒在這些懷孕女性中的一般形態及流行情況可說教人吃驚！年齡最輕組別(十五至十九歲)的流行比率一直維持在百分之二十左右，即是說過去十年，在這地區的年青人每年受愛滋病毒感染的個案數目並無改變，這點確實使人震驚！此外，一九九六年，年齡介乎三十至三十四歲組別的懷孕女性，超過百分之四十受愛滋病毒感染。懷孕女性向來被視為愛滋病的低危人口組別，所以若估計該馬拉威地區同年齡組別（三十至三十四歲）男性的愛滋病毒流行比率，結果可能高達百分之五十至六十！事實上，在馬拉威所有年齡在三十至三十四歲之間的城鎮男性皆極可能存在如此高的比率（超過百分之五十）！各位可以嘗試想像若有半數年齡在三十至四十歲之的香港或澳門男性受愛滋病毒感染，將會帶來甚麼樣的影響！

以下是一些供比較的統計數字：馬拉威每年檢測的懷孕女性樣本數目約為四千人，而平均陽性比率為百分之三十至三十五。香港在去年或再前一年對約四千名懷孕女性進行測試，結果發現有一個受愛滋病毒感染的個案。在馬拉威相同樣本的數目中，我們估計會有一千二百至一千四百名受愛滋病毒感染的女性。換句話說，香港和馬拉威的懷孕女性受愛滋病毒感染的數目差距超過一千倍以上。這些結果反映愛滋病流行比率在不同的異性戀人口中的極端差異。

亞太國家的愛滋病毒感染比率

這裏再次引用聯合國愛滋病規劃署／世界衛生組織報告對愛滋病流行情況的估計，不過我需略作修正，因為我認為報告高估了愛滋病在香港流行的情況。香港的愛滋病規劃當局和我都掌握了更多和更佳的香港數據。我們把聯合國愛滋病規劃署／世界衛生組織所估計的三千個香港愛滋病毒感染個案減為二千個，在亞太地區十五至四十九歲人口中擁有最高愛滋病毒感染比率的國家／地方中，香港不再在十名以內。

圖四顯示亞太區按估計愛滋病毒感染流行比率排列的前十名國家或城市。柬埔寨擁有區內最高的比率，在十五至四十九歲的總人口中有接近百分之二點五受到感染。然而，這個比率少於非洲撒哈拉地區最高比率（百分之二十六）的十分之一。在亞太區只有三個國家？柬埔寨、泰國和緬甸在成人

人口中的流行比率高於百分之一。亞洲絕大部分國家的成人人口愛滋病毒感染比率都低於一比一千的比例。

經異性性交傳播的愛滋病毒感染

現在讓我剖析愛滋病的流行病學形態，以便了解是什麼因素促成估計中愛滋病流行情況的重大差異。我將引用的部份數據，其實自一九八零年代早期至中期已經存在，只是我們一直沒有加以重視。這些都是有關愛滋病毒經性交傳染的研究結果。流行病學的研究指出，愛滋病毒由一名受感染的男性經肛交傳染給另一名未受感染的男性，按估計傳染的危險比率是一千次接觸中有一次。在沒有促成因素的情況下，愛滋病毒經性交傳染的機會較其他大部份經性接觸傳染的病源為低。

重點是：愛滋病毒經單一次性接觸而傳染的機會極微。要達致大量經性交而感染愛滋病毒的數字，我們得設法彌補這種相對較低的傳染比率。以人口為基數，感染的數目會因不安全性交的機會和次數而增加。在檢討這些行為因素之前，我們須先檢視促成因素的角色，它們被視為有可能增加愛滋病毒經插入式性交傳染的效率。

圖五顯示Nancy Padian在美國加州進行的性伴侶研究中的部份結果，她總結在統計上愛滋病毒從男性傳染給女性的機會是一千次接觸中有一次。不過，必須注意愛滋病毒既可以在第一次接觸中傳染，也可以在第一千次接觸時傳染。以個人而言，傳染的效率是零或是百分之一百，但以整個人口為基數，則愛滋病毒的傳染效率相對較低，並未能擴散成為流行病。她的研究另一個有趣的發現和結論，便是從一名受感染的女性傳染給另一名男性，危險比率是每八千次接觸便有一次。所以只要屈指一算，我們便能算出要促成一次感染所需的接觸次數，這數字必然十分高。

在圖五下方列出了我相信是增加愛滋病毒經性交傳染的效率的主要促成因素。許多流行病學的研究均清楚指出，如果一個人患有潰瘍性的性病，他受愛滋病毒感染的危險便會增加五至十倍。我們也知道一個剛受愛滋病毒感染的人，較那些已經過了急性感染階段（約在感染的數月後）的患者具有更大的傳染性。我們並不準確知道這個因素可引致多大的傳染性。部份論者估計傳染性會增加百倍，我則認為這個因素至少可增強愛滋病的傳染性達五至十倍。

另一個潛在因素是男性的陰莖是否已割去包皮。割包皮被視為一個保護因素。另一方面，有些人認為愛滋病某些副類型可能具有更高效能的傳染力，我本人則對此存疑，並認為愛滋病毒的流行傳播大部份與行為因素有關。“乾涸性交”會是另一個促成因素。在非洲許多地方，婦女明顯地在她們的陰道塗上收斂劑，目的在收乾陰道的分泌，因為她們認為這樣可使男方在性交時獲得更大的樂趣。這種“乾涸性交”可能帶來更嚴重的後果，而且會提高愛滋病毒傳染的比率。

綜觀以上各項因素，其中大部分都出現於非洲撒哈拉地區。大量新的感染個案會不斷衍生更多新的個案，“乾涸性交”也會造成更多其他類型的潰瘍性性病。這些因素在許多亞洲國家都不存在，即使有也只是輕微程度而已。

異性戀人口流行傳播愛滋病毒的主要因素

圖六列出我相信是愛滋病毒在異性戀人口中廣泛傳播的主要決定因素。我認為最重要的是所涉及的「性配對模式」。通過簡單的模擬分析，若要有效地傳播某種性病，每個人需要同時及重疊地擁有多個性伴侶。

若果某人擁有不同的性伴侶，但在同一時候只有一個，就像許多西方國家的情況一樣，那麼愛滋病便很難在人口中迅速或廣泛地傳播起來。相反來說，若同時間擁有多個性伴侶，便可提高愛滋病毒的迅速和廣泛傳播。進行性交易便是這類擁有多個性伴侶的最佳例子。一般從事性工作的人一天內都會接觸多個性伴侶。在大部份亞太區國家，異性性交易（男顧客、女性工作者）可說是人們在傳統婚姻以外進行性活動最普遍的情況。

另一個決定性因素是性濫交的流行情況，意指人們恒常地擁有多個性伴侶。性濫交在世界各地均有存在，並不局限於任何一個國家或一種文化。雖然多個性伴侶的現象舉世皆是，但國際流行病學卻未能把它量化。我們並不能說出在甲人口中，有多少個百分比的男女恒常地擁有多個性伴侶。在傳播性病，包括愛滋病方面，人口中擁有多個性伴侶的百分率，究竟是百分百還是百分之一或二，會明顯地造成很大的差別。一般來說，一個社會的人口既不會百分百性濫交，但也不會完全沒有性濫交的情況。所有社會都會介乎兩者之間，而我們也要開始量度性濫交的流行情況 — 意指人口中有多少個百分比的人恒常地擁有多個性伴侶？我認為大部份國家都無法回答這個簡單的問題，因為它們都沒有進行所需的量化行為研究，以量度這個重要的指標。它們只能告訴你：對；我們有某部份的人口恒常地擁有多個性伴侶。然而，當你問究竟是佔了性活躍人口的百分之一、五、二十還是五十的時候，他們並不知情，但這方面的資料對評估愛滋病的傳播機會卻非常重要。

第三個主要決定性因素是：那些擁有多個性伴侶的異性戀者，他們轉換性伴侶的頻密程度有多大。即是說，他們在某段時間內一共擁有多少個不同的性伴侶？究竟他們是每年擁有一或兩個不同的性伴侶，抑或是每天或每週擁有多個不同的伴侶？有些性工作者每天會接五到十名男顧客，而不少異性戀者每年可能只有一至兩次的高危性接觸。轉換性伴侶的頻密程度在數量方面可以造成很大的差別，不過，如前所述，絕少國家的愛滋病規劃曾經進行過任何社會性的調查以量度這個重要的指標。我們也沒有量度過這些因素，因為量度工作困難重重。我們需要一個有系統的方法來量度它們，以便比較不同人口的情況。我們可假設在非洲這些行為因素的流行比率要比世界其他地方為高。然而，我們卻無法肯定這些因素在香港和在澳門的差別，或是與珠江三角洲，以至於與北京等地的差別。我們有需要量度這些因素，目的在更準確地估計在不同人口中愛滋病毒經異性戀廣泛地傳播的機會。

其它主要的因素還包括我曾提及的各項促成因素：包括性病的情況、愛滋病毒新舊感染個案的比例、男性割包皮的多寡，以及病毒副類型等。上列的因素雖然有助促成愛滋病毒的傳播，但我不認為它們的重要性可以和我相信是首要的因素相提並論。首要因素包括在人口中主流的「性配對模式」，及性活躍的青少年及成人恒常地擁有多個性伴侶的百分率！

進行量化行為監測的需要

添布朗博士將會講述有關危險性行為因素及監測的課題，但明顯地“我們”並沒有對高危性行為進行量化的測度。對此我感到驚愕。如果你作為一個流行病學家，負責評估因煙草及吸煙可能引起的疾病，而你只以登記肺癌來量度眼前的問題，人們便會追問：“為什麼你不研究人們吸煙的模式、人口中煙民的百分比、他們吸煙的頻密程度等等？”這方面的道理同樣適用於愛滋病的預防及控制規劃。我們正為愛滋病和感染設立所需的登記和監測系統。但針對更重要的變項和決定因素，還有如何應用行為改變計劃方面，我們便需要先鑑定那些進行高危行為的人口。這包括量度他們行為的危險程度，然後再隔一段時間，重複這些調查來判別危險的程度是否有升降，這樣做是因我們的愛滋病規劃旨在減少這些危險行為。不論愛滋病的流行程度是否像非洲地區一般高，或是低如大部份亞洲國家，愛滋病規劃的目的都應該是減少上述的危險性行為。我們不敢肯定現時大部份亞洲國家所存在的低比率是否會維持。這些國家會否逐漸在高危群中累積足夠的愛滋病感染者，以致最終導致愛滋病的數目大量激增？

我本人對愛滋病能在大部份亞太區國家廣泛傳播（有超過百分之一的十五至四十九歲人口受感染）表示存疑，但我們仍然未能搜集足夠的行為數據來支持這個結論。我希望各位從今次的研討會可以明白到人類行為才是傳播愛滋病的主要成因。我們以量化的方式測度人類的性行為的工作尚未完備。現時我們仍無法知曉愛滋病毒在人口中傳播的機會，直至我們可以收集足夠的資料，了解人們性行為的具體模式、頻密程度及上述危險行為的流行情況。以上的課題將會在本研討會作進一步討論。

總括來說，由於要探討像人類高危性行為這類敏感問題殊不容易，所以世界各地許多愛滋病規劃，不少公共衛生的專業人員和普羅大眾，都越來越強調和重視生化技術的解決方法 — 像"神奇子彈"般的科技。他們希望提倡發展一種愛滋病疫苗，還有發展更有效和便宜的愛滋病特效藥 — 這些全都有需要！不過，這種對"神奇子彈"的尋覓卻把我們帶離了眼前面對的挑戰。這個挑戰是我們所了解的愛滋病會因危險性行為的流行和頻繁程度而傳播。我們既有能力，而且亦有泰國的"成功例子"可以減少或改變這些危險性行為。我相信在我講座開始時所談及的愛滋病一般型態和流行情況並不會出現重大的改變。然而，直至我們可以恒常地量度愛滋病經異性戀廣泛傳播的主要決定因素之前，我們尚未能對這個想法存有很大的信心。直至我們確立行為監測系統，追縱這些危險性行為、它們的流行和頻密情況，留意它們是否產生變化，這些行為指標是升還是降？若果有上升趨勢，我們便需要密切關注了。

我認為所有愛滋病規劃需要進行的首要工作，便是搜集這些數據，並確保所有計劃皆以減低危險行為為大前提，不然的話，我們實有失責之嫌。

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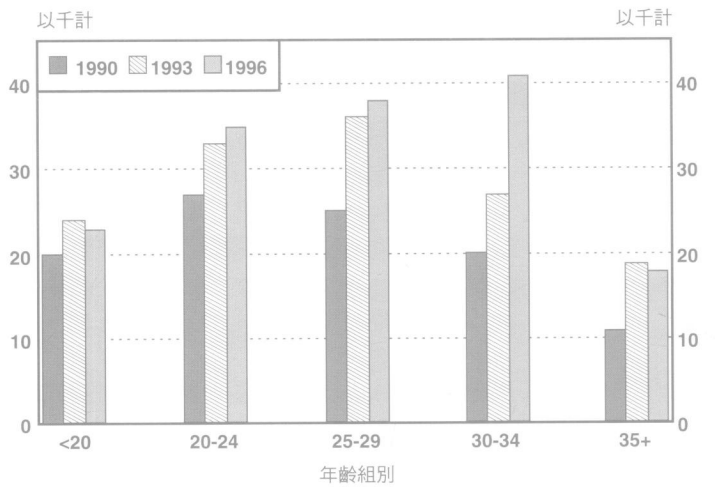
圖一

圖二

圖三

按年計在不同年齡的懷孕女性血清內愛滋病病毒抗體呈陽性反應 (QECH)



圖四

一九九八年估計人口血清內愛滋病病毒抗體呈陽性反應最高的亞太國家

國家	*15-49 歲的人口	估計感染愛滋病病毒數目	成人感染愛滋病病毒比率
柬埔寨	4 994	120,000	2 40
泰國	34 433	770,000	2 23
緬甸	24 361	440,000	1 79
印度	494 756	4,100,000	0 82
馬來西亞	10 624	66,000	0 62
尼泊爾	10 404	25,000	0 24
越南	39 722	86,000	0 22
汶萊	0 173	300	0 20
新幾內亞	2 260	4,200	0 19
星加坡	2 030	3,100	0 15

* 以百萬計

圖五

經異性戀傳播愛滋病病毒感染

在欠缺促成因素的情況下，經與異性性交一次而感染或傳播愛滋病病毒的危險程度較其他大部份性病的途徑為低。

受愛滋病病毒感染的男性傳播給女性：
1/1,000

受愛滋病病毒感染的女性傳播給男性：
1/8,000

促成因素：

患有潰瘍性的性病	↑ 5-10 倍
早期愛滋病病毒感染	↑ 5-10 倍
未割包皮的男性	↑ ? 倍
“異性戀” 愛滋病病毒副類型	↑ ? 倍
“乾涸性交”	↑ ? 倍

圖六

異性戀人口流行感染愛滋病病毒的決定性因素

- 性配對的模式
  性配對是否同時 / 重疊地，抑或持續地發生？
- 性濫交的流行程度
  性活躍的男女恒常地擁有多個性伴侶的百分率？
- 更換性伴侶的速率
  更換的速率屬於高 (每週 / 月數次) 或低 (每年一至兩次)？
- 主要促成因素
  其他性病的情況及 / 或相對高比例的愛滋病新感染個案
- 其他可能的促成因素
  男性並無割包皮者、愛滋病病毒副類型

專題演講 (2)
愛滋病的行為監測 — 理論與實踐

添布朗博士

為什麼要研究及追蹤行為?

首先我要感謝澳門的主辦單位邀請我主持講座，實在深感榮幸。我會承接趙教授剛才所談的，繼續討論從事行為監測的部分原因，以及你們在實施愛滋病行為監測活動時應該考慮的要點。多年來的經驗讓我們逐漸明白，只是監察愛滋病或性病是不足夠的，我們還需要了解當中所牽涉的行為。這方面的重要性有以下幾項原因。

在初期，社會上存在不少危機性活動，足以導致愛滋病迅速蔓延，但當其時愛滋病尚未氾濫。如果情況真如此，那麼唯一可以評估狀況的方法便要倚靠實際觀察行為。作為監測系統的一部分，行為監察可發揮非常重要的及早警報系統作用。它有助提高警覺，使我們明白有需要盡早減低在人群中潛在的危機。它同時亦是一種非常重要的工具，在低愛滋病個案的環境下，倡議及推動政策訂定者採取行動。

另一個從事行為研究和監察的原因，在於所有愛滋病的規劃皆志在改變和減低風險行為。若要改變行為，我們便先要了解是甚麼樣的行為，明白有甚麼方法可以有效地改變該種行為，同時可以量度行為所產生的變化。因此行為數據對設計和評估有效的規劃是不可或缺的。

最後，當情況惡化而愛滋病已普遍蔓延的時候，行為數據對幫助了解實況更顯重要。即使流行情況穩定，但仍然會有持續的病發事件，亦即繼續有新的感染，皆因現存的行為並無絲毫改變。但若不去量度行為，那麼亦無從斷定你的規劃有否產生預期成效，因為愛滋病普遍對行為變化的反應非常緩慢。事實上，在某些情況下，流行程度會反常地出現下降跡象。這是因為越來越多人因患愛滋病而死亡，又或是患有愛滋病的女性懷孕減少，只可惜每年依然有大量年青人受愛滋病毒感染。若果風險行為偏高，流行程度卻下降，我們便需要深入研究，了解真正的情況。

行為評估的方式

現時有多種不同的行為評估方式可供本地、全省及全國性規劃選用。在那些行為模式不詳的區域，第一步應進行一次快速評估，這當中可以包括數項元素。舉例說，其中一步可以做的是臚列商業性行為的地點及辨清顧客的特徵。快速評估一般亦包括其它方法，例如焦點小組，或與進行風險行為的人、或那些在該類行為發生的地點工作的人士（例如酒吧侍應和妓院主管）作深入面談。通過這類研究，便可開始了解目前的情況，從而構思需要量度哪類型的行為。在未有充足了解之前，根本無從著手設計一個行為監測的系統。

要從一個宏觀的角度來評估處境，便需要知道人口中參與風險行為的百分率。正如趙教授所言，要決定這項情況便要進行全國性人口普查。但他亦同時指出，沒有哪幾個國家曾經做過如此大規模的普查。因此，全球性而言，有關大部分國家風險行為的數據非常有限。此外，由於有半數的新感染個案皆發生在二十四歲以下的年青人當中，所以有必要把青年人的風險行為加以量化。

我將會在講座的下半部分集中討論一種重要的行為評估方式，那便是重複性的行為調查。這種方式要求你針對某些高危的脆弱社群，例如性工作者或貨車司機，追蹤他們的行為。這些重要的社群在

不同國家可以有極大的差別。在某些國家，它們可以包括工廠工人，而在另外一個國家或會有軍人，主要視乎本地的情況而定。然而，當一旦物識到關連最大的一群，便要在他們當中重複進行行為調查，以便可以追蹤某段時間內的行為變化，從而評估危機有否上升或下降。這些資料對應用及改良預防規劃皆極為重要。若果危機降級，那便顯示你的工作產生成效和發揮一定影響。這種在特定的脆弱社群重複進行的行為調查一般稱為行為監測，而接下來我亦會沿用這個詞匯。
我想指出不是所有人都喜歡行為監測這個詞匯，因為他們擔心監測意味著監視和追蹤別人的行徑。但必須緊記這裏所指的是公眾健康監測，所以重點應放在搜集所需資料，協助作出有關公眾健康的明智決策，預防愛滋病的傳播。因此，你的追蹤並非針對個人，而是重要社群所表現的行為，目的在尋找適當的規劃來協助他們。

甚麼是行為監測?

讓我先談甚麼叫行為監測，以及它和之前提及的其他行為評估方式有甚麼區別。簡單來說，行為監測即針對特選群體的風險行為，有系統及重複地進行橫切面的調查。

行為監測和從其他類型的行為研究的主要分別，便是前者只專注於一個很窄範圍的行為。行為監測並不採求百項的行為變項，及追蹤群體中所有預見的風險行為。那需要一個漫長而深入的調查才可以達致，不但耗費時間，而且動用大量資源。行為監測的重點在於把所搜集有關行為的資料，縮小至幾項最重要的因素，其中部分因素正是趙教授剛才介紹過的。它們包括：過去一年曾經光顧性工作者的人口百分比，或是過去一年擁有配偶以外的性伴侶所佔的整體人口百分比。和不同類型伴侶使用安全套亦是一項你希望量度的行為，因為這是預防愛滋病最有效的方法之一，也通常是規劃希望達到的預期效果。

最後，另外一項分辨行為監測和大部分其他類型的行為研究的因素，便是前者講求資料的迅速傳播和容易理解。許多行為研究的問題在於它需要長時間來處理、分析數據，然後才能夠報告發現和結果。由於行為監測要應用於實際規劃上，而你亦希望根據調查結果來調度規劃，所以必須迅速取得結果。因此，行為監測最重要是擁有一個非常簡短的工作循環系統。這一般在不多於三個月內，你便要把收集得來的數據以報告的形式，向有關的決策執行者匯報。

行為監測的設計

現在談談設計行為監測系統的問題。我的講題是理論和實踐並重，讓我把它系統分成五項主要的問題來討論。我會介紹各項問題背後的理論，談及理想中希望可以做的，再討論實際上一般可以做到的，以及所能獲得的行為資料。五項問題包括：一) 行為監測系統希望追蹤哪一類群體？二) 怎樣在這群體中進行抽樣？三) 應該運用甚麼指標，即應該搜集有關所選群體的甚麼行為資料？四) 實際上怎樣獲得資料，即採用甚麼方法搜集有關風險行為的資料？五) 怎樣處理所得的結果，即該怎樣把行為監測的成果向有關的決策者匯報？

你會挑選甚麼樣的群體？

第一項問題是你會挑選甚麼樣的群體來進行行為監測？這裏頭的理論相對簡單：你會挑選那些跟地方上的愛滋病流行最有關連的群體。這裏須重申，由於愛滋病在各國流行的情況皆有差別，所以相關的群體亦各地不同。若果我要在美國設計行為監測的系統，鑑於當地男同性性行為者和使用針筒注射藥物的人士佔了新感染愛滋病者的大多數，所以便應把他們列入行為監測的系統之內。在其他

國家，你或會選取例如貨車司機、自由貿易地區域或海外合約員工、軍人、移民僱員或其他處於高危狀態的群體作為監測對象。但在實際情況下，卻有許多不同的因素影響你的選擇。此外，「現實世界」的因素亦會影響你的選擇。我們並非活在一個理想的世界，所以亦不能期望把所有相關的群體列入監測範圍之內。

挑選群體第一個要考慮的因素便是分析本地的流行病及行為狀況。舉個例子，在分析愛滋病個案或追查最新感染情況時，若發現某些群體出現的比率相對地高，他們便很可能成為你行為監測系統的對象。又如果你獲悉某些高危行為經常在某個群體中發生，即使目前不能確定它的數量，你也會考慮及早把它們列入監測系統之內，以便掌握實際發展情況。

第二個舉足輕重的因素便是考慮是否有方法接觸這類風險群體並進行抽樣工作。我們把行為監測界定為有系統及重複地進行的橫切面調查，亦即是說可重複地以相同手法在群體中抽取樣本。若缺乏有系統的方法來抽取發生風險行為的地點樣本，或找到相關的群體來做抽樣工作，便不可能重複相同的調查。

接觸群體的局限性通常是設立行為監測的一個主要障礙。例如許多國家希望針對男性同性性行為者做行為監測，卻苦無方法接觸該類社群。事實上，這些群體過去往往和政府或負責公眾健康的官員有過不愉快的經驗，所以並不信任他們。結果從事行為監測的人員亦無法持之有恒地找到足夠的對象來進行重複測試。接觸的問題通常都和歧視及標籤有關。對國家規劃或政府官員來說，那些被邊緣化的群體往往難於接觸，因此，有需要透過其他途徑，例如與非政府組織合作，藉著邊緣群體對他們的信任，打開相互溝通之門。而最重要的是社群本身有機會參與，並明白搜集得來的資料將會反饋到預防及醫護的項目上，從而惠及他們。

第三項有關挑選群體所要考慮的因素，在於推行計劃的目標。一般規劃希望通過監測進行對防治項目的評估，所以應選取現時規劃中重點關注的群體，以便觀察他們的風險行為是否有增加或減少，從而決定規劃的成效。

此外，政治及文化的考慮亦相當重要。有時社會上的政治勢力對某些行為噤若寒蟬。在美國，這個問題肯定出現不止一次，當權者嘗試蒙蔽我們對男性同性性交及年青人性行為的認知。面對這種情況，你在挑選群體時便要考慮這些人的關注。這並不表示你應該接納他們的異議，並因此放棄揀選某個群體，而是這因素或會影響你所獲的經費和支持，所以做決策時須一併考慮。在挑選群體後，很多時都需要保持低姿態，並切忌把調查結果向受影響群體以外宣傳，避免引起強烈的不良政治反應。

還有一點，雖然我不會在這裏贅述，便是選擇群體亦視乎愛滋病的流行程度。在初期，當愛滋病只存於最高危人群，遏止愛滋病毒傳播的工作包括為這些群體提供有效的預防和醫護計劃。這便需要有上佳的行為監測來鑑定計劃是否成功。及至後期，當流行程度普及整個人口，便有需要把監測系統擴展到一些低危的群眾，特別是年青人。

最後一個影響你選取對象的因素便是你擁有的財政資源。你不可能對每個群體都調查，甚至連調查所有較高危的社群也不可能。你得從中作出抉擇，選取那些你認為是最重要或與你目前處境最大關連的群體。

究竟各國選取了些甚麼類型的群體？讓我介紹幾個例子，在印度泰米爾一帶進行監測選取了女性性工作者、男女工廠工人、男女大學生、男性貨車司機及男性性病門診病人。在柬埔寨則選取了女性性工作者，女性啤酒販賣員、在職婦女、軍隊及警察、男性電單車司機及職訓學生。在泰國，國家行為監測計劃包括了男女工廠工人、男女學生、軍隊徵兵及孕婦，而在曼谷的系統亦包括女性性工

作者和性病診所男病人。在許多亞洲國家，商業性行為在愛滋病的蔓延扮演重要的角色，所以不少國家以從事性工作者為跟進對象。這些活動成為傳播愛滋病的重要線索，有助開展預防計劃及建立支持系統。

從理想的角度來說，我們也會把病人包括在內，但要找他們做行為監測，一般都很困難。有許多國家發現工廠工人較文職人員或其他行業存在更高的風險，不過這點在不同國家之間亦有分別，有時甚至在同一境內也因地而異。柬埔寨的情況非常有趣，他們視啤酒販賣員，即為本地公司推銷啤酒的年輕婦女，為監測的對象之一。這是基於相信她們和工作上接觸到的男性有活躍的性行為。此亦強調了在確立監測系統及選取對象時，要先了解當地情況的重要性。

怎樣從這些群體中抽樣？

事實上，所有有關群體都可以透過某些方法接觸，但一旦選取了可接觸的群體後，接著的問題便是怎樣從中作抽樣過程？答案理論上非常簡單：你需要一個若干規模的隨機樣本，足以看到某種程度的行為改變。若果隨機抽樣的方法可行，便可運用簡單的公式，根據現時量度的變項及預期兩次調查之間所起的變化，計算樣本的大小。可惜現實中可以數列的群體為數有限，更遑論從中隨機抽樣，訪問他們有關風險行為。這點對被邊緣化或歧視的社群特別真確。所以實際上我們嘗試盡可能找到一個最吻合的隨機樣本。與此同時，我們須留意控制樣本的大小以配合成本的限制。

譬如說你的理想是找到三千個人，但實際上卻欠缺足夠的財力 — 每訪問多一人便增加多一分成本，所以通常只能做到三至四百個樣本。成本除了影響樣本的大小，同時亦限制了可作跟進的群體數目。跟進的群體數目愈多，監測的人數便愈少 (假設行為監測的財政預算是規定的)。若果數目太少，便無法測量行為上的變化。即使行為迅速改變，要量度它們的變化通常至少需要數百個樣本。因此，行為監測的財政預算可以嚴重限制可作跟進的群體數目。

實踐中首先要做的是釐訂抽樣藍圖。在許多國家通常是以地區為基點，做法是列舉一系列發生風險行為的地點及可在什麼地方進行抽樣。例如性工作者可在妓院找到。在泰國抽取性工作者的樣本，首先列出在某處地區的妓院，然後抽選妓院的樣本，再從中揀選性工作者做訪問。至於工廠工人，則可隨機選取工廠探訪，然後從廠內的工人抽樣。

由於希望可以盡量保持樣本的或然性，所以一般都會把所有可能的地點排列出來，再從中隨機抽樣，然後從選取的地點中隨機抽取符合要求的人。這並不是一個十全十美的方法，不及在一張包括全人類的名單上來一次真正的隨機抽樣，不過這已是最好的方法了。你可以運用統計分析來決定所需樣本的大小。只要找來統計師或一本統計的良書，列出你所考慮的行為改變速率，便可計算到樣本的大小。

須非常小心注意的是系統的重複性。為了每次都能抽取類似的樣本，所以細心留意群體的變化是非常重要的。若該群體的流動性高，經常轉換地點，在決定抽取樣本的地點類型時便得考慮上述因素。你不會想選一個流動性太大的群體進行監測，因為無法重複抽樣，這些都是要仔細思量的問題。

最後須考慮要相隔多久進行一次抽樣？答案通常都建基於預期行為變化的速率。若果是一般人口樣本，你大概不會做多過兩年一次，因為行為的變化不會過速。反過來說，在例如性工作者或用針筒注射藥物人士的群體，行為的變化實際上是以月計的，所以針對他們的行為監測約每年一次。若果進行超過一年一次的監測（例如六個月一次），在許多情況下，除了耗費資源外，亦不會提供真正有用的資料，使你的規劃獲得改善。所以你經常要考慮的是：這些資料有什麼用途？若果用途不大，便無必要收集。

還要一提其他幾項抽樣要考慮的因素。首先是關於選址的問題。有些認為應該每次抽樣都在同一處地方進行，因為要做重複抽樣，但當中牽涉不少問題。若返回同一處地方，很可能會訪問到一些相同的人，他們知道你提出的問題，於是便講一些你希望聽到的答案，若他們認為你想聽到多些使用安全套，他們便會投其所好報稱自己常用安全套。另一方面，若你隨機挑選不同的地點，例如不同的工廠，若工廠之間分別太大，你便無法進行重複抽樣。然而，若果所選的地區有足夠的工廠，而你亦在工廠中貫徹隨機抽樣的方法，相信不會有甚麼問題。

另外要考慮的是你所選取訪問或做問卷調查的對象的特徵。由於研究的是風險行為，所以通常會限制受訪者年齡。我們知道人一生中不會經歷相同程度的風險行為。當年紀很輕時，一般不會染指任何危機性的行為。從青春期踏入成年早期，人們在性方面會變得非常活躍或開始注射藥物，高危行為嚴重。一旦成家立室後，這方面行為又逐漸下降。行為監測系統要量度的是風險行為，抽取一個十五至四十九歲的樣本聽起來非常科學，但大部份三十歲或以上人口均沒有從事風險行為。鑑於資源有限（因此監測系統只能負擔限量的監測），便需要作出年齡的規限。所以在大部份的行為監測系統中，他們都會採用一個較窄的年齡界限來選取訪問對象，例如選擇十五至二十九歲的人士。這方面仍然得視乎本地的情況而定。若果人們到二十歲時在性方面活躍起來，你便要選擇二十至二十九或二十至三十四歲的界限。年齡限制能增加你量度群體風險行為的能力，並追查到行為發生的變化，而這正是行為監測的最終目標。

應該採用甚麼樣的指標？

跟著的問題是應該採用何種的指標。明顯地可以研究的問題比比皆是，但若果所得資料對整體項目的策劃、執行或評估沒有直接幫助，亦只是得物無所用。就理論而言，資料搜集的範圍應該因既定的規劃作釐定 — 資料應該有助採取實際行動。舉例說，若果進行針對使用針筒注射藥物人士的項目，所需的資料應包括共用針筒的習慣、夥伴的數目、清潔用具的習慣等。又例如項目對象是性工作者，所需的資料便有所分別（使用安全套的情況、顧客使用服務的頻密程度、非交易式性伴侶的數目等）。教育及衛生部門或會要求另外一類的資料，例如年青人或年青輟學者的風險行為。

若果你集齊所有負責人，要求他們列出所需的資料及各種的指標，結果清單上會包括五十、六十或七十個不同的項目。但若要量度所有列舉的項目，大抵做一個訪問要花上至少一小時，甚至更長的時間。而且還要耗費不少人力物力，對於許多面對成本及實力限制的國家或地區性計劃根本不可行。因此，一般的行為監測都會選擇最重要的幾項行為指標，並把範圍縮小。

這樣做可以把一般訪問維持在十五分鐘以下，以便能迅速完成訪問，並在相對短時間內找到理想中樣本數目，這樣便可以在一個月的時間內對所有群體實施整個行為監測系統。縮小指標的範圍亦意味數據可以更迅速地獲得統計和分析，並在第一時間內反饋到現行的規劃活動中。因此縮小指標的範圍是基於成本和時間的考慮。

指標的選取亦會因應研究的群體而相異。例如對性工作者，關注的問題包括他們每晚接客的數目和使用安全套的頻密程度，若果他們把顧客分類（例如常見的熟客相對於一次過的顧客），那麼便要分辨各類型顧客使用安全套的情況。針對一般人口，世界衛生組織過去曾列舉幾項主要的指標（見表一）。若果研究的對象是青年人口，進行第一次性交的年齡便是一個至為重要的指標，因為其中一個對青年男女有利的行為改變便是推遲性交的年齡，保障他們免受愛滋病傷害。在非洲許多受影響嚴重的地區，年青人較遲才開始有性經驗，主要因為愛滋病橫行和他們獲得有關預防此病的訊息。

表一、世界衛生組織建議的一般人口指標

1. 第一次性交的年齡（青年人）
2. 性伴侶的數目／特徵
   - 曾有性經驗的百分率（青年人）
   - 過去一年性事活躍的人口百分率
   - 過去一年有一個或以上非固定性伴侶佔的百分率（PI 4）
   - 過去一年性伴侶的平均數
   - 過去一年召妓的男性百分率
   - 非固定性伴侶佔的平均年齡（青年人）
3. 使用安全套
   - 曾使用安全套的百分率（青年人）
   - 報稱在上次與非固定性伴侶佔性交時使用安全套的人口百分率（PI 5）
   - 報稱過去一年與非固定性伴侶性交而恒常地使用安全套的百分率

如表一顯示，你也希望獲得趙教授在他講題內提及指標類型的資料，即關於不同性伴侶的數目和特徵。特別是曾有性經驗的年青人百分率，這當然和第一次性交的年齡有密切關係。你亦希望知道過去一年在性方面活躍的百分率。更確切地說，你並不著意那些和妻子發生性行為的人士，反而關心那些有婚外性行為的情況，因為那才是較有可能傳播愛滋病的途徑。因此，其中一項最普遍的指標是過去一年擁有我們稱為非固定性伴侶的百分率。這其實亦是世界衛生組織預防指標清單上第四號的預防指標（P1-4）。很多時你都會問及過去一年性伴侶的數目或召妓的男性百分率。我們經常發現一個現象，年青婦女一般擁有比她們年長的男伴侶。若果愛滋病在年長男性的流行程度較年輕一輩為高，便有可能增加年青婦女的危險。

在所有指標的清單上都會包括幾項有關使用安全套的問題，例如年青人當中曾使用安全套的百分率，或在上一次和非固定伴侶性交時有否使用安全套。在釐定指標時，須注意分辨和上一個伴侶使用安全套及恒常地使用安全套，即在所有與非固定伴侶的性交中皆使用安全套。各種預防規劃都應該以提倡恒常使用安全套為目標，而那亦是你應量度的項目之一。

在選取指標時最後要考慮的兩個方面：第一方面是選擇一些可以和諸如世界衛生組織的預防指標互相比較的指標。這樣便較容易在不同國家或國內不同地區之間互作比較。讓我重申趙教授剛才所講的預防指標。本年七月我在瑞士日內瓦時，我們搜集可提供PI 4和PI 5的國家數目（過去一年擁有非固定伴侶的百分率及上次和非固定伴侶性交時使用安全套的百分率）。全世界只有少於三分一的國家能提供上述資料，即使那些能夠提供資料的國家，他們的資料往往只是根據一個極細的樣本和極有限的數據，而非建基於一個足以普及整體人口的樣本。故此現時我們對於全球和各地的風險行為所知是非常有限。

應該如何搜集數據？

下一個問題是應該怎樣搜集數據？理想地當然是採用一個既真確（獲得正確的資料）又可靠（當每次在同一時間詢問相同的人皆獲得相同的答案）的方法。但在實際情況下，我們必須倚賴被訪者講述自己的風險行為，當中不乏潛在的問題。

首先被訪者不一定每次都講真話，或是不一定能夠準確地評估他們自己的風險行為的實況。若果你問某人過去一年擁有多少個性伴侶，他們未必可以清晰記憶這麼一段長時間內的伴侶數目。負責訪

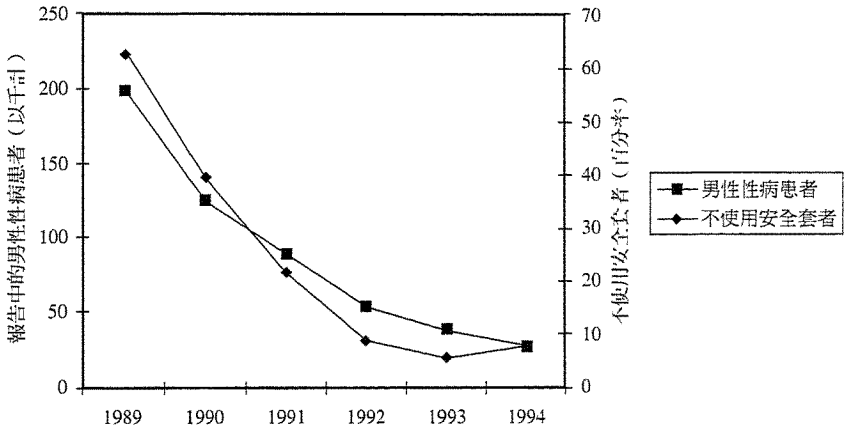
問的人員往往會影響結果。若果訪問員本身對發問有關性或濫用藥物的問題顯得不自在，那麼便很難從他那裏獲得可靠的資料。最後便是對保密性及私穩問題的恐懼。假如被訪者不相信談話資料保密、不記名，或無法追查資料來源便會影響回應。在設計監測系統時，這些都是須考慮和處理的實質問題。

換句話說，在執行行為監測系統時，有絕對必要花時間訓練系統工作人員的技巧。他們需要和例如本地大學的社會科學家緊密合作，發展個人和訪問技巧，學習詢問關於風險行為的技能。這方面的培訓不可或缺，因為如果工作人員獲得良好的培訓，便會有良好的表現，而你亦可獲得第一流的資料。假若他們戰戰兢兢，或完全缺乏訓練，那麼你所獲得的資料參考價值亦有限。

另外一項要考慮的便是如何評估搜集得來的行為數據的質素。在某些情況下，你會採用生物（疾病）指標作為後備數據，或作為實際情況中另一獨立參考指標。對於那些質疑自我匯報的行為數據是否反映愛滋病或性病傳播關係的人來說，我想向大家示範這種關係的一個例子（見圖一）。下列圖表是由泰國兩組數據構成。一組是到政府診所求診的男性性病患者，圖中以正方形代表。第二組是不使用安全套者，即自稱在上次和顧客交易時沒有使用安全套的性工作者的百分率。上述數據是泰國的愛滋病哨點監測搜集得來的。這一系列完全獨立的數據，是來自國家不同層面，但你可以看到它們發揮異常良好的追蹤作用。即是說，當安全套使用率上升（或不使用率下降），性病亦迅速減少，且沿著類似的軌跡發展。

圖一.　性工作者不使用安全套及國家性病報告的按年走勢

資料來源：泰國衛生部性病科及流行病學科



在泰國我們曾經在許多不同較細的樣本中見過類似的調查結果，我們一方面在留意生物指標，另一方面把它們和行為報告比較。因此我相信如果能在搜集行為數據方面做得滿意，它便可以提供非常有用的資料，了解關於愛滋病及性病傳播的真實情況。

應該怎樣把調查結果傳播？

最後，讓我簡述應怎樣把調查結果傳播的問題。理論上你希望把它們傳給所有可以採取相應行動的人，而不單是把它們寫在報告之內。搜集資料的目的在於達致發展更有效的愛滋病預防及醫護規劃。換句話說，把數據編成報告，然後向衛生部提交並不能發揮很大的作用。反過來，你需要向不同人士傳達這些資料，他們包括項目經理、決策者、公眾及受調查的社群等。因此，在設計監測系統時，

從一開始便需要預備一個週詳的計劃，把調查結果作廣泛傳播。此外，若果要把結果傳達到有關人士，便需要利用多種不同的傳播途徑。

首先你需要備有詳盡的報告。有些人要求知道所有詳情包括你訪問的內容。但你亦需要為新聞界準備特別的新聞稿，或準備接受電子傳媒的訪問。其中一個促使愛滋病繼續蔓延的因素便是愛滋病及其傳播途徑常隱藏於無形。只有讓公眾警覺愛滋病的存在和風險行為的普遍性，他們才會認真對待這個問題。這方面傳媒可以發揮很大作用，一方面把訊息向公眾傳開，另方面致力影響高層決策者。舉例在菲律賓，當菲律賓大學和東西中心合作調查年青人的風險行為時，傳媒對現時菲律賓年青人的實況極感興趣。在連續數星期的週日報章中均有專題報導關於蛻變中的菲律賓青年人的風險行為。在某段時間內，菲律賓大學的研究員更是電視及電台新聞及清談節目的常客。

由於大部分決策者都不會花時間閱讀一吋厚的報告，所以必須準備一份政策簡介。事實上，他們不會閱讀任何超過兩頁的東西，所以應以極精簡的政策簡介，告訴對他們來說重要的事項，及解釋你的發現如何影響他們的工作。別如數家珍般解釋所有詳情。他們根本不理會你抽了多少個樣本或做了些什麼，他們只有興趣知道底線在哪裏 — 最基本的事實。告訴他們安全套的使用率升高還是下降了，經濟活躍的人口中有百分之幾有愛滋病的潛在危險。那才是他們想知道的資料，和可以推動他們採取行動的數據。你同時亦可以利用和各大機構或部門的會議來確定他們了解研究結果的含義。

你所搜集的資料必須向資料來源的群體匯報，因為資料搜集的原意是要說服他們減低風險行為。所以回到被調查的社群是很重要的，告訴他們「這便是發生於你們當中的風險行為，它們有上升（或是下降）的趨勢。」若果有下降的趨勢，便會鼓勵他們所作的努力，証明發揮一定的作用。若果是上升的話，便會敦促不少人逐漸改變他們的行為，或支持擴大社群的預防性活動。因此，有絕對必要把資料回饋到你原來搜集數據的群體。

最後我認為是非常重要卻又常被忽略的一點 — 把結果向最重要的人物傳達。通常最佳的方法是透過一對一的面議。最好是能夠約見衛生部部長，向他說明關鍵的地方，而不只是呈交報告或書本給他。長遠來說，即使是十五或二十分鐘的會議也會發揮很大的效用。因此，在設計監測系統時，仔細考慮須有多種的傳播途徑。搜集行為數據卻又疏於傳播是費時失事的做法。

我的講題到此為止。在下午的圓桌會議，我希望大家可以考慮上述各項因素，並開始思考需要一個什麼樣的行為監測系統。又如果你現時已有一個這樣的系統，想想是否有處理我剛才提及的各項問題。

專題演講 (3)

公共衛生監測與臨床管理 — 介面

李瑞山醫生

引言

我將會集中探討在進行愛滋病感染和愛滋病工作時所面對的一個問題，即臨床管理與公共衛生項目之間所欠缺的聯繫。兩者的目標和範圍顯然存在本質上的分別，但愛滋病是一個獨特的情況，因為有不少醫護工作者同時擔任臨床管理和公共衛生兩方面的工作。

概括來說，公共衛生監測的定義是收集充足的準確資料，以引導我們為社會設計、實施和監察有關的規劃。其中一個重點是從這個規劃中所衍生的「回應」。另一方面，我們亦關注到個別病者所提供的臨床服務。英國的醫務委員會對良好臨床照顧的定義包括以下的元素 — 充份的評估、調查、治療和適當的轉介[1]。

公共衛生監測與臨床管理兩者之間有什麼共同之處？就監測來說，回應是來自公眾的層面；而當我們作出臨床診斷時，則是以提供照顧的方式，向個別病者作出回應。在思考的過程中，我們運用了同一的邏輯。它們兩者之間存在什麼聯繫？[圖一] 顯示病者個案匯報讓我們有機會填補兩者之間的空隙，為臨床醫護人員和傳統監測系統提供聯繫。另一方面，從監測系統中所獲得有關死亡率、發病率和行為的資料，可用作有意義的分析，並向協助擴大回應層面的專業醫護人員發佈。

公共衛生監測與臨床護理之間存在一種複雜而微妙的聯繫。過去數年的一些現象很富啟發意義，讓我們了解有關愛滋病的公共衛生監測與臨床護理之間的動態關係。

古巴的例子

古巴的例子可說最具爭議性。在一九八五年，古巴開始對全體人民進行愛滋病病毒抗體測試，至一九九三年已進行了一千二百多萬次測試。以數量來說，古巴進行了一次規模龐大的監測活動。經愛滋病病毒抗體測試後證實呈陽性反應的人士，均被送往一所診療院，該院下令禁止感染者在沒有保護的情況下與其他感染者或未經感染的人士進行性行為[2]。有人批評巴西政府為求達致預防的目的而不惜犧牲個人的自由。但我們要注意一點，為使監測計劃能順利進行，古巴推行一個非常完善和有效的臨床計劃。古巴因此建立了一個獨特的社群，而在若干年後亦推行了容許「保釋」的安排。這是將愛滋病規劃的兩項主要工作 — 臨床照顧與公共衛生監測融匯結合的一個極端化的例子。

臨床表現模式與照顧模式的改變

近年來，臨床管理對公共衛生監測的影響已逐漸顯著。在美國，根據最新的統計數據（來自三藩市衛生部愛滋病辦公室的監測報告）顯示，三藩市的愛滋病死亡率大幅下跌，整個美國的情況也是一樣[3]。歐洲[4]和澳洲[5]的愛滋病死亡率似乎亦出現顯著的跌幅，連同愛滋病併發症的發病率也同告下跌。而香港亦出現下降的趨勢。

造成這種趨勢的主要原因是什麼？最主要是科學技術的進步，特別是我們對病毒動態的認識、嶄新的治療技術，以及應用現代的科技對疾病進行監察。醫療技術的進步成功減低了死亡率，並有助改

善愛滋病感染者的發病率。現時建基於臨床資料的公共衛生監測系統所顯示的愛滋病的發展模式，跟十年前的情況有顯著的不同。

過去數年，愛滋病患者的住院個案持續下降。儘管個別國家的臨床系統各有不同，住院已逐步改由專注治療愛滋病毒感染者的門診服務所取代。香港的情況也不例外[圖二] [圖三]。事實上，末期併發症的數目亦逐步下跌。

為說明這一點，讓我們探討英國的情況。根據一項一九八九年的分析顯示，英國採用了多種不同的模式，以及逐漸邁向以社區為本的護理方法[6]。一份由 University College and Middlesex School of Medicine 於一九九二年國際愛滋病會議上發表的研究報告顯示，自八十年代末起，住院和門診服務的需求開始逆轉，顯示需要住院接受深切治療的併發症出現下降的趨勢。除了護理模式出現變動外，預防和治療與愛滋病有關的併發症的效能亦相應提高。而這些都是在三重混合治療法面世前已取得的成果。

臨床照顧對愛滋病感染/愛滋病監測的影響

我們對愛滋病毒感染和愛滋病的自然發展過程的了解有所改變，這亦影響了就監測系統所蒐集的資料的意義。愛滋病是一個例子。蒐集愛滋病的數據除了可以讓我們評估疾病的個案數目，更可用以估計社群內的愛滋病毒感染率。若果我們知道愛滋病的個案數目及愛滋病帶菌者在某段特定時間內會演變為愛滋病患者的比例，則可以推算愛滋病毒的感染率。試想想若有效的治療導致減少出現臨床併發症，因而減低愛滋病發病率的情況[圖四]，本來用以推算愛滋病毒感染率的公式便不再適用了。

過去，大家普遍認為愛滋病的數目減少，即意味著愛滋病毒感染率亦同樣下降。但時至今日，愛滋病數目的減少只是代表併發症的演變進程放緩，而愛滋病毒感染率則不一定受到影響。比較十年前來說，人們對愛滋病毒感染和愛滋病的看法已出現很大的改變。對於一些可提供有效抗病毒治療的國家，愛滋病已不能作為評估愛滋病毒感染在流行病學上的有效指標。其次，在某程度上採取預防治療確可減低伺機性感染，因而減低其作為指標的功用。

愛滋病的定義與再定義

愛滋病究竟代表什麼？雖然愛滋病一詞已沿用超過十五年，事實上，不同的人士或國家，對愛滋病所下定義亦有差異。

愛滋病是一個基於臨床診斷的監測定義。在臨床診斷方面，愛滋病是指感染愛滋病病毒的人士發展至嚴重缺乏免疫力的階段。我們可以了解，就臨床的角度而言，不同地方對愛滋病有不同的看法。在美國，愛滋病的定義為對愛滋病病毒抗體測試呈陽性反應，並顯示美國疾病控制及預防中心（Centres for Disease Control and Prevention）所列的二十六種指標疾病中最少一種併發症。於一九九三年，他們增設另一項標準：體內的CD4淋巴細胞數目少於200/μl。所以，當我們比較愛滋病的資料時，必須小心驗證有關方面對愛滋病所作的定義。

在二十六種經公佈的指標疾病中[7]，有三項新的指標，即肺結核、復發性肺炎和子宮頸癌。其中以肺結核對美國和其他地方的愛滋病監測數據最具影響力。例如，一份一九九三年在意大利發表的研究報告顯示，在採用新的監測定義後，愛滋病的個案報告數目增加了百分之一百八十八，而整體的生存機會亦同告上升。跟其他地方不同[圖五]，香港只在病者的 CD4 含量低於 200/μl 時，才把肺結核納入愛滋病的指標疾病內。我們採用這個方法，主要是因為肺結核在香港來說非常普遍，但愛滋病

毒感染率相對卻較低，這與美國的情況剛好相反。儘管感染愛滋病病毒可能是患上肺結核的先兆，但由於香港的肺結核個案較為多，每年約六至七千宗，而且與愛滋病毒感染並無關係，故這個定義在公共衛生層面的重要性備受質疑。

[圖六]顯示香港衛生署在過去十三年所匯報有關診斷愛滋病的所有指標疾病。其中最常見的為*肺囊蟲肺炎*，其次為*結核病*，然後為*馬氏青霉菌病*。在結核病的個案中，大部份為病者的 CD4 含量少於200/µl的肺結核。如果沒有這個嶄新的定義，愛滋病的個案總數將不會達到三百五十宗。然而，這並不單是準確性的問題，更涉及我們怎樣理解流行病學數據。我們界定愛滋病和提供治療的方法可能會影響公共衛生監測結果，而監測系統只可反映從臨床計劃所取得的數據。

香港及很多其他國家並未將 CD4 淋巴細胞數目的計算方法納入愛滋病個案的定義，使情況更為複雜。除了社會和科技因素外，不同族裔之間的健康人士和愛滋病毒感染／愛滋病患者體內的 CD4 數目和百分比亦可能不盡相同[8]。在香港，CD4 含量為 200/µl 的人士，其健康狀況可能與具同等細胞數目的白種人不同。圖七概括列出不同的 CD4 含量和上述兩類人士的關係。而為何出現這樣的分別，則仍有待研究。然而，這是一個適切的例子，證明研究所帶來的嶄新資料可能改變本地監測系統的運作，讓國際之間難於進行比較。

其他觀察

其他的幾項觀察對愛滋病規劃的兩項工作 — 臨床服務和公共衛生監測系統產生影響。其中一項為 ACTG 研究 076 報告，列出對懷孕婦女進行 zidovudine 治療，以預防圍產期感染的成效。接受 zidovudine治療後，圍產期感染率由百分之二十五點五減至百分之八點三[9]，這項治療已成功減低在圍產期感染愛滋病的情況。此外，評估初生嬰兒的感染數字已不再是估計生育年齡組別婦女的愛滋病毒感染率的有效方法。

愛滋病毒感染的診斷方法可以對公眾衛生監測所推斷的流行病學趨勢造成影響。近期公布的一份研究報告指出，以匿名和保密形式進行測試，可使病者及早獲得醫治。若為這些病人提供有效的抗病毒治療，在短期至中期而言，可能會減低他們患上愛滋病的比率。在香港，愛滋病毒感染的診斷工作是在醫院、診所和透過匿名測試服務進行的。在所有愛滋病毒感染個案中，百分之十六點七[圖八]的個案是由政府的社會衛生科診療所（性病診所）所報告。由於這個組別的個案大部份並無顯示徵狀，跟公立醫院的情況截然不同，故個案的比例很可能影響愛滋病趨勢的推斷。最後，自行測試的方法亦日趨普遍。近期一份報告指出，自行測試方法適合有較高感染機會但又不願意以其他方式測試的人士使用[10]。預期在未來數年，這個方法對愛滋病毒感染／愛滋病趨勢的影響將會引起各界的關注。

結論

在愛滋病毒感染／愛滋病規劃中，臨床診斷在病者照顧和公共衛生監測均擔當核心的角色。提供照顧服務不單可使個別病者受惠，更有助妥善地預防感染、疾病和負面的社會影響。上述都是一個有效監測系統的目標。圖九及圖十顯示臨床診斷與公共衛生規劃之間的聯繫。臨床項目為公共衛生監測系統提供大量的資料；包括其他干預措施，如病人治療、通知伴侶及預防性治療；以及有助就感染的自然發展過程和行為模式進行有關研究。而公共衛生規劃則會為臨床診斷提供有關現時及日後的疾病發展趨勢資料。後者在為愛滋病毒感染／愛滋病患者或感染機會較高的人士擬定臨床服務模式具有莫大的價值。愛滋病更提供了一個機會，讓我們了解這兩項計劃在公眾和個人層面上的互動關係。

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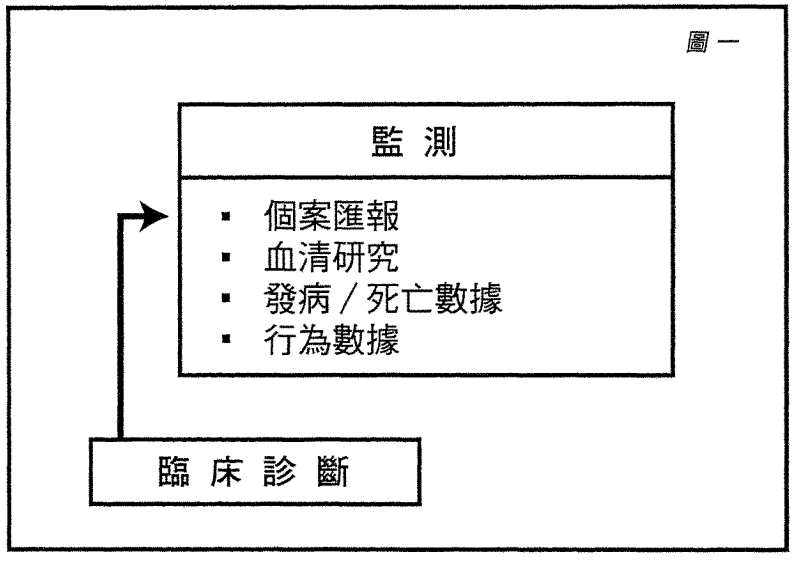
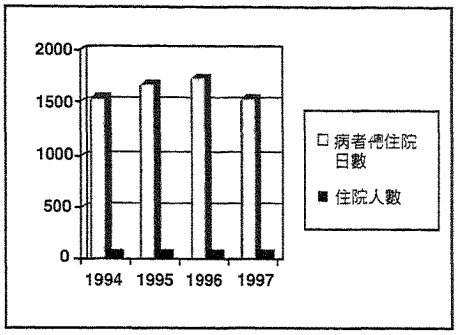


圖二

住院服務

香港伊利沙伯醫院愛滋病服務



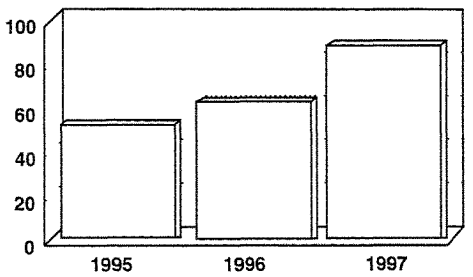
資料來源

一九九八年愛滋病顧問局內部評估報告（香港愛滋病規劃和狀況回顧）

圖三

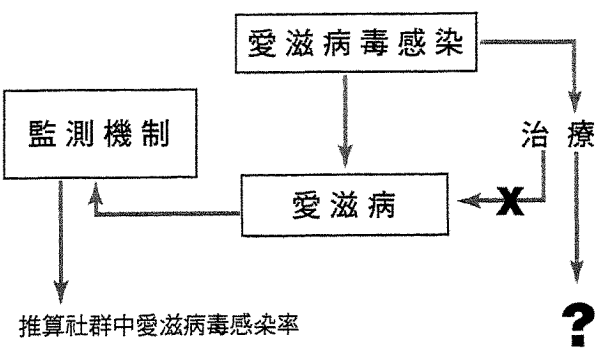
最新的病人登記數字

香港衛生署愛滋病診所



資料來源　一九九八年愛滋病顧問局內部評估報告（香港愛滋病規劃和狀況回顧）

圖四



圖五

愛滋病個案定義

美國

愛滋病病毒抗體測試呈陽性反應
加上
二十六種指標疾病的其中一種
或
CD4 < 200/μl

香港

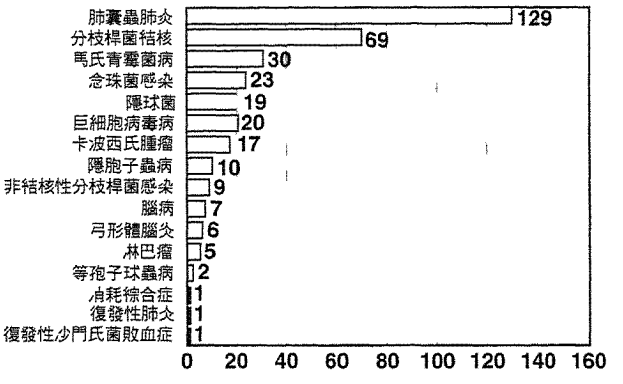
愛滋病病毒抗體測試呈陽性反應
加上
二十六種指標疾病的其中一種
經修訂為：

- 如CD4 < 200/μl，肺結核則被包括
- 另加*馬氏青霉菌病*

圖六

診斷愛滋病的指標疾病

香港 一九八五年 - 一九九八年六月（n =349）



圖七

CD4 含量結果的差異

	中國人	白種人
CD4%	36	43
CD8%	30	33
NK 細胞%	20	14

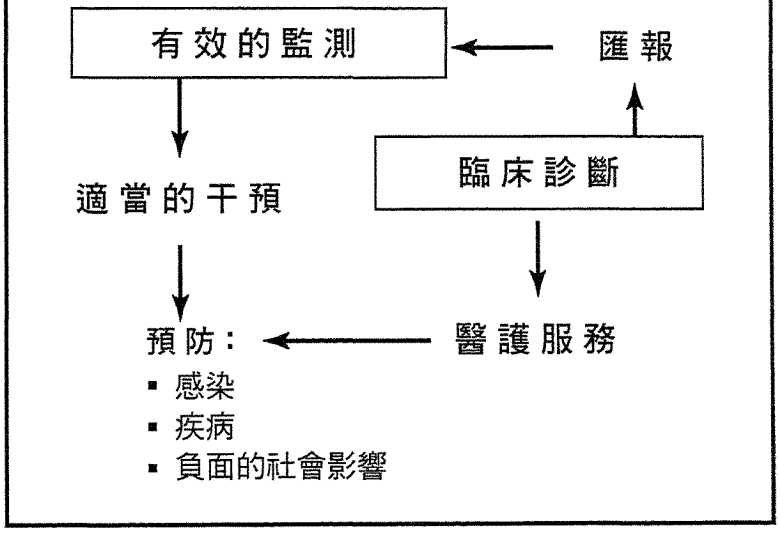
資料來源：Kam KM, Wong KH, Lee SS Interpretation of CD4 T lymphocyte values in different HIV infected populations J AIDS 1998, 17 185.

圖八

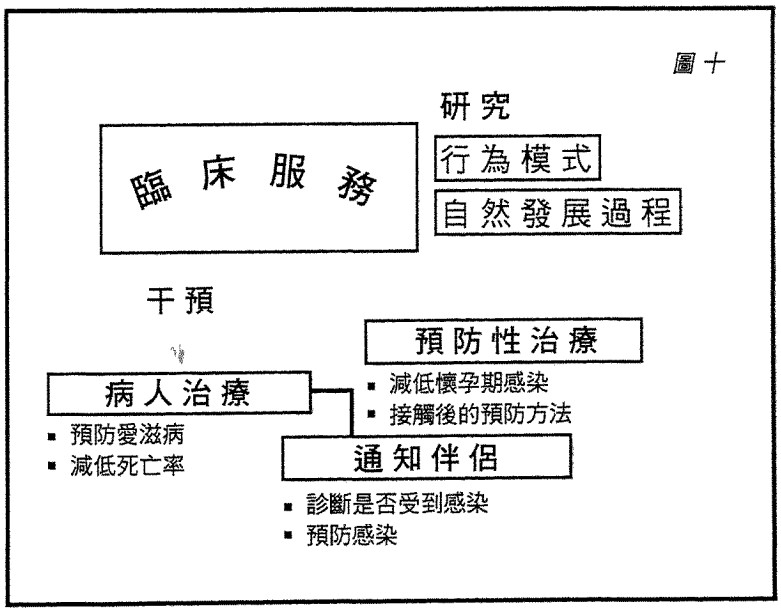
愛滋病毒感染和愛滋病個案報告的來源（香港，截至一九九八年十月）

	愛滋病毒感染	愛滋病
愛滋病服務	172 (15.6%)	42 (11.7%)
性病診所	183 (16.7%)	26 (7.2%)
公立醫院及診所	406 (36.9%)	204 (56.8%)
私家醫院／診所／化驗所	301 (27.4%)	83 (23.1%)
其他	36 (3.2%)	4 (1.1%)
總共	1098 (100%)	359 (100%)

圖九



圖十



問答環節

主持：

現在請趙教授、添布朗博士和李瑞山醫生上台。以下是問答環節，由於時間有限，只有十五分鐘，希望各位環繞所討論的主題發問。

參加者甲：

我想發表一下意見。添布朗博士和趙教授兩位講者曾談到數字的問題，一位告訴我們數字的重要性，而另一位則探討如何得知有關數字。他們提醒我們得知數字的成本高昂，所以必須非常謹慎和精心挑選。這是研討會中一個非常重要的挑戰，因為我們文化和生活環境背景有很大的共通點。我們有很大機會選出應該挑選的指標。我們可以挑選也許適用於整個地區的指標。主席，我認為這基本上界定了我們應做的事。但在作進一步的思想指導前，我們需要在如何詮釋數據方面達成一定的共識。我想李醫生在這方面給了我們一點啟示。獲取數字並非純粹一個數學問題，因為當中還有很多使人困惑的因素。我非常欣賞三位嘉賓的出色演講，多謝。

主持：

多謝，我想在座大部份人都有這樣的想法。請發問。

參加者乙：

我想問添布朗博士，你說利用所收集的數據，配合規劃評估程序或修訂規劃內容，可否舉例？

添布朗博士：

我想我們需要注意評估的定義。基本上，在社群的層面上，我們可以行為監測評估所有在社群內進行的活動的綜合影響，而不能評估任何個別計劃的成效。但是，對地區性、省分或國家的規劃來說，真正要關注的是所有活動所累積的影響和成效。只有這樣，行為監測才可變得有價值。

以泰國為例，當地設有由衛生部主持的國家行為監測系統，以及規模較小而在特定城市設立的行為監測系統 — 曼谷行為監測系統。這兩個系統非常清楚的顯示存在已久的高危行為數字持續下降，這是整個泰國和曼谷進行大量預防活動的成果。由此看來，行為監測在決定整體規劃是否能產生影響方面十分有用。但是，這個系統不能直接用於評估整體規劃中某一項成分的影響。在與贊助者交談時，這是重要的一環，因為很多贊助者都希望確實知道所資助的個別項目的影響。如果要做到這點，你需要對個別項目進行評估，否則，你便無法控制所有其他可變因素，包括在整個社群出現的其他活動。

參加者丙：

李醫生，作為兒科醫生，我們在上月份遇到一些有關非法入境者的問題，我想與兩年前香港在主權回歸前的情況一樣。我們替這些婦女進行某些疾病的檢驗，但卻沒有對愛滋病病毒進行有系統的檢測。你認為是否應該在這方面進行調查，以作為完善監測系統的一部分？你也知道，這些婦女生育後便會返回內地，但她們的子女卻會留下，所以我們必須知道他們是否愛滋病毒感染者。我想知道你認為這種檢測是否重要。

李醫生：

我也許可以與你分享一些處理非法入境者方面的經驗，但情況卻不一樣。我是指香港的越南難民和船民計劃。我相信兩者的原理一樣。最主要的是要考慮在發現感染者後如何處理，或心目中有何干預方法。我們至今還沒有實施任何強制性檢測措施。愛滋病狀況只是社群的一個部份，我們選擇在性病診所或透過越南難民營內的社區診所提供自願性檢測。我們應該找尋進行檢測的原因，而不是只顧提供愛滋病病毒檢測。如果我們有理由相信某一人群有較高的感染機會，我們便可以考慮制訂一項計劃，以提供檢測和把握每個機會，向性活躍的人士灌輸愛滋病教育。在你所說的情況下，接觸性活躍女性可促使你開始評定她們對感染愛滋病病毒和性病的警覺性，並考慮為愛滋病病毒抗體陽性者提供任何醫學干預措施。

趙教授：

我希望稍作補充，因為個案尋找和公共衛生監測之間有一個非常重要的分別。在這個舉例中，如果計劃目標是識別愛滋病病毒抗體陽性的女性，從而驅逐她們出境這便是尋找個案。如果希望得悉愛滋病病毒的感染程度，利用資料制訂一項計劃或決策，我稱之為公共衛生監測。你在展開檢測或擬實施的計劃時，必須對計劃目標有透徹的了解，是要作個案尋找，還是要進行公共衛生監測？

參加者丁：

謝謝。我只是希望補充現在所討論關於澳門監測計劃的情況。我們已自 1993 年起實施一個監測計劃，對象包括孕婦。事實上，我們從未發現任何抗體陽性的個案。不過，正如你所說，我們確實需要區別監測和個案尋找。我希望補充的是，產科醫生可能要求孕婦進行愛滋病病毒抗體測試，因為這是一個潛在的風險因素。如果她是非法入境者，可能無法及時進行測試，但我們可在她生育後得知愛滋病病毒的情況。

趙教授：

這基本上是一個有關性伴侶的研究，以受愛滋病病毒感染的男、女性為對象，然後非常審慎地追蹤他們的親密性伴侶，通常是固定的男友、丈夫或妻子。實際的研究個案其實數目很小，所以利用了一些較複雜的統計方法來作部份的計算。不過，這是用了3至5年時間，跟進了約82對，甚至近百對；其中一人為愛滋病病毒抗體陽性的伴侶所得的結果。研究結果和結論與1980年代初對男同性戀者進行的流行病學研究的部份結果一致。當時，研究員嘗試找出同性性接觸傳播愛滋病病毒的比率。在這些1980年代初期的流行病學研究中，估計從男性感染者傳播愛滋病病毒予另一男性的機會率是1比1000，雖然這個風險會因其它額外的因素而增加。

所以，所有關於性交傳播愛滋病病毒比率估計仍然是非常吻合的，這些數字實際上沒有改變任何看法，因為它們基本上是自1980年代初期至中期展開研究的一貫結果。但我們從不低估這些數字的價值。Nancy Padian 的研究實際上是肯定了它們的價值。

添布朗博士：

過去幾年有很多關於安全套效用的研究。基本上，如果使用正確，安全套的效用頗高。例如：部份有關性工作者正確使用安全套和避免穿破的研究發現，知道正確使用安全套方法的比率極高，有99%，而穿破的比率甚低(少於1%)。在此，其中一個重要的信息是他們是否正確使用安全套，所以教導人群適當使用安全套是一個非常重要的課題。

一般來說，我認為安全套的效用不成疑問。在預防愛滋病方面，真正的問題所在，是人們在很多情況下都不使用安全套。其中的原因很多，大部份是未能獲取安全套，或在部份情況下，是由於政治或法律限制，如攜帶安全套則被視為參與商業性活動。因此，性工作者都不帶備安全套，令安全套的使用率大大減低。法律的障礙與在需要時如何獲得安全套的實際障礙同樣重要。探討安全套在預防愛滋病的實際效用的研究結果頗佳，比發揮典型家庭計劃（計劃生育）的功效更佳。在家庭計劃方面，安全套並未視為理想的工具。我認為預防愛滋病最重要的事情，是不要太著眼於少數安全套失敗的比率，我們需要注意90%以上的成功和有效預防愛滋病病毒傳播的比率。這是比較重要的著眼點。

趙教授：

我想就安全套的效用稍作補充，因為我們可以個人和整體人口作為研究安全套效用的基礎。我的部份講題是基於愛滋病病毒的傳播效率較低。要使病毒繼續傳播，你需要一個受愛滋病病毒感染的人把病毒傳染至多於一人身上。如果你使20%、30%或多至50%的高危人口持續使用安全套，便可以將整體傳播愛滋病病毒的機會減低20%或30%。因此，在停止高危人士的密集傳播方面，安全套的使用可能比個人保護擁有更大的影響。所以我們要分辨個人保護和人口效用兩方面。

李醫生：

問題是：當我們在廣東省或珠江三角洲的監測系統下偵測得一名愛滋病毒感染者，我們應該怎辦？我認為答案不只一個。在任何有效的項目中，我們要先考慮往後想做的事。這是因地和因處境而異的。我們不能在尋得愛滋病毒感染者後停止工作。

Management(管理)是一個令人混淆的詞語。我知道這個詞的中文翻譯可能令人產生誤解。我們可以如何處理其他疾病如性病作為參考。在中文的詞義上，臨床管理經常包含監察和控制的意思。不過，我們不要把它與行政控制如公安活動混淆。我們要集中注意如何對病人施行臨床治療。另一個複雜的問題是我們可能被所有先進的醫藥如「抗逆轉病毒治療」所困惑，以為不使用這些治療便無計可施。從我所展示的數據和其他研究所見，我們可提供很多治療方式，其中一個是併發症如肺囊蟲肺炎的預防。另一個是建議伴侶接受愛滋病病毒檢測和採取安全性行為措施。另外還有很多其他需要因應個人情況而採用的方法。基本上，我們不可以依賴公共衛生監測系統，以繼續進行照顧感染者的工作。

主持：

多謝。問答環節完畢。按照會議議程，首輪小組討論將於下午二時正開始。

專題演講

小組 (1)：愛滋病監測機制

主持 1：

按照會議議程，今天下午開始進行圓桌討論會。首先簡單介紹一下本次研討會的來龍去脈。溯源至去年，香港衛生署李瑞山醫生與廣東省衛生廳劉廳長協商並決定進行一次珠江三角洲愛滋病趨勢研究合作項目，其中包括舉辦愛滋病培訓、研討會等。很高興今天大家聚首一堂，今天下午進行圓桌討論，希望各位代表能夠踴躍發言。首先請允許我簡單介紹一下台上同事，包括香港衛生署蔡醫生，深圳防疫站的馮醫生，廣州市防疫站徐大夫，澳門衛生署梁大夫與葉大夫。我姓陳，廣東省流行病預防研究所的。我們將分別帶領以下四個題目的討論：（一）愛滋病監測機制；（二）高危人群的監測；（三）愛滋病的管理；（四）流動人口。珠江三角洲的範圍包括清遠、肇慶、珠海、中山、澳門、東莞、廣州、深圳、香港等。珠江三角洲的愛滋病工作，在座均有豐富經驗，希望各位能藉此機會交流，相信大家都能收獲匪淺。

主持 2：

開始前，我們先看看目前所處位置。珠江三角洲的範圍需要劃定，這裏有一張地圖。我們先根據圖中地區逐一介紹各城市情況。首先，香港共佔一千多平方公里，600 多萬人口，主要居住在城市，年齡分佈較多的為年青人，20 多至 35 歲左右。年齡在 70 歲以上的人也漸多。

參加者：

深圳在中國可算是一個比較特殊的地方。深圳的常住人口(我們通常把人口分為常住與暫住人口)只有 108 萬；流動人口有 280 萬人，主要來自於全國各地，從事各類如商貿等工作。每年約有 2 萬多的出境旅遊者。深圳人口的主要年齡分佈在 16-30 歲左右中，平均年齡只有 24 歲左右，他們職業主要是工廠工人。

參加者：

江門在珠江三角洲的西邊，所轄有5個縣級市：新會、開平、台山、恩平、賀山。總人口是380萬。江門市區人口 41 萬。江門市各年齡組各佔約 1.2-1.5%，如 0-7 歲佔 1.2%，8-14 歲佔 1.5%。這是常住人口，流動人口近 100 萬。

參加者：

珠海是一個比較小的經濟特區。流動人口 34 萬，常住人口 62 萬多。由於它是一個比較年輕化的城市，所以 20-39 歲年齡段的人佔 45%。

主持 2：

珠海與深圳較相似，都是經濟特區，流動人口比較多，偏年輕。肇慶？

參加者：

肇慶地區管轄範圍包括 8 個縣市區，總人口有 360 多萬，位於廣東西北部，與廣西交鄰。肇慶主要以農業人口為主。常住人口為主，流動人口不到 10 萬，總共 360 多萬人口。流動人口約 7.8 萬。

參加者：
清遠位廣東省西北面，靠近湖南，管轄10個縣市區，總共370萬人口。市區位於南面。主要以農村人口為主。城鎮人口（包括鄉鎮人口）總共才42萬。市區人口15萬。88年才建市。清遠市是廣東省的新建市。流動人口大約4到5萬。

參加者：
惠州在珠江三角洲的東面。惠州分5個縣市區：惠城區、惠陽市、惠東縣、博羅縣、龍門縣。全區人口為260萬，絕大部分為農村人口。惠州市區有30多萬人。

參加者：
佛山市在廣州旁邊，基本相連。佛山市管轄共6個市區，常住人口260萬，農村人口佔70%左右，外來人口120萬。外來人口中20-60歲佔60%左右。

主持1：
佛山經濟比較發達，農村與城市的差別已不太大。所以講的農村可能比某些城市還要發達。

參加者：
中山與珠海相毗鄰。人口有128萬，外來人口38萬。下面直轄30個鎮區。

參加者：
東莞地處廣州與深圳之間。本地戶籍人口有145萬。外地人口有150萬。二者比例約為1：1。本地農業戶籍人口約78萬左右。東莞主要是農業人口，但東莞農業人口從事工商業的人也比較多。外來人口150萬中，來自外省的約109萬，來自港台約有2萬多，來自國外有2700多人。其餘為廣東省內流動人口。

參加者：
相信很多朋友都聽說過廣州，也到過廣州。廣州是中國的南大門，也是中國的一個大城市，是一個省會市，是經濟文化中心。廣州人口有660多萬，所轄區包括9個區及4個縣級市，廣州位於珠江口。廣州的城鄉人口分佈情況是：城市人口佔390多萬，農村人口佔270多萬。廣州也是一個流動人口較多的地方。登記在冊的人口有100多萬，但實際估計城市常住人口與流動人口相同，即各有300多萬。

主持1：
最後介紹廣東省的情況。97年底，全省人口為71,593,553（包括深圳市），如不包括深圳，則為70,137,262（7000多萬）。這是指有戶口的本地人口。流動人口數字不詳，很難統計。從發病情況來看，97年底，就傳染病而言，排在前5位的病種依次為：病毒性肝炎、肺結核、痢疾、淋病及麻疹。病毒性肝炎的控制成為廣東省的一個很重要的課題。

參加者：
現在，你們全都知道澳門的位置。正如你們所知，這是一個細小的地方，只有一個小城市和兩個島嶼，人口約有422,000人，多為年青人。我需要強調，澳門的人口也包括不斷往來的人士。每年有500多萬人從各邊境往返澳門。

主持 2：

我們剛才進行了相互介紹，就像平時認識新朋友一樣，在介紹所在地的情況外，也希望了解其他城市的情況。下面我來嘗試作一個小結。如有不妥，請大家指正。剛才談及靠南方的幾個城市流動人口比較多，如東莞甚至有來自港台的人員，且城市人口比較密集，人口年輕化。其他城市如肇慶、惠州、中山等，農村人口較多，總人口較少，密度低。此外，還有些城市，農村人口從事非農業工作。由於大家都是從事公共衛生監測的工作，因此人口的分佈對我們有較大關係。關於流動人口的分類問題將在明天的討論會中涉及。現在我們回到今天會議的重點。大家來會前，已準備了報告。但討論時，我們不應只注重數字，而是根據今天早上談及的理論展開討論。專家都在旁邊，如有問題或更深的討論可以提出。本次會議的內容為公共衛生的監測。今早李醫生提到公共衛生監測的定義，我們的討論可由此開始。該定義談及要收集資料，要有足夠的準確性，且資料能夠用於設計及推動預防及其他愛滋病工作。這是國際衛生組織提出的定義。它主要強調監測的準確性及資料的有效性。公共衛生監測應注意三個問題，即收集、分析與發放資料，但資料的發放對象這一問題需要得以解決。此外，關於監測的對象，即是應監測愛滋病毒感染還是監測愛滋病，工作人員的任務是甚麼，收集的資料代表甚麼等問題，也需要解決；最後，監測是甚麼，是公共衛生監測（public health surveillance），還是個案的尋找（case finding）。

參加者：

愛滋病毒感染者和愛滋病例的監測二者區別不大。因為監測的意義在於發現有傳染性的人，及其傳染源。不管是愛滋病毒感染者還是愛滋病人，都有傳染性，這在於公共衛生監測而言，二者的意義一樣。只不過在臨床治療方面有所不同。愛滋病人需要接受治療，愛滋病毒感染者目前還沒有甚麼很好的治療辦法。愛滋病人的治療，在於延長其生命，減少其痛苦，至於針對病源的治療方法還沒有甚麼進展，因此對於監測工作而言，不管是病人還是病毒感染者（病毒攜帶者）都是一樣。但對於行政官員而言，他們就注意到病人與感染者的區別，根據國內疫情報告，每個醫院與公共衛生工作者有義務就病人和病源攜帶者的情況進行逐級報告並統計。

主持 2：

我們現在討論兩個問題，愛滋病毒感染與愛滋病的問題。剛才你的意思是說病毒感染與愛滋病都要進行監測，可是監測的方式應當如何？

參加者：

我們的監測主要是這樣進行的：通過醫院及衛生防疫部門對於涉外婚姻的調查。江門市從1989年開始要求所有涉外婚姻的夫妻雙方必須進行愛滋病監測。當然除了愛滋病項目外，也對其他很多項目進行檢查。

簡單而言，愛滋病監測就是檢驗血中是否有愛滋病抗體。假如有愛滋病抗體，首先用 PA 方法或 ELISA方法監測；假如用兩種方法之一測出呈陽性，再用蛋白印跡法確認，如確認仍為陽性，便可確定為愛滋病抗體陽性，這表明血液中帶有愛滋病毒，但這是否愛滋病病人，仍待進一步確認。李醫生今天早上論及美國的標準和香港的標準。總而言之，就是要看有沒有甚麼不舒服。假如沒有任何症狀或體徵，即外觀健康者，只能稱之為愛滋病毒感染者，或病毒攜帶者；假如有免疫功能缺乏或低下（很低下）的相關疾病，主要表現在高燒，長時間高熱不退、消瘦、腹瀉，這些比較常見。有這些一系列症狀之一，就可確認。

主持 2：

謝謝。你的意思是我們平時作的愛滋病毒監測主要是看它的抗體，主要是抗體的監測。先作ELISA，加上確認程序然後決定是否屬陽性。

參加者：

所謂監測實屬醫療單位的「監測網」。

主持 2：

那甚麼叫愛滋病毒監測?

主持 1：

這就是說有兩個系統：一個是愛滋病毒感染者的監測，一個是愛滋病患者的監測。你認為是採取哪一種監測？實際上是愛滋病毒感染者的監測，很明顯，如呈陽性，就登記報告。患者就是發病了，在醫院了，從流行病學的意義來講，從預防控制的意義來講， HIV感染者的意義要比患者的意義要大。為甚麼呢？因為他一發病，就很明白了；他沒有發病的時候，你看不出來，像常人一個，但是他有傳染性，關鍵在這個地方。

參加者：

如果我們在實際工作中，發現一位HIV抗體陽性者。對於監測對象採血的同時，還進行問卷調查，以掌握更多的資料。在監測的過程中，不僅僅在於檢測抗體，還融合了對行為方面的調查。

主持 2：

今天早上添布朗博士提及，我們一會兒也將討論到有關高危指標的問題。現在先探討愛滋病的監測。香港進行了此項監測，監測愛滋病主要在醫院進行。廣州是否也有同樣系統？

參加者：

廣州對愛滋病監測是這樣理解的。監測包括發現病例，報告病例；另一方面作有系統的連續性的血清學方面的監測。廣州分兩種監測：常規監測及哨點監測。常規監測指在有能力開展HIV抗體檢測的醫院、醫療單位進行。針對人群為境外（國外，包括港澳台地區）住院病人，（由於廣州醫療水平較高，國外，包括華僑等喜歡到廣州來看病）還有性病病人及吸毒者。

主持 2：

剛才談及兩個問題：愛滋病病毒監測與愛滋病監測。大家談的大多涉及愛滋病毒監測。關於監測方法的問題，我們稍候再談。至於有關資料的使用、資料分發對象與地點的問題，請大家介紹各地區的做法。

主持 1：

剛才談及的對HIV感染者監測及對愛滋病病人的監測問題，我個人的理解是這樣的：目前大陸的監測主要是HIV感染者的監測，這是主動的。對於愛滋病病人的監測，是被動的。病人出現了症狀，到醫院來，我們通過對病人的檢查，了解情況。對於愛滋病病人的監測，我們基本沒有開展或開展較少。今天早上聽了李瑞山醫生的介紹，香港有部份私家醫院或政府醫院發現了很多愛滋病病人。對於愛滋病病人如何監測，通過何種方式監測，希望能聽聽香港同行的意見。

主持 2：

首先愛滋病的定義需要明確，定義不同，準確程度也受影響。在香港，愛滋病監測工作的首要問題是要弄清愛滋病的定義。愛滋病等於愛滋病毒感染，加上一個併發症。這個病症不是普通的發燒，而是出現了二十幾種可能發生的併發症的其中一種。至於愛滋病的有關資料應怎樣分發和報告，這個問題很重要。我對於清遠的情況比較感興趣。

參加者：

我們如果發現了HIV抗體陽性者，或者診斷為愛滋病患者，按廣東省愛滋病中心統一要求，第一時間向其報告，並作進一步確認。如獲該中心的確認，便及時反饋當地政府主管衛生部門（即衛生局）。省愛滋病中心也同時報告中央。

參加者：

我作一點補充。中國的報告體系是這樣的：HIV感染情況由下逐級向上反映。當地防疫部門發現了HIV感染者的可疑情況後，送到當地確認實驗室中心，這個中心負責檢測HIV抗體。如果實驗室發現這個抗體呈陽性，就送到省的HIV抗體確認實驗室，或深圳市的HIV抗體確認實驗室進行確認。確認後需把所有流行病資料（調查資料），有關個人資料（流行病學史，傳染來源等）等調查清楚，然後上報當地衛生行政部門及廣東省HIV確認中心。HIV確認中心經過確認後進行分析，分析結果報到國家衛生部的愛滋病預防控制中心，再報衛生部。最後的有關資料再反饋下來。

主持 1：

問題是：根據吸毒人群或涉外婚姻人群的行為特點進行監測，監測結果是否反饋到有關的主管部門，如戒毒所或當地公安部門，或收容教育所，以有針對性地開展對HIV流行傳播有關的行為的干預。

參加者：

我對監測的理解是，監測系統意義是非常重要的。首先對於各級的上報，報到各級政府，政府根據有關資料制訂相應政策，這就轉變成了政府的行為。通過制訂有關政策進行管理、干預，這樣由政府行為又變成了醫療行為。醫療部門再教育公眾，如何預防並告之愛滋病發展的有關信息，這樣又變成了個人行為。這是三個層面的行為。

參加者：

我們都知道，澳門的面積細小。我們是政府體系的較高層。澳門衛生司設有若干部門，其中一個是流行病組。我們向流行病組報告所有監測結果，然後由該組將資料呈報有關當局。澳門衛生司長身兼愛滋病小組統籌主任。我們已根據過去一年所收集的監測分析，制訂一些教育計劃。

主持 2：

剛才討論了不少關於資料分發的工作。主要是指把收集的材料上報給政府機關，再由政府機關發放。有沒有自行分發有關報告，或以報紙或通過記者等的形式發佈有關資料？

參加者：

至於資料的反饋，我們通過與新聞媒體的溝通，把近期的監測情況反映出來。例如在今年的世界愛滋病日，我們根據所掌握的深圳近幾年的監測情況，包括在哪一部份人中，有何種行為導致感染者的人數上升，我們對此提出預防等建議。重點在於預防，而資料是公開的。

參加者：

在廣州，對愛滋病人與感染者的監測，主要在於對病人的隔離管理，以及回答家屬及病人本人的諮詢的工作。對於HIV感染者，我們每半年至一年進行一次監測，內容包括對本人一些病情的發展、身體狀況、家屬（尤其配偶）是否受感染等情況。我們的監測數據結果都能及時向政府反映。在80年代末發現境外病人的感染者，把情況報告給政府，政府及時作出反應，要求凡是境外病人均須作檢測。這樣做的好處在於避免了院內感染，以保護醫生及其他病人。

參加者：

愛滋病是傳染病的一種。《傳染病防治法》把它列為傳染病管理。傳染病管理要求有報告的時限。譬如說，我們規定城市12小時內就要報告。監測機構，不管是哪一個部門，市醫療單位或我們衛生防疫機構，都要在12小時內報告。在農村地區，考慮到交通、通訊方面原因，可以在24小時內報告。愛滋病算是乙類傳染病管理。這在《傳染病防治法》中有詳細列明。愛滋病監測，防治到管理，都是政府行為。所以監測資料首先要報告當地政府。我們衛生防疫部門首先得到這個訊息。衛生防疫部門也是政府的一個管轄機構。至於資料應反饋給誰？誰報告的，在確認以後就應通知原報告單位。

主持2：

我們正就公共衛生監測進行討論，讓我們聽聽專家有何意見？有沒有任何關於流行病學的工作、資料分發、資料反饋和善用資料方面的意見？

趙教授：

我想先談談愛滋病個案的定義。我知道我們需要就每個檢測到的個案填寫標準表格，但我懷疑表格內有沒有包括一些鑑定個別人士如何受感染的問題。在中國，你可能會匯報一些有或沒有症狀的愛滋病病毒的感染個案。這個做法在目前可說是足夠的，並沒有需要急需修訂愛滋病的臨床定義。流行病學分析所需要的資料包括年齡、性別和可能受感染的途徑。

參加者：

剛才趙教授提出對愛滋病的定義不太重視，我不太同意。愛滋病監測一般比較是被動。被動的意思就是找到一個有病的病人，作抗體檢測，看是否有愛滋病。如果沒有明確的定義，僅憑是否拉肚子、發燒、發燒時間的長短等症狀，進行HIV抗體檢驗，其效果就不會理想。監測系統不能反映HIV感染所引起的臨床情況。

參加者：

在國內，愛滋病患者的定義是HIV抗體陽性，且具有下述任何一項者可確診為愛滋病病人：第一，近期，即3-6個月內，體重減輕10%以上，且持續發燒攝氏38度一個月以上；第二，近期，即3-6個月內，體重減輕10%以上，且持續腹瀉每天3-5次，一個月以上；第三，肺囊蟲肺炎（PCP）；第四，卡波基式肉瘤；第五，明顯的霉菌或其他機會性病菌感染。若抗體陽性者呈體重減輕，發熱，腹瀉等症狀，便必需考慮是否愛滋病。

參加者：

作為專業人員，我們需要考慮的是這個定義理想不理想？現有模式作為政府行為我是同意的。但有一個定義不太理想的時候，就需要提出。

參加者：

我覺得國內這個定義是不理想的。它跟國際有脫軌的地方。舉一個例子，我們現在對CD4的檢測還沒有進行廣泛的開展。甚至在一些很大的醫院，像廣州市市級醫院還沒有開展。對CD4少於200，即美國疾病控制中心在 1993 年定的標準，把愛滋病人的數量一下提高了很多，這是一個很好的建議。因為一些CD4在200以下的病人儘管沒有任何症狀，但很快進展到免疫衰竭，最後病人也會發病死亡。我個人意見，還是希望我們國家盡快在市一級醫院配備 CD4 的檢測手段。這是非常重要的，否則，我們有意識也無法發現愛滋病病人。要展開這種檢測手段，經費是一項重要考慮。

參加者：

我們遇到過一些晚期的愛滋病人，高度懷疑 PCP 的病人，單憑臨床判斷並不理想。我們對痰的檢測，陽性率不高，而且，痰中觀察到肺囊蟲形態改變了。我們送到中山醫科大學（廣州一所很有名的大學），他們也不能斷定這是否肺囊蟲。一定要通過肺道氣管纖維鏡插入病人的支氣管內灌洗，取出新鮮的痰液，才能找到典型的卡式肺囊蟲。這樣有兩個問題，在普遍醫院沒有纖維支氣管鏡，或有的話，也不願用在愛滋病人上，因為怕傳染給別的病人，也不知道真正該如何消毒，建議消毒方法，臨床醫生還是不敢相信。這是個認識問題。

主持 2：

你剛才提到的可能是一個資料反饋的問題，專家知道PCP情況，可以把情況告訴醫生，這可能不是一個很公開的方法，或不是很直接，但可幫助他了解情況。

趙教授：

回顧過去，為愛滋病制訂臨床個案定義的唯一原因是我們當時不知道病原是甚麼，而且沒有任何檢測方法。目前，有關的定義在美國引起一個重大的問題。如要得到公立醫療服務，必須屬已診斷的愛滋病個案。如果只是感染愛滋病病毒，就算出現多種疾病，也不可與愛滋病患者得到同樣對待。現時，多國政府基本上都採納世界衛生組織在1985年所訂下的愛滋病定義，但愛滋病病毒檢測現在也成為定義的一部份。我們知道由感染愛滋病病毒至死亡是一個連續性的臨床現象。因此，我們不應爭議如何去界定愛滋病，而應探討有或無症狀的愛滋病病毒感染個案和死亡的情況。

主持 2：

多謝趙教授。剛才趙教授講到美國的經驗。可是美國與中國相距很遠。這裏有兩個考慮：第一，專家與政府不一樣處理；第二，美國的經驗是否可以在中國引用。

小組 (2)：風險因素監測

主持 1：

風險因素監測，也叫高危指標監測。關於高危指標，首先要考慮到“高危”就是高度危險性，即高度感染 HIV 的特性。國際上對高危指標的研究分兩方面：一個是對性病進行監測（性病的種類我們比較熟悉，有狹義的，有廣義的。一般指狹義的性病，如梅毒、淋病、疱疹等等）；還有一個就是高危行為，其種類大家比較清楚，但我想還是拿出來討論一下。在討論過程中可能會有很多交叉的地方，這沒關係。我們可以通過討論，提高認識，增長見識，交流經驗。高危行為確定後，怎麼選擇高危指標這個問題大家談談。

高危行為有哪些，我們好像很熟悉了。除了種類外，還有哪些行為被我們忽略了。有沒有這個可能？這些指標是否適合於本地監測？此外，怎樣選擇高危行為的指標？如吸毒，光是吸毒，不會傳播 HIV。靜脈注射，單獨用一支針筒針咀，也不會傳播。共用針筒針咀，如果大家都沒有HIV，也不會傳播。只有當中有一個感染者，才會傳播。那麼選哪個指標呢？可能大家都會選注射器，這是直接指標。那麼口吸考不考慮呢？恐怕也要考慮，這可能是間接指標。這裏涉及了直接或間接指標的問題。大家可以考慮一下。指標選擇出來以後，誰來進行這種監測？在大陸來講，可能是衛生防疫站，或是性病監測中心的，還有其他哪些人呢？至於配合，這就涉及到整個社會的問題了。再深一層，我們進行監測危險性的目的是甚麼？不是為了監測而監測，是為了預防和控制愛滋病有些甚麼干預措施？

趙教授：

在目標人群的干預方面，可以泰國為例。泰國的性行業顯然是一個重大的問題，光顧性工作者的男性佔了人口很大的比率，促使愛滋病病毒的傳播。泰國人頗為精明，知道廢除性行業並不可行，所以專注減低因商業性活動而傳播愛滋病病毒的風險。他們鼓勵進行所有商業性行為時都要百分百使用安全套。他們已達到90%以上的目標，再加上舉辦大量活動和性病控制，確實減低了傳播愛滋病病毒的機會。在推廣使用安全套作為保護方面顯然有一個概念的問題。我們不是鼓勵男性帶備安全套光顧性工作者，這並非信息所在。信息強調如果選擇持續擁有多名性伴侶的高危行為，最低限度需要使用安全套，以保障自己和性伴侶。如果人人都使用安全套來預防感染，愛滋病病毒便無法傳播。

主持 1：

有關指標方面。國家也有規定對哪些人群哪些行為進行監測。我們現在定下來二種行為：吸毒和性交（或稱濫交，性亂）。對這些高危行為，我們怎麼辦？

參加者：

對於性交帶來的疾病在人群中的發病率應有一個飽和度。比如說在人們對安全套的認識沒有達到一定水平的時候，例如在非洲，發病率上升到一定高度時就呈下降的趨勢了。那麼剛才趙教授說到以泰國為例，通過避孕套的宣傳和使用，促使了發病率的下降。這方面的資料我們也看了不少，但真實來講，避孕套是一個措施，假如沒有避孕套的措施，如在非洲或其他地方沒有避孕套，是甚麼因素促使其發病率下降呢？這裏會不會有一定的偏移因素的存在?

參加者：

澳門確實有很多商業性工作者。自項目的開始，我們便強調教育她們如何使用安全套，因為我們知道很多娛樂場所的工作人員都是來自泰國的性工作者。我們已發現愛滋病病毒測試的陽性反應率正逐漸下降。我們必須著重指導性工作者保障顧客和自己的安全。

主持 1：

講到避孕套的使用，大家注意到沒有，最近廣東因為做避孕套的廣告，省工商局不同意，該廣告被撤下來了。我看了以後覺得不可思議。這不管怎麼講都是一個進步：就是指推廣使用避孕套來預防性病，包括愛滋病，還有避孕。其實在中央四台，已經有這個廣告了，所以我覺得奇怪為甚麼省工商局還說不能做呢？他們對信息太不了解了。

參加者：

我想請問在廣州所謂的危險因素的排名情況怎麼樣？危險因素的排名狀況會不會隨流動人口的多少或人口的分布情況，或是農業或城市人口狀況不同而有所不同？

參加者：

危險因素的排列，從我們所掌握的愛滋病病例分析來看，廣州排第一位的還是共用針筒針咀進行靜脈吸毒；第二位就是性行為。

參加者：

大家討論了不少高危行為問題，高危行為的定義就是人與人之間血和體液的交換。這種行為是有很多種類的。但我們現在在這個討論會上能否確定，監測的集中人群，是妓女、吸毒者或者其他？

參加者：

剛才同行說的很多內容我都同意。性病患者也是一個監測對象。廣東省、珠江三角洲最近這幾年，潰瘍性的性傳播疾病，如梅毒，甚至疱疹等有所上升。有潰瘍性性病又有高危性行為，傳播愛滋病的危險性就會大大增加。

主持 2：

我們剛才提到幾個高危行為，可是這些高危行為的媒介是甚麼？或說高危人群是哪些？

主持 1：

先定人群，選指標。譬如說，我定的人群是妓女，或叫性工作者，那麼對於她們應監測甚麼，年齡？性別？驗血？

參加者：

另外一個就是靜脈吸毒人群的性行為是怎樣的？這個指標也是很重要的。我們對一些靜脈吸毒的感染者的調查發現，很多男性均反映他們對性方面比較漠視。吸毒就是最好的享受了，其他享受都不在乎了。在女性吸毒者卻不同，為甚麼同時會有較高的性亂行為？

主持 2：

應該怎樣找吸毒人群？譬如在香港，我們只能在政府衛生署下的美沙酮診所，對登記的吸毒者進行行為檢測。可是對一些沒有接受治療的，我們就找不到。

參加者：

國內是禁止吸毒和販毒的，跟香港完全不一樣。香港還有一個美沙酮交換計劃，允許為吸毒者提供一些便利條件。大陸對吸毒、販毒是嚴厲打擊的，抓到的話肯定要進行法律處罰。我們尋找吸毒者主要通過戒毒所，被公安部門處罰後進行戒毒的這部份人。其他的就很難找到。他們一般怕跟政府工作人員或非政府組織的人員打交道。害怕有甚麼聯系後影響今後的工作。

主持 2：

首先澄清一下：在香港販毒也是犯法的，香港並不鼓勵吸毒。找到的吸毒者都在戒毒所和美沙酮中心。由於需要鼓勵吸毒者不要吸毒，所以才有美沙酮中心。這些中心好不好每個專家都有各自的意見。診所是一個治療的地方，治療得好不好要看從哪一個角度去談論。至於監測方面，我們的做法就是對每一個新來美沙酮中心的病人進行一次面對面的交談，還有一個問卷調查，查探是否曾共用針筒針咀，再計算一個百分比率。

參加者：

調查發現有多少人共用針筒針咀，你們對此是否提出甚麼指導性措施或意見？

主持 2：

剛才講的是兩件事情。面談是一個行為調查。可是我們為甚麼把它當作監測呢？因為這是一個定期的調查，我們每年算一個百分率，以我們公共衛生監測的形式做出來。這樣就可以作比較，看看它的趨勢。這跟對病的監測是一樣的道理。至於發現結果低了或高了，有甚麼措施呢，這是另一件工作。簡單說，我們有兩個方向：一個是以公共衛生的監測來分析愛滋病的傳染趨勢；第二個，是為所有來美沙酮的人提供個人服務。

參加者：

對於高危行為的監測，在國內的人對香港、澳門的情況不是很了解。在國內有一個很大的局限性。但方向方面現在已定下來，把共用注射器吸毒和性亂行為作為監測重點。

參加者：

這兩種行為都涉及到政府嚴厲打擊的人群，完全是隱蔽的。吸毒者生怕你知道，賣淫嫖娼的人也生怕你知道。儘管我們監測做得很好，實際上對控制愛滋病也不是一個根本的措施。舉個例子。在深圳市假如有1萬人在吸毒，我們接觸了1千個吸毒者，並且對他們進行了監測，但實際上造成愛滋病傳播的大量的人群（90%），我們實際上沒有監測。我們也沒有對他們的行為進行控制或干預，也沒有提高他們的認識。現在是我們每年這麼辛苦去做大量的工作，但愛滋病的上升幅度卻加速了，這就是一個最根本的措施問題。從我們作為專業人員來說，我覺得首先要通過多部門的參與，轉成一個政府行為。這才是最主要的。高危行為的工作，大家做了那麼多年，都很清楚。

參加者：

剛才談及香港對吸毒者的監測，包括美沙酮中心進行的面談，在訪談的時候，吸毒者會不會如實地回答問題？另外，這些戒毒病人的戒毒時間比較長，他可能在某個診所戒毒沒戒斷後，過了一段時間後又復吸，再到第二個診所去治療。這會不會造成統計上的出錯或混亂？

主持 2：

有關答案的準確性，其實是所有做行為調查的人所常遇到的問題。當我們進行公共衛生監測的時候，

我們也問同一個問題。要是能夠採用同一方法，定期重複去做，我們也可以看的主要趨勢。例如，去年和今年我們採用同一種方法統計，可是今年的數據突然高了30%，我們就要想想到底問題在哪裏。這與其他的衛生監測都一樣，我們的做法是對問卷調查的問題採用固定的模式，這樣隨機進行，不如實的機會也是差不多的。有關第二個問題，我們認為吸毒者不可能在多個美沙酮中心治病，因為美沙酮管得嚴，他們必須憑身份証登記，而且戶口是固定，每個人只能有一個戶口，戶口的變更受到掌握。所以對所採用的統計方法是很有信心。

參加者：

美沙酮是一種吸毒的替代品，是口服的。你怎樣得到針頭使用率和共用針頭使用率的數據呢？除了在美沙酮中心進行監測，還有沒有在其他地方進行吸毒監測？有沒有把所獲的資料進行比較？結果怎麼樣？

主持 2：

我剛才是指那些剛進美沙酮中心，當時還沒有開始戒毒的人。其實你也在問，我們只是進行一次的調查，到底所獲得的資料是不是反映了整個吸毒人群的高危行為情況？這個問題我們也在自問，不等於我們覺得很滿意。我亦希望藉此機會了解一下其他地方的做法。我們也有在戒毒所進行監測，但是人群的背景跟在美沙酮的不一樣。我們只要了解其方法才能作歸納，但這不等於這個方法就足夠了。

主持 1：

比如性途徑，今天上午趙教授提到男傳女是千分之一的機率，女傳男是八千分之一。假如這個可靠的話，那麼男性的性工作者更危險。對這群人，有沒有進行監測呢？人群的選擇，恐怕是一個新課題。據我所知，好像比較少，我們好像還沒開展。

參加者：

我們很難界定何謂男性性工作者。去年深圳進行了一個專題調查，選了一些桑拿浴室的男性按摩的，還有一些在歌舞廳的服務員，以一種匿名的形式進行了一個問卷表格，同時對他們靜脈抽血檢查HIV抗體及其他性病，結果發現，在200多人中，有一個酒樓做服務員的男性有抗體。他這個人個人生活史倒不是很複雜，但他女朋友是一個桑拿浴室的按摩小姐，可能跟一些從國外回來的人有頻繁的性接觸。

主持 2：

我們可否回到監測的問題。我們應該尋找哪些人有高危行為，還是利用百分率計算情況？在國外的資料，多半是用高危行為率來看。我們剛才好像在談有哪幾個人受到感染，就好像變成了專題調查，與行為監測似乎有點不一樣。

參加者：

我們對CSW (commercial sex workers) 展開工作有困難。去年我們作的調查，在髮廊按摩浴室還有歌舞廳，以及桑拿浴室等地方，雖然不能說全部，但也有一部份人在從事CSW的工作。我們做了一個行為學的調查以及發了一些宣傳資料，通過這種方式來進行調查，覺得還是比較理想。

參加者：

我想剛才深圳這個經驗非常有意思。在任何地方做性工作者的調查都是非常難的。我想在香港做的工作比內地更差，因為根本找不到性工作者做一些規範化的一些監測。剛才的討論可能有點亂，因為行為的監測本身是一個較新的觀念，大家，包括我，也不太了解。比較亂的情況有三個方面：一

是關於高危因素與高危人群的概念。監測的指標主要指行為。大家在談行為的時候，都在談去甚麼人群中找指標。說完人群，指標也談完了。第二個問題是關於對高危的概念。有高危，自然也就有低危。危險是相對的。可能大家是做醫療工作的，對愛滋病的了解都較多，大家都想到了很多的傳染方式。我們在看行為監測的時候，應該把重點放在高危行為，比較低的不是不重要，但監測的意義較小。還有第三個比較亂的地方是，關於監測高危性行為，我們都把重點放在HIV感染者的高危行為，兩者是不同的。兩方面的工作都要做，我們對HIV感染者探查的是他們以甚麼途徑感染HIV，這不是行為監測，作為監測主要工作在高危人群，需要研究他們的高危行為有多高。可是我們很多人在談到高危行為的監測時，只談到HIV感染者的行為，我想這是不足夠的。

參加者：

作為監測和干預工作息息相關。行為干預肯定是預防愛滋病的一個很重要的措施，但具體怎麼做，應根據各個國家或各個地區的不同情況。從廣州市的情況來看，第一位因素就是共用針頭吸毒。廣州地區的行為干預措施就是改變這種共用針頭吸毒這個行為。這是最關鍵的，是當務之急。第二，現在我們國家有一個政策性的問題：我們很想做一些工作，政府不給我們做。內地來的同行可能理解，港澳同胞可能不理解。比如說，我們都知道 condom use 是很有效的，我們曾經呼籲政府批准我們進行這樣的宣傳，並派發避孕套給prostitutes (妓女)，但不獲批准。另外，對於那些吸毒且戒不掉，我們也不能像香港那樣建立美沙酮中心，給他長期代替使用（我們認為長期服用美沙酮也是吸毒，概念與你們的不同）。就是臨時使用，使吸毒者慢慢戒毒，也是不行。本來派給他清潔的注射器，這是公認很簡單，很有效的辦法，但政府就不給我們這樣做。我們能做甚麼呢？

趙教授：

國家是由不同社群所組成，各社群所佔的人口比例不一，所以每個國家的多重性伴侶人口比例並非100%或0%。讓我們看看柬埔寨與泰國，以及菲律賓和印尼兩組國家的情況。柬埔寨與泰國的愛滋病病毒感染率佔成年人口超過2%，而在菲律賓和印尼，縱使在性工作者中也不易發現愛滋病病毒。當我們探討性工作者的情況時，我們曾問她們平均一周擁有多少名不同的性伴侶。在菲律賓，她們每周的性伴侶數目少於一個，但在柬埔寨，數目則較多，比印尼的情況加倍嚴重。我們目前的挑戰是要問自己，年青男性定期光顧性工作者的比例是多少？性工作者轉換性伴侶佔比率有多高？這是一個未有清晰答案的數量問題，也是一項需要即時進行，以界定高危行為底線的研究。

參加者：

關於干預，我認為在不同的人群進行不同的宣傳，那就是一種干預。我很欣賞澳大利亞的同伴教育和性伴教育。他們之間的互相教育比我們多，好得多。不一定就是給他們發針頭、注射器、避孕套，才叫干預，對他們的宣傳教育很重要。

主持 1：

國家規定各級衛生防疫站都要對愛滋病進行干預。可能香港澳門的不一定知道。一定要有試驗點。這說明我們國家對愛滋病的控制是非常重視的。一定要選擇干預試驗的試驗點。選擇的方法就是宣傳教育，了解和增加愛滋病方面的知識。

參加者：

派發安全套並不能完全解決問題，因為這是一個更為複雜的問題。正如你所說，教育、群眾運動和宣傳才更重要。澳門亦正在這幾方面努力，雖然成績未如理想。教育始終是最佳的方法，我們應嘗試探討哪些是優先目標群。

小組 (3)：愛滋病管理

主持 1：

下面我們開始第三輪的討論：愛滋病毒感染者的管理。大家都是從事公共衛生專業工作的，在工作中一定都遇到過管理問題。隨著近幾年愛滋病毒感染者的增加，帶來了管理上越來越多的問題。我們趁此機會來討論一下。首先，我想應該在概念上有共同認識：愛滋病的管理體制與愛滋病毒感染者的管理有甚麼不同。大家有甚麼看法？

主持 2：

在香港，愛滋病毒感染者和愛滋病者的管理，基本上都是同一個問題。愛滋病是愛滋病毒感染的一個後期現像。所以對我們而言，如果通過測試，知道一個人是感染者，他就屬於一個病人的身份。我們基本把他當作一個病人，看他有甚麼需要，如醫藥或心理上的需要。看他需要的程度是多少。愛滋病者由於有併發症，他可能需要多一點。所以二者基本上一樣的，只是程度不同。

參加者：

在管理上，香港對於本地居民、國外公民、以及從大陸過去的感染者的管理方式，或者是與大陸配偶生的小孩的管理有何不同，或有甚麼措施？

主持 2：

這主要看香港管理病人的系統。只要是香港公民，就可以憑身份証去看病。對愛滋病的服務和對其他病的服務基本上是一樣的。

參加者：

因為在香港，性病的治療都是免費的。如果把愛滋病作為性病的一種的話，有沒有這方面的規定？如果大陸人與香港公民通婚，香港公民感染了愛滋病病毒，又通過性關係傳給了內地的配偶，這個人又在香港，你們會不會要求大陸的公民回去，或者你們通過甚麼方式去管理？

參加者：

我們所談的主要是三個方面：一是行政方面，二是公共衛生學方面的，第三是臨床方面的，處理方法有一點不同。行政方面，如果有一個病人，HIV感染者，或是愛滋病病人，如果不是香港人，當然不可以享受所提供的非常便宜的醫療服務。如果不是本地人，想到香港公共醫務系統裏看病，費用十分高昂，這不是愛滋病的管理的問題，這是一個行政的管理的問題，甚麼病都一樣。在臨床方面的管理，對於給予病人提供多少服務，這要看地區的條件。有些病人可能是到專責性病的醫生、傳染病或免疫學的醫生處看病，這是臨床系統的問題。如果從公共衛生學（或系統）方面以任何方法找到一個病人，那麼這個人的管理就變成了臨床的管理，就到了臨床醫生那裏。香港沒有那麼多公共衛生學的醫生。他們也不會每半年去看病人一次。這不是他們的工作。公共衛生學就是做監測，分析問題，把資料提供需要知道這個問題的人。他們做的一般都是預防方面的工作。一個病人的管理是在他本人的醫生那裏。公共衛生學的醫生就做不到，他不懂。

主持 1：

這個情況就跟我們內地不一樣了。我們對個人的管理恰好是公共衛生的醫生去做的工作。香港與廣州地區有這個區別，那麼澳門怎麼樣呢？

參加者：

在澳門，感染愛滋病病毒的病人可接受完全免費治療，不論他是中國或葡萄牙籍的澳門居民，我們都免費提供治療，這情況跟葡萄牙一樣。但是有些關於愛滋病管理的情況是我們難以界定的。例如：若病人是非法入境者，這便不再單是一個臨床診治的決定。

參加者：

我們正向需要接受治療的病人提供3種藥物。目前，我們有15名病人正在接受治療，包括愛滋病毒感染者和愛滋病人。澳門現已採用CD4計算法。我們希望在短期內也採用病毒量的方法，那便毋須將樣本送往香港檢測。

參加者：

我想提一個問題：HIV感染者如果被發現以後，按照我們國家規定，是不能歧視他們的，不管他們是以甚麼途徑感染的。除了一些特殊的職業外，他們應該可以和其他人一樣正常工作、學習、生活。現實中因為他本身有HIV， 如果他繼續他的危險行為， 比如去嫖妓或共用針頭吸毒，他會傳播給別人，這個時候怎麼管理？我想這是一個很現實的問題，大家有甚麼高見？

我們是否應做一些工作防止病者繼續感染別人，這是其中一個問題。我想提出第二個問題，在公共衛生管理方面可能有關係。就是說，我們要不要交給誰去繼續跟進其他問題。例如病者個人的需要，應交給誰來滿足呢？第三個問題，我們有沒有責任或義務去跟他的配偶或很有機會從他身上感染到愛滋病的人去談，或使他們不受歧視，與其他人一樣工作及生活。我們怎樣可以一方面進行衛生管理而又沒有歧視成份。

參加者：

我介紹一下我們省和國家的做法。愛滋病管理分幾個方面：一個是感染者的管理。我們發現一個感染者，由下面的基層單位跟這位感染者保持一定的聯繫，讓感染者定期到我們那裏去檢查，還有對他們的去向進行追蹤，必要時候進行干預。這是愛滋病毒感染者的管理。另外一個是愛滋病人的管理。在廣東省劃定醫院給予愛滋病人治療。病人在那裏不會受到歧視，而且那裏的醫務人員也很願意為他們服務，防護措施一切都能跟得上。一旦病人發病，我們就介紹他到指定的醫院進行治療。對於一般公眾，我們進行愛滋病的宣傳教育，提供諮詢服務，這些也屬於愛滋病管理的一方面。這些人雖然沒有感染，但他們很需要了解愛滋病的一些知識。這跟香港的性病熱線、愛滋病熱線一樣，我們也為這些人提供了服務。這些諮詢對象也包括一些感染者或已患上病的，對他們進行諮詢教育、宣傳。

主持 1：

國內所做的工作看起來比香港的同行要多一些，因為這不僅包括監測工作，還包括對感染者或病人的現在或以後的問題，這些都由我們公共衛生醫師解決的。還包括對家屬親人等，都一起教育和跟蹤。

參加者：

我想國內防疫站的工作是非常忙碌。這裏有兩個問題：除了 HIV 感染以外，防疫站有沒有對其他的病，每 6 個月進行跟蹤，觀察 10 至 20 年？另一個問題是你們對 HIV 感染者與愛滋病做的辦法有點

不同。對愛滋病就是一些指定的醫院負責，如果有HIV感染，則到你們防疫站去看。如果有愛滋病以後，去了指定醫院後，還需不需要回去防疫站那裏作追蹤？

參加者：
他到指定醫院後我們就不需要對他追蹤了。

參加者：
讓我再作一點補充。愛滋病人確診後被介紹到指定的醫院，這個醫院與我們防疫站的關係是非常密切的。他們的醫生經常就一些情況跟我們電話聯繫。在有關政策、管理方面的信息也定期溝通聯繫。我們的愛滋病管理跟香港有點不同。在發現了HIV以後，做追蹤工作比較多。比如發現了HIV，如何預防傳給別人呢？舉個例子。我們與病人經常電話聯繫，告訴他如果跟別的女孩發生關係一定要戴避孕套；定期電話聯繫中問他最近與多少人發生關係，我們還問他是否肯定使用了避孕套。當然我們不能保証他每次都使用。另外我們的實驗室也建立了定期的CD4的監測，看他發展到甚麼階段，需要醫院甚麼指引與治療。對他的家屬也定期檢查。有一個病人，我們追蹤了5年，他有2個小孩，我們告訴他預防措施。他的妻子我們也作了檢測，現在他已經發病了，但他的妻子檢查結果始終是陰性的。

參加者：
關於愛滋病毒感染者怎麼說服他，我們有個很好的技巧，可以告訴大家。我們不是說“你不要把愛滋病傳給別人”而是說“如果你去嫖妓不戴套的話，你會感染上其他病毒，這就會加速你的發病死亡”。這樣一來，他就心服口服。剛才提到其他病的追蹤，除了HIV追蹤，還有甚麼病追蹤？

參加者：
我介紹一下江門市情況。97年江門發現一個愛滋病病例。醫院送來一份陽性的血清，我們複核後確認，馬上就送到省確認。第二天就到他工作所在的廠，找到工廠的董事長，是台灣老板，與醫院負責人一起把國家的有關政策向他交待，首先讓他消除恐懼，告訴他需要配合做甚麼工作，並對所在工廠的全體人員作了驗血。我們做了這麼多工作。甚麼時候我們接到哪個單位或個人報告有關有疑慮的疾病時，特別是群體發病的病例。

趙教授：
對於所有關於愛滋病的公共衛生或臨床工作的討論或策劃，我認為都要考慮目前和預計個案負荷量。如果個案很少，只有10至20宗，情況便十分簡單。要從最高的極限著眼，我們需考慮過百或過千宗的情況。在評估能力和未來的財政預算時，一般普遍假設在一年內有5%至10%愛滋病病毒個案需要某種醫療服務，另每年約有5%病人去世。根據這個簡單模式（我曾聽聞估計中國全國有300,000至400,000宗感染個案），目前中國應約有20,000至30,000宗愛滋病或有關愛滋病病毒的併發個案。

參加者：
有兩點大家看看方向是怎麼樣的：第一點，要使愛滋病病人不受歧視，能夠正常生活，我想知道，要是這樣追蹤，如打電話，跑到公司去，把所有人都檢查一遍，到底會不會讓他以後的工作有影響。要是會，我們應該怎樣去改變這種情況，或有甚麼方法可以妥協？怎樣可以做到又能進行公共衛生工作，又能減少歧視？第二個問題就是趙教授提到的，要照顧多少人的問題。假如整個市幾百萬人中只有一個愛滋病患者，我們當然可以這樣做，如果越來越多的時候，我們到底有沒有那麼多錢和

專業人士去追蹤？又到底值不值得花這些錢和資源？愛滋病人數上升時，我們能否有一個方法管理，減少在資源上的花費？補充一點，剛才趙教授提供我們一個方法，就是在一定人數的愛滋病毒感染者中，有5%到10%需要受到臨床管理或治療，根據國家估計的愛滋病毒感染人數，可以計算資源。

參加者：
我剛才沒有很詳細介紹我的做法。我跟全廠職工檢查時是說進行有關病毒性肝炎的檢查，不是說檢查愛滋病。全廠的人只有老板才知道我在檢查甚麼。當然如果知道是檢查愛滋病，就會引起哄動。這是一個技巧問題。

主持1：
剛開始在少病例的情況下，我們都在做這樣的工作。但到多病例時，且隨著我們對愛滋病的認識越來越深，這種工作我們已經不做了。在管理的時候，是要看怎 樣去控制傳染源，切斷傳播途徑。在愛滋病來講，它的傳播途徑是很特殊的。我們不需要做這麼大規模的檢測。

參加者：
內地的愛滋病是從國外“引進”過來的。我們對管理的要求是比較嚴格的。根據專家提的意見，愛滋病人要加強管理，管理的模式主要是追蹤調查和開展教育等等。我們是從這些特殊情況確定的。如果其他疾病也要這樣做，我們的難度很大。防疫站也沒有這樣的要求。剛才提到，假如病例多的時候，應該怎麼處理這個問題。我覺這個問題提得很好。我們也在考慮。按發展的趨勢，我們也有一個規劃。病人到了甚麼樣的程度，就該採取甚麼樣的方式去控制。現在我們還算是一個發病低的地方。我們還是可以進行教育，追蹤等工作。將來病例多的時候，我們當然也要調整策略。至於費用方面，我們政府官員已經表了態，這方面的工作一定支持。我們覺得預防方面的工作，花得少，但所收的效益是最大的，我們政府是有這個認識，投入的經費也會按防病的需要而越來越多。

參加者：
據我所知，肺結核也有類似的做法。我們有一個專門的防治院，規定凡是肺結核發病的，都要“歸口”，專門由防治病的機構長期觀察追蹤。此外，有幾個病在我們防疫系統一直是有監測的。例如霍亂，每年都監測腹瀉病人數和外環境的檢測。還有絲蟲病，為了消滅絲蟲病，我們一直開展監測，而且是監測了很多年。

參加者:
據我所理解，你為病人檢查愛滋病病毒時是並沒有告訴他們的。我不明白，這是不正確的道德觀念，以及病人和他們家人的私隱何在？

參加者：
關於普通門診的檢查，是自願的。如果不告訴他的檢查，是一種監測的檢查，這是不告訴他本人的，這叫匿名檢查。

參加者：
我補充一下廣州市的做法。就是又要使人不受到歧視，又要告訴相關的人。我們的具體做法不一定對：要完全杜絕歧視，那是不可能的。我舉個例子：今天開始某個人沒來，說他是感冒，大家可能反應都很淡；假如說他患了晚期癌症，大家都有同感：說這個人很能幹，又年輕，很可惜；但是一講到他患了愛滋病，他來不了，大家就會反應：噢，原來他是這種人，這種反映本身就是一種歧視。

所以在現有的國情下，完全不歧視他還做不到。這是一個心理反應。我們的具體做法：檢到他是陽性的，我們廣州市防疫站就告訴他本人，再問他親人誰是最可靠的，最可信的，就只告訴那個親人，其他人我們就不講了，也不通知他的單位，因為國家有規定，他要正常地生活，正常地工作，其他人不能歧視他。如果講出來，大家都跑掉，不肯跟他一起工作。所以我只告訴他最可信的親人。

參加者：

我想補充一點。我們經過很長時間的討論，常說香港不同，澳門不同，其實我想各地也是差不多的。這個病在香港開始的時候，也遇到很多困難，例如如何管理等。如果要找分別的話，那就是經過多年，我們的這個系統開始變化。另外可能有另一點差別，因為行政管理方面的措施跟香港是完全不同的。我認為國內的防疫站實際上太忙。現時HIV感染者一定要在防疫站接受追蹤，如果感染者還沒有愛滋病的時候，他們可不可以去醫院門診部接受一些臨床檢查。對他或防疫站來說，也許有一些幫助？

參加者：

實際上我們的醫院都有一個防保科，等於小小的防疫站，也有這個功能。當然現在還沒有聯繫到愛滋病患者。如果確實很多病例，相信他們會承擔這個任務的。

參加者：

我把深圳的做法也說一下。我們對發現HIV感染者以後的管理，一般根據國家對愛滋病的不歧視及其保密措施，跟香港的做法差不多。我們根據病人意願來告訴他的親人或配偶，這與以前的做法有很大的區別。在深圳發現了HIV感染者，如果他本人願意到醫院就診，我們會介紹他到指定醫院的門診，進行檢查及追蹤。我們不告訴他的親人及他周圍的人群，保護了感染者的私隱權。可是如果這個感染者本身道德水平不高，有可能他把這個疾病傳播給了別人，侵犯了別人的權利。這是個我們困惑的問題。另外，我想請問澳門的同行，澳門對娛樂場所的服務員每三個月檢查一次HIV抗體。如果發現有陽性，就不會給他們發居留証。這是否跟目前的有些法律相衝突的地方？譬如說你是否在歧視這些人？或你只是針對某個地區的人才這樣做，還是對哪些特殊人群這樣？

參加者：

這是澳門對待在本地工作的臨時居民的政策之一。僱主和僱員都清楚知道在簽署合約時，如果他們是愛滋病病毒感染者，便要即時離開澳門。但我強調在合約生效期間，沒有任何人，即使是僱主都不會接到員工的愛滋病病毒抗體呈陽性反應的文件。我們請他們前來接受輔導。即使他們不懂中、英文，我們也能清楚解釋，因為我們有翻譯人員。

參加者：

澳門的娛樂業僱員檢測計劃於1992年展開。我們知道這不是一個簡單的解決方法，是對聘用可能從事性行業的外國人和令本地人的健康得以保障的一個折衷方法。澳門娛樂業的僱員中，有些來自一些病毒流行性偏高的地方如柬埔寨、泰國以至任何地方。本地性工作者及來自中國內地的人士則毋須參與這個計劃。從事娛樂業的外國人士包括性工作者及各行各業的人士，如樂師和酒吧侍應等。

參加者：

如果我們負責衛生監測的人，發現有人是陽性反應後，責任是告訴誰呢？譬如在香港，我們只能告訴病人，鼓勵他告訴他的配偶，也會問他“誰是你最重要的人？”，可是這不是在公共衛生監測裏去做，而是轉介到門診去做。剛才大家談到打電話告訴病者不要有高危行為，這種忠告在香港是放

在臨床階段去做，在他回來看病的時候跟他講，這樣不用打電話去騷擾他。我們把他放在一個門診病人的情況下去採取相關措施，希望能減少歧視。病人到醫院或診所像其他人一樣，不會受到特別的待遇。

參加者：

很受啟發。HIV感染者已算是一個傳染源了，防疫站也可以做，醫院也可以做，誰做更好？這是值得討論的問題。如果大家認為醫院更好，我們為甚麼不建議？因為現在正在制定愛滋病的管理規程。防疫站太忙了，不能甚麼都由防疫站管。我們應該解放出來，很多工作等著我們做。

參加者：

但要是你們告訴了病人，讓他去找臨床醫生，他找誰呢？

參加者：

在香港剛發現愛滋病時，並沒有甚麼特定措施。後來看誰治療過愛滋病，就繼續跟他保持聯絡。知道他願意且有能力治療後，就轉介他到那個地方。

參加者：

這就是所謂指定醫院。我們也有啊。比如說廣州的中山醫院、傳染病院、南方醫院，好幾家醫院都是指定的。HIV感染也可以到那裏去，不一定是患者。那裏有定期諮詢，病人肯定會定期、很自覺去的。

參加者:

關於HIV感染者的管理，經歷了歷史過程。關於廣東全面監測與管理的問題都有個階段性，廣東省這個規定，甚至在全國還要早一些，其規定範圍還是比較局限，主要是我們衛生部門如何兼顧兩個目的來進行工作。一個受感染者需要保護，千千萬萬個健康人士也需要保護，所以我們衛生系統要做甚麼工作，才能兩個目的兼而得之？早期省裏的規定，基於HIV陽性數目很少，且都是境外人士。當時的監測目的，監測的人群，甚至管理的情況主要是對外的。

第二階段就不一樣了，HIV主要是去旅遊的人帶回來的，他的配偶及其接觸的人受到感染，此時監控重點隨目的不同而轉移，就提出了我們應如何管理的問題。在國家七個部委辦規定之前，省裏規定我們衛生系統、衛生部門如何更好地為兩方面人服務。當時規定，發現了HIV陽性，由防疫站進行訪視。這也是一個經驗教訓得來的。當時發現了國內第一例或前幾例的時候，按國家保密要求，發了紅頭文件，是想給感染者和患者保密，但是適得其反。因為看文件的主要是政府官員，不是醫務人員，這樣就失去了感染者患者的信任，他們不願找我們的醫生。在這種情況下，我們除了要求匿名檢查和自願外，並要求其服從我們到指定的醫院看病，行為要規範等方面，但總是有不自覺的。我想這個規定對愛滋病的管理和幫助都應建立在患者、感染者的自覺的基礎上。如果不是他自己自願，去停止他的高危行為的話，我想這全都是假的。只有在說服他、教育他，幫助他解決困惑等工作之後才能達到目的。所以，我們定出了廣東省愛滋病管理規定。這實際上是我們衛生部門如何規範工作的一個規定。此後，國家七個部委定出的規定也都是這種精神，所以這個管理也就沒有變。

剛才趙教授、李醫生及其他同行提出的問題都很中肯，也考慮到我們防疫站關於愛滋病工作負擔越來越重，越來越忙而會顧及不了別的工作。在此，很感激大家。現在國家各地區都發現了這個問題，將來將修改成甚麼樣的規定，我們都遵照執行。

參加者：

我們在香港最初的幾年也是非常痛苦的。我們看到了很多的歧視，其實在醫療系統裏面的歧視也非常嚴重，因為本身醫療人員對愛滋病的認識不太多。我們以前治療HIV感染者、愛滋病患者的醫生都很少，也只是幾個人，但對於他們幾個人來說，所得的經驗是越來越好，正如內地的防疫站，對HIV感染者的經驗非常豐富。但是當你們的經驗越來越好的時候，臨床醫生的機會就越來越少，他們很少見到病人。臨床方面的參與有一個好處，就是它能成為一個培訓機會。當培訓一個醫生時，如果沒有病人就無法培訓得好。因為他們沒有機會接觸病人。當我們處理一兩個病人時，醫生會感到不適應，再提供三、四個病人時，就完全沒有問題了。另外，我前面提到的愛滋病的定義，在作臨床報告時，如果醫生沒處理過愛滋病患者，就會遺漏很多愛滋病的情況。其實上，這就是臨床系統與公共衛生系統聯繫起來的問題。另外，我們也需要有很多的培訓，希望醫生懂得從公共衛生的角度看這個問題。這樣醫生才可以在醫療這個病人的同時，也知道他人怎麼做預防配合，對整個愛滋病的控制有幫助。

參加者:

我本人提個問題，香港的愛滋病毒感染者在犯罪後的處理手法是如何的？

參加者：

這是非常複雜問題，幾年前開始有了這方面的工作，當時遇到的第一個困難不是怎樣管理HIV感染者，而是監獄管理工作人員怎樣看待這些帶病菌者，政府部門給予這些工作人員開了學習教育課程，進行培訓。對犯罪的感染者提供和一般人所享有的臨床服務。也有些病者，在他得病後期可以減刑或保外就醫。這是很個別的例子。

小組 (4)：流動人口

主持 1：

我們今天討論的內容是：1、甚麼叫流動人口？2、流動人口在愛滋病的防治、傳播起甚麼作用？應採取些甚麼相應的對策？

主持 2：

流動人口是隨著世界的國際貿易以及國際旅遊業而逐步發展，數量在不斷增加。流動人員對全世界的影響也越來越明顯。尤其是一些公共衛生的問題，有很大的關係。我從以下幾個方面來討論：一是流動人口的定義；二是流動人口特點；三是流動人口與愛滋病的關係；四是流動人口與愛滋病毒感染者、愛滋病人的管理。首先定義：中國大陸、美國都有所不同，大陸定義為非常住戶口的那些人群，就是從常住戶口所在地流動到其他的一些地方，那樣的人群稱為流動人口。在深圳還有個特點，有廣義和狹義的概念。廣義是指所有非深圳戶口的人群。由於深圳有一些人是只有暫住証或藍印戶口，這些臨時在深圳，短期進行一些活動的人口歸為流動人口內，這就是狹義的。

參加者：

香港來說就沒有甚麼藍印戶口或暫住之言，只有是不是永久居民，也有是否為流動人口。從公共衛生角度來說，流動人口有多種。一是專門從外地進入香港工作的，一是常過香港作為中轉站到外地旅遊的人，一種是來回香港與內地之間穿梭於兩地的人，另一種是專門在港從事“性”的工作者，在香港沒有政府方面的特別定義。

主持 1：

我想重點還是放在公共衛生方面，因為我們從傳染病的登記報告來看，戶口不屬於本地而在本地工作、居住的，那就是流動人口。這裏有個局限問題，時間很重要。比如說我們在這裏開會兩、三天時間，就流動過來了，有時從北方過來的，居住時間較長，一年、兩年、甚至五年，但是在統計上他們還是屬於流動人口。因為他們的戶口不在本地，但是相對來說他們還是固定了，那麼在傳播愛滋病意義上恐怕又不一樣了。

參加者：

廣州的情況，比較複雜，廣州的第一關就是火車站。我本人分成四個層次：第一是登記在冊的，他們有一個明確的目的，例如經商的。第二種來廣州住一段時間，只是經過廣州，作為中轉站，到別的城市，從事某一種工作（目的）；第三種，我們稱為“盲流”。他沒有任何目的。不是看看有甚麼可做，找一些謀生的機會，沒有明確方向的人群。它的數量是最大，他們的管理是最難的，公共衛生是最差的人群。第四類是旅遊人群。

參加者：

東莞政策從戶口管理來分，我們認為凡是到異地活動的人口稱為流動人員，包括本地人到外地去的人口。

參加者：

以上代表講的都是境內的人口。在愛滋病來說，我認為以境外來我國的人口最危險。江門發現的感染者都是外籍人或者是在外境居住過一段時間的人，他們都與國外有關。這個流動人口很重要。

參加者：

在澳門生活和工作的人可分為四類。我們的勞動人口中約有400,000名居民和近30,000名非居民。我們不知道這些暫住人群的流動類別。另外，我們有23,000名外國居民和約5,000,000名旅客。在基層健康方面，居民的費用全免，但沒有藍証的人口則須支付若干費用。不過，在愛滋病病毒感染和愛滋病方面，因為非居民的數目很少，他們現時也可以享有免費服務。隨著這類人口不斷增加，我們可能會修訂有關政策。

參加者：

人口流動和非流動是相對而言的，由於戶口管理制度不同，它的定義就不同。中國的戶口管理在農村和城市是截然分開的，而且不同城市、省份也是截然分開的。所以這和美國及其他城市又是不太一樣，但是流動人口問題以中國而言，離開戶口的地區，不論出或進都屬流動人口。關於戶籍管理的問題，如果沒有農村與城市的的區別，就不存在本省農村到城市或者外縣到廣州的區別。另外，同行談的民間定義，我不太同意。那只是些貶稱，或大家講的一些真正的定義，應該是沒有這些貶義的。廣東省的領導對這些流動人口的評價是很高的，在報紙上曾登過“廣東建設的功勞的一半是外地勞工的。”的說法。我想這也是讓我們對流動人口的內涵的定義的一個參考。

參加者：

我想談一下珠海的情況。我覺得流動人口的定義，就是在除了常住戶口以外的人口的統稱。流動人口分類與深圳的情況差不多。第一是辦了暫住証的，只是住一段時間，在公安部門登記的。另一種是路過的、途經的、旅遊的。但在珠海還有一個特點，就是有一部分人，他們在珠海已經住了20年了，他們的戶口只算是暫住的，那麼，我們怎樣區分呢？如果是從戶籍來區分是沒有話說的了；如果是從報病系統方面去理解的話， 我覺得有待討論。

主持1：

這涉及到戶口管理的問題了。大家都聽說過這樣一個傳言：在中國大陸也將取消戶籍管理制度。但是現在還未實施，因為問題很多：1、人口多；2、地大物博，涉及的問題多。還沒取消，但趨勢是要取消，這個問題還有待解決。

參加者：

我想我們談定義時有兩個不同的原因。一個是關於愛滋病的傳播，人口的戶籍與所說的流動人口並不太一樣。如果是看傳染病的傳播來說，我們應集中地討論那幾類的人群，和對愛滋病傳播關係的。比如性工作者，我們是需要做一些工作的。另一個原因是管理方面，對HIV的管理，如臨床管理、行政管理，當然需考慮他是哪裏人、是否需要本地的醫療服務。

參加者：

我同意戶口只是政府的一些管理行為。對公共衛生學方面，我們討論的是HIV／AIDS傳播過程中，以流行力學角度上有著不同的機制。我認為應該撇開政府的定義，站在HIV／AIDS的傳播角度去定義流動人口，這樣較為貼切，而不應將戶籍看得太重。

主持 2：

如果沒有別的意見，就進入下一議題：流動人口的一般特點。這一議題，涉及到了流動人口在城市中的職業、文化背景、性別特點、教育程度等，這些與愛滋病的流行傳播可能會有密切相關的關係。他們產生的那種高危行為的機會恐怕要比其他要多一些。我想先就深圳的情況做一個簡單的介紹。深圳有380多萬人口，非流動人口110萬。我們認為歸流動人口有270萬人，主要很大一部分是在企業裏的工人，約佔65%。還有一部分是從事商貿活動的，約佔15%。另有一部分管理人員佔5%，其他工程技術人員佔5%。有10%是沒有固定職業的人。270萬人中僅指在公安機關辦理了登記的人，還有相當部分是像廣州那種情況，只有邊防証件，但是無有效的工作單位或常期的居住地點的，大約有幾十萬人。這樣的人的特點是年齡在16-40歲的年齡段，是在性活躍時期，而且整體的文化程度比較低，不到高中水平。他們的來源以四川、湖北、江西等地較多。流動人口性別以女性佔多數，約65%，男性35%。這是整體情況，職業分佈以工廠及文化娛樂服務場所居多。

參加者：

剛才提到檢測時流動人口是一個代表人群，愛滋病毒感染都是在流動人口中驗出的，是否是說流動人口的出入都要做檢測，而非流動人口就不需要呢？這就形成了本地人就沒有檢測的這種習慣。

參加者：

就珠海來說，我們並沒有把本地人口與外地人口HIV檢測用此界線來劃分。但有一個特點，流動人口，一般是從事那種有高危行為的為主。比如，旅遊業、桑拿，還有那些性工作者，這些都是流動人口從事的較多，所以此人群中，檢測較多一點。但是流動人口的特點，年齡方面是比較年輕化的，跟深圳類似。性別也是女性居多。因為從事服務行業的以女性較多。教育程度也較低，當然也有進入管理階層的，但是很快就會被政府所接納。所以存在白領層的總是較少。在職業方面，服務行業較多，桑拿、按摩業，還有性工作者等等，這些人群以流動人口居多。常住人口從事這方面行業的較少。這與文化背景、國情有關，總被認為這些職業較低微一些。本地人都不願意從事這方面的工作。所以我覺得對HIV的檢測範圍的劃分並非人為的因素，而是在不經意地對流動人口監測的較多。

參加者：

我們的看法是：在政府行為角度，我們統稱本地與外地人口，但是從公共衛生的角度來講，我們分為常住與暫住，我們的檢測並非分本地與外地。如我們東莞本地人在外工作時間長了，回來後我們同樣要對他們進行檢測。在東莞的HIV檢測，主要還是在流動人口方面，如果常在本地居住的或者沒有從事一些性服務工作的人群，我們一般不會檢測。從事性服務是違法的行為。所以我們只能從某一種職業或可能從事性服務的職業的角度來判斷，並沒有指明是性工作職業。

參加者：

我想大家在檢測與預防愛滋病遇到的問題都是大致相同的。在國內和香港性工作是違法的，所以只能從一些可能存在性工作的服務行業裏找這些人群去檢測。我想大多數國家也這樣。在香港或許更差，因為找不到性工作，找可能做性工作者的人更難。只能用不同的方法從一些人群中去了解HIV感染。另一個問題談到戶口問題與HIV感染關係。有個例子，在新加坡，他們會公報一些數字，並分辨是否新加坡籍。這跟香港完全不同，而從預防角度看來，戶籍的影響也不那麼大。

主持 1：

關於流動人口裏面，特別是旅遊這一部分，是不是也應作為檢測人群？我國規定，凡是到境外超過三個月的，回來就要檢測HIV抗體，反之則一般不檢測。就是基於窗口區來考慮的。但是可操作性

就很難了。由誰來做呢？檢疫站、防疫站、旅遊局或者誰呢？可能會有一定的意義。我們討論流動人口的目的，不是單純討論，而是怎樣採取措施預防控制愛滋病，了解它傳播途徑的特點，以採取相應的措施。

主持 2：

李醫生所說的，戶口本身與HIV的傳播是沒有一定的聯繫。這點我們是承認的。戶籍所在地與流動人口的HIV感染沒有甚麼關係。但是流動人口人群中可能存在著一些特別因素。因為這些流動人口遠離家鄉，感情上需要有些彌補，這些人是屬於脆弱人群。他們離開原來的居住地和家庭，到另外一個地方，道德與家庭約束力就相對減弱。他們進行高危行為的機率就比一般人要高。結合這些人群的年齡特點及文化背景與受教育程度，可分析與HIV感染者的關係。這並非涉及戶籍所在地，但與某些特殊職業的關係則較大。

參加者：

我發現大家都在講性工作者，但目前還沒有登記標明當事人就是性工作者，無論在香港、澳門還是國內都沒有這種事情。我們到娛樂場所、桑拿及一些按摩院等等去找這些人。她們剛好較多是從外地來的，由於經濟情況不同，而且從事這種工作，才致使他們與愛滋病毒感染帶上關係，而非因戶籍而異。

參加者：

事實上，這是澳門在處理性工作者方面的最大困難。如果是經代理人聘用的，我們可以很容易找到她們，因為她們需要申請居留証。我們很容易進行教育、提供安全套、輔導和監測有關情況。較危險的是那些在街頭工作的入境者。我們不知道她們的往返地點和工作地方。她們的處境比在桑拿場所、舞廳或按摩中心工作的更為惡劣。我們沒有特別為這類人士制訂政策。她們有時申請七日簽証，然後返國。我們沒有時間和條件教育她們和評估有關情況。

參加者：

我們關心的是愛滋病毒感染。既然愛滋病毒感染本身與流動人口關係不是那麼直接，我們就不應該看流動人口的特點，而是看社會中有哪幾種人特別容易感染愛滋病，然後再去查或進行干預。剛好在珠海、深圳、香港、澳門等地在經濟發展走在前面，較少本地人會在本地從事這種工作，所以才強調了流動人口的問題。相反在一些地區"輸出"的人口較多，他們的考慮就不像珠海、深圳一樣，而是外來的感染。

主持 1：

這是個很現實的例子。我們這次來到澳門，澳門政府就採取了"干預措施"，每位代表都派發了一個"安全套"。對旅遊者，我們能不能採取相應的干預措施，發點宣傳資料，相應的工具，這是很實際的問題。幾年前在廣州召開的愛滋病總結大會上，我提了這個問題，建議能不能先行一步做，通過旅遊局向每個出去旅遊的人發個小冊子，介紹預防愛滋病的信息。但是現在還不敢提供這些"工具"，相信以後會好辦的。

參加者：

這也許是對流動人口進行干預的機會。他到我們這裏來，我們就送他一點東西，告訴他不要進行高危行為。本地人流動到外面的時候，也告訴他不要進行高危行為。流動人口本身不是一個監測的人群，反而是一個提供干預機會的人群。

主持 2：

並不是所有流動人口都是重點人群。有一部份不會有高危職業，主要集中在某一些行業。這些行業的工作人員從事性行為的風險要大些。我們稱之為“脆弱人群”，應該對其進行重點監測。深圳的公安部門公布的數據看，94.5%犯罪都是由外來人口操縱的，而且我們發現的愛滋病毒感染者90%都是外來人員，都不是深圳市的。

參加者：

在珠江三角洲的某些流動人口的人群中，針對某些行為進行干預工作，這是對的。這不是說流動人口本身有甚麼危害。我們從事公共衛生的人員對此是很清楚。我們對流動人口的討論，一般公眾不能理解。認為“有流動人口就有愛滋病”，這不一定對。有些城市可能觀察到的HIV感染者都是外地來的，但這不能說就是流動人口的問題。從事管理工作的，戶口問題比較重要。因為戶口影響到患者是否得到一些醫療服務，這與公共衛生沒有甚麼關係。

參加者：

我同意這個看法。目前我們監測的重點主要針對流動人群。如果對所有本地人進行HIV檢測，得到的結果可能與目前所獲結果不一樣。這個問題應該全面看。我們的監測結果可能有所誤導，令人認為監測人口中流動人口多，這並不一定正確。

趙教授：

我想我們需要適當地接觸流動人口。首先，我們嘗試描繪他們的一般性行為。然後評估這些行為是不是高危。我給大家一個舉例。有一大群男性受僱興建香港機場，這是流動人口參與特定工程的一個好例子。我們需要派人去研究他們的生活狀況，找出他們有沒有光顧性工作者。如果有，便嘗試找出性工作者的數目、他們的平均性伴侶數目和有沒有使用安全套，然後評估進行高危行為的流行程度和密度，以及需否設置額外的愛滋病監測機制。有些男性可能工作太累，所以只工作了3至4個月便離開，在這個情況下，這類流動人口感染愛滋病病毒的機會幾乎是零。我們便無需特別關注。所以我們首先需要評估流動人口在高危行為方面的流行程度、強烈程度和頻密程度。如果他們光顧性工作者而不使用安全套，而且這類活動的流行程度十分高，我們便需要就這個問題建立公共衛生監測機制。

參加者：

關於昨天添布朗博士的一個圖片中顯示，在印度監測重點人群是工廠裏的工人，男性與女性都有，排第二或第三位。我想知道他們是否是流動人口。在國內尤其在珠江三角洲，在很多工廠，大部分工人都是流動人口，且都是年輕人，文化教育程度也相對較低，也正處性活躍年齡階段。

添布朗博士：

不論是泰國、印度或其他國家，工廠工人多是流動人口，因為工廠傾向吸引較年青的男女。這些工人離開日常社交環境，不再在農村或家鄉生活。他們在工廠的環境下，通常在宿舍居住，可能較難與同一環境下的人維持親密關係，因而增加發生高危行為的機會。這個情況在很多國家都有出現。在斯里蘭卡的一些經濟特區，工人的情況也是一樣。年輕工廠女工在性行為方面往往較其他同齡女性活躍。你們需要評估所處地方的情況，因為並非全中國的情況都一樣。就趙教授的說話，我認為並不一定要展開調查。調查只是探討問題的其中一個方法。但必須進行初步評估，你們可以委派一位人類學家或社會科學家作簡單的評估。與大量人士傾談、查詢他們到哪裏解決性需要或工餘時間

有甚麼消遣。調查可以非正統形式進行，無需設立調查機制。如果高危行為的情況不太嚴重，可能毋須對這類人口過份憂慮。但是，如果那位人類學家或社會科學家發現很多高危行為傾向或有不同模式的行為，這便成為開展調查，探討數量問題方面的基礎。我們需要緊記，可使用的研究方式林林種種，並非所有都需要大量時間或耗費很多資源。從人力的角度來說，有些方法是比較快捷和便宜的，我們須願意應用這些方法。如果自己力有不逮，往往需要和社會科學機構合作或請人類學家助你一臂之力。我曾經和很多人類學家合作，他們都善於參與和快速評估有關情況，並告知你是否需要關注這些人口的高危行為。所以，在嘗試決定這些人口是不是傳播病毒的關鍵時，請先想清楚。

參加者：
我認為對流動人口的管理問題，首先要了解流動人口有甚麼特點，流動人口與本地人口的差別比較大。他們收入不定，居住不定，而且聚散比較大，伴侶不在，性需要也大，所以容易造成高危行為。在傳染病管理方面，他們比本地常住人口要難管理。因此，流動人口的高危險系數應該高於本地人口。因此討論時應從這個特點著手。

參加者：
我聽說外地人感染後，會送回原戶籍地。請問在座有沒有收到報告本地在外地受到感染被遣送回來的？或是從國外或其他地方遣送回來的？

參加者：
我們（東莞）的管理是這樣的：分本地和外地人群的管理。我們會徵求外地戶口的人的意見，是否願意回原籍地。如果願意，我們就送回去，而且通過衛生防疫部門通知對方縣級的衛生防疫站，這樣管理就轉交給當地衛生防疫部門，我們本地就不負管理責任了。如果是本地戶籍人群，就由我們這裏的衛生防疫站來負責管理。管理只是提供教育和一些服務，不包括治療。

參加者：
這是國家《傳染病防治法》裏規定的一套制度。比如說我發現湖南、湖北有發病的，按規定我應該告訴對方。對方發現了我的情況，也該告訴我。有傳染病報告卡也寄過去。名字、性別、戶口本上的地址等都有。

參加者：
我想可能珠江三角洲是一個比較發達的地方，所以我們總是談外地人感染的情況，沒有談感染了回來本地的情況。我們應該想想，如果自己本地的人去了外地，不一定是外國，可能是外省，發生了HIV感染，他當然回來自己的省。這與你發現HIV感染者要送回原地，道理是一樣的。如果看到送回來的時候有甚麼困難，就知道送出去的時候應注意甚麼。

參加者：
國家確有這個規定，制定的時候是國內發現愛滋病的第一階段，很多都是境外的，所以考慮的問題就是送出去，送回戶籍。現在我們已經發展到目前這個階段，如果HIV感染者不是我們的戶籍，我們會徵求他的意見，是否願意留在這裏還是回戶籍。他如果願意留下來，我們可以繼續提供諮詢、醫療服務。另外，我們肯定還會通知他的原戶地，讓他戶籍地也了解到他有這樣一個情況：是在哪裏發現的，現在在哪裏。

主持 1：

舉例說，如果在湖南的人在廣東被發現是HIV陽性，我們是不能強迫把他送回去的。國家規定是"動員其返回其戶口所在地"，這是原話。是動員，不是強迫。如果他不願意回去，留在當地，當地的衛生防疫機構還是要負責對他進行公共衛生的服務，但同時要報告他戶口所在地的防疫站。

參加者：

再有一個問題：為甚麼都是別人跑到珠江三角洲的時候發現感染，是不是都是在珠江三角洲受到感染的？

主持 1：

從全國的愛滋病的排列來看，幾年前，雲南是第一位，廣東是第二位，但現在廣東排在第五、六位了。新疆、廣西、四川等省都比廣東多了。不是廣東少了，而是其他省份多了。廣東的也在增加，廣東省 HIV 感染者增加的數量速度比不上其他省。並不是到珠江三角洲病例就多了。

參加者：

廣東或珠江三角洲發現的病例，感染地不一定都在珠江三角洲。情況並非如此。發現地在珠江三角洲，但感染則不一定。

參加者：

你們香港是如何管理這些病人的？不久前，我們收到你們香港的通知，一個人的丈夫是香港人，感染了愛滋病後死了。她在清理丈夫的遺物時才知道丈夫死於愛滋病。她在你們那裏被檢查出來是愛滋病陽性，就被要求馬上返回內地。你們對這類病人如何管理？

參加者：

這是不可能發生的。香港對愛滋病的管理是一個臨床的系統，沒有一個像國內的龐大防疫系統。為甚麼她會回去，我想是因為她本身不是香港人，沒有香港居留權。如果她到香港一段時間，三個月或六個月，過了這個時間後她是必須離開的，這跟愛滋病沒甚麼關係。香港人一般沒有很強的戶籍觀念。不過我們知道，有些人從中國來，他說他要回到戶籍地。在香港長大的人這種觀念較淡薄。

參加者：

他要是在香港那裏確認為感染者，而他的居留時間可以是1-2年，你們提供的醫療服務包括甚麼？與本地人有甚麼不同？

參加者：

服務一樣，但非居民的要付很高的費用。但這是行政問題，跟 HIV 感染本身沒有直接關係。

開幕項目

小組討論報告

蔡敏欣醫生

首先，我們大家都同意應重視愛滋病的監測工作。昨天的討論中，對愛滋病毒感染者的監測的定義基本上一樣：首先以ELISA 進行初步測試，呈陽性的，再作一個確認測驗。這在香港、澳門及內地各市都有一樣的作法。在資料收集方面，我們基本上在市的層面做。各市在進行監測的同時，也在進行資料的收集工作。而監測共分三部份：收集資料，分析結果，作報告。

關於資料分析發放問題，其實大家做的方法是一樣的 — 基本上是由專家作監測，政府就負責報告。市的防疫站也會送到省的防疫站（省監測中心），然後再送到省政府，由國家統一做一個整體分析。在國內，由政府發放消息，而且由省政府或國家政府先發放，然後才到地方；在香港其實也一樣：由監測的專業人員交給政府做，只不過香港只有一個機關，很簡單。發放方法包括新聞發布和定期報告。是否定期，昨天沒有討論。在香港，基本上是定期的。

我們也談過愛滋病監測的定義。HIV 抗體陽性就可確定是愛滋病毒感染者。愛滋病患者就是再加上一個病症（國內與香港的看法不一樣。香港採用美國CDC（1993）轉化過來的定義，國內和澳門採用WHO的定義）。對於某些問題我們提出，但沒有進一步討論。譬如愛滋病的呈報系統是否完整？是否有些愛滋病判斷不出來？其中原因是因為定義不清楚，臨床醫生無法診斷出來，所以沒有報告？即使診斷出來了，他也不知道要報告。昨天這方面討論不多，但也許對以後的工作還是很重要的。

另外，會議討論了愛滋病監測的重點與準確性及其是否有用的問題，還談到了高危指標。高危指標除高危行為外，還有其他指標，比如說性病。我們討論了兩個問題：高危行為與高危人群。高危行為可指共用注射器，或是沒有用安全套的性行為或與性工作者的性行為等。這些行為到哪裏找呢？我們要先確定人群。在選擇監測人群時，有幾個考慮點：一是這個人群是否高危人群，如性工作者人群？性工作者不一定找得到，可能要到娛樂場所去找，他們可能是一個脆弱社群（vulnerable population）。是否能找到這些人群是一個很重要的因素。共用針頭（針嘴）吸毒是高危行為，這能在吸毒人群中找到。吸毒人群可能要到戒毒所或香港的美沙酮中心去找。性工作者在國內可能要到婦教所，在澳門（或珠海）要到娛樂場所中去找，進行測試。

在對高危行為人群進行監測時，是該注意愛滋病毒感染者的高危行為，還是某個人群的高危行為。就是說，在報告性工作者中有多少高危行為時，是否需要對同一人群做愛滋病抗體測試？對一般的行為監測，這是不必要的。

行為監測與干預的關係如何呢？也就是如何利用監測後的數據進行干預？是由公共衛生的醫生還是政府部門進行干預？昨天提到公共教育和同伴教育。同伴教育就是要求醫生與病人或目標人群建立關係，然後由目標人群進行某些教育工作。

大家都很關心醫源性感染的問題。但比起其他行為，這並不是最重要的。我們要提高醫務人員的意識，預防醫源性感染或了解如何處理沾染上血液的器具。其他高危指標還提到了性病等。愛滋病病毒感染與愛滋病人的管理分三個層次：第一是行政，第二是公共衛生，第三是臨床。程序是先進行檢測，然後確認，如果是陰性就進行輔導（包括心理輔導），如果是陽性，或是馬上轉介給臨床處理，或是由監測人士負責追蹤，直至病發才送到醫院，在管理的發展的各個階段，所要考慮的因素也不一樣。首先，看現有系統會否加深或減低歧視。歧視雖然很難避免，但是否盡量使歧視不那麼

嚴重？第二是資源的考慮。如果由公共衛生醫生追蹤，人手和物力能否保障支持？第三是病者與感染者的數目問題。當病者與感染者的數目增加時，如何完善管理系統？目前數目較少，很多地方的問題都較好處理。第四，可否充份利用現有機制如醫院等，和動員能夠治療的醫生等。在公共衛生管理和臨床管理的關係上，監測人員的工作就是為臨床部門的人提供有關資料，讓他們了解愛滋病管理需要注意的地方。

最後談到了流動人口。這個定義從兩個角度去看：一個是戶口管理，一個是公共衛生角度的管理。愛滋病的感染預防與監測，著重在公共衛生的角度去觀察流動人口。這要以流動人口的特徵而非其戶口而定。很多地方是以戶口所在地建立戶口管理系統，將來是否有變化？流動人口分兩類，一個是外來的，一個是本地到外面的。外來人口一般文化教育程度較低，且較年輕，可能是單身；對於出外的人口剛才討論較少。流動人口在戶口上是流動的，但與愛滋病毒感染的關係並不那麼直接。首先要看流動人口與HIV感染有沒有關係及何種關係？流動人口的分佈與職業等因素要考慮。如珠海、深圳的流動人口在娛樂場所比較多。了解其分佈後，要研究其行為表現。如是否有高危性行為？如果確定這種行為多，再決定下一步的工作。

會議總結

李瑞山醫生(香港):

過去兩天我們談到了很多不同的問題，都由三個不同部份組成：一是公共衛生方面做的工作，另一是臨床方面的服務，第三個部份是行政方面的。這三個部份可以幫助我們在會後繼續深入探討。行政方面我們不要忘記，它只是提供了一個架構。使我們可以有一個比較理想的公共衛生系統和臨床服務。

我們昨天和今天談過公共衛生系統裏做的重要工作，一是預防，另一是監測。為了使HIV感染不在珠江三角洲泛濫，需要我們進一步發展以下三個項目：一個是行為監測，但還有很多問題存在，不能明天就做到。另外，關於預防與監測的工作，怎樣使二者聯繫起來。每個地方都做了很多監測工作，但監測的結果未能放入預防工作之中。最後，是臨床方面與監測的聯繫。在會前，我知道在珠江三角洲各地愛滋病的問題是有所不同的。但過了兩天以後，我的想法有了改變。其實大家的分別並不是很大，有很多共通性，很多問題完全是一樣的。每個地方的系統可能有點不同，但面對問題時，所用的方法及出發點也是一致的。有些經驗在澳門和香港可能較重要，譬如說，談到行為監測，香港在規範方面做了一些功夫，但對找重點人群方面工作不如內地做得多，深圳已經開展了一部分這方面的工作。通過進一步的研究交流，可以加強行為監測經驗。目前全世界沒有哪一個國家可以說“我的行為監測做得最好”。雖然至今我們開展的工作不太多，但一兩年後，我們再交談的時候，可交流的經驗會更多，這也是因為我們的問題十分相似。流動人口有從香港到江門，從澳門到香港，每天都很多，我想我們珠江三角洲可以看作是一個整體。有很多社會文化的因素都把我們聯合在一起，這些因素可以幫助我們用更有效的方法，預防HIV感染的傳播。

另有一個問題我想應該作進一步討論，雖然我們談的是HIV感染 — 看上去好像很簡單，但HIV感染後面所隱含的內容，如用詞、定義、語言，大家的理解完全不一樣。HIV感染在歐洲與美國等地，發源較早，他們有很多新的研究，他們用詞與定義的翻譯要注意，有些並不適用於珠江三角洲，我們可能需要再重新評價每一個定義的用途。用在監測工作時，要根據在珠江三角洲工作的需要，應針對項目的實際情況來決定是否展開某種工作。

最後，對發展的過程我感到很有意思。HIV感染在珠江三角洲各地出現的時間不同。在香港出現可能比較早，在內地，珠江三角洲靠北的地區可能比較晚一些。在內地看的病例比較少，現在看到的問題好像是香港十年前的問題。面對的問題有一點共同性。我們考慮時可以從發展角度去看。在香港有些工作做得不好，可以跟大家談談，把不好的經驗告訴大家，這樣就不必再重複一些無效的工作。

陳偉師所長(廣東):

我們很榮幸能在此相聚，一起渡過了一天半的時間，對愛滋病的預防控制方面的幾個課題進行了討論。昨天上午的三個學術報告講得很精彩，豐富，昨天下午和今天上午的討論，大家發言很踴躍，我也感到收獲很大。通過討論，我們發現了共同點與異同點，因時間關係，很多人還有話想說，但

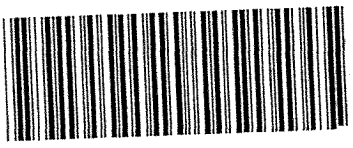
在此不能盡情探討。有的問題可能已經探討清楚了，有的還不清楚，有的永遠可能也講不清，但這並不影響我們向愛滋病的挑戰，我們的目的是一樣的：就是怎樣有效地預防控制 HIV 的發生和發展。

我提兩個期望：一個是今後的工作怎樣更好地開展 — 怎樣更好地做好監測，怎麼有效地採取干預措施，選好人群，做好工作 — 這才是我們會議的目的之一，不是單為了開會而開會；第二是，根據代表們意見，大陸代表認為這種會議很好，收獲很大，希望明年能在香港召開，共同相聚交流。以後我們也可以在內地，珠海、深圳或東莞、廣州、清遠選一個地方。到時候再看看實際情況。

最後，我代表內地來的各位代表，向為我們這次會議提供支持，贊助的澳門衛生司和澳門公共衛生化驗所、香港大學、香港衛生署表示真摯的感謝，同時對各位代表的參與，表示非常感謝。謝謝大家。

康麗明醫生(澳門):

多謝大家，特別是傅醫生對這個研討會的讚賞。我代表籌委會和澳門衛生司多謝各位的踴躍參與，使研討會帶出獨特的問題和成果。我也藉此對各位嘉賓、講者、主持小組討論的召集人及來自中國內地、香港和澳門的全體參加者致以衷心謝意。過去兩日，我們共同合作，互相交流區內的愛滋病毒感染和傳播方面的經驗。我希望這個研討會可以作為日後會議的起點，讓我們共同檢討過去，並就控制區內的愛滋病毒感染問題交流意見。我們就像一個大家庭，各人都像相識已久，並因為有這樣的同僚而感到慶幸。希望大家回程時旅途愉快。我期望在不久的將來再與大家會面，共同籌備另一次會議，多謝各位。



珠江三角洲愛滋病監測與流行病學研討會

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澳門

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