

Moving Ahead Together - Expanding Hong Kong's Response to AIDS

Executive Summary

*The External Review Team for the Advisory Council on AIDS
Review of Hong Kong's AIDS Situation and Programme*

Introduction - Adapting to a Changing World

For many years, Hong Kong has enjoyed the double happiness of low HIV prevalence in an economic and political environment that has made ample resources available for AIDS prevention and care. But the situation is evolving rapidly with increasing cross-border movements, changing behaviours among youth and other vulnerable populations, and a dynamic and growing HIV problem throughout Asia. Recent radical advances in effective combination therapies for those living with HIV have promised longer lives and altered the basic needs in care and support services for people living with HIV and AIDS. If prevalence is to remain low and the highest quality of care is to be provided, then Hong Kong's response must adapt to cope with these changes and make the most effective use of the resources available for HIV/AIDS prevention and care.

This document summarises the findings and recommendations of the external consultant team commissioned to review Hong Kong's AIDS situation and response. The review team took a broad definition of the *response* as the sum total of all policies, activities, and projects implemented by any agency or individual working with HIV/AIDS and related issues. Thus, it is inclusive of government, non-governmental organisation (NGO), community, family, and individual responses. Over a three-week period, the four member team met extensively with those heavily involved in Hong Kong's prevention and care response: government and NGO staff, university researchers, people living with HIV and AIDS, and the members of the Advisory Council on AIDS and the Council of the AIDS Trust Fund. They also carefully analysed the detailed internal assessment prepared by the secretariat of the Advisory Council on AIDS and the feedback on that assessment from others. It is hoped that the resulting recommendations will contribute to a stronger response in the Hong Kong Special Administrative Region.

Hong Kong's Evolving Epidemic - the Current Situation

HIV prevalence in Hong Kong remains low at present. To date 1,005 HIV infections have been reported, and unlinked anonymous testing in various populations supports the idea that total cumulative HIV infections in Hong Kong are on the order of a few thousand at most. However, the social, economic, and behavioural landscape is evolving rapidly, creating new opportunities for exposure to HIV both within and outside of Hong Kong. Continuing risk behaviour also creates the potential for substantial indigenous spread of HIV if no actions are taken to reduce those risks. Key areas of concern include:

- *Travellers to and from neighboring provinces in China.* China has a growing HIV problem, and studies have found many male travellers engage in commercial and casual sex while there before returning to Hong Kong.

- *Sex workers and clients in Hong Kong.* At present, their numbers, origins, and levels of risk remain largely uncharacterised and few prevention efforts have been undertaken.
- *Men who have sex with men (MSM).* While they account for over one-quarter of all reported HIV infections, only limited prevention activities have been undertaken and most MSM remain outside the reach of current behavioural and epidemiological monitoring systems.
- *Youth.* Young people around the globe are increasing sexually active, and Hong Kong is no exception. Marginalised youth are particularly at risk. Yet difficulties remain with sex education efforts and reluctance to provide youth with the knowledge and skills they need to protect themselves.
- *Injecting drug users.* While prevalence remains low, as does needle sharing, the speed with which HIV can spread through these populations call for careful monitoring and sustained prevention efforts.

Hong Kong's low prevalence has helped to keep medical and support care burdens comparatively low, with only 379 people currently under care in the two designated government clinics that serve all but a handful of people living with HIV and AIDS. But clinical improvements since 1995, in particular the introduction of combinations of three drugs that are extremely effective in delaying severe illness, have started to drive the overall costs of care upwards. These improved treatments reduce demands on hospital and other palliative care services, but call for expanded HIV testing and public education to make those living with HIV aware of their treatment options, improved medical follow-up, strengthened protection against discrimination in the workplace, and increased psychosocial support services.

Concerns About the Hong Kong Response to Date

The availability of resources through the AIDS Trust Fund and the Hong Kong government's commendable commitment to appropriate health care for all has helped in mounting fairly extensive publicity and education campaigns and providing good medical care for those living with HIV and AIDS. However, although HIV/AIDS is covered by the Disability Discrimination Ordinance, stigma and discrimination against those living with HIV and AIDS remains strong and a two-tiered system of medical care for those with HIV is still in place.

In meetings with various individuals and groups, the external consultant team heard a number of recurrent and common concerns about Hong Kong's current response:

- *People were uncertain of the effectiveness and impact of their current efforts.* For example, concerns were frequently raised about how effective earlier publicity and education campaigns had been and about the limited coverage of many vulnerable populations by existing programmes. Many were unsure if the needs of people living with HIV and AIDS were being met adequately, and people living with HIV and AIDS themselves often felt their voices were not heard.

- Little sense of partnership in responding was apparent. Many felt that government, NGO, and university efforts remained largely distinct and decoupled. A strong desire was expressed by most of the parties to find ways to work together as partners.
- Overall programme directions were unclear. Many did not sense any prioritisation of activities, so they remained uncertain about how their efforts could best be directed to contribute to an improved response.
- A need for more predictable and long-term funding was seen. NGOs were often concerned that funding from the AIDS Trust Fund, by far the largest local supporter of HIV/AIDS activities, was largely for short-term, one time projects and that their priorities in selecting or rejecting projects were not clearly defined for them.
- Involvement of communities affected by HIV in the response has been limited. This makes mobilisation of communities difficult and the resulting lack of participation reduces the appropriateness and effectiveness of HIV activities in these communities.
- The response remains largely in the government and AIDS-specific NGO sectors. Little involvement of mainstream NGOs or non-AIDS related community-based organisations has been seen.

Recommendations for Strengthening Hong Kong's Response

In light of the current epidemiological and behavioural situation and these expressed concerns about the response to date, the external consultant team has the following recommendations to strengthen Hong Kong's response:

Prevention

- Shift the emphasis in the response from publicity and education to prevention. Maintaining Hong Kong's low prevalence requires more than people being aware of AIDS, they must also have the skills, motivation, means, and support to reduce risk behaviour. Mass media and public education measures are insufficient and must be accompanied by stronger efforts at skills building, condom and clean needle promotion, and development of a supportive environment for risk reduction.
- Focus prevention efforts where they will have the greatest impact. In a low prevalence situation like Hong Kong's, the most effective prevention will result from focused efforts which work co-operatively with those at higher risk as active partners in developing, implementing, and evaluating projects. This requires carefully assessing where risk is (both epidemiologically and behaviourally), determining what makes for an effective programme in the affected communities, and monitoring how preventive behaviours change over time. Particular populations requiring closer attention in the Hong Kong context include: travellers to and from China, sex workers and their clients, men who have sex with men, youth, injecting drug users, and STD clinic attendees. Expanded prevention programmes in these communities will contribute greatly to keeping Hong Kong's prevalence low.
- Maintain awareness and build support for those living with HIV and AIDS among the general public by developing the capacity of non-AIDS government agencies, NGOs, and the private sector to offer AIDS prevention and care referral services. The emphasis on focused efforts does not mean the general population is ignored, but

instead that less expensive, more sustainable, and more cost-effective mechanisms are found for reaching them. This might be accomplished by integration of HIV/AIDS into ongoing activities, e.g., improved life skills training in the schools, coupled with a strong emphasis on social support for those living with HIV and AIDS, or provision of HIV counselling and testing referrals in family planning and maternal-child health settings.

Care, Treatment, and Support

- *Maintain the Hong Kong government's commitment to providing good treatment and support to those living with HIV and AIDS.* Financial support for medical services and the Comprehensive Social Security Assistance scheme are both essential components of helping those living with HIV and AIDS. As case burdens grow, health care reform gets underway, and costs increase these crucial instruments of social protection need to be maintained.
- *Expand the clinical and laboratory capacity to provide appropriate care for those living with HIV and AIDS.* Both clinical care personnel and laboratory support are reaching their current capacity limits as case loads gradually grow. Several steps can be taken to expand this capacity including: integrating specialised HIV care and treatment into a specific medical specialty to ensure an adequate future supply of HIV-trained physicians, expanding the involvement of private providers, developing the referral skills of general care physicians, and accelerating development of lab capacity for antibody and viral load testing, including support for new technologies on the horizon such as resistance testing.
- *Initiate an ongoing dialogue between clinical care providers, people living with HIV and AIDS, and concerned NGOs regarding current clinical care quality and therapeutic guidelines.* Concerns have been expressed about whether all those living with HIV and AIDS are receiving optimal therapy. This raises a number of issues of interpretation of guidelines, levels of client knowledge, and the therapeutic decision process that require open discussion and shared commitment to resolve.
- *Implement a regular system of quality assurance in clinical care.* Combination therapies require close monitoring, careful medical management, and good compliance to remain effective. A number of approaches can help to ensure ongoing quality of these services including chart audits, antiretroviral compliance services, anonymous surveys of people utilising the services, and viral load monitoring.
- *Undertake a comprehensive review of current support service needs of people living with HIV and AIDS.* As mentioned earlier, care and support needs are changing rapidly with the introduction of combination therapies. This means those providing services must know what is needed and adapt their programmes accordingly.
- *Expand programmes to encourage people with risk behaviour to obtain testing and seek medical care.* The introduction of effective therapies creates a strong need to reach those living with HIV who do not yet know they are infected with information about testing and treatment options. This should include both access to testing in established health care settings and outreach activities with the communities most heavily affected by HIV.

- Move as expeditiously as possible to the routine, voluntary implementation of screening for HIV among pregnant women and provision of optimal antiretroviral therapy. Most mother-to-child HIV infections can be prevented today, and Hong Kong should take steps to make these advances available to women living with HIV. This requires expanding testing capacity, addressing issues of discrimination in health care settings, and integrating HIV into maternal-child health services.

Providing a supportive environment

- Eliminate the two-tiered system of medical care for those living with HIV and AIDS by enforcing universal precautions in all medical procedures. The current system of unnecessary gloving, special labelling of specimens, and refusal to provide appropriate care has decreased the quality of care for people living with HIV and AIDS and increased the risk of transmission in health care settings because health care workers are lax in using universal precautions. This situation requires urgent action on the part of both policymakers and infection control teams in all health care facilities.
- Strengthen the ability of people living with HIV to access the Equal Opportunities Commission mechanisms anonymously. The strong stigma and discrimination associated with HIV make it difficult for people living with HIV and AIDS to use the current complaint system. The EOC, people living with HIV and AIDS, and concerned NGOs should work to create a mechanism for documenting and addressing ongoing discrimination issues.
- Promote the acceptance and support of people living with HIV and AIDS through campaigns aimed at the general population and youth. While announcements of public interest regarding HIV prevention are likely to have limited impact now since awareness is high, those regarding acceptance can still make a major difference. Similarly, programmes among young people on accepting and caring for people living with HIV and AIDS can create life-long attitudes of support and concern.
- Integrate services for people living with HIV and AIDS into mainstream social and health services. Only when people can access health and social services without needing to hide their HIV status will Hong Kong enjoy a society-wide supportive environment. This will require addressing issues of discrimination as they arise in specific settings.

Overall Programme Monitoring and Evaluation Issues

- Complement the current HIV reporting system with ad-hoc epidemiological and behavioural surveys in populations of concern. The current HIV and behavioural monitoring systems have little access to populations such as sex workers and clients, travellers, or men who have sex with men. Yet, evaluating the effectiveness of prevention efforts among these populations is crucial to keeping prevalence low. Programmes to assess what is happening in these communities should be undertaken, preferably in the context of expanded prevention activities.
- Sustain current behavioural monitoring efforts, especially among youth, and expand these activities to other populations of concern. Behavioural surveillance is currently

done in STD clinics, methadone clinics, and among the young. These efforts provide critical information for evaluating the efficacy of ongoing programmes, however, they need to be complemented by similar efforts among populations such as sex workers and clients and men having sex with men. These systems should be developed in consultation with these communities.

- Monitor and analyse STD trends more closely. HIV prevalence is actually a poor indicator for programme effectiveness because it changes so slowly. STD incidence on the other hand, changes very quickly in response to behaviour changes. Periodic analysis of data from the Social Hygiene Clinics and a subset of private clinics could allow trends and important behavioural changes to be tracked and addressed.
- Provide a central source for collection and review of epidemiological and behavioural data. If the response is to be most effective, everyone involved must understand what is happening. This requires ongoing collection of new data as it becomes available and periodic analysis leading to a summary report of current trends in risk behaviour and the current state of the epidemic in Hong Kong.
- Define a set of indicators for evaluation of the overall response and link evaluation of activities to these indicators. Addressing the widespread concern about the overall effectiveness of the response requires not only closer evaluation of individual projects, but the development of a set of global indicators that can be used to look at progress across all of Hong Kong. This should be undertaken in the context of the community planning process discussed in the next section.
- Continue current efforts at projection to encourage ongoing critical review of available data and anticipate future caseloads and needs. Hong Kong's prevention and care demands will change as the epidemiological situation evolves and the number of people living with HIV and AIDS increases. Projection efforts keep attention focused on these issues and provide planners with a concrete basis for determining future capacity and budgeting needs.
- Maintain an up-to-date list of ongoing projects to allow for informal co-ordination among the various sectors. If people are to co-ordinate effectively, they must know what others are doing. In this manner duplication of efforts can be avoided, partnerships can be arranged, and people can build on lessons learned. A list of ongoing prevention and care activities and their implementing agencies should be maintained and updated regularly.

Implementing the Recommendations - Community Planning, the ATF, and the ACA

The Community Planning Process

If Hong Kong is to implement the above recommendations to produce a more effective, sustainable, and comprehensive response, then those working on HIV/AIDS must find a common sense of direction and develop a shared vision for moving forward into the 21st century. As discussed earlier, the response in Hong Kong today is largely fragmented, with different agencies undertaking largely independent activities with little co-ordination and only a limited sense of partnership. This lack of co-ordination and partnership makes it difficult to determine overall coverage of current efforts and to evaluate their impact. It also fails to make use of the respective strengths and capacities of the various sectors

(government, NGO, community, people living with HIV and AIDS, etc.) to produce a maximally effective response given the available resources. What is needed is a mechanism that builds on the respective strengths of all these sectors to produce an effective and co-ordinated response that addresses all the concerns and issues discussed earlier in this summary.

In order to build a common understanding of the problems, foster a sense of ownership and partnership in the response, and actively involve all the sectors according to their strengths, a community planning process is proposed. The community planning process, now being promoted by both UNAIDS and the U.S. Centers for Disease Control and Prevention, brings together members of affected populations, epidemiologists, behavioural scientists, both AIDS-specific and non-AIDS NGOs and community based organisations, government departments and others. They analyse their local epidemic, prioritise populations and prevention and care needs, identify appropriate and effective prevention and care activities to address those needs, and develop a locally relevant comprehensive plan for prevention and care.

In Hong Kong, this community planning process can have the greatest impact if it is tied into the two major advisory and fundings agencies in Hong Kong: the Advisory Council on AIDS and the AIDS Trust Fund. One mechanism for accomplishing this in the current context is to have the ACA and ATF each appoint a co-chair for a community planning committee of limited duration. These two co-chairs then oversee the selection of a technical committee, whose members are chosen for their expertise in epidemiology and behaviour, HIV/AIDS prevention and care, knowledge of the affected communities, and willingness to consult with others. Communities, NGOs, and government agencies would all participate in the selection of some of these technical committee members, building a true sense of partnership. This committee then reviews the key prevention and care issues discussed in the full external consultants' report and identifies three or more realistic, implementable, priority activities to resolve each issue and improve prevention and care. These activities will be developed in close consultation with and participation by members of the communities affected by the activities, knowledge of the capacities and abilities of key partners, past local experiences in prevention and care, and use of external consultants where local capacity is limited. The resulting set of priority areas and activities will then be forwarded to the ATF and the ACA to co-ordinate their funding and implementation.

The Role of the AIDS Trust Fund

Because the AIDS Trust Fund remains the single largest source of AIDS-specific funding in Hong Kong, it has a critical role to play in improving the overall response. It is recommended that they take the following steps to implement the outcomes of the community planning process and improve the coverage and evaluation of the overall Hong Kong response:

- Fund priority projects identified in the community planning process to ensure coverage of Hong Kong's most urgent prevention and care needs.

- Improve the technical evaluation of projects by appointing an expert technical review board to examine each project closely. This technical review board evaluates each proposal critically, makes a recommendation to the Council of the ATF, and provides feedback to the agency submitting the proposal on ways to improve the project or revise it for resubmission. Key criteria for review would include technical merit, the quality of the evaluation and monitoring plan, the access to or involvement of communities by the agency submitting the proposal, and plans for future sustainability of the project. Supplementary criteria for funding might include partnerships among different sectors, co-financing from other sources, or concrete plans for moving innovative approaches into sustainable mainstream organisations.
- Support longer term projects and consider renewals if a strong need for the project still exists. Funding projects of two or three year duration allows for stronger evaluations of the projects and improved sustainability of operations for many of the partners in the response including NGOs and community based organisations.
- Support capacity building projects. The long term sustainability of Hong Kong's response will depend upon eventually moving HIV/AIDS activities into mainstream organisations as a component of their ongoing activities. Thus, the ATF should accord additional priority to projects which build the ability of mainstream NGO and government agencies to undertake prevention and care activities as well as to those which actively promote the involvement of community based and non-governmental organisations or people living with HIV and AIDS.
- Broaden the definition of acceptable projects to include areas which indirectly influence HIV prevention and care as well as direct HIV activities. It is now recognised that social, economic, and cultural factors are strong determinants of risk behaviour and access to care. Projects that address these issues, e.g., life skills training for youth or occupational training for sex workers can help to make a society more AIDS-resistant and reduce HIV transmission in the long run.

The Role of the Advisory Council on AIDS

Because the Advisory Council on AIDS is charged with ongoing co-ordination of prevention and care programmes, it too has a key role in implementing the recommendations of the community planning process. Accordingly, it is recommended that the ACA make the following changes:

- Change the names and structures of its Committees to reflect the changing nature of the epidemic in Hong Kong. The Scientific Committee on AIDS would remain as is with a strong emphasis on technical and clinical issues, surveillance, and epidemiology. A unified Committee on Prevention and Care would replace the Committee on Education and Publicity and the AIDS Services Development Committee. This committee would redefine its Task Forces to fit the most important priorities identified in community planning and to bring together people working in related areas to produce a more cohesive response. Finally, a new Committee on Promoting Acceptance of People Affected by HIV and AIDS would accord this issue the priority it needs and provide for ongoing efforts to address the issues of acceptance, discrimination, and stigma.

- *Expand the active involvement of NGOs and vulnerable community members at both the Council and Committee levels.* This could be accomplished by: appointing some NGO and community members, including people living with HIV and AIDS, to the Council itself; appointing some NGO and community members to chairmanships of Committees or Task Forces; and requesting NGO and community members to actively solicit input from the communities with whom they work.

These recommendation would allow the ACA to more effectively serve its co-ordination role in priority areas in Hong Kong, while improving the Advisory Council's insight into vulnerable populations and their needs so that policy recommendations would be more relevant and appropriate in the community settings.

Ongoing Review, Evaluation, and Improvement of the Response

Armed with the improved technical review and evaluation of projects by the ATF and the closer co-ordination of projects in specific priority areas by the ACA, the Community Planning Process should be reinitiated at regular intervals. The first step would be to review ATF evaluations and Task Force reports on the key issues and examine the overall indicators developed to determine progress toward overall goals. This critical review will help to identify additional gaps, changing needs in prevention and care, and new areas of concern for the next year or two. This review will then become a regular process, allowing Hong Kong's response to adapt to the changing needs of a dynamic epidemic. As time goes on the response will become more unified, more flexible, and people will work closer and closer together. In this manner, the people of Hong Kong can move ahead together to produce a more effective and sustainable response to the HIV/AIDS epidemic that will serve them well into the next decade.

Moving Ahead Together – Expanding Hong Kong's Response to AIDS

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Review of Hong Kong's AIDS Situation and Programme*

I. Introduction – Adapting to a Changing World

For many years Hong Kong has enjoyed the double happiness of low HIV prevalence in an economic and political environment which made ample resources available for AIDS prevention and care. But as the end of the 20th century approaches, the situation is becoming more fluid. The reunification with Mainland China as the Hong Kong Special Administrative Region (SAR) in 1997 and rapidly expanding international business ties have opened the door for increased commerce and migration, but have simultaneously created opportunities for increasing exposure to HIV as the epidemic in Asia evolves. It is estimated that there were close to 1.5 million *new* infections in Asia in 1997 [WHO/UNAIDS 1997], while in Mainland China alone, between 200,000 and 250,000 people are now believed to be living with HIV. Young people's sexual behaviours and social norms are changing here, as they are throughout the world. The effectiveness of treatment for HIV has increased dramatically in the last two years, offering the hope that HIV will become a chronic disease requiring ongoing therapy but also requiring significant changes in services for people living with HIV and AIDS. The dynamic nature of this situation makes it imperative that Hong Kong carefully evaluate its current response to the HIV epidemic and determine how best to use its resources to keep the prevalence low and provide the highest quality care and support for those residents affected by HIV.

To facilitate the process of improving Hong Kong's response to AIDS, the Advisory Council on AIDS has commissioned both internal and external assessments of Hong Kong's AIDS situation and response. This report presents the findings and recommendations of the external consultant team, which has tried to bring international perspectives and experiences from other countries to the table. In reviewing and analysing the situation and response to HIV/AIDS in Hong Kong the team has relied on the comprehensive internal assessment report prepared by the secretariat of the Advisory Council on AIDS, on additional research and documents describing the situation and response in Hong Kong, and on the inputs of many of the institutions and individuals currently involved in HIV/AIDS prevention and care efforts. The latter include government departments, community-based groups, non-governmental organisations (NGOs), people living with HIV and AIDS, and other individuals as well as members of the Advisory Council on AIDS and the Council for the AIDS Trust Fund. A more detailed description of the methodology of the review is attached as Appendix A.

It should be noted from the outset that when we refer to Hong Kong's response in this report, we are not talking about only the government's response. For our purposes, the response is the sum total of *all* policies, activities, and projects implemented by any agency or individual working to address HIV and AIDS or related issues. This includes numerous government departments (including Health, Hospital Authority, Narcotics, Education, the Equal Opportunities Commission, etc.), the Advisory Council on AIDS, the AIDS Trust Fund, both AIDS and non-AIDS NGOs,

community groups, people living with HIV and AIDS, their families and friends, the business sector, and various other agencies and individuals.

With this broad definition in mind, this review of Hong Kong's response seeks to analyse the strengths and weaknesses of that response in the context of a dynamic and changing situation, and, specifically, to look at:

- the current situation in Hong Kong,
- the relevance of the response to that situation,
- what is working or not working and why, and
- how best to adapt the response to meet Hong Kong's changing needs.

II. Lessons from the Global Pandemic

Before undertaking the review of Hong Kong's current situation, it is worthwhile to spend a brief time discussing what we have learned about the care, prevention, and treatment of HIV/AIDS from two decades of working with the global pandemic. The approaches and principles outlined in this section will be interwoven throughout the discussion and recommendations that follow.

Extensive research and experiences in countries around the world have improved our understanding of the factors contributing to the spread of HIV infection. Behavioural and epidemiological research has taught us that risk is distributed throughout populations, not confined to one or two sub-populations. As a result programmes must have multiple components addressing multiple populations. Yet, we also recognise that there is no magic formula for determining who is at risk today or will be tomorrow. Furthermore there is increasing appreciation of the need to also address the overarching societal and environmental factors that limit an individual's ability to exert control over his or her health and thus make him or her more vulnerable. Each country is different and behaviours change as cultural and economic changes sweep through societies. The resulting behavioural and epidemiological situation can be quite dynamic, as it clearly is in Hong Kong. Thus, careful behavioural and epidemiological monitoring is essential to maintaining an effective ongoing response. We understand that societal factors such as discrimination, stigmatisation, and gender inequity contribute to HIV transmission and make the prevention and care of HIV and AIDS much more difficult. We also understand that no country stands in isolation from its neighbours when it comes to HIV – borders offer little protection against the spread of the virus.

Programmatic experience from settings around the world has built our knowledge of the factors contributing to the implementation of effective prevention and care programmes. While we once thought providing information and education on HIV and AIDS was sufficient, we have now come to understand that a supportive social environment, training in prevention skills, and ready access to the means of prevention are essential to enabling individuals to take protective measures or seek appropriate treatment. HIV/AIDS services must also be offered in a way that is appropriate and accessible to the community toward whom they are addressed, meaning that efforts designed without the active involvement of the affected communities are less likely to be effective. We have also come to recognise that the most effective and sustainable responses are those which actively involve all sectors

of society as partners: government, non-governmental organisations, communities affected by HIV, people living with HIV and AIDS, and the private sector. The benefits of national programmes that incorporate these concerns are clearly seen in Thailand, a country that has substantially reduced the incidence of new infections through a strong society-wide response to the HIV epidemic.

Major technical advances have been made in medical care and psychosocial support for those living with HIV and AIDS. The introduction of combination therapy two years ago has for the first time offered the hope that HIV/AIDS can be treated as a chronic rather than a terminal disease. Yet, in order to take advantage of these advances people with HIV must recognise their risk, realise the potential benefits of these therapies, have access to testing, and have a social environment that supports continued therapy. Another major development on the international scene has been the recognition that people with HIV and AIDS have an essential role in both prevention and care programmes. Rather than being passive recipients of services, they are increasingly taking a role in their own care, in supporting others living with HIV and AIDS, and in assisting prevention efforts throughout society.

III. Hong Kong's Evolving Epidemic

A Dynamic Epidemiological and Behavioural Situation

To date 1,005 HIV infections have been reported in Hong Kong [AIDS Unit 1998]. The current surveillance system relies on voluntary reporting of HIV and AIDS, thus capturing only a portion of all infections. However, HIV testing in other populations including social hygiene clinic (SHC) attendees, drug users, correctional institute inmates, tuberculosis patients, and antenatal women all point to continuing low rates of HIV infection in the population as a whole. Rates in 1996 and 1997 were approximately 0.07% in SHC, less than 0.03% in pregnant women and drug users and between 0.2% and 0.4% in correctional institutions and TB patients [SCA 1997]. The AIDS Unit and the AIDS Scenario and Surveillance Research project have maintained ongoing monitoring of the epidemiological situation and preparation of short-term projections for HIV and AIDS. These exercises have also concluded that prevalence is low at the present time [ASSR1, ASSR2]. However, it should be noted that there are gaps in our knowledge, in particular, prevalence among men having sex with men and sex workers in the various types of sex establishments in Hong Kong. These gaps make it difficult at present to complete the epidemiological picture.

However, the fact that overall prevalence is currently low does not mean it will remain that way. The social, economic, and behavioural landscape in Hong Kong is evolving rapidly, as is the epidemiological situation in the countries surrounding Hong Kong. With these changes come growing risks of HIV transmission. Local universities have undertaken numerous behavioural research projects, and behavioural surveillance has been implemented in a number of Department of Health facilities. A combined review of these studies along with epidemiological data raises serious concerns in the following areas:

- *Frequent cross-border travellers to and from China*

As a Special Administrative Region of China, commerce and travel across the Hong Kong-China border is increasing. Preliminary behavioural studies have found that almost one-fifth of male cross-border travellers had engaged in commercial or extramarital sex on that trip. Almost one-third had commercial sex in the last 6 months, but only one-third of those said they would definitely use a condom in such activities [Lau 1998]. Meanwhile, Health Minister Zhang Wenkang has reported to the Cabinet that “AIDS is spreading quickly through China”. At the same time the incidence of other sexually transmitted diseases (STD) which can greatly enhance HIV transmission is also climbing rapidly in China, while knowledge of HIV and its prevention remain low. These combined factors mean that sexual activity across the border could rapidly become a major avenue of transmission for Hong Kong residents.

- *Commercial sex in Hong Kong*

While cross-border commercial sex is a concern, Hong Kong also has a large indigenous sex industry. One preliminary study has shown a variety of establishment types including villas, karaoke bars, brothels, and massage parlours, as well as women working from the streets [ASSR3]. Little is known of the actual number of sex workers and establishments or about their clients and how to reach them. Many are believed to be transient foreign sex workers from countries where HIV prevalence may be substantially higher than in Hong Kong. Consequently, as HIV spreads through Asia, the risk associated with commercial sex in Hong Kong may grow and efforts to promote condom use among both sex workers and clients become increasingly urgent. It is clear that condom use at present is far from universal in commercial sex, as a substantial portion of men attending social hygiene clinics report commercial contacts, both within and outside of Hong Kong, as the perceived source of their STD infections.

- *Men who have sex with men*

At present over one quarter of all reported HIV infections are attributed to men who have sex with men (MSM), implying a comparatively high per capita infection rate. However, concerns about increased stigmatisation and the local cultural context of male same-sex behaviour have made it difficult to access and mobilise MSM in Hong Kong to undertake major prevention efforts appropriate to the local settings of risk. The current lack of behavioural and prevalence data among Hong Kong MSM have made it difficult to ascertain the actual extent of the problem (although one small scale study reported substantial levels of unprotected anal sex with casual partners [Lulla 1998]) and to advocate for expanded community prevention responses.

- *Youth*

In every country in the world, youth are at substantial risk of contracting HIV and other STD. On a global basis, almost half of new HIV infections occur

among those between 15 and 24 years of age. In Hong Kong, a survey of secondary school students found that almost 20% had been sexually active, while more than half felt that premarital sex was acceptable [Lau and Cheung 1996]. Surveys among marginalised youth found higher rates: 40% had more than one sexual partner in the last year, but only 41% of those used condoms at last intercourse [Ho et al. 1997]. Again the situation is a dynamic one. With increasing globalisation, young people's sexual behaviour patterns are changing rapidly, yet parents and school authorities frequently remain unaware of these changes (in the school survey mentioned above teachers estimated only 12% of students were sexually active).

- *Injecting drug users*

Hong Kong has enlightened policies of unrestricted sale of needles at pharmacies and non-judgmental provision of methadone. The Department of Health through its methadone clinics has also undertaken major education efforts among injectors. These factors have contributed to keeping reported levels of needle exchange among injecting drug users low. Consequently, injecting drug use has not contributed significantly to the epidemic in Hong Kong to date [Lee et al. 1998]. However, one study done among street drug users has found somewhat higher levels of needle sharing than reported by those in treatment [Ch'ien et al. 1997]. This must be viewed with concern because epidemics among injecting drug users can grow quite rapidly, e.g. in New York City rates rose from 0 to over 60% in less than a year, and in Bangkok they grew from 0 to 40% in only 8 months. Thus, current prevention efforts among drug users must be sustained and the epidemiological situation must continue to be monitored closely.

In each of the areas mentioned the dynamic nature of the situation, available behavioural studies to date, and the completeness of coverage by current prevention efforts are of concern. Addressing prevention needs in the populations outlined above are most urgent if Hong Kong is to keep prevalence low into the future. Ongoing epidemiological and behavioural monitoring is also essential to identify new avenues of infection and find better ways to focus prevention efforts for improved impact. This will ensure that the response is making the most efficient use of available resources. For example, the situation in prisons should be watched closely as HIV prevalence at entry has been climbing slowly, creating an opportunity for promoting prevention among those at greater risk.

Changing Needs in Care and Support

Hong Kong's low HIV prevalence has helped to keep the medical and support care burden comparatively low. Current estimates are that cumulatively there have been approximately 1,500 HIV infections, with approximately 1,000 people currently living with HIV [ASSR2]. Through May of 1998, 322 people have been diagnosed with AIDS, although it is believed that this may capture only 50% of actual AIDS cases. The combined caseload at the two designated government clinics for HIV/AIDS was only 379 at the end of 1997, with some small number of additional people seeking care in the private sector (because heavy government subsidies for health care encourage people to seek treatment in the public sector). Similarly,

support service needs have been comparatively low, e.g., AIDS Concern has had about 40 clients in their transport service, and the Society for AIDS Care has an active caseload of approximately 20 for their home-care nursing team.

This situation is already changing rapidly because of the introduction of highly active antiretroviral therapies (HAART), in particular the three drug combinations which have been found to be extremely successful in suppressing HIV replication in the body. It is now widely acknowledged that HAART radically slows the clinical progression of disease, partially restoring immune function and allowing people living with HIV and AIDS to remain healthier. The duration of these benefits is unknown at present, because the therapies are relatively new, but it seems likely that with careful monitoring of the level of virus in the blood stream (viral load monitoring) and adjustment of the drug combinations used, the benefits will continue for many years.

However, this is also producing changes in the demands for support services. There will be a continuing need for palliative care services for those who chose not to pursue treatment or for those for whom the treatments prove ineffective. But, for those who are willing to pursue aggressive therapy less palliative care will be required. Instead their support needs will shift to issues including improved medical follow-up, changing relationships with family and friends as health improves, rights protection in the workplace, and psychosocial support for continuing therapy. Furthermore, the fact that a substantial number of those currently living with HIV do not know their HIV status creates a need for expanded programmes to inform people of the benefits of HAART and to encourage them to seek testing. Only by doing so will people have the information they need to make appropriate choices on their own treatment. Thus, ongoing monitoring of the care situation and close attention to the expressed support needs of those living with HIV and AIDS is essential to keeping the response relevant.

IV. Hong Kong's Response to Date

Overview of the Response

The Hong Kong Government by all accounts took early action to address HIV and AIDS. In common with many other AIDS programmes around the world the first years (1985-1990) were characterised by a focus on ensuring the safety of blood and blood products, on HIV surveillance among selected groups and on general awareness campaigns. In the last six years or so clinical care and support services for HIV/AIDS have assumed increasing importance within the overall response in Hong Kong, both as a result of the steadily growing number of newly diagnosed HIV infections and, most importantly, with continuing advances in therapy. In this regard there are two designated clinical services for the management of patients with HIV which provide the bulk of clinical services for those with HIV in Hong Kong – the AIDS Unit of the Department of Health and Queen Elisabeth Hospital of the Hospital Authority.

At present, the AIDS Unit of the Department of Health, the Advisory Council on AIDS (ACA), and the Council of the AIDS Trust Fund (ATF) are to all intents and purposes the key bodies in the co-ordination, orientation and non-clinical resource allocation respectively for the overall Hong Kong AIDS response. The Department of Health provides the secretariat for the Advisory Council while the Health and Welfare Bureau does the same for the AIDS Trust Fund Council. In a low prevalence context

like Hong Kong's the health authorities and the medical establishment have naturally been in the forefront of HIV/AIDS-related initiatives. They continue to dominate to a large extent the various multisectoral bodies and committees that provide technical, policy and administrative advice and provide most of the support for the overall response to date. NGOs, academic and research institutions, and community leaders are represented on the ACA and ATF or their various subcommittees.

The government programme is largely implemented and managed through the AIDS unit of the Dept of Health which is currently fulfilling multiple roles – service provider for the clinical care of HIV/AIDS patients, general IEC (information, education, and communication) work, programme co-ordination and surveillance activities. In terms of HIV prevention the Unit has focused on enhancing public awareness and on collaborating with and providing technical support to a number of organisations and relevant government units notably the Social Hygiene Clinics, Methadone Clinics, the Correctional Services Department, and the Social Welfare Department. With the setting-up of the Red Ribbon Centre there is likely to be an even greater demand on the staff of the Unit.

Over the last seven years non-governmental organisations have increasingly become involved in AIDS-related activities, starting in 1990 with the creation of AIDS Concern, the first NGO dealing specifically with HIV/AIDS issues, and the Hong Kong AIDS Foundation in 1991. These activities expanded markedly in 1993 with the establishment of the AIDS Trust Fund, which in many cases provides funding for community-based initiatives. At present the involvement of non-AIDS specific NGOs in HIV prevention and care has been relatively low.

In assessing and analysing the response the review team has looked at the overall efforts in terms of their relevance to the current situation in the areas of HIV prevention and care and support, and at the various management and administrative structures that underpin those efforts.

The ACA's Strategies for AIDS Prevention, Care and Control released in 1994 set out broad principles and guidelines for Hong Kong's response. This document identified the three major components of an effective programme as 1) information and education, 2) clinical and support services and 3) the creation of a supportive environment. It further stressed the key principles of non-discrimination, commitment, integration, sustained effort, and solidarity. We will now briefly review the response to date in each of these areas.

HIV Prevention

At the present time, the response with regard to HIV prevention per se in Hong Kong is gradually evolving from what has been largely a mass media and awareness raising campaign. For instance, there has been no shortage of public information advertising since the very beginning. This has gradually been complemented by projects among well-defined vulnerable populations that are offered through existing facilities. These have been largely confined to government or government-supported settings, e.g., STD patients at social hygiene clinics, methadone clinic attendees, and to some extent those in correctional settings. These people have been receiving HIV prevention messages, and in the case of STD patients, HIV counselling and testing. Condoms are

distributed through the government STD clinics that are reported to care for roughly 20% of all STDs, as well as through the methadone clinics. One NGO has also been actively promoting condom provision in gay venues.

Besides these primarily government-led activities, several NGOs have over the last seven years mounted their own information and education campaigns. However, as with government efforts, the majority of these have been aimed at raising general public awareness and, very importantly, at promoting non-discrimination among the public. These combined efforts have generated an impressive output of mass and small media products, which have undoubtedly contributed to raising awareness. In addition, both government and NGOs run hotline telephone services. But only a few isolated and somewhat limited initiatives are aimed at specific audiences and groups such as young people in and out of school settings, commercial sex workers, and men who have sex with men. A few NGOs also offer counselling and HIV testing facilities. There are also the beginnings of interest and involvement of mainstream NGOs but, by and large, the prevention efforts remain located within the AIDS-designated government services and some related government sectors and a handful of AIDS-focused NGOs.

Care and Support for Those Living with HIV and AIDS

Recent advances in therapy and improved knowledge about the general management and care of those living with HIV have focused increasing attention on care and support. The government has taken a significant leadership role with regard to these services, and as a result care and support services have been an important and remarkable part of the response in Hong Kong. Whereas significant public discussion has ensued regarding public subsidy of the cost of effective combination therapies, even in wealthy countries, the Hong Kong government's commitment to provide appropriate health care for all its residents has been commendably inclusive of people with HIV and AIDS. Although low prevalence is keeping the pressures on government health budgets manageable, it is nonetheless to the government's credit that there has been active support for providing optimal clinical services to those with HIV infection. Counselling and testing services, support services and hospice care by dedicated NGOs have complemented the government's own commitment of resources to clinical care, especially since the AIDS Trust Fund was established in 1993.

Overall access to government clinical services is good but the increasing load of patients has drawn attention to the need for building capacity within the clinical setting to deal with the growing numbers. Both designated clinics in the public service are reaching their resource limits, while laboratory capacity for viral load and HIV testing is in need of expansion. While the number of CD4 cell counts being done annually is appropriate for the caseloads, the number of viral loads conducted annually is inadequate and reporting delays average at least one month, which is problematic for timely therapeutic decisions. Thus expanding both the number of trained care providers and the laboratory capacity are urgent issues, which are currently on the Department of Health and Hospital Authority's agendas. These issues will become even more critical as efforts are made to get more people with HIV to determine their HIV status and seek personally appropriate therapy.

With combination therapy becoming the standard of care in Hong Kong, there is a need to carefully assess and review the needs for specific clinical and supportive services in the community, and for setting and maintaining standards of care. In this context it will clearly be important to ensure that carers and providers of support services in the NGO sector as well as people living with HIV contribute to defining the needs for, and the standards of, care and support. As with prevention, care is an area that is evolving rapidly and the response will have to adapt accordingly.

In the near future, the government will face mounting pressures to expend more resources on clinical care, especially as people living with HIV and AIDS increasingly shift to triple combination therapies. Under one set of assumptions regarding shifts to triple combination therapies, prolonged survival on combination therapies, and increasing incidence of newly diagnosed cases (see Appendix B), the cost of clinical management might grow steadily from HK\$31 million to HK\$190 million in 2002. An increase in resource requirements of this magnitude will place significant stress on the individual budgets of the two designated clinics in public service. It must also be anticipated that increased outpatient-based antiretroviral care will also shift the financing burden to the designated outpatient clinics from the hospitals. For example, in the United States it has been observed that the cost of providing care for those with CD4 counts under 200 has actually decreased over the last several years because of the reduced need for hospitalisation associated with implementation of combination therapies. However, while the hospital costs have fallen, the pharmaceutical costs have gone up. For those above CD4 counts of 200, the net impact is an increase in cost of care owing to the added pharmaceutical costs. The changes in such utilisation of pharmaceutical and hospital services should be monitored closely and anticipated in annual budgeting for these services to ensure that the best care is available for all.

Supportive Environment for Prevention and Care

In terms of a supportive environment the Hong Kong authorities have, to their credit, taken some innovative and creative steps, not least of which is the inclusion of HIV/AIDS within the Disability Discrimination Ordinance with oversight by the Equal Opportunities Commission. However, social stigma and discrimination against people living with HIV and AIDS are still strong, limiting the willingness of people living with HIV and AIDS to use the mechanisms so created. A number of private sector companies as well as government have also subscribed to a Community Charter which upholds non-discrimination among their employees although it is unclear how much this has translated into actual workplace education and prevention programmes. Another positive step in creating a supportive environment was the decriminalisation of homosexuality in 1991, which has opened additional avenues for promoting prevention among men who have sex with men in Hong Kong.

Serious concerns persist about the use of a two-tier system of care in medical settings, in which people with HIV are treated differently despite strong recommendations for universal precautions. This has engendered negative feelings and mistrust of the system on the part of many living with HIV and AIDS. Cases reported to the consulting team in which universal precautions were not followed in practices involving potential contact with blood and other body fluids in health care settings also have serious consequences for HIV prevention.

Shared Concerns about the Response

In our discussions with government departments, NGOs, and people living with HIV and AIDS, a number of themes arose time and time again. While each person's perspective on why things are the way they are varied, the concerns were common and widely held. These concerns, together with our own personal assessments of the current limitations in the response, form the basis for our recommendations on moving ahead in the next section. The most commonly mentioned concerns include:

- *Effectiveness and impact of existing efforts.*

This is, of course, the main motivation in the Advisory Council on AIDS initiating this review. It includes several specific issues that have been expressed frequently by people from the government, NGOs, and communities:

1. *The need for more prevention.* There is a general recognition that large-scale programmes to date have focused primarily on publicity and education rather than on specific efforts to provide skills, motivation, and condoms so that people can practise safer sex. People also realise that Hong Kong is in the midst of a highly dynamic situation as regards risk and vulnerability, calling for much more focused prevention programmes for people at higher risk of contracting HIV and for youth.
2. *The need for better coverage in prevention.* At present it is widely felt that the coverage of prevention activities for vulnerable populations, e.g., sex workers and clients, MSMs, and travellers has been limited. In light of the changes occurring in surrounding countries, an urgent need for expansion of these efforts is seen. At the same time, a strong need was also apparent for improving our knowledge of the nature and context of risk in these communities, which will contribute to design of effective programmes.
3. *The need to better serve people living with HIV and AIDS.* A frequent concern was whether people living with HIV and AIDS are getting the best services they can. It was recognised that more clinical care and laboratory capacity was essential and that a better understanding of the evolving needs of people living with HIV and AIDS was needed to improve services.
4. *The related need to more actively involve people living with HIV and AIDS in defining care and support service needs and in prevention programmes.* But while there was widespread interest in providing the best care and support for people living with HIV and AIDS, they themselves expressed concerns about being seen as "clients" rather than equal partners in the response. They felt, and experience elsewhere has shown it to be true, that they have much to offer by helping to shape the agenda for care and support and by assisting in prevention programmes so as to bring a human face to a hidden epidemic.

5. *The need to improve evaluation of both individual projects and the overall programme.* It is well understood that current prevention and care activities have not been sufficiently evaluated, either quantitatively or qualitatively, for effectiveness and coverage. This has many people asking whether what they are doing is making a difference or if they should be focusing their attention elsewhere. There is also concern over whether the totality of actions in Hong Kong is making the best use of resources and making a difference.

- *Little sense of partnership in responding.*

While there are obviously frequent forums - both formal through the various task forces and subcommittees and informal - for interchange of ideas, concerns and experience among different stakeholders, Hong Kong's response to date consists and is perceived to consist to a large extent of distinct entities. There are those efforts that are seen as equating with the government's programme, those that are initiated and carried out by non-governmental organisations, and the work of the academic institutions. There is unanimous recognition however that all these should form part of a co-operative, coherent Hong Kong-wide response within which the efforts of different groups and institutions would complement and reinforce each other. A strong desire has been expressed by most of the parties to find ways to work together better as partners.

- *The need for clear overall programme directions.*

A general concern expressed by many was that they did not sense any overall programme direction or prioritisation of activities in Hong Kong's response, making it difficult for them to decide how and whether their own activities fit into the large scheme of things. NGOs felt that the current general strategies were not specific enough to allow them to select their own activities so as to supplement the government's response effectively. The importance of the AIDS Trust Fund to the overall Hong Kong effort was recognised but was believed to be contributing to the lack of direction since the ATF did not have a well defined set of priorities in deciding which projects to fund.

- *The need for more predictable and long-term funding mechanisms.*

A frequently expressed concern on the NGO side was the short-term nature of much of their funding, which because of the current programme structure in Hong Kong comes largely through the ATF. Because most of the projects funded are either one-time events or one year in duration, it is difficult for them to plan in the long-term and maintain their staff. The existence of the ATF, which is widely perceived as resource rich, has also impeded their ability to raise funds from other sources, making them increasingly dependent upon it. Concerns were also expressed about the lack of transparency in the ATF review process and the need for clearer criteria for funding.

- *Mobilising and improving communication with affected communities.*

The difficulty in mobilising different communities and getting their input to the process was a frequently expressed concern. For example, it was often mentioned that it has been difficult to involve MSM in Hong Kong because the culture encourages people to remain hidden. Similar concerns have been expressed about people living with HIV and AIDS not taking a more active role because of their personal concerns about stigma and discrimination. But at the same time, concern is expressed from the side of people living with HIV and AIDS that those offering AIDS support services sometimes don't listen to them and address their needs.

- *Lack of mainstream NGO involvement – the response remains limited.*

There was almost unanimous agreement that much more effort was needed on the part of mainstream non-AIDS specific NGOs to incorporate AIDS into their activities. This was perceived as partly being due to the limited nature of the problem in a low prevalence setting, but also to some extent to continuing difficulties with stigma and discrimination.

V. Recommendations for Strengthening Hong Kong's Response

Hong Kong is entering interesting times. The dynamic nature of the epidemiological and behavioural situation coupled with the shifting needs in care and support call for a well-informed, comprehensive, and adaptable response. In this section, we will focus on important areas that call for sustained action and/or close attention over the next several years. In the following section, we will propose a structure for co-ordinating the response of the partners so that needs arising in these areas can be addressed flexibly and adaptively as changes inevitably occur in the future.

Prevention

- *Shift the emphasis in the response from publicity and education to prevention.*

If Hong Kong is to maintain its low prevalence into the future, it is essential that the previous programme emphasis on widespread publicity and education activities shift instead to a primary focus on prevention – providing people the motivation, means, and support needed to reduce their risk behaviour. While past publicity and education efforts have been effective at raising general public awareness, global experience suggests that their impact on changing behaviour has been limited, especially among those with higher risk of infection. Prevention is not only good for public health, preventing both HIV and the increased population-wide incidence of active tuberculosis frequently associated with HIV infection, but it also makes financial sense. Effective prevention will keep clinical caseloads low and minimise the total cost of providing treatment to those with HIV and AIDS. Should prevention efforts fail the costs of providing effective clinical management for many additional people living with HIV and AIDS will grow rapidly, placing increasing strains on government resources.

- *Focus prevention efforts where they will have the greatest impact.*

In a low prevalence situation such as Hong Kong's, the most effective prevention will result from *focused* efforts. Focused prevention efforts seek to work with those having higher risk as partners in designing, implementing, and evaluating projects that help them reduce their own risk behaviour. Each HIV infection prevented among those with higher risk behaviours will have a multiplier effect by preventing many subsequent secondary infections. Undertaking such efforts effectively and efficiently requires careful epidemiological and behavioural monitoring to track changes over time, evaluate the effectiveness of prevention efforts, and continuously adapt these efforts for maximum impact.

However, focused efforts must be undertaken carefully so they do not inadvertently increase discrimination and stigmatisation against various sub-populations, which can seriously impede efforts to create a supportive prevention environment. In order to accomplish this, the concept of "market segmentation" becomes very important. The messages and services developed should be designed and delivered in a way that they reach the intended audience without reaching others who might be offended or disturbed by the content. For example, messages intended to reduce risk among men who have sex with men should be distributed in places where these men meet and socialise rather than through APIs (announcements of public interest). Continuing low level efforts to maintain the populace's awareness of HIV and the need for prevention and to foster supportive and caring attitudes for those living with HIV should complement these focused efforts.

At the present time, the following appear to be the areas of greatest concern in terms of focusing prevention efforts. However, this assessment will change in the future as further research clarifies the magnitude of the risk (population size and distribution of risk behaviour within the population) and as levels of condom use and risk behaviour change in response to ongoing prevention programmes. Each area needs to be better understood through research undertaken with the primary goal of designing effective prevention efforts. University, NGO, and government partnerships can be particularly valuable in ensuring that the research fits the needs of project design, implementation, and evaluation and making certain that research findings feed directly into the design of prevention projects.

Pilot projects addressing risk in these populations should be initiated and evaluated as quickly as possible, because developing effective approaches takes time, especially when one starts with little knowledge of the full range of risk behaviours and settings in each population. Time is also required to gain the trust and active participation of the communities involved, many of which are marginalised by society. Trust and participation are both essential to ensuring prevention and care efforts are appropriate for the needs of the community, accepted by them, and able to improve over time. Once effective approaches are found, they should be scaled up to provide as complete coverage of higher-risk settings as possible with available resources.

Travellers to and from China. As the economic, cultural, and epidemiological situation changes in China, Hong Kong may be increasingly at risk. As discussed earlier, preliminary studies have already found high risk among men travelling to and from China regularly, but the characteristics and size of this population and the most effective avenues for reaching them remain unclear. Universities, NGOs, and government should work together to pilot, evaluate, and then scale up projects addressing this risk. Collaborative prevention efforts with Chinese counterparts may prove particularly valuable in this area, so that prevention efforts are mounted for both the sex workers on the China side and the clients on the Hong Kong side.

Commercial sex workers and their clients. The total magnitude of the commercial sex business in Hong Kong remains unclear, as do the characteristics of their clients. However, while preliminary work has shown there are over a thousand *known* establishments, at present only one small NGO (Action for Reachout) and a few social hygiene clinic staffs are working with sex workers, meaning that coverage is extremely limited. No prevention efforts are currently focused on reaching the clients. Mapping of sex work sites and formative research looking at variations in risk behaviour among the different settings (villas, saunas, streets, etc.), client characteristics, and possible avenues for reaching clients are needed. This will allow prevention needs in the different settings to be prioritised so that higher risk settings can be addressed first in the overall prevention programme.

Men who have sex with men. Additional efforts are urgently needed to better understand the nature of risks among MSM and develop locally appropriate prevention approaches that will prove effective for MSM in the Hong Kong setting. It is likely that different approaches will be needed to reach the different groups of men in different settings: gay bars, saunas, and public facilities. Only limited prevention activities for these men have been undertaken to date by AIDS Concern and a small number of community-based organisations such as the 10% Club. The coverage of the entire population of MSM by these activities remains unclear, but is probably quite low. Decriminalisation in 1991 has expanded the opportunities and venues for reaching these men, but not enough has been done to take advantage of this.

Youth. Serious questions have been raised by many about how well sex education and AIDS education are being delivered in Hong Kong schools. This needs to be evaluated and steps taken to improve the quality of these efforts. The differing needs of out-of-school and marginalised youth need to be addressed as well. As with any population, prevention efforts for youth should be designed with their active involvement so that the messages, concerns, skills (including decision making, negotiating safer sex, condom use, and seeking appropriate health care), and services are provided in a way which young people can personally accept and apply. Working with young people offers a particularly important opportunity to begin the process of making a society AIDS-resistant by encouraging safer sexual practices right from the time of sexual debut. Youth can also be a significant force for change, as they are often enthusiastic about taking an active role in prevention efforts for both their peers and adults. There is a clear need to expand coverage of prevention

efforts among the young, both through formal sectors such as education and youth outreach efforts such as TeenAIDS. The World AIDS Campaign 1998 which UNAIDS launched recently should also provide an ideal platform for Hong Kong to further mobilise its young people around HIV/AIDS prevention.

Injecting drug users. While the prevalence of HIV remains low, the need for continued vigilance is paramount. As mentioned earlier, some needle sharing is still being reported among drug users on the streets. The determinants of this practice need to be examined carefully and steps taken to reduce this extremely high-risk behaviour. Current prevention efforts at the methadone clinics should be supplemented with outreach efforts for drug users (both injecting and non-injecting) who do not come in for treatment, where the higher risk of needle sharing has been reported.

STD Clinic Attendees. Perhaps one of the most important populations to reach is those coming in for STD treatment; the presence of an STD is usually a marker for ongoing risk behaviour. This is already being done through the Social Hygiene Clinics where HIV counselling and testing is being offered. However, these government clinics are estimated to serve only 20% of those with STDs in Hong Kong. An initiative to assess the current situation and expand risk counselling and access to HIV testing in private sector clinics would enable many more people at higher risk to be reached.

- *Build the capacity of non-AIDS government agencies, NGOs, and the private sector to offer AIDS prevention and care referral services for the general population.*

While focused efforts will return the greatest prevention benefits in a low prevalence situation, this does not mean that the needs of maintaining awareness and building support for those living with HIV and AIDS in the general population should be ignored. However, whereas population-wide publicity and education were the largest prevention activities in the past, the more urgent need for focused prevention in other populations requires that efforts to reach the general population must be done in a more low cost and sustainable manner. One way to do this in a low prevalence situation is to build in fundamental AIDS prevention and support messages and referrals for care into existing services, in both the public and private sectors.

Numerous other possibilities exist for building such capacity into non-AIDS activities. For example, family planning services and maternal-child health services can offer information about the protective benefits of condoms and referrals to HIV testing for pregnant women (or eventually offer these services themselves). The Immigration Department can provide materials and prevention training for travellers and immigrants. The Labour Department might take a more active role in promoting workplace programmes. Each such opportunity should be explored and action initiated to bring it about, perhaps through provision of limited funding support or through partnerships between AIDS-related government and NGO services and these non-AIDS governmental, non-governmental, and private sector organisations.

Care, Treatment and Support

- *Maintain the Hong Kong government's commitment to providing good treatment and support for those living with HIV and AIDS.*

One of the most unique and commendable aspects of Hong Kong's response has been the government's commitment to comprehensive health care and social support for all residents, including access to appropriate state-of-the-art treatment for those living with HIV and AIDS. This commitment has helped to ensure uninterrupted access for people living with HIV and AIDS to the state-of-the-art treatments so essential for their continued well being. It has kept AIDS from becoming an illness that devastates people's livelihood in the quest for treatment, and has helped to guarantee social equity by ensuring that poor and wealthy alike have equal access to these therapies. Concerns about equity are also addressed through the means-tested income support from the non-contributory Comprehensive Social Security Assistance scheme (CSSA) and associated waiver of user fees for medical services, which assisted 16% of people under care at the Department of Health's Yaumatei clinic in 1997.

These instruments for social protection of people living with HIV and AIDS need to be maintained in the face of future pressures. Such pressures could arise from two factors. One is the projected increase in caseload, which adds to the resources required not only for clinical subsidies but also for CSSA income support. Another factor is the ongoing review of Hong Kong's health financing policy, which is aimed at containing the growth of budget expenditure on the health sector. If new policy measures are introduced to shift more of the financing burden to individual patients, it will be necessary to ensure that higher cost recovery is targeted to better off people living with HIV and AIDS who can afford to pay, while maintaining subsidies for poorer users. This is essential to guarantee continued equal access to all.

- *Expand the clinical and laboratory capacity needed to provide appropriate care for those living with HIV and AIDS.*

While the government has made a strong commitment to providing care for those living with HIV and AIDS, the capacity limits of the existing clinical and laboratory support systems have already been reached. In the early days of the global pandemic it was strongly recommended that HIV care be integrated into general medical practice. However, the complexity of medical management of HIV has grown substantially, with constantly evolving drug regimens and medical management guidelines for both HIV and associated opportunistic infections. As a consequence, while it is critical that palliative and emergency care be provided in all care settings and by all health personnel in a non-discriminatory fashion, the reality is that ongoing medical management of those living with HIV and AIDS requires specialisation. Only a limited number of physicians in Hong Kong today can offer quality medical care for those living with HIV and AIDS and each of these has full caseloads. The laboratory capacity for HIV testing is adequate to current needs, but will require considerable expansion in the immediate future to meet the needs imposed by antenatal screening and expanded promotion of testing. Viral load capacity has already been exceeded and is in urgent need of expansion.

to ensure quality care for those living with HIV and AIDS. Additional laboratory capacity may also be needed in the near future to support evolving HIV medical management strategies, which may soon include resistance testing. Several steps can be taken to address these issues:

1. Integrate specialised HIV care and treatment as a component of medical school training in a specific speciality area. The most obvious choices would be venereology/dermatology, immunology, or infectious disease. One approach to such integration, which also addresses shorter term clinical capacity needs, is to expand the role of teaching hospitals at the two major medical schools in the care and treatment of HIV rather than referring people living with HIV and AIDS to the two designated government clinics. The creation of one or more endowed chairs focusing on HIV treatment and care might be considered to encourage ongoing support for this in the medical school curriculum. These steps will help to generate a continuing supply of young physicians from the medical schools who can assume some of the steadily expanding caseload and compensate should the caseload increase rapidly at some future time.
2. Expand the involvement of private providers in HIV care. One of the main issues that keeps people in the public system for HIV care is the low-cost availability of advanced antiretroviral therapies. People living with HIV and AIDS might be more willing to visit private providers if the cost of these drugs and of viral load testing could be defrayed through provision of government subsidies for these drugs and tests when prescribed by private physicians. This would allow private physicians with experience in caring for HIV and AIDS to expand their caseloads, while simultaneously providing people living with HIV and AIDS with more provider choice. While such public subsidies are difficult under the current system, one option would be for private physicians to share the care of people living with HIV and AIDS with physicians at the designated clinics in the public service, thus lowering the burden on public service providers while providing access to more costly therapies.
3. Develop a clear strategy to bring relevant HIV issues to primary care physicians and incorporate HIV into general medical training. At present HIV has largely been segregated from most of the medical care system, with only a small number of qualified providers. This encourages continued stigmatisation of the disease and reduces quality of care. Primary care providers need training on recognition of acute HIV infection, risk assessment, and routine serologic testing and provision of prevention messages when appropriate. This will allow them to make proper referrals to HIV specialists when necessary. One of the most effective ways to accomplish this is to make sure appropriate knowledge of HIV infection is part of any licensing or testing process, e.g., medical school exams, board certification tests, or hospital licensing. Medical schools and associated training hospitals should develop their own capacity for HIV care or establish strong linkages with the two designated services to ensure that students have sufficient familiarity with the manifestations and management of HIV disease.
4. Accelerate the pace of expanding laboratory capacity in the government sector and consider temporary use of private sector capacity for HIV screening in the

interim. As HIV testing is promoted in various settings and medical management of HIV becomes more sophisticated, demands for laboratory services are growing. Three issues are relevant here: HIV screening and confirmation; viral load testing; and evolving laboratory technologies needed to enhance the quality and effectiveness of medical care.

Current laboratory capacity for HIV testing and confirmation is adequate, but increasing demands are anticipated in the near future. Antenatal screening is likely to become the norm, adding a demand for 60,000 tests per year. The advent of effective new therapies makes it imperative that those with risk behaviour be encouraged to get tested and enter treatment. This will be a substantial expansion over current testing demand and will require additional laboratory capacity to be developed, along with supporting budget. The rate at which these demands will grow should be anticipated and plans made proactively to ensure the capacity is there when needed.

In the case of viral load testing, laboratory capacity is now inadequate to support the current caseload and substantial delays are being seen in providing test results. This is a need that must be addressed urgently to ensure the best care for people living with HIV and AIDS. Providing viral load testing needs to be made a higher priority among laboratory management and additional resources provided to them to ensure it can be done in a timely fashion.

While capacity shortages exist in tests that the private sector can perform, e.g., basic HIV screening, consideration should be given to using private sector labs to absorb some of the load.

5. Anticipate and prepare for changing laboratory needs to ensure quality medical management of HIV, e.g. the introduction of resistance testing. This requires closely following the development of new approaches in the care and treatment of HIV in other places and determining their local suitability quickly. To accomplish this therapeutic research at Hong Kong universities and medical centres might be expanded or the Scientific Committee on AIDS of the Advisory Council on AIDS might institute regular review of changing laboratory needs for effective medical management. For example, testing of HIV resistance using genotypic and phenotypic assays is expected to become a component of routine therapeutic monitoring within the next 6-12 months in the United States at an approximate cost of HK\$42,000 per year for each individual for an annual resistance test. These changes should be anticipated in determining and meeting future laboratory capacity needs.

- Initiate an ongoing dialogue between clinical care providers, people living with HIV and AIDS, and NGOs on quality of current clinical care services and clarify guidelines for therapeutic decisions for all concerned.

Concerns have been raised by some about whether all people living with HIV and AIDS currently under medical care have access to optimal combinations of drugs. Yet, in discussions with care providers we have sensed no reluctance or resistance to providing 3-drug combinations if the doctor sees them as offering clinical benefits and the client wishes to have them. Much of the difficulty here seems to

arise from the lack of sufficiently precise guidelines on therapeutic decisions based on CD4 cell count and viral burden, differing interpretations of current clinical practice overseas, disagreements on the respective roles of the parties involved (provider, client, advocate), and limited dialogue among them. The needs of clinical care for those living with HIV are changing rapidly – new therapies arise constantly, physicians practice HIV medicine differently, and the client's own understanding of the therapies offered often affects treatment decisions. Probably the most effective way to address these issues is to initiate a regular dialogue among those involved to clarify current practice and to identify roles each can play in ensuring that people living with HIV have access to the best quality care. This includes making sure that those living with HIV and AIDS, whether Chinese or English speaking, have the information they need to actively participate in decisions on their own care. This is a shared responsibility of providers, of people living with HIV and AIDS, and of NGOs, not of any one party alone.

Providers have expressed concerns about the limited expertise and time available in Hong Kong to regularly update guidelines for therapy when therapeutic approaches are changing so rapidly. One way to address this might be to review and adopt the treatment strategies of another nation that invests substantial resources into keeping them current with adaptations on the basis of available resources, drugs, and the idiosyncrasies of HIV in Hong Kong (e.g., treatment of *Penicillium marneffei*). The US guidelines are appropriate to the current standard of care in Hong Kong, although some are concerned that one study has found normal CD4 counts for Asians are somewhat lower than in the US. This study needs verification in light of the importance of CD4 cell counts in dictating policies for antiretroviral therapy and prophylaxis for opportunistic infections.

- *Implement a regular system of quality assurance in clinical care to ensure that people living with HIV and AIDS are receiving quality care and are complying with the therapeutic requirements of combination therapies.*

Combination therapies require close monitoring, careful medical management, and good compliance on the part of people living with HIV and AIDS to be effective. Specific drug combinations are not always successful, depending upon the individual and their past treatment history. Thus regular monitoring of viral loads is required to detect the development of resistance to the current combination. Failure rates of combination therapies can also be quite high if those on therapy do not adhere to the specified regimens. These issues have major consequences not only for individual health but also for the development of resistance to specific drugs which may reduce their future effectiveness for others.

A number of approaches might be applied to ensure ongoing quality of clinical and support services including:

1. *Chart audits* on application of standards of care (e.g., use of antiretrovirals, prophylaxis for opportunistic infections, laboratory monitoring, etc.);
2. *Antiretroviral compliance surveys* (e.g., using client surveys, pill counts and pharmacy records);

3. Anonymous surveys of people living with HIV and AIDS on quality and access to services, their individual service needs, and their quality of life;
4. Viral load monitoring among patients. Since the goal of therapy is to achieve no detectable virus, this is an indicator of overall quality of care.

With only two clinics handling most HIV related care in Hong Kong, establishing a database for gathering this information would be relatively easy. Such a database would be extremely beneficial in analysing resource utilisation including hospitalisations, outpatient visits for HIV-related complications, pharmacy use, laboratory test results, use of support services, etc. Analysis of this database would allow the unit cost, subsidies, cost-effectiveness and benefits of various clinical management strategies to be documented and compared over time.

- Undertake a comprehensive, inclusive review of the current support service needs of people living with HIV and AIDS.

As discussed earlier, the introduction of combination therapies is changing the support needs of people living with HIV and AIDS as they anticipate living significantly longer. Increased attention needs to be paid to social services, including workplace, family, and relationship issues, while the need for palliative and terminal care is likely to be decreasing. A careful review of the current needs should be undertaken, with particular attention to the expressed wishes of those living with HIV and AIDS. Their clearly expressed wish in our meeting was to be viewed as part of the solution, rather than as clients of services. This calls for revisiting the idea of organising mutual support groups or linking with overseas groups of people living with HIV and AIDS to help build a sense of community.

This has been difficult in the past, but as the perspective of people living with HIV and AIDS becomes longer term, such community mobilisation may become more attractive. Government departments and NGOs should carefully evaluate the caseloads for the various support services they offer and decide if pooling of resources or sharing of responsibilities with people living with HIV and AIDS, other government departments, and other NGOs could lead to more efficient use of resources. However, this type of review will need to be repeated periodically as demands for different types of services can be expected to change over time.

- Consider instituting case management with the assignment of a case manager for people living with HIV and AIDS who can follow them through the entire network of care resources with the goal of making maximum use of available resources.

HIV is a chronic and complex disease that requires a complete network of medical care resources including outpatient care, hospital care, chronic care, hospice care, social work services, laboratory support, radiology support and pharmacy services. This is best provided in a managed care environment where a single team orchestrates care through the entire system that is co-ordinated in a fashion that makes cost-efficient use of resources. Integrated care is not currently feasible in Hong Kong due to the separation of components of health care resources and health care funding (separate Department of Health and Hospital Authority). Thus the ideal system is not feasible without changes to the entire system of care. Given these limitations, our impression is that HIV care is well organised by a relatively

small group who have the necessary expertise and have developed a network of services that seem to meet the needs of people living with HIV and AIDS. The current system is neither cost-effective nor maximally efficient for HIV care delivery, but it may be the best that can be achieved within the current system. In this system a case manager would follow a person through all sites of care to determine, with the provider, the most efficient place for care and identify current system limitations to be addressed. This could provide improvements in both compassion and economics. This type of allocation of resources for case management for those with a disease that is so expensive would be well justified by enormous savings.

- Expand programmes to encourage people with risk behaviour to get tested and enter medical care.

Even the relatively low current prevalence estimate of 1,000 implies that only about 40% of those with HIV are currently receiving medical follow-up at the government's designated units. Given that effective treatments are available now, additional efforts should be undertaken by all parties to ensure that people know about the benefits of treatment, evaluate their own risk carefully, and have ready access to testing should they decide to determine their status. Outreach efforts are needed to vulnerable communities such as men who have sex with men and sex workers in their own settings, rather than expecting them to come into the Social Hygiene Clinics or the AIDS Unit, neither of which may be comfortable for them. Such expanded testing will also have major prevention benefits in a low prevalence situation such as Hong Kong's because people who know they have HIV are likely to take steps to protect their partners from infection, thus reducing future caseloads. Testing also provides another opportunity to do risk assessment and counselling, which has been shown to be effective in reducing the incidence of STDs (and presumably of HIV as well).

- Move as expeditiously as possible to the implementation of routine, voluntary screening for HIV among pregnant women and provision of optimal antiretroviral therapy and counselling on bottle-feeding for women testing positive. The major advances of the last few years in reducing mother to child transmission using AZT and other antiretroviral therapies need to be made available to women in Hong Kong. Current guidelines in the United States call for providing optimal antiretroviral therapy to women with HIV [MMWR 1998]. However, several issues locally, including discrimination in medical care settings, inadvertent disclosure of confidentiality through the two-tiered system of medical care, and limitations in counselling and testing capacity, must be addressed in the process of implementing these advances. This will enable counselling, testing, and care to be done in a way consonant with addressing the serious concerns of women who test positive and protecting both their rights and those of their children. Piloting of routine, voluntary screening should begin immediately in one or two hospitals with the intention of scaling it up to universal coverage in the near future. A dialogue should also begin among all involved parties on how these services are to be delivered.

Providing a Supportive Environment

- *Eliminate the two-tiered system of medical care for those living with HIV and AIDS by developing a mechanism to enforce universal precautions in all medical procedures.*

This constitutes an urgent and immediate need. The practices of unnecessary gloving in working with people with HIV, special labelling of specimens, and refusal to provide appropriate treatment appear to persist at some level in the overall health care system, despite existing strong recommendations for use of universal precautions. This engenders mistrust between people living with HIV and AIDS and the medical system and creates serious potential for breaches of confidentiality. Furthermore, the continuation of the two-tier system creates a false sense of security in which universal precautions are routinely violated, thus exposing health care workers to both HIV and other infectious disease threats. The review team has heard two reports of recent cases where universal precautions were violated in handling potentially infectious materials or procedures. The Department of Health and Hospital Authority should take steps to assess the extent of and reasons for non-compliance with universal precautions in their facilities with similar programmes undertaken in private hospitals and clinics. Infection control teams/units at hospitals and clinics should be enlisted in this assessment and in bringing about changes in practice. Following these assessments steps should be taken to enforce universal precautions uniformly and eliminate the two-tier system of care for people living with HIV and AIDS.

- *Strengthen the ability of people living with HIV and AIDS to access the Equal Opportunities Commission mechanisms without breaching confidentiality.*

HIV remains a strongly socially stigmatised disease in Hong Kong. While the mechanisms are in place in the Equal Opportunities Commission (EOC) to protect the rights of those with HIV and AIDS under the Disability Discrimination Ordinance (DDO), the basic process of filing a complaint for conciliation cannot guarantee confidentiality for the complainant, potentially exposing them to social discrimination. NGOs and other advocates should work closely with people living with HIV and AIDS and the EOC to find ways for complaints to be filed in confidence, so that as the number of complaints grow, the EOC can investigate discrimination as a general issue rather than requiring identification of individuals. The creation of a central source for collection of such information will strengthen the case for action in the future. The development of case law under the DDO also needs to be watched closely and any weaknesses or loopholes found in the law corrected in future changes.

- *Promote the acceptance and support of people living with HIV and AIDS through campaigns aimed at the general population and at youth.*

Additional prevention gains from announcements of public interest (APIs) aiming at awareness raising are likely to be marginal, especially if the focused prevention programmes proposed earlier are implemented. However, APIs can still serve an important role in promoting acceptance and support. The messages might stress that people living with HIV and AIDS are still productive workers, that treatment is available, and that they have families and friends, i.e., present a positive, human side of those affected by HIV. The Government Information Service should

support such APIs in the future. Because many young people have yet to form opinions on these issues, school and youth group based programmes (e.g., those run by TeenAIDS) that encourage caring attitudes are likely to be even more productive in moving Hong Kong toward a truly supportive environment.

- Integrate services for people living with HIV and AIDS into mainstream social and health services, addressing issues of stigma and discrimination as they arise.

As mentioned in the internal assessment report, problems with Home Care delivery services for those with HIV have been addressed by the Hong Kong Council for Social Services successfully in the past. As services for HIV are integrated, additional opportunities for training and education to promote positive attitudes toward those living with HIV and AIDS will present themselves. These opportunities must be pursued aggressively and proactively, perhaps by an agency such as HKCSS, by the coalition of AIDS NGOs, or both. This is an ongoing process that will gradually ensure that people living with HIV and AIDS enjoy a society-wide supportive environment.

Overall Programme Monitoring and Evaluation Issues

Epidemiological and Behavioural Monitoring

The system of focused prevention proposed above requires close epidemiological and behavioural monitoring of the epidemic to be effective. If prevalence of HIV and other STDs or the practice of risk behaviours start to rise rapidly in a particular population, prevention efforts for that population need to be expanded quickly and effectively. Data on prevalence levels and risk behaviours also serve as essential tools for advocacy and can be helpful in convincing policymakers and community members that HIV is an issue that merits their concern. The combination of epidemiological and behavioural data helps those planning the response to better direct resources to have the maximum impact and serves as an important component in evaluating the overall response's effectiveness. Basing prevention planning on careful analysis of this data can also address expressed concerns regarding the lack of overall programme directions. Several suggestions are made here to allow a clearer picture of the current HIV situation in Hong Kong to be obtained.

- Complement the current system of voluntary HIV and AIDS reporting and unlinked anonymous surveillance with ad-hoc epidemiological and behavioural surveys among sex workers, private STD clinic attendees, men who have sex with men, and travellers.

The current system of voluntary HIV and AIDS reporting is important in assessing the magnitude of Hong Kong's HIV problem but does not provide a complete picture. Because government laboratories do most of the confirmatory testing in the Hong Kong SAR, they capture the majority of positive HIV tests. However, not everyone who has HIV is tested. For example, although the private sector cares for approximately 80% of symptomatic STD cases, it has reported only 28% of the HIV infections, which includes not only testing done in private STD clinics, but also testing done for insurance application, emigration, etc. On the other hand, the Social Hygiene Clinics that treat roughly 20% of symptomatic STD cases have

reported 18% of the HIV infections. This implies that either less HIV testing is being done in private sector STD settings, so that many HIV infections are not being captured, or that risk behaviours are much lower among STD clients in the private sector, which seems unlikely.

Furthermore, while analysis of reported HIV data can provide some indication of where infections are occurring, it does not provide the complete picture because one remains uncertain of what proportion of people in given populations are being tested. Without this “denominator” information, the level of HIV infection (prevalence) in that population cannot be determined. The current unlinked anonymous screening system does allow prevalence to be determined in a number of populations including neonates, injecting drug users in treatment, and correctional facility inmates. However, no prevalence data is currently available for several important populations, including sex workers, men who have sex with men, travellers, and private STD clinic attendees.

Ideally, one would like to measure the HIV prevalence in these populations as part of an ongoing epidemiological and behavioural surveillance system, however, at present the necessary links to access these populations have yet to be established. Under prevailing conditions, it is recommended that a series of ad-hoc behavioural and epidemiological surveys in these populations be conducted, preferably in the context of future prevention projects. This will begin the process of establishing the relationships and trust with these communities that will make future monitoring efforts feasible.

This also presents an important opportunity to forge much-needed alliances and partnerships between academic institutions and NGOs in order to prioritise research that informs the development and evaluation of relevant prevention programmes. For example, an NGO and university researchers might combine research and prevention efforts to meet the prevention needs of the community of men having sex with men. They could conduct a baseline assessment for the prevention project that included quantitative and qualitative behavioural assessments and anonymous HIV testing (with referrals for testing in other facilities should participants wish to know the results of their test), perhaps using less intrusive saliva tests instead of blood tests. A follow-up survey at the end of the project could assess the resulting behavioural and epidemiological change, contributing to the project's evaluation. Because the benefits of the project to the community could be explained to the participants, it might be possible to significantly reduce refusal biases compared to any stand-alone attempt to do testing. The help of organisations of men having sex with men could also be enlisted to expand the participation. Similar efforts could be taken among sex workers and among travellers.

Among all these populations, it will be important to eventually characterise variations in risk behaviour and prevalence by setting, e.g., for MSM at bars vs. saunas vs. public sex settings or for sex workers at villas vs. bars vs. on the street. This would allow prevention programmes to be prioritised by setting type so as to make the most efficient use of available prevention resources.

Similarly, efforts are needed to determine what is happening with men and women at private STD clinics. Currently in the Social Hygiene Clinics some behavioural surveillance is being done, along with active promotion of HIV testing. These efforts have found low HIV prevalence to date. Similar efforts should be promoted at private STD clinics, since they are providing the majority of STD care in Hong Kong. Research should also be undertaken to identify any behavioural, demographic, or health care seeking differences between those attending public and private clinics, and to determine the extent and quality of risk assessment and risk reduction counselling occurring. Active promotion of risk reduction remains one of the most important, but most frequently neglected, aspects of overall STD case management. Special sessions at Social Hygiene Clinics targeted at MSM and sex workers might also be used to obtain another window on HIV prevalence and risk behaviours in those populations.

- *Sustain current behavioural monitoring activities, especially the initiative among youth, and expand to other populations as access difficulties ease.*

Currently some behavioural surveillance is being done in STD clinics, at methadone clinics, and more recently among youth. These are important efforts to sustain as behavioural monitoring can detect increases or decreases in risk long before HIV prevalence starts to change. Such behavioural surveillance should monitor numbers and types of recent partners, condom use, STD care seeking behaviours, age at first intercourse, and other indicators that help to assess the changes occurring in response to prevention projects and exposure to AIDS messages.

As relations improve and it becomes easier to access men having sex with men or sex workers, expansion of behavioural surveillance to include these populations should be considered. Alternatively, unless major behavioural changes are suspected, behaviour might be monitored through ad-hoc surveys every one or two years, most of which might be done as baselines for evaluation of new prevention projects, rather than as part of a separate organised behavioural surveillance system. This would help to keep the costs of behavioural monitoring low.

Hong Kong has already done a large-scale behavioural survey [HKAF 1993], but concerns remain about under-reporting of risk behaviours in this study. Innovative approaches and new methodologies for gathering behavioural data (e.g., recent efforts in Hong Kong to obtain sensitive information with mobile phones, use of telephones for large scale surveys, and computer administered questionnaires) should be supported and evaluated in comparison to more traditional approaches (e.g., face-to-face interviews or self-administered questionnaires). Should phone methods produce comparable results, they could substantially reduce the cost of such surveys in the future.

Determining the characteristics of clients of sex workers and avenues for reaching them is also a high priority behavioural research need in Hong Kong. Rapid appraisal methodologies, including in-depth interviews and focus groups with sex workers, sex establishment owners, and other key informants, should be applied immediately to determine who are the clients of sex workers, both in Hong Kong

and in Southern China. If this work identifies a convenient way of accessing these men (e.g., through particular occupational groups or social settings), serious consideration should be given to including them in future behavioural monitoring efforts.

- Monitor and analyse STD trends more closely.

Bacterial sexually transmitted diseases, such as gonorrhoea and syphilis, provide a much more immediate indicator of risk behaviour than HIV. Because they are usually treated effectively upon detection, STD cases provide information about new infections (that is, incidence), whereas cross-sectional HIV surveys can only tell you about cumulative risk of infection (prevalence), since infection with HIV is life-long. This makes STDs a much more sensitive indicator of behavioural change than HIV prevalence. In the Internal assessment, a substantial increasing trend in syphilis was reported from the Social Hygiene Clinics between 1995 and 1997. This is of concern, as it may indicate increasing risk behaviours or exposure to STDs and also because other STDs have the potential to greatly enhance the transmission rates of HIV.

The periodic careful analysis of epidemiological, demographic and behavioural data on Social Hygiene Clinics attendees can help to track and understand these trends, providing valuable information for dynamically adjusting the response to address changing risk behaviours. Are increased STDs due to changes in health seeking behaviour with more people now coming to Social Hygiene Clinics rather than seeking treatment in the private sector? Do those attending the clinics report behaviours consistent with the observed rise in STDs? How are the sources of infection changing over time, e.g., has the balance changed between cases contracted in Hong Kong and those acquired elsewhere, especially in Southern China? This might indicate an increasing STD problem associated with cross-border movement. Such ongoing analysis can help to identify problem areas, while providing a biological indicator of changes in risk behaviour.

While the Social Hygiene Clinics do collect some behavioural data along with case information, no such monitoring is in place in the private sector, which treats almost 80% of all STDs in Hong Kong. Consideration should be given to establishing some simplified case reporting and behavioural monitoring at a subset of the private clinics so that trends and patterns in the private sector can be monitored. These should be compared periodically with what is happening in the Social Hygiene Clinics to ensure that a change in STD care seeking behaviour does not mask a major change in STD incidence.

- Provide a central source for collection and periodic review of epidemiological and behavioural data and preparing reports for subsequent dissemination.

If the various agencies and individuals involved in Hong Kong's response are to effectively direct their efforts, a clear epidemiological and behavioural picture is needed. An often neglected component of epidemiological and behavioural monitoring efforts is the periodic review of what is known and not known. As the number of sources for epidemiological and behavioural data grows (e.g., HIV and STD case reporting, university research projects, prevention project baseline

assessments, etc.), it becomes increasingly important that a central point be designated for collecting reports, reviewing them, and identifying holes in the overall picture to be filled. At the present time the AIDS Unit in the Department of Health serves this function informally and the Red Ribbon Centre is collecting information from many ongoing projects and efforts. However, this role should be formalised and support provided for them to work with NGO and university collaborators to publish an annual review and analysis of existing information, assess trends in risk behaviour and epidemiology, and identify gaps in the current knowledge of the situation. UNAIDS recently conducted such a review in Thailand and the process was useful in identifying several areas requiring expanded prevention efforts [UNAIDS 1998a]. Such annual reviews will be an important input to the community planning process described in the next section.

Evaluating and Improving the Response and Planning for Future Needs

The magnitude of risk posed by AIDS to the community demands effective monitoring of the performance of the response, along with the ability to anticipate and adjust the response to changing conditions in the future. While many HIV prevention efforts have been launched in Hong Kong, little is known about their overall cost-effectiveness, coverage in reaching vulnerable populations, and impact in terms of behaviour change. Similarly, the delivery of and satisfaction with HIV care and support activities has not been evaluated in any systematic fashion. Such an evaluation is a particularly critical need given the recent therapeutic breakthroughs. If the best use is to be made of available resources in the future, the costs and effects of these efforts need to be systematically monitored on a collective basis. In addition, if care and support services are to maintain high quality, it becomes essential to anticipate future caseloads in planning to ensure that capacity constraints, e.g., the current limitations in viral load testing capacity, do not lower the overall quality of services.

- Define a set of key indicators for evaluation of the overall response and link evaluation of specific prevention activities to some of these indicators to provide a global view of how individual projects are contributing to overall response coverage and effectiveness.

Perhaps the strongest concern expressed by people was the question of how effective the current response is and whether they are making a difference. Periodic reporting on key performance indicators would help to meet this concern. Indicators for the Hong Kong programme are needed in several areas: prevention, clinical care and social support services, societal acceptance, programme costs, and coverage of vulnerable populations.

The issue of programme effectiveness and coverage is an ongoing issue for all national programmes and has received much attention at the international level. For example, the WHO Global Programme on AIDS developed a series of prevention indicators for national programmes which looked at knowledge of prevention, access to and use of condoms, STD management and incidence, HIV prevalence, and non-regular sexual partners [WHO 1994]. UNAIDS is continuing this work in a number of other areas, notably care and support indicators. Prevention indicators might be developed by adapting the WHO indicators to the

local Hong Kong context, which might involve a general population survey, health facility surveys, surveys of retail outlets, and review of epidemiological data. Additional important prevention indicators in the Hong Kong setting might include coverage of prevention programmes, condom use and uptake of STD care in the potentially important sub-populations for expanded prevention identified previously.

Care and support indicators are equally important to assessing the overall response. These might include, for example, indicators on access to and quality of medical management services for HIV (e.g., drawn from some of the approaches suggested earlier for quality assurance in clinical care settings), on access to and quality of care and referral in non-AIDS specific health services, and on attitudes toward those living with HIV and AIDS by health staff. A quality assurance database, as mentioned earlier, would allow some key indicators to be easily assessed, while others would require use of facilities surveys or surveys of people living with HIV and AIDS. Analysis of a quality assurance database would also allow the unit cost, subsidies, cost-effectiveness and benefits of various clinical management strategies to be documented and compared over time. Properly designed, it would also be an invaluable resource for tracking the demand for various social and support services over time.

Other larger scale cost related indicators that might prove valuable include AIDS expenditures (total and by specific function), their funding sources, and what percentage of all health expenditures and public health expenditures they constitute. When these are coupled with estimates of the size and coverage of vulnerable populations, along with levels of behavioural change, they would allow estimates to be made of the overall coverage and effectiveness of prevention and care efforts. Indicators on supportive environment might be collected by a mixture of public and health provider surveys, coupled with the number of actual discrimination events reported by people living with HIV and AIDS in particular settings of concern (e.g., from a system set up to report discriminatory actions anonymously to the EOC).

As one part of the process of community planning outlined in the next section, a set of technically feasible, readily measurable, clearly defined, and relevant overall indicators for evaluating the Hong Kong response should be developed with appropriate input from all sectors. Subsequently, each project submitted to the AIDS Trust Fund should have a detailed monitoring and evaluation plan. In designing this plan, the project team should consider which of the overall indicators are relevant to their project and work these indicators or something comparable into the overall monitoring and evaluation plan for the project. While these indicators will typically be only a small component of the project's overall monitoring and evaluation, their presence will allow the impact of the project to be considered in terms of its contribution to Hong Kong's overall response. These monitors should then be collected centrally and used during subsequent year's community-based evaluation and revision of the overall response in Hong Kong.

Complementary measures to strengthen policy relevant research on AIDS programmes, their cost, and their effectiveness could include funding a regular programme of competitive peer-reviewed grants for operational research, together

with endowment of one or more academic positions for this purpose at local universities.

- *Sustain current efforts at periodic modelling and projection of caseloads and ensure the results are disseminated to those budgeting for future needs.*

As epidemiological and behavioural data improve over time, the issue of estimation and modelling needs to be revisited at regular intervals. The process of preparing estimates and projections encourages ongoing critical examination of existing epidemiological and behavioural data, which helps to ensure that the weaknesses of current knowledge are well understood. The resulting models and short-term projections (5 years) assist in anticipating future clinical and support care needs by providing estimates of number of current and future HIV infections and AIDS cases. This information must then be disseminated to those in the Department of Health, Hospital Authority, Social Welfare Department, NGOs, and other agencies who must provide and budget for care and support activities for people living with HIV and AIDS. This is an essential step in ensuring that future needs are anticipated so that services can continue uninterrupted. The AIDS Scenario and Surveillance Research Project conducted such exercises in 1994 and 1997, and the process should be revisited in 2000 or possibly prior to that time if there is a significant change in the epidemiological and behavioural situation in Hong Kong or our understanding of it.

- *Maintain an up to date list of ongoing projects and once a year identify gaps in the overall coverage of the response.*

Another important component of co-ordinating the response is keeping track of who is doing what. A central collection point should be identified to which all agencies involved in AIDS related activities can send descriptions and up-to-date summaries of their current activities. These summaries should include descriptions of project activities, the populations served, the magnitude of the project (number of people served, number of activities held, etc.), the coverage in terms of the total population served, and important findings from baseline evaluations, along with a summary of future evaluation plans and timeframes. These descriptions should be made readily accessible to everyone to allow for informal co-ordination of activities to promote better coverage of prevention and care needs in the overall response. These descriptions will be yet another essential input into the community planning process described in the next section.

VI. A Proposal for Moving Forward Together

The Need to Expand the Response

Hong Kong has accomplished much in prevention and care over the last decade; however, this review and the concerns expressed by the many people in Hong Kong contributing to it have highlighted some limitations of the current response. Analysis of the epidemiological and behavioural situation described earlier points to a number of critically important prevention contexts that are poorly understood at present and, consequently, addressed in only a limited fashion by the current response. Foremost among these are cross-border travel, commercial sex, and same-sex behaviour among men. Given available staffing, the limits of clinical care capacity are being reached and laboratory demand has already exceeded laboratory capacity in some areas. People living with HIV and AIDS remain highly stigmatised; both at the societal level and within many health care and social service settings. This has kept many from seeking HIV testing and others from accessing available care and support services. As a consequence, people living with HIV and AIDS have had largely a passive role in the response, not making the contributions they might to prevention and care efforts.

However, none of these problems is insurmountable. Within Hong Kong, people can be found with the ability and interest to address these issues successfully and the resources are available to do what is needed. But in order to maintain its record of accomplishment and make progress against HIV, Hong Kong must expand its response. Expanding the response means a number of things [UNAIDS 1998b]:

- Expanding the coverage of the response to reach those at risk of and vulnerable to infection with HIV
- Focusing actions where they will have the greatest impact
- Involving all relevant sectors of society
- Increasing the resources mobilised for HIV/AIDS prevention and care
- Enhancing the sustainability of HIV/AIDS programmes over time
- Strengthening partnerships in the design, implementation and evaluation of HIV/AIDS policies and activities

All of the topics in the above list have been raised by people in Hong Kong during this review: concern that not enough prevention is being done; concern that efforts must be directed where they will have the most effect; concern that there hasn't been enough involvement of those outside the government health sector and AIDS-specific NGOs; concern about access to adequate financial resources and personnel for prevention, care and support; concern about the sustainability of the efforts, especially in the NGO sector; and a strong desire for increased partnership in responding. These are all issues that Hong Kong must address to make its response more effective.

In discussions during our visits, those working on HIV and AIDS in Hong Kong all expressed a need to expand the response and signalled their readiness to do so. It is quite clear that they *are* prepared to expand the response. In fact, strong desire has been expressed for establishing clear programme directions and building partnerships between the various players to address the gaps in the current programme.

Given existing structures, resources, and capacity in Hong Kong we propose the following process to expand Hong Kong's response:

1. *Setting programme directions - community planning.* Institute a process of community planning to identify the most urgently needed prevention, care and support activities and to define a set of concrete indicators to be used for evaluating that response. This process would be convened jointly by the Advisory Council on AIDS (ACA) and the AIDS Trust Fund (ATF) and would provide recommendations to the ACA and ATF on important priorities.
2. *Implementing programme directions - the ATF.* Apply criteria for funding from the ATF, which now serves as the primary instrument of public financing for HIV/AIDS, to ensure the most essential activities are carried out and evaluated, mobilise additional resources, and build more capacity to respond.
3. *Implementing programme directions - the ACA.* Adjust the composition of the Committees and Task Forces of the ACA to reflect the priorities identified in the Community Planning Process and ensure closer co-ordination among those working in related areas.
4. *Reviewing, evaluating, and improving the response.* Maintain ongoing monitoring of the activities making up the response, their epidemiological and behavioural outcomes, and new needs which emerge. Then come together as a community every one or two years to review the epidemiological and behavioural situation, the programme activities carried out, and the indicators collected to evaluate the relevance and effectiveness of the response. Use this evaluation to adjust the list of prevention, care and support activities to reflect changing needs and what has been learned.

Setting Programme Directions - the Role of Community Planning

If Hong Kong is to respond effectively, then those working on HIV/AIDS must find a common sense of direction and develop a shared vision for moving forward into the 21st century. As discussed earlier, the response in Hong Kong today is largely fragmented, with different agencies undertaking largely independent activities with little co-ordination and only limited partnership. This has been an early and natural stage in the evolution of HIV/AIDS responses around the world. Most national responses began either largely in the NGO sector or in the government health sector with limited co-operation, and in some cases strongly adversarial relationships, in the early days.

But as time went on, each began to realise that each had strengths and abilities that the other did not. NGOs had ties to many communities, especially impoverished or marginalised populations, which the government could not access adequately. They also had the flexibility to change quickly and could more easily pilot innovative new approaches and ideas. Government had financial and staffing resources, strong influence on policy and legal frameworks, and the ability to act on a national level. As

the magnitude of the HIV/AIDS problem grew, people began to realise that there was more than enough work for all of them to do and that the overall response was more effective if they co-ordinated and worked as partners than if they tried to do things on their own. It was also soon realised that the HIV/AIDS epidemic was influenced by and in turn impacted almost every sector of society, including non-health governmental agencies, the business sector, communities, and the family. HIV/AIDS was no longer thought of strictly as a health problem. This led to an emphasis on involving sectors of society beyond the health sector in efforts to prevent HIV transmission and deal with the epidemic's impacts and consequences. This idea was soon embodied in the concept of the multisectoral response, promoted heavily by the World Health Organisation in the early 1990's.

But the concept of a multisectoral response is often misunderstood. Many think that a response in which the Ministry of Health or a related government agency assigns responsibilities and budget for different parts of the national programme to different government, NGO, and private sector agencies is multisectoral. But such an approach does not build common understanding of the problems, a sense of ownership of and partnership in the programme, or necessarily assign specific efforts where they can be most effectively and efficiently carried out. The resulting lack of a shared sense of purpose and direction weakens the overall response. Instead to be truly multisectoral and get everyone moving in a common direction, all those working in HIV/AIDS (and eventually as prevalence grows in non-AIDS sectors as well) must come together in a participatory process for establishing programme directions, identifying essential prevention and care activities, locating or building capacity to conduct these activities, implementing the various activities, and undertaking evaluation of the overall response.

Starting in 1993, just such a community planning process for HIV prevention has been undertaken by the Centers for Disease Control and Prevention (CDC) across the United States [CDC 1995]. This planning brings together members of the affected populations, epidemiologists, behavioural scientists, HIV/AIDS service providers, health department staff and others. They are responsible for analysing their local HIV/AIDS epidemic epidemiologically and behaviourally, prioritising populations and prevention needs, identifying specific prevention projects to address those needs, and developing a comprehensive plan for their own location. The community planning process has been used for several years to allocate the prevention funding from the CDC to maximise its prevention impacts. Such a process also underpins the strategic planning approaches that UNAIDS is promoting and supporting on a global basis to improve the local relevance and effectiveness of the response.

Proposed Mechanism for Community Planning in Hong Kong

To move this process forward in Hong Kong, we propose establishing a time-limited (three to six months) Community Planning Committee to achieve the following objectives:

1. Starting from a list of important prevention and care areas (populations and issues) to identify several priority activities in each area which will have the greatest impact in reducing HIV transmission and improving care and support for those living with HIV and AIDS in Hong Kong.

2. To identify strategies for building capacity and involving others in Hong Kong's response to HIV and AIDS.
3. To prepare a set of detailed recommendations for the ACA and ATF on priority projects, services, and capacity building needs.

In Hong Kong, the closest equivalent to the CDC as a source of HIV/AIDS funding is the AIDS Trust Fund, which was established in 1993 to make *ex gratia* payments and fund HIV/AIDS medical and support services, publicity and education. Given the ATF's broader charge and the recognition that prevention and care work best when dealt with together, the community planning process in Hong Kong should encompass all components of the response: prevention, care and support, and provision of a supportive environment. We propose a community planning process for Hong Kong that will proceed in 4 steps:

1. *Appointment of co-chairs for the Community Planning Committee by the Advisory Council on AIDS and the AIDS Trust Fund.*

Given the essential roles of both the ACA and the ATF in Hong Kong's response, they should share responsibility for the appointment of two co-chairs to oversee the process of community planning. This will establish a clear linkage between the community planning process and the existing AIDS policy and funding frameworks in Hong Kong. The primary responsibilities of the chairs are to co-ordinate the logistics of recruiting Community Planning Committee members, to assist in establishing working groups as necessary to address particular prevention and care needs, to solicit community input, and to finalise the recommendations for forwarding to the ACA and ATF.

2. *Recruitment of Community Planning Committee members.*

The members of the Community Planning Committee should represent a broad spectrum of expertise and experience if they are to develop a realistic and achievable set of activities. Epidemiologists and behavioural/prevention scientists are essential because the process must be grounded in the realities of the distributions of HIV and risk behaviours in the population and must be able to draw upon the considerable scientific knowledge base about effective prevention activities. Members of affected communities and those who have been working in HIV prevention and care in those communities must be involved because the objective is to identify specific, feasible, and appropriate prevention and care activities for these affected communities. People living with HIV and AIDS have an important place, for nobody else knows their peer's care and support needs as well and they can play an important role in prevention programmes. Non-AIDS mainstream NGOs and government agencies should be represented because the process is participatory and mobilising their active involvement is one of the ultimate goals of the process.

However, as the CDC has learned, the ideal composition of the Community Planning Committee may not be feasible at first because of difficulties in finding representatives of some populations. In Hong Kong, for example, concerns have often been expressed during our visit about how difficult it is to find representatives of men who have sex with men who are willing to be

publicly identified. Similarly with foreign sex workers. However, with time as efforts reach out into these communities, it will become possible to locate people who can present their viewpoints and concerns. In the interim, Hong Kong does have NGOs which have worked with each of these populations and they can seek to represent them by actively seeking feedback from the communities on issues relevant to them that are being considered by the Committee.

With these requirements in mind, we would propose for consideration an initial composition of the Committee as follows:

- 1 epidemiologist and 1 behavioural scientist - chosen from Hong Kong universities for their epidemiological and behavioural expertise (HIV/AIDS-specific expertise, if possible).
- 3 AIDS NGO members - chosen by the Hong Kong Coalition of AIDS Service Organisations for their experience in prevention work with important vulnerable populations or care and support activities.
- 3 non-AIDS NGO members - chosen by the Hong Kong Council of Social Services for their experience with HIV/AIDS services in their own organisations or their willingness to incorporate such services in the future.
- 2 people living with HIV and AIDS - chosen by one or both of the current organisations - House of Hope and Positive Living Group.
- 3 members from vulnerable communities - chosen by community-based groups for their ability to express the concerns and needs of their communities and comment on feasibility and acceptability of proposed activities in these communities. These might include youth, men having sex with men, and injecting drug users.
- 2 members with specific additional expertise - chosen by the Co-Chairs in consultation with the community for expertise in areas of 1) clinical care and 2) evaluation and monitoring (to assist in indicator development).

It should be noted that this is a *technical* committee, charged with drawing up specific activities in key areas and identifying capacity building needs. The members of this Committee are not selected for their ability to "represent" specific constituencies, but for their knowledge of important issues in HIV/AIDS prevention, care and support. Thus, the primary criteria for their selection should be:

- Knowledge of a specific area of HIV/AIDS prevention or care and support.
- Knowledge of the needs and concerns of specific vulnerable populations.
- Willingness to consult with relevant government agencies, AIDS and non-AIDS specific NGOs, and members of vulnerable

communities to ascertain their needs, concerns, and reactions to what is proposed in the Committee.

- Technical expertise in a field essential to the Committee's work.

In order for the process to be truly participatory, the selection of Committee members in each category should not be done centrally, but through the organisations outlined in the listing above. This will ensure that there is ownership of the resulting directions in the community at large.

3. *Selecting priority activities and defining indicators.*

Once the Committee is constituted, they can begin the process of identifying priority activities. Based on this review, we would recommend the following as initial areas in which to consider developing specific sets of activities:

Prevention

Travellers to and from China
Commercial sex in Hong Kong
Men who have sex with men
Youth
Injecting drug users
STD clinic attendees

Care and support

Expanding the clinical care capacity
Evaluating and improving current quality of care
Identifying and adapting to changing care and support needs
Promoting wider HIV testing
Implementing antenatal screening with antiretroviral therapy

Providing a supportive environment

Enforcing universal precautions
Promoting the acceptance of people living with HIV and AIDS

Monitoring and evaluation

Expanding behavioural monitoring activities
Defining indicators for overall programme evaluation

Capacity building

Expanding the role of non-AIDS NGOs, government agencies
other than health, and the private sector
Including people living with HIV and AIDS in the response
Building capacity for vulnerable populations to respond

For each area, a minimum of 3 priority activities should be developed. But this should not be considered a fixed limit. In some areas additional activities may be needed to cover the full spectrum of risk or address the full continuum of care and support. These activities might range from information gathering activities in cases where little is known to specific prevention and care projects that are likely to prove effective with a given population of concern. For each

potential activity examined, current prevention and care knowledge, the concerns of those involved, the existence of capacity to undertake the activity, and the likelihood of success should be carefully considered before adding it to the list. The idea is not just to locate the problems, but to come up with *solutions* that can work in the Hong Kong context.

The process of developing these activity lists should make ample use of meetings (Committee meetings, working groups, open seminars, and workshops) and both formal and informal channels of communication among groups in the community and those working in HIV/AIDS prevention and care to solicit feedback, obtain additional inputs, and gauge reactions to the activities being considered. The process should be open and inclusive in its execution, and the rationale and reasoning behind the activities chosen should be clear to all.

In its deliberations the Committee should feel free to draw upon any individuals or agencies working on HIV/AIDS in Hong Kong to obtain additional information, ideas, and suggestions on what might or might not work. This will help to ensure that all voices are heard during the process and that the final outcome is a true consensus of the overall Hong Kong community. They should also make use of international experiences on prevention and care, and involve international consultants in areas where expertise is not available locally.

4. Forwarding of recommendations to the ACA and AIDS Trust Fund.

After the activities lists have been widely circulated in the community and feedback has been incorporated, the recommendations of the Community Planning Committee should be forward by the Co-chairs to the ACA and the ATF. The ACA should see to their widespread dissemination to interested parties throughout Hong Kong. Once the recommendations are forwarded, the Community Planning Committee can be disbanded.

Implementing Programme Directions - the Role of the AIDS Trust Fund

The AIDS Trust Fund has an especially important role to play. Because it serves as one of the primary sources of funding for prevention, care and support programmes, it can have a significant influence on the direction of the overall response. By judicious application of its resources, the ATF can provide an invaluable mechanism for ensuring that the most critical prevention and care needs are addressed first. With some increase in its technical oversight capacity, it can strengthen the ability to evaluate and determine the effectiveness of the prevention and care projects it supports, thus contributing to the overall evaluation of Hong Kong's response. Finally, by supporting capacity building efforts, it can contribute to the expansion of Hong Kong's ability to respond effectively in the future.

In order to accomplish these objectives, we would recommend the following changes in the way the ATF evaluates and funds projects:

1. *Fund priority projects first* - Allocate funding for priority projects as defined through the community planning process.

One criticism made of the ATF is that it does not set priorities in funding projects. To address this we would propose that the ATF should take the priority activities that arise from the community planning process and use them in deciding which projects to fund. If no projects are forthcoming in a given area identified as important, e.g., prevention in the commercial sex industry, then the ATF should take a proactive stance and specifically request applications in that area.

This might be most effectively done by earmarking funds for each priority area. For example, in prevention, six priority areas have been identified above (travellers, commercial sex, MSM, youth, injecting drug users, and STD clinic attendees). The ATF might choose to allocate 10% of all prevention moneys to be spent on each one of the 6 priority areas, with the other 40% to be granted in any prevention area in accord with the quality of the proposals received. The presence of designated funding will help to encourage activities in each important area.

The exact apportionment of funds between prevention, medical and social services, and research needs to be examined carefully by the Council for the ATF. Through February 1998, the ATF reported expenditures of HK\$84 million, apportioned with HK\$58 million for medical and social services and HK\$26 million for prevention, of which HK\$7.9 million went for research projects. However, as the epidemiological and behavioural situation changes and support needs shift, this apportionment may need to be reconsidered. The Council also needs to make these funding decisions with reference to a hard budget constraint that reflects a long-term view on whether the Fund should preserve or delete its capital base.

2. *Improve technical review and evaluation of projects* - Substantially strengthen the technical review and evaluation of projects and the feedback given to organisations which apply, so that they can remedy weaknesses and improve their future project proposals.

The members of the Council of the ATF acknowledge that most of them are not experts on HIV/AIDS, but they are very concerned about making the right decisions for Hong Kong. A strong desire for more comprehensive evaluation of the outcomes of projects which the ATF supports has also been expressed. As a mechanism for addressing this, we would propose an approach as outlined in Figure 1. The current subcommittees on medical and support services and on publicity and public education would be replaced by a more formal Technical Review Board. Members of the Review Board, like the members of the Community Planning Committee, would be chosen for their abilities in specific areas on which proposals are to be evaluated for funding. These would include:

- Technical quality of the prevention or care and support project itself
- Quality of the evaluation and monitoring plan in the proposal
- Access and ties to the community toward whom the project is directed
- Plans for ensuring future sustainability of the project

In addition in order to strengthen Hong Kong's overall response, the ATF might also consider giving preference to projects which meet any or all of the following criteria (perhaps by weighting them higher in terms of comparative fundability):

- Projects that involve *partnerships* between various government organisations, NGOs, universities, and community-based organisations (e.g., the example discussed earlier in which research is undertaken by the university as the baseline for evaluating an NGO project).
- Projects that clearly provide a plan for *sustainability* when the ATF funding expires (e.g., an innovative project piloted by an NGO with government participation from the start which intends to move the service into a sustainable government setting upon completion).
- Projects that have *co-financing* from another source. If a certain amount of ATF support is earmarked only for co-financed projects, it will help to mobilise additional resources and address the NGO concern that the existence of the ATF makes it difficult for them to raise funds from other sources.

To be most effective in considering all of these issues, the Review Board would then consist of a mix of university researchers, NGO and government organisation prevention and care staff, clinicians, members of vulnerable populations, etc. Again the membership of this Review Board should be inclusive, drawing on all sectors of the community and bringing in people with diverse backgrounds and experiences. Each person assigned a particular proposal will provide comments in their area of expertise. (Note: in a small place like Hong Kong, there will need to be guidelines drafted on conflict of interest so that reviewers are not commenting on their own proposals). To keep from overburdening the Board members a network of both local and international reviewers should also be recruited to provide concrete and specific criticisms of the proposals forwarded to the ATF. This will require some additional staff support, preferably from someone who knows the issues in HIV/AIDS prevention and care, and it is proposed that the Social Welfare Department provide one or two such staff persons.

Once proposals have been reviewed, the Technical Review Board should prepare a recommendation for the Council of the ATF on either funding the project, requesting a revision and resubmission of the proposal, or rejecting the project. The Council, as required under the terms of the Trust, makes the final decision. The recommendation to the Council should include a detailed summary of the technical comments from the reviewers, reflecting both positive and negative feedback. These detailed comments (one or two pages) might include, for example, discussion of technical issues in the design of the project, concerns about the applicant's ability to access the communities addressed, or suggestions for strengthening or improving the project. To increase the transparency of the whole ATF process, these technical comments should be returned to the submitting agency or individual. This "external review" of their proposals will assist them in improving their own programmes and activities, and will assist in capacity building.

In the initial proposal phase, applicants should be asked to clearly state how their project addresses Hong Kong's larger prevention needs, what the expected coverage of the project is, and how they intend to evaluate its effectiveness. They

should also seek to include those indicators for the overall response which are relevant to their project, thus allowing the next Community Planning Committee to determine the project's contribution to Hong Kong's overall efforts. The Technical Review Board and support staff should also undertake reviews of projects at the end of their funding to determine their effectiveness and help in identifying projects that merit continued funding and/or expansion to larger scale.

3. Support longer term projects and consider renewals if a strong need for the project still exists - NGOs have expressed concerns about the short-term nature of most ATF projects, which is a legitimate concern in terms of the sustainability of their activities and staffing beyond a year. To address these concerns, the ATF should shift primarily to supporting projects for 2 or 3 years. If projects are to have stronger monitoring and evaluation components as proposed here, then supporting longer term projects is essential. Furthermore, if the project is still satisfying a critical need or a filling a gap in the overall response, the ATF should be willing to consider renewal funding, although continued funding should be contingent upon demonstration of continuing demand for the project and its services.
4. Support capacity building projects - Allocate another portion of ATF funding annually for capacity building projects which strengthen Hong Kong's ability to accomplish the priority projects identified in the community planning process or provide support to community based organisations or non-AIDS organisations to undertake new HIV/AIDS activities, thus expanding the response.

The long term sustainability of Hong Kong's response to HIV and AIDS depends largely upon the ability to eventually move HIV/AIDS services into mainstream organisations. If parallel HIV/AIDS services must be established instead of integrating HIV/AIDS into existing mainstream services, these parallel services will remain vulnerable to future funding cuts and reductions. HIV/AIDS services which are integrated into mainstream services are more likely to be sustainable in the long-term. The ATF can contribute to this process by actively promoting the involvement of mainstream NGOs, new community-based organisations (e.g., social clubs for men who have sex with men), and governmental organisations in HIV/AIDS prevention and care. This helps in expanding both the participation in and sustainability of the overall response. Once again the presence of a designated fund for HIV/AIDS capacity building or a preference for capacity building projects in the funding criteria could help to make this a reality.

One model the ATF might consider for capacity building is that of the Northern AIDS Prevention and Care (NAPAC) project in Northern Thailand (later succeeded by AIDSNet). NAPAC was supported by AusAID to fund small projects among NGOs, government organisations, and community-based organisations (CBOs), not unlike the ATF. Over the 4 years of the project, they funded over 160 projects. An equally essential component of NAPAC's mission was to build capacity, which was done by implementing a small grants fund for newly formed NGOs and CBOs. This small grants fund was coupled with activities to develop the management capacity of these newly formed organisations, increasing their sustainability and their ability to expand their small projects to larger scales. These small grants were less stringently evaluated than larger grants with simpler reporting requirements, but they helped to start over 30

organisations of people living with HIV and AIDS in the North. Since that time, over 100 similar groups have now developed. Hong Kong has several communities including people living with HIV and AIDS, men who have sex with men, sex workers, and others who, if given this type of support, might be able to begin valuable and effective prevention and care projects within their own communities. Small grants of only HK\$30,000 or \$40,000 might be enough to move many of these CBOs to undertake HIV/AIDS activities.

One final capacity building approach that the ATF should continue supporting is the fostering of international links between Hong Kong organisations and Chinese and global organisations responding to HIV and AIDS. Prevention efforts, especially among marginalised populations, have been underway longer in other countries. Thus, Hong Kong can learn from their experiences and perhaps adapt them to local needs. Similarly, Hong Kong has many links to HIV outside of Hong Kong, e.g., through foreign sex workers in Hong Kong or travellers having commercial sex in Southern China or Southeast Asia. Collaborative efforts with NGOs or government agencies in surrounding countries could help in developing effective projects to lower the risk in those foreign populations with whom Hong Kong residents interact sexually.

5. *Broaden the definition of acceptable projects used by the ATF to include areas which indirectly influence HIV prevention and care as well as direct HIV activities.* As time has gone on, our appreciation has grown of how important underlying social, economic, and cultural factors are in determining risk behaviour and influencing the environment for prevention and care. Thus, many projects that on the surface may seem only peripherally HIV-related can contribute substantially to reductions in HIV transmission. For example, life skills training for youth in which young people are taught general decision making, critical thinking, and social negotiation skills have proven an excellent way to give young people the ability to make responsible decisions. These skills can be applied to a number of situations that young people routinely face including smoking and drinking, choosing to have or not have sex, and avoiding HIV and STDs. Such programs might not even mention HIV or other sexually transmitted diseases until very late primary or early secondary school, but could be an essential tool in reducing risk behaviour among the young. Similarly projects offering occupational skills training and employment opportunities to sex workers can give these women alternatives to commercial sex. Such efforts are being successfully applied in Thailand to reduce the number of young Thai women entering the sex industry and thus slow HIV transmission. If the ATF were willing to fund such projects that can demonstrate their relevance to HIV prevention and care, it could help to expand the response in Hong Kong.

Implementing Programme Directions - the Role of the Advisory Council on AIDS

The Advisory Council on AIDS is currently charged with three functions:

- Reviewing local and international trends
- Advising the government on policy for prevention and care, and
- Advising on the co-ordination of prevention and care programs

To undertake these functions it has three standing committees: the Scientific Committee on AIDS (SCA), the Committee on Education and Publicity on AIDS (CEPAIDS), and the AIDS Services Development Committee (ASDC). In practice co-ordination of activities has occurred primarily at the Committee level.

However, some reservations about the functioning of the ACA Committees, especially in the area of co-ordination has been expressed by many of the NGO staff with whom we met. Many felt that the Council and the Committees were still strongly dominated by the government, while others felt that little actual co-ordination went on in the Committees. These people felt that the primary NGO function in the Committees was to report on their activities, not to actively co-ordinate with others. This sense of detachment on the part of the NGOs weakens the overall Hong Kong response, and needs to be addressed in any restructuring or adaptation of the roles of the ACA.

With these concerns in mind and reflecting on the suggested changes in priority outlined in the preceding sections, the following are suggested changes to the ACA:

1. *Change the names and structures of the Committees to reflect the changing nature of the epidemic in Hong Kong.*

The *Scientific Committee on AIDS* remains appropriate in the current environment with its emphasis on technical and clinical issues, surveillance, and epidemiology. This Committee should maintain its present makeup and functions.

The Committee on Education and Publicity, however, reflects the older emphasis on media and passive approaches to AIDS education rather than the much more urgently needed emphasis on active prevention, especially among vulnerable populations. The shifting needs in AIDS clinical and support services as a result of improving antiretroviral care are also decreasing the role of the AIDS Services Development Committee, even as they increase the importance of clinical services. Finally, we recognise today that prevention and care are most effective when considered as a package in affected communities, rather than as separate entities. Accordingly it is recommended to change the name of CEPAIDS to the *Committee on Prevention and Care* and to absorb the ASDC into this new committee.

The composition of this Committee should also be expanded to include more representation from vulnerable populations and people living with HIV and AIDS. Their support and co-operation with Hong Kong's prevention and care efforts is essential to an effective response. We recognise that this will be difficult at first given that many of these communities at present have only limited internal self-organisation or concerns about public disclosure. But with time and a place at the table, this situation will eventually resolve itself. In the interim, the NGOs with active programs in those communities can bring the communities' points of view forward. In addition, the Task Forces under this Committee should be changed to reflect the areas of highest priority in terms of prevention and care programs. For example, after the key strategies have been defined in each prevention and care priority area by the Community Planning Process, a Task Force might be formed to address the most important vulnerable populations, e.g., youth, men having sex

with men, people living with HIV and AIDS, or travellers. Each such Task Force should have good representation from the affected community and from government and NGO agencies working with that community. It would be charged with the overall co-ordination of activities in that area, evaluating the effectiveness of current responses, and suggesting revisions to the strategies from the Community Planning Process as the situation evolves or more is learned. This focus of the Task Forces on narrowly defined topics in which all participants have a strong interest should lead to more effective co-ordination, especially in a comparatively small place like Hong Kong.

The remaining outstanding issues impeding Hong Kong's ability to respond effectively are the lack of a supportive environment and the ongoing discrimination against those affected by HIV and AIDS. This issue is critical enough to the future response that a separate *Committee on Promoting Acceptance of People Affected by HIV and AIDS* should be constituted. Key members of this committee should include people living with HIV and AIDS, social agencies in a position to influence people's attitudes, the Equal Opportunities Commission, representatives of the health care professions where major problems remain, and NGOs positioned to influence acceptance, e.g., the Hong Kong Council on Social Services.

These three committees would bring the structure of the ACA in line with the changing priorities in the Hong Kong Environment.

2. *Expand the active involvement of NGOs and vulnerable community members at both the Council and Committee levels.*

The next important recommendation for the ACA is to expand the participation and role of NGOs and vulnerable community members in the Council and its Committees. This can be done in several ways:

a. *Appoint some NGO and community members to the Council itself.* Since Council members serve in individual capacity for the most part, rather than as representatives of specific agencies, this would give the NGOs and vulnerable communities a more active role in the overall operation of the ACA, increasing their participation and sense of involvement.

b. *Let NGO and community members take the Chairmanships of some of the Committees and Task Forces under those Committees.* In many cases, the NGO or community members may be the ones best qualified to identify needs in vulnerable populations or may have the greatest field experience in areas of need. This would increase the effectiveness of the strategies proposed, improve the quality of the evaluations, and increase insight into the needs of the specific community.

c. *Ask NGO and vulnerable community members to take the lead in bringing issues raised in the Committees or the Task Forces to the communities for feedback.* If programs are to be truly effective, the feedback of the affected communities on their suitability and appropriateness is essential. This requires that they become involved in the process. It requires that they have a voice in

what is finally chosen and implemented. With many socially marginalised populations this is difficult to accomplish in a formal, public Committee or Task Force meeting. However, it can be very easily accomplished with community meetings in safe and comfortable environments for those affected communities. This is an essential role that NGO and community members can play as Chairs and members of the Committees and the Task Forces.

These suggestions would allow the ACA to more effectively serve its co-ordination role in priority areas in Hong Kong, while providing better insight to vulnerable populations and their needs so that policy recommendations would be more relevant and appropriate.

When the time came to evaluate Hong Kong's overall response, reports prepared by these Committees and Task Forces would help those doing the evaluation to understand the situation and document the changes which have occurred in response to ongoing programs.

Reviewing, Evaluating and Improving the Response

Once the community planning process has completed and the ATF has been operating under revised criteria for project funding, a periodic review of the state of Hong Kong's response is essential. HIV/AIDS is a dynamic disease and the response must adapt as the epidemic does. Thus, at one or two year intervals it is necessary for the community to take stock of what is happening epidemiologically and behaviourally, look at what has been accomplished in prevention and care, and determine what course corrections are necessary in overall programme direction. The improved project evaluations coming from the ATF and reports from the revised Committees and Task Forces of the ACA along with the national indicators will allow a more balanced assessment of successes, failures, and continuing gaps in the response.

As the situation changes, resources may need to be redirected and both prevention and care and support needs will certainly change. Thus, every one or two years, a new Community Planning Committee should be appointed to revisit the process, review what has been learned, examine the current capacity, and make the necessary changes in direction. As time goes on the composition of this Committee will probably change. New populations will assume importance in terms of HIV/AIDS and others may have such an effective response that they no longer need to be emphasised in the overall response. New agencies will be available to contribute as capacity building efforts take hold. New opportunities for prevention and care will present themselves.

The community planning process is not an easy one. It will be difficult at first as people learn to put aside their differences and focus on common goals of preventing HIV and AIDS and caring for those touched by it. But, because they do share common goals, as time goes on, people will work closer and closer together. Hong Kong's response to HIV/AIDS to date has been a good one, but it can be made better. We hope that the community planning process proposed here will get the people of Hong Kong moving ahead together on the path to an expanded and stronger response.

ACKNOWLEDGEMENTS

The external consultants' team wishes to express its appreciation that this review has been an open and inclusive process allowing us to hear everyone's views and take them into consideration in preparing our recommendations. We wish to offer our sincerest thanks for the willingness of everyone to give their time and share their inputs in order to improve our understanding and for their hospitality during our stays here. We hope that this review itself constitutes the beginning of the process of expanding Hong Kong's response through an increased sense of partnership and shared objectives.

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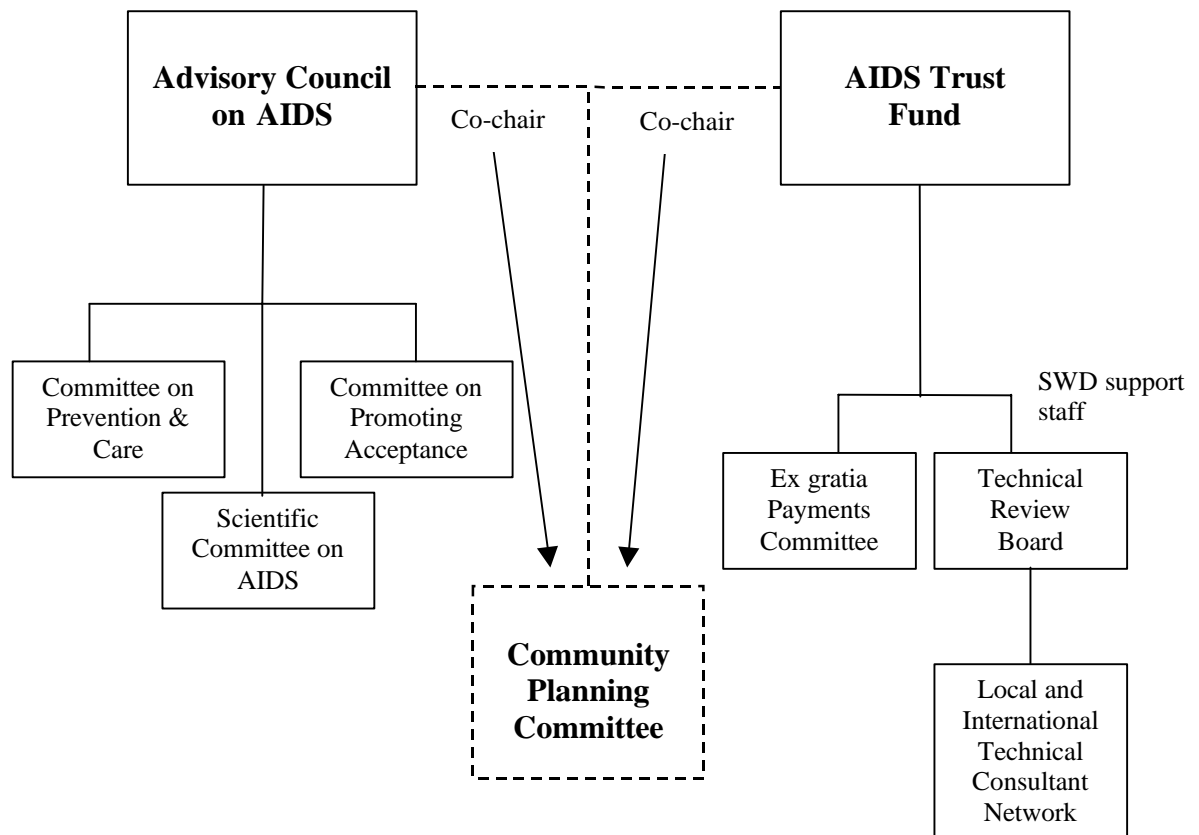


Figure 1. Proposed reorganisation of the ACA and ATF to support the community planning process.

Appendix A - The Methodology of the External Review

The external review team consisted of four individuals: Dr. John Bartlett (a clinician from Johns Hopkins University), Mr. Nick Prescott (an economist from the World Bank), Dr. Clement Chan-Kam (a prevention specialist from UNAIDS), and Dr. Tim Brown (a behavioral scientist/epidemiologist from the East-West Center). Because of scheduling conflicts, the team worked in two shifts. Dr. Bartlett and Mr. Prescott visited Hong Kong during the week of April 27, while Drs. Chan-Kam and Brown came during a two-week period starting May 3rd.

Dr. Bartlett and Mr. Prescott focused extensively on the clinical service and support situation and on issues of cost and financial management of the response. They met with clinicians at both the Department of Health's Yaumatei Clinic and the Hospital Authority's HIV Service at Queen Elizabeth Hospital, with laboratory staff involved in HIV work, with those offering support services for people living with HIV, and with groups of people living with HIV and AIDS at the clinics. Organisations visited included LookOut, Haven of Hope, the Social Hygiene Service, the AIDS Advocacy Alliance, and AIDS Concern as well as the various government clinical and laboratory services. Meetings were also held with the Steering Committee of the Advisory Council on AIDS, the Council of the AIDS Trust Fund, and officials from the Department of Health and the Health and Welfare Bureau. Upon completion of their visits, they drafted individual reports on the clinical care and support services (Dr. Bartlett) and the economic aspects of the response (Mr. Prescott). These individual reports and their recommendations have been incorporated into this document.

Drs. Chan-Kam and Brown focused on the prevention response and the epidemiological and behavioural situation respectively. Their longer visit allowed for a more extensive set of visits over the two-week period. Their concern with prevention responses, epidemiology and behaviour brought them to examine both specific prevention and care settings such as the Yaumatei HIV clinic, the Yaumatei Social Hygiene Clinic (STD), and the Violet Peel methadone clinic and to meet with university and community researchers with knowledge of the behavioural and epidemiological situation. Given the importance of NGOs to the overall response, more extensive meetings were requested with NGOs, including the Hong Kong AIDS Foundation, AIDS Concern, TeenAIDS, and the AIDS Advocacy Alliance. During the period of their visit, two larger group meetings were also held with NGOs: the first involving an extensive set of NGOs to request their input for the review and the second to present preliminary versions of some of the ideas in this report to obtain NGO feedback. As people living with HIV and AIDS have a critical role to play in prevention and care, a meeting was also held with a group representing House of Hope, one of the organisations of people living with HIV and AIDS. Drs. Chan-Kam and Brown also met with various government agencies with important roles in the prevention and care response including the Equal Opportunities Commission and the Health and Welfare Bureau. Finally, they had meetings with the Steering Committee of the Advisory Council on AIDS and the Council of the AIDS Trust Fund. In formulating the recommendations contained in this final consultants' report, close attention has been paid to the concerns expressed by these varied and valuable contributors to the review process.

Upon completion of their visits and consultations, Dr. Chan-Kam and Dr. Brown collaborated on incorporating their own views with Dr. Bartlett's and Mr. Prescott's materials into this final consultants' report reviewing the overall Hong Kong response.

Appendix B - Increase in Costs Associated with Combination Therapies

Despite the high share of public finance in AIDS-related expenditures, their low absolute amount has meant, so far, that public subsidies for HIV/AIDS have put very little strain on overall public spending in health. The 1997 figure of HK\$51 million in recurrent budget outlays adds up to much less than one percent -- only 0.2% -- of the overall health sector budget of HK\$28,180 million. Adding the additional HK\$18 million of extrabudgetary funds disbursed by the AIDS Trust Fund in 1997 does not change the profile of modest resource mobilisation requirements.

In the near future, however, the government will face mounting pressures to spend more resources on the AIDS program. These pressures will be driven by new developments in clinical management, which is the largest single contributor to expenditure on AIDS. In 1997, expenditure on clinical services amounted to HK\$30.5 million, or 42% of total AIDS expenditure. Three driving forces can be readily identified.

First, the main factor leading these new pressures is ongoing innovation in medical technology. The recent development of triple combination therapy with the new class of protease inhibitors had doubled the unit cost of treatment. The annual cost of antiretroviral drugs per patient has increased from HK\$47,500 for double therapy to HK\$95,000 per year with triple therapy. In 1997 only one-third (39%) of the active cases in designated clinics were receiving triple therapy, with another 29% continuing on double therapy. Taking into account the non-ARV costs incurred (lab, OI drugs, outpatient visits and inpatient days) by all patients at different stages of disease progression, the full cost of treating an active patient averaged HK\$77,000 per year in 1997. If all patients with CD4 counts in the range 50 to 500 were shifted to triple therapy, as well as those below 50, the average annual cost per active patient would nearly double to HK\$130,000.

Second, the increased unit costs of treatment will be multiplied by higher caseload volume due to prolonged survival. While too early to assess its true efficacy, estimates suggest that triple therapy could extend survival by at least 2.1 years compared to double combination therapy. Double therapy adds 0.9 years to survival experience with zidovudine monotherapy, which in turn adds 0.5 additional years compared with treatment of opportunistic infections alone. Longer survival duration means that any given number of HIV infections will result in more patients living and requiring continuous therapy at any point in time.

Third, a rising incidence of newly diagnosed cases is anticipated in coming years, reflecting both the lagged effect of transmission occurring during the late 1980s as well as improved clinical coverage induced by better therapy. Newly diagnosed cases might increase at a rate of 20% per year from the 1997 baseline of 156, reaching 388 in year 2002. With prolonged survival, the active caseload could quadruple from 397 to 1,454 over the same period.

Taken together, the above three factors imply a sharp increase in the total costs of clinical management, more than doubling from HK\$31 million in 1997 to HK\$70 million in 1998, and reaching HK\$190 million in the year 2002. This would be accompanied by a tendency for antiretroviral drugs to take up an increasing share of

the resource requirements, with an offsetting decline in the share of hospital inpatient costs.