

Chapter XI

RESEARCH

11.1 Research is an important part of our five-pronged strategy in tackling the drug problem. Findings of objective, systematic and rigorously designed research studies provide a solid foundation to facilitate the formulation of evidence-based anti-drug policies and measures.

11.2 Drug-related research studies of the Government are coordinated and monitored by RAG. Comprising members from the academic, social welfare and medical fields, RAG plays a major role in ensuring the quality of the studies and interpreting the results for the benefits of ACAN and the Administration.

11.3 This chapter discusses the latest development of the research work and proposes the way forward.

(A) Monitoring of Drug Abuse Situation

(a) Current situation

11.4 Perhaps there is nothing more important than finding out and understanding the latest drug abuse situation.

11.5 ACAN and the Administration all along collect and publish two sets of data about the number of drug abusers and other relevant information, i.e. the standing Central Registry of Drug Abuse (CRDA) based on voluntary reporting; and the regular Survey of Drug Use among Students (Student Survey) conducted every four years. In formulating anti-drug policies and programmes, reference is also made to other statistics and information, including drug-related arrest and seizure figures, admission statistics from treatment and rehabilitation service agencies, thematic studies, etc.

(i) *CRDA*

11.6 CRDA is a voluntary reporting system. Since its establishment in 1972, it has played a pivotal role in monitoring the drug abuse situation in Hong Kong. It records information of drug abusers who have come into contact with and been reported by reporting agencies, including law enforcement departments, treatment and welfare agencies, and hospitals. It is not the intention of CRDA to ascertain the exact size of the drug abusing population in Hong Kong, but statistics derived from it reflect the trends of drug abuse.

11.7 CRDA is cost-effective and user-friendly, and provides the most up to date information for monitoring closely the situation. Over the years, it has been revamped several times to modify the data captured, system functions and reporting network to meet the ever changing needs. A review conducted in 2001¹ concluded that CRDA had performed in an excellent way in terms of its sensitivity, timeliness, accuracy and user-friendliness, and was effective in monitoring the drug abuse trend in Hong Kong.

(ii) *Student Survey*

11.8 While CRDA provides the most up-to-date information, the Student Survey is conducted regularly to keep track of the drug abuse situation among students in Hong Kong. The Student Survey was first conducted in 1987, and subsequently in 1990, 1992, 1996, 2000 and 2004. The 2008 round is underway.

11.9 The Student Survey is conducted by means of self-administered questionnaires. Owing to the sensitive nature of drug abuse, special measures have been taken to relieve the psychological burden of students in honestly answering questions about their drug abusing behaviour.

¹ Commissioned by ND, the “Review of Central Registry of Drug Abuse, 2001” was conducted by an independent research team led by Professor Lau Tai-shing and Professor Chen Char-nie of the Chinese University of Hong Kong.

11.10 The latest Student Survey in 2004 had covered a large effective sample size (representing a sampling proportion of 20% of all students under study), compared favourably to similar surveys overseas.

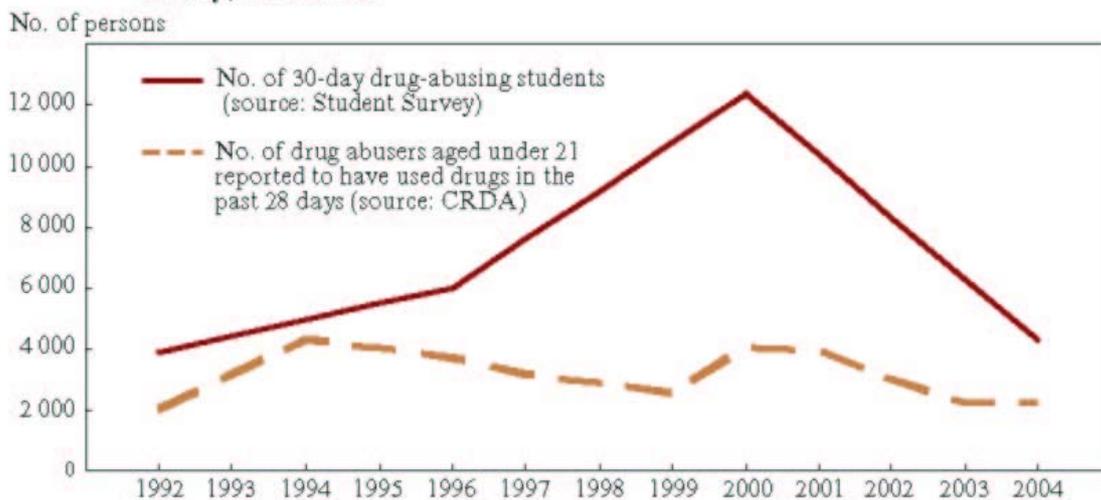
Chart 1 Comparison of Student Surveys conducted in Hong Kong, the US and England

	2004 Student Survey Hong Kong	US	England
No. of students covered by survey	About 500 000 (secondary level students)	About 12 million (Grades 8, 10, 12)	About 3 million (Years 7 to 11)
Effective sample size	About 100 000	About 50 000	About 10 000
Sampling proportion	20%	0.4%	0.3%

11.11 It was also comparable to overseas surveys in terms of the participation rate and response rate.

11.12 Although CRDA and the Student Survey are two different monitoring systems, both exhibit a similar trend in terms of change in the number of young drug abusers over the past years.

Chart 2 Number of young drug abusers captured by CRDA and estimated in the Student Survey, 1992-2004



(iii) Other drug-related statistics and data

11.13 In formulating anti-drug policies and programmes, reference is also made to drug-related statistics compiled by various Government departments and agencies. Kept in a computerised database called the Supplementary Drug Abuse Monitoring System (the Supplementary System), the statistics and data cover -

- (a) Drug arrests and conviction;
- (b) Drug seizure;
- (c) Admission/discharge from treatment centres and methadone clinics;
- (d) HIV infection by drug users injections;
- (e) Quantity of dangerous drugs supplied by wholesalers to medical practitioners;
- (f) Illicit drug retail price;
- (g) Drug purity and composition;
- (h) Drugs detected in death cases;
- (i) Drug-related death reports;
- (j) Number of Hong Kong citizens caught in the Mainland for taking drugs;
- (k) Urine toxicology screening; and
- (l) Worldwide drug statistics and illicit drug indices.

11.14 Although the data kept in the Supplementary System may not directly relate to existing drug abusers, they help the understanding of the drug problem from different perspectives and the monitoring of changes of the drug situation in a swift manner.

11.15 For a more comprehensive understanding of the drug abuse situation in Hong Kong, ND also commissions thematic studies from time to time to research into the a particular aspect of the drug problem or drug-abuse related issue. Compared with regular data collection systems

like CRDA and the Student Survey, thematic studies are tailored to meet specific objectives, with more in-depth and detailed coverage². Thematic studies however take longer time and more resources to take forward and complete.

(b) Issues of concern

11.16 In recent years, concerns have been raised by different quarters as regards the limitations of CRDA and the cogent need to monitor more closely the drug abuse situation among the youth. Several major issues are set out as follows -

- (a) The existing drug monitoring system is unable to provide an accurate estimate on the prevalence of drug abuse in Hong Kong. Owing to the voluntary nature of CRDA and the Student Survey, the number of drug abusers might be grossly underestimated. There are increasing demands for a more accurate estimate of the number of drug abusers in Hong Kong to facilitate better allocation of resources and formulation of policies and measures.
- (b) In addition to the overall prevalence, there are also requests for more information regarding the “hidden” drug abuse population, so that services can be redesigned to meet their needs.
- (c) CRDA and the Student Survey together are not comprehensive enough to cover all drug abusers in Hong Kong. There are demands for other fact-finding methods such as development

² Studies being conducted or completed recently include –

- (a) Engagement of Parents in Anti-drug Work;
- (b) Study of Cocaine Abuse in Hong Kong;
- (c) Study of Patterns of Drugs of Abuse Using Conventional and New Technologies;
- (d) Short-Term and Long-Term Effects of Chinese Herbal Medicine in Drug Detoxification – a Meta-Analysis;
- (e) Longitudinal Study of Psychotropic Substance Abusers in Hong Kong;
- (f) Study of Drug Abuse Situation among Ethnic Minorities in Hong Kong;
- (g) Public Opinion Survey on Anti-drug Publicity;
- (h) Study of Social Costs of Drug Abuse in Hong Kong; and
- (i) Study in Folate Deficiency and its Serious Consequence in Drug Abuser, with Emphasis on Cough Mixture Abuse.

of a qualitative information system to complement the existing monitoring. The non-response rate of the Student Survey and the under-reporting of CRDA should also be reduced as far as possible.

(c) Improvements and further research

(i) CRDA and the Student Survey

11.17 CRDA and the Student Survey are the backbone of our monitoring system. They need continuous improvements to remain relevant and useful to our cause.

Recommendation 11.1

The Task Force recommends that on-going efforts should be made to improve CRDA and the Student Survey.

Measures taken thus far

ND is taking measures to –

- (a) maintain close contact with the reporting agencies and help address their concern and suggestions, e.g. by promoting electronic data submission to enhance efficiency and reduce workload;
- (b) reduce the possibility of under-reporting, e.g. by introducing an additional form for agencies to record and report non-identifying information of those drug abusers who may not be willing to be identified; and
- (c) widen and deepen the reporting network, e.g. by identifying new reporting agencies and parties and promoting CRDA to them.

ND has, in consultation with RAG and ACAN, extended coverage of the 2008 Student Survey to include students from

Primary Four to post secondary. Every effort is being made to relieve the psychological burden of students in providing sensitive information and to improve the school and student participation rates³. Future rounds of the survey will also be conducted more frequently at three-year intervals, in order to more closely monitor the drug abuse situation among students.

(ii) *Better estimating the drug abusing population*

11.18 There is no universally accepted method to accurately measure the size of the drug abusing population in a country or territory. As noted from the experience of various countries, the estimation of the drug abuse population is a difficult issue. The drug abuse data reporting systems adopted by different jurisdictions vary in accordance with their own drug policies.

11.19 Owing to the sensitivity of the subject matter and operational difficulties, a territory-wide household survey to locate the drug abusers is not considered feasible in Hong Kong. Nevertheless, a number of indirect methods have been developed in other places to estimate the number of drug abusers in a country or territory. An outline can be found at **Annex 6**.

11.20 While each method may have its own merits and limitations, it would be worthwhile to examine them further to see whether any of them is applicable in the local context, and, if so, how best to apply it to make an estimation.

Recommendation 11.2

The Task Force recommends that further research should be launched to review the various methodologies for estimating

³ For example, to encourage participation, a confidential report showing the aggregated statistics of each participating school will be provided to the principal after the survey is completed.

the drug abusing population and recommend a possible method that is suitable in the Hong Kong context.

Measures taken thus far

The research outline is being developed.

Recommendation 11.3

The Task Force recommends that, subject to satisfactory identification of a suitable estimation method, a further study may be considered in due course to apply that method for estimating the number of drug abusers in Hong Kong.

(iii) Studying the drug abuse situation of non-engaged youth

11.21 The term “non-engaged youth” refers to young people who are exposed to a prolonged period of non-engaged status, i.e. being unschooled and unemployed. The service sector has called for attention to this group of youngsters as they usually have a lower level of resilience and are prone to psychological or behavioural problems such as drug abuse. Worse still, they are generally less motivated to seek assistance and may remain out of reach of the usual help networks for a long time.

11.22 Some quarters have called for surveys to estimate the number of non-engaged youths who have drug abuse problems and to study their characteristics, so that services may be redesigned to cater for their needs.

11.23 The Task Force has looked into the possibility of conducting a survey on the number of non-engaged young drug abusers but found that statistically, there is no obvious sampling frame of non-engaged youth that we may draw samples from to ascertain the extent of the problem of drug abuse among this particular group of youngsters.

11.24 That said, the study on estimation methods proposed above may also cover the feasibility of estimating specifically the number of non-engaged young drug abusers and the suitability of different estimation methods for this purpose. As appropriate, the follow-up study in estimating the total number of drug abusers may also estimate the number of non-engaged young drug abusers.

11.25 Meanwhile, it is important to better understand the drug taking behaviour, socio-economic characteristics, service needs and other relevant issues in relation to non-engaged youth who have drug abuse problems.

Recommendation 11.4

The Task Force recommends that further research should be launched to understand qualitatively the drug abuse situation among non-engaged youth and their corresponding service needs, leveraging on past studies on general or other issues relating to non-engaged youth, and taking care to avoid duplications.

Measures taken thus far

The research outline is being developed.

(iv) Qualitative module of the Supplementary System

11.26 Comprising principally statistical data, the Supplementary System was originally designed with an additional qualitative module, which was held up owing to non-availability of a suitable researcher at the time of the launch in 2006.

11.27 The purpose of setting up a qualitative module is to establish a framework to gather, collate and analyse relevant information that is scattered in different sources outside the formal statistical domains. This would encompass reaching out through different means in a structured manner (e.g. review of professional literature, newspapers and magazines,

internet research, key informant personal interviews, focus group discussions, etc). The framework would help give us a fuller picture of the local drug scene, detect changes (e.g. new drugs detected or new abuse patterns), and our follow-up with dedicated research on worthwhile issues.

11.28 WHO has highlighted the importance of employing qualitative methods in monitoring the drug abuse situation. In particular, WHO noted that populations that are best reached or studied through qualitative methods include hidden populations, groups usually not detected through the traditional household or student surveys, and those who do not commonly participate in health, welfare or justice institutions.

11.29 The Task Force recognises the possible contribution of a qualitative module of the Supplementary System to complement our existing monitoring efforts, but also appreciates the difficulties in identifying a suitable researcher for its development.

Recommendation 11.5

The Task Force recommends that efforts should be made to develop and launch the qualitative module of the Supplementary Drug Abuse Monitoring System to provide more information about the drug abuse situation in Hong Kong, in addition to quantitative information currently available.

(B) Harmful Effects and Impact of Psychotropic Substance Abuse

(a) Past efforts

11.30 In view of the rising number of reported psychotropic substance abusers over the years, ND has commissioned a number of research studies to investigate the various aspects of the problem -

- (a) Focus Group Study on the Psychotropic Substance Abuse (2001);
- (b) In-depth Study of the Psychotropic Substance Abuse Problem in Hong Kong (2001);
- (c) Study on the Treatment and Rehabilitation for Psychotropic Substance Abusers (2001);
- (d) Study on the Psychotropic Substance Abuse Problem in Hong Kong (2001);
- (e) Study of Substance Abuse in Underground Rave Culture and Other Related Settings (2004);
- (f) Study on the Cognitive Impairment and Other Harmful Effects Caused by Ketamine Abuse (2005);
- (g) Study in Folate Deficiency and its Serious Consequence in Drug Abuser, with Emphasis on Cough Mixture Abuse (2006);
- (h) Study of Cocaine Abuse in Hong Kong (2008); and
- (i) Study of Prevalence and Patterns of Drugs of Abuse Using Existing and Latest Technologies (to be completed in 2009).

11.31 Some studies above investigated the harmful effects of psychotropic drugs, some analysed the behavioural patterns of various subgroups of abusers, and some aimed at developing more effective preventive education and treatment models. They are meant to address imminent needs of the time and be completed and were or will be completed within relatively short periods of time.

11.32 On the other hand, longitudinal data about substance abusers over time are extremely valuable in the area of research. Currently the absence of such data has hampered our understanding of the root cause of the psychotropic substance abuse problem, long-term psychological and physiological consequences related to such abuse, progressive pattern of

drug abusers' behaviours and its future trends, making the planning of long-term strategies less effective.

(b) Longitudinal study

11.33 The Task Force is pleased to note that, following the advice of ACAN and RAG, a three-year longitudinal study was launched in November 2007 to address the research gap, led by a multi-disciplinary team with members coming from the chemical pathology, pharmacy, psychiatry, and sociology fields.

(i) Objectives

11.34 The objectives of the study are to -

- (a) study the long-term harmful effects of abusing psychotropic substances in a group of identified drug abusers;
- (b) study the acute toxicity of abusing psychotropic substances in a group of identified drug abusers;
- (c) review and analyse the existing treatment/rehabilitation practice for psychotropic substance abuse; and
- (d) assess the economic impact of psychotropic substance abuse to society.

(ii) Research methodology

11.35 The research team will, at six-month intervals⁴, conduct a longitudinal survey of a group of 400 to 500 new or early drug abusers recruited from youth outreaching teams on their physical and psychosocial changes caused by drug abuse. To supplement the survey, the research team will conduct three rounds of focus group discussions with young drug abusers recruited from treatment and rehabilitation centres. The information from these two sources will be compared and triangulated.

⁴ A total of six rounds of questionnaire interviews will be conducted during the research period.

11.36 Furthermore, the research team will perform initial screening of young people who have taken a heavy dose or are overdosed with psychotropic substances, using the latest screening technology followed by toxicological assessment.

11.37 The research team will also conduct a thorough review on the existing treatment and rehabilitation models for psychotropic substance abuse in the literature. In particular, it will look into the operation of local substance abuse clinics by interviewing selected patients.

11.38 The study will estimate the cost of drug abuse in Hong Kong by studying the direct and indirect costs with reference to a group of identified drug abusers. A sample of deceased addicts will be selected for detailed investigation to collect more information pertaining to mortality and life expectancy of drug abusers, as compared with that of the general population.

(iii) Implications of the study

11.39 The anticipated benefits of this large-scale study include the following -

- (a) A clearer understanding of both the long-term and short-term (acute) harmful effects of common psychotropic substances will be possible (e.g. whether the damage caused by psychotropic substances is reversible or curable, how they will threaten and affect the life of abusers, etc). This will be useful in warning the public the danger of psychotropic substances, and alerting anti-drug workers of the possible complications involved in the treatment and rehabilitation of psychotropic substance abusers.
- (b) By following closely the progressive patterns of drug abusing behaviour of identified drug abusers, we will have a deeper understanding of the reasons why youngsters take psychotropic drugs, which may be a manifestation of deeper family or youth development problems. This will be valuable to our formulation of future preventive education and treatment.

- (c) The review results of the treatment and rehabilitation models available in other places of the world to tackle psychotropic substance abuse will serve as important reference for both the Administration to adjust its strategy and drug treatment agencies to refine their treatment programmes.
- (d) There will be a more comprehensive estimate of the social impact and costs, both tangible and intangible, of psychotropic substance abuse. This will be useful for the better planning of our anti-drug strategy in the long run with a view to reducing the overall burden of the problem to society.

(c) Further research

11.40 Pending completion of the longitudinal study scheduled for 2011, it is expected that the local drug scene will not remain static and further research needs will emerge and be identified. In particular, further research studies on physiological damages of prevalent or emerging psychotropic substances such as ketamine and ice⁵ on human bodies may be conducted. Also, studies that involve laboratory experiments of applying psychotropic substances on animals may be supported to demonstrate the harmful effects of the drugs and understand the physiological mechanism behind, considering the limitation⁶ associated with studies that apply illicit drugs on human beings for research purposes.

Recommendation 11.6

The Task Force recommends that further studies on the harmful effects and impact of psychotropic substance abuse should be encouraged and supported to provide evidence-based support to the formulation of anti-drug

⁵ Young ice abusers reported to CRDA recorded a 48% increase in 2007 over 2006.

⁶ For instance, drug abusers usually abuse a combination of drugs that may affect the study results, street drugs used by subjects commonly contain impurities, and it will be unethical to apply illicit drugs on human purposefully for studying their effects.

policies and programmes in response to the ever-changing drug scene.

Measures taken thus far

With support from BDF, ND commissioned in July 2008 the study “Long-term Ketamine Abuse and Apoptosis in Cynomologus Monkeys and Mice”. This study will establish a solid scientific background on the harmful effects of ketamine abuse.

(C) Evaluation of Drug Treatment and Rehabilitation Services

(a) Existing efforts

11.41 Hong Kong’s drug treatment and rehabilitation services are characterised by a multitude of different modalities to cater for the different needs of drug abusers from varying backgrounds and dependent conditions. They differ in objectives, operators, target clients, programme philosophies and content, funding sources, monitoring systems, etc. Details can be found in Chapter VI.

11.42 Owing to the diversity and uniqueness of various treatment models, service agencies and departments have adopted different approaches in monitoring the performance of the services. The most basic information gathered is the output indicators (such as the number of admissions, completion rate of the programmes, total number of training sessions, etc) to understand the workload of a treatment service. Outcome indicators (such as customer satisfaction rate, abstinence rate, rate of staying drug free upon termination of aftercare service, etc), which better reflect the effectiveness of the services, are also available in certain modalities, albeit less common.

11.43 These performance indicators are featured in Funding and Service Agreements (FSAs) between SWD and subvented NGOs. In the case of NGOs subvented by DH⁷, they have to follow the Government's subvention guidelines and submit returns on performance indicators. The practice of including in the Controlling Officers' Reports performance indicators of services they subvent or they provide directly varies among SWD, DH, CSD and FHB. Some of the service agencies may on their own accord publish their performance indicators.

11.44 In overseeing the general service provision, ND also collects and collates statistics with reference to various performance indicators in place, but the arrangement varies from modality to modality and from agency to agency. Evaluation efforts are rather rudimentary.

Recommendation 11.7

The Task Force recommends that -

- (a) Controlling Officers (SWD, DH, etc) should explore whether and how best to introduce more outcome indicators, and/or include them in their FSAs with subvented agencies and/or reflect them in the respective Controlling Officers' Reports;
- (b) DH should step up efforts to enter into FSAs with NGOs it subvents where appropriate; and
- (c) ND should collect from treatment agencies more information and statistics about their delivery of services, e.g. workload statistics on abusers of different types of drugs.

⁷ DH has initiated action to establish FSAs with its subvented NGOs.

(b) Recent developments

11.45 Over the past years, in-depth evaluation of drug treatment programmes in Hong Kong was not common. Only a handful of studies on specific modalities were conducted on an ad hoc basis, including a service review of a CCPSA in 1997, and of MTP conducted in 2000. Also in 1997, a review was done to assess the effectiveness of treatment centres running on a faith-based model with a view to deciding whether they should be covered under the subvention net. While ten centres had been invited to join the review, only seven were willing to participate in the exercise and eventually four started to receive government subvention.

11.46 Launched in 2001 and financed by BDF, the Chinese Addiction Treatment Outcome Measure (CATOM) was a systematic and scientific tool comprising a paper-pencil questionnaire and a software programme for data entry and analysis. The system could generate statistics about the psychological and mental state of the service recipients of respective programmes and the effectiveness of the service agencies in running the programmes. A number of service agencies had originally shown interest in the project but then expressed concern about providing pilot outcome data to the system. CATOM could not be sustained without sufficient service data from the agencies eventually.

11.47 Feedback has been received from ACAN and from certain quarters that our evaluation system should seek continuous improvements to better assess the effectiveness of various treatment programmes or modalities. Views from the anti-drug sector are however diverse. Some service agencies hold the stance that they have their own ideologies and priorities in running their service which should not be fettered. Some consider that their mode of operation is unique in itself which makes comparison with other programmes meaningless. Moreover, we should also recognise the rather unique positioning of SACs (integral part of the public medical service), MTP (medicine-based substitution therapy) and DATCs (integral part of the criminal justice system).

(c) The Service Information System

11.48 One of the recommendations of the Second Three-year Plan on Drug Treatment and Rehabilitation Services in Hong Kong for 2000-2002⁸ released in 2000 was to develop a set of service standards for the local drug treatment and rehabilitation services. Following the recommendation and the experience of the CATOM development, ND has set out to develop a Service Information System (SIS) for DTRCs.

11.49 SIS is a data management system which collects data regularly from each participating DTRC about the centre itself, its programmes and clients. A special task force has been set up to provide a steer on the design of the system, monitor the collection and analysis of data gathered and oversee the trial run of the system.

(i) Objectives

11.50 The primary objectives of SIS are to -

- (a) collect more detailed information about the programmes offered by the participating DTRCs;
- (b) compile a set of output/outcome indicators;
- (c) maintain longitudinal records of clients to facilitate future follow up and case studies; and
- (d) provide management statistics to facilitate centres' daily management and operation.

⁸ The Three-year Plan on Drug Treatment and Rehabilitation Services in Hong Kong is a policy paper mapping out the strategies and future direction to which drug treatment and rehabilitation services should take. The plan provides anchor points for related departments and treatment agencies, subvented or non-subvented, to reflect on their services and develop complementing strategies and programmes to response to the latest drug trend.

(ii) The pilot run

11.51 The pilot run of SIS began in July 2006 involving voluntary participation by five subvented DTRCs. Compared with the performance management systems currently run by subventing departments which focus on monitoring the efficient and effective use of subvention resources, SIS is more demanding in terms of submission of data and information. It also places greater emphasis on outcome indicators to measure the effectiveness of respective programmes, and provides greater characterisation of the clients and a wider range of behavioural and other changes with which to describe the outcome. The availability of outcome indicators common to all participating centres makes comparison of effectiveness between these centres possible. Participating centres are also encouraged to seek self-improvement by referring to their respective year-on-year outcome indicators.

11.52 A final evaluation has been planned for 2009. The SIS Task Force will examine the data collected, give suggestions to improve the system, and discuss the way forward.

Recommendation 11.8

The Task Force recommends that, subject to findings of the final review and necessary adjustments, SIS should be extended to all other subvented DTRCs and be promoted for voluntary adoption by non-subvented DTRCs as far as possible to facilitate continuous service improvement.

11.53 The SIS pilot project is valuable to not only DTRCs, but also other treatment modalities in Hong Kong, given our basic objectives to develop broadly comparable indicators. On the other hand, the Task Force is conscious that outcome indicators must be relevant and sensitive to the objectives and uniqueness of the respective treatment modalities. As such, SIS may not be strictly applicable in all circumstances.

11.54 It should be noted that Controlling Officers are monitoring the treatment modalities they provide or subvent through their own systems (FSAs, subvention guidelines, Controlling Officers' Reports, etc) in the main to ensure proper programme operation and accountability of public resources. On the other hand, ND is developing the pilot SIS for DTRCs to seek more in-depth evaluation of programme effectiveness from a more strategic policy perspective. Notwithstanding the different objectives, there may be certain overlapping in reporting coverage and scope for adjustments of the two systems in future. There is a long term need to consider relieving the reporting burden of agencies and better aligning resource allocation with policy objectives.

Recommendation 11.9

The Task Force recommends that, subject to progress of implementation of SIS, studies may be carried out in the longer term to explore ways to develop a more structured and systematic outcome monitoring system for other treatment modalities in Hong Kong and to consider whether and how best the performance monitoring systems of Controlling Officers and SIS may dovetail or converge with each other.