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Report on a study on the
treatment and rehabilitation for psychotropic substance abusers



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Report on 香港賽馬會藥物資訊天地
Hong Kong Jockey Club Drug InfoCentre
A Study on the Treatment and Rehabilitation
for Psychotropic Substance Abusers

Commissioned by Task Force on Psychotropic Substance Abuse

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INTRODUCTION

BACKGROUND

In view of the rising trend of psychotropic substance abuse observed in the recent past in Hong Kong, the Action Committee Against Narcotics (ACAN) established a Task Force on Psychotropic Substance Abuse in April 2000. Members of the ACAN and its Subcommittees were invited to join the Task Force. The Task Force subsequently decided to set up an Ad Hoc Research Group and carry out two studies. Some members of the Task Force joined in the Group upon invitation.

RATIONALE OF THE STUDY

According to the Central Registry of Drug Abuse, despite the generally falling trend of the number of reported drug abusers since 1995, the number of reported psychotropic substance abusers has increased from 2,238 in 1994 to 3,493 in 1999, representing an increase of 53% over the past five years. An alarming increase in the trend of psychotropic substance abuse was noted particularly in "ice" and ecstasy. It is also known that the abuse of psychotropic substances will bring about many physical and psychiatric complications to drug abusers. Therefore, this study can help to obtain a better understanding on the impact of psychotropic substance abuse on treatment and rehabilitation and can help the Task Force on Psychotropic Substance Abuse to draw up effective treatment and rehabilitation strategies.

RESEARCH GROUP COMPOSITION AND CHANGE IN MEMBERSHIP

There were four members in the group at the beginning: Dr. Leung Shung

Pun, Dr. Cheung Kin Leung Ben, Dr. Yu Chak Man and Mr. David Cheung. Initially, it was planned that the group could submit the final report to the Task Force by the end of 2000. Dr. Leung withdrew from the group because of personal health reason. Dr. Benjamin Lai was recruited to participate in the group towards the end of 2000. More time has been used to collect relevant reference materials.

OBJECTIVES OF THE STUDY

At the beginning the objectives of the study were quite ambitious. Without time and resources constraints, we would like to work our best to achieve them. Eventually, we had to limit the scope and extent our study so that we could manage the work. For example, there are so many types of psychotropic substances that we decided to be more focused in this review. We chose to address the five most commonly abused substances as reported by a recent survey on abuse of party-drugs conducted by the Dance Drugs Concern Group¹.

The revised objectives of the study are:

- To examine the physical and psychiatric harms caused by common psychotropic substances of abuse (MDMA, Cannabis, Ketamine, Amphetamine, and Benzodiazepines)
- To examine the clinical experience in respect of the medical and psychiatric treatment for psychotropic substance abusers.
- To examine the overseas treatment approaches for psychotropic substance abusers.
- To examine the current methods and models adopted by local treatment and

¹ Dance Drugs Concern Group, Committee on Substance Abuse, Hong Kong Council of Social Service, (2000) A Survey on Party Drugs.

rehabilitation agencies in the treatment of psychotropic substance abusers.

- To recommend appropriate strategies in the treatment and rehabilitation of psychotropic substance abusers for the consideration of the Task Force.

MEANING OF THE TERM PSYCHOTROPIC SUBSTANCES

The term “psychotropic” means acting on the mind. Thus, psychotropic substance refers to all mood altering chemical substances including as heroin, stimulants, depressants, nicotine, alcohol, etc. In this paper, however, we have narrowed down its meaning to refer to substances of abuse other than narcotic drugs, nicotine and alcohol. This working definition is adopted so that the term is in line with the meaning adopted by the Government, which can be inferred from the Three-year Plan of Drug Treatment and Rehabilitation published by the Narcotics Division and the Narcotics Report 2000 published by ACAN.

DO PSYCHOACTIVE SUBSTANCES CAUSE DEPENDENCE?

There are some confusions in the use of the term dependence. Experts in the field of drug addictions are increasingly dissatisfied with the pharmacologists' concept of “dependence”, and the misguided attempt to distinguish between physical and psychological dependence, in the late 1970s. The World Health Organization produced a memorandum to suggest that the misleading term physical dependence should be renamed 'neuroadaptation' and dependence recognised as 'a clustering of phenomena (cognitive, behavioural and physiological)' of which 'evidence of neuroadaptation is just one' and 'not ... the most important". Both ICD10 and DSM-IV (the two most widely accepted classification system of diseases) endorse such concept and developed operational criteria for dependence. A diagnosis of dependence could be made in the absence of withdrawal symptoms. Applying this more legitimate and

up-to-date definition, the psychoactive substances reviewed in this paper do cause dependence.

LIMITATIONS

- Because of the various constraints, the study is limited to focus on only five common types of psychotropic substances being abused.
- Polysubstance abuse is not covered here because of its complexity. This complicated phenomenon may deserve a separate study for in-depth evaluation.
- Only descriptive information are collected on the existing treatment and rehabilitation employed by various treatment agencies. The frequency of the sessions and the details of specific treatment approaches used in various approaches are not available for further understanding of the current local services for the abusers.

ACKNOWLEDGEMENT

The research group would like to express our thanks to the following parties who had rendered us assistance in the process of carrying out this study:

Dr. Leung Shung Pun who was the convenor of the group and laid the groundwork before he withdrew because of personal reasons. Ms. Rhoda Yu, the librarian of Castle Peak Hospital and Ms. Gloria Tang, the librarian of Kwai Chung Hospital who helped order books and reference materials. Ms. Ms. Jennifer Mo of Castle Peak Hospital who helped arrange meetings. Miss Lam Ho Wan of Caritas Wong Yiu Nam Centre who assisted in carrying out the questionnaire survey on the treatment and rehabilitation service. The various treatment and rehabilitation agencies listed in the information table for their participation in the questionnaire survey.

PHYSICAL AND PSYCHIATRIC CONCERNS IN PSYCHOTROPIC DRUG ABUSE

INTRODUCTION:

The abuse of psychotropic substances is rapidly attracting the public's attention. Increasingly more youngsters are lured to try on these so call "soft drugs", misled by an erroneously claim of their safe and non-addictive nature (Patrick Zickler. 1999).

Most of these compounds can be taken via oral, inhalation or intravenous routes and are thus considered as user-friendly. Comparing with the heroin or opium, supply of these drugs is often ensured, as the manufacturing process is considerably simpler and cheaper. Furthermore, these compounds are highly diversified in their chemical compositions and can easily be modified into other derivatives, making detection and control more difficult than before.

Some of these drugs, e.g. cannabis, have been extensively studied and their physical and psychological effects were well described in medical literatures. On the other hand, the so called 'club drugs' e.g. ketamine, were relatively new to the market and their toxic effects were not as widely reported. Of the many different kinds of commonly abused psychotropic substances, the following five drugs are in prevail (Government Lab 2000) and their physical and psychiatric effects would be discussed in this report:

1. Benzodiazepine
2. Amphetamine
3. Methylenedioxymethamphetamine
4. Ketamine
5. Cannabis

PHYSICAL HARMS:

1. BENZODIAZEPINE

Benzodiazepine is a family of chemical related compounds consisting of a benzene ring attached to a seven-member 1,4-diazepine ring. These compounds have widely been used as sedatives, hypnotic, muscle relaxant or anticonvulsant. They can be taken via oral, intravenous or rectal routes. They can potentiate the actions of γ -aminobutyric acid (GABA) and interact with the GABA receptor, causing an increase in chloride flux and hyperpolarization of neural cells and resulting in neuronal inhibition and central nervous system depression. (Richard S Irwin. 1999) At a higher dose, benzodiazepine results in sedation, decreased anxiety, disinhibition, hypnosis, loss of consciousness, amnesia and reduced reflex activity. Higher doses may result in respiratory depression and hypotension (Steven B. Karch. 1998).

Physical dependence is possible, especially among chronic, multiple drug abusers or use of high potency and short acting derivatives. Withdrawal from the drug will result in recurrence of anxiety or panic disorders, insomnia, hallucinations and delusions, pain, malaise and weakness, impaired memory and concentration. Complicated withdrawal syndrome may result in delirium, convulsion, hyperthermia, cardiovascular collapse and death (Friedman L. 1996).

Acute overdose of benzodiazepine causes delirium, confusion, dysarthria, hypotension, pneumonia, pulmonary edema and renal failure. Respiratory depression may occur (Richard S Irwin. 1999).

2. AMPHETAMINE OR METHYLAMPHETAMINE

Amphetamine is a synthetic congener of ephedrine. Methylamphetamine is chemically related to amphetamine which is synthesized by reduction of ephedrine or condensation of phenylacetone and methylamine.

These compounds are indirect monoamine agonists causing release of norepinephrine, serotonin and dopamine from presynaptic terminals, blocking the reuptake of these catecholamines into the nerve terminals and inhibit their breakdown by the monoamine oxidase system. The increase in catecholamines in the nerve cells accounts for the effects on central nervous system and other peripheral adrenergic stimulatory actions. Long term repetitive use of amphetamines depletes the catecholamine stores and resulting in depressive symptoms (Steven B. Karch. 1998).

Physical effects of these compounds include restlessness, irritability, tremor, hyperactive reflexes, dizziness, insomnia and weakness. Other more general effects include headache, chills, sweating, hyperthermia, urticaria, loss of libido, nausea, anorexia, diarrhoea, tachycardia, anginal pain, hyper or hypotension. In case of heavily overdose, convulsion, coma, cerebral hemorrhage can occur (Richard S Irwin. 1999).

Regular users develop tolerance to the central nervous system effects usually within a few weeks. Physical dependence on these compounds often occurs. Acute withdrawal of these stimulants causes fluctuation in mood and other psychotic behaviours. Different withdrawal phases can be observed which are characterized by varying degrees of drug craving, fatigue and somnolence and mood disturbance.

3. METHYLENEDIOXYMETHAMPHETAMINE (MDMA)

MDMA is both a stimulant and hallucinogen which is chemically related to methylamphetamine. It induces behavioral and emotional changes among human users, including mood fluctuation, increased tactile sensation, heightened sense of well being and a strong desire to be more sociable with people. MDMA results in physical changes including tachycardia, elevated blood pressure, constriction of pupils, tremor, increased salivation, bruxism, trismus, increased locomotor activities, hyperreflexia, hyperthermia and diaphoresis (Franz X. Vollenweider, 2000). Memory deficits (Michael John Morgan. 1999) as well as impaired cognitive performance (Gouzoulis-Mayfrank. 2000) in association with previous exposure to MDMA have been well demonstrated. Moreover, potential toxic effects have been reported, which include malignant hyperthermia, circulatory disturbance, pulmonary distress, hepatic necrosis, rhabdomyolysis and disseminated intravascular coagulopathy. Some of these toxic effects are unrelated to dosage. The most commonly reported after effects of MDMA include drowsiness, muscle pain, fatigue, difficult in concentration, paranoia, anxiety, irritability and depression. 'Flash backs' are commonly experienced (K.M. Hegadoren. 1999).

MDMA primarily affects brain cells that produce serotonin which is responsible for the transmission of signals from one nerve to another. Serotonin may be responsible for human emotional activities such as empathy, insight, happiness etc. Consumption of MDMA results in a reduction of serotonin (5-HT) and its metabolites, diminished activities of tryptophan hydroxylase and widespread degeneration of serotonergic axon terminals (Brendon P Boot. 2000, Rabi Simantov. 1997). Auditory evoked potential study in abstinent recreational MDMA users indicated diminished central serotonergic activity thus may indicate long term alternation in the brain

function (Frank Tuchtenhagen 2000). Special imaging with Positron Emission Tomography also demonstrates decreased brain 5-HT transport binding in contrast to control (McCann UD 1998). However, the exact mechanism in producing its unique psychotropic effects is still unclear.

4. KETAMINE (SPECIAL K OR K)

Ketamine has been used as anaesthetic agents in veterinary medicine and in clinical practice occasionally for brief bedside procedures especially in paediatrics. Ketamine is a non-competitive N-methyl-D-aspartate (NMDA) receptor antagonist. It interferes with the action of excitatory amino acids such as glutamate and aspartate (John W Newcomer. 1999). Positive Emission Tomography studies in human beings demonstrate the ability of ketamine in stimulating the release of dopamine from nerve endings in the nucleus accumbens (Franz X Vollenweider. 2000). At a subanaesthetic dose, ketamine can produce marked impairments on human performance, especially on executive functions and explicit memory, and produces an acute psychotic state (Alan Breier 1997). Ketamine causes harm to frontal cortical functions, disrupt attention and explicit memory and the effects are still observable days after the exposure. Ketamine also produces subjective effects including sensation of light through the body, distorted image of body parts, sensations of floating or weightless condition, derealization and distorted sensory perception. Ketamine increases both salivary and tracheobronchial secretion. There are few reports on acute toxic effects of ketamine. Anxiety, tachycardia, hypertension, chest pain, respiratory depression, nystagmus, mydriasis, hallucination and loss of consciousness are common clinical features (Alan L Weine. 2000). Since ketamine increases coronary oxygen consumption, there is an increase in risk of myocardial ischemia.

5. CANNABIS

Cannabis is the most commonly abused illicit drug worldwide. Cannabis is the dried, crushed leave of the plant material of *cannabis sativa*. It contains hundreds of different chemicals and resins; the most abundant chemicals are tetrahydrocannabinol (THC), cannabinal and cannabidiol. The concentration of these chemicals determines the potency of the drug. Smoke inhalation is the most common route of administration but it can also be brewed as tea or eaten in baked foods (Friedman L 1996). Due to its high lipid solubility, the drug penetrates cell membranes easily and affects the central nervous system directly.

Cannabis has stimulant, sedative and hallucinogenic effects. At a modest dose, the drug impairs cognitive ability, alters perception and impairs skill performance. Subjects would report feelings of relaxation or euphoria, alternation of sensory perceptions, increase in appetite and loss of insight. Dilated pupils, congested conjunctiva, dry mucous membrane, tachycardia and slurring of speech would be observed. Chronic use of cannabis results in personality change, decrease in short term memory, impaired abstract thinking, diminished libido, irritability and mood disorders (Hall W, Lancet 1998).

Though chronic users would increase their dose and dosing frequency due to tolerance, physical dependence on cannabis is only mild. Withdrawal symptoms include sweating, irritability, restlessness, anxiety, amotivation, anorexia, nausea, and diarrhea, weight loss, insomnia, chills and tremors (Friedman L.1996).

ACUTE MANAGEMENT OF DRUG-RELATED MEDICAL COMPLICATIONS (Richard S Irwin. 1999, Steven B. Karch. 1998):

Either as a result of accidental over-dose or deliberate self-harm, drug abusers may present to the accident & emergency departments with different complaints. In most of the situations, the patients would not be cooperative enough to give a detail history or too confuse to disclose their relevant information. Many of these abusers are very likely to be under the influence of more than one drug as multiple drug abuse is far more common and toxic than single drug abuse. Unless the history clearly indicates that the drugs were taken within a reasonable interval (usually within 60 minutes) or that the drugs had a particular slow clearance from stomach, gastric decontamination is not usually indicated. In case of impairment of consciousness, such procedure may pose an unacceptable risk of aspiration. While these psychotropic substances have notorious effects on the nervous systems, most of them also affect other major organ systems. A detail systematic examination to look out for various possible complications is therefore necessary. Finally, it must be stressed that in the absence of reliable and detailed history, the abused drug may not necessarily be responsible for the presenting signs and symptoms. Other associated problems such as intracranial bleeding, electrolytes or metabolic disturbance, or other unrelated conditions such as infections should always be carefully excluded.

It is beyond the scope of this review to have a comprehensive discussion of the acute management of intoxication due to psychotropic substances. Instead, the clinical features and treatment of some of the most common life threatening complications are described.

1. COMA OR DELIRIUM

Many of these psychotropic substances have direct suppressive effects on the central nervous system resulting in different degrees of cerebral depression. Maintaining an adequate airway is the primary concern under these situations. Airway intubation and assisted ventilation is often required. Other causes of confusion such as low blood sugar, central nervous system infection or trauma must be excluded. The type of drug abused should be identified as far as possible, as effective antidotes may exist for some of the drugs (e.g. naloxone for opiate and flumazenil for benzodiazepine). Laboratory investigations would be performed to rule out other causes of confusion (e.g. electrolyte disturbance, hypoglycaemia or meningitis). In most situations, the drug effect will gradually wear off within 24 hours.

2. ACUTE PSYCHOSIS

Drug - induced acute psychosis can present in different combinations of agitation, delirium, visual and auditory hallucination, paranoia and disorientation. In amphetamine induced psychosis, the victim usually has agitation, paranoia but intact orientation. On the other hand, in hallucinogen induced psychosis (e.g. phencyclidine), disorientation and distorted body image would be observed. In addition to other acute life support measures, treatments consist of rapid sedation with either benzodiazepine or neuroleptics, reduction of environmental stimuli, prophylactic drugs against convulsion and prevention of injury by induction of paralysis or physical restraint. Intravenous benzodiazepine injection is usually helpful in amphetamine or cocaine related psychosis and can also prevent subsequent convulsion. Neuroleptics such as haloperidol or chlorpromazine are also commonly used for amphetamine related acute psychosis but their side effects in reduction of heat dissipation and acute dystonic reactions may limit their usefulness in acute

situation.

3. CONVULSION

Drug induced convulsion is a serious complication. Whether due to direct central nervous system toxicity as in the cases of amphetamine, cocaine or hallucinogens or due to central nervous system hyperreactivity after cessation of drugs, drug abuse complicated with convulsion commonly results in death or other permanent neurological complications. Clinical presentations of convulsion can vary from subtle focal twitching to status epilepticus or continuous convulsion reflecting the underlying electrical instability. It is important again to watch out for other possible reasons of convulsions that may bear little relation to the drugs taken. Treatments of convulsion depend on prompt and appropriate administration of anticonvulsants. First line medications commonly used include various short or long acting benzodiazepine, barbiturate and phenytoin. For complicated cases, pentobarbital or thiopental induced general anesthesia may be required to abolish the abnormal electrical activities. Underlying central nervous system structural abnormalities should be carefully excluded with the help of imaging such as computerized tomographic scan or magnetic resonance imaging of the brain. In cases of concomitant hyperthermia where infection cannot be excluded, lumbar puncture would be necessary.

4. HYPERTHERMIA

Defined as core temperature more than 40.5 °C, hyperthermia is associated with high mortality and severe neurological complications in the survivors. An increase in core temperature of the drug abuser is possible as a result of the following three mechanisms : 1) increase muscular activities due to stimulatory effects of drug taken, 2) inhibition of sweating due to the anticholinergic effects or peripheral

vasoconstriction due to the sympathomimetic effect or 3) interference with central nervous system thermoregulatory mechanism. Amphetamine, cocaine, phencyclidine can all induce hyperthermia but the most lethal agent is MDMA. Death is usually preceded by generalised rhabdomyolysis, haematuria, convulsion, hypotension and renal failure. Cooling by evaporation is the most efficient method but other measures such as immersion in cold water, cold gastric lavage should also be attempted. Antipyretics are not usually helpful. Partial ice packing may induce shivering and thus aggravating heat generation. As percutaneous absorption of alcohol may lead to systemic side effects and coma, alcohol sponging should be avoided. Intensive monitoring is often required.

5. CARDIAC PROBLEMS

Cardiac complications are associated with almost all common drugs of abuse. The mechanism of cardiac complications includes an increase in oxygen demands due to hypertension or tachycardia, a decrease in myocardial perfusion due to coronary vasoconstriction or coronary vessels thrombosis due to platelet aggregation or change in blood viscosity. As a result, the heart will suffer from ischaemic damages presenting as cardiac arrhythmia, heart failure or asystole and death. Stimulants such as cocaine and amphetamine are particularly damaging. Treatment of cardiac complications is mainly coronary supportive care. Oxygen should be given and artificial ventilation initiated if necessary. Sublingual or intravenous nitroglycerin may improve the myocardial circulation. Thrombolytic agents should be given for acute myocardial infarction. Adequate sedation can be achieved with benzodiazepine. Blood pressure should be appropriately control with vasodilators such as nitroglycerin, labetalol or nitroprusside.

6. RHADOMYOLYSIS

Rhoadomyolysis implies destruction of muscle cells with release of muscle cell contents into the systematic circulation resulting in widespread damages to other organ systems. Virtually all drugs of abuse may be associated with rhoadomyolysis. The clinical progression is usually very rapid and as the abuser is often too confused to report his discomforts, the classic features of nausea and vomiting, myalgias and muscle weakness are uncommonly encountered. Treatment is mainly supportive with correction of metabolic disturbance due to the muscle cell lysis including hyperkalemia and hypocalcemia, support circulation with fluid replacement and correction of associated coagulopathy. In order to prevent renal failure due to the myoglobinuria, aggressive treatment with forced alkaline diuresis with large volume of normal saline and sodium bicarbonate is often required. Diuretic agents such as mannitol, furosemide are often used but their effectiveness are not clearly defined. In established acute renal failures, renal replacement therapy with either peritoneal or haemodialysis should be administered until a spontaneous recovery of the acute tubular necrosis due to myoglobinuria is observed.

7. ASPIRATION PNEUMONIA

Aspiration is a common problem in acute management of intoxication either due to vomiting in an unconsciousness victim with full stomach or over aggressive gastric decontamination without proper protection of airway. Irritation from the ingested food and the gastric secretions would result in chemical pneumonitis which may progress to bacterial pneumonia. Treatment is often difficult requiring oxygen, rigorous chest physiotherapy, antibiotics and mechanical ventilation. Fibro-optic bronchoscopic examination and broncholavage is sometimes necessary to clear up the airway.

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PSYCHIATRIC HARMS:

BENZODIAZEPINES

Intoxication Delirium:

Intoxication with benzodiazepines causes drowsiness and delirium, often accompanied by poor coordination (ataxia), impairment of pronunciation (dysarthria), and vibration of eyeballs (nystagmus). There may be an initial paradoxical hyperactive phase, when the client may be restless and irritable. As dosage further increases, consciousness progressively deteriorates and may result in coma (Evans 1980). On the other hand, withdrawal of benzodiazepines is quite the opposite of the withdrawal state. Different degree of altered state of consciousness is associated with hyperactivity, over-arousal and anxiety features.

Effects on cognitive functions:

Benzodiazepines interfere with neurotransmission. They increase GABA_A receptor affinity for GABA. GABA neurons exert inhibitory effects on neighboring neuron, decreasing the release of acetylcholine, noradrenalin, dopamine and serotonin (Bowling & DeLorenzo 1982; Skolnick & Paul 1982). These neurotransmitters, especially acetylcholine, are crucially involved in memory systems. Single dose of benzodiazepines can cause anterograde amnesia (the inability to make new memories for the events which occur after drug intake) for hours (Wolkowitz, Weingartner, et al. 1987; Danion, Zimmermann, et al. 1989; Weingartner, Hommer, et al. 1992; Vidailhet, Kazes, et al. 1996). The impairment in acquisition of new information is not only due to sedation but also a result of specific amnesic effects. Next-day memory impairment is a recognized feature after a bedtime dose (Morris & Estes 1987; Bixler, Kales, et al.

1991). The use of Benzodiazepines is reported to be associated with shoplifting (Tang, Pang, et al. 1996; Coid 1984) and date rape (Schwartz, Milteer, et al. 2000; Slaughter 2000). Ongoing memory impairment can be demonstrated when benzodiazepines are taken repeatedly. Deficits in memory and other cognitive functions were reported among patients 18 days after admission for detoxification from sedatives dependence (Bergman, Borg, et al. 1980). Another study found that benzodiazepines could impair memory during an 8-weeks' usage period, and residual impairments were still manifest several weeks even after drug withdrawal (Curran, Bond, et al. 1994). There are some evidences suggesting that cognitive impairment persists after benzodiazepine withdrawal (Tata, Rollings, et al. 1994). Longer term follow-up studies examined patients who stopped benzodiazepines for 4 to 6 years. Recovery of intellectual functions was found to be slight and incomplete, suggesting more long-standing impairment (Bergman, Borg, et al. 1989; Mc Lellan, Woody, et al. 1979). In short, there is a suggestion in the literature that long-term benzodiazepines cause dose and time-related cognitive disturbances. However, so far none of the studies could satisfactorily controlled effects from other confounding factors. Further studies are required to study the issue.

Brain damage:

There are methodological difficulties in studying drug-induced brain damage. It is difficult to conduct longitudinal randomized trials that can control for confounding variables. Ethical consideration also limits research design. To look at available indirect evidences, there are some suggestions in the literature supporting that prolonged benzodiazepines may result in permanent brain damage. It was demonstrated that chronic benzodiazepine users had higher ventricular-brain ratios than controls, suggesting a degeneration process (Lader, Ron, et al. 1984). Another

study found enlargement of cerebrospinal fluid spaces in long-term benzodiazepines abusers (Schmauss & Krieg 1987). A significant association between the ventricular-brain ratio and the duration of benzodiazepine use were reported as compared with published norms (Uhde & Kellner 1987). However, these findings were not confirmed in other studies (Perera, Powell, et al. 1987; Moodley, Golombok, et al. 1993; Busto, Bremner, et al. 2000).

Depression and Suicide:

Long-term benzodiazepine use may induce depression, precipitate pre-existing depression, and provoke suicide (Ashton 1987; Lader & Petursson 1981). Depression may also be associated with withdrawal, and the course is often severe or protracted. The mechanism is not known but may be related to disturbance of central monoamine activities. In a retrospective study of 221 patients who abused benzodiazepines, an excess of unnatural deaths was noted. A high proportion of subjects (11% of the men and 23% of the women) died of suicide (Allgulander, Ljungberg, et al. 1987).

Withdrawal syndrome:

It is well established that regular use of benzodiazepines causes dependence, and a withdrawal syndrome develops upon cessation. The common symptoms of withdrawal include anxiety, tremor, insomnia and autonomic symptoms. The less common symptoms include sensory hypersensitivity, perceptual disturbances, hallucinations, muscle cramps, twitching, and formication. Acute withdrawal from benzodiazepines may lead to convulsion, delirium and psychosis. In general, withdrawal symptoms last for days up to a month. However, it is also recognized that some symptoms (e.g. anxiety, insomnia, depression, perceptual disorders and motor

symptoms) may be protracted and linger on for months. There are some evidences that this syndrome is not caused by return of anxiety, hysteria or abnormal illness behaviour, but a genuine iatrogenic complication of long-term benzodiazepine treatment (Higgitt, Fonagy, et al. 1990; Ashton 1991).

Anxiety Disorders:

Benzodiazepines may cause a paradoxical excitation at low dosage due to disinhibition effect (Lader & Petursson 1981). Benzodiazepines can also cause anxiety during withdrawal. In the case of short-acting benzodiazepines, anxiety may occur between doses. Upon cessation of short-term usage, severe anxiety symptoms may occur along with depersonalization, derealization and fear of going mad (van der 1979; Morgan & Oswald 1982). Because of drug tolerance, increasing anxiety with the onset of panic attacks, agoraphobia and other phobias may develop during long-term benzodiazepines usage (Ashton 1987).

Sleep disorders:

Benzodiazepines are commonly referred to as sleeping tablets, and are generally regarded as an aid for sleep. However, despite the ability to induce onset of sleep and to prolong the total number of hours of sleep (at least initially), normal sleep architecture is disturbed. For subjects taking benzodiazepines, light sleep (stage 2) is prolonged, but deep slow wave sleep (stages 3 and 4) and rapid-eye-movement sleep (REMS) are reduced. It is generally believed that the primary function of slow-wave sleep is to permit the brain to rest and recover from its daily activity, and that REM sleep is related to brain development, learning and memory processing. Thus, benzodiazepines have their problems as hypnotics beyond short-term usage. In addition, when tolerance develops, the effect of sleep promotion diminishes. During

withdrawal of regular benzodiazepines use, a withdrawal syndrome occurs which includes insomnia, intermittent wakening, excessive dreaming, and anxiety symptoms.

METHAMPHETAMINE

Intoxication delirium

Intoxication of Methamphetamine results in a delirium associated with excitement, hallucination and paranoid delusion. Other features include enhanced vigor, gregariousness, hyperactivity, restlessness, hypervigilance, interpersonal sensitivity, talkativeness, anxiety, tension, alertness, grandiosity, stereotypical, repetitive behavior, anger, fighting and impaired judgment. In the case of chronic intoxication, there may be affective blunting with fatigue or sadness and social withdrawal.

Dementia and neurotoxicity:

Chronic high dose abuse of Methamphetamine can lead to dementia and other permanent cognitive deficits. It may be resulted from cardiovascular complications including cerebrovascular accidents, transient ischaemic episodes and angiitis (inflammation of blood vessels) (Zhu, Oritani, et al. 2000; Imanishi, Sakai, et al. 1997). Another underlying mechanism may be mediated through neurotoxicity. Damage to dopamine and 5-hydroxytryptamine (5HT) receptors by methamphetamine has been extensively documented in animals (Seiden & Sabol 1996). Although the generalizability to human is not certain, modern diagnostic technologies provided some support for neuronal dysfunction and neurotoxicity in human beings. In single

photon emission computed tomography (SPECT) study, multiple focal perfusion deficits in cerebral cortices were detected in methamphetamine abusers even after a long abstinence period, suggesting that vascular changes were irreversible to some degree (Iyo, Namba, et al. 1997). Long-term metabolite abnormalities had been detected by Proton MRS (1H MRS) in abstinent methamphetamine users, providing evidence for long-term neuronal damage (Ernst, Chang, et al. 2000).

Withdrawal syndrome:

Despite the common belief among clients that Methamphetamine is not addictive, it is recognized that cessation of regular use may result in a withdrawal syndrome. The typical features include fatigue, vivid, unpleasant dreams, insomnia or hypersomnia, increased appetite and psychomotor retardation or agitation. Mood lability and depression may also occur. Methamphetamine use was reported to be associated with increased suicidal behaviour and violence (Logan, Fligner, et al. 1998). Stereotypic movements and behaviours are also recognized features of prolonged Methamphetamine use, probably related to dopamine depletion and compensatory postsynaptic dopamine receptor supersensitivity in the caudate nucleus.

Mania and Depression

Methamphetamine can lead to florid manic picture with euphoria, impulsiveness, rapid thoughts, hyperactivities, irritability and suspiciousness (Peet & Peters 1995). Response to dopamine blocking antipsychotic but not adrenoceptor antagonists indicates that the underlying mechanism is at least partly dopamine mediated. Depressive symptoms are common after cessation of usage. Some cases develop into a major depressive episode associated with high suicidal risk.

Psychosis

Methamphetamine has long been recognized to induce psychosis. This has been regarded as an evidence to support the dopamine theory of schizophrenia. Methamphetamine exacerbates symptoms in schizophrenic patients, but it can also induce psychosis in individuals with no history or family history of psychosis. In some cases psychotic symptoms subside after cessation of usage (Drug induced psychosis), but a proportion may develop into a self-perpetuating and long-term mental illnesses like schizophrenia or delusional disorder.

Anxiety Disorders:

Methamphetamine causes a dose-related anxiety reaction due to its stimulation on the central nervous system. Lower dosage causes initial euphoria with restlessness and anxiety. At higher doses, the intensity of anxiety increases and the mood becomes predominantly irritable. On the other hand, fear, anger and panic symptoms may develop secondary to hallucinations and paranoid delusions.

Sleep disorders:

Methamphetamine stimulates the central nervous system by enhancing dopaminergic, noradrenergic and serotonergic neurotransmissions. It delays the onset of sleep, reduces the total duration of sleep, increases sleep fragmentation, and suppresses slow wave sleep and REM sleep (Valerde, Pastrana, et al. 1976). During withdrawal, the reverse will occur. There is excessive daytime sleepiness, increase in sleep duration and excessive dreams and nightmares.

3,4-METHYLENEDIOXYMETHAMPHETAMINE (MDMA, ECSTASY)

1. Intoxication Delirium:

Acute intoxication of MDMA can induce a hyperactive delirium with florid hallucination and extreme hyperactivity, which can occasionally persist for some weeks (Hollister 1986). However, less extreme cases may not be so prominent and higher level of suspicion is required for recognition. In a survey conducted in an emergency department in London, the commonest symptoms were vague and non-specific such as feeling strange or unwell. Taking into account the timing (late hours at weekends), age, sympathetic overactivity and increased temperature ("Saturday night fever") helps proper identification (Williams, Dratcu, et al. 1998).

2. Mania and Depression:

Due to its resemblance in structure to amphetamines, the usage of MDMA may induce mania and depression, probably through a dopamine and serotonin mediated mechanism.

3. Cognitive impairment and neurotoxicity:

MDMA is perceived by many users as relatively safe (Cohen RS 1998). Many users believe that with better management of acute effects of MDMA (e.g. sufficient hydration and cooling) the danger of MDMA will be removed. However, the emerging scientific literature paints a different picture. MDMA has been shown to produce widespread and possibly permanent damage to serotonergic axons in animals

(Molliver, Berger, et al. 1990). Reduction of serotonin and its metabolites in the brain of animals had also been demonstrated. Although the dosage administered to experimental animals were very high, larger animal like human beings are more susceptible to the toxic effects of a lower dose. Therefore, evidences from animal studies are not to be taken lightly. In human studies, decrease of serotonin metabolites was demonstrated in cerebrospinal fluid of MDMA users (McCann, Ridenour, et al. 1994). Brain imaging (Positron emission tomographic) studies also provided support for neurotoxicity in human. Reduced binding of a radioligand was documented, suggesting a reduction in density of serotonin sites (McCann, Szabo, et al. 1998). There is also evidence that MDMA (Ecstasy) induces programmed death of human serotonergic cells (Simantov & Tauber 1997). All these findings have important functional correlates. Given the important role of serotonergic systems in brain functions, damage may result in impairment of memory and higher functions. It has been reported that MDMA can cause acute and longer-term disruption in memory and cognitive functions (Parrott & Lasky 1998 132; McCann, Ridenour, et al. 1994; Morgan 1999). A recent paper suggested that even moderate use of MDMA might lead to cognitive decline in otherwise young people (Gouzoulis-Mayfrank, Daumann, et al. 2000). In short, there are extensive animal studies and strong human results supporting the possibility of long term serotonergically mediated deficits. Studies with tighter designs and better controls are needed to clarify the issue conclusively.

4. Psychosis:

MDMA may cause acute as well as later-onset psychosis. The most common presentation takes the form of a paranoid psychosis, but there are many other psychiatric presentations (McGuire & Fahy 1991). Psychosis may last months or more after cessation of MDMA (McGuire, Cope, et al. 1994). Some cases may respond

partially to antipsychotics treatment resulting in a less favourable prognosis (McGuire & Fahy 1991).

5. Persisting perception disorder (flashbacks)

Weeks or months (rarely up to years) after MDMA have been taken, the user may experience fragmentary recurrences of certain aspects of the drug experience in the absence of actually taking the drug (McGuire & Fahy 1992). The occurrence of this flashback phenomenon is unpredictable. It may occur spontaneously, or triggered by stress, fatigue, sudden entering into a dark environment, or even self-induced by thinking about it. It seems to occur more frequently in younger individuals. With time, such episode tends to diminish and become less intense. Other than hallucinatory experience, emotional and accompanying somatic experience can recur as well. Frightening flashback may cause anxiety disorder or even psychosis.

6. Mania and Depression

MDMA may induce mania and depression similar to the effect of Methamphetamine.

7. Anxiety Disorders:

Despite being described as “entactogens” and regarded being different from amphetamine in promotion inward reflection and positive mental states, MDMA causes anxiety related to its stimulating effects on the central nervous system. Intake of MDMA can produce hyperarousal ranging from feelings of tension, restlessness, agitation, and panic to experience of impending death (Krystal, Price, et al. 1992). It is recognized that anxiety symptoms caused by MDMA may persist for months or even years after cessation of usage (Green, Cross, et al. 1995).

8. Sleep disorders:

MDMA has amphetamine like effects. Therefore, it causes insomnia, decreases sleep duration, and suppresses of slow wave sleep as well as REM sleep. After cessation of drug use, users may continue to have trouble with sleep lasting months or even years (Green, Cross, et al. 1995).

KETAMINE

Ketamine is a non-competitive N-methyl-D-aspartate (NMDA) receptor antagonist which interferes with the action of excitatory amino acids including glutamate and aspartate. NMDA receptors are densely localized in some regions of the brain (cerebral cortex and the hippocampus) involved in higher executive functions and memory. Ketamine can cause a mixture of psychiatric symptoms including stimulant, sedative, psychotomimetic and catatonic features. Stimulant effects include anxiety, mood elation and insomnia. Sedative effects include calmness, psychic numbness and anergia. Psychotomimetic effects include time distortion, hallucination, paranoid delusion and schizophreniform psychosis. Catatonic features include mutism, negativism, clouding of consciousness combined with anesthesia. These states may be associated with violence, suicide, accidents and falls.

1. Delirium:

Ketamine intoxication commonly presents as delirium. Common associating features include sleepiness, ataxia and stupor. Higher doses may result in light to deep coma.

2. Cognitive functions and neurotoxicity:

Ketamine at subanaesthetic level has been shown to produce marked cognitive impairment. It impairs attention and disrupts explicit memory, and also produces impairments on frontal cognitive functions (Krystal, Karper, et al. 1994). There is a considerable body of evidence demonstrating that such impairment is mediated through acute NMDA receptor blockade. Animal studies showed that even a single dose of ketamine or repeated daily dose for more than 4 days resulted in neuronal destruction in corticolimbic regions (parietal, temporal, piriform cortices and the amygdala, tenia tecta and hippocampus) of the brain. Ketamine-induced NMDA receptor hypofunction has been proposed as a model of memory impairment and psychosis (Newcomer, Farber, et al. 1999). There is some anecdotal evidence that long-term Ketamine use may lead to memory deficits (Jansen KLR 2001) and impairment of attention (Siegel 1978).

3. Psychosis:

Behavioural effects of Ketamine are commonly observed in post-anaesthetic patients, typically including a confusion state with dissociation, vivid dreaming and hallucinations (Siegel 1978). Ketamine can induce schizophrenic-like symptoms in normal volunteers, and can cause re-emergence of acute psychotic symptoms when given to chronic schizophrenics (Lahti, Koffel, et al. 1995; Lahti, Holcomb, et al. 1995). Because of its ability to induce both positive and negative symptoms, Ketamine is considered one of the best pharmacological models for understanding of schizophrenia. The selective blockade of NDMA receptor by Ketamine gives support to a glutamate deficiency hypothesis for schizophrenia. Positron emission tomography (PET) studies revealed metabolic alterations in cortical and subcortical brain regions,

suggesting distributed neuronal networks are involved in acute psychotic symptom formation (Vollenweider, Leenders, et al. 1997). It was also demonstrated that Ketamine could cause degeneration of limbic structure in human similar to those in psychotic patients (Kovelman & Scheibel 1984).

4. Persisting perception disorder (flashbacks)

Ketamine has been reported to be associated with flashback (Fine & Finestone 1973; Perel & Davidson 1976). The recurring phenomenon is less clear and marked. The underlying mechanism and physiological changes are not clear and is a topic for further research.

CANNABIS

1. Delirium:

Cannabis in high dose can induce a delirium with impairment of consciousness, distorted time sense, dream-like euphoria, fragmented thought processes and hallucinations. These episodes are usually self-limiting over a few days (Chopra & Smith 1974; Tennant & Groesbeck 1972).

2. Withdrawal syndrome:

Although cannabis is generally considered by clients to be non-addictive, dependence has clearly been demonstrated (Georgotas & Zeidenberg 1979; Haney, Ward, et al. 1999). Taking 2 joints of high quality cannabis a day (180mg THC) for two to three weeks may be sufficient to induce dependence and withdrawal (Jones 1983). A cannabis withdrawal syndrome has been recognized. 6 to 10 hours after cessation of regular cannabis use, withdrawal symptoms start to develop. They

include restless, anxiety, dysphoria, irritability, insomnia, anorexia, tremor and autonomic symptoms (Mendelson, Mello, et al. 1984). Most symptoms last several days, but sleep problems are more problematic and may linger on for weeks. Despite the common belief that cannabis withdrawal are mild and self-limiting, evidence shows that more and more people are bothered by the symptoms and seek professional help for help (Roffman & Barnhart 1987). The exact mechanism of cannabis withdrawal is not yet known, but it is likely to involve changes in endogenous cannabinoid receptors in the brain (Matsuda, Lolait, et al. 1990).

3. Cognitive functions:

Acute effects of cannabis include significant cognitive, psychomotor impairments. The effects include slowing of reaction time, impairment of attention and complex tasks. Memory is also disturbed. The immediate and short-term memories are more affected. There are intrusions of irrelevant materials, and the client has difficulty to filter out irrelevant information. Impairment of memory may last for more than 24 hours. For heavy and chronic users of cannabis, there are evidences that their cognitive functions remained impaired even when they are not intoxicated. These impairments may last for months or even years after cessation (Hall & Solowij 1998). Such effects may partly be due to very slow elimination and active metabolites in fatty tissues. Whether the impairment is permanent is a topic of debate. It has been established that increase duration of use lead to greater impairment. The prognosis of recovery is not sure. The mechanism involved in cognitive effects is not fully understood. It is recognized that cannaboids have inhibitory effect on the second messenger adenylate cyclase. They may also interact with the cholinergic and monoaminergic systems as well.

4. Psychosis:

Cannabis can produce many short-term psychotic symptoms including paranoid symptoms, auditory hallucinations and depersonalization (Thomas 1996). Heavy users can develop acute psychosis similar to schizophrenia. The effect appears to be dose related, with the risk of psychosis increased by using more potent preparations. It usually resolves within days but may be severe and prolonged for weeks (Carney, Bacelle, et al. 1984). This may be related to the long half-life of cannabinoids in the body. Those with mental illness or family history are particularly vulnerable, but cannabis can induce psychosis in individuals without psychiatric history. The underlying mechanism may involve dopamine (Miller & Gold 1993). In a recent review on cannabis psychosis, the clinical validity of cannabis psychosis was questioned due to imprecise usage of this diagnostic category (Johns 2001). Some of the acute cannabis psychosis might have actually been suffering from toxic delirium. Some other diagnosed cases might have had precipitated episodes of other underlying functional psychosis. There is insufficient evidence that heavy cannabis use leads to a prolonged functional psychosis that persists after cessation (Thomas 1993). More research in this area is required. It is important, however, to note that cannabis abuse is associated with high rates of psychiatric co-morbidity. The Epidemiologic Catchment Area survey reported that 50.1% of individuals with cannabis abuse or misuse also met criteria for one other non-substance related diagnosis. Schizophrenia was also found to be associated with six-fold increase in risk of developing a drug use disorder, and cannabis was the most commonly used drug (Regier, Farmer, et al. 1990). There are also some evidences that cannabis constitutes a risk factor for schizophrenia and aggravates the severity of psychotic symptoms (Andreasson, Allebeck, et al. 1987; Clegorn, Kaplan, et al. 1991; Baigent, Holme, et al. 1995).

5. Persisting perception disorder (flashbacks):

Cannabis can cause flashbacks long after last intake (up to years) (Levi & Miller 1990). It is also recognized that cannabis can precipitate flashbacks in users of other drugs including LSD (Stanton, Mintz, et al. 1976; Owen & Tyrer 1983). The hallucinatory flashbacks with cannabis are commonly frightening and emotionally charged. It has been suggested that the phenomenon may be a form of intrusion of memory of bad trips in ways similar to post-traumatic stress disorder.

6. Anxiety disorders:

Anxiety is a common adverse effect of cannabis use (Thomas 1996). It is more likely to occur in drug-naive subjects, those under stress, and those who take cannabis in an unfavourable environment. For hours after cannabis intake, the clients may experience restlessness, loss of control, panic attacks and fear of dying. Varying degrees of anxiety symptoms may also occur during cannabis withdrawal.

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TREATMENT APPROACHES FOR PSYCHOTROPIC SUBSTANCE ABUSERS

INTRODUCTION

Treatment approaches for psychotropic substance abusers vary with the basic models underlying the causative factors leading to the abuse. Studies into the causative factors and perpetuating factors of substance abuse have included genetics, neurological basis of the reward mechanism, the physiological and psychological basis of craving, psychodynamic factors, the psychology of stages of change in substance abuse, and sociocultural factors (Lowinson, Ruiz, Millman & Langrod, 1997). Different treatment approaches are often established on the basis of one or more of the models of these various causative factors.

Irrespective of the differences in the models, the management of the individual abuser often requires attention to intrapersonal aspects and interpersonal aspects of the particular individual. Other than the biological effects of the particular substance the individual is abusing, it is often important to understand the defense mechanisms underlying the behavior of the individual. Common defense mechanisms that need to be addressed in individual abusers include denial, displacement, fantasy, projection, rationalisation, intellectualisation, minimising, reaction formation, regression and repression.

It is also important to understand the relationship between the abusers and the significant others surrounding him. In the case of an adolescent the relationship with his family and the functioning of the family system in facilitating the

development of the adolescent and in re-integrating the grown-up adolescent in the family system are often important areas for understanding for the individual adolescent substance abusers. Common examples of family dysfunction include hostility or apathy in marital relations, disturbing interaction between the adolescent and a parent, ineffective parenting, ineffective divorce arrangement, family disruption, absence of role for the adolescent in the family, and limited social involvement (Quinn, 1996).

ASSESSMENT

Treatment begins with assessment. In the case of psychotropic abusers comprehensive assessment of the abuser should include a complete medical workup, circumstances for referral, drug and alcohol use patterns, legal history, educational and vocational history, developmental and family history, psychiatric and medical records, sexual history, motivation, social-recreational-community involvement, and previous treatment history (James and Gilliland, 2001). Assessment should also include how the abuser could fill his social void in his life left by giving up the abusing agent. Assessment could also be made as to despair and hopelessness the abuser may feel and the emptiness in his life that he tries to fill with the abuse, and the desire to change his life to how he wanted the life to be. Collaborative information should be obtained for a more objective assessment. Qualitative and quantitative blood and urine screening for drugs of abuse and laboratory tests for abnormalities that may accompany acute or chronic substance abuse (APA, 1996). Screening for infectious and other diseases often found in substance-dependent persons need to be done.

The three-dimensional crisis assessment model by Meyer, Williams, Ottens, and Schmidt (1992) has been used in the assessment of a substance abuser presenting in crisis. This is an objective assessment by the worker on the functioning of the abuser in three different areas, the affective, the behavioral, and the cognitive. This allows planning and decision of treatment options.

Assessment is also made to facilitate the decision of the suitability of inpatient versus outpatient treatment. According to the Group for the Advancement of Psychiatry (1990), the following five criteria are to be followed.

- i. associated major medical and/or psychiatric problems, and their actual or imminent complications;
- ii. actual or anticipated severe withdrawal;
- iii. multiple failed attempts at outpatient treatment;
- iv. family, friends, or self-help group members unavailable or unable to provide adequate social network to support abstinence; &
- v. high degree of chronicity and severe addiction, with polysubstance abuse.

TREATMENT SETTINGS

Other than the inpatient hospital treatment and the outpatient treatment facilities, there can also be residential treatment facilities and partial hospital care. Residential treatment is indicated for abusers who do not meet the criteria for hospitalisation but whose lives and social interactions have come to focus predominantly on substance abuse, and who lack sufficient social and vocational skills and drug-free social supports to maintain abstinence in an outpatient setting

(APA, 1996).

Partial hospital care is suitable for abusers who require intensive care but have a reasonable chance of refraining from illicit use of substance outside a restricted residential setting. This partial hospital care is also considered for abusers who remain at high risk of relapse after completion of hospital or residential treatment.

An alternative form to hospital in-patient care is supportive housing as reported by Schinka, Francis, Hughes, LaLone, & Flynn (1998). Abusers without serious medical conditions and highly unstable psychiatric disorders lived in apartments operated by a nonprofit agency with agency staff in the house day and night. The apartments were near to the hospital. In the day time the abusers went to the hospital and participated in the same therapeutic activities as did hospital inpatients. In the evening, the house provided self help group and other group meetings. They found at two-month follow up similar treatment effects between hospital inpatient treatment and supportive housing while the cost was substantially less for supportive housing.

Monitoring for substance use is recommended as an important part in the treatment process in various settings (APA, 1996). It should be intensified during periods of high risk of relapse, including the early stages of treatment, times of transition to less intensive levels of care and the first year following cessation of active treatment.

MAJOR TREATMENT APPROACHES

1. Motivational Enhancement Therapy

Motivational Enhancement Therapy is an approach to evoke from an abuser his own motivation for change and to consolidate a personal decision and plan for change (Miller, 2000). The underlying assumption is that intrinsic motivation is a necessary and often sufficient factor in instigating change. The abuser is to set his own goals of treatment. In this therapy the abuser is helped in two to four sessions each of an hour to move from not considering change, to weighing the pros and cons of change, and considering options and then action to accomplish change. A counselor needs intensive training and subsequent supervision. The counselor needs to have empathy, warmth and respect, and utilises open-ended questions, reflective listening, reframing and supporting. The key strategy is to develop discrepancy by eliciting the abuser's own verbal expression of problems, concerns, reasons for change, and optimism regarding change. The counselor is to avoid the confrontation/denial trap, but still bring the abuser to face with the difficult reality and to initiate change.

Basing on the philosophy of motivational enhancement as above described, Obert et al (1997) had reported the use of a cognitive behavioral protocol for hazardous abusers who had mild to moderate use of drugs while their lifestyles were minimally disrupted, and they were unwilling to enter intensive treatment. This protocol had only six sessions. It was non-confrontational and was to motivate the abuser to recognize the problems associated with the substance abuse.

Stephens et al (2000) reported comparison between a brief two session individual treatment using motivational interviewing, a fourteen session relapse

prevention support group, and a delayed treatment control for a group adult cannabis abusers. They showed that both treatment groups had significantly and substantially greater improvement than the delayed treatment control. There were no significant differences between the brief individual treatment and the group treatment at follow up to sixteen months. The result from this study shows that motivation intervention is important and may have itself substantial effect to reduce substance abuse in some abusers.

2. The Minnesota Model

The Minnesota Model is a thorough and ongoing assessment of all aspects of an abuser and of multimodal therapeutic approaches (Owen, 2000). A multidisciplinary team of professionals plans and assists in the treatment process for the abuser. The team forms an individualised treatment plan. The treatment helps the abuser to learn new ways of living with the abuse. The major part of the treatment is group treatment. The counselor works together with the abuser to integrate his group experience and individual work. The treatment is a residential treatment setting with a typical length of stay of twenty-two to twenty-eight days. Involvement in self-help group is critical for long-term abstinence.

The counselor is directive in the approach in choosing the topic of the session giving assignments to the abuser. The model is however not hard hitting confrontation. Examination and certification of the counselors are recommended. Individual supervision is also necessary.

Winters et al (2000) have reported favorable treatment outcome for a group of adolescent drug abusers who had completed Minnesota Modal treatment with

complete or incomplete twelve-step as compared to a group of abusers on waiting list.

3. Addiction Counselling Approach

Mercer (2000) described an addiction counselling approach as components in a more comprehensive treatment programme. The approach is time limited and aims to help the abuser to recognise the existence of a problem and the associated irrational thinking, to achieve and maintain abstinence, and to develop the necessary psychosocial skills and spiritual development to continue in recovery lifelong. The initial active phase of treatment runs for six months and the follow up phase another six months. Individual treatment sessions are more frequent initially and amount to about sixty sessions in the treatment phase and twenty sessions in the follow up phase. Group sessions amount to about thirty-two sessions in the active phase of treatment. The abuser is encouraged to attend self-help group at least three times a week. He may also locate a sponsor. Frequent regular urinalysis is also employed.

4. Twelve-Step Facilitation

Twelve-Step Facilitation is a brief, structured and manual guided individual treatment to facilitate the involvement in and benefit from community based twelve-step meetings (Nowinski, 2000). The abuser is helped to accept the need for abstinence and to surrender or to participate in twelve-step meetings. It is intended to be held for twelve to fifteen sessions over a period of about twelve weeks. Sessions may be held twice a week initially for individual abusers. The focus of the treatment is early recovery and achievement of abstinence for six months. Two sessions may be held with significant others. Problems in the relationship may be acknowledged and intensive relationship counseling is deferred to after completion of the early recovery. Educational requirement for the counselor is a master's degree and a thousand hours

of supervised counseling.

5. The CENAPS Model of Relapse Prevention Therapy (CMRPT)

The CENAPS Model of Relapse Prevention Therapy (CMRPT) is a comprehensive treatment for prevention of relapse to substance abuse (Gorski, 2000). It has an underlying belief that chemical dependence is a primary disease resulting in abuse of and addiction to mood altering chemicals. Long term use of the mood altering chemical causes brain dysfunction that disorganises personality and causes social and occupational problems. Total abstinence plus personality and lifestyle changes are essential for full recovery. The model sees that the addiction can be influenced by self-defeating personality traits that result from being raised in a dysfunctional family. As a result, family-of-origin problems need to be appropriately addressed in treatment. Relapse is seen as an integral part of the addictive disease process. The relapse process is marked by predictable and identifiable warning signs. Relapse prevention therapy is to teach the abuser to recognize and manage the warning signs and to interrupt the relapse progression early and return to positive progress in recovery. The abuser is helped to achieve competent functioning in thinking, feeling, acting, work, friendship and intimate relationship.

This model is primarily an outpatient programme with a minimum of twelve problem solving group sessions, ten individual therapy sessions, and six psychoeducational sessions over a six week period. The 12-step is utilised to help the abuser to relate the twelve-step programme involvement to relapse prevention.

Master degree or above as the education requirement of the counselor is required.

6. The Living in Balance Counseling Approach

The Living in Balance Counseling Approach is a group treatment for abusers by professional counselors in either the outpatient, inpatient, or residential treatment settings (Hoffman, Jones, Caudill, Mayo, and Mack, 2000). The programme is both psychoeducational and experiential. There are thirty-six sessions each covering one specific topic held over a twelve-week period. The topics cover addiction related topics like relapse prevention and drug education, physical health issues like HIV/AIDS and insomnia, psychosocial topics like negative emotions, communication, spirituality and relationship. Other topics covered include money management, vocational development and loss and grieving. Each session contains education, behavioral rehearsal, role-playing and group process. The abuser learns to conduct self-assessment and implement coping and relapse prevention skills. The abuser is to develop awareness of the situations triggering cravings and the chain of events leading drug use, to break the chain at a nearly point, to cope with the triggering situations with thought stopping, visualization, and relaxation, and to develop immediate alternatives to drug use and long term plan for recovery. An abuser can enter into the programme at any session and continue until all the intended sessions are completed.

7. The Dual Disorders Recovery Counselling

The dual disorders recovery counselling is an integrated approach to treatment of patients with drug use disorder and co-morbid psychiatric disorders (Daley, 2000). The approach utilizes the period of stabilization of acute psychiatric symptoms as a time for engagement of the abuser to motivate him to continue in treatment after the acute crisis. Then in the early recovery phase the abuser is to learn

to cope with the desires to use chemicals, avoid or cope with people, places and things that represent high-risk addiction relapse factors. The abuser is to join in support group, get the family involved if indicated, build structure into life, and identify problems to work on in recovery. Then in the middle recovery phase the abuser is to learn to develop or improve coping skills to deal with intrapersonal issues like handling of emotion, and interpersonal issues like relationship skills. He is to develop social and recovery support systems. The abuser is also to learn to manage relapse warning signs or high-risk relapse factors. In the late recovery and maintenance phase important intrapersonal and interpersonal issues are to be worked on in greater depth.

The initial inpatient treatment may last up to three weeks. Partial hospitalisation may last up to six months and outpatient treatment for another six months or longer. Psychiatric consultation, medication, individual counseling, psychoeducational group, support groups, and family therapy are employed in the appropriate phases of the treatment.

It needs to be noted that there are educational requirements on the counselors. In general counselors working on an outpatient basis would function more autonomously than inpatient staff. They tend to have at least a master's degree or higher. The counselor is expected to be able to develop a therapeutic alliance with a broad range of patients. He should be aware of his own issues, biases, limitations, and strengths. He should be willing to examine his own reaction to different patients. Supervision is also necessary for the counselors to allow positive feedback for good work and critical feedback on areas of weakness.

8. Treatment of Dually Diagnosed Adolescents: the Individual Therapeutic

Alliance within a Day Treatment Model

Treatment of Dually Diagnosed Adolescents: the Individual Therapeutic Alliance within a Day Treatment Model is a day treatment model for adolescent drug abusers with a co-morbid psychiatric disorder (Jorgensen and Salwen, 2000). It emphasizes on the relationship between the abuser and the counselor as a therapeutic alliance to allow support and interpretation of resistance and other dynamics that block the abuser's ability to accept help. In this model psychodynamic techniques are integrated with twelve-step recovery model techniques and both group and individual treatments are employed. Psychological vulnerabilities of the abuser are taken as learned from childhood as attempts to adapt to a chaotic and unsafe emotional environment. Drug abuse is seen as an effort of self medication. Involvement of family members is viewed as essential to successful treatment outcome. An abuser is to keep his own workbook and this bibliotherapy forms an important part of the programme. Educational material and reading assignments are given to the abuser.

The adolescent abuser attends treatment five days a week each for four hours. This frequency is reduced to three days a week as he progresses. The total duration of the day treatment is about six to eight weeks. The abuser also needs to accept daily urine screening, attendance at twelve-step meetings three times a week. Education programmes at school is to be continued in the treatment period. The motivation of the abuser to treatment is fostered to develop from the initial period of distress oriented to the subsequent health oriented. The abuser is helped to develop lifestyle changes and his family is helped to develop behavioral improvement in family functioning.

Individual treatment held once a week serves to facilitate the abuser to

benefit from the group treatment. Groups are seen as to provide structure and nurture for the abuser. Group sessions are held three times a week with a goal each week. Another chemical addiction group is held four times a week focusing on the educational aspect of the treatment. An abuser also keeps a recovery workbook with informational material for reading and he is to keep his own recovery goals and behavioral progress. Daily recovery goals are also kept. The abuser also attends twelve-step groups three times a week. He is also encouraged to obtain a sponsor, a person with long term abstinence. The sponsor acts as a guide and he is available for support twenty four hours a day. Family therapy, expressive arts, pharmacotherapy and therapeutic challenge programmes are also employed. The total duration of the programme is about twelve to sixteen weeks.

Education requirements of the counselors include advanced professional degree. Adequate clinical experiences of and supervision for the counselors are also required.

9. The Matrix Model of Outpatient Stimulant Abuse Treatment

The Matrix model is an integrated outpatient substance abuse treatment programme initially developed for patients with cocaine abuse (Obert et al, 2000). The effective elements in the treatment include engagement and retention of the patient, promotion of a structure in the daily of the patient, provision of information, learning of relapse prevention techniques, family involvement, self help groups, and laboratory testing.

The sixteen-week programme consists of individual sessions, relapse prevention group, a weekly family educational group, twelve-step meetings, social

support group, relapse analysis and urine testing. In addition small groups are used for building of early recovery skills. Patients learn how to use cognitive tools to reduce craving, how to schedule their time, the need to discontinue use of secondary substances, and to connect with necessary community support services. Patients with longer term of abstinence are invited to serve as co-leaders in the groups. The relapse prevention group is a structured group with thirty-two topics that focus on behavior changes, changing the patient's cognitive orientation, and dealing with connecting patients with twelve-step support systems.

In a review of the response to Matrix treatment between methamphetamine users and cocaine users, Huber et al (1997) showed that cocaine users remained in treatment an average of 18 weeks compared to 17.1 weeks for the methamphetamine users. The percentage of urinalysis positive for the primary drug was 13.3% for cocaine users and 19.3% for methamphetamine users. They concluded that the Matrix model was equally well received by cocaine and methamphetamine users and both groups had a very favorable response to treatment.

10. The Therapeutic Community

The therapeutic community is based on a social learning model that fosters behavioral and attitudinal change as a result of the abuser's membership in a community (O'Brien & Devlin, 1997). It is often an intensive peer based approach where the abuser learns pro-social values and addresses self-destructive, anti-social behavioral patterns. It has been applied to residential setting and community-based ambulatory setting. Individual and group therapy, family services, medical and psychiatric services, and vocational and educational services are also provided. The

abuser is expected to use skills learned, and to assume responsibilities to help maintain the treatment community. As the abuser progresses, he takes up more challenging and responsible assignments and higher status. The abuser is to grow emotionally, spiritually and intellectually.

11. Pharmacotherapy

Pharmacotherapy in substance abusers is employed in detoxification and the management of related psychiatric illnesses. Anti-psychotic medication, anti-depressant, and anti-anxiety medication are used for the management of psychotic symptoms, depressive illness and anxiety features respectively.

In the pharmacotherapy of sedative-hypnotics withdrawal, the approach is gradual reduction or substitution with another long-acting sedative and to gradually withdraw the substitute medication. Another alternative is to substitute an anti-convulsant such as carbamazepine or valproate (Wesson et al, 1997). Abrupt discontinuation of a sedative-hypnotic in a patient physically dependent on it is not acceptable medical practice and it can be fatal.

In the pharmacotherapy of stimulant abuse, medication is used to reverse or compensate for the long-term residual neuroadaptations produced by the chronic abuse of stimulants. The approaches include blockade of the re-inforcing actions of the stimulant, and the provision of low-grade enhancement of “energy-activating” or affective tone with direct dopamine agonists, or with classical anti-depressants. Such medicines include bromocriptine and amantadine for the treatment of cocaine users (King and Ellinwood, 1997; Kampman et al, 2000).

12. Individual Psychotherapy

Psychotherapy is necessary in the treatment of psychotropic substance abusers (Rounsaville & Carroll, 1997). Group therapy has become the modal format for psychotherapy of drug abusers because it is less expensive and there are aspects that make group therapy more effective. These include comfort through mutual sharing and acknowledgement of abuse problems with other group members, learning of coping strategies, continued support among members outside of group sessions, and developing self control through the group process as the abuser progress towards recovery.

Individual psychotherapy has its place because of its privacy and easier arrangement for an individual. Besides, it allows the therapist flexibility to address the problems of the individual as they arise and the therapy is tailored to the issues relevant to the individual. Some kinds of problems, like deep-rooted relationship problem, are better dealt with in an individual setting. Furthermore abusers with certain kinds of personality, like a schizoid personality, might not be able to benefit from a group setting, and individual treatment is more appropriate.

Irrespective of the type of the individual psychotherapy used, there are several common issues that need to be addressed. These include assessing the motivation of the abuser and setting treatment goals, teaching coping skills, changing reinforcement contingencies, fostering management of painful affects, improving interpersonal functioning and enhancing social support. It may also help to maintain motivation and prevention of premature termination from treatment.

Individual psychotherapy can serve as an introduction of treatment for abusers

who deny their problems or decline to accept appropriate treatments. It can be used as part of an ongoing comprehensive treatment programme or as an alternative when other treatment modalities have failed for an individual abuser. It can also be utilized following achievement of sustained abstinence for those abusers with persisting psychopathology or interpersonal conflict.

13. Cognitive and Behavioral Therapies

Psychotherapies that focus primarily on individuals' thoughts and behavior are generally known as cognitive-behavioral therapies (Liese & Najavits, 1997). The basic principles underlying the treatment for substance abusers include collaboration between the therapist and the client, and adapting the treatment to the individuals rather than expecting the individuals to adapt to the treatment. The therapist is supportive and empathetic. Besides there should be clear case conceptualisation for an individual abuser, whereby the background information of the abuser, his core beliefs, conditional assumptions, beliefs and rules, and compensatory strategies are utilized to conceptualise the automatic thoughts, the meaning, associated emotion and behavior of the abuser. The stage of motivation for change in the abuser should also be included in the conceptualisation. There should be a clear structure of the treatment session and psycho-education should be included. The areas of education include specific strategies for managing cravings, general coping skills, physiological effects of particular substances, high risk behaviors, the impact of substance use on the family, dual diagnosis and the psychological models for understanding substance abuse. Education should be given to the abuser when he is ready for it.

Cognitive behavioral therapies have been applied to different groups of

substance abusers and different phase of treatment of the abuser. It has been applied to enhancement of motivation, management of cravings, reinforcement contingencies, treatment of co-existing psychiatric disorder, enhancement of social support and lifestyle changes and associated coping skills.

DISCUSSION

Based on the above it can be seen that treatment approaches for psychotropic substance abusers on the whole include several common principles. These include comprehensive and multidisciplinary assessment by various professionals and specialists, simultaneous treatment of substance dependence and any co-morbid psychiatric disorders, comprehensive treatment plans catering for whatever needs of the abuser, time limited inpatient or residential treatment when appropriate, and outpatient programme with aftercare. Continuum of care by a case manager or counselor is desired. In general both group and individual therapy are employed. Self responsibility of the abuser is emphasized. Pharmacotherapy, psychodynamic skills, cognitive behavioral techniques, and group process are employed in the treatment. Self-help group is often encouraged in addition to the other treatment regimes. Counseling sessions are fairly intensive in the initial phase of treatment and early recovery. It is often five sessions a week initially. Family sessions and therapy may be arranged when the condition of the abuser is deemed to be appropriate for the family therapy. Family members may also be referred to self help and support groups. Educational requirements and certification of counselors are specified, and adequate clinical experiences and supervision of the counselors are required.

In a study comparing the one year outcome of four different treatment approaches in community residential programmes for substance abusers Moos, Moos

and Andrassy (1999) reported that programmes rated as substantially utilising approaches including therapeutic community, psychosocial rehabilitation, and twelve-step approaches had comparable outcome. The orientation of the programmes in therapeutic community, rehabilitation, twelve-step approach, psychodynamic orientation, and cognitive-behavioral orientation were measured. Those programmes with scores below the mean for these measures and do not meet criteria for classification into the above three broad categories were named as undifferentiated programmes. Abusers in these undifferentiated programmes had worse outcome as compared to the other programmes. The longer the episode of care and the completion of care were independently related to better one-year outcome.

In another randomised controlled study of treatment for subjects with cocaine dependence three different forms of treatment modalities were studied (Gottheil, Weinstein, Serling, Lundy & Serota, 1997). The three forms were weekly individual outpatient counselling, weekly individual counselling plus one weekly group session, and three hours of group treatment three times a week. The three treatment programmes were of twelve-week duration. Only subjects without active psychotic features and cognitive impairment were included. At nine-month follow up, patients who had remained treatment longer had fewer drug problems, a better employment status, and fewer psychological problems compared with patients who had left treatment earlier. They were more likely to be attending self-help meetings, continuing in outpatient treatment, or attending school. There were no significant differences between the three different modalities of treatment.

There are also reports of success with much less intensive interventions. As mentioned above, Stephens et al (2000) reported effectiveness of a brief two session

individual treatment using motivational interviewing for cannabis abusers. Lang et al (2000) also reported in a small sample of cannabis abusers that a single individual assessment interview with self-help material had positive effect with marked reduction in the frequency and the quantity of cannabis used.

Budney et al (2000) reported utilising a principle of behavior modification to supplement the motivational enhancement therapy and behavioral coping skills therapy. Participants earned vouchers exchangeable for retail items contingent on them submitting cannabinoid-negative urine specimens. The use of vouchers engendered significantly greater duration of documented cannabis abstinence during treatment and greater percentage of abstinence at the end of treatment. This study appears to support the use of incentive-based interventions for treatment of substance abusers.

In a study of the use of family therapy in changes in parenting practices and adolescent drug abuse Schmidt et al (1996) reported that after completion of sixteen sessions of multidimensional family therapy over two thirds showed moderate to excellent improvement in parenting. There was significant association between improvement in parenting and reduction in drug use and behavior problems. They found that parents of abusers had negative parenting behaviors, and these parents were disengaged emotionally and in interactions with their children. These parents did also have certain strengths and competencies in parenting. In a review of adolescent substance abuse treatment outcome studies Williams et al (2000) expressed that there was insufficient evidence to compare the effectiveness of treatment types. The exception was that outpatient family therapy appeared superior to other forms of outpatient treatment.

As for maintenance of abstinence aftercare is an important aspect of the treatment. To increase the length of participation in treatment programme in order to improve the outcome has been a focus of concern. An aftercare orientation session to encourage the abuser to attend aftercare, to explain why the aftercare is helpful and to have him sign an aftercare participation contract has been shown to increase the chance of participation in the aftercare treatment (Lash, 1998). Interactive CD-ROM on refusal skills as a prevention program has been tried to help substance abusers to learn refusal strategies (Duncan et al, 2000). Latimer et al (2000) also suggested that adolescent drug abusers who had received sufficiently long treatment, participated in aftercare had the best chance to maintain gains during treatment.

Hubbard (1997) suggested that post-treatment experiences including employment are important in the long-term recovery of abusers. Similarly in the extensive review of adolescent substance abuse treatment outcome by Williams et al (2000), post-treatment factors were believed to be the most important determinants of outcome. These included involvement in work and school, association with non-using friends, and involvement in leisure activities.

In a treatment programme with limited resources or provision many of the issues and problems of abusers could not be addressed. Partnerships with other service providers to cater for a more comprehensive service has been reported positively (Charnaud, 2001). A community drug team led by a consultant psychiatrist shares the patient care with other partners including National Society for the Prevention of Cruelty to Children, young person drug workers, probation officer and the police, and other social services. The partners help to address other issues,

including parenting and intergenerational cycle of drug misuse, other social needs, relapse prevention and re-integration into society. In their experience it is important to share power with partners and be flexible. Trust and respect between partners are important. Joint training is suggested as a mechanism to promote trust.

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TREATMENT & REHABILITATION SERVICES FOR PSYCHOTROPIC SUBSTANCE ABUSERS IN HONG KONG

Hong Kong has different treatment modalities available for substance abusers at present. Some of them are specialized to serve only opiate abusers. The treatment centres run by the Society for the Aid and Rehabilitation of Drug Abusers and the methadone clinics are of this category. Psychotropic substance abusers can only turn to other service providers for assistance. We have gone through the Three-year Plan by Narcotics Division (2000), the Hong Kong Narcotics Report 2000 and a study by HKCSS (2000), carried out a questionnaire survey this year, and talked with some of the agencies. The following is a brief description on the services.

COMPULSORY TREATMENT

The Correctional Services Department (CSD) operates three compulsory drug addiction treatment centres, two for male (one adult and one youth) at Heiling Chau and one for female at Chimawan. The aim is to provide compulsory treatment service for the cure and rehabilitation of persons addicted to drug who are also found guilty of criminal offences punishable by imprisonment.

Before admission, medical examination is carried out. The persons entering the centres get no drugs for detoxification but are prescribed some drugs to alleviate their symptoms when needed. The centre refers cases to Queen Mary Hospital for psychiatric consultation when psychiatric problems are detected. For patients already known to the substance abuse clinics, arrangements will be made for them to attend the relevant clinics. An inmate stays at the centre for 2 to 12 months

and will receive one-year aftercare service after completing the in-centre treatment. In the year 2000, the centres admitted a total of 1,414 inmates; among them 1,287 were opiate abusers and 127 were non-opiate abusers.

The CSD employs clinical psychologists as well as social work trained staff to work with the substance abusers. It is known that relapse prevention topics and drug education programmes are run for the people who receive compulsory treatment.

CSD had multiple factors stacked against its success. Most of its clients had no desire to quit drugs, at least on entry into the programme. Discipline was intense because of the criminal nature of its clients. Treatment duration was time dependent rather than result determined. It may be valuable to study the long-term outcome in this particular group of clients and to identify their service needs.

THE SUBSTANCE ABUSE CLINICS (SACS)

Since 1994, the Hospital Authority has been providing specialized treatment service for substance abusers through six SACs at Kowloon Hospital, Kwai Chung Hospital, Castle Peak Hospital, Prince of Wales Hospital, Queen Mary Hospital, and Pamela Youde Nethersole Eastern Hospital. The clinics provide outpatient service for substance abusers, as well as short-term inpatient service for clients requiring medical detoxification, and those with identified concomitant psychiatric illnesses. In 1999, they treated some 500 cases. It is observed that the waiting list is accumulating in some clinics.

The general treatment scheme may be outlined as follows: registration, thorough medical and psychiatric assessment to discern problems including

comorbidity, outpatient treatment of withdrawal symptoms and psychiatric and physical complications, psychotherapy, family therapy or inpatient service, teaching relapse prevention skills, and networking with social agencies for rehabilitation and aftercare. They provide services mainly through doctors (psychiatrists), nurses, and clinical psychologists. They adopt a voluntary treatment model; clients are free to join or leave the service according to their own willingness. However, it must be added that the six clinics have differences in emphasis and model of service provision.

With the new trend of psychotropic substance abuse, the detection and treatment of psychiatric morbidity among substance users should be an indispensable part of treatment services. At present, the SACs are catering for such needs, and become the main service providers for psychotropic substance abusers and clients with psychiatric complications. There are several areas requiring urgent attention and improvement. Their most obvious weakness of this service is the relative lack of commitment from the Hospital Authority. The existing in-patient and outpatient provisions are far behind the increasing needs in the community. At present, there is not even one fulltime specialist in service, and all six clinics are led by part-time and hospital-based staff with heavy commitment of other duties. This made service development, community partnership and coordination with drug agencies difficult. Another drawback is their base in mental hospital/psychiatric wards, which discourages many psychotropic substance abusers from getting service because of the social stigma. It is obvious that there is a lack of outreaching service. Although the clinics have urine toxicology support from hospital laboratories, there are different degree of constraint especially in capacity and promptness of result. In addition, there is a severe lack of input both in quality and quantity from medical social worker in all SACs. These areas also require prompt improvement for better service provision.

Linkage with NGOs is to be enhanced. Last but not the least, there is a relative neglect in service provision for alcohol related problems, and this should be considered in future service planning and development.

RESIDENTIAL DRUG TREATMENT AND REHABILITATION CENTRES

1. Caritas Wong Yiu Nam Centre

The Centre was newly opened in 1999. It serves young male substance abusers who abuse heroin or psychotropic substances. The centre has 20 beds and it offers treatment which lasts one to three months. The centre has a staff team which consists of a visiting psychiatrist, nursing staff, social workers, and other staff. Before clients are admitted, they have to undergo physical and psychological examination and urine test. The psychiatrist prescribed drugs to help the clients go through the detoxification and the clients go through counseling and group sessions which focus on relapse prevention, sex and drug education, etc. Clients who complete the programme are provided one-year aftercare service. In the year 2000, the centre had admitted 201 substance abusers and about 30% were non-opiate substance abusers.

Wong Yiu Nam Centre offers short-term inpatient treatment which is attractive to youngsters. With psychiatrist, nurses, social workers and peer counselor in staff establishment, a multi-level intervention could be provided to the clients. The centre still very young, is gathering experience in serving clients with opiate and non-opiate addiction problems. It only serves young male clients.

2. SER Foundation

The agency has served substance abusers since 1993. It provides service to both male and female substance abusers with age between 19 and 35 years old. It provides therapy for the physical and psychological rehabilitation of the clients. The minimum recommended period of rehabilitation is 12 months. The agency has no medical staff. Clients have to get prescribed drugs from doctors before admission or the agency may refer the client to a substance abuse clinic for a short-term detoxification before admission to the centre.

SER emphasizes on reform of clients' personality and values. It does not require acceptance of any religious practice or a deity element in the programme. Having no medical or nursing staff at the centre, problem arises when psychiatric complications occur among its clients.

3. Christian Drug Rehabilitation Centres

At present, there are no fewer than nine Christian agencies running services for drug abusers. In the past, most centres emphasized that they did not use drugs to help their clients. Though some centres still stress that they use no drugs, with more drug abusers abusing substances other than opiates, many of the centres have changed their policies and allowed their clients to use drugs prescribed by doctors for treatment. Still, some of the centres allow clients to undergo treatment at their centres without any medical or psychological examinations. To tackle non-opiate abusers' problem, many of the centres choose to concentrate in rehabilitative work and ask the non-opiate abusers to receive prior detoxification procedure provided by the SACs or other short-term treatment settings. Some centres also let their clients attend regular psychiatric follow up at SACs and to receive prescribed drugs if

necessary. None of these centres have medical or nursing staff and it is not common for the centres to perform urine test with their clients. These centres are namely, Enchi Lodge, New Being Fellowship, Ling Oi Centre, Perfect Fellowship, Barnabas Association, Zheng Sheng Association, Wu Oi Centre and St. Stephen Society. Together they run more than 700 beds. In the year 2000, opiate abusers were still their major client group.

Though all the Christian agencies claim that they are running gospel treatment, the contents of their programmes vary greatly. In general, they take bible teachings as their core treatment philosophy. What they believe is that human being have sins. Drug abuse is one of the sins committed and drug workers must provide holistic care for their clients. In other words, the clients should make thorough changes in behaviour, in values, and in belief. The agencies teach principles as laid out in the bible. They may not be focusing on the drug abuse problem. They believe that if the person admits that he has sins, believes in god, and confesses, then he can transform into a new person. They do not emphasize on special drug education programmes and in fact many of them do no drug education for their clients, and much of the programme contents are designed to help the clients under rehabilitation recover physically and grow spiritually. As they emphasize Christian thoughts and values, all the staff have to be Christians.

Most of the agencies have been employing social workers who practise social work approaches like counseling and family work. Many of them are social work degree holders. Another common practice among the Christian rehabilitation agencies is the use of ex-drug abusers as centre staff. The ex-drug abusers use their experience to help the persons under rehabilitation and also serve as role models.

One of the distinctive features of these rehabilitation centres is their emphasis on value change and personality change, with a belief on God. There is an expectation on clients to practice or at least to co-operate in religious sessions, whether they really believe in God or not. Their emphases in simple life and environment, having clear regulations, dedicated staff teams who are willing to work longer hours and accept lower pay, family like atmosphere as well as very good service image are all helpful for inducing positive change of the clients. They also enjoy the support from the church which can contribute human and other resources. On the other hand, the lack of medical staff, the less emphasis on drug education and ignoring possible psychiatric complications may cause trouble when they serve non-opiate substance abusers. Besides, the practice of not doing pre-admission medical and psychiatric assessment and not performing urine tests to monitor the clients by some of these centres are their limitations.

COUNSELING CENTRES FOR PSYCHOTROPIC SUBSTANCE ABUSERS

1. PS33

PS33 was established in 1988 and provides outpatient counselling, detoxification and treatment service, structured programmes and therapeutic groups to help substance abusers. It works with psychiatrist and medical professionals of the SAC of Kowloon Hospital to help the clients. Inpatients treatment can be offered for those in need as the Kowloon Hospital reserves six beds for meeting such need. Other supportive services include peer counselling and urine test. In the year 2000, the centre served 206 clients and all of them are psychotropic abusers.

2. Caritas Hugs Centre

Caritas Hugs Centre started operation in 1996 and provides non-residential services to substance abusers. Assessment would be performed by social workers with an aim to match clients to appropriate services. Alternatives include SAC, short term residential treatment, residential detoxification and rehabilitation service, and getting rid of substance abuse under the supervision of a social worker. Service includes individual and family counselling, therapeutic groups, referral to treatment agencies, telephone counseling, aftercare service and family support group. The centre served 181 cases in the year 2000.

3. Lutheran Cheer Centre

Lutheran Cheer Centre was founded in 1998. It provides individual, group and family counselling, assessment, referral to treatment service to substance abusers. Apart from working with the substance abusers, it also works with their family members. The centre provides urine test to help monitor the clients' drug status. The centre served 176 cases in the year 2000.

Though these three centres adopt different approaches in working with the substance abusers, they all provide nonresidential services and refer clients to inpatient service when needed. In terms of medical check-up and urine toxicology, these centres lack resources and support. At present, the SACs do not have the capacity to take up all the cases promptly. Other clients need to pay the fees for assessment from private practitioners out of their own pockets. Urine tests may not be performed to monitor the progress of their clients due to shortage of resources.

SUPPORTIVE SERVICES

Apart from the specialized service described above, substance abusers can also get help from private general practitioners, psychiatrist, as well as the hospitals. We cannot elaborate on how the substance abusers make use of such service due to the lack of data. Anyway, we may point out that the number of substance abusers making use of such services is not large. As the doctors involved may have different specialized expertise and supportive systems, there is no way to say if they are apt to render proper assistance to the help seekers. Anyway, they may be very useful in providing screening and early identification of substance abusers.

Many social service organizations have high probability to contact clients who are substance abusers. They are the outreaching teams, probation offices, youth centres, school social work teams, as well as those who work with discharged prisoners and rehabilitating former drug abusers. For instance, the Society for Rehabilitation of Offenders Hong Kong has a high proportion of its clients suffering from substance abuse problems. A substantial percentage of the clients of the outreaching teams have drug problems. These organizations adopt different approaches in working with the substance abusers and they may refer their service recipients to get drug treatment services when needed.

There are also three other agencies working for drug abusers. The Pui Hong Self Help Association runs self-help activities for former drug abusers. The Caritas Lok Heep Club works for substance abusers, former substance abusers, and their family members. The Social Welfare Department operates the Against Substance Abuse Scheme for occasional/experimental substance abusers under 21 years of age.

All the above agencies providing supportive service do serve psychotropic substance abusers with identification and onward referral to drug treatment or assessment if needed.

OBSERVATIONS ON EXISTING SERVICE PROVISION

1. Most of the existing services are for opiate abusers

It is apparent that most of the existing drug treatment services, especially the residential treatment services, are for opiate abusers. The reasons are obvious: up till now the proportion of opiate abusers among all the abusers seeking treatment is still the biggest and many of the services were set up to treat opiate abusers. Only the SACs and the counseling centres are specialized in serving the psychotropic substance abusers. With the changing trend of drug abuse, almost every residential centre is re-engineered to provide rehabilitative service also to psychotropic substance abusers. However, opiate abusers still occupy most of the existing beds.

2. Specialized services

Only the substance abuse clinics and Wong Yiu Nam Centre enjoy the service of psychiatrists and could provide thorough assessment and medical and psychiatric treatment for the psychotropic substance abusers. While the SACs provide mainly outpatient service WYN treats opiate abusers together with non-opiate abusers with short residential treatment course. When the other residential treatment centres are becoming more willing to accept psychotropic substance abusers, they treat this client group the same way as the opiate abusers. However, it may not be appropriate to treat opiate and non-opiate drug abusers together as they do not have

similar withdrawal symptoms and pattern, their reasons of abuse and high risk factors are not similar, and they might seduce their counterparts in trying new types of drugs. Besides, there is higher chance of various forms of co-morbid psychiatric illnesses in psychotropic substance abusers. They often require intensive psychiatric treatments. There is at present no specialized inpatient service tailor-made for the psychotropic substance abusers. According to the three-year plan, a new mixed mode treatment centre will commence operation in 2003. It is hoped that the new centre will cater services for the different types of substance abusers.

3. Experience in working with psychotropic substance abusers

It is observed that compared with opiate abusers, psychotropic substance abusers have less severe or even no physical withdrawal. However, the risk of having complication is much bigger and the psychological craving is also strong. Agencies in general are paying more concern and attention to psychotropic substance abusers but find them relatively difficult to serve. Psychotropic substance abusers regard themselves better than opiate abusers and tend to believe they need not change. They are more reluctant to make positive changes. Comorbidity of mental illness and psychiatric complication are more common among psychotropic substance abusers than opiate abusers. We would like to quote one example to illustrate the difficulty of serving the dual diagnosed clients. One client who had completed a short-term residential treatment went to another centre to continue his rehabilitation. As he was found to have mental illness, he had to consult a psychiatrist in a SAC regularly and he was advised to taking prescribed antipsychotic drugs to help control his illness. As the centre encouraged the client not to take the drugs, the client also felt he did not need to take the prescribed medication. After some weeks, a staff of the centre escorted the client to attend follow up at the SAC. The staff suggested the

doctor to stop the prescription. However, the doctor found the mental illness of the client in stage of relapse. He had to be hospitalized immediately. This example illustrates that the staff needed training in managing co-morbid clients with substance abuse and mental illness, and the centre needed psychiatric input.

Treatment agencies also find the group of psychotropic substance abusers relatively younger than the opiate abusers and postulate that the traditional treatment modalities may not suit these youngsters.

Another point worth noting is that many agencies prefer to use rehabilitated drug abusers as staff. These staff are mostly with heroin abuse experience only and their experience in quitting heroin may not be relevant for the psychotropic substance abusers.

4. Polysubstance abuse

There are many different meaning for the term "polysubstance abuse". It may mean abusing combination of different types of drugs at the same time. It may also refer to a non-selective pattern of abuse i.e. using whatever drugs that is available. In addition, there is a common condition of involuntary abuse of several drugs because adulterants are added to the illicit drugs they consume. All the three conditions are becoming more and more popular. It is experienced that polysubstance abusers are more difficult to treat. The experience of Caritas Wong Yiu Nam Centre indicates that polysubstance abusers had a lower chance of completing treatment compared with other substance abusers. In 1999/2000, only 33% of the 9 polydrug abusers entered the centre could complete the treatment, against the average of 68% for all type of drug abusers (Caritas, 2000).

5. Assessing and monitoring clients

Many agencies use social workers as intake workers to assess the suitability of their clients for treatment. Though the social workers may be experienced working with the substance abusers and highly capable in tracing personal and drug histories, social background, employment record, offence record, etc, they lack the training to make psychiatric assessment for their clients.

It is still not a common practice for agencies to verify substance abusers' drug status, i.e. does the person have substance abuse problem or what substances the person is abusing? While many agencies depend on the experience of their social workers and peer counsellors to make observations and guess work, some agencies rely on the Government Laboratory. Though the Government Laboratory provides reliable test results, it usually takes quite some time to know the results and the price is not cheap (\$200 per test). This causes many problems to the treatment agencies. Without prompt results, the treatment staff are not certain what kind of drugs the client is abusing. They are unable to confirm the client's abstinent status, since some clients are without apparent withdrawal. Planning of treatment and rehabilitation is difficult.

At present, some agencies use some instant handy drug testing panels. These panels provide fast and accurate screening means. However, the cost is quite high. It cost \$15 to \$65 for a single drug test and for a test of 8 common drugs of abuse, a test panel costs \$200. The high cost prevents many agencies from using the tool and thus they are handicapped in doing the drug treatment and rehabilitation work. Furthermore, for new popular drugs like ketamine, no instant urine test panel

is available.

6. Medical Support

The substance abuse counseling centres can get support from the substance abuse clinics. For the inpatient settings, only Wong Yiu Nam Centres have medical staff. The other residential centres have no doctor or nurse. They may have difficulty if medical complications arise during the course of treatment. They have problems in supervising the clients in taking prescribed drugs. For example, a boy in a centre got some antipsychotic medication prescribed by a doctor from the centre's staff. Though the drugs were prescribed to help him, he did not use it. Instead, he gave it to another client who abused them. In the end, the client who took the drugs lost consciousness and developed extrapyramidal side effects and had to be sent to a hospital for treatment.

7. Drug Education

It is noted that psychotropic substance abusers have inadequate knowledge on the drugs of abuse and they hold some misconceptions. A recent study on drug related deaths also finds out that among those drug related deaths, some 30% are newly discharged from compulsory or voluntary treatment centres (Lee, et al, 2000). So it is essential that drug treatment centres should conduct correct drug education in their centre. However, at present, many centres do not have such components in their programme contents. Of those who do drug education, only some of them have structured contents. Few follow the evidence-based approach in programme design, and evaluation of effectiveness is seldom carried out.

8. Approaches in Practice

Different agencies adopt different approaches. The more popular approaches used by the agencies include motivational interviewing, relapse prevention, family therapy, as well as Christian conversion. Other approaches being practiced include cognitive behavioral therapy, pastoral care, life skills training, adventure counseling, teaching of harm minimization concepts and skills, praying, and psychotherapy.

Of the major treatment approaches described in the previous section, the Motivational Interviewing and Relapse Prevention approaches are practiced by many centres, especially by social workers and medical staff. For example, there is evidence that body-check up integrated with motivational interviewing can be an effective means of early intervention for young substance users who find themselves not attracted to conventional service (Cheung 2001). The therapeutic community model has been adopted by SARDA and the Christian centres, though in a variety of forms. Pharmacotherapy is adopted by the SACs. It is observed that the 12-step facilitation has a very low popularity and adopted only by Alcoholic Anonymous in Hong Kong. There is also evidence that Cognitive Behavioural Therapy is used by some centres. However, little research has been done to verify the effectiveness of the individual approaches in helping the substance abusers in Hong Kong.

Of the remaining approaches, the “Dual Disorder Recovery Counselling” and the “Treatment of Dually Diagnosed adolescents” have good potentials for being brought into practice since there are signs of an increase in dually diagnosed clients. The “Living in Balance Counseling Approach” also has its attractiveness because of its versatility and all rounded coverage. The “Minnesota Model”, the “Addiction

Counselling Approach” and the “Matrix Model” appear less attractive for local practice.

Information on existing services

A table showing the existing service information is compiled and listed in Appendix 1.

The two questionnaires that we used for the survey are also attached.

NEEDS EXPRESSED BY THE TREATMENT AGENCIES FACING THE RISE OF PSYCHOTROPIC SUBSTANCE ABUSE

According to the recent questionnaire survey specially conducted for this study, the treatment agencies express that they need resources so that they could adequately serve the psychotropic abusers. Their needs are summarized as follows: The counseling centres in general need medical and psychiatric support to serve their clients. The Christian rehabilitation centres need psychiatric support. The SACs need upgrading to full time service, with enhancement of manpower, development of outreaching service, and increasing input from medical social workers. All the agencies need information on the drugs of abuse, training for their staff, urine test means, and many raised that a separate residential treatment service exclusively for psychotropic substance abusers is needed. Other expressed needs include a mechanism and provision to monitor new drugs trends, education to minimize harm, vocational training, temporary shelter, residential/day centre for psychotropic abusers.

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RECOMMENDATIONS

1. As already pointed out, most of the existing services cater for opiate users. Although the proportion of reported opiate addicts remains large, the capture rate of psychotropic users may be low, and clients with a primary opiate addiction may abuse other drugs at the same time and such conditions are often not attended adequately. At present, there are insufficient mechanisms among the treatment agencies in monitoring the pattern of polysubstance abuse among their clients. New guidelines for urine screening of psychotropic substances should be established by each agency. In general, a broad-spectrum urine test should be done during the intake assessment, and further screenings should be done whenever appropriate during the following periods. For instance, urine screening for concurrent non-opiate drugs may be conducted regularly in Methadone Clinics so that appropriate treatment or referral can be done accordingly. It is also necessary for organizations to document polysubstance abuse systematically. The use of a standardized record sheet is considered desirable. (See Appendix 2 for a sample assessment chart)
2. The new trend of psychotropic drug abuse mainly involves younger clients with different service needs. Although many agencies declare the willingness to accept non-opiate drug abusers, it is not certain to what extent the existing service models can attract the psychotropic users and suit their needs. Re-engineering or re-packaging of existing opiate-oriented service is necessary. The Government should regularly monitor the existing services including clients' spectrum, turnover, drug abuse pattern, outcome measures as well as costing, and examine if sufficient services are provided for the changing drug trends. The Three-year Plan recommends tailor-made programmes to be mapped out.

Priority should be given to development of new services to cope with the new trends of non-opiate abusers. There is some local evidence that a motivational approach with body-check up and individualized feedback may be appealing to psychotropic drug users, and effective in decreasing their drug consumption. Further development along this direction may be explored.

3. To reiterate, proper assessment is the basis for effective treatment of psychotropic drug abusers. With the potentially serious physical and psychiatric complications of psychotropic drug abuse, clinical assessment and laboratory screening is a necessary element to minimize avoidable morbidity and mortality. It also enables formulation of realistic treatment plans, matching of appropriate treatment settings and approaches. In agreement with the Three-year Plan, it is recommended that comprehensive assessment and laboratory screening should be conducted for all clients before they enter a drug treatment programme. The standard of such assessment should be regarded as an indicator of quality for the service.
4. Many agencies reflected that staff working in the field need training so that they can handle the psychotropic substance abusers adequately. We recommend that formal training should be organized and provided to social workers and peer counselors so as to keep them updated on the changing trends of substance abuse, treatment approaches and other information related to substance abuse. It may be desirable to establish and develop supervised clinical experiences for workers and counselors working in the field. Certificate and Diploma would be given for those who have attended the training and supervised clinical experiences. Ultimately, staff working in the drug treatment and rehabilitation field should be

required to have such certificate. At present, outdated concepts still prevail among some frontline workers. They hold belief that treatment for all addictions are the same, and models successful for opiate abusers will be equally applicable to non-opiate users. Another commonly held misbelief is that it is no good for a client to be put on longer-term or maintenance medication even if they are suffering from long-term mental illnesses. The concept of dual diagnosis and maintenance psychiatric medication is still not widely accepted. Attitudinal change has to be promoted on an organizational level before training will be effective and fruitful.

5. The Substance Abuse Clinics of the Hospital Authority provide medical service to the drug abusers. Many of them, because of their specific physical problems and psychosocial conditions, may not be accessible to other more traditional medical and health services. As far as out-patient service is concerned, these clinics are highly valued by agencies. On the other hand, there is great inadequacy in the community provisions. As already mentioned, all the SACs are led by part-time, hospital-based staff with heavy commitment of other psychiatric duties. There is little room for them to provide sufficient input to community drug services, including some of the ACAN functions. Another drawback is the insufficiency in in-patient service. With the higher level of psychiatric morbidity associated with the new drug trend, there is a need for short-term residential treatment. Existing in-patient provisions, though varies widely among different clinics, cannot meet the increasing needs of psychotropic drugs abusers. To most clients' dissatisfaction, existing settings involve mixing of psychotropic drug abusers with general psychiatric patients. There are some initial attempts to establish separate cubicles to improve the provision with some

success, but the development is limited by the lack of manpower and other resources. Worse still, there is a tendency for these already inadequate services to shrink during the EPP process. In short, there is a lack of total commitment from the Hospital Authority and there is an urgent need to fill the gaps in existing service provision. It is recommended that local services should be enhanced, and tertiary centers be established. Each local service should establish networking and partnership with agencies. They will offer advice, support and training to NGO drug & youth workers, provide shared care with G.P.s, and involve with district management and other relevant agencies in the planning and implementing of local drug services. Tertiary centres should be established to implement specialized residential treatment facilities. There should be enhancement of in-patient treatment provisions to serve as back up facilities for the previous district based services. Setting up of separate inpatient wards or cubicles should be implemented. As for manpower, each local service requires a consultant psychiatrist, junior medical staff, nurses, paramedical and administrative staff. Other recommendations include proper service provisions like upgrading to full-time service, enhancement of medical social workers' input, topping up of urine toxicology services, and development of day hospital and development of alcohol treatment services. It is relevant to point out that some of the recommendations here have been already been included in the Three-year Plan. They are reiterated here because of the lack of satisfactory progress. The Government's facilitation is required.

6. Continual medical education in the area of substance abuse should be enhanced. Health care professionals (especially the general practitioners, doctors working in the medical wards and accident and emergency departments) play an

important role in early detection, treatment and prevention of substance abuse. It is recommended that medical practitioners should regularly update their knowledge on the physical and psychiatric consequences of commonly abused drugs. The medical practitioners should regularly receive information about the changing prevalence of substance abuse and the various treatment services available in Hong Kong. Training on substance abuse should be enhanced in the basic curriculum of the medical schools and should be emphasized with the Continuing Medical Education provided by the Academy of Medicine as well as other related medical specialist colleges and societies. As for training in the field of Psychiatry, so far only one SAC has been approved as training centre. This is not adequate for service provision and training development. Therefore, prompt attention is urgently required for improvement.

7. There is an urgent need to make available urine toxicology services with sufficient capacity, accessibility and promptness of results. Whether to develop a central territory-wide toxicology unit or several satellite centres is a topic requiring further consultation. In general, sufficient local toxicology service should exist in each cluster to cover the commonly ordered tests. For special and uncommonly ordered tests, specialized centre should be established to provide on territory-wide basis. To meet the increasing demands resulted from the new drug trend, sufficient resources should be given for enhancement of the Government Laboratory and selected laboratories in hospitals of Hospital Authority. Bedside urine toxicology kits have their merits of low operational cost and provision of immediate results. They may be considered as useful adjuncts to the general laboratory, and their usefulness and reliability should be further explored. It is important for agencies and organizations to have the available

budget for such provision.

8. The psychotropic substance abuse pattern is fast and ever changing. We propose that ACAN should set priority for service or researches related to monitoring of the psychotropic drug trends. As many psychotropic drug users may not be captured by the CRDA reporting mechanism. Surveys that can complement this area are desirable and should preferably be conducted on a regular basis.

9. As most psychotropic substance abusers are ignorant of the harmful effects of psychotropic drugs, and holding misconceptions that they are in control of the drugs they abuse, they are vulnerable to relapse and its potential complications including mortality after leaving treatment. It is recommended that drug education and techniques to minimize harms of drug abuse have to be taught in treatment and counseling centres. Clear and basic drug education messages must be given to the people receiving treatment and rehabilitation service. The treatment agencies are encouraged to carry out the education. It is recommended that the Narcotics Division or ACAN should produce a drug education video and distribute it to the various treatment and rehabilitation agencies. Literature supported the need for doctors' involvement in client education and prevention (Pols 1996, Miller 1999), and the Hospital Authority should facilitate doctors in SACs to participate in such duties.

10. Different approaches including individual, family, group, and self-help have their own strengths. The diversity of approaches in treatment centres in Hong Kong is to be enhanced and supported. Due to the lack of documentation and study on

various treatment modalities and approaches, we are not able to consider the strengths and weaknesses of the various services in Hong Kong in this paper. We recommend more evaluation work to be done for each modality while allowing development and improvement of those effective treatment approaches with favourable outcomes. This recommendation goes in line with the Three-year Plan recommendation on the practice of more in-depth psychotherapy to assist polydrug abusers.

11. Last but not the least, we would like to recommend more provisions in rehabilitation of drug abusers. Detoxification and treatment of complications are but the first step of holistic treatment. Psychotropic substance users are in general younger and it is important for them to regain a functional and productive life. In this regard, it is important to ensure adequate training provisions, half-way house placement and aftercare service, as well as supported and gainful placements in employment for needy clients. At present there is insufficient provision for supported housing or short-term hostels (especially of the type of a few weeks' duration). Its cost-effectiveness is supported by the literature (Schinka 1998). As psychotropic drug abusers are generally reluctant to commit to long-term residential programmes, the development of short-term programme should be considered and given priority.

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Schinka J.A., Francis E., Hughes P., LaLone L., & Flynn C. (1998). Comparative outcomes and costs of inpatient care and supportive housing for substance-dependent veterans. *Psychiatric Services*; Vol. 49 (7): 946-950.

APPENDIX 1

**Task Force on Psychotropic Substance Abuse
Study on Existing Services for Drug Abusers**

Name of service:

Target:

Capacity/Charges:

Format of Treatment: outpatient/inpatient

Duration of Treatment:

Preadmission Examination: No/Yes

Contents: Physical _____ Psychological _____

Urine Test: No/Yes Means _____

Drugs Prescribed for detoxification: No/Yes

Number of clients served in last year:

Breakdown of Heroin vs psychotropic vs other drug abusers:

Sex	Heroin	Psychotropic	Other, please specify
Male			
Female			

Facing the new psychotropic substance abuse trend

A. Serving Psychotropic Substance Abusers: No/Yes

B. Why not? How to do with those accidentally admitted?

C. If yes, how?

D. What is the difference Between serving Heroin and psychotropic substance abusers:

E. What is badly needed to serve psychotropic substance abusers?

F. What Special approaches are used to serve the psychotropic substance abusers?

Task Force on Psychotropic Substance Abuse
Study on existing treatment services in Hong Kong

Please kindly provide answers to the following questions to facilitate our further understanding on your agency's work. Please return the answers by fax to **2335 5855**.

Thank you very much.

(Ad hoc research group members: Dr. Benjamin Lai, Dr. Yu Chak Man, Dr. Ben Cheung and Mr. David Cheung)

1. Do you do drug education in your treatment programme for the people under treatment in your centre?

No/Yes

If Yes, please list how much time and the topics concerned.

2. Can you provide us with the number of clients served by your agency in the past three years and if possible, the breakdown of clients according to the type of substances abused.

Year	Total No. of Clients	Opiate abusers	MDMA	Ice	Benzo	Cannabis	Ketamine	Polydrug	Others
1998 Male									
Female									
1999 Male									
Female									
2000 Male									
Female									

3. Please describe the specific approaches used by your agency to work with the substance abusers under treatment?

4. Do you require your staff to have some minimal qualification so that they can practise the approaches? If yes, please specify.

APPENDIX 2

PSYCHOACTIVE DRUG HISTORY QUESTIONNAIRE :

DRUG CATEGORY	^a Ever Used	^b Only as Prescribed /Directed	Age First Used	^c Total Years Used	Most Typical Route of Administration	Year Last Used	^d Frequency of Use in Past 6 Months
	1 = No 2 = Yes	1 = No 2 = Yes			1 = oral 2 = snorted 3 = injected 4 = smoked 5 = inhaled 6 = other	19 __	
ALCOHOL		XXX					
NICOTINE		XXX					
CANNABIS: Marijuana, hashish, hash oil		XXX					
STIMULANTS: Cocaine, crack		XXX					
STIMULANTS: Methamphetamine – speed, ice, crank		XXX					
AMPHETAMINES/OTHER STIMULANTS: ecstasy (MDMA)							
BENZODIAZEPINES/MINOR TRANQUILIZERS: Valium, Librium, Halcion, Xanax, Diazepam							
BARBITURATES/OTHER SLEEPING PILLS: Phenobarbital							
KETAMINE:							
OVER-THE-COUNTER OPIOIDS cough medicine with codeine							
OPIOIDS: Opium, morphine							
OPIOIDS: Heroin		XXX					
OPIOIDS: Street or illicit methadone		XXX					
HALLUCINOGENS: LSD, PCP, STP, MDA, DAT, mescaline, peyote, mushrooms		XXX					
INHALANTS: Glue, gasoline, aerosols, paint thinner, poppers, rush, locker room		XXX			5		
OTHER PSYCHOACTIVE DRUGS: (Specify) _____							

<p>^aIf "EVER USED" is NO (1) for any given line, the remainder of the line should be left blank.</p> <p>^bIf "Only as Prescribed" is YES (2), for any given line, the remainder of the line should be left blank.</p>	<p>^cCode 87 = infrequent use (≤ 2x/yr)</p> <p>Code 88 = brief experimental use (< 3 months lifetime use)</p>	<p>^dFrequency Codes:</p> <p>0 = no use 3 = 2 to 3x/mo. 6 = 4 to 6x/wk. 1 = < 1x/mo. 4 = 1x/wk. 7 = daily 2 = 1x/mo. 5 = 2 to 3x/wk</p>
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Information on existing counselling and treatment service for substance abusers

Agency	Wong Yiu Nam Centre	SER Foundation	Perfect Fellowship	Ling Oi Centre	New Being Fellowship	Barnabas	Zheng Sheng Association	St. Stephen Society	Wu Oi Centre	Enchi Lodge	Operation Dawn
Serving psychotropic Sub. Abusers	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No of heroin users served in 2000	140	98 (95 % heroin abusers)	6	107	45 (No break down)	34	36	282	156	26	97
No. of psychotropic sub. Abusers served in 2000	61		0	4		34	12	78	52	6	39
Inpatient/ Outpatient	Inpatient	Inpatient	Inpatient	Inpatient	Inpatient	Inpatient	Inpatient	Inpatient	Inpatient	Inpatient	Inpatient
Performing Medical exam. before admission	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Psychological exam.	Yes	Yes	No	No, perform only if needed	Yes	Yes	Yes	No	No	No	No
Performing Urine test for clients	Yes	Yes	No	Yes	No	Yes	No	No	No	Yes	No
Drugs prescribed for Detoxification	Yes	Allow client take prescribed drugs	No	No	No	No	No	No	No	Yes	No
Medical Staff In establishment	Yes	No	No	No	No	No	No	No	No	No	No
Doing Drug Education at Centre	Yes	Yes	No	No	No	Yes	No	No	Yes	No	No
Treatment Duration	1-3 months	12 months	12 months	12 months	18 months	12 months	18-24 months	12 months	18 months	6-12 months	18 months
Special Approaches used	Motivational Interviewing, Relapse Prevention	Motivational Interviewing, Relapse Prevention	Bible, Adventure Counseling	Pay special attention to psychotropic sub. abusers	Gospel Treatment	Family Therapy	Skills Training, Gospel Treatment, Modeling	Praying & worshipping	Work with family, referral to psychiatrists	Gospel treatment	Work with psychiatrist, prayer