

Clinical and Psychosocial Assessment of Poly-drug Abusers

Resource Book for the Seminar for Doctors to Help Beat Drugs 2005

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FOREWORD

by President of the Hong Kong Medical Association

As a representative body of the medical profession and a responsible member of the society, the Hong Kong Medical Association is devoted to encourage people to develop a healthy lifestyle. This year, as the fifth seminar sponsored by the Beat Drug Fund, we looked into the clinical and psychosocial assessment of poly-drug abusers, a topic that is concerned by many doctors.

As stated in the three-year plan set forth by the Narcotics Division, there is a need to increase involvement of general practitioners in the delivery of drug treatment services. With the accelerating demand for medical treatment from psychotropic substance abusers suffering from intercurrent illnesses and/or psychiatric co-morbidities, frontline doctors are in a better position in identifying drug-dependent persons and offering them the initial assessment and care. The seminar updated doctors and other health care workers on the psychological and social assessment of poly-drug abusers. Such kind of training is not well covered in the undergraduate curriculum and the postgraduate continuous medical education in most specialties. The seminar served to bring together relevant expertise in different disciplines, and the participants were also introduced to relevant tools and resources developed in different areas.

It is hoped that, with adequate training, doctors would competently take on a bigger role in responding to the needs of drug-dependent persons in areas such as detoxification, pharmacological treatment and relapse prevention. Let's join hand in offering help and support to fight against drug abuse for the community.

Dr. Choi Kin, Gabriel

President

Why is it Necessary to Assess Poly-drug Abusers?: Current Epidemiology and Clinical Morbidity

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INTRODUCTION

It is a fact that, when people hear the words “drug abuse and its consequence”, they usually think of addiction, crime, and other social disruptions. However, the most immediate, extensive, and long lasting problems caused by drug abuse, both for individuals and for society, are often medical in nature. It is known that almost every drug of abuse harms some tissue or organ. Take an example of a very popular drug named “ecstasy” or MDMA. It can cause malignant hyperthermia, permanent kidney damage and even death. It damages serotonin nerve fibers in the brain, which plays a direct role in regulating aggression, mood, sexual activity, sleep, and sensitivity to pain. No wonder a variety of mental disorder like panic attacks, depression, delirium, delusional disorder, etc accompany its intake. Apart from the direct harmful effect of the abused drugs, the circumstances and behaviours associated with drug abuse add to the adverse impacts on health. Inadequate housing and poor nutrition very often accompany drug abuse. There is increase exposure to diseases and reduce ability to fight off infections. Injection drug use promotes blood clots, severe skin infections, and blood borne infections which include life threatening endocarditis, viral hepatitis, and HIV/AIDS.

By now, it should be clear that assessment of drug abusers, not only from psychosocial perspective, but the physical and mental aspect, is very important.

Doctors should always be alert and responsive in risky individuals who turn up at his clinic with drug or other health problem. He must be equipped with adequate assessment skill.

THE POLY-DRUG ABUSERS

The target population faced by general practitioners can be categorized as:

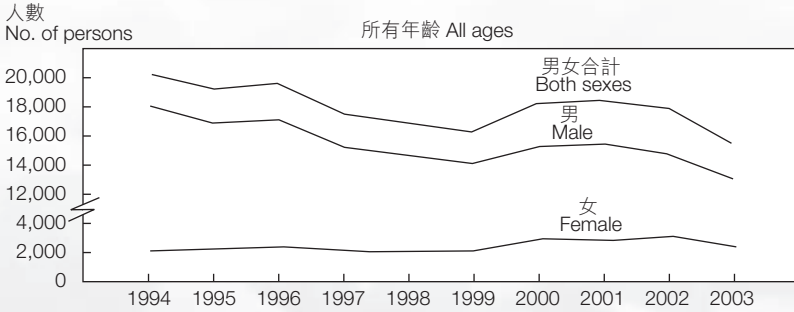
1. The never exposed
2. The exposed never-used
3. The experimental users
4. The non-dependent regular users
5. The addicted users
6. The vulnerable ex-users

Most drug users do not limit themselves to one of the abused drugs. They tend to have an experimental approach and will try other substances to find a range that they can use at different times or in different circumstances when they are available. The term “poly-drug use” describes the simultaneous use of more than one drug or the frequent use of several drugs (Drugs: Dilemma and Choices).

THE CENTRAL REGISTRY OF DRUG ABUSE AND REPORTED STATISTICS 1994-2003

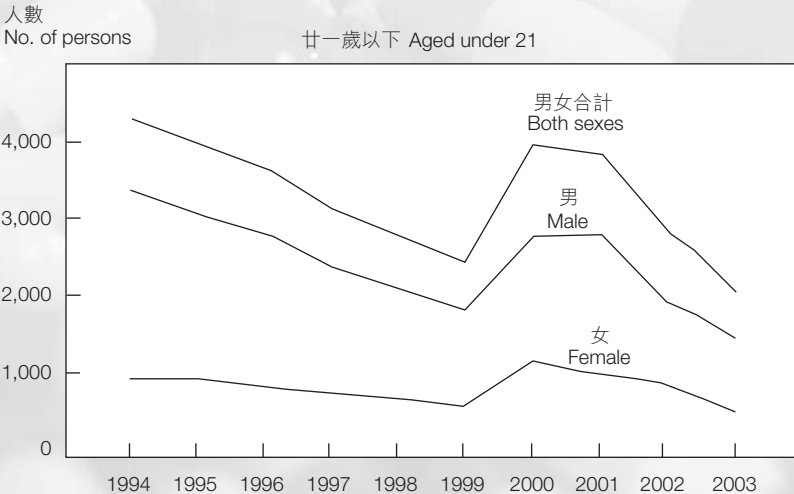
Local drug abuse statistics based on drug abused records collated by the CRDA from reports sent to it by law enforcement agencies, hospitals and clinics. The total number of drug abusers reported to the CRDA within a year is compiled each year to indicate the overall trend. In CRDA, the drug abuser is defined as a person who has come into contact with a particular agency and is known or suspected to have taken substances during the specified period, which harms or threatens to harm the physical, mental or social well-being of an individual, in doses above or for periods beyond those normally regarded as therapeutic.

按年齡組別及性別劃分的濫用藥物人士
Drug Abusers by Age Group by Sex



During 1994 and 1999, there was a declining trend in the total number of reported drug abusers. The trend reversed in 2000 and 2001. It then reversed to its downward trend again and stood at 15,605 in 2003, the lowest in the past 10 years.

按年齡組別及性別劃分的濫用藥物人士
Drug Abusers by Age Group by Sex



In regard to young drug abusers aged under 21, there was a gradually declined trend in 1994 to 1999, which surged up in 2000. During 2001 and 2003, it declined and stood at 2,130 in 2003, lowest in the past 10 years.

Other important findings of drug abusers include the following. Drug abuse was more popular among males than females. The average age of male drug abusers varied between 34 and 36. Female drug abusers were generally younger than male counterparts, 25 to 28. The age of newly reported drug abusers was 22 to 25.

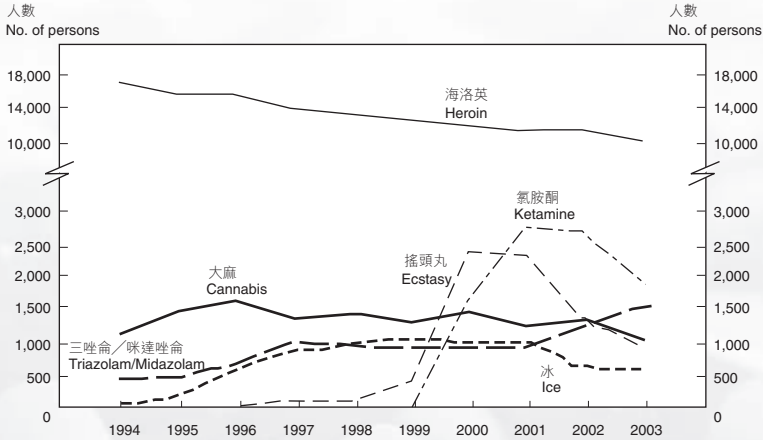
THE ABUSED DRUGS LISTED IN CRDA

The abused drugs can be divided into:

- A. "Opiate" group including Heroin, Morphine, Physeptone/Methadone
- B. "Psychotropic substances" group including
 - Amphetamines, Ecstasy, Methylamphetamine (Ice), Cocaine, cough medicine with Ephedrine/Pseudoephedrine. This is the group with stimulant property.
 - Methaqualone
 - Cannabis, Ketamine. This is the group with Hallucinogenic property.
 - Triazolam, Midazolam, Diazepam, Flunitrazepam, Nimetazepam. This is the Benzodiazepines group with sedative and hypnotic properties.
 - Organic solvents

The most popular abused drugs in 2003 were Heroin, Ketamine, Triazolam/Midazolam, Cannabis, Ecstasy, and Ice.

按最常被濫用的藥物種類劃分的濫用藥物人士
Drug Abusers by Most Common Types of Drugs Abused



註釋：因為濫用藥物人士可濫用多於一種藥物，所以應避免將個別藥物種類的濫用人數相加起來。
 Note: Since an abuser may abuse one or more types of drugs, the numbers for abusing different drugs should not be added together.

Heroin

Heroin was on a declining trend during the past decades, dropping from 17,229 in 1994 to 10,330 in 2003. In 2003, it still took up 74% of all reported drug abusers.

Ketamine

Ketamine overtook all psychotropic substances to become the second most commonly abused drug in 2000 and since then topped the list of psychotropics. In 2001, its use peaked at 2,746 and declined moderately to 1,875 in 2003.

Triazolam/Midazolam

Its abuse has a rising trend in the last decade. In 1994, the number of abusers is 409 and in 2003 it peaked at 1,523. It is second on the list of psychotropics in 2003.

Cannabis

It was used to be the most commonly abused psychotropic substances during 1994 and 1999. It was then overtaken by other psychotropic substances but ranked third in years to follow. The numbers of reported abusers were stable, 1,013 in 2003.

Ecstasy

In 2000, it rapidly overtook all other psychotropic substances, becoming the most commonly abused psychotropic. In 2001 and 2002, it dropped to second and then to fourth in 2003. The number of abusers reported in 2001 was 2,272 and in 2003 was 916.

Ice (Methylamphetamine)

It was very popular among reported drug abusers since mid-1990s. It had been the second most commonly abused psychotropic substances in 1998 and 1999. It then dropped to fifth in 2002 and 2003.

In 2003, among young drug abusers aged under 21, the most popular types of drugs abused were as follows:

- Ketamine 62.5%
- Ecstasy 34.1%
- Cannabis 28.4%
- Cough medicine 7.9%
- Heroin 7.7%
- Ice 6.5%
- Triazolam/Midazolam 4.8%
- Organic solvents 2.4%
- Nimetazepam 1.6%
- Diazepam 0.9%

During 1995 and 2001, the trend for abusing more than one type of drugs was rising. The number of such increased from 1,181 in 1995 to its peak of 3,247 in 2001. After 2001, the number declined and stood at 2,887 in 2003 (proportion was 20.9%).

THE CONSEQUENCES OF PSYCHOTROPIC DRUG ABUSE

Most, although not all, of the psychotropic substances that are widely abused are addictive. The hallmarks of addiction are tissue tolerance and unpleasant withdrawal effects if drug use is ceased abruptly. However, addiction is being replaced by a new more broadly based concept of dependence. Dependence emphasizes the importance of the subject's strong desire, or sense of compulsion, to take the drug, and their increasing difficulty controlling their substance-taking behaviour. This difficulty leads to a progressive neglect of alternative pleasures or interests and an inability or failure to give up despite clear evidence of overtly harmful consequences. And all abused drugs are dependence producing, although they vary in degrees.

A review of these widely abused substances illustrates the complexities of harm of drug use. It is not just the substances themselves which causes problems: physical and psychiatric, there are also problems associated with injecting (HBV, HCV and HIV), accidents and other indirect effects. As poly-drug abuse is more usual, especially when we include alcohol that can be abused, drug interaction is the rule and difficult to predict in its harmful effects.

People with mental health problems tend to self-medicate with abused drug(s), a condition named co-morbidity or dual diagnosis. Identification of co-morbid psychiatric disorders is complicated by the myriad of psychiatric symptoms caused by drug use and by the medical conditions it induces. Correct identification of true psychiatric disorder leading to drug abuse can lead to a diagnostic-specific treatment, a skill that general practitioner must acquire.

A Specialist Clinic for Substance Abusers and its Statistics 2003-2004

Tuen Mun Substance Abuse Clinic, a specialist clinic of Hospital Authority that serves NT West with a population of a million, accepts referral from doctors and social workers in both public and private sectors. In 2003-2004, it accepted 119 new case referrals. 31 were female and 88 were male. The mean age was 31 and median was 29.

The 5 most common primary abused drugs were Heroin/Methadone (35.3%), cough mixture (23.5%), Ketamine (13.4%), Zopiclone (7.6%) and Ecstasy (6.7%). Of these 119 new cases, there were 75 (63%) who abused two or more substances in the past one year. The 6 most common secondary drugs of abuse were Cannabis (36%), Ecstasy (30.6%), Ketamine (30.6%), Benzodiazepines (24%), Zopiclone (21.3%), and Ice (20%). 40 of the 119 new cases (33.6%) abused 3 or more substances in the past one year.

75 of the 119 new cases (63%) have concurrent psychiatric disorder (which included drug related psychiatric disorder and psychiatric co-morbidity/dual diagnosis) apart from drug abuse/dependence as follows:

- Depression 17.6%
- Drug induced psychosis 16%
- Schizophrenia 16%
- Adjustment disorder 5.9%
- Personality disorder 5.9%
- Other psychiatric disorders 7.6%

7 of the 75 have more than one form of concurrent psychiatric disorder.

The Clinic also provides consultation liaison service to adjacent Tuen Mun Hospital (the only general hospital serving NT West). In 2003-2004, it provided service to 66 patients in TMH who were recognized by its doctors to have drug abuse/dependence. 37 of the 66 (56%) suffered from concurrent psychiatric disorder. The most common of which was depression (25 out of the 37).

Statistics of Hepatitis C in injecting drug users (IDUs) of TMSAC since 2002 are collected. 66 IDUs' blood was collected with consent for HCV screening. 43 were found to be positive (72%). This high rate of positive HCV among injecting drug users deserves attention, as it is understood their chance of being carrier is very high and their risk of future development of cirrhosis and hepatocellular carcinoma is substantial.

The Importance of Assessment for Physician Working in the Community

"Harm Reduction" is a widely accepted concept nowadays in management of drug abusers. As drug use is more frequent, so is the likelihood that medical, social, psychological, psychiatric, and legal problems that will develop. The harm affects not only individual drug abusers, but their family and the society they are living at. Harm associated with these problems can be minimized by appropriate professional input. This is much more constructive approach than treatments aiming at chemical abstinence alone. Some of the medical harm to individual drug abusers can be minimized by general practitioners through the provision of general medical services and further action via referral to, or, working together with specialist drug services (medical or social as "Share Care"/ "Partnership Approach"). GPs are seen as a key resource in management of drug abusers because of their widespread accessibility and because they would be the first ports of call when drug problems begin to develop.

The Assessment

It is the mutual gathering of information to ascertain drug abuser's needs and to assist in defining the most appropriate course of action. It should be thorough. A good assessment is essential to the continuing care of the drug abuser. It enables the drug abuser to become engaged as a patient in treatment and begins a process of change even before assessment is completed. Feedback provides patients with an objective picture of their situation and allows for reflection on problem areas in their lives. Advice should be based on an objective assessment of the patient. Accurate and non-judgemental information can assist them to draw their own conclusions from the facts. The GP is in an important position to provide such. Avoid argument, express empathy, and support self-efficacy. These are the basics in motivation strategy.

CONCLUSION

General Practitioners are likely to be consulted by a wide variety of drug users. They should be able to respond to the needs of users who present across the range of experimental, recreational, social, dependent and long term use. It should be recognized that 'Brief Intervention' in the form of a thorough assessment with feedback and advice could effect change even in those who perceive few problems with their drug use. Change could even be effected with long term poly-drug users with a wide range of psychosocial problems.

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Medical and Physical Assessment of Poly-drug Abusers

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Drug abuse among young people in Hong Kong is commonly a poly-drug abuse involving Ketamine, Ecstasy (3,4-methylenedioxymethamphetamine, MDMA) and Methamphetamine. Other drugs may also be taken such as Marijuana, Cocaine, LSD (lysergic acid diethylamide), Alcohol, Cough Medicines, Inhalants and Benzodiazepines like Rohypnol (flunitrazepam). Gamma-hydroxybutyrate (GHB) has not been used so frequently in Hong Kong as in some other countries but its abuse may be increasing. Abuse of Heroin still remains a major problem.

CLINICAL FEATURES OF POLY-DRUG ABUSE

In between episodes of abuse there may be no obvious signs but certain features which might alert the medical practitioner that there may be a problem of substance or alcohol abuse include frequent absences from school or work, history of frequent trauma or accidental injury, depression or anxiety, gastrointestinal symptoms such as epigastric distress, diarrhoea or weight changes, sexual dysfunction and sleep disorders. The physical findings that might suggest substance or alcohol abuse include mild tremor, odour of alcohol on the breath, enlarged tender liver, nasal irritation (suggestive of cocaine insufflation), conjunctival irritation (exposure to marijuana smoke), labile blood pressure, tachycardia (alcohol withdrawal), “aftershave/mouthwash” syndrome (to mask the smell of alcohol), odour of marijuana on clothing, signs of COPD, hepatitis B or C, HIV infection.

Poly-drug abusers may present to medical practitioners in many different circumstances and it is important to maintain a high level of awareness that this problem may be contributing to some unexplained illness. To obtain the patient's cooperation and trust it is important to adopt a non-judgmental attitude. Some of the clinical features which might suggest the abuse of club/street drugs include past history of drug overdose or substance

abuse, suicidal ideation or prior suicide attempt, history of other psychiatric illness, unexplained cardiac arrhythmia, cardiopulmonary arrest, agitation or hallucinations, muscle rigidity or dystonia, delirium or confusion, stupor or coma, rotary nystagmus, rhabdomyolysis, hyper/hypothermia, respiratory failure, bronchospasm, liver failure, renal failure, aspiration and seizures.

Inhalant abuse more often involves younger adolescents than those who indulge in poly-drug abuse. It is associated with some more specific signs and symptoms such as paint/oil stains on the clothing or body, chemical odour on the breath, spots or sores in or around the mouth, rhinorrhoea, injected sclera, nystagmus, diplopia, stained fingernails, a dazed appearance, dizziness or unsteady gait, slurred speech, forgetfulness or difficulty concentrating, anorexia or nausea, irritability or excitability, anxiety, and sleep disturbance. The chemicals that are commonly abused as inhalants include toluene, butane, propane, fluorocarbons, chlorinated hydrocarbons and acetone. Deaths can occur due to the so-called sudden sniffing death syndrome when an intoxicated inhalant abuser is startled triggering ventricular fibrillation. Chronic toxicity can affect the brain, heart, lungs, kidneys, liver, and bone marrow.

PHARMACOLOGY AND TOXIC EFFECTS OF DRUGS OF ABUSE

Pharmacological and physicochemical properties of substances influence their potential for drug abuse and dependence and the mode of abuse. Liposolubility increases the passage of a drug through the blood-brain barrier, whereas water solubility facilitates the injection of a drug. Volatility favours the inhalation of drugs in vapor form and heat resistance favours smoking of the drug. Characteristics such as rapid onset and intensity of effect increase the potential for abuse and substances that rapidly reach high levels in the brain are usually preferred e.g. flunitrazepam is preferred over triazolam, and smoking “crack” cocaine is preferred to intranasal administration. A short half-life (e.g. Heroin) produces more abrupt and intense syndromes of withdrawal than does a long half-life (e.g. Methadone). Drugs of abuse generally exert their pharmacologic activity through either ionotropic or metabotropic mechanisms.

AMPHETAMINES

Amphetamines and amphetamine-like drugs have previously been used therapeutically for narcolepsy and attention-deficit disorder and in various anorectic medications but they have a very low therapeutic index and it is now widely considered that there is no medical indication for their use. Methamphetamine (known as “chalk, crank, crystal, fire, glass, ice, meth, speed”) acts on the central nervous system causing stimulation, with peripheral release of catecholamines, inhibition of re-uptake of catecholamines, or inhibition of monoamine oxidase. Methamphetamine intoxication results in increased heart rate and blood pressure, a feeling of exhilaration and energy, increased mental alertness and reduced appetite. Overdose results in confusion, tremor, anxiety, agitation, irritability, aggression, mydriasis, and tachyarrhythmias. Death may occur due to hepatic toxicity, cardiovascular toxicity, cerebral toxicity, or hyperpyrexia. The long term effects include tolerance, addiction, impaired memory and learning.

MDMA

MDMA (3,4-methylenedioxymethamphetamine) is a ring-substituted Amphetamine, which is structurally similar to Methamphetamine and Mescaline. It was developed in 1914 as an appetite suppressant, but not tested in humans at that time. By 1965, it was occasionally used by psychiatrists to break through psychological defenses as an “Empathy Agent.” By 1985 its potential for abuse was well recognized and it was produced by illegal laboratories for recreational use. In the USA it is classified as a schedule I controlled substance but it is often considered incorrectly by lay-people as a harmless substance. It is known variously as “Ecstasy, X, M, E, XTC, rolls, beans, Clarity, Adam, lover’s speed, hug drug” and various other street names. It is important to be aware that many so-called “Ecstasy” pills are adulterated with other substances such as Methamphetamine, Caffeine, Dextromethorphan, LSD, etc. and that some of these substances are more toxic and may have different clinical effects.

MDMA is a potent releaser and/or reuptake inhibitor of presynaptic serotonin (5-HT), dopamine (DA), and noradrenaline (NA). The effects which may be considered desirable by abusers include “Entactogen” properties producing a closeness to others, facilitation to interpersonal relationship, and empathy. The most frequent effects described with small doses include euphoria, well-being, happiness, stimulation, increased energy, extroversion, feeling close to others, increased empathy, increased sociability, enhanced mood, mild perceptual disturbances, changed perception of colours and sounds, somatic symptoms related to cardiovascular and autonomic effects (blood pressure and heart rate increase, mydriasis), and moderate derealization but not hallucinations. Unwanted acute side effects occur in the same dose range and include lack of appetite, jaw clenching, dry mouth, thirst, restlessness, palpitations, impaired balance, difficulty in concentration, dizziness, feeling and sensitivity to cold, drowsiness, nystagmus, hot flashes, trismus, muscular tension, weakness, insomnia, confusion, anxiety, tremor, panic attacks, delirium, and brief psychotic episodes. Some of these side effects may persist for up to 24 hours after the episodes of abuse such as fatigue, heavy legs, dry mouth, loss of appetite, insomnia, drowsiness, weakness, muscular tension, lack of energy, difficulty concentrating, and headache. Some residual side effects that may persist up to 7 days include fatigue, irritability, anxiety, lack of energy, depressed mood, insomnia, drowsiness, and muscular tension.

With slightly higher doses acute toxic effects will be seen and medical attention may be required at this stage. The clinical features with mild intoxication include nausea, vomiting, mydriasis, dry mouth, sweating, restlessness, tremor, hyper-reflexia, irritability, pallor, bruxism, trismus, and palpitations. Moderate toxicity results in hyperactivity, confusion, aggression, panic attack, psychosis, muscle tension, tachycardia, hypertension, and increase in body temperature and severe intoxication will produce delirium, coma, seizures, hypotension, tachyarrhythmias, hyperthermia ($>40^{\circ}\text{C}$), and renal failure associated with rhabdomyolysis. Hyponatraemia occurs uncommonly resulting from excessive water intake usually combined with the syndrome of inappropriate antidiuretic hormone (SIADH) secretion. The “Serotonin Syndrome” may be seen and consists of increased muscle rigidity, hyperreflexia, and hyperthermia. Death may occur from heat stroke (hyperthermia,

rhabdomyolysis, myoglobinuria, disseminated intravascular coagulation, and renal failure), intracranial haemorrhage, fulminant hepatitis or hepatic necrosis. Long term toxicity has also been described involving gradual loss of some cognitive functions (memory, performance of complex tasks), higher impulsivity or aggressiveness and a greater incidence of psychopathology or depression.

The metabolism of MDMA is complex with 2 main metabolic pathways, an O-demethylenation (involving cytochrome P450 (CYP) 2D6 & CYP1A2) followed by catechol-O-methyltransferase (COMT)-catalyzed methylation and/or glucuronide/sulfate conjugation and an N-dealkylation, deamination, and oxidation to the corresponding benzoic acid derivatives conjugated with glycine. Various intermediate products are pharmacologically active and are thought to contribute to the toxic effects. The metabolites can be detected in the plasma and urine, mainly as their glucuronide or sulfate conjugates. As CYP2D6 shows polymorphic metabolism there was some expectation that subjects displaying the poor metabolizer phenotype may be at higher risk of acute toxicity episodes. However, in this part of the metabolic pathway, a mechanism-based inhibition of the enzyme operates because the formation of an enzyme-metabolite complex renders all subjects, independently of genotype, phenotypically poor metabolizers after the administration of 2 consecutive doses. Therefore, the impact of CYP2D6 pharmacogenetics on acute toxicity is limited and all subjects will show higher plasma concentrations of MDMA and some responses, such as the increase in blood pressure, will be greater with repeated doses. The conversion of MDMA to toxic intermediate metabolites may be involved in the development of mid- to long-term neurotoxic effects as a result of progressive neurodegeneration of the serotonergic neurotransmission system.

KETAMINE

Ketamine was derived from phencyclidine (PCP) in the 1960s for use as a dissociative anaesthetic. It causes anaesthesia without respiratory depression by inhibiting neuronal uptake of noradrenaline, dopamine, and serotonin, and by glutamate activation in the N-methyl-D-aspartate receptor channel. The side effects of bizarre ideations and hallucinations have limited its medical use but these effects have appealed to recreational drug users.

Much of the illicit supply is diverted from human and veterinary anaesthesia products and is distributed in a liquid form that can be ingested or injected. In clubs it usually has been dried to a powder and may be smoked in a mixture or taken intranasally. It is known colloquially as “K, special K, super K, vitamin K, kit-kat, keets, super acid, jet, cat valiums, etc.”

The recreational effects appear rapidly after ingestion and last about 30 to 45 minutes, with sensations of floating outside the body, visual hallucinations, and a dream-like state. Side effects commonly experienced include confusion, anterograde amnesia, delirium, tachycardia, palpitations, hypertension, and respiratory depression with apnoea. “Flashbacks” or visual disturbances can be experienced days or weeks after ingestion. Some chronic users become addicted and exhibit severe withdrawal symptoms that require detoxification.

GENERAL GUIDELINES FOR MANAGEMENT OF POLY-DRUG INTOXICATION

As with all acute medical situations and intoxications, the first step is stabilization of airway, breathing, and circulation (ABC). It may be possible to identify specific toxidromes based on physical examination but because of the use of multiple drugs, often with opposing pharmacological effects, this may be difficult and the history of the type and amount of drug abused is often not available or inaccurate. Reduction of toxin exposure from oral intake may be achieved with activated charcoal and gastric lavage may be considered if the patient is seen within 1 hour of drug ingestion. Laboratory evaluation to identify the drugs involved is often not available in the acute situation and quantification of club drugs in serum will not assist in therapeutic decisions. Provision of basic supportive care is the most important management. Specific antidotes are available for benzodiazepines and opiates and can be used in appropriate circumstances.

Admission to the ICU may be required for any of the following reasons: respiratory depression or severe hypoxaemia, endotracheal intubation and mechanical ventilation, pulmonary oedema induced by toxins or drugs, cardiac arrhythmia, haemodynamic

instability and systolic blood pressure <80 mmHg, hypertensive emergency, unresponsiveness to verbal stimuli, Glasgow coma scale <12, seizures, severe or worsening metabolic acidosis, hypothermia or hyperthermia, body packers and stuffers, emergency surgical intervention, or need for continuous infusion of naloxone.

IDENTIFICATION OF TOXIDROMES

The adrenergic toxidrome involves hypertension, tachycardia, mydriasis, diaphoresis, restlessness and dry mucus membranes. It may be caused by amphetamines, cocaine, ephedrine, phencyclidine, or pseudoephedrine. The sedative-hypnotic toxidrome involves stupor and coma, confusion, slurred speech and apnoea. It may be caused by barbiturates, benzodiazepines, ethanol, opiates or GHB. Hallucinogenic toxidromes feature hallucinations, psychosis, panic, fever, mydriasis, hyperthermia, and synesthesia. This may result from amphetamines, cannabinoids, cocaine, LSD or phencyclidine (which may present with miosis). The narcotic toxidrome features altered mental status, slow shallow breathing, miosis, bradycardia, hypotension, hypothermia and decreased bowel sounds. It may be related to opiates, dextromethorphan, pentazocine, propoxyphene, or methadone. The epileptogenic toxidrome includes hyperthermia, hyper-reflexia, and tremors resulting from cocaine or phencyclidine.

CONCLUSIONS

Poly-drug abuse has become a common problem and should be suspected in acute drug intoxications in young people. The actual substance and dose taken are usually unknown but will often include ketamine, MDMA and methamphetamine. Severe reactions can occur with relatively small doses and may require critical care. Club drug overdose usually resolves with full recovery within several hours but without proper care the effects can be fatal. In between periods of abuse there may be no obvious abnormal signs and it is important to adopt a high level of awareness and to approach the patient with empathy as long term education of the patient and family is essential.

Psychiatric and Psychological Assessment of Poly-substance Abusers

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INTRODUCTION

Hong Kong is well known for its relationship with opium until the early fifties in the last century, when heroin began to take over from opium (Lau, 1967). In the mid-nineties, universal surge in rave party drugs has begun to change the scene in Hong Kong. This is associated with more abuse of multiple substances and more youths. For example, as shown in Figure 1 (from CRDA, 53rd Report), less than 10% of substance abusers in Hong Kong in 1994 were poly-substance users. This figure has increased yearly, and has reached over 20% by 2003. In 2003, it was also found in Hong Kong (Figure 2) that 16.8% of all substance abusers abused 2 different substances (e.g. Heroin and Triazolam or Midazolam; MDMA and Ketamine; Heroin and 'Ice'; or Cannabis and Ketamine) in the same period, 3% abused 3 different substances (e.g. Cannabis, MDMA and Ketamine; Heroin, Triazolam/Midazolam and 'Ice') and 1.1% abused more than 3 different substances. Besides, those newly- and previously-reported abusers below the age of 21 who abused multiple substances also increased from less than 20% in 1991 to over 40-50% in the first 3 years of this century (Figure 3, from CRDA, 47th Report). Thus, the need for psychiatric and psychological assessment of poly-substance abusers becomes obvious.

Figure 1. Poly-substance Abuse as Reported in Hong Kong from 1994 to 2003 (Data drawn from CRDA, 53rd Report).

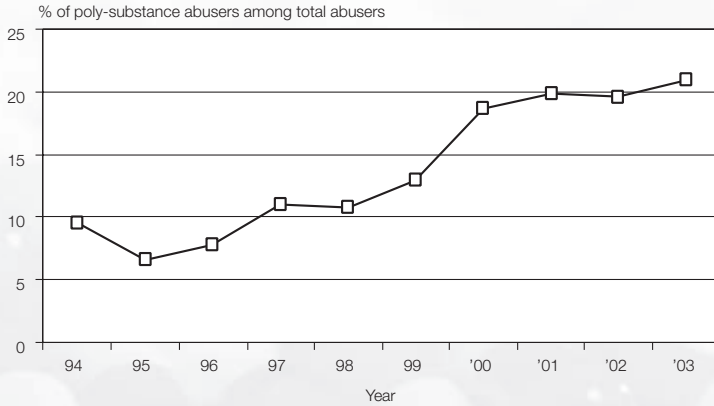


Figure 2. Number and Types of Substances Abused by Poly-substance Abusers in Hong Kong in 2003 (Data drawn from 53rd Report of CRDA).

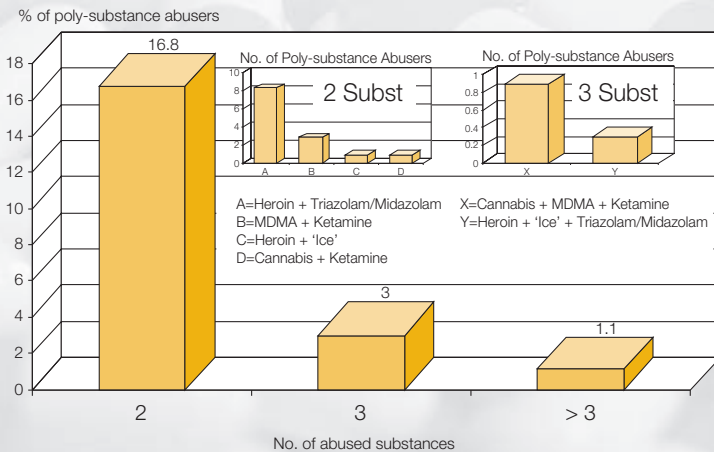
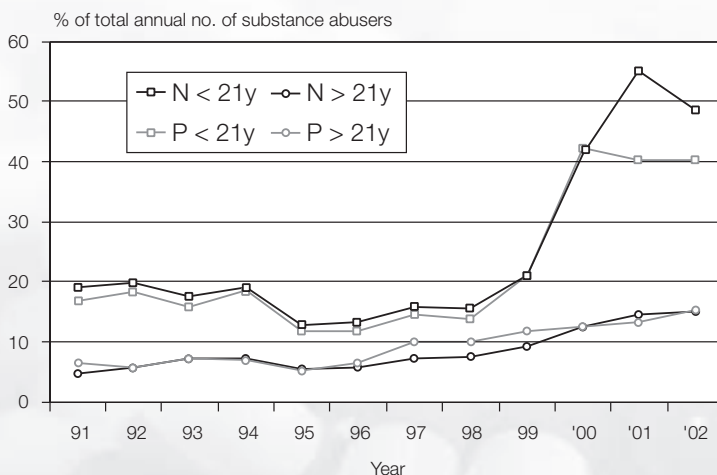


Figure 3. Annual Proportion of Newly-(N) and Previously-reported (P) Substance Abusers in Hong Kong Subdivided by those above (>21y) or below (<21y) the Age of 21 Years Old from 1991 to 2002 (Data drawn from 47th Report of the CRDA).



APPROACHES TO ASSESSMENT

There are two general approaches to assessment of drug abusers. The categorical approach makes clinical diagnoses, upon which treatment and management are based. The dimensional approach examines various aspects of the abuser's abnormal behaviour, upon which plan of management can be individually formulated. When both approaches are combined, e.g. the assessment of clinical diagnosis, severity of addiction and potential for motivation and rehabilitation, it has been shown by Mattson and Associates (1994) that it is possible to use such assessments to effective treatment matching.

CLINICAL DIAGNOSIS

Two international systems are widely available for psychiatric diagnoses. The International Classification of Diseases, Mental and Behavioural Disorders, tenth edition (ICD-10) has been designed and widely used internationally by World Health Organization. The Diagnostic and Statistical Manual of Mental Disorders, fourth edition, text revision (DSM-IV-TR™) is provided by American Psychiatric Association. Although it is a national system, it is also highly recognised in the international scene because of intensive research and its influence on ICD-10.

Diagnostic criteria for these two systems are easily available (Cooper, 1994 and American Psychiatric Association, 2000). The diagnostic code and terminology for these two systems are shown in Tables 1 and 2. The ICD-10 system classifies drug problems according to which chemical substance is used and what clinical condition is manifested. Notable among these clinical conditions is the term 'Harmful Use', which indicates clearly identifiable physical or psychiatric harm that is caused by a substance.

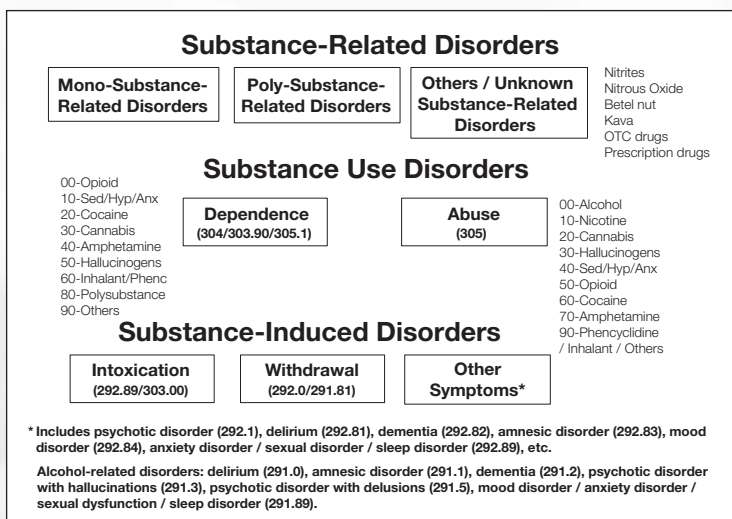
Table 1. Diagnostic Criteria in the ICD-10 (Cooper, 1994).

Note: Numerical Numbers Refer to Diagnostic Codes.

For Substances - First 3 digits before decimal:	For Clinical Conditions - 1 st digit after decimal:
* F10.x - Alcohol	* F1x.0 - Acute Intoxication
* F11.x - Opioids	* F1x.1 - Harmful Use
* F12.x - Cannabis	* F1x.2 - Dependence Syndrome
* F13.x - Sedatives / Hypnotics	* F1x.3 - Withdrawal State
* F14.x - Cocaine	* F1x.4 - Withdrawal State with Delirium
* F15.x - Stimulants	* F1x.5 - Psychotic Disorder
* F16.x - Hallucinogens	* F1x.6 - Amnesic Syndrome
* F17.x - Tobacco	* F1x.7 - Residual & Late onset Psychotic Disorder
* F18.x - Volatile Solvents	* F1x.8 - Other Mental & Behavioural Disorders
* F19.x - <u>Multiple drug use</u> & others	* F1x.9 - Unspecified Mental & Behavioural Disorder

Table 2. Diagnostic Criteria in the DSM-IV-TR™ (American Psychiatric Association, 2000).

Notes: Numerical Numbers Refer to Diagnostic Codes of the Disorders.



The DSM-IV system is more complicated in that it classifies drug problems from three different perspectives, i.e. substance-related disorders, substance use disorders and substance-induced disorders. Substance-related disorders are used to indicate which substance causes the disorder, and whether it is multiple or unknown. Substance use disorders address two major problems of abuse and dependence, and hence are further classified according to individual chemical substances. Substance-induced disorders are concerned with the clinical manifestations caused by a single or multiple substances. These include intoxication, withdrawal and other symptoms. The latter includes psychotic disorder, delirium, dementia, amnesic disorder, mood disorder, anxiety disorder, sexual disorder, sleep disorder, etc.

DIMENSIONAL ASSESSMENT

The dimensional approach examines individuals in terms of their body, mind and social problems. The physical assessment will not be mentioned here as it has already been addressed separately.

DRUG HISTORY

A history of the use of drug will be essential for one who is suspected to have been abusing chemical substances. This is concerned with how he or she was initially, subsequently, and is currently involved in the use of single or multiple substances. It is necessary to enquire on the route of administration of substances, whether the equipments were properly sterilised, or whether there was sharing of needles or syringes. It is useful to take a psychosexual history to see whether or not the person might have been exposed to high-risk behaviour leading to HIV or Hepatitis, etc.

It is of course necessary to have a good knowledge of the patient's physical, psychological, psychiatric, social, family, marital, financial, and/or legal problems or complications, as well as problems in daily living. Such knowledge also reveals the strength of the patient's own help-seeking network and forms the basis for an individual plan of management. For example, one of my patients has been sleeping rough on a staircase because he previously stole money from his parents living on the same floor when he was abusing Heroin, hence is not allowed entering the house after dinner. He is currently a registered Methadone Clinic attendee but is suffering from persistent sleep problem. He is therefore being helped to apply for a single accommodation in addition to helping him to sleep well clinically.

MENTAL HEALTH HISTORY AND PSYCHIATRIC ASSESSMENT

Mental health history covers biological, social, drug use and psychiatric background. It is routinely undertaken by psychiatrists in daily clinical practice. The usual semi-structured format includes the source of referral, chief complaints, history of present illness, past history of illness, family history, personal history consisting of developmental data, childhood experiences, menstrual history in women, education, job history, marital and psychosexual history, criminal history, etc., as well as the current circumstances.

Social history is an expansion in depth of personal history mentioned in the last paragraph. It is very useful to have such a view of the person's social background so that help can be planned according to individual need. Social history includes details on accommodation (home, rented place, the people living with, relationship with these people, living condition, etc.), employment (attitude and motivation, experiences and capabilities, needs for vocational guidance or training), finance (income, benefits and debts), daily social functioning, sexual practices (sexual orientation, sexual functioning, number of sexual partners, prostitution, use of condom or other safety measures, etc.), social network (family members, friends, agencies, colleagues at work, drug subculture, extent of loneliness, isolation, stigma & discrimination, etc.), and forensic problems (behaviours such as fighting, drink-and-drive, stealing, shoplifting, rape, robbery, manslaughter, murder, arson, etc., arrest, offences, on bail, imprisonment, post-release supervision, aftercare, etc.).

PSYCHIATRIC ASSESSMENT

Psychiatric assessment is the same as any routine psychiatric examination. It is important to have psychiatric assessment because it is common to have a dual diagnosis, i.e. both drug use and psychiatric diagnoses among people who abuse substances.

Again, it is a semi-structured format of interviewing and observation. The areas to be covered include general behaviour (calm, hypervigilant, restless, irritable, excitable, agitated, frightened, disinclined, preoccupied, withdrawn, suspicious, repetitive, stereotyped, dishevelled, violent, assaulting, malnourished, etc.), bodily signs (miosis, mydriasis, sweating, hyperthermia, tachypnoea, hypertension, tachycardia, smells of alcohol or cologne, smelly, etc.), consciousness (conscious, drowsy, sleepy, confused, stuporous, comatose, etc.), cognitive state (disorientated, impaired attention, impaired memory, impaired intelligence, etc.), speech (relevant, coherent, irrelevant, incoherent, over-talkative, mute, dysarthria, stuttering, dysphasia, flight of ideas, etc.), mood (worried, euphoric, elated, depressed, anxious, panic, hypomanic, manic, suicidal), abnormal belief (delusions of reference, being followed, poisoned, persecuted, controlled or possessed), abnormal perceptual experiences (illusion, hallucinations, flashbacks, derealization, depersonalization, etc.), and insight (partial or full).

People who abuse substances should be differentiated for adjustment disorder, personality disorder, mood or neurotic disorder (e.g. anxiety disorder, panic disorder, unipolar depressive disorder, dysthymic disorder, depersonalization or derealization disorder, sleep disorder, psychosexual dysfunction, post-traumatic stress disorder, etc.), psychotic disorder (schizophreniform disorder, schizophrenic disorder, paranoid disorder, bipolar affective disorder, etc.) or organic disorder (drug-induced delirium, drug-induced paranoid disorder, drug-induced persisting amnesic disorder, drug-induced persisting dementia, drug-induced psychotic disorder, etc.).

According to Maier and Delmo (1996), there is an increased risk of panic disorder, borderline personality, and post-traumatic stress disorder for alcoholics, and an increased risk of panic disorder and post-traumatic stress disorder for other substance abusers. The risk is 3.8 for schizophrenias among alcoholics and 4.2 for other substance abusers. The corresponding figures for bipolar affective disorders are 5.1 and 8.3, and those for antisocial personality disorder are 21.0 and 13.4. The risk for psychotic experiences among marijuana users is 7.0.

It has been shown in a review (Chen, 1993) that those who initiated substance abuse tend to be associated, prior to abuse, with poor school work, exposure to substance use, early contact with tobacco, alcohol and cannabis, early delinquent behaviour, high sensation-seeking personality, adolescent subculture, generation gaps, feelings of depression, low self-esteem, and prior physical or sexual abuse. Those risk factors that were associated with drug-taking behaviour include negative emotional state, interpersonal conflicts, social pressure, cognitive factors and external influence such as peer pressure, drug-abusing subculture or drug pushers. This led Chen (1993) to suggest a theory of 'push-pull' factors notably in the family or neighbourhood of substance abusers that may be pathological causes for substance abuse. The 'push' factors originated from the family or personal environment include poverty and unemployment, lack of care or attention, parental or family conflicts, disturbed interpersonal relationships, low self-esteem or self-confidence, feeling emotionally discontent, and poor school performance. The 'pull' factors outside the family or immediate environment include a drug-abusing subculture, a supportive or drug-abusing peer group, a skewed social identification, and presence of drug-pushers. These factors are important for those who attempt to help substance abusers by means of dynamic, interpersonal or supportive psychotherapy.

Furthermore, it has long been pointed out by Prochaska and DiClemente (1983) that it may take a long time for substance abusers to change and the latter may depend upon a process of contemplation and action. Thus, they proposed that there are four stages of change in a substance abuser's drug-taking habit. The stage of pre-contemplation indicates the way of mentality before any change can take place, but there are hints in life to suggest to him that a change may have to be inevitable. By the time the stage of contemplation is reached, he becomes serious about the change. The thought of change is then put into action and behaviour change. Through the process of change and perhaps some lapses, he proceeds to stability and maintenance of the change and stays away from substance abuse thereafter.

In order to promote change, motivation may have to be enhanced among substance abusers. A motivational interviewing (Miller and Rollnick, 1991) is therefore used to encourage such change in motivation; hence it is also called the motivation enhancement therapy. To conduct a motivational interview, it is essential for the therapist to maintain a non-judgmental attitude and to listen to substance abusers in a non-directive and empathic way. He may give selective feedback, summarizing, affirming, reframing, or even questioning and try to minimise denials. Meanwhile he should try to avoid argumentation and labelling. Through motivational interviewing or therapy, substance abusers are expected to enhance their self-esteem, self-efficacy, awareness of problems, dissonance and motivation, and able to reach self-made decisions. Thus, they are then capable of passing through the process of change as suggested by Prochaska and DiClemente mentioned earlier.

THE USE OF QUESTIONNAIRES

In recent years it has been possible to use well-validated questionnaire such as the Addiction Severity Index (McLellan et al., 1980, 1992) gather more comprehensive information. A Chinese version of this questionnaire is also available in Hong Kong. This questionnaire includes information such as demographic data, medical status, employment and support status, drug and alcohol use, legal status, family and social relationships, as well as psychiatric status.

A comprehensive questionnaire that is useful for adolescents with drug problems is the HEADS FIRST approach (Goldenning and Cohen, 1988). This questionnaire collects information from different aspects of the adolescent's life, including Home (independence, support, 'space to grow'), Education (expectation, study habits, achievement), Abuse (emotional, verbal, physical, sexual), Drugs (tobacco, alcohol, marijuana, others), Safety (hazardous activities, seatbelts, helmets), Friends (confident, peer pressure, interaction), Image (self-esteem, looks, appearance), Recreation (exercise, relaxation, TV, video games), Sexuality (changes, feelings, experiences, identity), and Threats (harm to self or others, running away).

Another questionnaire (Anglin, 1987) designed to identify adolescents at risk with drug problems consists of 23 questions for adolescents. These questions are as follows:

- What do your friends do at parties? Do you go to the parties? Do you drink? Get drunk?
- Do you drive drunk? Stoned? Have you been a passenger in a car driven by someone who was drunk or stoned? Could you call home & ask for help? What would your parents say or do?
- After drinking, have you ever forgotten where you had been or what you had done?
- Have you recently dropped some of your old friends and started going with a new group?
- Do you feel that lately you are irritable? “bitchy”? Or moody?
- Do you find yourself getting into more frequent arguments with your friends? Brothers and sisters? Parents?
- Have your grades recently gone down? Did you receive any F’s on your last report card? Have you ever been expelled from school?
- Do you have a boyfriend/girlfriend? How is that going? Are you having more fights/arguments with him/her lately? Have you recently broken up?
- Do you find yourself being physically abusive to others? Your brothers or sisters? Your mother or father?
- Have you ever been arrested for possession of drugs, burglary, vandalism, shoplifting, or breaking and entering?
- Have you ever had to go to an emergency room or doctor’s office for a drug-related accident or illness (overdose)?
- Have you ever overdosed or intentionally tried to kill yourself?
- Have you ever been caught at school for drug or alcohol centre?
- Have any of your friends been admitted to a drug treatment centre?
- What drug, if any, have you used in the past? How much?
- What drugs, if any, are you currently using? How much?
- Have you ever experienced blackouts while drinking heavily? (For example, have you awakened unable to remember what happened the night before?)

- Has your alcohol or drug use caused problems with your friends or family, or both?
- Have you ever gotten into trouble at work or at school because of alcohol or drug use?
- Do you often wake up with a hangover?
- Do you think your drinking or drug use is a problem? Why?

Similarly Comerici (1998) put forward 12 questions for parents of adolescents at risk, and they are as follows:

- Does any family member, including parents, have a past or present alcohol or other drug problem?
- Is there a family history of depression (especially bipolar affective disorder), suicide or suicide attempt, or other psychiatric illness?
- What changes have you noted in your child's mood, affect, behaviour or dress?
- Has there been lying to cover up for absences from home or school, for missing personal or family belongings, or for no reason at all?
- Have the child's personal belongings or family possessions or money been missing?
- Has the child's manner of dress or personal hygiene changed?
- Has drug paraphernalia been found in the child's possession or in the home?
- Has there been deterioration in the child's school performance, frequent truancy, or conflict with coaches or teachers?
- Has there been stealing, shoplifting or encounters with the police?
- Has the child been physically abusive to family members?
- Has the child tried to introduce drugs or alcohol to any of your other children?
- Has the child talked about suicide or running away?

Finally, in Hong Kong, the Action Committee Against Narcotics and the Narcotics Division have jointly sponsored and published a reference guide for screening and assessment of polydrug abusers.

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Social Assessment of Poly-drug Abusers

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三減策略之建議

Proposal of the Three Reduction Strategy

<p>三減策略的項目 Three-R Programs</p>	<p>暫設評估指標舉例 Suggested Index for Assessment</p>
<p>I. 減低供應之策略(禁毒) Reduction of Supplies</p>	<p>每年市場供應量有無增減? Annual Supplies for the World Market ↓ or ↑</p>
<p>(1) 禁種罌粟、可柯、大麻等非法植物以控減毒品原料之生產 Prohibition of planting poppy, coca, marijuana bush etc.</p>	<p>(1) 產地面積與產量有無縮小? Reduction in illicit production and/or planting area</p>
<p>(2) 種植替代合法農作物與社區發展 Promoting the planting of agricultural products and community development in the planting areas</p>	<p>(2) 合法糧果生產量與推銷網路之功效 Outcome of replacement crop and effectiveness of marketing network to improve village economy</p>
<p>(3) 緝堵走私，禁洗黑錢，司法公正，國際合作，充公毒販利潤用作禁防濫藥 International Law Enforcement against black market, money laundering and the use of such proceeds for the 3-R Programs</p>	<p>(3) 緝獲走私數量與充公資產年額 Quantity of seizure of illicit traffic and confiscation of ill-gotten funds</p>
<p>(4) 制毒前體之控制(如工業用醋酸，與麻黃素等原料) Control of precursors of manufacturing (e.g. industrial vinegar, methedrine etc.)</p>	<p>(4) 非法入口「前置體」緝獲量 Quantity of the predecessors seized which reduces the manufacturing process of Heroin and MDMA respectively</p>

<p>(5) 控制精神活性藥物之供應銷售(尤其對未成年者銷售煙酒與派對藥物)</p> <p>(6) 組織無毒社區、鄰里、鄉村、學校、家庭或無藥歌舞會、歷奇鍛煉、體育競賽等康樂活動</p>	<p>(5) 緝私量與定期調查 Periodic evaluation of mis-used substance and number of underaged users</p> <p>(6) 無毒活動之質素次數與反應 Assessment of quality and frequency of drug free activities as well as its impact</p>
<p>II. 減低需求之策略(戒毒) Demand Reduction Program</p>	<p>每年用藥人數及用藥量 Annual Number of Users and Quantity Consumed</p>
<p>(1) 基層：家庭教育，親子輔導，校內預防教育，社區教育，多媒體宣傳等 Basic education in families, schools and communities</p> <p>(2) 中層：危機干預，外展服務，緊急援助 Intermediate Prevention: crisis intervention, out-reach service, emergency assistance etc.</p> <p>(3) 高層：多元化戒毒康復，預防復吸，社區自助互網絡(如AA, NA, PSHSA etc.)、巡迴救傷車提供急救等措施 Tertiary Prevention: multimodality treatment number of and rehabilitation relapse prevention, community integration, self and mutual help network etc.</p>	<p>(1) 活動前後問卷 Evaluation questionnaires executed before and after program activities</p> <p>(2) 測試智識、態度、行為、習慣(KABP)改變程度 Knowledge, attitude, behaviour and practice changes</p> <p>(3) 評估參見前段「治療康復篇」，包括接受服務人數，完成脫癮康復程序，參與及完成善後活動之人數，學習避免重吸與維持操守時期等 Numbers of service users of treatment, rehabilitation and aftercare programs, participation in relapse and self-help activities; and periods of voluntary abstinence etc.</p>

<p>III. 減低危害之策略 (消毒)</p> <p>Harm Reduction Strategies</p>	<p>如何降減濫藥行為對個人、家庭、社區之傷害</p> <p>How to reduce the negative impact of drug abuse on individual, family and community</p>
<p>(1) 維持性治理毒癮(如美砂酮門診·尼古丁貼膏等) Substitute maintenance through methadone for heroin, nicotine patch for cigarette smoking etc.</p> <p>(2) 安全方式用藥(如吸食海洛英較注射危害較少·派對藥物忌用酒精送食·但必須多飲清水) Safe use of substances (e.g. heroine smoking instead of injecting, avoiding alcohol chasing of party drugs etc.)</p> <p>(3) 教導如何避免在藥物影響下作出高危險行為(如酒後駕駛·葯後亂性等) Avoiding risk behaviour under influence of alcohol or drugs (e.g. drunk driving, unsafe sex during rave parties etc.)</p> <p>(4) 預防因使用未消毒針筒感染愛滋病毒或其他藉體液傳播之病毒(如破傷風·肝炎等)。提供漂白水示範消毒·或供應即用即棄之針筒等 Prevention of comorbidities through injecting drug use (e.g. HIV/AIDS/STI/HYP etc.)</p>	<p>(1) 代用品使用率與原用藥物之降減量 Substitutes usage and former drug abuse reduction</p> <p>(2) 降減危害行為之實踐 Reduction of harmful practice or damaging risk behaviour</p> <p>(3) 類似酒後乘的士返家·避免在昏迷中操作機械或不安全性行為 E.g. taking taxi home instead of driving under influence, operating heavy machinery or unprotected sex following drug use</p> <p>(4) 自備專用針筒或使用即棄注射器以免共用他人針筒之高度感染危機 Prevention of comorbidities thru' self-use needles or disposable syringes</p>

<p>(5) 組訓戒毒康復人士參加街頭外展宣傳並執拾焚毀被棄針筒及其他吸毒用具以保護環境衛生</p> <p>Organize former users in outreach service and environment protection</p>	<p>(5) 街頭訪問，問卷分析，以測量街頭用藥者之行為與危機有無增減</p> <p>Street survey to assess drug users' risk behaviour</p>
<p>(6) 審查過時刑法或檢控條例(如攜有個人自用注射器被控藏毒等於間接鼓勵共用針筒)</p> <p>Some out-dated legislation (e.g. possession of empty syringes as an offense encourages needle sharing) should be reviewed</p>	<p>(6) 過時法規應否修改並提出具體建議</p> <p>Review of archaic legislation and proposal for necessary amendment</p>
<p>(7) 實際了解藥物濫用之現況與消解危害之可行性</p> <p>Realistic understanding of substance abuse and practical reduction of its risks and harms</p>	<p>(7) 分析改變知識、態度、行為、習慣各方面測試</p> <p>Knowledge, attitude behaviour and practice assessment</p>

備註：以上部份建議措施曾被不同國家試行或實施，但所列的項目並非包羅萬有。作者歡迎讀者建議任何其他策略並討論如何更新三減策略。

Remarks: Readers' comments and contribution are welcome to improve or revise the Three Reduction Strategy.

一般對於「毒品」之誤解：

亞洲國家通常認定麻醉藥物為「毒品」，而南北美洲受害於可卡因與奮劑多過鴉片類；何謂毒品因「時」、「地」而異，並無科學根據。例如酒精濫用為害人類最為深遠而從未列入「毒品」條例。大麻煙之為害與香煙類似，但多處被列為毒品而煙草則不問用者年齡合法售賣並不合理。

Differential Intervention According to Problems Severity & Personal Resources

吸毒嚴重性 ADDICTION / ABUSE PROBLEM

<p>社會支持資源 Personal Resources Including Social Support</p>	<p>重 High Severity</p> 	<p>輕 Low Severity</p> 
<p>不足 Inadequate</p> 	<p>高度干預 Maximum Intervention</p> <p>e.g. T.C./D.A.T.C./D.R.C + Aftercare</p>	<p>中級干預 Medium Intervention</p> <p>e.g. Short Res. Treatment + HWH/ OPD + A/C/ MM + Counseling etc.</p>
<p>充足 Adequate</p> 	<p>中度干預 Moderate Intervention</p> <p>e.g. M.M./A.T./ Religious Programme + F.C.</p>	<p>低級干預 Moderate Intervention</p> <p>e.g. OPD + Counseling/ Probation/Supervision/ Family Counseling</p>

Notes:

- TC = Therapeutic Community which usually requires a minimum residence of six months of highly disciplined life. 治療社區 (包括宗教靈性戒毒計劃)
- DATC = Drug Addiction Treatment Centre run by the Correction Service Department with 2-12 months compulsory treatment and different lengths of statutory supervision. 強制戒毒中心
- DRC = Drug Rehabilitation Centre with or without T.C. structure and operated in many Asian countries often under Governmental sanction, requiring usually one year residence even for voluntary patients. 中、長期志願戒毒康復中心
- HWH = Halfway Houses to bridge residential treatment and the community at large. 中途宿舍
- OPD = Out-patient Detoxification with the help of agonists or symptomatic relief by traditional Chinese medicine etc. 門診戒毒
- MM = Methadone Maintenance.
- AT = Acupunctural Treatment with or without electronic stimulation. 針灸或電針穴位刺激
- FC = Family Counseling conducted by social workers or drug counselors. 家庭輔導
- A/C = Aftercare service rendered by social workers, and other professionals, peer counselors etc., which includes vocational rehabilitation aiming at successful reintegration into the community with the support of self help organizations. 善後輔導包括平輩示範及職業康復與戒毒者自助組織等，主要目的在促進戒毒後成功融入社會作為守法公民。

Proposed Performance Indicators

I. Drug Use Modes

1. Learn how to clean and sterilize injection instruments (e.g. bleaching hypodermics).
2. Stop sharing needles and use clean personal instruments only.
3. Stop patronize injecting stalls especially those north of H.K., Macau border.
4. Try other mode of drug use (e.g. fume inhaling).



II. Reducing Drug Use Frequency and Quantity

1. Cut down the frequency from 3 to 4 times to twice or once daily.
2. Cut down the quantity of Heroin use each time.
3. Attending Methadone Clinics.
4. Reducing methadone dosage gradually with professional consultation and stabilization.



III. Safe Drug Use or Pure Methadone Maintenance

1. Chasing Dragon or non-injecting method of use only.
2. Reducing double use (炒兩味) of both Methadone and illicit drugs.
3. Taking only Methadone regularly.
4. Enrolling in counseling program at Methadone clinics.



IV. Lowering Dependence and Completing Treatment

1. Lower Methadone to a minimal dosage (say under 10ml per day).
2. Enrolling in drug free treatment or enter compulsory programme and continue with aftercare.
3. Early recognition of relapse episodes for prompt consultation/counseling.
4. Re-entering MTP or drug free treatment without heightened re-addiction.



V. Self Efficacy & Drug Free Life

1. Learning relapse prevention.
2. Participating in Self Help Group activities.
3. Mutual support thru healthy activities and community service.
4. Firmly establish a drug free and constructive lifestyle.

Remarks: The proposed outcome indicators totally 20 in number may rate 5 points each adding up to 100%. Relapses to drug use following each course of treatment should not be considered a total failure. As long as harm reduction behaviour is maintained at certain level or minimized from original starting point, it indicates some improvement. When drug induced harm is reduced completely, the individual would be free from addiction.

降低傷害服務效果指標

I. 濫藥方式

1. 清洗消毒注射器
2. 停止共用針筒或只用個人針筒
3. 不在白粉檔購買(尤其北上打針)
4. 改用追龍或打高射炮方式吸毒



II. 減少用藥頻率／數量

1. 由每日3/4次減為1/2次
2. 減少每次用藥量
3. 美沙酮診所登記治療
4. 接受輔導，穩定於適量美沙酮



III. 穩定安全用藥並逐漸減少用量

1. 改注射為追龍或打高射炮
2. 避免炒兩味(同日用美沙酮及白粉)
3. 長期專用少量美沙酮
4. 接受輔導，嘗試門診斷癮



IV. 降低用藥量後志願戒毒

1. 以門診方式降低美沙酮至每日10毫升以下
2. 志願報名入住康復院或被勒令戒毒
3. 完成康復程序並警惕復吸危機
4. 如有復吸，即刻再恢復美沙酮門診



V. 自強建立無毒新生活

1. 學習應付／避免重吸場合
2. 加入自助互助團體參與活動
3. 提高互相關懷網絡與社區義務服務
4. 創設無毒之積極新生活

備註：以上表列建議效果指標共有20項，以每項最高5分計算，理想總分為100分。在完成戒毒治療後如再吸毒，但能降低濫藥帶來之傷害，便不應視為完全失敗。所以任何進展均值得讚賞，而當傷害降低至零點時，當事人必然享有無毒之新生活。