
**THE PRACTICES AND CONTEXT OF
PHARMACOTHERAPY
OF OPIOID DEPENDENCE
IN SOUTH-EAST ASIA AND WESTERN
PACIFIC REGIONS**



WORLD HEALTH ORGANIZATION
Department of Mental Health and Substance Dependence

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Abstract

This publication presents an overview of the practices and the context of pharmacotherapy of opioid dependence in selected countries of the South East Asia and Western Pacific regions of the World Health Organisation. Based on reports provided by professionals involved in treatment of opioid dependence in these regions, the document describes the current situation with opioid use and its health consequences in Asia, the role of pharmacological treatment of opioid dependence in public health responses to opioid dependence and associated health consequences in the region, as well as priorities for development of treatment responses. The publication contains key informant reports from Australia, China, Hong Kong, Indonesia, Lao Peoples Democratic Republic, Malaysia, Myanmar, The Philippines, Thailand and Vietnam. This publication has been prepared in conjunction with another WHO document that is focused on pharmacotherapy of opioid dependence in selected countries of Central and Eastern Europe and both documents are a part of the global activity on treatment of opioid dependence which is currently being implemented by the WHO Department of Mental Health and Substance Dependence.

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Part One

Michael Farrell, Robert Ali, Walter Ling, John Marsden

Pharmacotherapies of Opioid Dependence

In Asia Pacific Region

BACKGROUND

The problem of opioid dependence is historically weaved into the fabric of most societies in Asia. It is a long and complicated story that has been strongly influenced by many key historical themes. The stories of major social upheaval and turmoil have shaped the growth and restrictions in opium production over time. These strands run through the ancient and contemporary history of opium use in Asian societies.

The area of particular concern has been the continued growth and spread of heroin use and drug injection use throughout the region (Ghys et al., 2001) which follows the continued global spread of drug injection use (Des Jarlais, 1994). This ongoing spread has major public health implications concurrent with the spread of HIV through drug injection and sexual risk-taking behaviour. The sustained growth of heroin production and heroin problems and the long-standing experience of many countries in developing effective responses to these problems are now well recognized. Development of diverse and comprehensive treatment services for drug-dependent people is one of the main strategies in responding to these problems. Joint problem recognition, problem resolution and information sharing in the area of drug dependence treatment are important mechanisms for regional and global responses to the spread of opiate use and opioid dependence and their health and social consequences.

The aim of this publication is to compare the current practices and contexts of pharmacological treatment of opioid dependence across the South East Asia and Western Pacific regions, in the general framework of pharmacological treatment of opioid dependence. Several sources of information have been used for this publication including key informant country reports presented at the Workshop for pharmacotherapies to manage opioid dependence in Asia and convened by the authors in Bangkok, Thailand, in April 2001.

TREATMENT RESPONSES TO OPIOID DEPENDENCE

In developing responses to opioid dependence there is a need to clarify the scale of the problems that have to be tackled (Box 1), the currently available resources utilized in responding and the evidence for the efficacy of currently used or currently available interventions. The needs assessment exercise aims to ensure

that an identified problem and a clearly defined means of responding to it are organized so that resources are used as effectively as possible. The actual cultural setting will also have a major influence on what is and what is not an acceptable form of treatment irrespective of the evidence on the efficacy of the treatment. The cultural acceptability and sensitivity to cultural issues is a critical part of the overall approach to community consultation and community engagement and involvement as part of the service development.

Box 1**Problems to be tackled:**

- Polysubstance use
- Injecting drug use
- Associated transmission of HIV and other blood-borne infections
- Chronic health problems
- Social exclusion
- Personal / Social functioning
- Crime involvement

The initial focus is usually on long term residential and drug free rehabilitation as the key part of the service response to opioid dependence. However in many countries, as the scale of the problem grows and access is required for substantial populations, then consideration is given to developing more affordable and accessible community based treatments. The increasing focus into community based treatments with involvement of broad generic health and social welfare resources enables broader community involvement.

The challenge for the coming decade is to fashion public health based treatment systems for drug dependence that can enable a broad range of prevention and treatment interventions to be targeted at the 'at risk' population. This should reduce the risks associated with this pattern of drug use and maximize the numbers who return to a fully functioning role in society.

There is a need for clarity of aims and objectives of treatments. When these have been made clear and the goal of the treatment is clearly set, it should be possible to measure these objectives while treatment is being delivered (Box 2). Over a twenty-year period it is estimated that a heroin addict has the same chance of managing to stop using drugs as they have of dying from drug use. About one third die, one third manage to stop and the other third continue a long battle with their addiction, including time in prison, time in treatment and time on the street. In the long term many continue using heroin persistently into their middle age and beyond.

Because of the chronic nature of heroin addiction and the repeated use of local health services, health practitioners came to realize that methadone maintenance could provide major stability and improvement for those who were continuing drug use despite abstinence-oriented treatment. The method of maintenance agonist pharmacotherapy is controversial and initially unappealing. However, in the face of the range of options and following extensive and repeated experimental trials there is now a high level of consensus on the efficacy of this form of treatment. The advent of HIV and AIDS added a new degree of urgency to finding structured ways of responding to injecting drug use in the community and has spurred many countries to rapidly expand methadone maintenance treatment as part of the HIV prevention strategy. This type of treatment is no magic bullet. In regular practice it achieves moderately modest outcomes but systematic reviews indicate that these are significant treatment effects and it is judged that these treatment effects are cost effective and practical in the face of the limited alternative options.

Box 2**Treatment outcome expectations:**

- **Elimination or at least reduction of illicit opiate and other drug use**
- **Reduction in risk of infectious diseases**
- **Improved physical and psychological health**
- **Improved social functioning**
- **Reintegration into society**
- **Reduction in criminal behaviour**

Marsch (1998), from a meta-analysis of studies, concluded that methadone maintenance treatment has a moderate but significant effect on illicit opiate use and a small to moderate effect on HIV risk behaviours. In terms of overall criminal behaviour, methadone maintenance treatment was found to have a small to moderate effect but when analyzed in terms of type of crime, methadone maintenance treatment was found to have a significant and large effect on drug-related criminal behaviour.

The Treatment Outcomes Prospective Study (TOPS) found that retention in treatment at three months was highest for methadone maintenance treatment (65%), followed by therapeutic communities (44%) and outpatient drug-free treatment (40%). In terms of reductions in drug use and criminality, methadone maintenance treatment and therapeutic communities were equally effective. But these were naturalistic studies where patients chose their own treatment modality. The three major US large-scale outcome studies, conducted over the last three decades respectively DARP, TOPS and DATOS all reported similar positive findings using methadone maintenance with major reductions in the key outcome domains of drug use, criminality and risk taking behaviour (Simpson et al., 2000). The English NTORS evaluation of the treatment of Drug Dependence during the 1990s, also reported similar positive findings for both residential drug free

treatment and methadone based treatment in the community, at five year follow up (Gossop et al., 2000).

Among heroin users attending public treatment centers in Italy, the retention rate after one year was 40% for methadone maintenance treatment, 18% for naltrexone, and 15% for drug-free treatment.

Over the past decade there have been a number of studies aimed at developing alternative long acting opioid agonists that could be used for opioid agonist maintenance pharmacotherapy. Buprenorphine, which is a μ -receptor partial agonist and LAAM (levo-alpha-acetyl-methadol) have been most extensively assessed. Buprenorphine has been used in many settings especially in Europe. Both medications appear to be comparable in efficacy to methadone and there are both advantages and disadvantages to the differing medications.

INTERNATIONAL PERSPECTIVES AND ROLE OF PHARMACOTHERAPY OF OPIOID DEPENDENCE IN HIV/AIDS PREVENTION

There has been a major expansion in the provision of opioid maintenance treatment in the European Union over the past decade (EMCDDA 2000). One of the key drives behind this expansion has been concern about HIV and concerted efforts to contain the spread of HIV among injecting drug users. After an initial epidemic spread there is reasonable evidence that HIV infection among injecting drug users has been significantly contained over the past five years (EMCDDA 2000). No single intervention can account for this, but the provision of a broad range of treatments including drug substitution treatment has been an important component of this result.

Most countries in the EU have seen a down turn in new infections and a downturn in the incidence of AIDS, however the reduction in incidence of HIV/AIDS may be related to development of new anti-retroviral treatment agents. Overall there is consensus that the broad range of interventions including educational, prevention, and treatment approaches has had an impact on the range of risk taking behaviour in injecting drug users.

After an initial spread of HIV among injecting drug users in countries such as Italy, Spain, France and Ireland, major public health progress has been made towards reducing the spread of HIV among injecting drug users.

Other countries such as the Netherlands, UK, Sweden and Denmark have had low levels of HIV among injecting drug users and have continued to maintain these low levels.

To date it is safe to say that the containment of the spread of HIV among injecting drug users in the European Union has been one of the more successful results of current drug policy. The experience has been similar in Australia where the development of a broad and comprehensive range of treatments including

extensive provision of methadone maintenance has been very successful in containing HIV spread among injecting drug users.

The containment of hepatitis, and in particular hepatitis C, to date has not been as successful and presents a major public health challenge for the coming decade. It is estimated that the base line prevalence in many countries is very high and that this virus appears to be more transmissible for a variety of factors.

One of the other key challenges for the public health of these populations has been the high mortality associated with drug injecting use and opioid dependence. Reviews and cohort studies report a 1% to 2% annual mortality among these populations. There is good evidence that treatment significantly reduces the mortality rates compared with those not in treatment, and substitution treatment has been demonstrated to significantly reduce mortality also.

This has been difficult to demonstrate at the population level because of differing ways of collecting and recording deaths in different countries.

In conclusion, because of the controversial nature of methadone and other opiate agonist pharmacotherapies, there have been a substantial number of studies made. These studies are methodologically sound and consistently report a robust effect in response to treatments. Further studies on the psychosocial component are required which will assist in the planning and organization of services for the future.

HISTORY OF OPIATE USE IN ASIA

As part of the overview, a brief historical review is provided here for the purpose of establishing a context and perspective. It is hypothesized that opium was first used in the Mediterranean region in the 7th century AD. Opium use spread to India and then to China, but was mainly used for purposes of medication. In Greece, opium was used by medical priests who regarded it as a metaphysical substance. However, Hippocrates, the founder of modern medicine, dissociated himself from the magical attributes of opium, realizing that it should be used sparingly and emphasizing the risk of habituation.

In Roman times, the poppy was seen as a powerful symbol of sleep and death. It was used as a method for murder and suicide and became an important classical theatre symbol with all its attendant terror. Opium reached China by the 8th century. By the 9th century, Arab physicians were publishing texts on 'afyum' (opium), and reporting on its medicinal qualities. The Arab physicians were the most scholarly and advanced and were servants to the powers of the time. Doctors and scholars promoted the role of opium and its growth in international trade along with herbs, spices and other related exotic goods. Although the opium trade grew, it was very small then in comparison with modern day trafficking. Nevertheless, traders had identified it as a useful commodity. McCoy (1991), reports that it was not until the 15th century that opium became a regular item of intra-Asian trade with the Persians and Indians having some use for it as a recreational euphoria producing substance. The great seafaring traders of Medieval

times expanded the opium trade, firstly through the Venetians and subsequently through the Portuguese, Dutch, British and French colonists.

Acosta recorded the condemnation of opium by Arabic, Persian, Turkish and Indian, Malay, Chinese and Malabar doctors, who all decried the drug for its risk of habituation.

“Though opium is condemned by reason it is used so extensively that it is the most general and familiar remedy of degraded debauches”

[Acosta. Portuguese Physician returning from a visit to the Far East in 1655].

The Portuguese attempted to compete with the Chinese and import opium from Western India into China, but with limited success. However, they did identify the opium trade as an important source of revenue. Subsequently, the Dutch entered into the trade with a more aggressive and competitive manner and established control in the Dutch East Indies. The Dutch East India Company imported large amounts of opium for sale to the Indonesian and Javanese populations and opium became one of the most traded commodities and a major source of revenue. The British followed with the establishment of the British East India Company in 1656 and the trade was to develop even more over the next fifty years and continued for another hundred and thirty years.

This policy gave rise to two Opium Wars as a result of Chinese opposition to the trade, and created a vast population of opium addicts in China estimated at 10% of the adult population (Spence, 1971). This opium was produced in Bengal and its sale was controlled by the Colonial Administration and the East India Company. Opium chests were smuggled into China by clipper ships with large traders dominating the market.

After the second Opium War (1856-1858), the Chinese legalized the opium trade but kept control of the customs duty and regulated the domestic trade. This resulted in a considerable growth in opium production in China itself with Szechwan and Yunnan being the main producer provinces. Subsequently, Yunnan became a net producer and exporter of opium using mule trains to cross the mountains into Siam, Burma, and French Indo-China. The Chinese population developed very high rates of opioid dependence.

McCoy (1991), reports that during the nineteenth century, state licensed opium dens became a unique South East Asian institution, spreading and sustaining opiate use throughout the region. In 1930 there were 6,441 government regulated opium dens. McCoy reports that in a single year those dens consumed 272 tons of opium in a population of 542,100 registered opium-dependent users. The Kingdom of Siam realized 14% of its tax revenue through the sale of 84 tons of opium in 972 licensed dens to 164,300 opium-addicted users. In the Philippines these dens were banned. In the late 1880s, the French Colonial Administration in Indo-China established a state monopoly on opium production aiming to maximize tax revenue by facilitating domestic production. Price regulation and taxation on consumption through the network of opium dens created a direct state marketing monopoly. This model was adopted by the British in Burma and

in the Federated Malay States, by the Dutch in the East Indies and also in the Kingdom of Siam. It rapidly became an important source of Government revenue and Colonial Administration revenue and a major Asian international industry. It would appear that most of the production went towards domestic consumption. Consequently, these countries did not make a significant contribution to the global opium trade of the time.

Other key developments at the end of the nineteenth century included the disruption and migration of hill-tribes as they fought to maintain their integrity in the face of colonial and nationalist domination. This included the Yunnan Muslims known as the Panthays, the Hmongs of Laos and the varied tribes of the Shan state hinterlands. There were hundreds of small ethnic minority groups in these regions. These highland tribes lived a peripatetic existence but the development of the state opium monopolies provided them with an opportunity, within their rugged terrains, to produce opium and to smuggle it into Burma, Siam, Malaya and French Indochina where they could sell at a lower price than the state monopolies. The authorities attempted to dissuade these hill tribes from this activity.

The size and impact of the opium industry during the twentieth century resulted in a global anti-opium movement, resulting in the gradual prohibition of legal trade through the development of international treaties.

At the beginning of the Second World War, many state opium dens still existed and continued to be an important source of revenue. The war resulted in major interruptions of supplies from Persia and India. Therefore, a general trend towards obtaining opium from the tribal hinterlands developed. This was to have long term consequences because it fostered and developed opium as an important cash crop for the tribes in areas that were rugged and difficult to access. This was very hard for the authorities to control. Afghanistan was a good example of this development and would become a prominent problem later in the century.

At the end of the Second World War the opium trade rapidly re-established itself. Reports show that the addict populations of Singapore and Malaysia dropped but that the addict population of the whole region itself grew. The response to problems of opioid dependence in China at that time was the establishment of mass detoxification centers and the supply of opium was cut off. The opium addict population dwindled rapidly as a consequence.

In 1953, new UN conventions resulted in all governments agreeing to ban the sale of opium on the international market for legal smoking or eating. This ended the Iranian supply for the Thai, French and British monopolies. The British Colonial administration withdrew from Malaya and India and the Dutch withdrew from the East Indies. The era of European Colonial Administrations was over. The active suppression of opium dens and government sponsored opium trade continued.

In the 1950s, counterinsurgency movements came to have an important regional role. Many armies were based in inaccessible areas that were also major centers of

opium production and consequently the opium trade rapidly became a major part of the mechanism for funding these armies. Warlords were well established through clan connections across the region and they created a very powerful financial base through which to establish trafficking connections in many countries. Other political upheavals such as the Vietnam War, the Iranian Revolution and the Afghan War had significant regional impacts on opium production and supply.

A critical new development in the world drug problem came in the early to mid nineteen eighties when HIV was discovered to be linked to injecting drug use. The rapid spread of HIV among sexual health workers and injecting drug users presented a major public health challenge in a population group that was very low in priority response in developing countries. The realization that public health strategies based on HIV prevention were required occurred in the late eighties. Thai Public Health Authorities developed a major campaign in response to rising levels of HIV in their general population. The appearance of HIV drew attention to the problem of prostitution and drug dependence. Across the region, ongoing spread of HIV in the general population highlighted the problem and necessitated a more structured public health regional response than had been achieved thus far.

Another important change in the past decade has been the gradual development of a major epidemic of psycho-stimulant abuse in the region. Illegally produced Methamphetamine has been marketed in most of the Asia Pacific Region and has become a major public health problem. Currently, the development of this epidemic is unclear, but one of its significant implications will be the need to address a broad range of drug dependence problems within the treatment system and to use an appropriate range of psychosocial interventions.

THE CURRENT SITUATION – AN OVERVIEW

The 1990s saw an explosion of illicit drug use and dependence in the region. Global structural changes have influenced local trends such as the opening up of economic structures to improve the flow of trade between countries. The evolution of drug related problems in society are complex and cannot be explained by any simple or single cause. However, it is fair to say that after a period of relative containment there is now a rapid growth in the number of heroin users in the region and also a rapid growth in the number of psycho-stimulant users.

Data from different countries used in reports on the size of the problem varies from accounts of the number of treatment episodes to estimates of size of the using populations and data extrapolated from national surveys. All approaches have their limitations in acquiring accurate estimates. However, the current picture is of a growing problem in the region.

COUNTRY ESTIMATES OF DRUG USERS AND REGISTERED CASES OF DRUG DEPENDENCE

China estimates a twelve-fold increase in the size of the problem. Starting in the 1990s, the number of registered addicts increased from 70,000 to 0.86 million by the end of 2000. In the province of Yunnan there were 44,245 registered addicts alone by the end of 2000. It is reasonable to estimate that the full size of the opioid dependent population is substantially in excess of this.

In Laos, it is estimated that opium problems are endemic amongst some of the ethnic communities. There are 63,000 registered opium users, equivalent to 1.6% of the population over the age of 15.

In Indonesia, there has been a sharp increase in the number of drug-related arrests and in demand for treatments, between 1997 and 2000.

In Malaysia, there are reports of a slight downward trend with 27,306 registered users in 2000, of which 17,429 were heroin addicts. Reports show that the majority of use is by smoking rather than injecting.

In Myanmar, opium use is dominant with considerable regional variation. There are a growing number of heroin users of which 40% are injecting. In 1999, registered cases for drug treatment numbered 49,510 in the Shan states, 10,806 in Yangon, 9,726 in Kachin, 6,845 in Mandalay and 4,270 in Sagaing, with opium dominating. In total 86,537 persons were registered for treatment in 1999.

In Vietnam, it is estimated there are 150,000 heroin users. Most start by smoking the drug, but 57% progress to injecting it.

In Thailand, it is estimated that 3.6 per thousand of the population use heroin and 1.1 per thousand use opium. There are 60,000 to 100,000 persons reporting to drug dependence treatment centres annually, with heroin constituting 56% of cases and 60% of cases reporting injecting drug use.

It is noteworthy that in the Philippines and in Indonesia, use of heroin is associated with the more affluent sections of society.

One of the other striking features of recent reports in many of these countries is the upsurge of methamphetamine dependence and high rates of presentation to mental health institutions with severe psychiatric disorders.

Overall, realistic levels of provision of treatment in all countries fall well below the genuine size of the problem. In all of these countries, there is a clear recognition that the treatment systems need to be substantially expanded and improved if levels of access are to meet treatment demand and treatment needs. There is also a need to develop frameworks for confidentiality that will encourage people to start treatment. Realistically, a mixture of community based out patient treatment

centers and some in-patient and residential treatment centers are required if the capacity of the treatment system is to be expanded to meet demand.

PUBLIC HEALTH ISSUES

The issues of HIV prevention and HIV spread continue to be a major challenge in the South East Asia and Western Pacific regions. Despite some notable successes in prevention campaigns, the overall trends in the region indicate ongoing major HIV spread. Part of the challenge is to address the substantial social, cultural and economic changes that are taking place with social upheaval, economic reform and new channels of global communication having an effect. The phenomenon of globalization has affected young peoples' social behaviour and life style expectations. Changes in sexual behaviour in many countries provide a considerable risk for the spread of heterosexual HIV among the general population. For some time it has been recognized that the young drug using and drug injecting population is a potentially significant bridgehead for the spread of HIV into the heterosexual community. Different virus subtypes tend to spread among different sub-populations. The study of these phenomena in Thailand has shown that there is considerable mixing of these different subtypes, partially amongst sex workers being involved in injecting drug use but also from infected drug injectors having unprotected sex with sex workers.

Furthermore, many of the street children in the larger cities of the region are involved in sex work, drug abuse and suffer from poor health care. The reported estimates of HIV among injectors in different countries are alarming.

Reports from China show that by the end of the year 2000, there were 20,711 cases of HIV infection with injecting drug users accounting for 62% of all cases. In Yunnan, at the end of September 2000, there were 8,317 cases of HIV and it was estimated that there was likely to be an additional 47,000 undetected cases. Of those testing positive, 70% reported using injecting drugs. In one locality in Yunnan a seroprevalence study conducted over the past three years reported an increase from 10% to 70% HIV positivity over that time.

In Indonesia there has been a rapid rise in the prevalence of HIV among injectors. It is reported that 73% of all new HIV positive tests are among injecting drug users and that 37% of new AIDS cases are also among injecting drug users. In January 2001 it was reported that of the 94 new HIV cases, 48 (51%) were injecting drug users. In Jakarta, rates of HIV seroprevalence reported among treatment attendees rose from 15% to 40% in the space of one year. In Bogor, in West Java province a quarter of injectors tested positive for HIV and a study of prisoners in Bali found that 53% of injectors were HIV positive.

At present no HIV has been found in injecting drug users in Laos despite its proximity to populations with high seroprevalence rates.

The situation in Malaysia is that injecting drug use has been an important cause of HIV transmission. Overall, there have been 65,893 cases of detected HIV. The exact number relating to drug injection is not clear but it is estimated that 85% of cases are due to injecting drug use. Overall the situation for HIV prevention among injecting drug users is very serious.

The situation in Myanmar is very serious but real data is limited. Reports estimate that over half of all injectors are infected with HIV.

Vietnam estimates that roughly 60% of injectors are HIV infected and that the majority of HIV positive tests are accounted for by injecting drug users.

Also, Thailand estimates about half of injecting drug users are infected with HIV.

Australia by contrast has very low levels of HIV among injecting drug users.

The challenge of HIV containment is one of the major challenges for drug policy and public health officials in this region over the coming decade. There is some data to indicate that prisons and use of drugs in prisons is increasing the risk factor for the efficient spread of HIV. In addition, the number of individuals in large correctional centers provides opportunities for population mixing that may contribute to the momentum of the epidemic. Overall there is a need for extensive surveillance and intervention in order to prevent the escalation of the HIV epidemic in this region.

CURRENT RESPONSES

All countries have a national strategy and a range of legislative and control approaches to the drugs problem. Structural reforms in the public health sector, with particular reference to mechanisms for financing and organizing health care, are a particular challenge in many countries. The issue of resourcing responses to this needy but socially stigmatized group and the justification for allocating scarce resources for these types of services causes intense debate in many countries.

In all these countries, criminal justice systems bear a heavy burden in responding to drug problems with extensive use of police time and court time and high rates of imprisonment of the addict population. All of the countries in the region have high imprisonment rates for drug addicts.

Despite limited resources, many countries invest heavily in the management of their drug dependent populations. China has developed an institutional reform program where users are sent after a second relapse into drug use. They are required to stay at the institution or its equivalent for two years for the purpose of rehabilitation. It is estimated that the abstinence rate three years after discharge is 15%. In one follow up survey of a group who had stayed for three years 56% had relapsed within a year of leaving the program, 44% had made good progress, but over 80% relapsed soon after release.

Similarly, Malaysia makes use of long term institutional correctional methods. In Malaysia there are 27 rehabilitation centers which offer at least two year residential rehabilitation programs. They treated 14,094 addicts in 2000 and can cater for up to 12,000 at any one time. Malaysia reports that over 80% relapse soon after release. There are also 56 NGO rehabilitation units that are run independently and charge for treatment and rehabilitation. These deal with a small population of wealthier individuals.

Laos reports that it has five centers for detoxification which catered for more than 1000 opium addicts and also provided aftercare for them.

Myanmar reports a shift from long term institutional type treatment to more community-based approaches to treatment and rehabilitation combined with the use of Drug Treatment Centers for inpatient detoxification.

Thailand focuses on a more health and community based approach to treatment.

Indonesia and Vietnam have limited facilities and emphasize the role and value of therapeutic communities. However, the rapidly changing nature of the problem has made them interested in exploring new and diversified treatment approaches.

All countries have some form of residential rehabilitation facility, but in the Philippines these are limited to the private sector and there are no government treatment facilities. Religious groups and NGOs run a number of detoxification and residential facilities in different countries.

DETOXIFICATION

The major emphasis of the treatment approach in all countries is detoxification and rehabilitation. A variety of approaches are used but most if not all use medicated withdrawal. Some traditional herbal medicines are used in some areas such as alpha-adrenergic agonists like clonidine. In Myanmar and in Laos, tincture of opium is used to manage opiate withdrawal particularly in opium smokers and is reported to be more cost effective than the use of methadone in areas where tincture of opium is locally produced. In China studies have been conducted on the efficacy of clonidine, lofexidine, and buprenorphine in the management of opiate withdrawal and reports show effective reduction in withdrawal symptoms overall but there are some adverse effects, such as hypotension, with the use of clonidine. In Indonesia, a popular Chinese herbal medicine is used for detoxification along with codeine. In Malaysia non-medicated management of drug withdrawal is most popular but there is increasing use of clonidine and other symptomatic treatments. Methadone is used for the management of opiate withdrawal in some countries such as China, Vietnam and Thailand. In Thailand methadone detoxification is used as the main form of management of opiate withdrawal.

AGONIST MAINTENANCE TREATMENT FOR OPIOID DEPENDENCE

Despite an interest in the long-term management of chronic patients with opioid dependence across the countries of the region that is included in this review, only Hong Kong SAR, Nepal and Thailand have formal maintenance programs. The situation is changing rapidly however. Thailand has changed its legislation to enable it to deliver maintenance treatment under particular conditions.

Overall it is noted that there is a major resistance to the notion of using an agonist substitution drug in the management of opioid dependence. Practitioners in the differing countries were of the view that due cultural sensitivity was required in each country to the varying views on the management of opioid dependence with maintenance pharmacotherapy. Many thought that additional resources would be required to develop such services. Many also noted that there was a readiness for change in the light of the reported high relapse rates in cases coming from long-term rehabilitation programs. The continuing growth in the size and scale of the problem, the growth in HIV seroprevalence among injecting drug users and the availability of new treatment agents made it possible to consider developing this modality of treatment in some countries.

Drug treatment professionals are keen to develop protocols for treatment trials that would enable full evaluation of drug substitution treatment within the Asian cultural setting. Such an approach would enable policy makers and planners to evaluate the viability of these treatments within the specific Asian context. There was also an issue of long-term affordability that would require continuous review. In China, in Yunnan province there was a project underway to develop a trial with Buprenorphine as a medicine for agonist pharmacotherapy of opioid dependence. Thailand, Malaysia, the Philippines and Indonesia expressed an interest in further information and possible development of appropriate projects.

Opposition to developing substitution treatment programs is substantial. The majority of the public and general professionals are sceptical about the role of substitution treatment. There is a view that such treatments are regarded as being too soft on the addicts and therefore not attractive from the harder perspective of the politician and policy maker.

On the other hand, a view is evolving that the countries in the region have invested fairly heavily in the treatment of opioid dependence and the returns on the current treatment strategies have not been high enough or visible enough. Also the scale and severity of the problem is continuing to grow despite the best efforts of everyone. Currently there is a mood for considering a change in strategy and the adoption of new approaches. The idea that substitution could be integrated with existing treatment approaches in order to improve the overall outcome seems attractive. It is possible that a highly structured program may have high retention rates, high rates of abstinence from other non-prescribed drugs and possibly high rates of social rehabilitation because of staff and patient acceptance of these highly structured programs. However, the staff involved in many of the current abstinence based treatment programs will be resistant to such treatment changes and a broad training strategy would be required to assist in the development and integration of drug substitution in current treatment options.

Virtually all countries in the South East Asia and Western Pacific regions have a substantial treatment infrastructure. The treatment services are staffed by trained personnel with a high level of commitment to the delivery of treatment for the drug dependent population. The expansion and diversification of treatment is a real option due to the skills and network of professionals, which have developed in all these countries over the past three decades.

It is regarded as very important to work closely with village elders in order to inform and educate them about developments in treatment approaches and to look at harnessing their support in developing new treatments, if these treatments are going to be acceptable to the community in the future.

RELAPSE PREVENTION AND USE OF ANTAGONISTS

All countries have a broader psychosocial component of treatment built into their services at every level and those countries with long-term rehabilitation programs place a major focus on broader psychosocial rehabilitation. The size of the treatment population and the throughput of cases make it difficult in practice to deliver very intensive or comprehensive post detoxification relapse prevention. In the Asian context, the family is a very important part in the overall treatment process and approaches to involving families in the treatment process were given great emphasis by all treatment providers.

Naltrexone is used in a number of countries. A large-scale research study on the role of Naltrexone has been underway in Malaysia but the project is not yet complete. In China, a multi-center study and an open study have supported the role and efficacy of naltrexone. A follow up study was conducted in 7 centers with 302 subjects followed up. In the double blind study, 28% of the naltrexone group completed six months treatment while 7.14% of the placebo group were retained. In the open study the retention rate was 23.6% at 3.16 months This compares with a previous cohort where abstinence rates with drug free treatment were 1% with an average two-week duration of remaining drug free. There were some adverse effects but overall the authors concluded that there was a role for the use of naltrexone as a maintenance therapy in the long-term management of opioid dependence. A separate study conducted in Singapore using a double blind design in a prison release cohort also found significantly better retention in the active drug group. Overall policy makers seem to be more inclined to use the antagonist naltrexone as a maintenance agent because of its non-euphoriant properties and non-agonist properties. Increasing use of prescribed medication such as naltrexone may help to further develop the pharmacotherapy of opioid dependence in the region.

HERBAL MEDICINE

The use of herbal medicine in the detoxification and broader treatment process is an important component of treatment in the region. Many countries placed major

emphasis on this type of approach and valued it highly. Some of the herbal preparations came from China but others from elsewhere. This type of treatment was very accessible but in some situations some special preparations were very costly and major claims were made in the media and in public forums over the benefits of these treatments. There is a need for significant research, both pre-clinical and clinical in this area to evaluate the efficacy of specified preparations. Such an approach might identify important new pharmacotherapy agents that may contribute significantly to the field of medicine. Overall there is a tension between the promotion of evidence based medical practice and the use of traditional herbal treatments. However, such tensions could be overcome through good research and evaluation that may help to firmly locate herbal treatments in the overall choices of treatment approaches.

PRIMARY CARE

Primary care is a very important part of the health care system in all countries. The primary care and community health teams are often key contacts and provide a broad range of intervention to promote health in the community. They are very important for any broad access strategy and are often the workers who have the best picture of what is happening in the community. It has been reported that the level of involvement of primary care in many countries is limited.

In Thailand the community workers and village health volunteers have an important role in working with the hill tribes and the same situation occurs in Laos.

In Laos the view was that major health problems contributed to the use of and dependence on opium and that a lack of basic health services was a major reason for opioid dependence in the community. Hopefully, plans in place for the provision and improvement of primary health care systems will play an important role in the prevention of further opium addiction and relapse. Community based primary health care (PHC) support is being implemented. Village Health Volunteers (VHV) have been established and supported in order to improve the health situation. Village health volunteers are improving health related developments and supporting a health prevention strategy designed to improve the effectiveness, relevancy and accessibility of health information and education at village level. The aim is to develop a reduction in demand component with community involvement in order to increase community awareness of the problem of drug addiction.

In Malaysia and in Myanmar the treatment services were based in specialist centers and did not involve primary care.

MONITORING ACTIVITY

It is reported that a significant amount of monitoring occurs and many countries have central registers where all new treatment episodes are registered. In China, Myanmar, Malaysia, and the Philippines, the police manage this function. However, it is not clear if this creates problems of confidentiality and whether drug users feel able to access services safely.

Reports to UNDCP on the ARQ were required from each country. It was seen as desirable that both treatment providers and researchers used the best information available in responding to the annual monitoring activities. WHO, in partnership with UNDCP and others, have developed a comprehensive range of workbooks and guidelines on the Monitoring and Evaluation of Treatment. These are available free of charge and are also available on the WHO web site (http://www.who.int/substance_abuse).

RESEARCH ACTIVITY

Although there is a considerable amount of research underway in the region, there is also a need for major research activity. The consensus is that a range of epidemiological studies is needed which could provide a more detailed picture of current and evolving trends in drug problems that will assist in shaping a response. There is considerable opportunity for regional cooperation in studies and regional sharing of skills and cooperation around joint projects. The areas of priority are seen as:

- Population based epidemiology with drug and HIV incidence and prevalence studies.
- Studies of the negative impact of drug dependence.
- Studies of prisons and the response in prisons to drug and HIV problems.
- Studies of ways to promote broader, more accessible and comprehensive community based interventions with a particular interest in evaluating the Village Health Volunteer projects.
- Development of treatment monitoring and outcome systems that could be used as part of the process of developing and enhancing current responses.
- Studies of pilot drug substitution projects set in Asian countries that would enable policy makers to make assessments on the feasibility of these types of treatments in these specific settings.
- Studies to explore varied types of setting for the delivery of drug substitution treatment, and identification of the skills required and personnel required to competently deliver these treatments.

There is a desire in a number of countries to take part in pharmacotherapy trials of methadone, buprenorphine and naltrexone. A study is underway comparing tincture of opium to methadone and further work in this area is considered to be important and timely.

Given the rapid spread of HIV in the region, it is critical that urgent studies are conducted to enable the mobilization of broader prevention strategies that would result in containment of the current spread. In addition, the studies of AIDS vaccines should include a subgroup of injecting drug users, such as is happening in Thailand.

A range of other studies is either underway or at the planning stage on aspects of other drug dependent problems, such as Amphetamine Type Stimulant use and its related psychiatric complications. There are also studies on cannabis, tobacco and alcohol related problems.

There is an interest in all countries being involved in multi-center studies and there is an opportunity to conduct short term, high impact, treatment evaluation studies across a number of countries which would assist policy development. If such a study were able to compare outcomes between the existing treatment modalities and new drug substitution treatments, this would provide valuable information for broader discussion on the utility of different treatment options. Such a study would require international funding and support if it were to take place and would have a far-reaching impact if successfully completed.

TRAINING

Reports from most countries are that a significant amount of training is underway for generic professionals and for community health workers. However, there is still a major gap in training and there is a need for a far more comprehensive approach to the development of training if the capacity and skill within this field is to be adequately developed over the coming decade. There is a need to extend basic training but there is also a need for senior training in specialist areas of treatment and research. It is thought that a regional network with a good communication infrastructure could make a contribution to the development of a robust training infrastructure and network within the individual countries.

Overall, the challenge of improving training centred on the importance of having adequate resources but also having the manpower and development within a field of work that was attractive to be in and that would attract capable and competent staff who are self-motivated and self-directed.

It was also made clear that a considerable bank of training material exists that was not easy to access and any process that improved access to existing material would be very helpful.

Training programmes need to be established with long-term objectives, and with appropriate qualifications and career developments linked in, if they are going to be sustainable and have any impact.

REGIONAL TREATMENT AND RESEARCH NETWORK

There is a strong need to establish a regional treatment and research network that will assist in facilitating communication between research and treatment centres and between countries. There is a recognition that the resources available for such activities might be limited but that it is realistic to aim at the following:

- Establishment of a web site and electronic mail server.
- Development of exchange programs between centers.
- Setting up training programs.
- Set up of a network that could work cooperatively on project development and implementation of the multi-site treatment evaluation study.
- Set up of a bank of treatment and research methods that could be translated into local languages, be culturally adaptable and validated and available on a web site.

Such a web site could also host a range of manuals, protocols and policies and standard operating procedures that would be available for adaptation.

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Part Two

Key Informant Country Reports

AUSTRALIA

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1. Country profile

Australia is a federation of eight States or Territories with a total population of around 19 million. Caucasians constitute the major ethnic group; indigenous (Aboriginal and Torres Strait Islanders), and Asian (Vietnamese and Chinese) are significant minority populations.

State and Territory governments have primary responsibility for the standards and delivery of treatment services. However, the Federal government plays a significant role in having responsibility for the system of registration of therapeutic goods, through the provision of funding to State and Territory governments for public hospital and public health services, and through national schemes for subsidizing primary health care and pharmaceuticals.

2. Brief history of opiate use

Australia introduced a total ban on heroin in 1953 to bring Australia in line with international protocols. The commencement of significant illicit heroin use can be traced to Australia's involvement in the Vietnam war. Servicemen on leave in Australia from the war brought heroin with them. Since then, along with most Western countries, Australia has seen a trend of increasing prevalence of heroin use, and increasing harms.

There are indications that in recent years:

- the availability and purity of heroin has increased while cost has decreased;
- there is a continuing trend of increasing prevalence of heroin use; and average age of heroin users has decreased.

The increase in heroin use, and particularly injecting use, appears to be particularly marked in indigenous populations. The vulnerability of this group is increased by the existing disadvantages experienced by the indigenous population.

3. Existing data

The most recent Australian estimates (1997) put the number of dependent heroin users at 74,000, equating to 6.9 per 1,000 population aged 15-54 years.

It is estimated that in 1998 there were close to 110,000 injecting drug users in Australia. This includes amphetamine users as well as heroin users.

4. Nature and patterns of opiate use

Heroin users in Australia are relatively young (mean age 30 years), predominantly male (about two-thirds, although there are indications of increasing use by women), generally unemployed (about two-thirds), and with limited education and job skills. A history of imprisonment is common. Age of commencement is usually in late teens.

Intravenous injection is by far the most common route of administration – around 90% of heroin users are injecting users. With increasing purity and decreasing price, there has been some increase in smoking of heroin especially amongst the Indo-Chinese.

Most heroin users also use other drugs. The combination of alcohol and/or benzodiazepines with opiates causes substantial concern as these drug combinations increase the risk of overdose.

5. Health consequences

Australia has had notable success in controlling the prevalence of HIV in the population of injecting drug users. Nationally, less than 5% of injecting drug users are HIV positive, and around 5% of new HIV cases are attributed to injecting drug use. This situation appears to be stable.

Transmission of hepatitis C is an area of concern. It is estimated that 50-60% of injecting drugs users are hepatitis C positive, with about 20% of uninfected users becoming infected each year. Around three-quarters of hepatitis C infections are thought to be due to a history of injecting drug use.

A trend of increasing deaths due to opiate overdose has been evident since 1980, but became particularly marked in the latter part of the 1990s. The rate (per million of the population aged 15-44) increased from 10.7 in 1979 to 45.3 in 1988 and 71.5 in 1997. There appears to have been a decrease in the overdose mortality rate in 2000, but it is as yet unclear whether this marks the beginning of a period of decline, or simply a deviation from the trend.

6. Treatment of opioid dependence

• Treatment approaches

Methadone maintenance treatment is the major treatment modality for opioid dependence in Australia. Therapeutic communities and other drug-free approaches are also available but attract and retain only a small proportion of opiate dependent people. Naltrexone maintenance treatment has become available relatively recently. It is considered likely to appeal to around 10% of opiate users.

Historically most treatment services have been provided by the government, with the exception of therapeutic communities and other drug-free treatments which have tended to be the domain of non-government organizations. This situation is changing, with considerable effort being directed towards encouraging greater involvement of the private sector, particularly general medical practitioners.

• Number of persons receiving treatment for opioid dependence

There is a continuing trend of increasing demand for treatment. It is thought that less than 50% of dependent opiate users are currently in treatment.

Nationally around 30,000 are currently receiving methadone maintenance treatment. This represents around three-quarters of all those in treatment. The number of people receiving methadone maintenance treatment has been increasing by around 10% per annum for the past decade.

Naltrexone is available for relapse prevention treatment but there are no data on the number of opiate users receiving this treatment. Buprenorphine has recently been registered in Australia but is not yet generally available. However, it is considered likely to become central to treatment options over the next five to ten years.

Levo-alpha-acetyl-methadol (LAAM) and slow release morphine are under active investigation in Australia as alternative substitution approaches, but it will be some years before they are likely to become generally available.

- **Pharmacotherapies**

Medications used

As indicated above methadone remains dominant. Naltrexone became generally available over the last two years while buprenorphine was registered for the treatment of opioid dependence at the end of 2000.

Withdrawal treatments for opioid dependence rely on clonidine and symptomatic medications. Methadone is not generally used in Australia as a withdrawal treatment. Buprenorphine is considered to have potential as a withdrawal treatment.

Legislation and control mechanisms

Methadone is a restricted (schedule 8) drug. This means that it can only be prescribed and dispensed by approved providers and all patients receiving methadone maintenance treatment are registered with State and Territory health authorities. Arrangements for buprenorphine are still being finalized, but similar restrictions are expected to apply.

Naltrexone is more generally available, being listed as a schedule 4 drug. This means that it can be prescribed by any medical practitioner, and dispensed by any pharmacy.

Professions involved in treatment provision

The delivery of effective pharmacotherapy is multidisciplinary, entailing medical practitioners, nurses, pharmacists and counsellors.

Level of primary health care involvement

Most methadone maintenance treatments involve primary health care providers and considerable effort is being expended nationally to maintain this trend. The remainder continue to be treated at clinics or practices with a focus on drug and alcohol issues.

Pharmacy involvement

Similarly, the trend is for an increasing involvement of community pharmacies both for dispensing and supervising the administration of methadone, for clients of both public and private sector programs. The majority of methadone clients now receive their medication from a community pharmacy.

Future evaluation plans

Currently underway is a co-ordinated process of evaluation of pharmacotherapies for opioid dependence. This work will combine the outcomes of recent clinical research in Australia and is expected to provide guidance for future service development. There is also a three state treatment outcome study being undertaken.

Potential problems

Community concern about opioid dependence continues to be high, but understanding of the nature of dependence remains limited. The expressed community view continues to be that treatment should be directed first and foremost to the quick achievement of abstinence. In general the community has little understanding of heroin dependence, reflecting the fact that

most of the community are aware of heroin users primarily through exposure to drug-related criminal activity. This is in turn reflected in community resistance to treatment services, and particularly to methadone dispensing being located in town centers, and to continual questioning of the effectiveness of methadone treatment. Politicians are of course sensitive to community pressure with the result that there is also a degree of political resistance to expansion of substitution treatments, and a preference for abstinence-based treatments.

The public health system in Australia is currently under considerable resource pressure and this situation is likely to continue. Public hospital services are particularly affected. In this context it is to be expected that resources for the treatment of opioid dependence will also continue to be limited. It is currently unclear to what extent financial resources might constrain the introduction and spread of buprenorphine treatment.

CHINA

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1. Country profile

China, with a history of more than 5000 years, is one of the oldest civilized countries in the world. However, the People's Republic of China, established on October 1st 1949 is only 51 years old. China has a land area covering approximately 9.6 million square kilometers, nearly 6.5% of the world's land surface area. It has an extensive coastline of 18,000 kilometers. The total population of China is about 1.3 billion, with 30.4% of the population in urban and 69.6% in rural areas (1998). China is a unified multi-national country with 55 minorities outside of the Han majority of 91.96%. Other minority nationalities include 8.04% of the population. China is composed of 31 provinces, municipalities and autonomous regions; 334 prefectures, 2,143 counties and 640 cities. The capital is Beijing. Mandarin is the official and national language. However, people are free to use their local languages in non-official situations. English is taught from primary school upwards. Primary and junior middle school education is compulsory and children start their school education at the age of 6 or 7.

2. Brief introduction of opiate abuse in China

Drug abuse in China began in the Qing Dynasty (1636-1909), when western colonialists brought opium into the country. Since then, Chinese people have suffered from the scourge of opium abuse for almost two hundred years. At the time of the founding of the Peoples Republic of China in 1949, there were over 20 million opium abusers in the country (5% of the population).

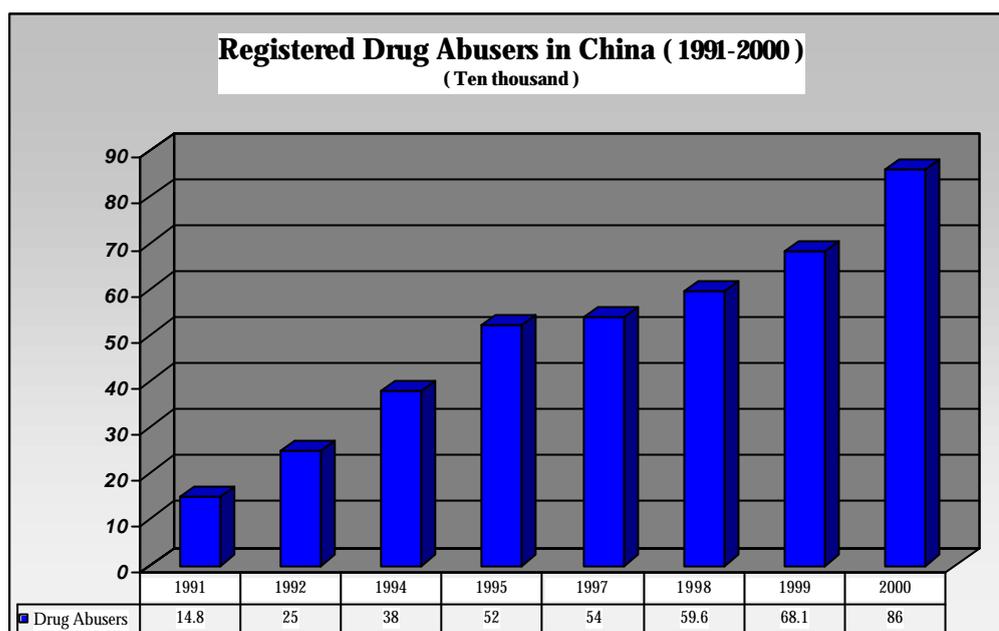
In 1950, the new government carried out a nationwide anti-drugs campaign. During the campaign, persons involved in growing opium and transporting or trafficking in illegal drugs were rounded up and punished according to law. 20 million opium addicts were cured of their habit and were able to live healthy, useful lives again. The campaign lasted for 3 years and finished successfully at the end of 1952. For the next 30 years, China was acknowledged to be a drug-free country by the rest of the world.

However, advantage was taken of China's new reforms and openness to the world, and the drug abuse problem re-appeared in the late 1980's, influenced by widespread global drug abuse. Throughout the 1980s, drug abuse was considered to be at the initial or sporadic stage. The majority of drug-smuggling incidents involved opium only, with heroin accounting for a very small proportion, and drug consumption was limited to border areas in the southwest and rural areas in the northwest of China. Most of the abusers were elderly people.

In the 1990's, drug-related crimes became rampant and drug abuse spread quickly. China faced greater challenges than ever before in combating drug-related crimes and preventing drug abuse.

3. Existing data

According to recent statistics from the National Narcotics Control Committee, the drug abuse problem has become more serious over the last decade. The number of registered drug addicts has increased from 70,000 in 1990 to 0.86 million at the end of 2000, and that is 12.2 times as much as in 1990 (table 1). The real number is far greater than that.

Figure 1. Registered drug abusers in China (1991-2000)**Table 1. Registered drug addicts in China (1990 to 2000)**

Year	Total Populations	Numbers of drug addicts (1/10 000)	Prevalence of drug abuse
1990	1 143 330 000	70 000	0.61
1991	1 158 230 000	148 000	1.28
1992	1 171 710 000	250 000	2.13
1993	1 185 170 000	--	--
1994	1 198 500 000	380 000	3.17
1995	1 211 210 000	520 000	4.29
1996	1 223 890 000	--	--
1997	1 236 260 000	540 000	4.37
1998	1 248 100 000	596 000	4.78
1999	--	681 000	--
2000	--	860 000	--

* Denominator data are based on the sampling surveys on population changes (the data excludes Hong Kong SAR, Macao and Taiwan)

Unlike the late 1980s, most drug users (83.6%) are young people aged from 17 to 35, with low education levels and limited job skills. Most are male but there is an increasing trend towards female abuse. (For example, a survey in Guizhou, Yunnan and Wuhan, found that males accounted for 66.7% and females 33.3% of users.) Heroin and opium are the major drugs, (98% by a recent survey). However, polydrug abuse has increased in recent years. The pattern of polydrug abuse is a combination of heroin with sedative/hypnotics such as trizolam and benzodiazepines, or other narcotics such as pethidine and dihydroetorphine or some prescription drugs such as APC and tramadol. The reasons for polydrug abuse in opiate addicts may be to 'detoxify' from heroin dependence, or as a substitution for heroin, or for ameliorating opiate withdrawal symptoms and treating protracted abstinence problems such as anxiety, insomnia and pain after acute opiate withdrawal and for seeking psychological effects (euphoria) from misuse of drugs, especially produced by inter-action or synergism of polydrug abuse. Besides opiates, some 'new' kinds of drugs, including amphetamine-type stimulants (ATS) and LSD have

penetrated into China through various channels since 1997. But there are no exact data relating to the ATS epidemic in China at present. Methods of administering opiate drugs are different from place to place, with 'snorting' dominant in the North West while injection is preferred in the South in general.

(A survey in Suzhou in the south of China showed i.v. and i.m. was 65.47%, but in Shaanxi was less than 10%).

4. Health consequences of drug abuse

The incidence of HIV infection is increasing amongst the high-risk population, two thirds of whom are drug abusers. By the end of 2000, 20,711 cases of HIV infection (including 741 cases of AIDS of which 397 cases were mortalities) had been reported in 31 provinces, autonomous regions and municipalities. Injecting drug users (IDUs) are 62% HIV.

The incidence of hepatitis B and C and skin infections are common amongst injecting drug users. Tuberculosis has appeared among heroin users (18 out of 700 in a study). Death from overdosing was frequently reported.

The relapse rate among drug addicts was approximately 80% within 2 weeks and over 95 % within 6 months after discharge from the detoxification centers.

5. Treatment of opiate addiction

There are three types of treatment institutions available in China. Compulsory detoxification institutions run by the Public Security Section, rehabilitation labour units run by Departments of Justice and detoxification institutions run by Departments of Health. Medical treatments often combine with psychological consultations and physical training. According to the law, all drug abusers are forced to detoxify as soon as they are detected and if they relapse after detoxification will be sent for rehabilitation in labour camps.

Patients have to pay for their detoxification treatment unless they enter the labour camp rehabilitation units.

5.1 Medications for opiate addiction

There is no methadone maintenance program available in China. Short-term detoxification programs and antagonist (naltrexone) treatment programs are available and therapeutic community programs also take place.

5.1.1. Short-term methadone detoxification programs

Methadone is widely used as a substitution agent in China, but only the short-term detoxification program is approved by the authorities. The mean duration of methadone treatment is 7 to 20 days. It is reported that success rates of completed detoxification were about 70% to 80%.

Wan Wenpeng et al (1992) conducted a comparative study of 122 heroin addicts. Amongst them, 53 received an 18 to 21 day program, and the other 69 received an individualized 14 day detoxification program. The results suggested that the outcome of the two groups were equally effective and acceptable.

5.1.2. Non-opiate detoxification programs

The use of non-opiate agents (e.g. Clonidine) in the detoxification of opiate addiction was first studied by Jiang Zuoning and his colleagues in a controlled clinical study. 200 heroin addicts were enrolled. The results showed that the withdrawal scores of both clonidine and methadone groups were sharply decreased daily, suggesting the anti-opiate efficacy be similar. The results also showed that there was a higher incidence of postural hypotension in the clonidine group and drug-seeking behaviours in the methadone group. The advantages of clonidine are that it is non euphoria provoking and non-addictive, which prevents it becoming a source of illegal sale and

abuse. Other researchers also found that clonidine was effective in suppressing the withdrawal symptoms in different grades. In the meantime, Wang Xiaoping et al (1993), also reported their clinical experience of clonidine in the treatment of opiate addiction, suggesting it was safer and better than subhebernation therapy with chlorpromazine and pethidine.

Lofexidine, a clonidine analogue, has also been used to relieve the withdrawal symptoms of opioid dependence since 1998. Tang Yilang et al. (1997), first conducted a control study with clonidine in heroin addicts. Compared with clonidine, lofexidine has similar efficacy and onset in suppressing opiate withdrawal symptoms. It was found that lofexidine had a similar side effects profile, with the exception of hypotensive effects, which was significantly less severe than those on clonidine, especially during the first four days. The study suggested that lofexidine is safer, more desirable, and more suitable for outpatient detoxification of opiate addiction.

5.1.3. Buprenorphine detoxification program

Buprenorphine (Bup) is usually categorized into the mixed agonist-antagonist class of opioids. In recent years, its efficacy in suppressing opiate withdrawal syndrome has been well recognized. Buprenorphine is considered a promising agent in the treatment of opioid dependence by many authors. Since its launch on the market, almost a dozen trials on detoxification of heroin abusers with buprenorphine have been conducted in many parts of China, (most guided by the National Institute on Drug Dependence in Beijing). The results are promising. Many clinicians prefer Buprenorphine to methadone or clonidine both in compulsory and non-compulsory settings.

Although influenced by some foreign research, Chinese investigators have carried out their own researches. For example, most Chinese studies are for two weeks instead of the recommended two to seventeen weeks, and the defined daily dose is also lower than that recommended by NIDA. These considerations may be based on the fact that the majority of Chinese drug abusers have a relatively short history of drug use and also a different body composition. The detox programs with Buprenorphine are more diversified, including a 'Buprenorphine alone program' and a 'Buprenorphine combined with other agents' program. As all the detoxification programs in China are short-termed, most of them are based on similar dose schedules. The initial dose is individualized, based on the severity of opiate withdrawal syndrome, history of drug use and physiological conditions; then gradually reduced daily until discontinuation in 1 to 2 weeks. Zheng Hongbo et al. (1992), conducted a 10 day study on 500 heroin addicts, suggesting the intravenous Buprenorphine's anti-opiate withdrawal efficacy be in parallel with methadone. With sublingual preparation of Buprenorphine, Luo Xiaoyun et al (1994), conducted a clinical trial on 81 addicts (male 77, female 4) in a non-compulsory closed setting. Based on the severity of opioid withdrawal syndrome (OWS) and history of drug use, the initial dose was administrated and adjusted later on. The maximum daily dose was 3.0-7.0 mg for the first 4 days and then reduced gradually on day 5 to 9 until discontinuation. All of the treated addicts were measured by the Clinical Institute of Narcotic Assessment (CINA, 11 items) and the self-development Inventory of Adverse Drug Reaction.

In summary, the authors suggested: (1) Sublingual Buprenorphine is effective in suppressing OWS also; (2) Buprenorphine can control most symptoms of OWS; (3) When <8 mg/d, it is safe and has less side effects; (4) it is administrated more easily than i.m. or i.v. route; (5) the program is easily practiced in less developed areas. Some clinicians have also tried to combine Buprenorphine with clonidine. The dose schedule was: day 1 to 3, Buprenorphine 1.2-0.9mg/d im, day 3 to 9, clonidine: 0.3-1.2/d, day 10 discontinuation. Thus, the daily dose of clonidine was reduced more than the usual treatment. Some empirical observations in non-compulsory inpatient settings showed that more than 80% of the addicts finished the 7 to 12 -day treatment, and fewer side effects were observed than in the clonidine treated population, suggesting its high tolerability. In fact, some addicts preferred this program when several programs were offered to them. However, some Buprenorphine abuse was observed by clinicians. Illegal trade of Buprenorphine has also been reported.

5.1.4 Developments in Traditional Chinese Medicine

Traditional Chinese medicine (TCM) has its own theory and practice about opiate addiction. From 1840 to 1952, many addicts received TCM treatment and completed detoxification successfully. During these years, some research units and pharmaceutical factories continued their efforts. Fukang tablet is made of a dozen Chinese herbs. Guo Song et al. (1995) reported a comparison trial of Fukang tablet (n=212) with clonidine (n=104). The result indicated that the change of total score from baseline of Fukang group was better than that of clonidine. Fukang's efficacy on the rhinorhea and insomnia was more significant. Common side effects of Fukang were dry mouth, blurred vision, dizziness, fatigue, palpitation, consciousness disturbances and EEG abnormality. Up until now there are 7 varieties approved by The State of drug administration. Several are on trial. The effects on average are the same, however, with each having its own advantages.

5.2 Relapse-prevention programs

Relapse-preventing agent: naltrexone hydrochloride

Naltrexone is an opiate antagonist. A multiple-center study that included a double-blind and an open study among 302 heroin addicts, suggested its efficacy in relapse-prevention of heroin addicts. The follow-up study was conducted in 7 treatment centers in China. The study period was six months. Naltrexone was given 50mg/d in the double-blind study and the open study. The dose was titrated from 10-50 mg/d depending on the patient's responses. In the double-blind study, 28% of the naltrexone group completed the six-month treatment while 7.14% of the placebo group stayed to the end. In the open study, the retention rate at the six month and the average length of taking naltrexone was 23.6% and 3.16 months respectively, contrasting with a 1.2% abstinence rate and 0.5 month (average length of drug free) reported in the past. The non-euphoric effects reported in both naltrexone and placebo groups were 68.18% and 33.3% respectively. The rate of morphine positive urine tests was 24.38% in the naltrexone group with 40.48% in the placebo group.

The adverse drug effects included sleep disturbances, lack of appetite, weakness, diarrhea, anxiety, stomach-ache, aching in bones and muscle, dry mouth, headache, irritability, cold flash, nervousness, nausea and vomiting, dizziness, constipation and skin rash. Some of the effects could be attributed to symptoms and signs of precipitated abstinence in patients with residual dependence. The results suggested that naltrexone be an adjunct medication in the relapse-prevention of heroin dependents. The authors concluded that the adverse drug effects were very slight, and therefore suitable for maintenance treatment (Jiang Zuoning et al, 1998).

5.3 Rehabilitation through labour

According to Chinese law, addicts with two or more relapses will be sent to the rehabilitation labour institutions run by the Departments of Justice. The average stay is about two years and strict regulation makes it possible to stay drug-free for a relatively long time. In the meantime, there are many educational, training and therapeutic programs adapted for the residents. It is estimated that the abstinence rate three years after discharge is 15%. The follow-up study by Li Chao et al 1999 showed that, among the 120 ex-addicts who complete three-year stays, 55.8% of them relapsed within one year.

5.4 Residential Therapeutic Community

Helped by DAYTOP Inc., Yunan Institute on Drug Abuse set up a residential center for heroin addicts in 1998. It is well run. Dr. Li Jianhua may mention it. Some correctional institutions and prisons are also trying to set up TC-like programs for drug addicts.

6. Research

From the following brief introduction, you may get some idea of the research on drug dependence and drug abuse prevention in China. The National Institute on Drug Dependence (NIDD) where I work, is especially engaged in research on drug dependence and drug abuse prevention and treatment. There are four departments in NIDD, including the Department of neuropharmacology, the Department of clinical pharmacology, the Department of drug epidemiology and the Department of information on drug dependence.

In the Department of neuropharmacology, research focuses on the post-receptor signalling transduction, some known and unknown gene expression and neuron plasticity in mediating the development of drugs, especially morphine, heroin and amphetamine dependence. We are interested in searching for new molecular targets of anti-morphine dependence compounds and trying to establish new compound screening methods in the specific cell lines (e.g. the mouse μ -receptor transfected CHO cell lines). In addition, the pre-clinical trials, including potential and safe evaluation, of new compounds and Chinese medical herbal prescriptions against morphine dependence and pain are being carried out.

The clinical trials of multi-centers within our country are taken up in the Department of Clinical Pharmacology in order to assess addictive patients response to anti-morphine dependence agents, including Chinese traditional medicine, Alpha-2 receptor antagonists (e.g. clonidine, lofexidine), μ -receptor antagonist (e.g. naloxone, naltrexone) and the others. Under our guide and supervision, the administration of analgesics in the patients with severe pain has been improved and reasonably well used in China. We have developed some methods (e.g. HPLC) to determine the levels of morphine, heroin and other agents in plasma and hair of patients so as to explore the relationship between plasma compound levels and clinical phenomena (symptoms and signs), in order to study the human bioavailability of some drugs.

Information about drug abuse problems in our country is provided for the Department of Chinese Government by the Department of Drug Epidemiology. Long-term follow-up and surveillance of national drug abuse has been carried out. We have acquired some important material from high-risk regions of drug abuse using epidemiological methods such as demographic and national distributions; proportion of positive HIV; and hepatitis and other physical diseases in drug abusers. A pilot study of National Epidemiology on Substance Dependence is being prepared.

The Chinese Journal of Drug Dependence is edited by the Department of Information on Drug Dependence. We have sponsored and organized many educational programs on substance abuse in the community, in primary schools and high schools and in colleges and universities. Training programs on the prevention and treatment of drug abusers, the management and control of illegal drugs for clinical doctors, government officers and social workers are run by this department. Education on drug abuse is very important in order to protect adolescents and young persons from illegal substances. Collaboration between our ongoing research project and the Hong Kong SAR red ribbon foundation concentrates on education and prevention of drug abuse amongst adolescents and youth.

7. Potential problems

Relapse rates, as mentioned before, are high which has already attracted the attention of both the government and the community. More effort and general interest is being put into drug prevention now. However, although more addicts have the motivation to withdraw from drug abuse, the relapse rate and associated economic problems are puzzling. After care is not available in most communities. I am trying to instigate NA like groups in the community to help addicts undergoing withdrawal and to maintain them in a drug-free state.

(Note: The co-authors are either professors or associate professors.)

PROVINCE OF YUNNAN REPORT

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1. Background

During the 1970s and 80s, due to China's economic reforms and 'opening-up' policies, drug trafficking by international crime groups through the porous China-Myanmar border increased dramatically. While large quantities of illegal drugs were sold to Hong Kong, Europe and America, some infiltrated into Yunnan through the border areas. This easy availability increased drug consumption in the population. Drug abuse, which had effectively stopped for 30 years, assaulted China anew.

2. Drug abuse in Yunnan now and the growing trend

- 2:1. Numbers of new drug abusers are increasing.
- 2:2. Drug abusers are generally young with youth accounting for the biggest proportion of all drug abusers.
- 2:3. Drug abuse is predominantly in the male population but there is an increase in the number of female drug abusers.
- 2:4. There is a growing proportion of heroin abusers and intravenous users.
- 2:5. The number of HIV-positive persons is increasing drastically as a result of the prevalence of intravenous injection and needle sharing.
- 2:6. Multi-substance abuse is gaining a foothold amongst drug abusers.
- 2:7. The use of stimulants is finding its way into the urban youth and adolescent population.
- 2:8. There is a high rate of drug-related crime.
- 2:9. The relapse rate is over 90% amongst drug abusers.

3. Existing data

The number of drug users who were registered in the Yunnan Public Security Bureau, was 44,245 by the end of 2000.

Table 1. Descriptive characteristics of registered drug users in the Yunnan Public Security Bureau.

Sex:	
Male	39,296
Female	4,949
Age:	
Below 17	961
18 ~	14,707
26~	16,789
36~	9,572
Over 60:	2,216
Occupation:	
Worker	3,113
Peasant	27,325
Unemployed	11,973
Self-employed	1,238
Other	596
Education:	
Illiterate	8,583
Elementary school	15,801
Middle school	17,037

High school	2,715
College	109
Consumption:	
Smoking heroin	19,910
Injecting heroin	15,247
Smoking opium	9,051
Using 'ice'	37
Complications:	
HIV positive	1,507
STD's	482
Other diseases	839
Involved with crime	2,252
Over-dose deaths	182
Unclear death	115

4. Yunnan's HIV/AIDS situation

The first case of AIDS was found in Yunnan in 1986. The HIV carrier was found among IDUs in Ruili county, which is near Myanmar, in 1989. After that, cases of HIV carriers found among IDUs increased year by year and spread to the whole province. Most of the HIV carriers are IDUs. The ratio of sexual transmissions is increasing and cases of mother to baby transmissions have been found. At the end of September 2000, 8,317 cases of HIV carriers and 351 cases of AIDS were found in Yunnan Province. The experts estimate that the actual number of HIV carriers is over 50,000. Data from the Yunnan Centre of AIDS Surveillance shows that about 70% of the found HIV carrier were IDUs. According to the sero-prevalence of the IDUs in certain areas in Yunnan, the sero-prevalence of IDUs has increased from 10% to 70% in less than three years. In addition, more and more women are infected with HIV. The ratio of male to female infection has increased from about 12:1 in 1990 to 3:1 at the end of September 2000. It is estimated that about 1,500 pregnancies and 500 babies were infected with HIV in 1999, (Hehe Chen, 2000).

Sharing syringes among IDUs has led to the quick spread of infectious diseases, such as hepatitis B, hepatitis C and HIV among this group, which has then spread to the general population. This has become one of the epidemic features of these kinds of diseases. Also, whether male or female, most of the drug users have more than one sexual partner (Li Jianhua 1998). IDUs are involved in a lot of high risk behaviour, which increases the risk of transmission of HIV to the general population directly or indirectly.

5. Risk factors for HIV/AIDS in Yunnan province

Needle sharing has been and remains a major route of HIV infection in Yunnan Province. Its related risk factors include: (a) Injection-sharing at different places and times for various reasons such as poverty, and repeated use of injecting equipment without proper sterilization due to lack of hygiene. (b) Low education levels amongst drug abusers who have poor judgement and take the risk of contracting HIV infection as a result of lack of knowledge and information about HIV/AIDS. (c) Prevalence of sexual transmission due to the unwillingness of male drug abusers to use condoms and their continued sexual activity in the community after they have stopped using drugs; and female drug abusers who are engaged in commercial sex activities. (d) Infection through tattooing in certain places such as reform-through-labour camps. (e) Attitudes of exclusion by the public towards drug abusers and little public sympathy to methadone maintenance schemes, needle exchange programs, and public promotion for the use of condoms and other measures of HIV/AIDS prevention. In addition, HIV sero-prevalence through sexual transmission is increasing. The experts believe that sexual transmission will be a main route of infection in the near future. The reasons are as follows: a) Sexual attitudes have changed. b) Commercial sex activities are increasing. c) Talking about sex continues to be taboo in Chinese traditional culture. d) Few people use condoms regularly and consistently during all sexual

activities. e) Gender issues. f) STIs are never discussed in Yunnan culture and in China. g) Rates of STDs are increasing. h) Migrants, who have a lack of knowledge of HIV/AIDS and general health care and awareness of HIV prevention, are increasing.

6. Treatment of heroin dependence

There were 91 compulsory detoxification centres and 23 voluntary detoxification centres in Yunnan by the end of 2000.

Treatment approaches were as follows:

1. Methadone substitute treatment (21 days).
2. Buprenorphine treatment (7~10 days).
3. Clonidine treatment (7~10 days)
4. Chinese traditional herb treatments(10 days).
5. Acupuncture (7~10 days).

Comprehensive treatment methods:

1. Methadone + buprenorphine + naltrexone.
2. Methadone + Chinese traditional herbs + naltrexone.
3. Buprenorphine + Chinese traditional herbs + naltrexone.

Therapeutic Community.

7. Prevention Strategies.

- 1. Supply reduction.**
- 2. Demand reduction.**

Three-level prevention:

The first level prevention of drug abuse and HIV/AIDS infection in Yunnan Province targeted the public in general. An intense awareness campaign through the media and various government institutions was carried out across the province on June 26, October 26 and December 1 to increase public knowledge about drug abuse and HIV/AIDS, and in particular to show the devastating harm that is caused to individuals and to society as a whole. Despite its huge educational potential for prevention, the strategy had its limitations. It was not sufficient and it fell short of a multi-component package to meet the needs of different groups. It was also not effective enough for transmitting much needed information to the most vulnerable groups.

The second-level prevention complemented the first level prevention in that it targeted the most vulnerable groups through the implementation of sustained prevention activities. At this prevention level, it is extremely important to work out strategies relevant to different groups. For example, even within a school, there is a whole range of students from the 'good' to the 'bad' who need and should be given a variety of well-planned prevention activities with different focuses. Likewise, prevention amongst the young migrant population should be different from prevention amongst unemployed youth. Put simply, the second level prevention should be individual-centered and needs-based in order to be accepted, developed and sustained among the target groups. Third level prevention is twofold. In the area of demand reduction, it provides a series of services to drug abusers through detoxification, rehabilitation, re-entry and aftercare, aimed at reducing the number of drug abusers and the demand for drugs. In the area of HIV/AIDS prevention, it provides services to HIV/AIDS carriers and patients through medical treatment, psychological counselling, financial assistance and social support. HIV/AIDS carriers and patients are also encouraged to form self-help and mutual-help groups amongst themselves.

The three prevention levels are complementary links in a huge prevention network, of which none of the three should be missing. Since 1991 Yunnan Institute for Drug Abuse has implemented a number of community-based and school-based drug abuse and HIV/AIDS

prevention projects, both in rural and urban areas. Here is a brief review of the community-based projects that we have conducted.

Objectives:

- (1) To enhance awareness and increase knowledge about drug abuse in the community.
- (2) To change negative attitudes towards drug abuse amongst community members.
- (3) To promote a healthy life-style and reduce high-risk behaviour amongst community members.
- (4) To stabilize and decrease the incidence of drug abuse in the community.
- (5) To integrate the initiatives of the projects into the daily activities of the community and promote socio-economic development in the community.

Approaches:

- (1) Community-based prevention education.
- (2) Community-based detoxification and treatment.
- (3) Community-based rehabilitation and aftercare.
- (4) Community outreach programs.

Results:

The main objectives were generally achieved, although the outcome varied from project to project.

Difficulties and solutions:

The main difficulty arises from the approach itself, i.e. the 'community-based' concept. How to integrate the initiatives of the projects into the daily activities of the community and yet keep the projects sustainable. This is the biggest question. Our answer is to mobilize the community, organize the community, and promote socio-economic development within the community.

Discussion and conclusion :

Community-based demand reduction is an effective prevention tool. Its successful application depends on cooperation across disciplines, personnel training and the promotion of successful models.

Harm reduction :

The ongoing harm reduction programs include two peer education projects, one in a mandatory treatment center and the other in a reform-through-labour camp. We started the projects by conducting training courses for the volunteers from the drug addicts undergoing treatment at the centers. The subjects of the courses included basic knowledge about drug abuse and HIV/AIDS, social skills training and training on injector sterilization and correct use of condoms. The peer educators then went back to work amongst the addicts with the knowledge and skills they had obtained from the training. The drug addicts at the centers have accepted these projects very well.

8. Conclusion :

Drug abuse is a health problem as well as a social problem. Prevention, therefore, should be based on co-operation across disciplines. Complimentary and well-integrated approaches, relevant to different target groups, are essential for achieving the desired objectives. Prevention needs the support of the Government to ensure an effective macro-control through policy-making. More efforts should be made to strengthen first level prevention. We welcome and greatly appreciate the participation of government organizations at different levels and also the various NGOs in prevention projects across communities and groups. In view of the

concurrent prevalence of drug abuse and HIV/AIDS in Yunnan, we think it necessary to integrate the prevention programs of these two diseases to make it cost-effective.

HONG KONG SPECIAL ADMINISTRATIVE REGION

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1. Brief history

As a consequence of the Opium War of 1840-42, the island of Hong Kong was ceded to Britain under the 'Unequal Treaty of Nanking', by the former Imperial Government of China 'perpetually'. The much larger Kowloon Peninsula was added a few years later and the vast New Territory north of the Boundary Street in Kowloon was leased to Britain in 1898 for ninety nine years. Together with a few outlying islands and some land reclamation, the total area of the whole territory added up to 1,098 km² at the time of its peaceful repossession by the Peoples Republic of China, on 1 July 1997. This became China's first Special Administrative Region, (SAR). The Hong Kong SAR enjoys a high degree of autonomy, with its own legal system based on Common Law traditions. Only in the spheres of national defence and diplomacy is Hong Kong obliged to follow Beijing's instructions. The estimated population at the end of year 2000 was 6.866 million, with a density of 6,320 persons per square kilometre. A new census, taken early in 2001, will probably yield an even higher density, especially in the urban areas of Hong Kong and Kowloon, where most people live in high-rise apartments or in government built housing projects. These contain tens of thousands of residents, and include all the necessary services and amenities, which make it a township of its own.

2. Country profile

The great majority (95%) of the local population is of Chinese descent. Among foreign residents, Philippine passport holders rank first with 495,200 residents, mostly domestic helpers. Second are Indonesians with 53,400 residents with a similar background. These are followed by Americans, Canadians, Thais, British, Indians, Australians, Japanese and others who are mostly business people or official representatives. The median age of the population is 36.6 with life expectancy at 77.2 years for males and 82.4 for females. The crude birth rate is 8.0 per 1,000 and the death rate is 4.9 per 1,000. The average wages of all selected industries is HK\$ 11,306 p.m.ccount (HK\$7.78 = U.S\$1.00). Since 1998 the unemployment rate has hovered at about 4% to 5%. Due to scarcity of land and relatively high wages, most locally owned industrial production and assembly line industries have relocated northward across the border in the past two or three decades. Hong Kong SAR however, remains one of the financial and communications centres of Asia, having survived the Asian economic crises in the closing years of the 20th century. Hong Kong SAR also looks forward to a faster recovery than other Asian countries on account of the impending entry of China to the World Trade Organization and the hosting of the 2008 Olympic games in Beijing. The combined effects of these historic events should stimulate tourism related industries as well as international and inter-regional investments on an unprecedented scale.

3. A brief history of opiate use

Until the end of World War II, when Hong Kong was liberated from Japanese military occupation, opium use was as legitimate a practice as tobacco use is today. In fact, the British Colonial Government received a major source of revenue from its official Opium Monopoly for many decades. Under the wartime Japanese military rule of Eastern China, heroin was introduced into Hong Kong, as well as most of the coastal cities of China. Following V. J. Day, all opiate drugs, (except morphine for medicinal use), were banned in China and Hong Kong. Nevertheless its continued use persisted underground with the 'protection' of some corrupt law enforcers and part openly in the small walled city of Kowloon, which was supposedly ruled by a Chinese magistrate to administrate Ching Dynasty Civil Laws. He abandoned his enclave in the late 18th century to the control of the Triad Societies. Following the establishment of the Peoples

Republic of China in 1950 and its ironfisted closed door rule on the mainland, opiate use was suppressed forcefully and practically eliminated for a quarter of century, until China's south-western border with the Asian Golden Triangle was reopened for trade in the late 1970s and early '80s. In fact the land route for opiate smuggling from Northern Myanmar through south-west Yunnan Province via Guangxi and Guangdong Provinces to Hong Kong has, since the 1990s replaced the traditional sea route via Thailand as the leading source of narcotics supply for the lucrative market in Hong Kong SAR up until today.

In post World War II Hong Kong, heroin use rose steadily to replace opium smoking, and intravenous injection increased steadily to overtake the method of smoking through cigarettes, nicknamed the 'firing of anti-aircraft guns', and of fume inhalation, nicknamed 'dragon chasing'. With rapid industrialization and immigration from the mainland, the population grew rapidly from 600,000 at the end of World War II to 3,000,000 by the mid 1950s. The spread of opiate use among immigrants, workers and young people accelerated alarmingly. In 1958, the Prisons Department (of that time), reported that among 18,410 persons imprisoned that year, 11,863 (64.4%) were narcotic dependents. A White Paper by the Colonial Government in 1959 estimated a total number of 150,000 addicts. In 1973, the newly empowered Action Committee Against Narcotics (ACAN) decided to establish a Central Registry of Drug Abuse (CRDA) to better assess the incidence and prevalence rates of narcotic abuse, but its first report was not published until 1976, following belated computerization of its data processing system. A more realistic estimate of some 50,000 drug abusers out of the four million population was then suggested. The great majority of these were under-educated male adults, living in public housing, with rather low incomes, mostly engaged in petty crime including theft, prostitution/pimping, illicit gambling and trading or in possession of narcotic drugs.

4. Existing data on opiate use

According to the 47th, which is the latest semi-annual Report of CRDA, there were a total of 18,275 cases reported in the Year 2000, of whom 15,306 (83.8%) were male and 2,969 (16.2%) female. 16,380 reported cases provided information on types of drugs abused. Of these 74.5% used heroin, 14.1% MDMA 'ecstasy', 9.7% ketamine, 8.7% cannabis, 5.8% methylamphetamine 'ice' and 5.5% triazolam/midazolam, (adding up to more than 100% because 18.6% of these admitted to having abused both heroin and other 'soft drugs'). Among the heroin abusers, 54.0% preferred the method of injection, 40.3% fume inhalation and 18.0% smoking (including 12.3% multiple modes).

Referring to geographic distribution of prevalence of drug use, the redevelopment of an area of Kowloon City into a large public park as well as the development of middle-class housing since the mid 1980s has down graded its leading black spot reputation for addiction and crime. Some areas with new towns are now high incidence areas, such as Kwun Tong, Sham Shui Po, and Wong Tai Sin in Kowloon, and Tuen Mun, Tsuen Wan etc. in the New Territories. Also, the well-known entertainment districts such as Yau Tsim Mong of Kowloon (tip of the Peninsula) and Eastern Hong Kong Island are high incidence areas.

5. Patterns and trends of drug abuse

CRDA reports from the past decade indicate a slowly declining trend of opiate use but an increasing psychotropic substances use and a downward trend in the average age of first reporting to CRDA, from 36.3 years in 1980 to 23.1 years in 2000. On average, amongst those aged under 21 years reporting for the first time, females started drug use earlier at 18.9 years, than males at 20.9 years. Also, among first time reporting female cases, mean age was 21.4 with 18.9% below 16 years, as compared with a male mean age of 23.7 years with 8.7% below the age of 16. Of all newly reporting persons in 2000, 45% were full-time workers, 5.3% casual workers, 33.6% unemployed, 12.8% students, 1.1% home makers and 0.9% admitting to be in illicit trades (including prostitution, a category which was probably under-reported). Therefore it is clear that the trend of increasing juvenile and female drug use is prevailing in the Hong Kong SAR and this is expected to continue in the foreseeable future.

6. Health consequences

Amongst the opiate users who smoke opium or heroin, the leading comorbidity of their addiction was pulmonary tuberculosis, which was highly prevalent amongst refugees coming from northern China to escape the civil war. The Junk Bay Medical Council provided much-needed medical and clinical services in the eastern most district of Kowloon, known as Tseung Kwan O (or Tiu Keng Leng meaning the 'Hill of Hanging'), where new arrivals used to congregate. Through the Haven of Hope Sanitarium, the Council operated a chest clinic and an inpatient ward exclusively for male refugee addicts from the late 1940s to early '70s. With the rising standards of living combined with mainline heroin use by both men and women, public health focus on drug abusers shifted to blood borne diseases and sexually transmitted diseases, which affects more and more users as the mean age of novice users declines and an increasing number of women addicts engage in prostitution, with many of their male partners working as pimps. According to CRDA reports, the leading factors of initiation for users under 21 years of age, are peer influence, curiosity and relief of boredom and anxiety.

Drug abusers everywhere are known to take risks impulsively. Should an injecting drug user (IDU) die from an over-dose of an exceptionally potent supply of heroin, other users would ironically flock to this 'honest source' to buy the 'quality stuff'. The first author and his colleagues from the Society for the Aid and Rehabilitation of Drug Abusers (SARDA) have conducted annual surveys since 1991 on street addicts, which showed that the sharing of injecting instruments is often due not only to lack of money or convenience but for bonding within a small group. Through out-reach services and peer guidance, Hong Kong SAR seemed to follow some Australian and American cities in being able to reduce such risk behaviour. By maintaining 7,000 or more heroin addicts on methadone in Hong Kong SAR daily, and simultaneously providing structured counselling to some of the participants, the Hong Kong SAR Department of Health and SARDA have demonstrated that a combination of medication and counselling programmes can result in more successful ambulatory detoxification among the motivated minority, and in a growing request for referrals to drug free rehabilitation among those who need residential care.

7. Treatment of opioid dependence

The contribution to public health by a wide network of methadone clinics was demonstrated when tetanus was first diagnosed in 1993 among IDUs maintained on methadone. All 21 clinics in Hong Kong, Kowloon and the New Territories were promptly converted into prevention centres and thousands of IDUs received immunization and education against tetanus in the subsequent weeks. A potential epidemic was thus nipped in the bud. With the first HIV-positive case identified among narcotic addicts in 1998, the author mobilized and trained a team of out-reach volunteers among youthful members of the Pui Hong Self-Help Association. This Association boasts an active membership of some 500 former male and female drug users who went through SARDA's rehabilitation and aftercare programmes successfully. The volunteers visit known copping areas and the neighbourhoods of the larger methadone clinics where heroin addicts tend to congregate, to provide harm reduction counselling and demonstrate its necessary skills such as needle bleaching and condom use. In the past year an additional Phoenix Project was launched by SARDA to mobilize better-trained peer counsellors to promote both harm reduction concepts and practice among methadone patients and to encourage HIV screening tests voluntarily. By the end of 2000, 32 IDU HIV-positive cases were identified among a cumulative total of 1,542 positive cases, which occurs in only 2.07% of all the of HIV carriers in Hong Kong SAR. In China, the known proportion of IDU transmissions among all carriers is 70% or more.

Treatment approaches

Over the years, Hong Kong SAR has adopted a multi-modality approach to the provision of drug treatment and rehabilitation services. This approach is necessary because a form of treatment suitable for some drug dependent persons may not be suitable for others, owing to differences in age, history of addiction, personal background, employment and other characteristics. The main types of treatment programmes for drug dependence include a compulsory placement programme operated by the Correctional Services Department (CSD), a voluntary out-patient methadone programme provided by the Department of Health, and voluntary residential treatment programmes run by the Caritas-Hong Kong, SARDA and other non-governmental organizations (NGOs), including nine Christian spiritual rehabilitation agencies, once known as 'Non-Medical Treatment Centres' because they practiced 'cold turkey withdrawal'. In recent years, most of them have made arrangements for their patients who need medication to be placed elsewhere first. The CSD runs two drug addiction treatment centres. One on the Island of Hei Ling Chau for male addict offenders and another at Chi Ma Wan for female addict offenders.

The voluntary methadone treatment programme operated by the Department of Health includes both maintenance and detoxification options for outpatients. Under the more popular maintenance scheme, patients are provided with an appropriate dose of methadone each day to block their craving for heroin. The much smaller detoxification program aims to wean patients off drugs by gradually reducing their daily dosage of methadone until they are completely drug-free or referred to residential care. Social counselling and public health education are provided to all patients, and drug dependent persons seeking help are able to select any type of treatment. There are 21 methadone clinics at present attended by an average of about 7,000 patients daily. On the other hand, all the other combined voluntary treatment programmes cater for five or six hundred drug-dependent persons at any one time and re-integrate them into the society. The Department of Health provides subvention to Caritas to operate a youth treatment centre for young men and to SARDA for adult men and women, and male and female teenagers separately in four residential treatment centres with a total capacity of 450 beds. Since 1963, SARDA has provided medical detoxification and psychosocial rehabilitation services to over 60,000 male and 2,500 female cases including re-admissions. Presently about 2,000 voluntary patients per annum are admitted to its residential rehabilitation programme. All programme leavers are encouraged to join the Pui Hong Self-Help Association for continuing mutual support.

The Social Welfare Department (SWD) also provides subvention to four non-government organizations, which provide voluntary long-term residential treatment programmes emphasizing a Christian spiritual approach. They are the Barnabas Charitable Service Association, Ling Oi Youth Centre of the Finnish Missionary Society, Operation Dawn and Christian New Being Fellowship, which in total provide 309 places for mainly narcotic dependents. The length and content of the programmes vary with the four organisations, which also provide various aftercare services. For the treatment of psychotropic substance abusers, subvented counselling services are provided by PS33 of the Hong Kong Christian Service, Cheer Lutheran Centre of Hong Kong Lutheran Social Service and the Caritas HUGS Centre. Two teams of specially trained social workers have been set up under the Against Substance Abuse Scheme of the SWD to help youth at risk who occasionally misuse drugs. There are also six Substance Abuse Clinics established by the Hospital Authority to provide medical services primarily to psychotropic substance abusers. However, they also support the above-mentioned NGOs who do not have their own medical facility for treating withdrawal symptoms or detoxification complications.

In reality many psychotropic abusers may progress into narcotic use and opiate dependents may also abuse a variety of other drugs intermittently such as alcohol, tranquilizers, hypnotics and anaesthetics, especially when the dosage of methadone maintenance appears to be inadequate to some individuals. The colloquial description of such multiple drug abuse is 'double or triple fried dishes'. Although all treatment and rehabilitation agencies report to CRDA about their newly admitted cases, they do not always report premature discharges or relapses under aftercare.

Hence CRDA could not at present fulfill one of its original objectives for programme evaluation. The so-called 'success rates' claimed by individual centres do not follow any standard criteria of measurement at present and if relapsed cases are counted at the close of aftercare service, they usually do not specify any length of prior abstinence under follow-up. Therefore the second author, under a consultancy contract with ACAN, has designed a system of periodic reporting as well as output and outcome evaluation, which hopefully will be adopted by all the agencies concerned.

Legislation and international collaboration

On legislation, law enforcement and policy formulation, the Narcotics Division of the Government Secretariat and ACAN have accomplished the following, in 2000-2001:

- a. The Organized and Serious Crimes (Amendment) Ordinance 2000 came into operation on 1st June 2000. Codes of Practice for money-changers and remittance agents have been substantially revised.
- b. Financial regulators' guidelines have been revised and an 'announcement for public interest' on the requirements has been launched on TV and all electronic media.
- c. The Dangerous Drugs Ordinance has been amended to tighten control on dihydroetorphine remifentanal, ketamine.
- d. The Control of Chemicals Ordinance has been amended to tighten control on norephedrine.
- e. The Drug Trafficking and Organized Crimes (Amendment) Bill 2000, has been introduced to the Legislative Council to enhance the effectiveness of the fight against money laundering regimes.
- f. A Bill to license drug treatment and rehabilitation centres was introduced into the Legislative Council and passed into Ordinance in May 2001, and its Administrative Code of Practice on the licensing scheme is being finalised in consultation with all NGOs concerned.
- g. A second 3-year Plan on Drug Treatment & Rehabilitation Services (2000-2002), has been issued in Hong Kong SAR, in October 2000.
- h. A review on the methadone treatment programme was completed and a report was released in December 2000, which recommended the enhancement of structured counselling to all participants in order to reduce risk behaviour and multiple drug use.

On regional and International Co-operation, the following accomplishments are noteworthy:

- a. Hong Kong SAR was removed from the USA's 'Majors List' of trans-shipment ports in November 2000.
- b. Hong Kong SAR was selected FATF President for 2001-2002 of the Financial Action Task Force of the G8 and European Union.
- c. The USA shared US\$ 0.9 million with Hong Kong SAR for the first time in an anti-drug trafficking case. More cases are expected to follow.
- d. Hong Kong SAR's Task Force on Psychotropic Substance Abuse, which was established in early 2000, visited Guangdong, Shenzhen and Macau etc., in December 2000.

e. Publicity was stepped up at the Lo Wu border and other venues where passengers and goods make crossings.

f. A dialogue was built up with 'rave' party promoters and a Code of Practice issued for Dance Party Organisers in October 2000.

g. 121 applications for the Beat Drugs Fund were processed and a total grant of \$ 16.6 million was disbursed to 29 successful applicants and vetting procedures were revamped. (The Fund was first established in 1996 with an initial allocation of \$350 million.)

Some relevant research studies

With the support of the Government's Beat Drug Fund and University Grants, the authors and their collaborators have completed or engaged in the following research project:

a. A social costs study on Drug Dependence, of which the findings indicated a total expenditure of HK\$4,226 million in 1998. This included direct/indirect and tangible/intangible costs, of which 30% were spent on drugs (predominately heroin), 25% for crimes and judicial processes, 19% on lost productivity and workplace damages, 14% on treatment and rehabilitation, 8% on welfare expenditure, 2.5% on medical care and 1.2% on prevention and education etc. A major conclusion was that the money spent on demand reduction was a sound investment which reduced public expenditure and the current average per capital costs of HK\$632 p.p. (Little or no inflation has been reported in the past three years since 1998).

b. Retroactive follow-up studies of SARDA's discharged cases revealed an impact of methadone maintenance on residential treatment. These studies showed that those addicts who were stabilised on methadone before entering into residential programmes demonstrated a higher motivation in completing the full course of rehabilitation and in retaining a longer period of abstinence than those with similar drug use histories who entered residential treatment directly, (1987-1997).

c. A study of childrens needs in families with parental addiction revealed inter-alia that without timely and effective intervention, addictive behavior would perpetuate from generation to generation. However the question of which group of factors casts a stronger influence on cross generational transmission, 'nature vs. nurture', could not be answered because of the limitation of the time frame and the resources imposed by the consultancy contract,(1998-1999).

d. A case-control study on 'Genes and heroin addiction - association studies on receptor genes is being conducted by the second and third authors to investigate the hypothesis that heroin abuse or drug seeking behaviour is associated with genetically determined variations in gene functions of the brain reward circuit. More specifically, gene variants related to brain receptors that bind to heroin, and other receptors in the brain reward pathway and genes related to sensation/novelty seeking behavior, are being studied among active addicts and former users who have been abstaining for three years or more. An association may exist between the multi-century old cultures of habitual opiate use in Chinese people with these variant genes and those individuals with these variant genes may be more vulnerable to opiate addiction. The eventual findings should have implications for new strategies for treatment and demand reduction.

e. Simultaneously a three-year longitudinal chronic drug abuse study is being conducted by the first author and associates to observe the life styles and psychosocial changes among 500 opiate dependents that were newly discharged from or still under multi-modality treatment in mid 2000. By mid 2002, its findings should reveal the socio-pathways of recovery from opiate addiction versus the commonly observed pattern of chronic relapses ,(2000-2002).

f. The second author is also conducting an ethnographic study of 'rave' party-goers and their misuse of various drugs including alcohol, 'ecstasy', ketamine, 'ice' cannabis, etc. The public

tends to classify them as an entirely different class of people from opiate users. Swinging patterns of drug abuse in post World War II Japan, began with amphetamine-type stimulants, switching to tranquillizers or to narcotics and more recently, hallucinogens. With this tendency of loop cycles, we hope to ascertain if the current 'rave' phenomenon is a passing phase of global youth culture or a new phase of human history of substance abuse, which may last for a long period.

Conclusion

Simplistic approaches of control of any form of substance abuse in the past (e.g. the prohibition against alcohol in America) have failed to live up to their idealistic but arbitrary goals. Opiate abuse disappeared for two decades or more in China in the mid 20th century under self-imposed national isolation, but re-emerged after Deng Xiao-Peng's open reforms. Meanwhile, the controlled use of morphine remained necessary for medical and surgical purposes. Ironically when methadone was viewed as an artificial opiate, it was frowned upon in China but is now manufactured in the northern city of Tianjin, China under official licensing. In order to curtail the spread of HIV/AIDS amongst the hundreds and thousands of heroin users in China, a few experimental methadone clinics have been established in the south-west Yunnan Province, which has the highest prevalence of AIDS among a growing number of heroin addicts. Already the clinics are reportedly able to reduce the risks and harm to thousands of participants in the programme. Hence, methadone maintenance may be introduced nationally in the near future.

The two recently established SARs in Hong Kong and Macau are now working closely with our common neighbour, the Guangdong Province, in mutual exchanges of expertise and experience in reducing illicit supplies, unjustifiable demand and the resulting harm of drug misuse. The First Regional Symposium on Joint Action Against Drug Abuse and Trafficking will be held here in November 2001. Hopefully more rational policies and realistic strategies will be hammered out during the week-long meeting by both Governmental and NGO representatives for the joint reduction of supply, demand and damage by all kinds of misused drugs.

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INDONESIA

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1. Country profile

Indonesia is the largest archipelago in the world, made up of many islands, totaling 17,508 altogether. Indonesia is on a crossroads between two oceans, the Pacific and Indian, and bridges two continents, Asia and Australia. This location places Indonesia in a very strategic position for drugs smuggling. Along with this, Indonesia is located within a relatively short distance of the 'golden triangle,' the largest producing area of illegal drugs in South East Asia. Indonesia is also located in the Pacific region where its relatively high economic growth causes it to be vulnerable to the transit and marketing of illicit drugs and psychotropic substances.

Today, Indonesia has become a producer and exporter of drugs. In the year 2000 the total population of Indonesia reached more than 210 million people, of which the youth proportion is about 40 %. As in other countries, young people between the ages of 15 and 25 years are the most vulnerable to drug abuse. This is due to the psychological and behavioral attitudes of adolescents and their search for an identity. In order to support countermeasures against the drugs problem, the President of Indonesia issued a Presidential decree (No. 116) in 1999, establishing the National Narcotics Coordinating Board (BKNN), which replaced BAKOLAK INPRES (No. 6), 1976.

2. Brief history of opiate use

Indonesia has had a drug problem for quite a long time. It is estimated that drugs were introduced at the time of Chinese immigrant arrivals. At first, drugs were taken habitually especially amongst fishermen in order to keep up their endurance. This situation changed during the Dutch colonial regime which benefited from the habit when they decided to expand their plantations to other islands outside Java, where opium was then legally sold and distributed amongst the Chinese community. Also amongst certain tribes opium was used as a local custom, rather like alcoholic drink is consumed at special events or ceremonies.

Since the first morphine addict was treated in one of the private mental hospitals in Jakarta in 1969, drug abuse in Indonesia had been relatively low and consistent involving sleeping pills, marijuana, alcohol, and small amounts of morphine, heroin and amphetamines.

But from 1990 a dramatic change took place in the trend of drug abuse in Indonesia. Beginning with stimulant drugs such as ecstasy, the trend later developed into the use of 'putauw', (the street name for heroin) as the most popular drug amongst young adults.

These are indications of the increasing problem in recent years :

- a. According to Police data in the last three years from 1998 to 2000, the number of drugs cases handled increased sharply from 958 in 1998 to 1,833 cases in 1999 (an increase of 91.33 %) while in the year 2000 cases have doubled to 3,478 cases (an increase of 92 %). The number of offenders arrested by Police also increased from 1,308 people in 1998 to 2,595 people in 1999 (an increase of 98.4 %) and 4,955 people in 2000 (an increase of 90.9 %).
- b. A report from The Drugs Dependence Hospital (RSKO) reported that in the last three years from 1996 to 1999 the number of male out-patients increased 462 % and women by 423 %. There was also a substantial increase in in-patients, where males increased by 257.8 % and women by 328 %.

- c. In 1998/1999, 615 people were treated at six Social Rehabilitation Centres for Drug Addicts (PSPP), where men presented more frequently than women (87.56 %). Most of those treated had alcohol problems (52 %), multi-drugs (43.25%) and others (2,76 %).
- d. Drug Addicts were aged between 15 to 25 years old. Heroin, ecstasy, and cannabis were the most popular drugs consumed.

3. Existing data

The estimated population of drug addicts in Indonesia in 1997 was 130,000 people. This number is much bigger if we calculate roughly using the iceberg phenomenon of drug addiction at 1:10. Such a ratio would suggest that there could be around 1.3 million people dependent on drugs. In year 2000, experts estimate that in Indonesia not less than 2 million people will have been involved in drugs misuse.

There are also current indications that the rise in the number of injecting heroin users has resulted in substantial medical complications including hepatitis C, pulmonary infection and HIV/AIDS.

4. Nature and pattern of opiate use

Data from RSKO and General Hospital in the last three years 1996 to 1999, stated that the youngest age of presenting was 12 years and the oldest was 53. Most of the drug addicts are male and 80 % of them aged around 15 to 25 years. The educational background of out patients (RSKO data) is senior high school students (41.85 %), university students (31.35 %) and junior high school students (21.07 %). The highest number of in patients are senior high school students (46.25 %), university students (42.70 %) and junior high school students (8.20 %).

The data from the rehabilitation center which is supervised by the National Social Welfare Board (BKSNI) shows that classification based on the clients ages are around 17 to 20 years old (55.28 %), 21 to 24 years old (28.61 %) and 14 to 16 years old (12.44 %).

Treatment for narcotic abusers in Indonesia is not only given by the Government but also by private foundations that are run by the community (NGOs). For example, Titihan Respati, Karya Bhakti, Kasih Mulia, and Pesantren (Islamic School) Modern Darul Ichtan.

The data for the numbers who were treated by those foundations are as follows:

In 1999 :

No Foundation	Sex		Age				Education		
	M	F	<15	16-24	25-34	>35	EL	HS	Univ.
1. Titihan Respati	227	39	5	231	24	6	1	172	93
2. Karya Bhakti	130	19	-	111	32	6	14	126	9
3. Kasih Mulia	130	14	7	95	40	2	-	-	-

In 2000 :

No Foundation	Sex		Age				Education		
	M	F	<15	16-24	25-34	>35	EL	HS	Univ.
1. Titihan Respati	237	59	3	212	44	7	4	190	102
2. Karya Bhakti	186	21	2	149	47	9	23	173	11
3. Kasih Mulia	210	3	2	150	57	4	-	-	-

Most of the clients treated at the above foundations came from the middle and the higher economic classes.

Even though drug abuse has spread to all social strata, many are from dysfunctional families, such as those with single parents, divorced parents and non-harmonising families. In addition, almost all drug abusers are influenced initially by their peer groups.

There is a correlation between drug abuse and other substance consumption, such as alcohol, cigarettes and marijuana and also with substance availability on the black market.

According to BKNN data narcotic substances seized in the year 2000 are as follows: -

Heroin	22.66 kg
- Cocaine	17.41 kg
- Hashish	3.88 kg
- Marihuana	6.332 kg
- Shabu-shabu	76.70 kg
- Ecstasy	109,567 tablets

5. Health consequences

The extensive use of hypodermic needles among abusers (IDU) has significantly impacted on the spread of HIV which is increasing every year. The data from Ditjen. PPM and PL, Ministry of Health, and Social Welfare shows that in November 2000, three out of eight AIDS cases and twenty-two out of thirty HIV cases, newly reported were drug injectors. This means that IDUs consisted of 37.5% from all of the new AIDS cases and 73.3 % from all of the new HIV cases. Again in January 2001, there were nine AIDS and ninety-four HIV new cases and of those, two AIDS cases (22.2%) and forty-eight HIV cases (51.1%) were drug injectors.

6. Treatment of opioid dependence

Many ways of combating drug abuse have been attempted in Indonesia. The first step for treatment, as well as rehabilitation is to know or identify the basic substance abuse because of the problems of social stigma. The next step is the identification of health and psycho-social problems that usually go along with the main problem.

The role of counselling is needed to change behaviour such as motivating the patients to stop abusing drugs by giving them information about the risks of drug abuse and the benefits of addiction treatment. Abusers who have been motivated towards a cure, have to be referred to the rehabilitation program as soon as possible.

A well known form of detoxification used is opioid detoxification, in which the abuser is given opiate substitution and symptomatic pharmacotherapy, e.g. Codeine, which is easy to obtain in addition to Chinese/Korean Herbal therapy with oral pills (traditional herbs), as an alternative pharmacotherapy.

The Indonesian government does not support the use of Methadone as a substitute for heroin addiction treatment. However, many individual experts consider that Methadone is good enough for that purpose. On the other hand, Clonidine that does not contain opioid is rarely used as a substitute substance because of its side effects.

With regard to the use of levo-alpha-acetyl-methadol (LAAM) and Buprenorphine, it is regretted that those substances are not yet available in Indonesia.

Treatment facilities

In Indonesia, there are many institutions which carry out treatment for drug addicts, such as:

- a. The Drug Dependence Hospital, Jakarta.

With a capacity of 30 to 40 beds, this is the only government hospital which specializes in services for patients suffering from substance related disorders. Since it officially opened, from 1972 until the end of 2000, there have been more than 38,000 patients who have accepted treatment as inpatients and outpatients. But due to its limited capacity, programs are conducted over three month periods, including the detoxification process and social rehabilitation. After this, the patient has to follow outpatient services or day care activities in the Drug Dependence Hospital, or if needs be the patient can choose any treatment facility in the community including residential TC, Drop in Centers or the religious approach methods, etc.

The Department of Health and Social Affairs c.q. and the Drug Dependence Hospital, Jakarta in cooperation with the local government of Jakarta Metropolitan City are planning to establish a larger capacity system as a National Drug Abuse Referral System and Network Center.

b. Drug Abuse Mental Hospital Services.

There are more than 40 state or private mental hospitals in Indonesia. Following government instructions, each state mental hospital has to set 10% of its bed capacity aside for drug abuse patients. In the past this policy has not been adhered to because of social stigmas. But at present this attitude is changing. This can be demonstrated by the fact that many patients are now presenting to mental hospital drug abuse facilities and the hospitals are providing special drug abuse unit services for detoxification, and ambulatory treatment services as well as using the therapeutic community approach.

c. State and private general hospitals.

There are many comatose heroin addicts and sometimes dead addicts brought to hospital emergency services. There is a need to develop a better response to this problem.

Even though the Drug Dependence Hospital, Jakarta is the only hospital specialising in drug dependence patients at present, many state and private general hospitals also provide services for drug addicts who are mainly heroin dependent.

d. Primary Community Health Center.

There is intensive training for general practitioners responsible for primary community health care. This program was started by the local Government of Metropolitan Jakarta to support the development of a broad community based and primary care approach to services for drug abuse. This approach will assist in helping patients from very poor backgrounds to obtain treatment.

e. Non Government Rehabilitation Centers.

In response to public demand, treatment facilities in Indonesia have been improved in terms of the quantity and type of service which now includes therapeutic community services, drop in centers, traditional healing and religious approach methods.

Besides the above facilities, the National Social Welfare Board has initiated a project to formulate and publish guidelines called 'the Model of Integration Rehabilitation Services for Drug Victims'. The guideline is aimed at helping the communities who will participate in delivering the treatment and rehabilitation services. There are many institutions and professions involved in this model, such as health institutions (medical doctors), psychologists, social workers and security personnel.

LAO PEOPLES DEMOCRATIC REPUBLIC

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1. Country profile

The Lao Peoples Democratic Republic is a landlocked country with a land area of 236,000 km² and a total population of 5.2 million (IMCH, 2000). It stretches for more than 1,700 km from North to South and between 100 and 400 km from East to West. It shares borders with Vietnam (1,957 km), Cambodia (492 km), Thailand (1,730 km), Myanmar (230 km) and China (416 km). It consists of seventeen provinces and one special zone, 133 districts and 11,795 villages. About 80% of the country is mountainous, with altitudes ranging from 200 to 300 m. About 47% of the area is covered by forest. The Mekong River runs from north to south for 1,500 km.

The Lao PDR is a 'multi-ethnic' state. Main ethnic groups include Lao Loum (Lowland Lao) which constitutes about 65% of the population, Lao Soung (highland Lao) about 25%, and Lao Theung (Upland Lao) about 10%.

The national health strategy is based on primary health care. Health services are the responsibility of the Ministry of Health and the provincial health authorities. The central level consists of the Ministry of Public Health, with various departments (e.g. curative, hygiene and preventive medicine, personnel and food and drug departments), and includes the center for dermatology and venereology, the center for anti-tuberculosis, the center for ophthalmology and the Central Hospital. The central level provides technical and logistic support to the provincial level. The provincial level then provides support to the district levels, which then provide support to the sub-districts and health centers.

2. Brief history of opiate use

The northern provinces of Laos are characterized by high infant and child mortality rates (104 per 1000 live births and 156 per 1000 children respectively). Half of children under five years old are affected by malnutrition, and approximately 90% of the population lack access to basic health, birth spacing and nutritional services (LCDC, 1993). Diarrhea, respiratory, and intestinal diseases are widespread, and malaria is particularly prevalent. The consumption of opium for medical, ceremonial and other social purposes is well established in northern parts of the Lao PDR and has created a basis for widespread addiction.

Addicts stated that they use opium as a medication to cure intestinal diseases, coughs, mental problems, arthritis and other pains. The more opium they took, the more dependent they became, finally becoming addicts. Other reasons given were that addicts initially tried it for entertainment or as a result of peer pressure.

In northern Laos, opium is commonly used as a painkiller and opium addiction is a real problem among some of the ethnic minority groups in this region. The use of opium as a painkiller over a fairly long period of time was given as the main reason for addiction. There were reports of heroin availability and use. Abuse of psychotropic substances (e.g. ATS) does not appear to be common yet. However, it is feared this could be the next form of drug of abuse by current day glue sniffing methods.

3. Existing data

According to the 1998 National Opium Survey, there are some 63,000 opium users in the country, equivalent to 1.6% of the population aged 15 years or over. In 1996, a survey was carried out by the National Commission for the Control and Supervision of Drugs in the large cities of

the provinces of Bokeo, Luang Prabang, Vientiane and Savannakhet, This revealed five cases of heroin addiction: three in Bokeo and two in Savannakhet (see table 1).

Table 1. Number of other substance users

Provinces	Volatile solvents	Heroin
Savannakhet	135	2
Bokeo	30	3
Luang Prabang	120	0
Vientiane	1100	0
TOTAL	1385	5

(Source: National Commission for the Control and the Supervision of Drugs, 1996).

As can be seen from table 1, a total of 1,385 people used volatile substances (glue, gasoline, thinner, etc.) in different regions. Most of these addicts were young children (Pelc et al, 1998). It is considered that the number of frequent users is probably higher as consumption is usually secretive.

4. Nature and patterns of opium use

The opium addicts are aged between 28 and 91. The average age is 55 (Pelc et al, 1998). Of these opium addicts, 60% are in Lao Soung, 30% are in Lao Theung and 10% are in Lao Loum (LCDC, 1993). There appears to be an age difference among the various ethnic groups: those in Lao Soung and Lao Loum are older than in Lao Theung. Smoking is by far the most common form of administration by opium users.

5. Health consequences

Of the risk factors resulting in people developing AIDS or becoming HIV infected, sexual activity is the most important. There were no drug related HIV positive or AIDS cases in 1999, (UNDCP, 1999). While heroin addiction seems not yet to be a problem, opium addiction is widespread in the rural areas of northern Laos. Opium has caused certain problems among addicts including sexual problems, emotional disorders, and memory loss.

6. Treatment of opioid dependence

Treatment Approaches:

A tincture of opium detoxification is the major detoxification modality for opioid dependence in Laos. To date, there are many verbal and mixed reports of attempts at various treatment activities in the different provinces and districts and different experiences by different ethnic groups and communities. These include social mobilization to provide education about the dangerous effects of drug use, awareness campaigns, and the use of herbal/traditional medicines for detoxification, detoxification carried out by private medical practitioners and resettlement programs.

Basically, most treatment services have been provided by the UNDCP and NGO's funding. Drug control projects in Laos include a social development component and the establishment of a primary health care system. Although these projects are better known as opium reduction projects, they are in fact aimed at both supply and demand reduction. There are many Integrated Rural Development Projects, implemented and developed with a drug demand reduction component, focusing on the detoxification and rehabilitation of opium addiction in project areas.

A number of the activities included the treatment and rehabilitation component but there is a need to develop sustainable treatment and rehabilitation capacities at both the levels of design strategy and the levels of operation.

Consequently, a National Treatment Guideline for opium addiction is currently being developed. This guideline consists of four phases:

1. The Pre-Detoxification or Preparatory Phase.
2. The Detoxification Phase.
3. The Rehabilitation Phase.
4. The Evaluation Phase.

Number of persons receiving treatment for opioid dependence

There is a continuing trend of increasing demand for rehabilitation. Over the past five years (1996 to 2000), there have been Rural Development Projects conducted in many village based Detoxification Camps and Detoxification Centers in the five northern provinces. A total of more than 1,000 opium addicts have been detoxified and received some aftercare and follow up.

Pharmacotherapies

Medications used

As indicated above **tincture of opium** remains the dominant remedy. Herbal/traditional medicine has become generally available over the last five years while **Buprenorphine** is not used for the treatment of opioid dependence in Laos.

Withdrawal treatment for opioid dependence relies on **clonidine** and symptomatic medication. **Methadone** is never used in Laos as a withdrawal treatment. **Diclofenac** is considered to have potential as a withdrawal symptom treatment.

Legislation and control mechanisms

Tincture of opium is restricted under controlled drug laws. This means it can only be prescribed by authorized physicians and/or medical doctors and dispensed by the Food and Drug Department and/or Provincial Food and Drug Management Section. Patients receiving tincture of opium treatment are registered with District Health Authorities and Detoxification and Rehabilitation Centers.

Professions involved in treatment provision

The use of medicine on its own was not so effective until community involvement had been mobilized by the active support of local authorities such as District Governors, Heads of villages and communities, Village Development Committees and mass organizations such as the Lao Women's Union, the Lao Youth Union, and the Lao Front for National Construction and by activities which improved the livelihood of all families in villages and communities.

Level of primary health care involvement

The master plan suggested that the treatment of addicts and the training of villagers for the rehabilitation of addicts should take place in the framework of primary health care and community development activities. In fact, the health condition of the ethnic minority population is closely linked to local environmental concerns and the accessibility of effective services. Communicable diseases are common (malaria, diarrhoea, and respiratory infectious diseases are the main cause of morbidity and mortality). Malnutrition is also an important cause of morbidity and mortality in children. The lack of basic health services is a major reason for opium addiction in these communities.

The provision and the improvement of primary health care systems will therefore play an important role in the prevention of further opium addiction and relapse. Community-based primary health care (PHC) support is being implemented. Village Health Volunteers (VHV) have been established and supported in order to improve the health situation. Village Health Volunteers provide a resource to improve health related development and support a health

prevention strategy designed to improve the effectiveness, relevance, and accessibility of health information and education available to communities at village level.

The demand reduction component, through the establishment of development activities within communities has been introduced. (e.g. After detoxification, the program for the prevention of drug addiction requires active community participation. That means patients take part in occupational therapy rehabilitation sessions such as weaving, gardening, counseling, moral support and sport etc. The community must therefore be made aware of the problems of drug addiction).

Pharmacy involvement

The Department of Food and Drugs under the Ministry of Health is responsible for the supervision of drugs under international control. That is, the import, export, manufacturing, distribution, sale of narcotic drugs, psychotropic substances and precursors. Tincture of opium is not allowed to be sold at pharmacies yet.

Future evaluation plans

In the near future, the National Addict Rehabilitation Guideline for Opium addiction will be published. This new Guideline it will be evaluated to determine whether it is suitable and whether it improves the overall situation or not.

Potential problems

The health system in Lao PDR is under considerable resource pressure. Health expenditure at the central level is allocated largely to hospitals and health institutions. Approximately 55% to 60% of the Ministry of Health budget goes to the provinces and to operating costs. At the district level and below, it is insufficient to provide much needed services (IMCH, 2000). Under this situation it is expected that resources for the treatment of opioid dependence will also continue to be limited.

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MALAYSIA

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1. Country profile

Malaysia is a country comprised of thirteen states and is divided into West Malaysia and East Malaysia. Eleven of the states are in West Malaysia and two in East Malaysia. The total population is 22 million. Malays constitute the major ethnic group with Chinese making up 36% of the population and an Indian population of about 8%. Although Islam is the official religion of the country, other races can practice their religious beliefs without much restriction. Most of the Malaysian Chinese are Buddhist while the majority of Indians in Malaysia are Hindu.

In 1996 the government transferred management of the drug problem from the Prime Minister's Department to the Ministry of Home Affairs. The National Drugs Council and the National Drugs Agency was formed to develop policies and strategies to combat the drug problem and to coordinate, monitor and review the implementation of policies and strategies. The government takes full responsibility for the funding of all drug-related activities and programs including programs implemented by all of the government owned hospitals throughout the country.

It was not until the late 1990s that the government decided to review the treatment approaches. This was as a result of findings that there was a high prevalence of relapse among addicts who had undergone two-year rehabilitation programs. To be precise, less than 10 % of rehabilitated opioid dependence patients were in total remittance after the two-year rehabilitation programs.

Medical problems related to the use of intravenous heroin have become more of an issue for the Ministry of Health. For example it was noted that 95% of HIV cases were intravenous heroin users. This has created more pressure from the public for the Government to review its treatment approaches and to give an increased role to health workers in managing heroin dependence patients.

2. Brief history of opiate use

Drug abuse is not a recent phenomenon. It is associated with the early economic development of the country. In the early 19th century, tin mines, rubber and pepper estates were being developed and migrants provided labour from China and Southern India. Opium began to emerge as a problem towards the end of the 19th century.

Opiate addiction was first linked with foreign labourers, who brought it from China during the early part of the 19th century. The British colonials at that time tried to control the problem by controlling the importation and sale of opiates through registered shops. The Government at that time also registered addicts who needed to be certified by medical practitioners and who were considered bona fide addicts. Towards the mid -19th century, it was noted that there were 75,000 registered opium addicts in the country, most of them elderly Chinese men. Opium smoking was only completely prohibited in 1954, at the end of the terrorist 'Emergency'. Abuse of morphine was also prevalent and cannabis was being smoked by some Indian dockworkers.

In 1952, the Government introduced the Dangerous Drugs Act (DDA), prohibiting the possession, use and importation of all types of dangerous drugs.

Drug addiction has increased tremendously in Malaysia since the 1970's. Over these years, heroin abuse has been on the increase. However, there was a decline in heroin abuse in the year 2000, from 17,429 in 1999 compared to 13,605 in 2000.

3. Existing data

The most recent Malaysian estimate in year 2000, puts the number of heroin abusers at 13,605 (44.47%). There are more males 30,084 (98.34%) compared to females 509 (1.66%). with an age range from 20 to 39 years old (82%). About 90% were employed and most of them were secondary school leavers.

The number of injecting drug users comprised 6.63% of the total number of drug abusers for the year 2000, which numbered 27,306. This included amphetamine users as well as heroin users. The type of drugs used were grade three drugs, which contain less than 10 % heroin and this could be the reason why the preference is to inject the drugs to get the desired effects.

Most drug users confine their use to heroin. The use of alcohol and other drugs as a combination was not common.

4. Nature and patterns of opiate use

Heroin users in Malaysia are relatively young, 25 to 29 years and predominantly male. Figures show males at 30,084 (98.34%) and females at 509 (1.66%), the general unemployed at (27.5%) and labourers at (43.2%). A history of imprisonment is common. For the year 2000, the total number of arrests under the DDA was 17,550.

'Chasing the dragon' is by far the most common form of administration of the drug. Around 70.73% of heroin users are 'chasers'.

Most heroin users also use other drugs. The combination of morphine, cannabis cough mixtures, amphetamine-type stimulants (ATS) and opium causes substantial concern as these drug combinations increase the risk of overdose. The other common combination is with alcohol and or benzodiazepines.

Most of the addicts identified from January to November 2000 were heroin users (11,858). Other figures showed 4,740 used cannabis, 6,928 used morphine, 24 used opium, 404 used psychotropic pills, 1,036 used 'syabu' or methamphetamine hydrochloride, 284 used codeine in cough syrup and there were 14 cases of inhalant abuse.

5. Health consequences

Malaysia has seen an increasing trend among IDU's causing the spread of HIV infection. As of 2001 the number of HIV cases detected included 658,93 suffering from chronic illnesses, and 28 cases with psychiatric related disorders.

The policy in Malaysia, is that once a drug addict has been identified as having full-blown HIV infection, he/she will be discharged from the drug rehabilitation center. The National Drug Information System (NADI) which is attached to the National Drugs Agency does not keep reports of overdose cases. This is because almost all of them die on the streets and are immediately sent to hospitals for post-mortem by the police.

6. Treatment of opioid dependence

• Treatment approaches

'Cold turkey' treatment is the main modality used for detoxification for all types of drug abusers. However in rehabilitation many approaches have been adopted. Some of the approaches include the Therapeutic Community (TC) modality, Multi-Disciplinary modality (Psychosocial), Religious Oriented modality and Work Therapy modality. There are 27 government-managed centers that can cater for 12,000 addicts at any one time. Treatment and rehabilitation in government managed centers are free of charge. In year 2000, 14,094 addicts were rehabilitated in these 27

centers. There are also 56 registered NGO managed drug rehabilitation centers. However, these NGO centers treat very small numbers of addicts and they charge for treatment and rehabilitation.

The Government launched a pilot project using naltrexone as an adjunct drug for rehabilitation. However, the decision to continue with this project will be dependent on the result of the pilot project. Naltrexone and clonidine have already been used in the treatment of addicts in a number of Government managed hospitals.

- **Number of persons receiving treatment for opioid dependence**

The law provides for two modalities in treatment and rehabilitation. Addicts can either be sent to rehabilitation centers for institutional rehabilitation or to the community for community treatment and rehabilitation. The place for treatment and rehabilitation is dependent mainly on three criteria:

1. The availability of family support. If the addict has strong family support then they will be treated and rehabilitated in the community.
2. Status of employment. (Sole bread winners will seldom be sent to centres.)
3. Criminal record. If the addict has a criminal record they will usually be sent to a center but if the criminal record is serious they will be sent to prison.

8,597 addicts are currently undergoing treatment and rehabilitation in Government managed centers. The rest of the addict population are either sent for treatment and rehabilitation in the community or undergo aftercare supervision in the community.

Neither **LAAM nor buprenorphine** are available for the treatment of opiate use in Malaysia at the time of preparation of this report, in April 2001.

- **Pharmacotherapies**

Medications used

As indicated above 'cold-turkey' remains the dominant detoxification modality. Naltrexone has been used following detoxification and has become generally available over the last number of years.

Withdrawal treatments for opioid dependence rely on clonidine and symptomatic medications. Methadone is not used in Malaysia as a treatment method or in maintenance treatment.

Naltrexone and clonidine are restricted drugs. These drugs can only be prescribed by medical practitioners and dispensed by pharmacies from General Hospitals. All these patients are registered with the health authorities.

Professions involved in treatment provision

Delivery of effective pharmacotherapy is multidisciplinary entailing medical doctors, nurses, pharmacists and counsellors.

Level of primary care involvement

There is no involvement from these sectors in the treatment and after-care of opiate users. Some continue to be treated at clinics or practices with a focus on drug and alcohol issues.

Pharmacy involvement

Most of the dispensing and supervision of medication is done by the hospital sectors. The majority of cases now also receive their medication from private pharmacies.

Future evaluation plans

Currently, the evaluation of different modalities of pharmacotherapies is underway. The pilot project for use of naltrexone in the treatment of drug dependence is awaiting completion. Continuous training of front line police officers is also progressing as Malaysia is one of the five countries in the world that has a mandatory death penalty for drug trafficking.

Potential problems

Community concerns about opioid dependence and abuse continues to be high. These concerns relate to the mistrust of recovering addicts and crimes that are usually committed by these addicts. The majority of the community also believes that the responsibility to prevent, control, treat and rehabilitate drug addicts lies solely with the Government. Volunteers for this work is poor within the community. Knowledge of the dangers of heroin and other drug abuses and trafficking is broadcast routinely through the mass media and through anti-drug campaigns in the community and especially in schools.

The Malaysian Government believes opiate abuse may stabilize in the near future. This may be attributed to the increased use of ATS (ecstasy/syabu) especially amongst the youth. ATS abuse has increased due to misinformation amongst youth that its use is not addictive and that it is safer to use because it is taken orally. The Ministry of Health believes that HIV/AIDS may show a downward trend.

MYANMAR

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1. Country profile

The Union of Myanmar is located in South East Asia with an area of 261,228 square miles (676,577 square kilometers). It has common borders with the Peoples Republic of China and Laos Peoples Democratic Republic in the East, with Thailand in the South East and with the Peoples Republic of Bangladesh and India in the West. The Adaman Sea and the Gulf of Martaban are situated to the South and the Bay of Bangal to the West of the country. The total length of international boundaries with neighbouring countries is 3,626 miles (6,159 kilometers). The coastal regions of Myanmar include the Rakhine coast, the Delta region and the Thanintharyi coastal strip with a length of 1,385 miles (2,228 kilometers).

Two thirds Myanmar lies in the tropical zone and one third in the temperate zone. The country is located in the tropical monsoon region with three seasons. A hot summer season, a wet rainy season and a cold winter season.

The total estimated population of Myanmar in 1998,99 was 46.74 million with 23.22 million male and 23.52 million female. The total population of young people under 15 years is estimated at 16.03 million and the working population aged 15 to 59 years is about 26.34 million. The population aged over 60 year is 3.37 million.

The Union of Myanmar is formed by seven states and seven divisions and is inhabited by 135 ethnic nationalities. The main nationalities are Kachins, Kayahs, Kayins, Chins, Mons, Bamars, Rakhines and Shans, of which the Bamars are the majority. Myanmar is an agricultural country and is also rich in both natural resources and mineral resources such as timber and precious stones.

2. Brief history of opiate use

During the reigns of the Myanmar kings, the country was free from drug abuse problems. The British colonial Administration introduced opium into the country. Opium was once the main drug abused by people in the rural poppy growing areas. It was used as a medicine for self-treatment of illnesses such as coughs and diarrhoea and to relieve pain after strenuous work. The abuse pattern abruptly changed in the nineteen-seventies. Apart from its use by elders in rural areas, it became used by youths in urban areas. As youths started to abuse drugs, they changed the method of administration to injecting drug use and this subsequently led to the transmission of HIV, Hepatitis B and C and other diseases.

Cannabis or Marijuana (known as *Sai-chauk* in Myanmar) was a popular drug. It grew naturally along mountain ranges in the middle of the country. The youths cooked it with meat curry or smoked it in cheroots for entertainment. Regular smokers of marijuana existed in early times until heroin arrived. They then used heroin rather than marijuana but it was a gradual process. During the 1980's and 90's, codeine containing drugs such as Phensedyl and psychotropic substances such as diazepam coupled with alcohol use became a fashion among the youth. Gradually these soft drugs became the stepping stones to heroin and people switched over to hard drugs.

Law enforcement officers have reported that stimulant drugs such as amphetamine tablets have often been seized along the border areas during the last two or three years. Still, there is little evidence of domestic ATS abuse, but there could be an emerging issue at the border areas in the near future. It is understood that in some border towns, immigrants who worked daily on the other side were found to be abusing amphetamine like stimulants.

3. Existing data on opiate use

The Department of Health Planning, Ministry of Health, has a Central Registry. Accumulated figures for registered addicts between 1974 and 1999 are given below.

Table 1. Cumulative cases of registered drug addicts by drug type in Myanmar (1974-2000).

Drug Type	Registered Cases	Cumulative figures by % (1974-2000)
Opium	36,601	59.3
Heroin	19,605	31.8
Marijuana	497	0.8
Amphetamine	28	0.04
Tranquillisers	233	0.4
Others	4,722	7.7
Total	61,686	100.00

A glimpse at figures accumulated over the last 26 years, shows that it is apparent that opium ranked first with 59%, and heroin second, with 32%.

It was found that up until 1999, opium continued to be the most preferred drug among addicts in Myanmar; followed by heroin, marijuana and codeine containing cough syrup and then stimulants in that order. The proportion of user by drug type as observed by CCDAC was found to be 51.55% for opium, 38.30% for heroin, 5.80% for marijuana and 1.25% for stimulants. The number of drug addicts varied from a minimum of 143 in Kayah state to a maximum of 38,490 in Shan state (North). The incidence of drug abuse is high in those regions where there are opportunities for trade, commerce, and employment. Factors that facilitate a comparatively higher drug use in Shan State to other States/Divisions may be attributed to easy access and comparative cheapness. In terms of drug addicts, Shan State ranked first with 49,510, Yangon division second with 10,806, Kachin state third with 9,726, Mandalay fourth with 6,845, and Sagaing fifth with 4,270. The age distribution for most addicts was between 20 and 49 years.

According to some studies in different DTCs, it was found that the route of administration among heroin users was in different stages. The majority of heroin users initially smoked it in cigarettes or used it as in the 'chasing the dragon' method and sometimes by sniffing. After about six months of heroin use, the route of administration changed to injecting. The reason for this change was the reduced cost. But some addicts at follow-up treatment sessions were found to be non-injecting because of their awareness of HIV/AIDS and their fear of overdose and arrest (Yangon DDTRU). It was estimated that in 1999 there were about 40% injecting drug users out of all heroin users.

4. Nature and pattern of opiate use

Before 1970, opium users were scattered among the poppy cultivation areas of hilly regions. They consisted of just the older physical workers and used opium as a relaxant, as a medicine for self-treatment of coughs and diarrhoea and for traditional and cultural usage. The average age of initiation was 30 years and the mean age was found to be 41 years and they were from below average social classes. Most of them were married males living with their families. They used a low dosage of opium with low tolerance, which was cheap and used either the smoking or ingestion route with few problems.

The abuse pattern abruptly changed after 1970. Opium was not only used by the elderly in rural areas now, but also by youths in suburban and urban areas. Most of them were young males, single, and if married were separated or divorced. Their mean age was 22 years and initial drug use was at 19 years and most belonged to the middle class or a higher social class. They used heroin and codeine more than opium for experimentation and curiosity and because of peer pressure, sometimes to gain a 'high' or to achieve a thrill for amusement. Initially they smoked heroin in cigarettes or used 'chasing the dragon' methods and sometimes by sniffing higher doses with increased tolerance. Later on they became injecting drug users (IDUs) with higher risk behaviours such as needle sharing, lack of sterilization and no bleaching. They end up as indiscriminate and hazardous users with subsequent drug related problems. Some heroin users use other drugs like benzodiazepines, psychotropic drugs and antiparkinsonism agents such as artane (trihexylphenidyl), sosegon (pentazocine) and codeine containing cough syrups. It was also found that some addicts were poly drug users and some used heroin in conjunction with alcohol.

5. Health consequences of opiate use

According to the Myanmar National HIV program for serological testing of HIV among IDUs, testing was done at six sites with a sample of 420 out of which 236 (56.2%) were found to be positive. It illustrated markedly that out of every two IDUs tested for HIV, one was serologically positive.

A five-year follow-up study at the Drug Dependency Treatment and Research Unit of Yangon Drug Treatment center revealed that there were two types of death related to opiate use. One was drug overdose (7.41%) and the other, death from HIV/AIDS (5.55%). (From a survey of 54 deaths from 173 study patients). Some other associated physical illnesses such as viral hepatitis and septic skin infections were found among opiate users.

6. Treatment of opioid dependence

• Detoxification methods

Before the 1974 Drug Law was promulgated, treatment of addicts was by traditional healers, indigenous physicians and monks, some of whom were quite famous. They used indigenous herbal medicines and opium together in a controlled manner, lowering the dose gradually. After the establishment of drug centers, physicians gave treatments of their own, using the narcosis method (using tranquilizers in high doses), or symptomatic treatments using analgesics, tranquilizers, antihistamines and anti-diarrhoea drugs to suppress withdrawal symptoms.

Methadone was also used in the mid 1970s but was omitted after a comparative study made between the 'cold turkey' method, the substituting symptomatic method and methadone detoxification. It was found that the 'cold turkey' method was inhumane. The patients suffered a lot and became less confident in the treatment service. Methadone was satisfactory, but in comparison with Tincture of Opium (1 % morphine solution), was found to be less effective.

Tincture of Opium with analgesic and chlorpromazine tablets used in gradual reduction methods over a period of 10 to 14 days was also found to be satisfactory in suppressing withdrawal syndromes. Methadone was very expensive and had to be imported and therefore this therapy was left out. As Tincture of Opium (T.O) is a cheap local product (produced by the Myanmar Pharmaceutical Industry) and equally effective compared to Methadone, it was introduced to all drug treatment centers in the country.

• In-patient and out-patient treatment programs

Normally major DTCs provide both inpatient and outpatient detoxification services. Inpatient services were given preference because of the relapse problems of outpatients and their

likelihood of arrest by law enforcement officers operating the Drug Law. The DTCs usually give detoxification programs to addicts rather than put them on maintenance programs. Major DTCs combine with rehabilitation programs such as animal husbandry, welding work, carpentry, cane works, motor vehicle services. Recreation and musical facilities are also provided. Meditation and relaxation therapies are also given in some centers. Peer group education programs and counselling services for HIV seropositive patients are also delivered.

- **Long-term comprehensive treatment and rehabilitation programs**

In 1982, two comprehensive care programs for detoxification and rehabilitation of opiate addicts mainly from chronic hard core cases were established in KaThe-Kwin and Wettikan where they were kept and trained for ten months. The Ka-TheKwin camp catered for 20 addicts and Wettikan for 1,200 at a time, (later reduced to 300 in 1988). Early results were quite impressive but later results became less satisfactory, the reasons being due to diversity of cultures, differing social backgrounds and language barriers among ethnic groups. At the beginning of year 2000, both camps were renamed as Youth Rehabilitation Centers, ShwePyiTha and ShwePyjAye, respectively.

- **Community based approach to treatment and rehabilitation**

A community-based program for treatment and rehabilitation was introduced in Kachin State (Myitkyina area). The outcome was found to be favourable. Similar programs were introduced in Muse and the Maing Yan area (Shan state). The community based drug demand reduction program launched in Muse from 1993 to 1995 was quite impressive. It was introduced simultaneously with a similar program on the Ruile (China side) funded by UNDCP.

- **Role of self-help groups and non-governmental organizations**

The community leaders with the help of primary health care personnel established residential programs where addicts are detoxified. Eleven were initiated in Muse in 1987 and others are starting in the Phakant and Kyukoke (Pansan) areas at the moment. Very few NGOs exist at present but the Myanmar Anti-Narcotic Association (MANA) is well established. Others such as the Border Area Development Association (BADA) and the Young Crusaders are playing a part. Their aim is to support drug abuse control work in the community.

- **Preventive health education programs**

Preventive education regarding drug abuse and in relation to HIV/AIDS was given in the community whenever necessary. Lectures were also given to the staff of the primary health care program workers. Distribution of pamphlets, posters, handouts, manuals and billboards giving drug education messages were erected at appropriate sites in towns and villages.

- **Drug treatment sector**

The Drug Treatment Sector exists under the Ministry of Health with the Deputy Minister of the Ministry of Health as the Chairperson, and the Director General of the Department of Health as the Secretary. The following measures are being planned by the Treatment Sector to address drug dependency issues:

1. The registration of drug users.
2. Treatment and rehabilitation.
3. Drug education.
4. The provision of training on Drug Prevention, Treatment, Rehabilitation and After-care.
5. The undertaking of research projects in combating threats posed by Narcotic and Psychotropic Substances.

6. The provision of supplies and equipment to Border Area Hospitals.
7. Collaboration with WHO.
8. Implementation of Special Programs:
 - a. Helping with the collection of drug abuse data.
 - b. Developing a fifteen year Drug Abuse Elimination Programme.
 - c. Implementing a Drug Treatment Programme in WADP.

- **Drug treatment services**

According to the 1974 Narcotics and Dangerous Drugs Law, all drug users are required to register at specific state run drug treatment centers. The 1993 Narcotic and Psychotropic Substances Law makes compulsory, the registration and provision of medical treatment for drug addicts.

Since 1997, thirty Drug Treatment Centres (DTCs) have been established throughout the country. The locations of the different DTCs are given below:

- 6 major centres at Yangon, Mandalay, Myitkyina, Taunggyi, Lashio, and Kyaing Tung.
- 22 subsidiary centres, with 4 in Kachin State, 10 in Sagaing Division, 5 in Shan State, 2 in Mandalay Division, and 1 in Mon State.
- 2 Comprehensive centres at ShwePyiTha and ShwePyiAye.
- Township Hospitals:
 - Provide drug treatment services in those townships without DTCs
- 49 Border Area Hospitals.

The six major DTCs have a combined daily bed capacity of 250 and a yearly capacity of about 2000. The usual duration of treatment is six weeks. Laboratory facilities are also made available at twenty centers. In those areas where there are no DTCs, Township Medical Officers are instructed to provide registration and treatment services. In addition to these, efforts are being made to provide drug treatment services in some border areas such as Mong-Yang, Homein, Silu, the Southern Wa Region, Laukkai (Kokant Region) and in Chin-Shwe-Haw (Kokant Region). All DTCs are manned with appropriate medical officers and trained staff who give internal and external training services.

- **Legal framework**

In 1974, the Government enacted the Narcotics and Dangerous Drugs Law to provide a broad legal framework. The Central Committee for Drug Abuse Control (CCDAC) was constituted in 1975 with the Minister for Home Affairs as Chairman. The Minister for the Progress of Border Areas and National Races and Development Affairs and the Minister for Foreign Affairs act as vice chairmen, the Deputy Ministers from relevant Ministries as members, and the Director General of the Myanmar Police Force as the secretary of the Committee. Committees for Drug Abuse Control (Cades) have also been formed at the State, Division, and District levels. The CCDAC is the institution responsible for implementing policy on narcotic drugs.

- **The 15-Year Narcotics Elimination Programme**

A long-term plan for the Elimination of Narcotic Drugs within 15 years was adopted in 1999. This plan is multi-sectioned, and proposed activities include the elimination of opium poppy production, the elimination of the abuse of narcotic drugs, law enforcement and the organization of the local populace to participate in the fight against narcotic drugs with international cooperation. The total estimated budget for the whole plan is US \$ 5613.569 million. The long-term plan consists of three consecutive five-year plans. The Treatment Sector is therefore required to coordinate all its activities with the 15 year plan for the Elimination of Narcotic Drugs.

• **15-Year Drug Abuse Elimination Programmes**

Following the directives of the CCDAC, the Treatment Sector under the Ministry of Health has drawn up a fifteen year plan for the eradication of drug abuse.

This plan is to be implemented through three consecutive 5 year plans. The first 5 year plan is to span from 1999 to 2003, the second from 2004 to 2008, and the third from 2009 to 2013. These programs were drawn up to achieve specific objectives, by following a set programme of actions.

Table 2. Drug Abuse Elimination Programme in Myanmar

Sr No	Programme	Expected Outcome
(a)	Awareness raising	First 5 year plan – 60% of general population Second 5 year plan – 80% of general population Third 5 year plan – 100% of general population
(b)	Treatment	First 5 year plan – 60% of total drug use population Second 5 year plan – 80% of total drug use population Third 5 year plan – 100% of total drug use population
(c)	Research	To achieve a greater efficiency in prevention, treatment, rehabilitation and after care.
(d)	Resource allocation	Appropriate budget with provision for accommodating national and international assistance.

• **Action Program, 1999**

1) Drug education and provision of training on drug intervention, treatment, rehabilitation and after-care

Under the direction of the Ministry of Health, drug education is provided as a component of health education in all middle and high schools run by the Department of Basic Education. IEC activities are being carried out at all 30 DTCs, in the country and hospitals in border areas.

2) Research on prevention and treatment of drug abuse

In 1999, 5 research works were carried out with assistance from WHO. Psychiatrists stationed at major DTCs in States and Divisions conducted these projects.

3) Establishment of preventive and treatment facilities at hospitals in border areas

Provision has been made for preventive and treatment services for drug addicts at hospitals in border areas and for the establishment of new DTCs in border areas.

Programs are underway for the provision of training to doctors and nurses attached to hospitals in border areas in two batches with the assistance of WHO. There are 49 hospitals in the border areas and arrangements have been made to provide training for 49 doctors and 89 nurses attached to these hospitals.

7. Treatment potentials in the future

Although we have relatively effective drug treatment and rehabilitation services throughout the country, there are no maintenance drug treatment programmes for our serious chronic users, such as Methadone maintenance treatment clinics. Other drug treatment options are not yet available in our country. In the future, we would like to see various treatment modalities introduced, especially for pharmacotherapies to manage opioid dependence in Myanmar. At

present, we have no clinical experience with such pharmacotherapeutic drugs as Methadone, Buprenorphine, Naltrexone, Levo-Alpha-Acetyl-Methadol (LAAM) and slow release morphine for detoxification during the withdrawal state. We would like to have maintenance treatment on a cost-effective basis.

PHILIPPINES

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1. Country profile

The Republic of the Philippines (RP) is an archipelago composed of the three major island groups of Luzon, Visayas and Mindanao with sixteen regions. RP is a democratic country with a multiparty system. It is strategically located south of the China Sea and acts as a bridge between East and West. It consists of 7,107 islands with a total land area of 300,000 hectares. RP is in proximity to several Asian countries.

The Philippines is strategically and centrally located in the Asia Pacific Region near to areas that are a major source of illegal drugs such as the Golden Triangle, as well as major illegal drug markets such as Japan and Australia. Hence, it is a logical choice for drug smuggling operations and as a transshipment point for illicit drug trafficking.

Population

The 1998 mid year population was estimated at 72.2 million. The annual growth rate was 2.3% in 1997. At the country level, the primary source of population growth is measured as the natural increase, meaning the excess of births over deaths. The natural increase was 2.27 that implies an average family has a size of 3 children. The overall population density is about 195.7 per square kilometer (DOH 1997).

The population is more concentrated in urban areas. The Philippines has one of the highest rates of urbanization among developing countries. The proportion of urban population with the total population was 48.7% in 1990. Urbanization is currently growing at an extremely high rate, 5.14% annually. Manila, which is the largest and most urbanized city, has a population of 7.5 million, which is 11% of the total population. The National Capital Region (NCR) where Manila is located, has the highest migration rate. International migration, while increasing, is an insignificant factor compared with internal migration.

In 1997, the 0-4 age group comprised 13.7% followed by the youth group. The male to female ratio is 1.2:1.0. However, male to female ratio among substance abusers is 10:1 (DDB 1996). In morbidity, communicable diseases predominate. The top three are diarrhoea, bronchitis and influenza. In mortality, non-communicable diseases predominate except for pneumonia which comes third. The top two are diseases of the heart and the vascular system which has a deteriorating trend over the past 5 years unlike diarrhoea and tuberculosis (TB). **Statistics on substance abuse are not yet part of the health information system.** Accidents occupy the number 5 and number 6 positions in morbidity and mortality respectively. Currently, there is no available information on cause of accidents. Moreover, there is no documented evidence of accidents that are drug related, although a survey among bus drivers in 1998 plying the route of EDSA revealed that 10% are using methamphetamine.

Economic growth

The Philippines experienced a severe economic recession in 1984-1985 during which the economy contracted by 10%. Since 1986, after the famous peaceful 'people power' revolution, the economy has grown modestly. But debts accumulated in the 1970's, under the Marcos dictatorship (Tadaro, 1997), have been critical for approximately 52% of the population who suffer from debilitating poverty. Currently, there is an expanding labour force with an annual increase rate of 4.5%, but the unemployment rate exceeds 30%. Due to the pervasive deteriorating social and economic conditions and the increasing vulnerability of the people, substance abuse has become predominant in Philippine society.

1.2 Organization of the Health System

The health service sector is composed mainly of the Government, private institutions, non-government and people's organizations, with different roles in health welfare but with the ultimate goal of improving the health status and quality of life of the people.

The Local Government Units (LGUs)

The Local Government Code (LGC) of 1992 brought full implementation of devolution from central Government in 1993. With devolution, the municipal and city health services were placed under Mayors and provincial health services and hospitals under the Governors. Obviously, health is not a priority of elected local officials and allocation of resources was poorly managed. Hence, in 1999 several hospitals were re-nationalized.

Department of Health (DOH)

The Department of Health is the principal government agency mandated by the Philippine Constitution for health promotion, preventive, curative and rehabilitative care. However, there are also many important government agencies that contribute to improved health. The Department of Education Culture and Sports (DECS) has an important influence on health knowledge, practices and behaviour. The Department of Labour and Employment (DOLE) has a role in the workplace. The Department of Social Welfare and Development (DSWD) has a pivotal role in addressing social concerns. The Department of Justice (DOJ) has a role in implementing peace/order while the National Bureau of Investigation (NBI) within the (DOJ) administers the government owned rehabilitation facilities. These agencies are responsible for important factors of determinants of health.

Currently, there are 16 Regional Health Offices under the jurisdiction of the Secretary of Health. Central DOH retained the regional offices, the medical and regional medical centres and a number of hospitals under its control.

Health services and facilities

A range of government, private, non-government and people's organizations and institutions deliver health services and operate health facilities. These include hospitals, health centers, health stations, clinics and laboratories. Government facilities provide promotional, preventive, curative and rehabilitative services, while the private sector focuses more on direct personal care that are curative and rehabilitative in nature. Government health services are mostly aimed toward low-income groups while the private sector generally concentrates on the middle and upper income groups. Non-government organizations are usually community based with a bias towards the poor and marginalized sectors of society. The essential elements of primary health care (PHC) are integrated in the Philippine health care delivery system through various public health policies and programs.

In 1990, there has been a move to include mental health into the PHC system. A National Mental Health Programme was established in 1991, in which priority problems were identified including substance abuse. But such efforts are waning because of the limited number of trained health workers in the field. However, with the change of administration and priorities, mental health care has shifted from PHC to hospital based mental health care. Due to resource constraints, the hospital¹ has been identified as the entry point for mental health activities.

The hospital system is divided into primary, secondary and tertiary categories according to the level of care that is being offered. With the implementation of the LGC, of the 587 that were

¹ Mental health is generally a specialized service provided only in the national institution in Manila and in some regions. Recently a move was made to integrate it into the tertiary general hospitals that are national facilities and enjoy comparatively better resource allocations than the devolved hospitals.

government run, 534 were devolved and the 53 that consisted of medical centers, special and regional hospitals were retained. There are 75 Provincial Health Offices, 278 District Health Offices, 2,385 rural health centers and 11,423 Barangay Health Stations (BHS) which are all devolved to the LGU's. A midwife mans each BHS. A physician, nurse, midwife, sanitary inspector, dentist and a medical technologist man a typical health center. The latter two are each responsible for two or three municipalities. A strengthened referral system among the facilities ensures a smooth and uninterrupted delivery of services.

In 2001, the health sector reform agenda started to be implemented and is ongoing.

Resources

Health care is not among the top priorities of the national Government and is viewed solely as consumption rather than an investment to individual and overall development. In 1997, DOH had a total appropriation of 11,020,083,000 pesos. This represented 15.58% of the social sector budget and 2.54% of the national budget. However, this is only 0.43% of the Gross National Product (GNP). The appropriated financial resources are still far lower than the recommended 3% share based on GNP. With limited budgetary allocation for DOH, there is difficulty in getting funds for new programs such as substance abuse treatment. Hence, there is a need for innovative ways of carrying out rehabilitation plans for substance abusers.

Private sector

The private sector in health care consists of commercial and business organizations such as manufacturing and advertising companies and non-governmental organizations (NGOs) such as socio-civic groups, religious organizations and foundations as well as medical and paramedical professionals. Human health resource development, policy and decision-making, research, service delivery and advocacy are the areas in which they are involved. In the establishment of a rehabilitation plan for substance abusers, the private sector including the NGOs may play a vital role in augmenting and complementing DOH services.

Communities, families and individuals

Growing awareness and desire for self-help is fast increasing and this has provided the impetus for people's active participation in health promotion and well being. Community based organizations have been established as initiated by the health sector, leading to a more integrated and co-ordinated approach to health and overall development, (DOH, 1997). In Manila, Alcoholics Anonymous (AA) and Narcotics Anonymous meetings are regularly held in selected localities.

2. Brief history of opiate use

Dutch traders introduced opium into the country. Opium use had started in the 17th century, reputedly to "steady the nerves of the soldier".

By the 19th century, the Muslims of Jolo and Sulu in the South had acquired the use of opium smoking, presumably from the Chinese who were the only group which the authorities tolerated using opium. By 1903, there were 190 opium establishments exclusively for Chinese use. In Manila, one out of twenty people was estimated to be addicted to opium. When a system of registration for individual addicts was introduced, all were encouraged to seek treatment. Facilities were totally inadequate for the registered addicts, (Spencer 1981).

The American civil government that took over from Spain in the 20th century, ordered a systematic survey of the drug problem. Taking the view that opium was a potential danger to the Filipinos, non-medical use of opium was banned in 1908. The American campaign continued until the Japanese occupation in 1942, at which point all supplies of illicit opium were cut off

from the country. By the 1950s, the number of Filipino opium addicts was probably the lowest in Asia. With a population of 20 million at that time, only 50 to 60 persons were arrested annually and were mostly Chinese. By 1963, a new trend appeared of a decreasing use of opium among the Chinese and an increasing use among the Filipinos who comprised 63% of the total arrests. At the same time, morphine was gaining in popularity.

When the Republic Act (RA) 6425² was promulgated in 1972, an estimated 20,000 substance abusers in general were accounted for. The average age was 18 years old and the majority were single. The execution of a prominent Chinese drug lord curtailed the supply of heroin in the country. The main substances of abuse in the 1970's were marijuana, benzodiazepines and heroin.

By 1980, Manila was the principal distribution point and center of drug activity accounting for 33% seizures and 45% arrests for illicit drug trafficking. The number of substance users increased to 250,000 with a male to female ratio of 15:1. Marijuana continued to be used by 97% of the total substance dependants. In this year, the Philippines became known as a transit point for heroin and cocaine. Methamphetamine (MA) known as 'shabu' in the Philippines was noticed to arrive in 1985. The Philippine Constitution of 1987 abolished the death penalty which caused drug syndicates to flourish and 'shabu' to enter into the drug market. Currently, the Philippines has "no known domestic heroin problem". (International Narcotics Control Strategy Report, 1997).

3. Existing data

There is no reported admission of opioid dependence in the national mental institutions and regional psychiatric hospitals. An interview of a key informant at Makati Medical Centre (MMC), a private medical center catering for affluent families, revealed that 5 to 8 opioid dependent patients have been admitted in the past two years. These patients belong to the uppermost economic bracket in the Philippines and some were foreigners who had decided to be admitted to the MMC. In 1998, heroin was reported to be a part of seized drugs in police campaigns against illicit trafficking. From 1999 to the present, no heroin seizures have been reported, (NDLEPCC 1999-2000).

4. Nature and patterns of opiate use

Opiate users admitted to Makati Medical Center include a circle of affluent families usually living in the Makati area and a few foreign nationals. These patients are aged in their mid 20s to 30s, are male and have reached college education. Opioids used were heroin, morphine and codeine. Preferred route of administration was injection and orally for codeine. Other substances used were benzodiazepines, (key informant).

5. Common type of opiate related harm

Admitted patients were observed to be undernourished and suffered from social and work dysfunctions. However, they were free from HIV and hepatitis infection, (key informant).

6. Treatment

For opiate withdrawal, morphine is given intramuscularly and clonidine orally to titrate the

² The Dangerous Drugs Act of 1972 provides for the definition and regulation of prohibited and regulated drugs; appropriate penalty and criminal liability for the importation, sale, administration, delivery, manufacture and cultivation of plants which are sources of dangerous drugs; and possession of any of the prohibited drugs in specified quantities.

withdrawal symptoms. For patients taking opiates with benzodiazepines, withdrawal from benzodiazepines is prioritized. No long term follow-up is observed upon discharge. Patients come for admission when their supply is held up or has been consumed, hence causing the withdrawals. It is observed that the same patients come for admission at least once a year.

Currently, the government has no treatment facility for opioid dependence. Since opiate dependents are from the higher social economic bracket, they can afford to attend private medical centers.

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NDLEPCC (National Drug Law Enforcement and Prevention Coordinating Center) Annual

THAILAND

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1. Country profile

Population, geo-environmental and structural characteristics

Thailand is situated in South East Asia between Myanmar in the West and the Lao Peoples Democratic Republic in the North East. Cambodia forms its Eastern neighbour. The Southern region is a long narrow peninsula joined to the Northern part of Malaysia. The country has a land area of about 514,000 square kilometers. The whole Kingdom is in the same time zone which is seven hours ahead of Greenwich Mean Time.

The population of Thailand was 61.5 million at the end of December 1998. 30.6 million are male and 30.9 million females. The population of Bangkok, the capital, is 5.7 million. About 95 % of citizens are Thais and the rest are Chinese and Indian as well as other ethnic minorities. Between 1964 and 1996 the Thai peoples life expectancy at birth had increased from 55.9 to 69.97 years in males and 62.0 to 74.99 years in females. By 2020, it is expected to rise to 72.2 years for males and 76.5 years for females, (National Statistical Office). Although this is higher than the global average (64.7 years), it is still lower than for some other Asian Countries, e.g. 70.5 years for Malaysia and 71.3 years for Sri Lanka, (Institute of Population and Social studies, Mahidol University, 1996).

The Thai language is officially and commonly used for speaking and writing, while English plays a greater role in the business sector.

Most Thai people, (92.56%), are Buddhists, followed by Muslims (5.3 %) and others.

Health service systems in Thailand have evolved from self-reliance in the past, using local wisdom for curative and health promotion, to systems which depend upon modern medical and health services. The public sector is the main service provider, including private profit-making and non-profit making sectors in a pluralistic health service system. Meanwhile, many people still depend on traditional methods of self-care.

The Ministry of Public Health (MOPH) is the core agency in the Thai public health system, having a 60 % share of health resources, most of which are in rural areas and plays a role in the management of Thai health care programs.

2. Brief history of opiate use and the main drug situation in Thailand

Thailand has suffered periodic extensive opium dependence in past centuries. The first heroin epidemic which lasted a few years occurred in 1959. The geographical proximity of the opium and heroin producing Golden Triangle Area established a widespread and deep-rooted opium dependence problem.

The second largest heroin epidemic occurred in the 1970s and 80s. During the 1970s the abuse of 'ganja', opium, morphine and methamphetamine increased concurrently with heroin abuse. In early 1996, high heroin prices caused heroin addicts to use methamphetamine as an alternative.

However, the extent of amphetamine type stimulants (ATS) abuse superseded heroin abuse in the late 1990s. It still remained the main problem in Thai society. The expansion of ATS abusers has increased four to five times more in the last four years. It has been found that the

characteristics of clandestine methamphetamine laboratories have changed from large scale manufacturing sites to small scale movable manufacture. The sources of production have moved from central areas to the Northern border areas of Myanmar and Lao PDR. The smuggled methamphetamine from these areas consists of more than 80% of total methamphetamine supplied in Thailand.

The number of heroin users in drug dependence treatment was more than 80% in the 1980s and gradually decreased from 72 % in 1997 to 56 % in 1999. More than half of the heroin users resided in Bangkok and the urban areas of the central region. The opium user population although much smaller than the heroin user population were both targeted for percentage data among the treatment population in the Northern and Northeastern regions. The Southern region had the smallest treatment population of which more than 90% were heroin users.

In 1998, the price of heroin in Thailand was reduced compared with the year before. The availability and lower price of heroin indicates that the epidemic problem could return to our society in the near future.

3. Existing data on opiates

The data from the TDRI survey in 1993 estimated that drug addicts in Thailand number 1.27 million. The main problems are volatile substances, 7 persons per 1,000 population, ganja 5.5, Amphetamine 5.8, heroin 3.6 and opium 1.1 persons per 1,000 population, respectively.

Data was gathered from drug addicts surveyed and estimated by the ABAC pole in 1991. There were drug users and drug addicts in schools and colleges and a total of 503,849 persons from all over the country. At present, estimated drug users and drug addicts are about 1.9 to 2.2 million. The epidemiological surveillance system by the MOPH from 1984 to 2000, showed HIV infection through shared injection equipment among the injecting drug users gradually rose to 51.1% in 1999 and decreased to 47 % in 2000.

4. Nature and patterns of opiate use

There are 60,000 to 100,000 reported cases per year from the drug dependence treatment centres. Heroin users consisted of 56% in 1999. More than 90 % were male and their ages mostly ranged between 20 and 35 years. Less than 7 % were students and about one third were unemployed. About 60% administered heroin intravenously.

5. Treatment of opioid dependence

- **Treatment approaches**

Drug abuse treatment methods in Thailand are divided into three systems:

1. Voluntary System

This gives an opportunity for drug addicts to voluntarily decide to get treatment in medical centers in both the public and private sectors.

The Ministry of Public Health has issued a Public Health Regulation for the voluntary treatment of substance dependence. The Regulation defines how management and treatment services operate. The treatment service is under licensing control and includes four stages.

1. Pre-admission within 7 days
2. detoxification within 45 days
3. rehabilitation within 180 days
4. after care within 1 year

In the area drug abuse of treatments, in order to respond to the increase in the drug abuse problem, there are at present 710 treatment centers. 627 are run by government agencies and 83 are run by the private sector.

2. Correctional system

The system is to treat drug addicts who have been found guilty of crimes and imprisoned. The drug addicts are required to get treatment by law. The system is operated under the Ministry of the Interior.

3. Compulsory system

It is legally enforced that drug addicts get treatment under the Drug Addict rehabilitation Act, B.E. 2534. This means that suspects in drug cases are required to have their urine tested and to get treatment by the rehabilitation programs within a specific period. At present, this system is not yet implemented. The system will operate under the jurisdiction of the Ministry of Justice. Admission to the system is strictly under court judgement. Methadone detoxification treatment is the major treatment for opioid dependence in Thailand. In response to the IVDU problems, the Department of Medical Services was forced to review and amend the Narcotics Law B.E. 2522, by supporting long term Methadone Treatment. This began in September, 2000.

To control and prevent methadone entering the drug trafficking network:

1. Treatment centers must give rehabilitation services to drug addicts in four steps to stop heroin use and methadone use in the future.
2. The key criteria for receiving long term methadone treatments are as follows:
 - a. Heroin use of not less than two years.
 - b. Heroin use of not less than 200 mg/day.
 - c. Three previous treatment episodes.
 - d. Disruption of social, work and or quality of life through heroin addiction.
 - e. Physicians must agree to use long term methadone treatment.

Methadone detoxification treatment is the major treatment for opioid dependence in Thailand.

Therapeutic communities and other drug free approaches are also available but attract and retain only a small proportion of opiate dependent people. Naltrexone treatment has become available recently. It was registered and approved by Thailand FDA in 1997. It was indicated as a treatment of alcohol dependence. It is very expensive but is considered of use in some groups of patients especially in the private sector.

Buprenorphine has been registered for the relief of moderate and severe pain but its use for the treatment of opioid dependence is not currently registered.

• Pharmacotherapies

Medications used

As indicated above methadone detoxification remains dominant. Long term methadone treatment or methadone maintenance has just been approved and amended by The Narcotics Act B.E.2522, so it will become generally available. Withdrawal treatment for opioid dependence relies on clonidine and symptomatic medications. Naltrexone and Buprenorphine is not generally in use in Thailand as a withdrawal treatment.

Legislation and control mechanisms

Methadone is restricted. It is listed as a schedule 2 in the Narcotics Act B.E. 2522. It can only be prescribed and dispensed by physicians, and all patients receiving methadone maintenance are registered with drug dependence treatment clinics and reports are sent to the Narcotics Control Division FDA.

Buprenorphine is listed as schedule 3 in the Psychotropic Substance Act B.E. 2518. It is restricted to be prescribed by physicians or dispensed by any pharmacist with the physician's prescription. Naltrexone is more generally available, being listed as a specially controlled drug with a safety -monitoring program. This means that it is able to be prescribed by physicians in all government sectors and private sectors which are drug dependence treatment clinics according to the Narcotics Act B.E. 2522 and some private sectors that treat alcoholic dependence.

Profession involved in treatment provision

The delivery of effective pharmacotherapy is multidisciplinary through medical practitioners, nurses and pharmacists.

Level of Primary Health Care involvement

Primary health care providers are considered best involved in the after care process. Methadone detoxification, methadone maintenance and other drugs continue to be prescribed at treatment clinics by physicians.

Pharmacy involvement

The majority of methadone clients now receive their medication from a community pharmacy by a physician's prescription. There is a trend of increasing involvement of community pharmacies for dispensing and supervising the administration of methadone. Some clients obtain methadone from nurses or medical practitioners in methadone clinics. This depends on the management of each treatment clinic.

Potential problems

The general public has limited understanding about the relapse nature of drug dependency. Most people and even policy makers aim at quick achievement of abstinence. A range of other problems include:

1. Social stigmatization can delay the addict's access and opportunity to get treatment.
2. Methadone maintenance is practiced as a pilot study in many centers. The law is under the amendment process. NSEP is still against the law and public opinion.
3. Other alternatives are welcome but need some pilot studies before they can be widely accepted. Cost is also a major issue to consider.
4. The economic down turn in Asia and the global slow down may effect resources for treatment and prevention. This may also force more people into the illegal drug trade.

The production of opiates and ATS in neighbouring countries by minority ethnic groups, that are not controlled by central Governments, may cause more difficulties with supply reduction. Better understanding and cooperation with our neighbors to cope with the problems together may be the best strategy in the future.

VIETNAM

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1. Country profile

Vietnam's surface area is 326.5 km² and includes 61 provinces and cities. Vietnam's population is about 71 million with many ethnic and indigenous groups. The majority ethnic group is the Kinh group (over 90%). There is a small population of the Khome group (Cambodian), and Hoa group (Chinese), as well as 63 minority indigenous groups.

The Vietnam Government is responsible for health technical standards and for subsidizing the national health expenditure such as public hospitals, public health services, pharmaceutical and health science research through the Ministry of Health. However, health service investment depends on economic development in each province.

2. Brief history of opiate use

After 1965, with the deployment of the United States forces in Vietnam, an invasion of new drugs came into the country that included heroin, cocaine, amphetamines and LSD.

1975 was a landmark as far as drug addiction was concerned, due to the political changes which took place in South Vietnam after the withdrawal of American Armed Forces and the defeat of the Saigon Government. In general, social background changes led to a limited drug abuse situation in Vietnam. Drug use was mainly of opium (black opium), or opium combined with benzodiazepines. Heroin, cocaine, and amphetamines were not yet available. At this period the mean age of drug users was 25 to 40 years.

In 1996, heroin again became the main addictive drug in Vietnam. Infiltration of heroin came from Myanmar, Laos, China, Cambodia, Hong Kong and Taiwan. Most drug users were young people between 16 and 25 years old.

From the beginning of 2000, amphetamine use has been mentioned frequently in the news. The Vietnam Government has also ordered its Ministries to develop strategies for ATS prevention. However, heroin users are still the majority group among drug addicts groups, (over 90%).

There are continuing risks of drug problems in Vietnam:

- The availability of heroin has increased at the same time as the cost of heroin has decreased.
- Prevalence of heroin use is high. There are 120,000 to 150,000 addicts with a relapse rate of more than 90%.
- HIV infection among drug users is increasing by 40% to 50%. Injectors with HIV make up 63% of the drug population.
- The age of initiation and age of heroin users continues to fall, but students rate of heroin use (and ecstasy) is increasing.
- Drug related crimes are increasing.

3. Existing data

Drug user numbers in Vietnam are estimated at about 150,000 people with male to female rates being 9:1. The mean age is around 23 years old.

4. Nature and patterns of opiate use

Generally, drugs addicts are unemployed (54%). The national unemployment rate is 6.25% by comparison. Education and job skills of drug addicts are very limited.

Smoking heroin was the most common route of administration for new heroin users. But after one to two years, 57% have changed from smoking to injecting and many will have become involved in poly drug use with benzodiazepines in particular. Overdose cases, both fatal and non fatal, have become increasingly frequent to emergency services.

5. Health consequences.

Although needle exchange education and safer sex education programs have been developed, the HIV prevalence among drug injectors continues to increase, (HIV infected IDUs among the HIV group was around 63%). Furthermore, risk of HIV infection is also increasing due to sexual risk taking behaviour among infected injectors and smokers, (the rate of HIV infection in the smoking heroin group is 30%). We have not yet processed data on overdose cases, HBV and HCV transmissions in drug user groups.

6. Treatment of opioid dependence

• Treatment approaches

For the drug treatment policy of the Vietnam Government, opioid dependence treatment includes three criteria:

- * Detoxification.
- * Education (therapeutic community) and technical training.
- * Addict management in social community programs.

The number of persons receiving treatment for opioid dependence is more than 60% (therapeutic community).

Methadone treatment has been experimented with for a trial period in some provinces, (Hanoi, Nhatrang, and Tiengiang), but it has not yet been officially applied in clinics. Naltrexone, we hope will be introduced in the next year.

• Pharmacotherapies

Future evaluation plans:

Currently, Vietnam has only therapeutic community methods for opioid dependence treatment. We have not yet evaluated the outcome of therapeutic treatment but the heroin relapse rate appears to be high for the reason that “No one method fits everybody”. We hope to develop a range of treatment approaches in the future and to get more experience of opiate maintenance treatment.

Potential problems:

Vietnam's drug treatment policy is resistant to substitution treatments such as methadone, LAMM, and buprenorphine because the general view is that substitution treatments simply replace one form of drug addiction with another. Also, community understanding is still limited. However, because substitution treatment has not yet been available, its practical application has not been tested here. Social harms such as relapse to heroin use, HIV, Hep B, Hep C, and other crime problems have become a central point of Vietnam's drug treatment policy.

Notes

