CME ARTICLE
Addiction in Singapore: changing patterns and evolving challenges

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ABSTRACT
Data from recent studies have shown an increase in substance use and addictive behaviours in Singapore. However, training and services still lag behind this trend, which means the provision of adequate treatment is lacking in spite of good evidence that treatment approaches for addiction disorders are effective. There is a need to train more manpower for this purpose, especially in primary healthcare. Another challenge is to ramp up services as quickly as possible to manage the growing number of addicts. Research should also focus on special populations, while public health education and national policies can be improved, particularly to curb binge drinking. We need to be open to the use of harm-reduction therapies and substitution treatments, as addiction is a chronic relapsing disorder with significant health and psychosocial morbidity.

Keywords: addiction, policies, public health education, research, services

INTRODUCTION
In the last decade, more local research data on addiction has become available, particularly in epidemiological studies. This has been vital in observing the changing patterns and evolving challenges of addiction in the Singapore scene. These important findings include:

1. The lifetime prevalence of alcohol abuse and alcohol dependence was 3.1% and 0.5%, respectively, while the 12-month prevalence was 0.5% and 0.3%, respectively. (1)
2. The estimated prevalence of alcohol use disorders in a general hospital was 1.93%. (2)
3. Alcohol consumption trends showed an increase in alcohol consumption, especially binge drinking, among Singaporean drinkers between 1992 and 2004, from 5.1% to 10.0% in both genders and most evidently among adults aged 18–29 years, with consumption fast approaching that in the USA; the increase in frequency of drinking was most pronounced among women aged 18–29 years. (3) Binge drinking was also found to be evident in the Singapore Mental Health Survey. (1)
4. The point prevalence of nicotine dependence was 4.5%. (4)
5. The probable pathological gambling rate for 2011 was 1.4%, while the probable problem gambling rate was 1.2%. (5)

TRENDS IN SERVICES, TRAINING AND RESEARCH
On the health front, a tertiary addiction treatment centre, National Addictions Management Service (NAMS), was established at the Institute of Mental Health in 2008, followed by a consultation liaison psychiatric programme in addiction medicine with brief interventions at Changi General Hospital in 2009 (6) and an outpatient addiction clinic at National University Hospital in 2010. Inter-hospital addiction meetings were initiated in 2011 by NAMS to facilitate communication and training among the various hospitals. The failure of buprenorphine therapy programme for opioid dependence in this period was a great setback for addiction treatment in Singapore. (7) This led to the official policy of zero tolerance toward illicit drug use, which was commonly interpreted as no room for harm-reduction treatment modalities, in spite of good medical evidence for harm-reduction approaches and substitution therapies in the treatment of addiction. (8) Only the substitution programme with methadone continued to be made available to a small number of remaining elderly opium users. (9)

The last decade saw an addition of only three psychiatrists who received some form of training in this subspecialty (currently there is a total of only ten for the entire nation, with six of them in private practice). The national psychiatric residency, which started in 2010, has included a compulsory three-month addiction medicine rotation. (10) A study on the attitudes of doctors and nurses in a general hospital toward addicts showed that only half of them felt that they had adequate knowledge and skills to manage alcohol-related conditions, and even fewer felt comfortable working with addicts. (11) There are now an estimated 200 persons trained as addiction counsellors, which represents an increase of 100% in numbers from 15–20 years ago (Personal communication, Tony Ting, President, Association for Professionals Specialising in Addiction Counselling, Singapore, February 28, 2012). However, the actual number who are practising or maintaining their certification is about 40. There are now addiction modules in almost all psychology and counselling courses. For the medical
undergraduate curriculum, the number of hours of training in addiction has risen from around two hours previously to more than 40 hours since 2011. The issue of family physicians over-prescribing benzodiazepines in Singapore has been highlighted, leading to the Ministry of Health clinical practice guidelines for prescription of benzodiazepines. Further administrative measures may be on the way this year.

Community services, agencies and programmes have expanded, with WE Centre for Addictions Recovery and Education and family service centres providing addiction counselling. The number and locations of Alcoholics Anonymous (AA) groups have also grown significantly; there is currently a minimum of three AA groups being held daily in Singapore. Similarly, Narcotics Anonymous (NA) groups have increased in numbers and locations, with 3–4 stable groups being held weekly. The number of half-way houses, however, has remained stagnant during this period, with some of them conducting direct intake from drug rehabilitation centres or prisons, so there were less places available to addicts via the healthcare route. Some of these half-way houses also admit persons other than those strictly with addiction disorders.

Statistics from the Central Narcotics Bureau indicate that there was a 13% increase in the number of drug abusers arrested from 2010 to 2011, although the number of new drug abusers registered a decrease of 17%. These figures likely represent recidivism rates, which is in line with research findings, indicating that addiction is a chronic, relapsing disorder. Heroin and methamphetamine remain the top two illicit drugs of choice, making up 93% of drugs used by all arrested drug abusers in 2011. Methamphetamine is the most popular drug (62%) among new or first-time arrested abusers. Alarmingly, the number of new youth abusers below the age of 20 years saw an increase from 79 in 2007 to 155 in 2010 and 225 in 2011. Chinese and Malay drug abusers make up the majority of arrests at 48% and 33%, respectively. There was a drastic decline in the number of inhalant abusers arrested, from a total of 499 in 2010 to only 156 in 2011, suggesting a contained situation since measures were introduced in August 2007; youths below the age of 20 years formed the largest part (56%) of this group.

The advent of the integrated resorts with casinos was met with apprehension by both public and healthcare workers, but the increase in the number of problem and pathological gamblers with apprehension by both public and healthcare workers, but the increase in the number of problem and pathological gamblers and clinical practice guidelines on problem gambling. Clinical research has also been carried out to examine stress-coping morbidity among family members of addiction patients. A pharmacogenetic study on alcohol and aldehyde dehydrogenase polymorphisms in Chinese and Indian populations, and reports of medical complications from the use of buprenorphine and cough mixture such as dextromethorphan have also been published.

Another area that has been well researched is that of internet addiction among Singapore youth. The prevalence of pathological video gaming in Singapore has been found to be similar to that in other countries (9%). Greater amounts of gaming, lower social competence and greater impulsivity were found to be risk factors for gaming addiction. A higher figure for excessive internet use (17.1%) has been reported among adolescents, and although this is not equivalent to internet addiction, it is associated with a lower likelihood of having confidants and the presence of feelings of sadness or depression.

**CHALLENGES**

The most pressing challenge is to provide adequate and quality services for addiction treatment. These include inpatient as well as outpatient programmes. As the addicts are ‘out there’, community-based treatment, such as those within family physician clinics, may be the way forward. The consultation-liaison psychiatric model for addiction medicine could be duplicated in various general hospital settings, not just for alcohol and benzodiazepine abuse but also for gambling addiction. Denial can be present even in hospitals; thus, this is an obstacle that needs to be overcome.

An equally urgent need is that of trained manpower – medical, nursing and allied health – especially in primary care. There should be incentives for staff who choose to be trained in addiction, similar to the scheme for trainees opting for geriatric medicine, as both these subspecialties are deemed to be unpopular. In Australia, general practitioners and internal medicine physicians also train and work in the field of addiction, and this may be a possible answer to building up medical expertise in this field. It is also important to integrate other mental health professionals, such as clinical psychologists, medical social workers and counsellors in the community, so that early identification of cases and interventions can be carried out. In addition, step-down care should be expanded, and more dedicated half-way houses, support groups and counselling services should be made available to addicts and their families. Networking between community agencies and hospitals can also be further improved, while more community recovery groups can be set up in locations such as family service centres and other community organisations.

In the area of research, we recommend a stronger focus on special populations, such as adolescents, the elderly, women and the disabled. Moreover, certain trends require close attention, especially binge drinking, which is already an epidemic in many western countries. Overprescription of potentially addictive analgesics should also be closely monitored. Some ethnic groups with psychosocial issues that are linked to addiction may need the help of a health team working with the community. Advances in neuroscience have led most clinicians to consider all addictions as brain disorders – the same systems through the brain’s reward
centre for all addictions irrespective of behaviour or substance – but unfortunately, society does treat each addict differently. Societal attitudes and attitudinal change can be studied with a view to tackling stigmatisation.

Public health education programmes in addiction (except for smoking cessation) have been lacking locally. These programmes, which ought to involve the healthcare sector, can be better coordinated, with more comprehensive and enlightened national policies on substance use, particularly alcohol. National health policies can, and should, influence the prevalence and morbidity of addiction disorders, as well be evidenced in the approach to nicotine dependence. There is a call to set up a national body to tackle problem drinking; this can help coordinate policies between regulatory authorities and the healthcare sector with regard to issues such as alcohol pricing, tax levies, reduction of the number of drinking hours, underage drinking, drink driving, binge drinking, responsible drinking and harm minimisation. In addition, alcohol marketing needs to be restricted. These policies are all backed by the World Health Organization.

The issue of harm-reduction treatment modalities needs to be reconsidered, in particular the use of suboxone as a substitution therapy, with an adequate support system set up. Countries such as Hong Kong have similar laws regarding substance use but still manage to have good substitution therapy programmes that aim for harm reduction, which benefits both the persons with addiction as well as their families.

In spite of the many challenges for addiction in Singapore, we have reasons to be optimistic. National resources for healthcare are now more readily available, and there is heightened awareness among healthcare staff as well as key members of the community that addiction is an area that has long been neglected but simply cannot be ignored. With effective treatments and better possible outcomes, the road forward is promising.

REFERENCES
SINGAPORE MEDICAL COUNCIL CATEGORY 3B CME PROGRAMME
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Question 1. The following epidemiological trends are present with regard to alcohol addiction in Singapore:
(a) Binge drinking is on the rise.
(b) Alcohol consumption among women is low.
(c) Lifetime prevalence of alcohol abuse is around 3%.
(d) Estimated prevalence of alcohol use disorders in general hospital is around 2%.

Question 2. These statements are true for drug abuse in Singapore:
(a) The increase in total number of drug abusers with a lower number of new drug abusers arrested is likely to represent recidivism rates.
(b) Heroin and methamphetamine are the top two illicit drugs of choice.
(c) Inhalant abuse is still on the rise.
(d) The number of new youth drug abusers has decreased.

Question 3. These are pressing challenges for addiction treatment in Singapore:
(a) Community-based treatment and step-down care.
(b) General hospital addiction programmes.
(c) Trained manpower in primary care.
(d) Early identification of cases and interventions.

Question 4. Public health and regulatory policies that can help to tackle problem drinking include:
(a) Lowering tax levies.
(b) Increasing the number of drinking hours.
(c) Curbing underage drinking.
(d) Campaigning against binge drinking.

Question 5. Regarding harm-reduction treatment modalities:
(a) They include substitution therapy such as suboxone for opioid dependence.
(b) They are incompatible with zero-tolerance drug enforcement policies in Singapore.
(c) They can be effectively carried out only when accompanied by a comprehensive support system.
(d) They have not been proven successful in other Asian countries.

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