ABSTRACT
Although awareness of pathological gambling is growing in Singapore, some medical practitioners may not be conversant with the availability of treatment at the National Addictions Management Service (NAMS) and the treatment approaches. Some may not be clear about the diagnosis. This article aims to discuss the above and to stress the important roles that the primary care physician can play in terms of identification of those at risk of developing gambling problems, early identification of the pathological gamblers for referral for early treatment, and implementation of brief intervention for those who are reluctant to seek treatment from the addiction specialists.

KEYWORDS: pathological gambling, national addictions management service, brief intervention, primary care physician’s role.

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INTRODUCTION
Gambling is a common activity throughout the world. For the majority, gambling is a pleasurable social activity conducted among friends and relatives. For a small number, however, it becomes a serious problem that adversely affects the gambler and all aspects of his life, in particular his family, job, interpersonal relationships and mental health. Such people often labour under the misconception that they can ‘beat the system’ one day and win big: they do not realize that gambling is an activity where the outcome is unpredictable and based on chance. Prior to the establishment of the 2 casinos in Singapore, 2 prevalence surveys on problem gambling were conducted by the Ministry of Community Development (MCYS) in 2005 and 2008; the latter showed that 1.7% of those surveyed had probable problem gambling while 1.2% had probable pathological gambling. Many in Singapore were concerned that the number would grow with the presence of the 2 local casinos. To its credit, the government took preemptive steps to prevent the problem with the establishment of the National Council on Problem Gambling (NCPG) and the Casino Control Act which empowers the NCPG to issue 3 types of Casino Exclusion Orders (self, family and third party exclusion) to individuals. At the same time, treatment of pathological gambling was made available in a 3-tier framework that involves community agencies like the family service centres in tier 1, the Tanjong Pagar Family Service Centre in tier 2, and NAMS in tier 3. At tier 3, NAMS is responsible for the treatment of the more severely afflicted pathological gambler.

NATIONAL ADDICTIONS MANAGEMENT SERVICE (NAMS)
Located at the Institute of Mental Health at Buangkok Green Medical Park, NAMS is dedicated to the management of all addictions, of which the principal ones are drugs, alcohol and gambling. Service is delivered by a multi-disciplinary team of addiction counsellors, psychologists, social workers, family therapists, nurses and addiction psychiatrists. Treatment is predominantly outpatient for behavioural addictions like pathological gambling, while a 24-bedded ward for detoxification and rehabilitation is available for the inpatient treatment of the chemical addictions.

NAMS had its beginnings in the dedicated Alcohol Treatment Centre (ATC) of the old Woodbridge Hospital (WH), which was subsequently replaced by the Community Addictions Management Programme (CAMP) in 2001, funded by the MOH Health Service Development Programme. In a timely move, CAMP evolved into NAMS in 2008, funded by the MOH Re-investment Fund, to take charge of all the addictions including pathological gambling. All primary care physicians are familiar with drugs and alcohol dependence, but some may not be familiar with pathological gambling, which is to be expected as it was classified as a diagnostic entity in as recently as 1980, in the 3rd edition of the diagnostic and statistical manual of mental disorders (DSM-III).

DIAGNOSIS OF PATHOLOGICAL GAMBLING
Gamblers can be social, at-risk, problem, or pathological. Social gamblers form the majority; they gamble for fun with money they can afford to lose. Pathological gamblers are those who fulfil the A and B criteria as listed in the table below, reproduced from the diagnostic and statistical manual of mental disorders, 4th edition (text revision), DSM-IV-TR (2000):
Researchers are working to come up with a brief questionnaire for use by busy clinicians to detect pathological gambling early. Some risk factors for pathological gambling include impulsivity, alcohol and substance abuse/dependence, attention deficit/hyperactivity disorder, antisocial personality problems, family history of gambling, and starting to gamble at an early age. Warning signs that primary care physicians should look for are preoccupation with gambling, loss of control, increased tolerance as in placing bigger bets and gambling more frequently, withdrawal symptoms (restlessness, irritability) when not gambling, betting more money to chase losses, bailouts by family to help with the finances, lying and involvement in illegal activities to fund the gambling7.

**TREATMENT OF PATHOLOGICAL GAMBLING AT NAMS**

When referred to NAMS, the patient is assessed by the counsellor followed by the psychiatrist, to engage the patient, establish rapport, diagnose, and map out a treatment plan. The diagnosis is confirmed using the DSM-IV-TR criteria. The treatment plan includes individual counselling using cognitive behavioural therapy based approach, group counselling (psycho-education and support), family education and support, and in certain cases, pharmacological therapy as well. Each patient is assigned a personal counsellor who is also responsible for case management of the patient. Debt issues are addressed and the patient is referred to the Credit Counselling Service, a non-government organization registered with the Commissioner of Charities, if legal debts were involved and negotiations with the financial bodies were needed. Specific psychological and family issues are handled by the psychologist and family therapist who are members of the multidisciplinary team. As the majority of the patients are financially troubled by the time of the referral, the social worker’s assistance is crucial.

Pathological gambling is generally accepted as an addictive disorder (although it is currently classified as an Impulse Control Disorder in the DSM), where the pathology is thought to involve various parts of the brain, including the ventromedial prefrontal cortex6. Abnormalities in the neurotransmitter systems of serotonin, dopamine, noradrenaline and endorphin have been reported. To date there has been some preliminary research showing the effectiveness of Selective Serotonin Reuptake Inhibitors (e.g. Fluvoxamine), opioid antagonists (e.g. Naltrexone), and mood stabilizers (e.g. Lithium), in the treatment of pathological gambling7. The American Psychiatric Association is currently working on DSM-V; preliminary indications are that pathological gambling is likely to be subsumed under the ‘Addictions and other related disorders’ group.

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**EARLY DETECTION OF PATHOLOGICAL GAMBLING BY THE PRIMARY CARE PHYSICIAN**

Survey tools are available for use in the tracking of the prevalence of problem and pathological gambling in population surveys. Most if not all primary care physicians would not have the time to use these tools in their daily practice. The primary care physician would need to have a high index of suspicion when a patient turns up with anxiety and depressive symptoms and appears troubled. Local NAMS data4 on 350 pathological gamblers has shown that co-morbid mental health problems was high (28%); 11.7% showed depression, 10% alcohol abuse/dependence, and 15% reported past suicide attempts. Studies done in other jurisdictions have also shown the presence of significant co-morbidity. A recent joint survey in Hong Kong done by the Tung Wah Group of Hospitals, the Department of Applied Social Science of Hong Kong Polytechnic University and the Divisions on Addictions affiliated to Harvard Medical School, reported that 63.7% of the 201 pathological gambling subjects were found to have at least one type of mental disorder5.

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**A. Persistent and recurrent maladaptive gambling behaviour as indicated by five (or more) of the following:**

1. Is preoccupied with gambling
2. Needs to gamble with increasing amounts of money in order to achieve the desired excitement
3. Has repeated unsuccessful efforts to control, cut back, or stop gambling
4. Is restless or irritable when attempting to cut down or stop gambling
5. Gambles as a way of escaping from problems or of relieving a dysphoric mood (e.g. Feelings of helplessness, guilt, anxiety, depression)
6. After losing money gambling, often returns another day to get even (“chasing” one’s losses)
7. Lies to family members, therapist, or others to conceal the extent of involvement with gambling
8. Has committed illegal acts such as forgery, fraud, theft, or embezzlement to finance gambling
9. Has jeopardized or lost a significant relationship, job or educational or career opportunity because of gambling
10. Relies on others to provide money to relieve a desperate financial situation caused by gambling

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**B. The gambling behaviour is not better accounted for by a Manic Episode**

BRIEF INTERVENTION BY THE PRIMARY CARE PHYSICIAN

People with gambling problems are known to be reluctant to seek treatment; 2 national U.S. surveys showed that only 7-12% of those with DSM-IV diagnosis of pathological gambling had either sought treatment or attended Gamblers Anonymous meetings. At the same time, retention in treatment is consistently low in most jurisdictions. Studies have also shown that for those who do not seek treatment, brief intervention in the form of very brief and directive advice is beneficial in reducing gambling. As most pathological gamblers feel stigmatized in seeking treatment from the addiction specialists, the primary care physician is well placed to give out this brief advice to pathological gamblers who shy away from seeking treatment. The brief advice could include the risk factors for development of severe gambling problems, and provide 4 steps to reduce the gambling: limiting the money spent when gambling; reducing the time and days spent gambling; not viewing gambling as a means of making money; spending time on other activities.

GROWING AWARENESS OF THE PROBLEM

IMH started treating pathological gamblers in 2001 under its earlier Community Addictions Management Programme (CAMP). The numbers seen in the initial years were very small. The last 2 years, however, have seen an increase in numbers, due to the growing awareness of the problem. The increased awareness can be attributed to the public education efforts by NCPG, NAMS, and the other community partners. In addition to public outreach, NAMS is completing its first round of talks to the staff of all the polyclinics.

The figure below shows an increase in the number and percentage of new pathological gamblers seen at NAMS in FY 2009 compared to FY 2008; the increase had come about before the opening of the 2 casinos:

The presence of the 2 casinos in Singapore tends to provoke extreme reactions amongst Singaporean. Those against the presence of casinos predicted that problem gambling will rise. In this respect however, it is worth noting that some 30% of the pathological gamblers seen at NAMS were already frequenting casinos elsewhere prior to the opening of the 2 local casinos.

CONCLUSION

It is premature to conclude whether the 2 casinos will markedly increase the number of pathological gamblers in Singapore. Many forms of gambling are available in Singapore, quite apart from casinos. It is encouraging that more pathological gamblers are emerging to seek treatment as a result of the increased awareness of the condition. The number presently seeking treatment is only the tip of an ice-berg. If only 1% of the adult population had pathological gambling problems, the number seeking treatment will be significantly higher. The recent increase in the number of gamblers seeking treatment is thus encouraging. With the increased awareness also come increased knowledge and concern among the public about this problem. The public education efforts and the growing awareness can be expected to continue in the years to come.
pathological gambling, there should be at least 20,000 to 30,000 pathological gamblers in our midst. The primary care physician has an important role to play in the detection and management of this condition.

REFERENCES

LEARNING POINTS
• People with gambling problems are known to be reluctant to seek treatment; 2 national U.S. surveys showed that only 7-12% of those with DSM-IV diagnosis of pathological gambling had either sought treatment or attended Gamblers Anonymous meetings.
• As most pathological gamblers feel stigmatized in seeking treatment from the addiction specialists, the primary care physician is well placed to give out this brief advice to pathological gamblers who shy away from seeking treatment.
• The brief advice could include the risk factors for development of severe gambling problems, and provide 4 steps to reduce the gambling: limiting the money spent when gambling; reducing the time and days spent gambling; not viewing gambling as a means of making money; spending time on other activities.
• When referred to NAMS, the patient is assessed by the counsellor followed by the psychiatrist, to engage the patient, establish rapport, diagnose, and map out a treatment plan.