

# Gambling addiction: what the non-specialist needs to know

**Gambling addiction can have numerous deleterious consequences for the gambler, his/her family and society, but most gamblers go undiagnosed and untreated because of various patient- and clinician-related factors. This article outlines gambling and related problems, and the screening, assessment and treatment of gambling addiction.**

**G**ambling is betting something of value (usually money) on an event (usually a game) whose outcome is unpredictable or determined by chance (Ladouceur et al, 2002). Gambling, for the large majority, is a normal and socially-sanctioned leisure activity and is widely prevalent in most countries. According to the British Gambling Prevalence Survey (Wardle et al, 2007), 68% (32 million people) of the population had participated in at least one gambling activity in the past 12 months. It also found that the most popular gambling activities were the National Lottery (57%), scratch cards (20%), betting on horse races (17%) and fruit or slot machines (14%). However, for a significant minority, gambling can progress from being a recreational activity to being a problem or addiction.

The aims of this article are two-fold. First, to raise clinicians' awareness of gambling and related problems and, second, to equip the non-specialist with sufficient knowledge about the essentials of screening, assessment and treatment of gambling addiction. These objectives are in line with the recommendations made in a British Medical Association report *Gambling addiction and its treatment within the NHS: A guide for healthcare professionals* (Griffiths, 2007), which sadly has been largely ignored by service providers and service commissioners. This report specifically called for health-care professionals to be aware of gambling-related problems, and to receive education and training in the screening, diagnosis, referral and treatment of gamblers.

## Definitions

Problem gambling is defined as gambling that disrupts or damages personal, family or recreational pursuits (Lesieur and Rosenthal, 1991). The *Diagnostic and*

*Statistical Manual of Mental Disorders – IV* (DSM-IV) (American Psychiatric Association, 1994) uses the term pathological gambling (or gambling addiction) and defines it as persistent and recurrent maladaptive gambling behaviour, characterized by some of the following: preoccupation with gambling, need to gamble with increasing amounts, inability to cut back or stop, 'chasing' losses, lying about gambling, adverse social and financial consequences.

## Epidemiology

The British Gambling Prevalence Survey (Wardle et al, 2007) estimated the prevalence of problem gambling to be 0.6% (nearly 250 000 people) and also estimated those at future risk of developing problem gambling: 1.4% of the population were at moderate risk and 5.1% were at low risk. Epidemiological correlates of excessive gambling are similar across cultures: gambling and problem gambling are more common in men; it often starts in late teenage years in males but much later in females. Although women start gambling later than men, they develop gambling-related problems sooner, called the 'telescoping effect'. Adolescents and minority ethnic groups are particularly vulnerable.

It is especially worth noting, from a non-specialist's perspective, that the prevalence of problem gambling in primary care settings is estimated to be around 6% (Pasternak and Fleming, 1999), and around 10% in those with co-existing mental health and/or substance misuse problems. There is also robust evidence to suggest that increasing the availability of gambling opportunities will result in increased rates of gambling and gambling-related problems (National Research Council et al, 1999). This is of great concern to Britain as the Gambling Act 2005 contains very liberal gambling laws, and there is a rapidly expanding online gambling industry and the imminent opening of casinos across the country.

Although there exists some nosological and conceptual ambiguity as to whether problem gambling is an addictive, impulse control or obsessive-compulsive disorder, from an assessment and treatment viewpoint it is perhaps best conceptualized as an addiction. It also appears that the next edition of the DSM is set to include gam-

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bling in the section on addictive disorders. Just like substance use, gambling behaviours also exist on a scale of escalating severity and adverse consequences, ranging from normal or recreational gambling, through problem gambling to gambling addiction.

### Adverse consequences

Gambling addiction can have multiple adverse consequences for the individual, family and society. It can negatively impact on the gambler's physical and psychological health. Gamblers experience high rates of several stress-related symptoms or conditions with consequent increase in use of medical resources (Morasco et al, 2006). Commonly noted psychiatric comorbidity includes depression, anxiety, substance misuse (particularly alcohol misuse) and personality disorder (Petry et al, 2005). Financial losses leading to debts and bankruptcy are also often consequences of excessive gambling. To fund their gambling, some gamblers resort to criminal activities.

As the gambling addiction takes hold, employment and employability may suffer significantly. Furthermore, it is estimated that for every gambling addict, between eight and ten others are also directly affected: this includes spouses, family members, children, friends and colleagues (Lobsinger and Beckett, 1996). Spouses often bear the brunt, and instances of domestic violence are common (Mulleman et al, 2002). Children of gambling addicts have increased rates of behavioural and emotional problems, and substance abuse (Jacobs et al, 1989).

### Diagnostic criteria

According to the *International Classification of Mental and Behavioural Disorders* (World Health Organization, 1992), the essential diagnostic feature of pathological gambling is 'persistently repeated gambling, which continues and often increases despite adverse consequences such as impoverishment, impaired family relationships and disruption of personal life'.

Diagnosis using DSM-IV consists of ten criteria. If at least three of these are met a diagnosis of problem gambling is made, and if five or more are met a diagnosis of probable pathological gambling is made. The criteria are:

1. Preoccupied with gambling
2. Needs to gamble with increasing amounts of money
3. Repeated failed attempts to control or stop gambling
4. Restless and/or irritable when trying to control or stop gambling
5. Gambles as an 'escape' from problems or to counter dysphoric mood
6. 'Chases' losses
7. Lies to others about the extent of gambling
8. Commits crime to fund gambling
9. Has had significant negative impact on job or family
10. Borrows money to fund gambling.

### Screening for gambling addiction in non-specialist settings

Although precise prevalence estimates of gambling problems in various non-specialist settings in the UK are lacking, reasonable extrapolation from studies overseas suggest rates of around 6% in primary care. This rate tends to be even higher in those with comorbid mental health problems such as anxiety, depression and substance misuse. This is relevant to the non-specialist because it is to these doctors that the majority of these patients initially present.

Screening is also important because excessive gamblers very rarely present with obvious gambling-related complaints or symptoms, and this could be the result of stigma, denial, shame and various other sociocultural barriers. Such 'non-direct' presentations (including physical symptoms, psychiatric complaints, financial difficulties, legal problems, domestic violence), coupled with health-care professionals' lack of awareness and knowledge of the disorder, often leads to gamblers going undetected and hence their problems unaddressed. Despite this, routine screening of all patients is not recommended; only the 'high-risk' group, i.e. those presenting with non-specific physical complaints, stress-related symptoms, those with psychiatric conditions such as depression, anxiety and alcohol misuse, domestic violence and financial difficulties.

There are various questionnaires in use to screen for gambling, the most commonly used is the South Oaks Gambling Screen (Lesieur and Blume, 1987). This is a 20-item questionnaire that can be self-administered and has robust psychometric properties. However, the authors recommend the Lie/Bet screen (Johnson et al, 1997) because of its brevity. The Lie/Bet screen is a two-question screening instrument; the questions are: 'Have you ever felt the need to bet more and more money?' and 'Have you ever had to lie to people important to you about how much you gamble?' A positive response to either question identifies a pathological gambler, and it has a sensitivity of 0.99 and a specificity of 0.91 when compared to DSM-IV criteria.

Screening is only the initial step in the diagnostic process, and patients who screen positive should be assessed in greater detail and/or referred on (see next section).

### Assessment

An in-depth assessment of gambling addicts by non-specialists can often be limited by resources and expertise. Hence, this article only introduces the essentials of assessment and recommends, where detailed assessment is not possible, to refer those who screen positive to specialist services.

As many gamblers feel embarrassed and guilty about their gambling behaviours and resultant problems, the clinician should be sensitive and tactful in exploring this. Where feasible and appropriate, corroborative information from the patient's spouse or partner can be sought.

**Table 1. Key aspects in the assessment of a gambling addict**

Full psychiatric history, including history of presenting complaints, and psychiatric, family, treatment, past and personal histories	
Detailed assessment of gambling behaviour:	Initiation
	Progression
	Current frequency (days per week or hours per day)
	Current severity (money spent on gambling proportionate to income)
	Types of games played
	Maintaining factors
	Features of dependence
Consequences: financial, interpersonal, vocational, social and legal	
Reasons for consultation, motivation to change and expectations of treatment	
Assessment of suicide risk	
Assessment of psychiatric comorbidity, particularly depression and substance use disorders	
Comprehensive mental state examination	

Table 1 summarizes the key aspects in assessing gambling addicts (George and Murali, 2005).

An integral part of the assessment of a gambler is looking for co-existing psychiatric disorders. Depression is particularly very common in this patient group and studies have found prevalence rates of up to 75% (Becona et al, 1996). Ideas of self-harm and suicide should be specifically asked about as part of the risk assessment. Although the exact relationship between gambling and depression is unclear, two explanations have been offered: depression could either be a result of the negative consequences of gambling or gambling could be viewed as an attempt to ‘self-medicate’ (as an ‘antidepressant’) the gambling. Other commonly seen psychiatric comorbidity in gamblers include anxiety disorders and substance misuse disorders; alcohol use should always be enquired about.

### Where to refer gambling addicts for treatment?

Gambling addicts are best treated in specialist services, where their (and their carers’) multiple needs can be best met. Unfortunately, there is very little service provision (NHS-funded) within the NHS despite calls for the same. There is only one specialist NHS treatment centre for gambling addicts in Britain, which is based in London ([www.cnwl.nhs.uk/national\\_problem\\_gambling\\_clinic.html](http://www.cnwl.nhs.uk/national_problem_gambling_clinic.html)). In the NHS, where available, services tend to sit within or alongside addiction services and hence non-specialists should check with their local addiction service as the first port of call.

There are non-statutory (non-NHS) organizations that patients could be signposted to or referred to: GamCare and Gamblers Anonymous are two of the most common. GamCare ([www.gamcare.org.uk](http://www.gamcare.org.uk)) is a non-governmental organization and a charity that ‘provides support, information and advice to anyone suffer-

ing through a gambling problem’. Based in London, it offers services (themselves or through partner agencies) in most regions of the UK, including a telephone helpline, netline, forums, chat rooms, counselling (face to face and online), psychotherapy, group therapy and support for families.

Gamblers Anonymous ([www.gamblersanonymous.org.uk](http://www.gamblersanonymous.org.uk)) is a self-help group based on the ‘12-step’ model from Alcoholics Anonymous and sees total abstinence as the treatment goal. Although the efficacy of Gamblers Anonymous has not been well researched and despite its very high rate of attrition, those who attend regularly (and often receive other treatments as well) have been found to benefit. Gamblers Anonymous also run support groups for families and friends affected by their loved one’s gambling (Gam-Anon).

### Treatment

Treatments for gambling addiction can either be pharmacological or psychological (delivered 1:1 or in groups, face to face, online or over the telephone) or both. Given below is a brief account of some specific types of treatment.

#### Pharmacological treatment

Neurotransmitters hypothesized to play a role in the pathophysiology of gambling addiction include serotonin, noradrenaline, endogenous opioids and dopamine. Hence, pharmacological therapies have targeted these neurotransmitter systems: the main classes of drugs tried include selective serotonin-reuptake inhibitors, mood stabilizers, opiate antagonists (naltrexone) and anti-psychotics. Trials of selective serotonin-reuptake inhibitors have yielded mixed results: fluvoxamine was found to be superior to placebo in one study (Hollander et al, 2000) but not consistently so in another (Blanco et al, 2002). Results of paroxetine trials have been unconvinc-

ing: a single-site, double blind randomized trial found that gambling behaviour reduced after 6–8 weeks of treatment (Kim et al, 2002); however, a multi-centre, randomized placebo-controlled, double blind study failed to show that paroxetine was better than placebo (Grant et al, 2003).

Apart from selective serotonin-reuptake inhibitors and mood stabilizers (such as lithium, valproate and carbamazepine), antipsychotics and opiate antagonists have also shown some promise in treating gambling addiction. Opioid antagonists such as naltrexone and nalmefene have been shown to be effective in reducing the frequency and intensity of gambling urges and gambling behaviours (Kim et al, 2001; Grant et al, 2006). However, methodological weaknesses of pharmacological studies (e.g. small sample sizes, inadequate blinding and randomization techniques, high drop out rates) grossly limit the validity and generalizability of their findings.

Despite some encouraging results, we are still a long way away from considering drug treatments as first-line treatments for gambling addiction. For this reason, to date, no drug has been approved for use in the treatment of gambling disorder in the UK. Hence, the clinician is best advised to choose a drug based on the presence of psychiatric comorbidity, as no one drug has been shown to be superior to another. For example, if a gambler has coexisting depression, choose a selective serotonin-reuptake inhibitor, whereas if he/she has bipolar affective disorder, choose a mood stabilizer and so on. It is also important to note that often the doses of medications required to treat gambling addiction (sertraline 150–200 mg or naltrexone 200 mg) are very high, with resultant side effects and poor compliance.

## Psychological treatment

Psychological treatments (1:1 or in groups) are the mainstay of treating gambling addiction, with cognitive behaviour therapy being the most commonly and effectively used (Hodgins and Petry, 2004).

Cognitive behaviour therapy incorporates varying elements of cognitive and behavioural strategies. Gambling addicts have various cognitive distortions such as illusions of control, overestimates of one's chances of winning or biased memories. As gambling is essentially about judging the probability of outcomes and decision making, it follows that cognitive distortions will lead to impaired judgement and poor decision making. Cognitive behaviour therapy aims to address these cognitive distortions, identifies and conducts functional analysis of gambling triggers, plans and reinforces alternative activities, helps manage triggers, cope with cravings, train assertiveness and refusal skills, and prevent relapse. The functional analysis component of cognitive behaviour therapy includes analysis of the chain of thoughts, feelings and actions that lead to the gambler to place a bet, as well as analysis of the advantages and disadvantages of gambling *vs* not gambling. All in all, cognitive behaviour therapy

provides an overall framework to facilitate lifestyle changes and restructure the environment to increase reinforcement from non-gambling behaviours. Given below is a brief description of how psychological treatment is translated in practice.

### Psychological treatment in practice

There is always a danger of stereotyping individuals with particular problems and as a result making assumptions which ignore the patient's unique characteristics and ways of coping. Unlike substance misusers, gamblers are likely to hold a set of beliefs that justify the continuance of their behaviour, sometimes referred to as 'magical thinking', for instance, 'number 9 is lucky for me', 'I have special skills which mean I can beat the fruit machine', 'I have lost eight times, therefore the next one will be a win'. Getting the gambler to challenge these unrealistic thoughts is often the first step and can be done by checking his/her understanding of probability. It is useful to get the gambler to record accurately all winnings and all losses over a period of time to gather objective evidence that in the long run he/she loses more than he/she wins (which is unavoidable if the gambler continues to gamble as the systems are set to make a profit for 'the house'). Another useful exercise is to ask the problem gambler to list all the money he/she currently owes to others, including any amounts given freely by friends and families.

As with substance misusers, identification of patterns and triggers by way of diary keeping (when, where, how gambling took place, amounts lost or won) is essential. Discovering the functions of gambling for the individual is crucial and can be done by building a balance sheet. Eliciting information about the positives of gambling enables the gambler to recognize the functions of gambling for him/her as well as the losses involved in giving up and therefore the changes that he/she will have to make to reduce or abstain. Probe gently and ask for clarification but do not offer suggestions, as the value of the exercise is in the gambler recognizing what is going on personally for him/her and making sense of his/her behaviour. When discussing the balance sheet, always end on the sides which are encouraging change, i.e. the negatives of gambling and the positives of not gambling.

Encourage the gambler to set him-/herself goals and rewards attached to achievements and if possible get him/her to enlist the help of loved ones. Discussing with the problem gambler means of reducing his/her access to cash, for instance carrying only the amount necessary for the day and/or giving over control of his/her money on a temporary basis, is often an essential component of treatment.

Some of the very characteristics of problem gamblers can be turned to their advantage: for example many gamblers have considerable numerical skills and may enjoy producing graphs tracking their records of gambling and non-gambling days or the amount saved by not gambling. Some gamblers may be reluctant to break a

sequence of non-gambling days. By definition, many problem gamblers will enjoy taking risks and this may lend itself to developing alternative non-gambling behaviours, for instance hang-gliding, parachute jumping, investing in stocks and shares, property development or competitive sports.

Finally, explain that relapse is a normal part of the process of change and that it is crucial to have a plan in advance to tackle any triggers or eventual lapses. Gamblers will often be reluctant to discuss this and a useful analogy can be that fire drills do not increase the likelihood of a fire but can save lives. The objective is to identify risk situations and avoid them wherever possible. Where avoidance is not possible, waiting for the craving to pass ('surfing the urge') is one tactic. If the gambler gives in, then encourage him/her to treat the episode as a useful learning experience. Ask him/her what he/she has found out as a result and what he/she might need to put in place to avoid the same happening next time. The aim is to let the resumption of gambling be a blip or slip rather than a full relapse.

As far as treatment of gambling addiction is concerned, no one treatment modality has clearly demonstrated superiority over others. Hence it is best to offer patients multimodal and comprehensive treatment packages.

## Conclusions

Gambling-related problems, albeit not very common, often go unrecognized and unaddressed by the non-specialist leading to numerous negative consequences for the gambler, his/her family and society. It is hoped that this article has raised health-care professionals' awareness of this topic, so that they know what to do if faced with a gambling addict. **BJHM**

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- American Psychiatric Association (1994) *Diagnostic and Statistical Manual of Mental Disorders*. 4th edn. (DSM-IV). American Psychiatric Association, Washington DC
- Becona E, Del Carmen LM, Fuentes MJ (1996) Pathological gambling and depression. *Psychol Rep* **78**: 635–40
- Blanco C, Petkova E, Ibanez A et al (2002) A pilot placebo-controlled study of fluvoxamine for pathological gambling. *Ann Clin Psychiatry* **14**: 9–15
- George S, Murali V (2005) Pathological gambling: an overview of assessment and treatment. *Adv Psych Treat* **11**: 450–6
- Grant JE, Kim SW, Potenza MN et al (2003) Paroxetine treatment of pathological gambling: A multi-center randomized controlled trial.

- Int Clin Psychopharmacol* **18**: 243–9
- Grant JE, Potenza MN, Hollander E et al (2006) Multicenter investigation of the opioid antagonist nalmefene in the treatment of pathological gambling. *Am J Psychiatry* **163**(2): 303–12
- Griffiths MD (2007) *Gambling Addiction and its Treatment within the NHS: A Guide for Healthcare Professionals*. British Medical Association, London
- Hodgins DC, Petry NM (2004) Cognitive and behavioural treatments. In: Grant JE, Potenza MN, eds. *Pathological Gambling: A Clinical Guide to Treatment*. APPI, Washington DC
- Hollander E, DeCaria CM, Finkell JN et al (2000) A randomized double-blind fluvoxamine/placebo crossover trial in pathological gambling. *Biol Psychiatry* **47**: 813–17
- Jacobs DF, Marston AR, Singer RD et al (1989) Children of problem gamblers. *J Gamb Behavior* **5**: 261–7
- Johnson EE, Hamer R, Nora RM et al (1997) The Lie/Bet Questionnaire for screening pathological gamblers. *Psychol Rep* **80**: 83–8
- Kim SW, Grant JE, Adson D et al (2001) Double-blind naltrexone and placebo comparison study in the treatment of pathological gambling. *Biol Psychiatry* **49**: 914–21
- Kim SW, Grant JE, Adson DE et al (2002) A double-blind placebo-controlled study of the efficacy and safety of paroxetine in the treatment of pathological gambling. *J Clin Psychiatry* **63**: 501–7
- Ladouceur R, Sylvaïn C, Boutin C et al (2002) *Understanding and Treating the Pathological Gambler*. John Wiley and Sons, Chichester
- Lesieur HR, Blume SB (1987) The South Oaks Gambling Screen (SOGS): a new instrument for the identification of pathological gamblers. *Am J Psychiatry* **144**: 1184–8
- Lesieur HR, Rosenthal MD (1991) Pathological gambling: A review of the literature (prepared for the American Psychiatric Association Task Force on DSM-IV Committee on disorders of impulse control not elsewhere classified). *J Gambl Stud* **7**: 5–40
- Lobsinger C, Beckett L (1996) *Odds on the break even: A practical approach to gambling awareness*. Relationships Australia, Inc, Canberra
- Morasco BJ, Pietrzak RH, Blanco C, Grant BF, Hasin D, Petry NM (2006) Health problems and medical utilization associated with gambling disorders: Results from the National Epidemiologic Survey on alcohol and related conditions. *Psychosom Med* **68**: 976–84
- Mulleman RL, Denotter T, Wadman MC, Tran TP, Anderson J (2002) Problem gambling in the partner of emergency department patient as a risk factor for intimate partner violence. *J Emerg Med* **23**: 307–12
- National Research Council, National Academy of Sciences, Committee on the Social and Economic Impact of Pathological Gambling (1999) *Pathological Gambling: A Critical Review*. National Academy Press, Washington DC
- Pasternak AV, Fleming MF (1999) Prevalence of gambling disorders in a primary care setting. *Arch Fam Med* **8**: 515–20
- Petry NM, Stinson FS, Grant BF (2005) Comorbidity of DSM-IV pathological gambling and other psychiatric disorders: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *J Clin Psychiatry* **66**: 564–74
- Wardle H, Sproston K, Orford J et al (2007) *The British Gambling Prevalence Survey*. The Stationery Office, London
- World Health Organization (1992) *The ICD-10 Classification of Mental and Behavioural Disorders*. Clinical Descriptions and Diagnostic Guidelines. World Health Organization, Geneva

## KEY POINTS

- Gambling addiction is defined as persistently repeated gambling which continues despite adverse consequences.
- Gambling addicts often present to non-specialists with non-gambling-related symptoms and complaints and this, combined with professionals' lack of awareness, often leads to gamblers going undiagnosed and untreated.
- Simple, easy to use screening tools are available.
- If in-depth assessment is not feasible, refer patients who screen positive for specialist treatment.
- Psychological interventions such as cognitive behaviour therapy are the mainstay of treatment for gambling addiction.