



Problem Gambling and Health
Greens Discussion paper

December 2011

Problem Gambling and Health

Purpose

This document outlines the debate around gambling reform in Australia and looks at some proposed reforms through the lens of health policy. This paper aims to present some concrete options for gambling reform as well as avenues for further investigation, In order to frame the discussion and solicit feedback on possibilities for government action. Further reforms, with a focus on public health, should complement but not supplant existing plans to further regulate poker machines and other forms of gambling.

Background

Australians are the world's most prolific gamblers. We spend an impressive \$1200 per capita every year on wagers¹. Of the \$19 billion gambled by Australians every year, 60% or \$12 billion goes into electronic gaming machines (EGMs) most commonly known as 'pokies'.² About 4% of the adult population (600,000 people) play these pokies at least weekly. There are over 200,000 poker machines in Australia, of which approximately 50% are in NSW alone³. Despite Australia's small population, we have the 7th highest number of these machines in the world.⁴

Problem gambling is most commonly defined as "difficulties in limiting time and/or money spent on gambling which leads to adverse consequences for the gambler, others or for the community."⁵ According to the Productivity Commission, there are up to 160,000 Australians, or 15% of the people who gamble weekly, who are problem gamblers (with a further 230,000 to 350,000 at moderate risk).^{6 7} These problem gamblers spend an estimated \$5 billion a year on poker machines alone. Finding this money takes a toll on the social fabric of the nation. Gambling problems are major causes of theft and bankruptcy⁸, and for each problem gambler at least five other people are affected.⁹ Problem gamblers sacrifice the well-being of themselves and their families as they plunge into poverty and crime.¹⁰ The harm this causes the community is enormous. As money is taken out of family budgets the social costs add up, and are estimated at \$4.7b per year¹¹.

¹ Over USD\$1200 per year according to *The Economist*, reported at [Hhttp://www.economist.com/blogs/dailychart/2011/05/gambling](http://www.economist.com/blogs/dailychart/2011/05/gambling)

² Productivity Commission, *Gambling*, vol. 1, Commonwealth of Australia 2010 p. 2.

³ *Ibid.* p 6.

⁴ 1 machine per 108 people. See: [Hhttp://www.theage.com.au/national/poker-machine-count-puts-australia-in-big-time-20111001-1l2vl.html](http://www.theage.com.au/national/poker-machine-count-puts-australia-in-big-time-20111001-1l2vl.html)

⁵ Problem Gambling and Harm: Towards a National Definition

⁶ *Op. cit.*, Productivity Commission, p. 2.

⁷ *Ibid.*, p. 5.1.

⁸ Marshall, J and Marshall, A, *Gambling and Crime in South Australia*, Office of Crime Statistics and Research 2003.

⁹ Productivity Commission 1999

¹⁰ Sakurai and Smith, *Gambling as a Motivation for the Commission of Financial Crime*, Australian Institute of Criminology 2003.

¹¹ *Op. cit.*, Productivity Commission, p. 48.

It's no coincidence that poker machines are so addictive. Hundreds of millions of dollars has been spent on poker machine design, with the express goal of making them as addictive as possible¹².

The issue of problem gambling can be approached from several directions. In many ways it is both a medical problem and public health problem. In 2011 a letter signed by leading experts from the public health community to the Prime Minister urged her to take action on poker machine reform as a health priority, likening it to "serious and immediate" public health threats such as tobacco, firearms and the road toll.¹³ Any serious attempt to treat gambling addiction holistically must recognise the individual medical and public health aspects of gambling policy.

From a medical point of view, problem gambling can be treated as an addiction in the literal and clinical sense. Treatments for other forms of addiction such as drug and alcohol dependence can, in some circumstances, be applied by medical practitioners to combat problem gambling. Furthermore, there is significant comorbidity with other medical conditions, especially with regards to mental health. Research shows that major depression, substance abuse, anxiety disorders and mood and personality disorders are highly correlated with gambling addiction.

There is broad agreement that gambling policy is best treated as a public health issue.¹⁴ From a public health perspective, prevention, treatment and harm minimisation are the tools to be applied at a population level. To this end, continued education is crucial. A coordinated national approach to safe gambling messages, based on the latest research and combined with data collection on outcomes, could increase the effectiveness of the campaign over the current, fragmented, state-based approach.

Public health demands policy built on a strong evidence base. However, in order to have good evidence-based policy the evidence must first be gathered and research conducted. Despite the size of the industry, there are still significant gaps in the data on the prevalence of problem gambling and the most effective treatment options.

Minimising the harm of poker machines

The Productivity Commission conducted a detailed examination of Australia's Gambling Industries and handed down their findings in February 2010. The Commission identified the harms caused by gambling and pokies in particular, and made a series of recommendations for reform. First and foremost, it detailed the harm caused by the gaming machines to the communities in which they are housed.

In particular, the report focussed on the intensity of the machines, defined as the expected losses per hour. In states where a \$10 maximum bet applies and the spin rate is unregulated, one could

¹² Joint Select Committee on Gambling Reform, First Report, The design and implementation of a mandatory pre-commitment system for electronic gaming machines, p. 35. Aristocrat spends \$120m per year – billions has been spent overall.

¹³ <http://www.phaa.net.au/documents/110619PHAAletterfrompublichealthexpertsMandatoryprecommitment.pdf>

¹⁴ Op. cit., Productivity Commission, p. 3.18.

expect to lose \$1200 per hour with possible losses significantly higher.¹⁵ In some jurisdictions the losses could be even greater, such as in casinos with exemptions from state regulation.¹⁶

As well as a maximum bet, a machine's capacity for loss is affected by its spin rate – the minimum time between button pushes – and its volatility. Two machines with the same expected return to player but differing jackpot sizes will return the same amount of money to players over the long term, but the machine with a higher jackpot would cost the player more in a typical session of a few hours. In several states, the spin rate is limited (to between 17 and 28 spins per minute) but jackpot sizes and volatility are not regulated.¹⁷

The ability to lose such large amounts of money in a short time period exacerbates the risk to problem gamblers. Machines with this capacity for loss could be described as “high intensity” machines, to be contrasted with “low-intensity” machines where hourly losses are limited to ranges consistent with other forms of entertainment.¹⁸ At the present time in Australia, there are no low-intensity machines where bets are restricted to ranges consistent with normal recreational play. This contrasts with other jurisdictions around the world such as New Zealand and the United Kingdom, where certain venues are restricted to machines with limits on the maximum stake and maximum prize.¹⁹ In the United States, high-intensity machines are generally limited to casinos.²⁰

The Productivity Commission examined several other aspects of poker machines that contribute to risky and addictive gambling. The presence of note acceptors, which are not present in South Australia, was examined along with load-up limits.²¹ Spin rates – the time between button presses – were also examined including recommendations from experts that they could be slowed to 5 or 6 seconds.²²

The Joint Select Committee on Gambling Reform also looked at the harm caused by electronic gaming machines and their design parameters. It noted that “high intensity machines with the possibility of large, but infrequent wins have taken the gambling experience far away from the low risk recreational activity it used to be,”²³ and that

Given the high intensity at which one can play, the availability of EGMs, their ability to condition behaviour and the design features outlined to the committee, the committee supports the view that EGMs are potentially dangerous for some people. Therefore measures to protect consumers and reduce harm are a responsible course of action.²⁴

A harm minimisation approach would therefore suggest that there is considerable scope for an improvement to public health to be gained by further regulation of machine design and operation. Significant attention has already been devoted to the proposed reforms for mandatory

¹⁵ Op. cit., PC p. 11.7

¹⁶ In crown casino it is possible to bet \$50 per spin on certain machines.

¹⁷ Spin rates: Op. cit., Productivity Commission, p. 11.7

¹⁸ Op. Cit, Committee Report, pp. 36-37.

¹⁹ Op. cit., Productivity Commission, p. 11.23.

²⁰ Op. cit., Committee report, p 36.

²¹ “Load-up” limits are the maximum amount of credit that can be fed into a machine at any one time.

²² Op. cit., Productivity Commission, p. 11.4.

²³ Op. cit., Committee Report, p. 165.

²⁴ Ibid., p 48.

precommitment technology and the limitation of bet amounts to reduce the harm of high intensity machines.²⁵ There is significant evidence and a general consensus among experts that such reforms would be successful in reducing the losses of problem gamblers. The simplest way to limit losses would be to place limits on the wager amount per button push and the Productivity Commission's evidence would suggest that it is problem and at-risk gamblers that would overwhelmingly be affected by this change.

The Committee's report also condemned a further element of poker machine design, which is the disguising of wins as losses.²⁶ This feature is regulated in Queensland, Tasmania and the Northern Territory and due to its suggested potential for increasing the addictiveness of electronic gaming machines could be regulated at a national level.

Suggested avenues for reform:

- Regulating poker machines to:
 - Restrict maximum bets to \$1 per spin
 - Capping jackpots at \$500
 - Limiting the load-up at any time to \$20
- Possible further reforms:
 - Regulating spin rates
 - Regulating game features that disguise losses as wins

Medical interventions

Problem gambling – that is to say, an addiction to gambling behaviour – has long been seen as a medical problem. “Pathological gambling” is listed in the American Psychiatric Association's Diagnostic and Statistical Manual (DSM-IV) and is characterised by traits that will be recognised by anyone familiar with patterns of problem gambling, such as a tendency to try and fail at reducing gambling; lying to family members; chasing losses; and committing crimes to finance gambling. In the forthcoming edition of the DSM (DSM-V), gambling addiction will likely be re-classified as an addiction disorder and be placed next to other substance-related disorders, further highlighting the medical and neurological aspects of the condition.²⁷

The physiological components of problem gambling are further emphasised by research on the inheritability of a tendency towards such behaviour. The genetic component has been established by several studies, such a twin study conducted at the University of Missouri which separated out environmental factors found a substantial genetic role in determining disordered gambling behaviour.²⁸

²⁵ Large sections of the Productivity Commission and Joint Select Committee's reports are devoted to this subject.

²⁶ Op. cit., Committee Report, pp. 44-48.

²⁷ Problem Gambling Research and Treatment Centre, *Guideline for Screening, Assessment and Treatment in Problem Gambling*, 2011, p. 40.

²⁸ Slutske, et al, *Genetic and Environmental Influences on Disordered Gambling in Men and Women*, Archives of General Psychiatry, 2010;67(6):624-630. See also: Schreiber, Odlaug, Kim, & Grant, *Characteristics of Pathological Gamblers with a Problem Gambling Parent*, The American Journal on Addictions, Nov 2009.

In a mental health context problem gambling is often treated as a behavioural problem or impulse-control disorder. Treatment includes counselling and cognitive and behavioural therapies with a psychological emphasis.

Under the medical model, problem gambling can also be treated as a subset of addiction medicine using techniques applied to those suffering from alcohol and drug dependency. Treatment may include pharmacological therapies similar to those employed in the treatment of alcohol and drug disorders.

The best avenues for treatment probably lie in a mixture of approaches. It has been suggested that some caution should be applied regarding over-reliance on a psychopathological approach to treatment. By focusing on pathological behaviour at an individual level, gamblers who are at-risk or harmed by gambling but not yet exhibiting pathological traits could miss out on needed interventions.²⁹

Comorbidities associated with problem gambling

Problem gambling behaviour rarely occurs in isolation. A person struggling with gambling addiction is likely to be suffering from a range of other problems, from smoking addiction to anxiety to a greater risk of domestic violence. The Productivity Commission report noted that that people who sought help for gambling problems reported being diagnosed with anxiety problems (43%), depression (55%), alcohol problems (29%), and other drug issues (19%).³⁰

A 2001-2002 survey of 43,093 U.S. households, the National Epidemiologic Survey on Alcohol and Related Conditions, found similarly high rates of other disorders among problem gamblers (table 1)³¹. A meta-analysis carried out by the Problem Gambling Research and Treatment Centre found similarly high rates of comorbid psychiatric conditions (table 2)³².

Comorbid condition	Correlation with pathological gambling
Alcohol dependence	73.2%
Drug use disorder	38.1%
Nicotine dependence	60.4%
Mood disorder	49.6%
Anxiety disorder	41.3%
Personality disorder	60.8%

Table 1: Incidence of Comorbid conditions amongst problem gamblers

Source: Petry et al

Co-morbid condition	Correlation with pathological gambling
Alcohol dependence	28.1%

²⁹ Op. cit., Productivity Commission, p. 5.3

³⁰ Ibid., p. 7.4.

³¹ Paltry et al, "Comorbidity of DSM-IV Pathological Gambling and Other Psychiatric Disorders: Results from the National Epidemiologic Survey on Alcohol and Related Conditions, Journal of Clinical Psychiatry 2005

³² Op. cit., PGRTC, p. 22.

Major depression	23.1%
Substance use	57.5%
Anxiety	37.4%
Mood disorder	37.9%

Table 2: Meta-analysis of Comorbid conditions amongst problem gamblers
Source: PGRTC 2011

The high prevalence of comorbid mental health issues has consequences for the detection and treatment of problem gambling in a clinical setting. These conditions suggest avenues for better detection of gambling behaviour and more appropriately tailored treatment pathways.

Role of GPs in screening and diagnosis

Research is ongoing into the most effective models for treatment of problem gambling, but in all cases a necessary first step is identifying the problem and getting the person affected in contact with treatment specialists. Relatively few problem gamblers seek treatment, with estimates ranging from 8 to 17 per cent.³³

It is therefore imperative that more problem gamblers be given the opportunity to receive treatment and that interventions occur earlier – before the affected person hits “rock bottom” and has no other options. Problem gambling does not readily lend itself to a population screening approach but given the prevalence of comorbid conditions presented above there are possibilities for targeted and opportunistic screening by health professionals.³⁴ According to the Problem Gambling Research and Treatment Centre, “screening of people who are presenting for mental health services for problem gambling (and vice versa) is sensible. This may deliver more of the hidden non treatment-seeking problem gamblers.”³⁵

General Practitioners are especially well placed to carry out opportunistic screening and refer patients for appropriate further treatment. The AMA recommends practitioners include gambling as part of a lifestyle risk assessment.³⁶ However, many GPs lack the knowledge and tools to do this effectively. Other countries, such as Britain and the United States, have developed protocols for the treatment of gambling problems to aid doctors.³⁷ As a first step, Jackson et al have suggested a one-item screening test (“Have you ever had an issue with your gambling?”) that closely tracks answers to more robust screening tools.³⁸ They suggest that patients who present with substance abuse problems, anxiety or depressive symptoms should be screened for pathological gambling by GPs.

Because GPs are in a unique position to identify problem gamblers who may not otherwise seek treatment, it is likely to be cost-effective to invest in developing education and tools to support this work. Recognising problem gambling’s health aspects, the AMA suggests that it should be part of the medical curriculum: “Undergraduate and postgraduate medical education courses should include the recognition of problem gambling as a health issue. Medical practitioners are encouraged to

³³ Op. cit., Productivity Commission, p. 7.3

³⁴ Op. cit., PGRTC, p. 42.

³⁵ Ibid.

³⁶ AMA Position Statement: “Health Effects of Problem Gambling”, 1999

³⁷ Jackson, et al, “Problem gambling: what do general practitioners need to know and do about it?”, MJA 2008

³⁸ Ibid.

participate in continuing education related to the detection and management of the adverse health effects of problem gambling.”³⁹

The PGRTC and others indicate that more research is needed in order to make firm recommendation on treatment and screening options.⁴⁰

Pharmacotherapy and problem gambling

There is an emerging body of evidence that gambling addiction is similar to drug addiction, not only by analogy but physiologically as well. The use of pharmacotherapy in the treatment of problem gambling has been the subject of recent research; this includes anti-depressants such as SSRIs, mood stabilizers and opioid antagonists such as naltrexone.

Research reviewed by the Problem Gambling Research and Treatment Centre in Victoria suggests that the use of antidepressant medications is unproven as a primary treatment for gambling addiction, and that overall “antidepressants were no different to placebo in reducing gambling severity.”⁴¹ The efficacy of mood stabilizers such as lithium was similarly unproven, with insufficient research to draw firm conclusions.⁴²

Opioid antagonists are thought to have the most promise based on research conducted so far. Although the precise mechanism is unclear, it is thought that they treat the addiction by blocking the dopamine-driven reward pathway that gives positive feelings when gambling and is responsible for feelings of craving.⁴³

In Australia, naltrexone is already an approved therapy for substance abuse, particularly for alcohol and opioid dependence.⁴⁴ Its effectiveness in treating gambling addiction has been the subject of several studies. A recent report for the Independent Gambling Authority of South Australia examined the evidence for naltrexone and reported that “Preliminary findings suggest naltrexone is tolerable, acceptable and feasible, and can be expected to provide limited clinical benefit to a small number of patients.”⁴⁵

This conclusion is based on new research and several past studies. Two early trials conducted in 1998, one in Canada by Crockford and el-Guebaly, and another by SW Kim in the USA, found a significant decrease in gambling urge by those taking naltrexone. These small experiments were followed by a larger trial in 2001 by Kim, Grant, Adson and Shin in which 83 patients participated in a randomised, double-blind placebo controlled trial. Patients took doses ranging from 25mg to 250mg for three months. In the end, based on data from 45 patients remaining at the end of the trial, the

³⁹ Op. cit., AMA, p. 2.

⁴⁰ Op. cit., PGRTC, p 57.

⁴¹ Ibid., p. 81.

⁴² Ibid., p. 82.

⁴³ Faye Forbes, *Naltrexone Feasibility, Acceptability and Preliminary Effectiveness Study*, Independent Gambling Authority, Adelaide, 2010, p. 7, viewed 12 December 2011, H<http://www.iga.sa.gov.au/pdf/iga/IGA-Naltrexone-20010623.pdf>H

⁴⁴ 'Naltrexone hydrochloride', *Australian Prescriber*, vol. 22, 1999, 43-7, viewed 12 December 2011, H<http://www.australianprescriber.com/magazine/22/2/43/7/new-drugs-207/naltrexone%20hydrochloride>H

⁴⁵ Flinders Human Behaviour & Health Research Unit, *Naltrexone Feasibility, Acceptability and Preliminary Effectiveness Study*, March 2010

authors concluded that 75% of subjects taking naltrexone were “much or very much improved” on both the patient-rated and clinician-related scales, compared with only 24% of those on placebo.

A small trial involving 11 patients was conducted by Flinders University in 2010. This study concluded that “the majority of people benefited from being involved in the study” and reported reduction in the gambling urge.⁴⁶

Need for further trials

Based upon the results of those trials conducted so far, the literature indicate a clinically significant reduction in gambling behaviour is likely in some patients taking naltrexone. More research and larger trials are necessary to establish this with certainty.

In its response to the naltrexone feasibility study conducted by Flinders University for the Independent Gambling Authority in South Australia, the Authority wrote:

The Authority is of the view that there is scope for investigation of pharmacotherapy, including the use of Naltrexone Hydrochloride, to complement mainstream approaches to problem gambling. The next stage would be to conduct larger-scale, multi-site, controlled clinical trials to inform an evidence-based treatment approach.⁴⁷

The Problem Gambling Research and Treatment Centre also concluded that there is need for a trial and recommended further research into the efficacy of naltrexone compared to other pharmacological interventions, and comparing the outcomes of pharmacological interventions with with no intervention and with psychological interventions.⁴⁸

Government subsidies for pharmaceutical treatment

Naltrexone is listed on the Pharmaceutical Benefits Scheme, but is not yet approved for the treatment of gambling addiction. If a trial can establish the effectiveness of naltrexone for this indication, then a listing on the PBS schedule could be accompanied by a GP education program or an approval-required listing for use by medical practitioners with expertise in addiction therapy.

Suggested avenues for reform:

- GPs and other health practitioners have a vital role to play in helping problem gamblers. Many problem gamblers present to medical practitioners with other health issues highly correlated with problem gambling, including depression, alcohol drug and alcohol dependence, and other mental health issues
 - Funds to educate GPs in recognising problem gambling and associated conditions, with a focus on screening, identification and treatment options.
 - A trial into the use of Naltrexone as a treatment for gambling addiction, with a view to establishing cost-effectiveness for inclusion on the PBS for treatment of this condition.

⁴⁶ Op. cit., Forbes, p. 28.

⁴⁷ Ibid., p. 3.

⁴⁸ Op. cit., PGRTC, p. 84.

Other public health concerns

There are many reasons why problem gambling can be classified as a public health problem. Risky behaviours that have consequences for individuals and the community such as smoking, unhealthy lifestyles that lead to chronic disease, and road safety have been successfully ameliorated with a public health approach that applies community-wide education and evidence-based policy. Problem gambling behaviour is both socially adverse and (largely) preventable at a population level, and is thus a natural candidate for a public health approach.

The tools available to public health specialists and policymakers include social marketing campaigns to alter behaviour, regulation and legal sanctions, providing factual information and engaging with communities to find strategies to limit the harm.⁴⁹

Evidence base

A robust public health approach requires a solid evidence base. While much good work has been done on the prevalence and treatment of problem gambling in Australia, it is a common refrain amongst experts in the area that there is a dearth of solid research and a lamentable fragmentation of efforts between the states and territories. The Productivity Commission recognised this and recommended a more national approach to gambling policy.⁵⁰ The Joint Select Committee on gambling reform was more explicit in calling for research at a national level, making the following recommendation:

The committee recommends that a national, accountable and fully independent research institute on gambling be established to: drive and coordinate national research efforts, monitor the effectiveness of policies to reduce harms from problem gambling and build an evidence base sufficient to better inform future policy development.⁵¹

Social Marketing to complement medical interventions based on co-morbidity

Throughout Australia there have been many campaigns to warn people of the dangers of problem gambling and encourage them to seek help. Messages used include:

- Think of what you're really gambling with.
- Stay in control. Leave before you lose it.
- 'It's ok, I'm due for a win.' Don't bet on it!
- If you've got a problem paying your rent, you've got a problem all right.
- Don't wait till you hit rock bottom.
- In the end, the machines will win.
- The kids can have cereal for tea, they'll be ok – Wanna bet?^{52 53}

The common theme with all these messages is the focus on the consequences of problem gambling, such as the resulting financial hardship and the effect on the lives of loved ones. There is relatively little focus on the underlying causes of problem gambling behaviour. The high correlation with other

⁴⁹ Op. cit., Productivity Commission, p. 3.19.

⁵⁰ Ibid., p. 3.9.

⁵¹ Op. cit., Committee Report, p. 92.

⁵² Op. cit., Productivity Commission, pp 8.1-8.14.

⁵³ www.problemgambling.vic.gov.au

mental health problems suggests that problem gambling may often be a reaction to, rather than cause of, other problems. This suggests the possibility of a different direction in social marketing campaigns that may yet to be explored – instead of “think of what you’re gambling with”, “think of why you are gambling.”

Suggested avenues for reform:

- The establishment of a National Gambling Research Centre to shore up the evidence base for future reform
- A shift in social marketing strategies at a population level to focus on the underlying causes of problem gambling (e.g. lifestyle and addiction problems) and not the consequences (losing rent or grocery money).

Further discussion points

The state/federal relationship: It is commonly agreed that a national approach to gambling reform and treatment of pathological gambling is needed. However, as in many other areas of public policy most of the current research and service delivery efforts are controlled by the states which vary in aim and execution. What role could a national agency provide in coordinating and regulating approaches to reform?

Limitations of the medical approach: Because of the stigmas around gambling addiction and mental health problems in particular, few people seek treatment. In light of this, how does the medical approach best complement other gambling policy areas?

Role of industry: Medical interventions are clearly a last resort for those whose gambling becomes pathological despite public health initiatives and harm minimisation regulations. How can public policy on medical help for gamblers best be developed without taking away the focus from the gambling industry’s responsibility to reform?

Social marketing strategy: The comorbidities associated with problem gambling suggest new avenues for social awareness campaigns that focus on the underlying causes of gambling behaviour instead of the consequences. How could an evidence base be established to guide the development of a strategy in this area?

Cost effectiveness of pharmacotherapy: Further research is needed to establish the efficacy and cost-effectiveness of pharmacological treatments for problem gambling. Does the extant literature suggest that the pool of patients who could be potentially be helped by these therapies is large enough to warrant the investment proper trials would require?

Conclusion

The focus of the debate around gambling reform has been on poker machines and harm minimisation measures such as mandatory pre-commitment and dollar bet limits. However, there are wider public health concerns that present important possibilities for reform that could complement poker machine regulation and should not be ignored.



The evidence is clear that problem gambling has important individual medical as well as population health aspects. If therapies exist that can be harnessed to limit the harm where population –level measures fail, they should be investigated as a matter of priority.

For these reasons, the Greens feel the debate should also include areas for further research, more funding and most importantly a national approach for identifying the best programs that can bring help to where it is needed most.