

**Problem Gambling  
Research Programme  
2005 - 2010**

*Prepared by*

**Public Health Intelligence  
Ministry of Health**

## Problem Gambling Research Programme 2005 - 2010

Executive Summary	3
Introduction	5
Background	5
Monitoring (Surveillance).	12
The prevalence of problem/pathological gambling in New Zealand.	13
The incidence of problem/pathological gambling.	16
The social, economic and cultural impact of gambling.	19
Help-seeking behaviour of problem gamblers in New Zealand.	23
The distribution of gambling opportunities and problem gambling services.	24
Additional sources of information.	25
Research.	28
Help Services.	30
Barriers to help seeking.	30
Effective public health approaches.	31
Treatment effectiveness.	31
Gambler Characteristics and Behaviour.	32
At-risk populations.	32
Transitions between problematic and non-problematic gambling.	34
Culture and Gambling.	36
Crime and Gambling.	36
Protective factors and resilience.	38
Co-morbidities.	39
Industry behaviour.	40
Government behaviour.	42
Miscellaneous	43
Screening instruments.	43
Researcher and/or provider initiated projects.	44
Evaluation.	44
Appendix 1. Proposed research 2005/6 and 2006/7	48
Appendix 2. Proposed research budget 2007 through 2010.	49
Appendix 3. Proposed timeline for the Problem Gambling Research Programme.	50

### Executive Summary

The goal of the *Preventing and minimising gambling harm: Strategic Plan 2004-2010*<sup>1</sup> is to “assist Government, communities, and family/whānau to work together to prevent the harm caused by problem gambling and to reduce the inequalities associated with harmful gambling”<sup>2</sup>. In assessing all potential research projects, this aim and the aims of the Ministry of Health must be integral. A lengthy period of consultation of the gambling literature and discussion with experts in the field has resulted in the development of this research programme, which is designed to provide quality evidence in support of these goals.

A central feature of the programme is the role of Public Health Intelligence (PHI), the epidemiology group of the Ministry of Health, in developing and implementing a gambling monitoring framework to parallel those already in place for tobacco and food/nutrition. An outline of some of the information sources and gaps is provided in the research programme. However a very systematic approach is required to develop this fully. Routinely collected data and independent research will be integrated to provide an annual indication of gambling and gambling-related harm in New Zealand. This ongoing monitoring will provide a useful measure of the effectiveness of the Ministry of Health’s integrated strategy, and other regulatory interventions. PHI will publish this information regularly, with an annual publication anticipated. In addition to routinely collected data, projects key to the success of this programme will be the 2006/07 New Zealand Health Survey, a study of the social and economic impacts of gambling in New Zealand, and a replication, or partial replication, of the 1999 New Zealand Gaming Survey. These population-based studies will be supplemented by an ongoing programme of smaller scale, community level studies to provide an indication of gambling related harm in at-risk groups, including high deprivation communities in which gambling exposure is high, Maori, Pacific, and to be defined Asian communities.

To ensure a balanced research programme, an epidemiological framework suggested by the Australian Productivity Commission<sup>3</sup> has been adopted to produce five broad themes of research, and subcategories. It should be noted that these are often not clearly delineated, and that large projects, such as a replication of the 1999 New Zealand Gaming Survey, will overlap several categories. In addition, as discussed in this document, the lines between monitoring, research and evaluation are often blurred.

---

<sup>1</sup> Ministry of Health, 2005

<sup>2</sup> Page 11

<sup>3</sup> 1999

## **Problem Gambling Research Programme 2005 - 2010**

These five themes are:

- Help services
  - Barrier to help seeking
  - Effective treatments and interventions.
- Gambler characteristics and behaviour
  - At-risk populations.
  - Transitions between problematic and non-problematic gambling.
  - Culture and gambling.
  - Crime and gambling.
  - Protective factors and resilience.
  - Co-morbidities.
- Industry behaviour
  - Ecological exposure/accessibility.
  - Venue characteristics.
  - Game characteristics.
  - Advertising.
- Government behaviour.
  - The effectiveness of regulatory interventions.
- Other/miscellaneous
  - Screens for problem gambling.
  - Researcher/provider initiated research.
  - Support for emerging gambling researchers.

Initial priorities have been identified within each of these themes. An ongoing approach that is both data-driven and systematic is recommended. This means that the ongoing research direction must be responsive to the directions suggested by research results, which will raise new questions, and refine the existing questions. The changing needs of the Ministry of Health, the gambling sector, and the continually changing gambling and technological environments will also exert some influence over future research directions. As a result, the research programme will necessarily be subject to ongoing review, and thus must remain a “live” document. Nonetheless, draft timelines and indicative budgets for research and monitoring activities that are identified in the research programme have been included as Appendices 1 to 3.

Finally, the importance of evaluation has been stressed. In the broadest sense, a detailed monitoring framework will permit an evaluation of the effectiveness of combined efforts over time. However, evaluation should be integral to all programmes and services. In some cases research projects will provide best practice examples, and in others research projects will entail evaluation of clinical interventions. It is recommended that formative, process and outcome evaluations be integrated into all new and existing services.

# Problem Gambling Research Programme 2005 - 2010

## Introduction

The Ministry of Health<sup>4</sup> released a high-level framework to guide the development and implementation of an integrated approach to prevent and minimise gambling-related harm, the *Strategic plan for preventing and minimising gambling harm: 2004-2010*. The plan outlined how the Ministry of Health will address the continuum of gambling-related harm, and provided 10 principles that underpin the Ministry's approach and seven objectives or priorities for action. These principles and objectives<sup>5</sup> stressed that the Ministry of Health's approach was to be evidence based, and that a programme of research and evaluation would be developed.

The overall goal, as stated in the *Strategic plan for preventing and minimising gambling harm: 2004-2010* is to "assist Government, communities and family/whānau to work together to prevent the harm caused by problem gambling and to reduce the inequalities associated with harmful gambling"<sup>6</sup>. In developing an approach to research, monitoring, and evaluation, this overall goal must be central. In assessing external research proposals, including those requested by the Ministry and those initiated by researcher themselves, this overall goal must be stated clearly, and proposals assessed against how they contribute to this goal. The objective of the present document is to provide a plan and identify actions necessary to develop an evidence base for problem gambling in New Zealand that supports this goal.

This document has been compiled following a lengthy process that has included a careful review of local and international gambling research, and seeking advice on research priorities from key stakeholders via:

- Consultation on research priorities as part of the wider consultation in developing the *Strategic plan for preventing and minimising gambling harm: 2004-2010*.
- Presentation to and formal feedback from the Ministry of Health and Department of Internal Affairs (DIA) "Expert Advisory Group on Harm Minimisation".
- Wider discussions with and/or review by New Zealand gambling researchers, the DIA, the Ministry of Health's problem gambling team, PHI staff, and several leading international experts.

## Background

The Ministry of Health has undertaken to build on existing research to provide an evidence base to inform ongoing policy and service development. New Zealand is in the fortunate position to have a comparatively substantial research base on which to build. In particular, New Zealand is the only international jurisdiction to have nationally representative gambling surveys repeated using the same instrument<sup>7</sup>. Nonetheless, building a

---

<sup>4</sup> 2005

<sup>5</sup> Specifically Principle 9 and Objective 7

<sup>6</sup> Page 11

<sup>7</sup> Abbott & Volberg, 1996, 2000

## Problem Gambling Research Programme 2005 - 2010

comprehensive evidence base, and developing monitoring and evaluation systems will be a gradual and ongoing process. The initial steps involve identifying the research and information gaps, and addressing them.

Gambling refers to a collective group of activities in which something of value is risked for the chance (less than 1) of obtaining something of greater value. In some form, gambling has been a feature of New Zealand society and its economy virtually since the first European contact, and is generally viewed as a legitimate recreational or entertainment activity. Gambling includes a diverse range of activities in a variety of settings, many of which have substantially greater hours of operation and greater availability throughout communities than alternative recreational activities.

People take part in gambling activities for a variety of reasons<sup>8</sup>, principle among which is to win money. For most people, gambling is an occasional entertainment option that provides some enjoyment. However, for some, gambling is associated with a range of difficulties that vary in nature, severity and duration. Some frequent gamblers develop problems that cause or exacerbate harm to themselves, their significant others, and the wider community.

Pathological gambling was recognised as a mental disorder with its inclusion in the DSM-III<sup>9</sup> and subsequent revisions. The term problem gambling has been used in a variety of ways; in most situations it is used to indicate all patterns of gambling that disrupt personal, family, or vocational pursuits<sup>10</sup>. More recently, there has been a growing acknowledgement of the need to recognise the diversity of gambling problems – the homogeneity implicit in the approach from clinical psychology and psychiatry is not the case. A public health approach<sup>11</sup> provides a different lens through which these problems can be viewed and approached. In New Zealand, the Gambling Act 2003 has shifted the focus somewhat to prevention and minimisation of harm caused by gambling and problem gambling. This approach is central to the Ministry of Health's *Strategic Plan for Minimising Gambling Harm: 2004-2010*.

Section 4 of The Gambling Act 2003 provides a definition of gambling-related "harm". In this context, harm includes:

- Harm or distress of any kind arising from, caused or exacerbated by, a person's gambling.
- This includes personal, social or economic harm suffered:
  - By the person.
  - By the person's spouse, civil union partner, de-facto partner, family, whānau, or wider community.
  - In the workplace

---

<sup>8</sup> Tse et al., 2005

<sup>9</sup> American Psychiatric Association, 1980

<sup>10</sup> Lesieur, 1998

<sup>11</sup> e.g., Korn & Shaffer, 1999

## Problem Gambling Research Programme 2005 - 2010

- By society at large.

As such, it is important to acknowledge that although much research focus has been, and will continue to be, on problem and pathological gambling, this represents only a proportion of the potential harm of gambling according to this very broad definition. Consistent with this approach, the Ministry of Health's *Strategic Plan for Minimising Gambling Harm: 2004-2010* refers to a continuum of harm, and this must be incorporated into research investigating gambling-related harm. The Ministry of Health must make a concerted effort in commissioning research to broaden the focus beyond the use of simple "disorder" and "addiction" models acknowledging the complexity and heterogeneity of problem gambling and harm attributable to, or exacerbated by, gambling.

As stated, a public health approach provides a broad lens through which the factors influencing problem gambling can be contextualised and considered. These various factors interact in diverse and complex ways, and it is unrealistic to expect a specific and finite set of causal gambling harm "determinants" will be identified. However, by following an integrated approach to research and monitoring that encompasses the range of key variables identified while also acknowledging the area's inherent complexity, the Ministry's activities will improve the sector's overall knowledge base and directly contribute to the development of effective policies, programmes and services. The *Strategic Plan for Minimising Gambling Harm: 2004-2010* outlines several research and evaluation actions that are central to the development of a robust evidence base<sup>12</sup>:

- Carry out population surveys.
- Maintain and develop monitoring systems.
- Investigate risk and protective factors.
- Evaluate programmes and interventions.
- Develop Maori, Pacific and Asian peoples' research capacity.
- Investigate the social, economic and cultural impact of gambling.
- Investigate the conditions surrounding "natural recovery".

In addition, the Productivity Commission<sup>13</sup> provided an example of an epidemiological framework for problem gambling that is considered useful in this context (see Figure 1 below). In the research section below, this framework has been used to organise the proposed research and activities, and should be consulted when developing a full monitoring framework.

---

<sup>12</sup> Page 21

<sup>13</sup> 1999

## Problem Gambling Research Programme 2005 - 2010

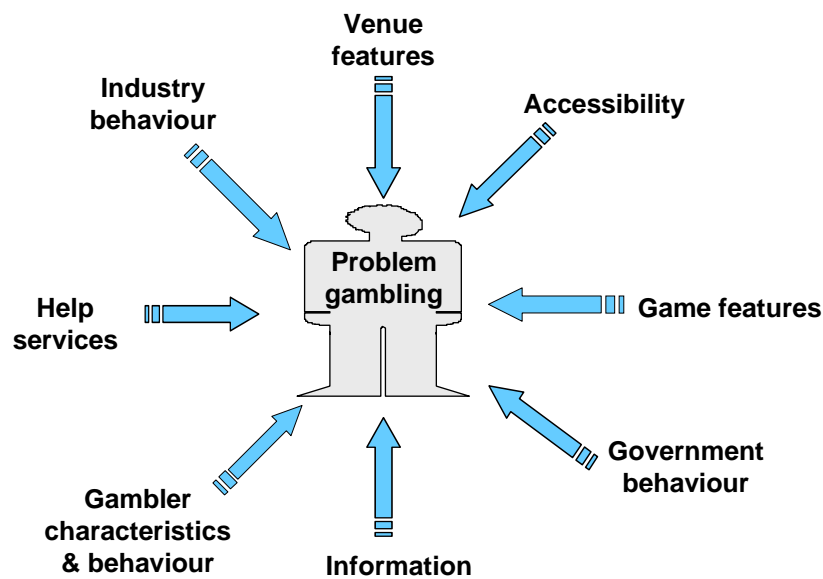


Figure 1. An epidemiological framework for problem gambling – source, The Productivity Commission (1999), *Australia's Gambling Industries*.

The present document separates the focus into three areas:

- Monitoring;
- Research; and
- Evaluation.

While to some extent these areas are considered here as distinct entities, it is important to acknowledge that at times, the boundaries between them are blurred and there can be considerable overlap. For some clarification, a description of the three areas follows<sup>14</sup>

### Research, Monitoring and Evaluation

Research, monitoring and evaluation are not mutually exclusive terms, and in respect of the overall Research Strategy there will inevitably be a degree of overlap between these areas, with some projects being informative across more than one domain. However, it is important at this stage, where possible, to establish boundaries, particularly given the influence this can have on how the various projects relate to one another and where they are best positioned in respect of the overarching programme as a whole.

---

<sup>14</sup> Adapted from *Seeing through the smoke: Tobacco monitoring in New Zealand*, Ministry of Health, 2005.



## Problem Gambling Research Programme 2005 - 2010

### Monitoring

Monitoring involves the regular and ongoing collection, analysis and reporting of information in an area of interest. It is important to stress the analysis and reporting, as collecting information alone is not sufficient.

In general, monitoring is primarily descriptive in nature. It addresses “what” type questions. By way of example, monitoring activities in the ‘problem gambling’ area may lead to questions such as:

*“What percentage of the population is problem gamblers?”*

*“What harm is suffered due to gambling?”*

*“What proportion of problem gamblers access treatment services?”*

Additional insight can be obtained by comparing observed values with expected, predicted or targeted levels of a variable of interest. Contrasts can also be made between different populations, geographic areas of interest, or, once an on-going monitoring programme is in place, over time.

In order to ensure the integrity of monitoring, and the reliability of associated reporting and decision making, careful planning and attention to specific data requirements is essential. Data collection methods associated with monitoring include cross-sectional survey, longitudinal studies, and record linkage studies.

### Research

In general terms, research involves the generation of new knowledge. This means it should be creative and novel, although the best research often seems like “common sense” in retrospect.

Research is usually, though not exclusively, mechanistic in focus and essentially analytical in nature. This means research tends to address “why” and “how” type questions. For example, research conducted in the problem gambling arena may focus on issues such as:

*The mechanisms or pathways via which individuals develop gambling problems;*

*Why certain groups are at greater risk of developing gambling problems than others; or*

*Why certain forms of gambling result in greater harm to gamblers and their significant others.*

## **Problem Gambling Research Programme 2005 - 2010**

There are a variety of distinct and clearly delineated approaches to research, the most common being:

- Experimental e.g., laboratory research, randomised control trials; and
- Observational e.g., cohort or case control studies.

Research approaches can be quantitative and/or qualitative in nature. Deciding what research approach is best suited to any particular issue or question will depend on both the nature of the area under examination and the ultimate motivation for conducting the research i.e. what will the results be used for.

“Basic” research, designed to generate new knowledge, but often without a “real-world” application as a driver is easily distinguishable from monitoring and evaluation, the results of which have specific, pre-determined applications. However, applied research can in many cases be considered as monitoring or evaluation.

### **Evaluation**

Evaluation involves assessing the performance or success of an approach or initiative using a set of selected criteria such as effectiveness, acceptability and impact. In terms of gambling, evaluation can take place at a number of levels and may include, for example such things as evaluating:

- the effectiveness of specific treatment services;
- new public health initiatives;
- the effects of a specific policy or regulatory regime; and/or
- the impact of a social marketing campaign on target populations/behaviours.

Evaluation examines “what works”, in contrast to research, which would ask, “why does it work?”

Evaluations can utilise a wide range of designs and methods, including both qualitative<sup>15</sup> and quantitative<sup>16</sup> techniques. In fact, there is virtually no limit to the variety and nature of evaluation design, from randomised control trials through to focus group discussions and even one-off designs produced specifically to address the challenges, opportunities or requirements associated with a particular project.

Evaluations are necessarily time-limited, but they can be repeated as required if appropriate, whether in the same or an evolving format as the subject of the evaluation develops.

Evaluation can share many characteristics with research and monitoring.

---

<sup>15</sup> Generally used with formative and process evaluations

<sup>16</sup> Generally used for outcome evaluations

## **Problem Gambling Research Programme 2005 - 2010**

It is now common place, considered good practise and often a specific project requirement, for evaluation to be built in to the design and budget of any new policy or programme. However, in instances where evaluation was not an integral part of an original project design, as has historically been the case with many problem gambling initiatives, an evaluation can quite easily be designed and conducted for an existing initiative. In such cases utilising an established evaluation framework as a template can be a good approach.

## **Problem Gambling Research Programme 2005 - 2010**

### **Monitoring**

Consistent with Objective 7 of the *Strategic Plan for Minimising Gambling Harm: 2004-2010*, PHI, the epidemiology group of the Ministry of Health will develop and implement a monitoring framework for gambling and gambling-related harm in New Zealand.

PHI has the Ministry of Health's statutory responsibility to monitor the health of the New Zealand population by analysing health outcomes, risks and determinants to measure how healthy the New Zealand population is over time and to examine inequalities in health across regional boundaries and between various population groups. Thus, PHI is ideally placed to undertake this work.

Templates for monitoring frameworks are available in the form of PHI's tobacco monitoring and food and nutrition monitoring programmes, and a problem gambling module has been embedded in the upcoming New Zealand Health Survey, which will be one of the cornerstones on which a monitoring framework is built.

The following material is not a comprehensive monitoring programme, rather it details some of the features that will be incorporated in the monitoring framework.

During the second half of 2007, a project team comprising representatives of PHI and DIA, will conduct a detailed and systematic review of resources to identify all reliable and accessible gambling information sources. On completion of the review process, the project team will design an appropriate framework and methodology for a operational gambling monitor and following consultation with key informants produce stakeholders ultimately produce a and implement a Gambling Monitor.

#### **Action.**

- **PHI to work with DIA to develop and implement a gambling monitoring framework in New Zealand.**

## Problem Gambling Research Programme 2005 - 2010

### THE PREVALENCE OF PROBLEM/PATHOLOGICAL GAMBLING IN NEW ZEALAND.

The value of regularly assessing the prevalence of problem gambling in the community is beyond question. As pointed out by Abbott, et al<sup>17</sup>, it must be noted that gambling and problem gambling are “moving targets”, that is, the gambling environment has changed rapidly in the last 30 or so years and continues to undergo a rapid evolution. This further emphasises the importance of regular and accurate monitoring of the prevalence of problem gambling and gambling generally in the wider New Zealand population.

New Zealand is fortunate in that it is the only jurisdiction in which a nationally representative survey has been replicated with the same measurement instrument<sup>18</sup>. The initial survey was conducted in 1991<sup>19</sup> and found that some 48% of respondents (18 years and over) reported gambling in at least one form, weekly or more often. The lifetime “probable pathological gambling” prevalence was estimated at 2.7%, with the current (previous six months) estimate 1.2%. This lifetime estimate was higher than comparable North American surveys.

A second survey<sup>20</sup> was completed in 1999. It is worth noting that in the eight years between the initial 1991 survey and the 1999 survey, expenditure on gambling had doubled, electronic gaming machine expenditure had trebled, and casinos were introduced in Christchurch (1996) and Auckland (1998). Given these substantial increases in the accessibility and availability of gambling alternatives, the general expectation was that problem gambling would have increased substantially. However, the results did not support this prediction, and lifetime prevalence was estimated at 1%, with current prevalence of 0.5%.

Most recently, the 2002/03 New Zealand Health Survey (NZHS) estimated that 69.4% of New Zealanders had participated in gambling activities in the past 12 months, and the estimate for current problem gambling levels (moderate to severe problems) was 1.2%<sup>21</sup>.

There is growing evidence that the prevalence of problem gambling has levelled out in New Zealand. The methodologies used by Abbott and Volberg<sup>22</sup> and in the NZHS (notwithstanding the concerns over the one-off screen) were very sound. Internationally, the evidence remains somewhat confused. Abbott<sup>23</sup> subsequently reviewed a number of North American replication studies, and found that seven had higher prevalence estimates on replication, in keeping with the notion that increased availability and

---

<sup>17</sup> 2004

<sup>18</sup> This instrument was the South Oaks gambling Screen (SOGS, SOGS-R)

<sup>19</sup> Abbott & Volberg, 1996

<sup>20</sup> Abbott & Volberg, 2000

<sup>21</sup> It should be noted that a ‘one-off’ screen was developed and used in this survey and its performance relative to validated screens has not been empirically established. Therefore, comparisons with prevalence estimates should be interpreted with a degree of caution.

<sup>22</sup> 1996, 2000

<sup>23</sup> 2001

## Problem Gambling Research Programme 2005 - 2010

expenditure would result in increased prevalence. However, eight studies showed reductions in prevalence. Decreases have also been noted in Australia<sup>24</sup>.

Although a consensus has yet to be reached, when the existing evidence is considered, methodological and confounding factors notwithstanding, it does not support the simple notion that at a population level increased availability and expenditure necessarily results in increases in gambling problems. Rather, there is likely to be a more complex multi-faceted relationship, or series of relationships involved.

Abbott et al<sup>25</sup> have discussed some of this evidence at a more detailed level and suggest that prevalence rates may tend to level out in mature markets, even as gambling accessibility continues to increase. However, this is not necessarily a naturally occurring phenomenon. In more mature markets such as New Zealand, factors such as a greater awareness of problem gambling, increased availability of problem gambling services, increased regulation, improved harm minimisation measures, increased host responsibility, changing participation patterns, and aging successive cohorts may all play some role in producing this phenomenon.

The dynamic nature of these variables suggest a complex and evolving system of actions and interactions, with the balance between risk and protective factors, industry behaviour, including new technologies and marketing activities and social adaptation continually in flux. In addition, the Ministry of Health's *Problem Gambling Geography* report<sup>26</sup> has clearly shown that gambling exposure is not uniformly distributed throughout the population. Exposure to gambling opportunities is in fact, much higher for people residing in the more relatively deprived areas of New Zealand, and these people are at increased risk of being problem/pathological gamblers. Maori and Pacific people are generally over-represented in these locations and therefore may warrant particular attention in respect of harm minimisation and prevention initiatives.

Converging evidence suggests that gambling harm is unlikely to be normally distributed throughout the population and the uneven distribution of gambling opportunities tends to exacerbate the harm experienced by particular groups. However, population surveys do not always identify the extent to which fluctuations and variations can occur at the 'local' or 'community' level. Given the potential importance of such discrete geographic variations in respect of problem gambling and gambling related harm, independent research into this area could make a valuable contributor to the sector, particularly if fed into the wider monitoring programme.

In conclusion, regular, ongoing monitoring of gambling participation and problem gambling prevalence is fundamental to monitoring the effects of gambling in New Zealand. Surveys of this nature need to be large enough to

---

<sup>24</sup> Productivity Commission, 1999

<sup>25</sup> 2004

<sup>26</sup> 2006

## **Problem Gambling Research Programme 2005 - 2010**

show changes in problem gambling, including changes within specific groups and subgroups and in levels of gambling participation over time. The 3-yearly NZHS meets all these criteria. It samples approximately 12,000 New Zealanders, using face-to-face interviews and includes an increased sample size for Maori and Pacific populations.

As mentioned above, the last NZHS included a one-off gambling screen, which a proportion of respondents answered. This is less than an ideal situation and effectively precludes comparison with previous national and international research. However, established gambling screens, such as SOGS, are too long to be readily incorporated into a large, general health survey such as the NZHS. In order to overcome these problems, PHI sought advice on possible solutions from a small expert group, who recommended that future surveys draw on the nine-item Problem Gambling Severity Index (PGSI)<sup>27</sup>.

The PGSI is a subscale of the 30-item Canadian Problem Gambling Index (CPGI). Its length is sufficient to generate the required levels of data and it has been well validated with extensive use in both Canada and Australia<sup>28</sup>. Wenzel et al<sup>29</sup> thoroughly examined the reliability and validity of the full CPGI and concluded that it outperformed the SOGS, which to date, is the most widely used problem gambling screen.

In addition to the gambling component in the NZHS, the Ministry is supporting the Youth 07 Survey, conducted by the University of Auckland. Youth 07 is a nationally representative general health survey of secondary school children. A DSM-IV based age-appropriate problem gambling screen has been imbedded in the survey. Other questions address the mode and frequency of gambling. The results from this module will allow correlations to be made between problem gambling and numerous other health issues affecting for New Zealand youth. With the results of these two surveys (NZHS and Youth 07), prevalence rates for all age groups of interest will be available.

The last national prevalence study was conducted in 1999<sup>30</sup> and there is a sound rationale for replicating this project every five to seven years. In contrast to the NZHS or Youth 07, a dedicated gambling study provides much more detailed, gambling-specific information. Thus, a national prevalence survey would complement the information produced by the NZHS and Youth 07 survey. Constraints and other priorities mean that an expansion of the gambling section in the NZHS is not possible. The present document outlines

### **Recommendations/Action.**

- **Incorporate the PGSI in subsequent New Zealand Health Surveys.**
- All respondents to undertake screen (i.e., no "screening" question) – respondent burden to be assessed in dress rehearsal.
- Fund production of a themed Problem Gambling report by PHI following each New Zealand Health Survey.
- Continue to support the inclusion of a gambling screen in national youth surveys (Youth 07).
- Regular (5-7 years) national problem gambling prevalence surveys (a partial replication of the 1999 New Zealand Gaming Survey). Budgeting requirements should be included in the next levy calculation.

## **Problem Gambling Research Programme 2005 - 2010**

a number of sources from which similar information can be obtained; however there are distinct and substantial advantages to a regular gambling specific “snapshot” project. Budgeting for this aspect of the monitoring regime will require some preliminary scoping work to be undertaken and, depending on the anticipated cost of the project, it may be necessary to address this initiative in the context of the next levy round.

### **THE INCIDENCE OF PROBLEM/PATHOLOGICAL GAMBLING.**

There remains comparatively little information on the incidence of problem gambling in New Zealand, or indeed the rest of the world. Although New Zealand is internationally recognised as being comparatively advanced in most areas of problem gambling research, a representative longitudinal gambling cohort has yet to be established. - although there are two substantial longitudinal studies underway: The Pacific Island Families Study; and the Dunedin Multidisciplinary Health and Development Study (see below) in New Zealand that currently contain gambling modules of varying degrees. A further longitudinal study is being established at the University of Auckland via funding from the Ministry of Social Development.

Longitudinal studies represent the best opportunity to gather detailed information on the variability, pathways, and natural recovery, help seeking protective and risk factors of/for problem gambling. The upcoming 2006/07 New Zealand Health Survey also provides an opportunity to establish a longitudinal study with a specific focus on gambling. Although this is a good opportunity, the expense and the timeframe associated with the outputs means that the current research budget precludes a large study of this nature. One alternative is to identify small sub-samples and track them prospectively. A second alternative, which should be investigated, is establishing a general health longitudinal study from the next New Zealand Health Survey, with a substantial gambling module – thus sharing the costs across the wider health sector.

The relationship between problem gambling and health more generally is one that has been largely neglected to date. A third alternative, which is the recommended action, is that a smaller “case control” longitudinal study is established. A sample of the problem gamblers from the next NZHS or the suggested replication of the 1999 NZGS, and an equivalent number of controls would be followed at regular intervals to obtain detailed information about aspects of their gambling such as nature and prevalence, specific help seeking behaviours, the impact of their gambling on health and well-being. Abbott, Williams and Volberg<sup>31</sup> reported similar research following a sample from the 1991 national prevalence study.

Retrospective studies can provide similar, admittedly more limited, information without the associated costs or delays. Longitudinal studies remain a high priority; however, as outlined above, the research community in New Zealand

---

<sup>31</sup> 2004



## **Problem Gambling Research Programme 2005 - 2010**

has ongoing projects that either currently, or with minimal additional funding will, include gambling and problem gambling among their areas of focus. Tapping into such projects, especially when they are longitudinal in nature, is an excellent means of broadening the evidence and researcher base without requiring high levels of new expenditure.

Establishing and maintaining credible and constructive relationships throughout the wider research community is an important focus for the Ministry. It is through such liaison and interaction that access to potentially relevant projects can be achieved. In order to benefit from influencing the nature and focus of specific projects, it is necessary to be directly involved at the earliest stages of planning and development.

Presently, there is an opportunity to add a substantial and ongoing gambling component to the existing longitudinal Pacific Families Study. Following previous assessments a modest gambling module was included. However, there remains considerable potential for the scope of this module to be expanded. Increasing knowledge about gambling among Pacific people is an important issue, particularly given the limited research currently being conducted with this uniquely vulnerable population.

Of all population groups in New Zealand, Pacific peoples are the most at risk of developing problem/pathological gambling. From the two New Zealand national prevalence surveys (1991 and 1999), it has been estimated that Pacific peoples are at least six times more at risk of developing problem/pathological gambling than New Zealand Europeans<sup>32</sup>. The same prevalence surveys estimated that 14% of current probable pathological and problem gamblers were Pacific peoples. These results were supported in the more recent 2002/3 New Zealand Health Survey, and recognised in the Ministry of Health's strategic approach to preventing and minimising gambling related harm.

---

<sup>32</sup> Abbott & Volberg, 1991, 2000.

## Problem Gambling Research Programme 2005 - 2010

Despite this knowledge, research into the relationship between Pacific people and gambling and the impact of gambling on Pacific people remains quite limited. Supporting the inclusion of a gambling module in the Pacific Families Study is a cost effective method of obtaining information that will be of benefit to Pacific peoples throughout New Zealand. The project outcomes will improve understanding Pacific peoples and their relationship with gambling. This ethnic-specific data could be used as a basis for developing effective interventions and informing policy development to help address the substantial issue of problem gambling in Pacific communities.

- ***The Pacific Islands Families Study (Contact Prof Max Abbott et al., Auckland University of Technology).***

The Pacific Islands Families Study follows a cohort of 1398 Pacific children within their family environment over the first six years of the child's life. It is anticipated that this prospective, longitudinal study will generate important practical information on Pacific child and family health and psychosocial functioning over critical developmental stages.

The three overall objectives of the PIF Study are;

- To provide information on Pacific peoples' health, and the cultural, economic, environmental and psychosocial factors that are associated with child health and development outcomes and family functioning.
- To determine how such factors individually and interactively influence positive and negative child, parent and family outcomes over time.
- To provide information that will help set quantifiable targets for Pacific peoples' health.
- 

- ***Dunedin Multidisciplinary Health and Development Study (Dr Shyamala Nataraja et al., University of Otago).***

A current study is investigating the childhood, adolescence and early adulthood risk factors for gambling and problem gambling as part of a longitudinal study tracking birth cohort of 1037 born in Dunedin between 1 April 1972 and 31 March 1973. The study is examining the "Pathways Model" (Blaszczynski, 2002) and associations between problem gambling and self-harmful thoughts and behaviours.

*Identify the key information needs currently not being addressed in respect of the relationship between Pacific peoples and gambling and, in consultation with stakeholders from the gambling and Pacific development sectors, develop an expanded gambling module for inclusion prior to (?) the next assessment of the cohort.*

### Recommendations/Actions

- Establish a small “case control” longitudinal study from the next NZHS or the planned replication of the 1999 NZGS – approximately 100 problem gamblers and 100 controls.
- Investigate the feasibility establishing a general health longitudinal study from a cohort identified in the New Zealand Health Survey.
- **Immediately support the introduction of a comprehensive gambling section in the 6-year (children’s age) follow-up of the Pacific Families Study, and support the ongoing inclusion of a gambling module in this research.**
- Monitor existing and new opportunities to add gambling modules – it is **imperative** that gambling modules are maintained/developed in these studies when possible.
- Initiate parallel retrospective studies to address key issues (see Research section).

### THE SOCIAL, ECONOMIC AND CULTURAL IMPACTS OF GAMBLING.

Nobel Laureate economist Paul Samuelson suggests that:

*(Gambling) involves a simple transfer of money or goods between individuals, creating no new money or goods. Although it creates no new outputs, gambling does nevertheless absorb time and resources. When pursued beyond the limits of recreation, where the main purpose after all is to kill time, gambling subtracts from the national income.*

Although this view is not unanimously amongst economists, quantifying the social and economic costs and benefits of gambling remains an area of great interest to many and has been identified as a priority area for ongoing gambling research and monitoring.

As specified in the Gambling Act 2003 and the Ministry of Health’s integrated strategy, the focus of intervention in the sector is not simply to assess the prevalence of problem gambling, but rather to support the prevention and minimisation of gambling-related harm. In terms of monitoring progress against these stated goals and evaluating related public health initiatives, a fundamental knowledge gap remains; how harm to individuals, families, communities, and populations can and/or should be measured.

The Gambling Act 2003 provides a broad working definition of what gambling related harm is, however quantifying and monitoring gambling-related harm is not a simple matter. Problem and pathological gamblers represent only a sub-group of those that suffer gambling-related harm. Therefore the “disorder” or “addiction” model sometimes used as a framework is, in respect of gambling at least, inadequate.

The analytical framework that is most useful in terms of analysing gambling-related harm remains somewhat contentious. A public health approach, to

## Problem Gambling Research Programme 2005 - 2010

which New Zealand is committed, provides a broad lens through which the costs and benefits of gambling can be analysed, and the impact of gambling on society better understood<sup>33</sup>. Although somewhat cumbersome, combining multiple sources of information is a viable means of assessing harm. A key factor in operationalising such an approach to form a comprehensive monitoring framework, is the use of a single benchmark measure that describes the impact (social and economic) of gambling at a population level. Additional information from a range of different sources can then be used to build on this base, and/or clarify aspects of it. A joint Ministry of Health and Department of Internal Affairs Expert Advisory Group meeting (2006?) confirmed that developing a sound methodology to assess the social and economic impact of gambling in New Zealand is a very high priority.

Quantifying the costs and benefits of gambling is a difficult task. A complicating factor is that the benefits are often easier to understand and quantify than the costs, which tend to be of a more intangible and less predictable nature, for example impact on well being and impact on future human capital, respectively. As a result, the methodologies used will be subject to ongoing development and evolution. Where direct costs are available, they will be used, and where the costs are less tangible proxy measures will be found.

The Productivity Commission provide an overview of the approaches that have been used, and group the costs into five categories:

- Financial costs.
- Effects on productivity and employment.
- Crime.
- Personal and family impacts.
- Treatment costs.

### **Measuring the Economic Impact of Electronic Gaming Machines in regional Areas – Bendigo, a case study<sup>34</sup>**

Pinge reported a regional impact analysis in developing a methodology to assess the impact of electronic gaming machines in Australian cities. He used a relatively simple “input-output” model to quantify the net effects of gaming. Bendigo is a region north of Melbourne with an estimated population of 49,000 adults. At the time of the study, the Bendigo region contained 507 machines at nine venues.

Pinge noted that further work was needed to estimate the true extent of positive and negative externalities. However, he stated “there is little doubt that the negative externalities will be greater than the positive externalities resulting from gaming machine activity”<sup>35</sup>. He estimated that the annual net loss to the region was \$11.57 million Australian dollars.

<sup>33</sup> Korn et al., 2003

<sup>34</sup> Pinge 2000

<sup>35</sup> Pg 14

***(This section could be updated to include more recent work)***

***Socio-economic Impacts of Gambling: Developing a methodology for assessing the socio-economic impacts of gambling in New Zealand. (Prof Sally Casswell et al., SHORE, Massey University, Auckland).***

SHORE developed and piloted a methodology for measuring the socio-economic costs and benefits of gambling in New Zealand funded by the Problem Gambling Committee and administered by the HRC. This project included:

- An international literature review of the methodologies and approaches suitable for measuring the social and economic impacts of gambling.
- Data collection from stakeholders, including the gambling industry, consumers, and those affected by the gambling of others to provide an insight into the nature and range of gambling impacts in New Zealand.
- Development and piloting of a quantitative instrument to assess the social and economic impacts of gambling in New Zealand.

The methodology appears sound, and warrants further development. A cost-benefit approach is adapted for gambling, and the survey developed includes measures of the impact of gambling on:

- Physical and mental health.
- Current and future material well-being.
- Housing or accommodation.
- Social connectedness.
- Relationships.
- Perceptions of self.
- Education, training, and employment opportunities.
- Criminal activity.
- Use of state and community funded services.
- 

The results suggested that the measures used were useful and appropriate, and potentially important information was obtained about the impact of the gambling of others on the respondent. Analyses have been designed to:

- Investigate the relationships between different modes and intensities of gambling and the specified socio-economic impacts.
- Describe the impacts of gambling (controlling for intensity and mode of gambling) for different demographic groups (e.g., age, gender, ethnicity etc.)
- Compare the socio-economic measures of heavier gamblers and their extended families with relevant social norms such as the Living Standards Index.
- Estimate the overall social and economic impact of gambling in New Zealand.

## Problem Gambling Research Programme 2005 - 2010

### **Community-Owned Model for the Assessment of Gambling (COMAG - Assoc Prof John Raeburn, CGS, University of Auckland)**

This project (in conjunction with the community reference group of PGF) developed a model to assess, monitor and evaluate the impact of gambling opportunities in communities. It fits well with the Ministry of Health's criteria, as it was "developed for the community, by the community". The COMAG uses a broad framework, consisting of two sets of measures, one that uses a household questionnaire, and another that uses available data in the community. The emphasis is on the economic, social and personal impacts of gambling across three levels of community life – the individual, the family/whānau, and the community. The driver for harm is viewed as emanating from financial loss, with stress, anxiety, crime and so on developing from this. However, the model is relatively holistic as it includes factors such as how people use their time, neglect of children, impacts on relationships, impact on recreational activities, and so on.

### **Where COMAG-type approaches should be implemented.**

There is converging evidence that suggests clearly where initial research efforts should be focussed if a community-based approach is used. Convergent evidence suggests initial efforts should be focused on high deprivation communities with substantial Maori and Pacific populations, and a high accessibility to electronic gaming machines

The 2004 *National Problem Gambling Intervention Statistics* (Ministry of Health, 2005) show clearly that the great majority of all problem gambling clients cite non-casino gaming machines as their primary mode of problem gambling (approximately 80% of clients).

Figure 2 below shows the distribution of non-casino gaming machines across deciles in the NZDep 2001 deprivation index (reprinted from the *Problem Gambling Geography of New Zealand*, PHIAL, 2003). Non-casino gaming machines are more likely to be found in the most deprived areas of New Zealand, with over half the machines located in the three most deprived deciles (deciles 8, 9, and 10). It is also important to note, that this relationship is not due to the distribution of the population, as each decile contains 10% of the population. Maori and Pacific peoples are and over-represented in the most deprived areas, with around 56% of Māori and 72% of Pacific peoples living in the same deciles 8, 9 and 10). Maori and Pacific peoples are also disproportionately represented among problem gamblers (e.g., Abbott & Volberg, 1996, 2000) and in clients accessing problem gambling intervention services (Ministry of Health, 2005).

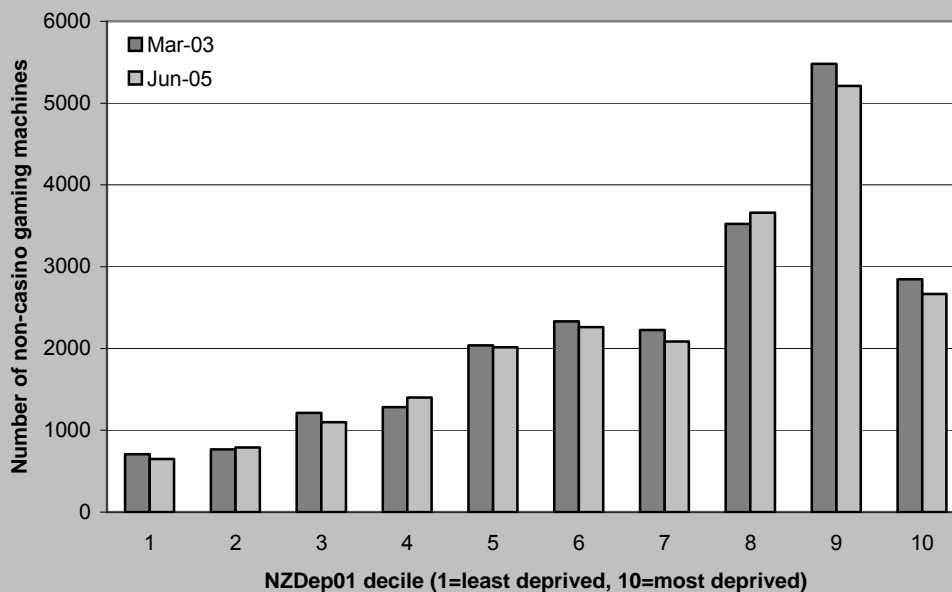


Figure 2. Total Non-Casino Gaming Machines by NZDep 2001 Decile (1=least deprived, 10=most deprived) on March 2003 and June 2005.

**Recommendations/Action**

- **Commission the implementation of a study to assess the socio-economic impacts of gambling in New Zealand, and its repeated implementation every 3 years as part of ongoing gambling monitoring in New Zealand.**

**HELP-SEEKING BEHAVIOUR OF PROBLEM GAMBLERS IN NEW ZEALAND.**

National statistics on clients seeking help for their gambling problems have been published annually since 1997. This series of reports provides time series data on the number and demographic characteristics of clients seeking help from Ministry of Health funded treatment providers. The reports include data both from face-to-face services and the Gambling Helpline – although as noted below at present these data cannot easily be integrated.

These data serve as a critical component of gambling monitoring in New Zealand. They provide some insight into what might be termed the “sharp end” of gambling-related harm, and the mode of gambling associated with it. In the context of national prevalence data, this data also provides information on the accessibility of services and/or help-seeking behaviour of different ethnic groups, genders, ages etc, and the family/whānau of people with gambling problems. The data is useful for service and policy development, and the formulation of questions to be addressed in research.

Service user data should continue to be summarised and reported annually. However, the form of the report should be considered carefully, specifically how the data is analysed, and potentially aligning the Gambling Helpline data more closely with the face-to-face intervention data. In particular, the usefulness of the data to the wider sector should be evaluated. For instance, there is a general consensus that in most cases the most useful level of data aggregation is by territorial authority (TA). This data is internationally recognised as a tremendous resource, and it is imperative that its use is maximised.

The progress measures used should also be re-evaluated. Clearly a gambling screen is required (currently the SOGS-3M is used), and gambling screens are currently being evaluated in a project by the AUT group. However, the other two measures (“Amount reported lost”, and “control over gambling”) also require evaluation for their appropriateness. Although globally there seems to be an agreement between the measures in terms of progress, at an individual level this is not necessarily the case<sup>34</sup>. As both measures are necessarily retrospective and little is known about their reliability and validity,

---

<sup>34</sup> Paton-Simpson, private communication.

## Problem Gambling Research Programme 2005 - 2010

there are inevitable concerns around them. There is also no account of any potential shift in the clients' frame of reference (e.g., gradual development of trust of treatment provider might result in more accurate disclosure of losses later in treatment; the development of a more realistic view of "how things are" – problems may have been under-rated early on). A general quality of life assessment with specific account of the aforementioned "response shift" might be appropriate. The Ministry of Health is committed to the ongoing improvement of the CLIC database.

### Recommendations/Actions.

- Ongoing annual publication of national intervention services statistics.
- Ongoing development and refinement of the CLIC database and progress measures (informed by ongoing work – e.g., AUT screening tools project)
- Support the alignment of Gambling Helpline data with face-to-face intervention data, and investigate shift of reporting to TA level aggregation.

### THE DISTRIBUTION OF GAMBLING OPPORTUNITIES AND PROBLEM GAMBLING SERVICES.

The *Problem Gambling Geography of New Zealand*<sup>35</sup> summarised the distribution of non-casino gaming machines across New Zealand<sup>36</sup> with respect to deprivation (the NZDep Index), known problem gambling risk factors, and problem gambling service provision. In addition, this approach was used to identify the areas with the greatest at-risk populations and demand for intervention and prevention services, and the locations of Alcohol and Other Drug treatment services.

The *Problem Gambling Geography of New Zealand* has proven to be a useful and valuable resource, and should continue to be updated. An updated version was published in 2006, and it is suggested that an update every 2-3 years from then is sufficiently frequent. In the 2006 version, the locations of TABs and casinos have been added, and the data (gambling venues, treatment centres and clients) are aggregated by TA. In the planning stages of the next report, advice should be sought from key community stakeholders in order to identify how the usefulness of the report can be maximised.<sup>37</sup>

---

<sup>35</sup> PHIAL, 2003

<sup>36</sup> Approximately 80% of clients in treatment services cite as this as their primary mode of gambling

<sup>37</sup> i.e., what additional data can and should be integrated (liaise with the Department of Internal Affairs on data they collect), and how these data should be aggregated.



**Recommendations/Actions.**

- Fund publication of the Problem Gambling Geography every 3 years. Every three years is preferable to coincide with the New Zealand Health Survey.
- Prior to next publication, consult with key community stakeholders to determine appropriate level of aggregation (e.g., TA), new data to be integrated (types of gambling venues, electronic monitoring data etc).

**ADDITIONAL SOURCES OF INFORMATION.**

The DIA collect a great deal of data as part of their role in regulating the gambling industry<sup>38</sup>. This data is an important component of monitoring gambling-related harm in New Zealand. The information collected by the DIA includes the number of gaming machines and the number, type and location of gambling venues in New Zealand<sup>39</sup>. Other currently reported information includes estimates of gambling expenditure from the main forms of gambling<sup>40</sup>, regulatory and compliance information and general information about the gambling environment in New Zealand, both current and historical.

In March 2007 an electronic monitoring system for all gaming machines in pubs and clubs was introduced. This system allows the DIA to track and monitor the operation of gaming machines, further ensure the integrity of games, limit opportunities for crime and dishonesty, and machine by machine tracking which enhances the understanding of problem gambling. Specifically, electronic monitoring:

- Monitors how much money is gambled on each machine.
- Monitors how much money each machine pays out in prizes.
- Monitors how much money should be banked.
- Ensures all software used on machines is identical to the approved versions (thus also assisting in the detection of software failures and/or attempts to manipulate the software).

Data obtained from electronic monitoring in New Zealand could potentially be integrated into the proposed 3-yearly Problem Gambling Geography reports to provide more detailed indications of the gambling patterns according to various demographic and geographic aggregations.

The DIA also conducts 5-yearly surveys on gambling participation and attitudes in New Zealand, the most recent of which was partially supported by the Ministry of Health.

<sup>38</sup> source <http://www.dia.govt.nz>

<sup>39</sup> already incorporated in the Problem Gambling Geography

<sup>40</sup> racing, NZ lotteries commission, non-casino gaming machines, and casinos

### Recommendations/Actions

- Incorporate DIA collected data into gambling monitoring – perhaps investigate the possibility of a joint annual report on gambling monitoring in New Zealand.
- Establish ongoing partial support of the DIA's gambling participation and attitudes survey.

There are a number of other potential sources of relevant information, and these should be investigated systematically. However, initial feedback suggests that those data sources that are commonly mentioned as being rich sources of information (e.g., WINZ, Courts, HNZ, other budgeting services etc) do not collect objective data on gambling in a systematic way. Furthermore, the information available is almost exclusively anecdotal, and thus limited in its usefulness. However, these potential sources of information should be explored further through the appropriate channels.

The Department of Corrections assess the “criminogenic needs” of offenders to examine why offenders are at risk. However, problem gambling does not appear as a common risk factor across the offender population<sup>41</sup>. To be classed as a criminogenic need, a demonstrable link, usually temporally, between the need and the offence must be present. Thus, although the prevalence of problem gambling is high in prison populations, this gambling is, in terms of this measure, not often related to offending. The relationship between gambling and crime is discussed further in the research section below.

PHI is in the process of establishing links to the NZ Police and access to their data. As part of this process, the data should be examined for any indicators of problem gambling, and relationships with other health and/or crime issues such as family violence, robbery, fraud etc.

Sullivan and colleagues have shown how problem gamblers can be identified in a number of settings when seeking help for other issues (see box below) – often related to their gambling. This sort of research can be developed to be informative at a number of levels – changes in the prevalence of problem gambling in these populations would be informative, and they could also be used to get more in-depth qualitative information on the harms suffered by problem gamblers and their families. In addition, other “at-risk” populations could be targeted in a similar manner – for instance, Maori, Pacific people, sub-groups of Asian communities, at-risk occupational groups (shift workers, food industry workers, gambling industry workers), etc. This innovative and relatively inexpensive approach to gathering information on the impacts of gambling should be supported. The research should be organised by the Ministry of Health in a programmatic manner. That is, specific targeted populations of interest identified and a similar approach to research taken with

<sup>41</sup> <http://www.corrections.govt.nz>

## Problem Gambling Research Programme 2005 - 2010

each (e.g., prevalence of gambling problem, and qualitative information as to the nature of the harms and narratives), and the groups followed up regularly

Sullivan and colleagues (2005 – Problem Gambling Foundation Conference) have reported a number of studies in which they have identified high rates of problem gamblers accessing a variety of community-based services, for example:

- Hutson & Sullivan – Food bank study.
  - 1208 clients at 3 food banks.
  - 14.6% problem gamblers, and 32% affected by someone else's gambling.
  - >34% in total affected by someone's gambling
- Sullivan, McCormick, Penfold, & Lamont – Mangere PHO study.
  - 1580 patients at GP clinics
  - 7.5% problem gamblers, and 18% family affected
- Sullivan – Ngati Porou study  $n = 507$ 
  - 23% problem gamblers.
  - 26% affected by someone else's gambling.
- Sullivan – AOD study
  - 12.5% of AOD clients were problem gamblers.
  - Rates higher for Maori (15.5%) and Pacific (17.8%).

(e.g., on a 2-3 yearly cycle).

### Recommendations/Action

- Continue dialogue with interested parties as to sources of community-level data that will be informative on gambling-related harm.
- Use established relationships with other Government agencies to establish what data are collected that will be informative, and what data could be collected. Principle among these will be NZ Police, the Department of Corrections, WINZ/Ministry of Social Development, and the Ministry of Justice.
- Establish a targeted research programme to assess harm in identified at-risk groups via a range of avenues (e.g., community groups, food banks, budgeting services, immigration services, employment groups/unions etc). This research should be on a small scale (along the lines initiated by Sullivan and colleagues), establishing prevalence levels using validated screens, modes of gambling, and collecting qualitative information on the nature of gambling-related harms. Each aspect of this research programme should be replicated 2-3 yearly and will supplement the population level measures suggested, and provide a richness of detail and narrative not possible at the population level. Funding for this programme should be built into the next levy negotiations.
- **An immediate priority is an appropriate study providing a better understanding of the impact of gambling on Maori communities to complement the proposed population level study and support of the Pacific Families Study.**

### Research.

In recent years there has been a dramatic increase in published gambling research, and there are now several peer-reviewed academic journals that specialise in the topic. In New Zealand, the task is to ensure that a gambling research programme systematically builds an evidence base that is informative for policy and service development. Using the *Strategic plan for preventing and minimising gambling harm: 2004-2010* as a guide, and considering the epidemiological framework (Figure 1), a monitoring programme will be informative to varying degrees on factors such as accessibility and industry behaviour (Problem Gambling Geography), gambler characteristics and behaviours (surveys), and help services (Problem Gambling Service User Statistics and progress measures). In addition, the monitoring activities highlight, and will continue to highlight, issues to be addressed by more specific research, both quantitative and qualitative.

When assessing proposals from research providers, it is important that the Ministry of Health has a set of criteria to assess them against. The criteria below were derived from the strategic plan, and stakeholder feedback. In addition, it is strongly recommended that written reviews are sought for all proposals from two external independent “experts”.

As outlined earlier, the general priorities outlined below are organised according to the Productivity Commission’s 1999 framework and were arrived at via internal consultation, reviewing the relevant literature and both informal and formal feedback from stakeholders. In all cases, the needs of priority populations, particularly Maori, Pacific and Asian, should be addressed. The section below is organised around key research questions. It should be made explicit that ongoing work will refine the focus of research in these domains, and/or suggest new avenues for future research.

A key role for the Ministry of Health will be to monitor ongoing research via relationship building, ongoing dialogue, and contract monitoring and refine the focus as the research programme is established. An overarching strategy is provided by the *Strategic plan for preventing and minimising gambling harm: 2004-2010* and when refining the programme of research, this document should continue to be consulted.

## Proposed guidelines to assess research proposals.

- Is the research meeting an existing need in New Zealand in terms of the current state of knowledge development?
- Is the proposed research consistent with goal of the Ministry of Health's strategic plan and the Gambling Act 2003? i.e.,
  - How will the research assist Government, communities and families/whanau to work together to prevent the harm caused by gambling, and to reduce health inequalities associated with harmful gambling?
  - Will the research be informative for ongoing policy needs, service development, and future funding decisions?
  - Does it address or clarify aspects of the impacts/harms of gambling on individuals, families, and communities as defined in the Gambling Act?
  - Does the research process specifically involve population groups experiencing significant harm from gambling? This involvement can be in the form of design (highly valued), data collection and analysis, and/or participation.
  - Does the research include a plan for communicating results and implications to key external stakeholders – particularly affected groups and service providers?
  - Does the research involve development of Maori, Pacific or Asian peoples' research capacity?
- Are the proposed research questions well developed and defined? Ideally, research questions should:
  - Have a sound and explicitly described theoretical basis and/or
  - Have a sound and explicitly described rationale developed from existing empirical evidence, particularly evidence obtained in New Zealand.
  - Be testable – except where research questions are exploratory or descriptive in nature. The latter should have a particularly strong theoretical basis
- Innovative research should be supported, particularly with respect to the development of interventions, the use of technology, and using methodologies, approaches and theory developed in other areas given a sound rationale for their use.
- The research should be of the highest possible standard. Research projects should be informative not only nationally, but also internationally. Where possible, they should be developed so that they are ultimately suitable for publication in international peer-reviewed journals, and add to the global knowledge base on gambling.
- Use the framework in Figure 1 to ensure that the overall approach to research and data collection remains balanced.

\* note: research proposals do not need to meet all criteria, however all should be considered when assessing proposals. For example, provider initiated projects would not necessarily be suitable for international peer-reviewed publication, but should be informative and available at a national level.

### Help Services.

#### BARRIERS TO HELP SEEKING.

Only a small proportion of problem gamblers seek professional help. In New Zealand, Abbott and Volberg<sup>42</sup> estimated that between 22,700 and 50,800 people could be classified as *current* pathological or problem gamblers<sup>43</sup>.

Data from clients accessing Ministry of Health funded treatment services suggest several issues that warrant investigation including:

- In the context of nationally representative prevalence data, Pacific people are under-represented in treatment services. Since 1999 the Pacific people have ranged from 5 to 7.7% of new clients accessing treatment services but make up about 14-15% of problem gamblers.
- Men are under-represented, in particular Maori (70% of new Maori clients are female) and Pacific (62% of new female clients are female).
- With respect to the family/whānau members seeking help for someone else's gambling, 70% of these clients are female, and 60% are NZ European.

Thus it is critical that the research project explicitly examines cultural (NZ European/Pakeha, Maori, Pacific, and Asian) and gender differences in barriers to help seeking and the experiences when seeking help, and factors that support earlier help seeking.

Internationally there has been little specific research on the motivations for, and barriers to, help seeking, it is clear that this must be a research priority. Evans and Delfabbro (2005) reported a study of this nature with 77 problem gamblers in Australia. They showed that professional help seeking was predominantly crisis driven, rather than driven by any gradual recognition of a problem. Shame, denial and other social factors were the most commonly reported barriers to help seeking, as opposed to a lack of knowledge, dislike, or distrust of treatment agencies. Another study (McMillen, et al., 2004) found broadly similar results and investigated cultural and gender differences in some detail. They found that men are less likely to seek help, and prefer group support. Cultural effects varied, however the most commonly identified factors were suspicion of mainstream services, shame, language barriers, unfamiliarity with or resistance to counselling, lack of information, and a lack of culturally appropriate services.

A study of this nature should be undertaken immediately in New Zealand. While it is likely that many factors will be similar in New Zealand, it is important to establish this clearly, and to examine carefully cultural differences among NZ European, Maori, Pacific Nations, and Asian problem gamblers, as well as gender differences and to shift the focus somewhat towards making

---

<sup>42</sup> 1999

<sup>43</sup> Note -in 2003, the total number of people seeking help for their gambling problems was around 6,700.

## Problem Gambling Research Programme 2005 - 2010

services more accessible. The McMillen et al<sup>44</sup> study focussed on Chinese, Italian, Croatian, Greek, Vietnamese, Arabic and indigenous Australian communities in Canberra, so overlap will not be substantial – however the study does provide an example of how to conduct such a project.

### **Recommendation.**

- **Commission study on barriers to help seeking, with a particular focus on the groups identified above.**
- Use outcomes of this research to inform service development, and as a platform for more focused research.

### **EFFECTIVE PUBLIC HEALTH APPROACHES.**

A public health approach has been adopted to prevent and minimise gambling related harm in New Zealand on the basis of a strong theoretical background. New Zealand leads the world in this regard, however this also means that there is little empirical evidence demonstrating best practice with specific reference to gambling.

This proposed project requires the provider to examine relevant literature and devise a set of best practice guidelines for public health approaches. An evidence-based approach and explicit intervention logic will be inherent in this project.

### **Recommendation.**

- **Commission a study to identify best-practice approaches to public health intervention.**
- Use outcomes to inform service delivery, and developing new services.

### **TREATMENT EFFECTIVENESS.**

A recent review of treatment studies<sup>45</sup> showed that no specific treatment modality had been shown to be effective in two independent research studies. Replication of this nature is fundamental to the progress of science, and the development of effective treatments. In the New Zealand context, it is important to recognise how little is known about what aspects of treatments are and are not effective, and in fact what treatment approaches are effective, and for whom they are effective. Both internationally and within New Zealand, there is a shortage of this sort of evidence.

In general, collaboration between treatment providers and researchers will be encouraged. Treatment providers should be involved in all aspects of the research from conceptualisation onwards. An initial research priority is the evaluation of some currently used treatment approaches. Following on from this, a larger treatment outcome study/clinical trial should be built into the next

---

<sup>44</sup> 2004

<sup>45</sup> Toneatto & Millar, 2004

## **Problem Gambling Research Programme 2005 - 2010**

funding round. Such a study could be part of a wider series of trials internationally, or a New Zealand specific project. In addition, a series of projects should be established to develop and evaluate novel treatment and/or prevention programmes.

### **Recommendations/Action.**

- **Commission an evaluation of the effectiveness of some current services.**
- Encourage continued relationship development between service providers and researchers.
- In the next 3-year funding period, establish a full-scale control study of several well-defined gambling treatments. Investigate the possibility of international collaboration in such projects, or such projects being funded as part of a wider international effort.
- Fund research to develop and assess the efficacy of novel interventions, and/or interventions assessed internationally (either intensive and brief and early interventions) for their effectiveness with New Zealand populations. These interventions could be specific to at-risk groups (ethnic and other), or generic.

### **Gambler Characteristics and Behaviour.**

#### **AT-RISK POPULATIONS.**

Throughout this document, it is clear that research has demonstrated that Maori and Pacific peoples are at increased risk of problem gambling. Immediate priorities have been identified to better understand the relationship between these peoples and gambling, and the impact of gambling on them. In addition, these projects and those that will follow will be used to develop appropriate and relevant methodologies, and Maori and Pacific peoples research capacity. When completed, this research will provide a focus for ongoing systematic investigation of these issues. In addition, projects involving geographical analyses and the relationship between gambling availability and gambling behaviour in high deprivation areas<sup>46</sup> have clear implications given the substantial over-representation of Maori and Pacific peoples in these areas.

A further population that service-access data suggest are at increased risk are Asians. However, nationally representative surveys generally do not identify these peoples as it is generally agreed that at-risk Asians are a sub-group of the very broad category "Asian". Research should be commissioned to identify more precisely the group of Asian peoples disproportionately affected by gambling – such research should consider factors such as culture, immigration, language difficulties, and occupation. Again, a systematic

---

<sup>46</sup> People in more deprived areas are also at greater risk of problem gambling, but gambling opportunities are also more readily available to them.



## **Problem Gambling Research Programme 2005 - 2010**

approach should be taken, but as with Maori and Pacific peoples, further information is required about the impact of gambling on these peoples, and their relationship with gambling – particularly casino-based gambling.

Youth are another population that evidence has suggested are at increased risk of problem gambling, consistent with their increased risk for a wide range of behavioural issues. Research in New Zealand is limited, although a gambling module will be integrated into the Youth07 project, and the NZHS samples young people. In addition, Fiona Rossen (Centre for Gambling Studies, University of Auckland) is currently completing a PhD specifically on youth gambling in New Zealand. Consistent with international research, preliminary results suggest that youth have higher prevalence rates than adults, their primary mode of problem gambling is somewhat different (see above), and that social connectedness may be a critical protective factor.

In the UK, a study by Wood and Griffiths (1998) showed that 30% of adolescents played the equivalent of “scratchies”. Most of the adolescents who played scratchies played once a month (44%), although 27% played a few times a month, 12% once a week, 13% a few times a week and 4% played everyday. There were no gender differences in frequency of play. A large minority of the participants bought their own scratchies illegally (26%). Wood and Griffiths (1998) identified 6% adolescent problem gambling. Furthermore a large minority of the participants answered that they were worried about how much they spent on scratchies (17%). Further studies by Wood and colleagues (Wood & Griffiths, 2002; 2004; Wood, Griffiths, Derevensky & Gupta, 2002) also support the notion that problem gambling is a significant problem for youth, and the primary mode of problem gambling is often scratchies.

The general approach to research in this area ,as with others, is to employ a systematic approach to build on existing research. Both population-specific and general research findings will provide direction for ongoing research, and the exact direction of future research should await the results of ongoing research.

### Recommendations/Action.

- Monitor ongoing research and consult with those researchers to establish a New Zealand specific evidence-based direction for future research.
- **As mentioned in “monitoring” above, support the inclusion of a gambling element into the Pacific Island Families Study, and commission a study of the impact of gambling on Maori communities.**
- Commission research to develop a better understanding of the at-risk groups’ relationships with gambling, and the impact of gambling on them.
- Commission research to clarify the at-risk Asian population, their relationship with gambling, and the impact of gambling on them.
- Use every opportunity to support the development of appropriate and relevant methodologies, and the research capacity of Maori, Pacific and Asian peoples.
- Establish Masters or PhD scholarships to support emerging researchers, with a particular focus on Maori, Pacific and Asian researchers.

### TRANSITIONS BETWEEN PROBLEMATIC AND NON-PROBLEMATIC GAMBLING.

The Strategic Plan for preventing and minimising gambling harm specifies investigation of the conditions surrounding natural recovery and the pathways into and out of problem gambling as a priority for research. These issues will be central in any potential longitudinal studies established as discussed in the monitoring section, however more immediately, retrospective studies using qualitative and quantitative methods should be established.

Tse et al., (2005), in the “Why do people gamble?” project, identified several indicators as important for whether social gamblers would become problem gamblers. The study was a population-based cross-sectional study involving members of the NZ European/Pakeha, Maori, Pacific and Asian communities in the South Auckland area. The indicators were split into environmental, social and personal indicators.

#### Environmental.

- Proliferation of electronic gaming machines (EGMs) and easy access to automatic teller machines (ATMs).
- Advertisements for casinos and internet games, which had increased influences on young people, NZ European/Pakehas, Maori, and students.
- Beginning on EGMs, housie, casino games and card games for money, and shifting to (or continuing with) EGMs, especially among females.

#### Social/Cultural/Socioeconomic.

- Starting for social reasons, including obligations to and the influence of family members and friends, but continuing for personal reasons, especially among Pacific people.
- For Asians, the difficulties associated with migration, and saving face.
- Solving money problems which becomes needing money to cover losses.

#### Personal.

- Escape from stress and loneliness, especially among NZ European/Pakeha and Maori.
- Losing control.

## Problem Gambling Research Programme 2005 - 2010

Abbott, Williams and Volberg (2004) reassessed 77 problem gamblers and 66 non-problem regular gamblers 7 years after their initial assessments as part of the 1991 New Zealand national prevalence survey. None of the problem gamblers accessed specialist counselling or treatment, nonetheless the majority no longer reported problems at follow up. With respect to those who had decreased gambling involvement, previous problem gamblers more often than previous non-problem gamblers reported:

- Being “older and wiser” (25% vs 5%).
- Having “other priorities” (16% vs 0%).
- Losing more than winning (9% vs 0%).

In contrast, non-problem gamblers more often mentioned:

- A lack of interest (31% vs 13%).
- A change in lifestyle or residential location (23% vs 13%).

For those that increased their gambling involvement, previous problem gamblers more often mentioned:

- More gambling opportunities (33% vs 7%)

Non-problem gamblers more often mentioned:

- “Something to do” or “a day out” (33% vs 5%)
- The opening of a casino (20% vs 5%).
- A “chance of winning” (20% vs 5%).

Overall, initial problem gambling severity, a preference for track betting, and co morbid excessive alcohol use were predictive of future problems. Unfortunately, due to the size of the study, too few non-problem gamblers developed problems to be able to identify predictors of problem onset.

The Abbott et al., study described above highlighted the often transient and certainly fluid nature of problem gambling, and both studies highlight some reasons and indicators for moving between problematic and non-problematic gambling. Abbott et al also highlight the much broader spectrum of gamblers that will endure or cause harm of varying degrees at varying stages. The studies suggest ways to retrospectively investigate, using qualitative and/or quantitative methods, the events surrounding movement into and out of problem gambling. Whilst the accuracy of retrospective accounts can be limited by recall and reinterpretation, careful and appropriate methodological development can minimise this.

### **Recommendation.**

- Commission a study (qualitative and quantitative) to retrospectively identify and explore common factors surrounding movements into and out of problem gambling. The study should involve cultural and gender differences in these factors.
- As described in the monitoring section above, where possible support/and or establish gambling modules in longitudinal research as the quality of information obtained will be vastly superior.

## Problem Gambling Research Programme 2005 - 2010

### CULTURE AND GAMBLING.

There continues to be a significant gap in the gambling literature regarding the role of culture in gambling and problem gambling, and the impact of gambling and problem gambling on culture. Internationally there is evidence that has been interpreted as suggesting that certain cultural groups and their associated environments are more vulnerable to begin gambling and experience problem gambling. In addition, relatively little is known, formally at least, about the impact of gambling on culture, and the role of gambling in culture. There are a number of potential research questions that could be addressed in this area.

In New Zealand, a number of surveys have shown that Maori and Pacific people are at increased risk of becoming problem gamblers, while other evidence suggests that certain sections of the Asian population are also at elevated risk. Initial research questions could centre on the developing role and impact of gambling in specific cultures, or New Zealand culture generally.

However, it is also important to examine cultural groups that seldom appear at problem gambling services or in national prevalence surveys in terms of the protective factors that might be involved. Asians provide an ideal opportunity to look at these issues. For instance anecdotal evidence suggests that the Indian community, while substantial in New Zealand, suffers little from problem gambling. Similar investigations may be possible with different Pacific groups.

#### **Recommendations/Action.**

- Commission a review of the role and impact of gambling on New Zealand culture generally, and the specific cultures in New Zealand. This review should integrate information from a wide range of sources, include an historical perspective, and explicitly include cultures that do *not* seem (anecdotally or empirically) to suffer disproportionate gambling-related harm.

### CRIME AND GAMBLING.

In recent years, the relationship between problem gambling and crime has received growing attention, particularly via the media. In order to support their gambling expenditure, problem gamblers may seek alternative sources of funds. They often borrow money from family and friends, sell assets, borrow money at high interest rates, and eventually they might seek money from illegal sources. Others have implicated problem gambling in domestic violence and child neglect. Of course not all problem gambling invariably leads to crime, however the general question of the extent to which problem gambling drives crime has yet to be adequately addressed.

## Problem Gambling Research Programme 2005 - 2010

A recent study of male prison inmates<sup>47</sup>, found the inmates surveyed had participated more, and spent nearly six times more, on gambling activities than the general male population in New Zealand. Moreover, 15% of the inmates reported committing a crime to finance gambling debts, and 9% reported being convicted for a gambling-related crime. However, as outlined earlier, gambling does not appear as a common risk factor for offending across the prison population in the Department of Corrections' criminogenic needs assessments<sup>48</sup>. More recent research from the United States<sup>49</sup> suggested that the percentage of problem gamblers among arrestees was three to five times higher than the general population, and that nearly one third of arrestees identified as pathological gamblers, admitted committing a robbery in the previous year. In addition, approximately 13% had assaulted someone for money, and pathological gamblers were more likely to have sold drugs than other arrestees. A study of serious fraud in New Zealand and Australia<sup>50</sup> suggested the presence of a link between gambling and fraud, particularly fraud undertaken by professionals in the workplace. In New Zealand, fraud (with theft) is the most common crime against property resulting in conviction<sup>51</sup>. However the Ministry of Justice do not routinely record data on factors relevant to the offending, rather the convictions are coded for the type of offending. Records of courtroom proceedings would contain additional information on the role of gambling, but even at this stage many suspect that gambling would, or at least could, remain hidden.

Various difficulties arise in determining the extent of gambling related crime, and these should be documented and considered carefully when designing a methodology to assess this issue. These issues include:

- The possible lack of temporal proximity between gambling and the resulting crime<sup>52</sup> and the relationship with other more proximate "needs" e.g., alcohol and drugs.
- The lack of objective data concerning the reported relationships. Most studies rely on self-reported evidence rather than official data and its accuracy is often questionable.
- There is a widely held belief that gambling-related crime is often not reported or detected, especially when it involves intra-familial crime. This is interwoven with the abovementioned concern about objective data.
- Even when offences are reported, they often do not result in convictions, and in some cases might not be investigated.

These considerations, among others, mean that the prevalence of gambling-related crime among prison inmates is unlikely to be indicative (it most likely substantially under-represents) the true extent of the problem. Research on the links between gambling and crime must take a much broader perspective

---

<sup>47</sup> Abbott, McKenna and Giles, 2000.

<sup>48</sup> <http://www.corrections.govt.nz>

<sup>49</sup> U.S. Department of Justice, 2004.

<sup>50</sup> Australian Institute of Criminology and PricewaterhouseCoopers, 2003.

<sup>51</sup> <http://www.justice.govt.nz>

<sup>52</sup> This may be an issue with the criminogenic needs approach.

## Problem Gambling Research Programme 2005 - 2010

on the nature and definition of crime and may involve several projects investigating different aspects of gambling-related crime in appropriate ways.

### **Recommendation.**

- **Commission a project/s to develop and implement a methodology/ies to better understand the links between gambling and crime (reported and unreported).**
- Investigate the potential and utility of examining archival data (Police and Court) on crime rates and legalised gambling expansion in New Zealand.

### **PROTECTIVE FACTORS AND RESILIENCE.**

In general, protective and resilience factors and the conditions necessary for these to develop are somewhat under-investigated topics. Investigations of protective factors and resilience could focus on youth, ethnic, and/or adult populations, and could be part of a study focused on well-being more generally. Information from the NZHS, Youth 07, longitudinal studies, and national prevalence studies provide and will continue to provide information on risk protective factors. It is critical to understand that the highest quality information will come from well-conducted longitudinal studies, and that the temporal sequence of events can be unclear in retrospective studies i.e, risk factors and consequences can easily be confused.

Research at the University of Auckland<sup>53</sup> has confirmed that rates of youth gambling are higher than the adult population in New Zealand, consistent with international research, and also examined the modes of gambling in youths. That research has also examined resilience among youth, and “social connectedness” has been identified as protective against problem gambling and a range of other problematic behaviours. The conditions necessary to develop such resilience have not yet been identified clearly and this is an area that research should address, either specifically with respect to youth gambling, or as suggested above, more generally.

### **Recommendations/Actions.**

- Commission a study/ies to build on and add depth of understanding to existing knowledge of protective factors and resilience, and the factors that influence these. Ensure this research includes protective factors and resilience in Maori, Pacific, and Asian peoples.
- As described in the monitoring section above, where possible support and/or establish gambling modules in longitudinal research as the quality of information obtained will be vastly superior.

---

<sup>53</sup> Fiona Rossen, PGF conference Auckland 2005 and personal communications.

## Problem Gambling Research Programme 2005 - 2010

### CO-MORBIDITIES.

A recent issue of the *Journal of Gambling Studies*<sup>54</sup> was devoted entirely to the relationships between gambling and alcohol use behaviours, and their associated disorders. The studies in this issue again concluded that there is a strong relationship between gambling and alcohol use, as suggested by the 2002/03 NZHS.

Stinchfield, Kushner and Winters (2005), in a sample of 765 problem gamblers receiving treatment showed that while a history of substance abuse and pre-treatment alcohol use were markers for increased problem gambling severity, neither exerted significant effects on problem gambling treatment outcome.

Ellery, Stewart and Loba (2005) showed that alcohol consumption affected play on "video lottery terminals" (a continuous electronic form of gambling common in Canada). Alcohol increased the time spent playing, and the rate of "power bets" – but it affected these more so in problem gamblers than non-problem gamblers.

Zack, Stewart, Klein, Loba, and Fragopoulos (2005) showed that a tendency to drink in response to gambling wins and more severe alcohol problems each coincide with stronger implicit associations (e.g., via priming) between gambling wins and alcohol concepts in memory. These associations can promote drinking and related effects (impaired decision making) in problem gamblers, and thus contribute to co-morbid problem gambling and alcohol use disorders.

In New Zealand, Sullivan<sup>55</sup> has implemented screening for problem gambling in AOD treatment centres and found high rates of problem gamblers, although Townshend<sup>56</sup> has found conflicting results in a preliminary study in Nelson.

### Recommendation/Actions.

- As in the monitoring section above, continue to support investigations of the prevalence of problem gamblers among those seeking help for alcohol and other drug issues.
- Dependent on policy implications, consider commissioning a small, controlled laboratory-based study on the effect of alcohol consumption on EGM play.
- Review existing Ministry of Health data (Mental Health) from all sources to ascertain what information is currently available, how informative it is, and what information should be collected.
- Investigate whether AOD services will screen for problem gambling, and whether problem gambling services will screen for AOD problems, and what research and development is required to facilitate this.

<sup>54</sup> Sept 2005, Vol 21(3)

<sup>55</sup> AOD study mentioned above

<sup>56</sup> Problem Gambling Foundation Conference, 2005

### Industry behaviour.

Marshall (2005) reported a study from the Richmond-Tweed area on the Gold Coast of Australia in which he examined the relationship between gambling behaviour and local provision of gambling opportunities. He showed that gambling activity at a local level was correlated with the availability of gambling opportunities (measured as electronic gaming machines (EGMs) per capita). It is important to note that in all people in the sample population lived within 4.5km of an EGM venue, and the vast majority within 2.5km – thus, on the basis of distance to a venue, minimal variation in gambling behaviour might have been predicted. The research suggests that at a quite local level accessibility to gambling alternatives may significantly impact on gambling behaviour. The process by which this might occur is not clear. Marshall concluded that accessibility to EGM facilities at a local level was an important driver in terms of their use, and suggested strongly that his data suggested that gambling is a producer driven market as opposed to a consumer driven market.

A suggested guiding concept of social epidemiology is that behaviour is substantially influenced by the social context in which it occurs<sup>57</sup>. Behaviours do not occur randomly through the population, but are more likely to be clustered or socially patterned. Consistent with risk factors for gambling, people that are poor, socially isolated and poorly educated are more likely to engage in risky behaviours, and less likely to engage in health promoting behaviours – some researchers have suggested that certain situations place individuals “at risk of risk”<sup>58</sup>. Understanding why groups of people behave “poorly” requires a paradigmatic shift away from the simplistic notion of individual choice, to a recognition that choices occur in and are significantly affected by, an environmental context. This is not a new notion. In reality it is one advocated, in a slightly different form, by Skinner<sup>59</sup>.

The social environment can and does influence behaviour in a myriad of ways, including shaping behavioural norms, enforcing patterns of social control (both health promoting and health damaging), providing or not providing environmental opportunities to engage in certain behaviours, reducing or enhancing stress for which certain behaviours, e.g., gambling, may be an effective, short term, coping strategy. It is critical to understand that environments place constraints on choices, and in some cases make certain personal choices very unlikely or impossible.

This recognition leads to a second - there are valid ecological level exposures in environmental and infectious disease epidemiology, and there are also valid ecological level exposures related to the social environment – e.g., the number and distribution of gambling opportunities may be an important determinant of gambling problems/harm as alluded to in the Marshall<sup>60</sup> study outlined above. The assessment of exposure at an environmental or

<sup>57</sup> Berkman & Kawachi, 2000

<sup>58</sup> Link & Phelan, 1995.

<sup>59</sup> e.g., 1938; 1953; 1969; 1971; 1974.

<sup>60</sup> 2005



## Problem Gambling Research Programme 2005 - 2010

community level may lead to a greater understanding of the social determinants of health. Important questions surround the appropriate level of analysis (population, community etc), pathways and so on. The existing geographical information on gambling in New Zealand provides insights into what are likely to be the appropriate levels of analysis<sup>61</sup>, and pathways to harm would be a question for follow-up research once a relationship is demonstrated.

*...although the reduction of stress, increased recreational activity, and wiser eating habits may all be indicated for healthier lives, such choices may be made impossible, or at least considerably more difficult, given the educational, economic, and cultural constraints of those living at or near the poverty line<sup>62</sup>.*

The 2005 study by Marshall outlined above has potentially important implications in New Zealand. The *Problem Gambling Geography of New Zealand*<sup>63</sup> has shown that over half the non-casino gaming machines (NCGM) in New Zealand are located in the three most deprived deciles (deciles 8, 9, and 10). In addition, Maori and Pacific peoples are over-represented in these most deprived areas, with around 56% of Māori and 72% of Pacific peoples living in the same deciles 8, 9 and 10. Maori and Pacific peoples are also at increased risk of being problem gamblers. The relationship between the distribution of NCGMs and NCGM venues at local community levels and gambling behaviour in these communities warrants empirical investigation in New Zealand. PHI has developed this idea, and has the expertise and skills in terms of geographical analysis, expertise in survey design and interpretation, gambling research and choice to produce this research in a cost effective and timely manner.

Townshend and Brooks (2005), at the Problem Gambling Foundation Conference, presented evidence from data collected in Nelson that some gambling venues might be disproportionately responsible for problem gambling in that region. Nelson contains 44 NCMG venues, and only one dedicated problem gambling service. Throughout a 6-month period in 2004, 58% of new clients reported one of just five of these venues as their "venue of choice". Moreover, none of these five venues had ever referred a client for treatment.

At another, even more local level, it would be interesting and important to examine the effects of individual venues on gambler behaviour. The preliminary research outlined below provides an example of how venue characteristics such as layout, jackpot structure etc,<sup>64</sup> can apparently influence the incidence of problem gambling.

Increased harm is associated with continuous forms of gambling, principally electronic gaming machines. With industry co-operation, an evaluation of the

<sup>61</sup> Deprivation level is an appropriate starting point

<sup>62</sup> Leichter, 1991.

<sup>63</sup> Ministry of Health, 2006.

<sup>64</sup> According to Townshend (personal communication) not, in this case, venue location.

## Problem Gambling Research Programme 2005 - 2010

characteristics of electronic gaming machines would be very informative. Behavioural psychology informs us that the pay-off schedules are the most critical aspect (variable-ratio schedules) and that the magnitude and structure of the pay-offs/jackpots and “near misses” are the other critical factors. The wider environment, noises, lights etc, may also have an impact. Such a study could be undertaken in a controlled laboratory setting, thus sacrificing some external validity, or as an observational study, thus sacrificing control over the relevant variables. An observational study of this nature could be integrated with an investigation of a regulatory intervention such as pop-up messages.

An issue neglected in problem gambling research is the impact of advertising, in a variety of forms, both formal and informal, on perceptions of gambling among various groups and gambling behaviour. In the “*Why do people gamble?*” project, Tse et al., repeatedly found that advertising was an important environmental factor in the development, maintenance and escalation of gambling behaviour. The Ministry of Health’s gambling needs analysis and other sources have cited advertising as a key environmental factor in problem gambling. An analysis of the range of marketing activities undertaken by the gambling industry, the way in which gambling is “branded” and/or the images associated with it, and the impact on gambling behaviour more generally i.e. not restricted to the mode advertised, would be an informative first steps for research in this area.

### **Recommendations/Actions.**

- **Initiate a study at community level to investigate the relationships between the distribution of gambling opportunities and gambling behaviour (PHI).**
- With appropriate industry support, commission research to investigate the relationship between venue characteristics and gambling behaviour – i.e., what features make venues safer or less safe?
- With appropriate industry/manufacturer support, commission research to investigate the effect of game characteristics. This project could
  - Be integrated into an investigation of the effect of pop-up messages.
  - Be a well-controlled laboratory-based study.
  - Or, be an observational study.
- Preliminary investigations of the impact of gambling advertising on gambling perceptions and behaviour (possible overlap with social marketing research).

### **Government behaviour.**

A monitoring programme will show the combined effects on problem gambling and gambling-related harm in a general sense. However, when the opportunity arises specific regulatory interventions should be assessed as they are implemented (e.g., pop-up messages on electronic gaming machines). Retrospective assessments of previous regulations, both direct (note acceptors) and indirect (anti-smoking) are possible via industry data on

## **Problem Gambling Research Programme 2005 - 2010**

turnover through gaming machines. However, the latter will be only crude proxy measures for gambling-related harm, and thus their usefulness diminished.

The immediate priority is an evaluation of the impact of pop-up messages on electronic gaming machine player behaviour and gambling harm. Perhaps the best way to examine this is through a carefully designed observational study backed up by data on expenditure and a short questionnaire (quantitative and/or qualitative). The matter is complicated somewhat by the gradual introduction of pop-up messages, meaning that consumers will in many cases continue to have a choice as to the type of machine they play. It is possible that given such a choice, problem gamblers and non-problem gamblers will choose different machine types – these choices will be influenced by a range of factors such as information, machine location, other machine features, irrational beliefs, etc.

Other potential regulatory interventions such as pre-commitment cards should be evaluated systematically prior to, or during, possible intervention.

### **Recommendations/Actions.**

- **Commission a study to evaluate the impact of pop-up messages on player behaviour and gambling related harm. Request detailed and precise information on data collection and analysis, observational methods, and proposed questionnaire design/development.**
- As opportunities arise, commission studies to evaluate the impact or likely impact of new regulatory interventions.

### **Miscellaneous SCREENING INSTRUMENTS.**

The Gambling Research Centre at AUT is currently commissioned to do a systematic review and assessment of problem gambling screening tools used in New Zealand and internationally. The goal of the project is to recommend a set of screening and assessment tools to be used in the clinical treatment of problem gamblers, and to pilot the recommended instruments to assess their utility in New Zealand. As mentioned above, the NZHS will incorporate the 9-item CPGSI in subsequent surveys. The recommendations from the AUT project and the decision to use the CPGSI will most likely necessitate validation, or continued validations of problem gambling screening instruments with New Zealand populations, particularly minority populations.

### **Recommendations/Action.**

- On receipt of AUT's final report (January 2007), commence validation work for the measurement instruments that are selected – the CPGSI is to be included.

## **Problem Gambling Research Programme 2005 - 2010**

### **RESEARCHER AND/OR PROVIDER INITIATED PROJECTS.**

In future years, an amount of money should be set aside for a competitive pool to fund small research projects initiated by researchers and/or service providers. These projects should be consistent with the Ministry of Health's strategy, and consistent with the criteria outlined in this document for assessing research proposals. In particular, projects should be supported that:

- Add to the evidence base, and have specific implications for service or policy development.
- Support the development of emerging researchers, the research capacity of Maori, Pacific and Asian peoples, and/or the research capacity of service providers (via supporting post graduate research).
- Build collaboration between researchers and service providers.
- Are innovative.

#### **Recommendations/Action.**

- In next 3-year funding period develop an annual competitive fund and appropriate process for small, developmental researcher-initiated projects consistent with the Ministry of Health's integrated strategy. This funding should be targeted at emerging researchers.
- In next 3-year funding period, establish Masters and/or PhD scholarship fund for emerging gambling researchers.

#### **Evaluation.**

Programme evaluation should be an integral part of the design and implementation of any intervention. Their key goals include, assessing whether programmes are being implemented as they were designed, assessing the effectiveness of programmes and informing future programme development. Evaluations draw on methodologies developed in behavioural and social sciences to address fundamental questions relevant to programme development and implementation. Evaluation should begin in the planning and early implementation stages of any programme, not later. Introducing evaluation later means that formative evaluation (see below) and the associated benefits are missed. There is no clear agreement on the terms that should be used, however most agree on two (formative and summative evaluations), or three (formative, process, and outcome evaluations). The panels below summarise the types of evaluation and some of the data collection methods used in evaluations.

### **Formative evaluation.**

Formative evaluations are sometimes considered analogous to needs assessments. The purpose of formative evaluations is to understand the need for an intervention, and be informative on how the intervention should be implemented in a targeted, cost-effective, and effective way.

### **Process evaluation.**

Process evaluations should be used periodically as a programme is implemented. They should be geared to understanding how a programme works, and will assist in determine whether and how programme goals are being met, what is being done, how it is being done, and who it is being done by. This process can be used to guide changes or adapt the programme to maximise its ability to achieve the stated goals, or, to ensure that the programme is being implemented according to the defined plan.

### **Outcome evaluation.**

Outcome evaluations often receive the most attention, as they are taken to show the effectiveness of an intervention or programme. Like process evaluations, they should be used periodically to assess whether programme goals are being met. Outcome evaluations usually use experimental designs to infer the effect of an intervention. Three simple designs are often used:

- Non-experimental designs:
  - The most commonly used technique. The individuals, groups or populations exposed to the programme are compared with themselves prior to exposure to the programme on the basis of variables that the programme is designed to affect. The inescapable weakness to this approach is that events other than the programme could be responsible for any changes in the identified variables. To help alleviate this, multiple and diverse variables should be identified and tracked
- Quasi-experimental designs:
  - Quasi-experimental designs include a separate non-randomised control group. Non-randomised control groups can lead to factors associated with the outcomes not being evenly distributed. Organising matched controls can alleviate this, however undertaking this correctly requires an extensive amount of work.
- Randomised control designs:
  - Randomised control designs are the optimal approach. However, with respect to problem gambling in New Zealand it would be very difficult, if not impossible, to justify this sort of design on ethical grounds.

## Problem Gambling Research Programme 2005 - 2010

**An overview of some major methods of data collection for evaluations (adapted from McNamara, 1988).**

<b>METHOD</b>	<b>PURPOSE</b>	<b>ADVANTAGES</b>	<b>CHALLENGES</b>
Questionnaires, surveys, checklists.	To get much information from people in a relatively non-threatening way	<ul style="list-style-type: none"> <li>• Anonymity.</li> <li>• Wide administration.</li> <li>• Often analyses are simple.</li> <li>• Volume of data.</li> <li>• Templates for questionnaires freely available.</li> </ul>	<ul style="list-style-type: none"> <li>• Might not get considered feedback.</li> <li>• Question wording can bias.</li> <li>• Impersonal.</li> <li>• Sampling.</li> <li>• Need other information for depth.</li> </ul>
Interviews	To understand with some depth someone's experiences or perceptions.	<ul style="list-style-type: none"> <li>• Depth of information.</li> <li>• Development of relationships.</li> <li>• Flexibility.</li> </ul>	<ul style="list-style-type: none"> <li>• Time consuming.</li> <li>• Difficult analyses.</li> <li>• Interviewer –induced biases.</li> </ul>
Documentation review.	To develop an impression of how a programme operates without impacting on its operation.	<ul style="list-style-type: none"> <li>• Comprehensive historical information.</li> <li>• No impact on programme.</li> </ul>	<ul style="list-style-type: none"> <li>• Can be time consuming.</li> <li>• Restricted to what exists, can be problematic if evaluation no inbuilt from formative stages.</li> </ul>
Observation.	To gather information about how a programme actually works – particularly about processes.	<ul style="list-style-type: none"> <li>• Observe operations as they occur.</li> <li>• Can adapt to events as they occur</li> </ul>	<ul style="list-style-type: none"> <li>• Can be difficult to interpret behaviours, or behaviours can be over/misinterpreted.</li> <li>• Observing and recording behaviour is more complex than most believe.</li> <li>• Observation can influence behaviour.</li> </ul>
Focus groups.	In depth exploration of topic(s)	<ul style="list-style-type: none"> <li>• Can get quick and reliable impressions.</li> <li>• Efficient means of getting range and depth of information.</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitator critical.</li> <li>• Difficult to analyse.</li> <li>• Selection biases.</li> </ul>
Case studies.	To fully understand experience of the programme	<ul style="list-style-type: none"> <li>• Detailed understanding.</li> <li>• Excellent means of portraying programme to outsiders.</li> </ul>	<ul style="list-style-type: none"> <li>• Can be too narrow – sacrificing breadth of knowledge for depth.</li> </ul>

**Recommendations/Actions.**

- All new programmes should include formative, process and outcome evaluation component in service specifications.
- Commission process evaluations of some existing public health programmes.
- Undertake preliminary evaluation of treatment services via analysis of CLIC database to parallel treatment research.

**Problem Gambling Research Programme 2005 - 2010**

**Appendix 1. Proposed research 2005/6 and 2006/7**

<b>PROJECT/\$</b>	<b>2005/06</b>	<b>2006/07</b>	<b>TOTAL</b>
<b>Barriers to help seeking</b>	<b>200,000</b>	<b>200,000</b>	<b>400,000</b>
<b>Treatment evaluation</b>	<b>200,000</b>	<b>250,000</b>	<b>450,000</b>
<b>Effective PuH approaches</b>	<b>120,000</b>		<b>120,000</b>
<b>Youth 07</b>	<b>44,444</b>	<b>30,556</b>	<b>75,000</b>
<b>PG geography and NZHS analysis (PHI)</b>	<b>44,444</b>		<b>44,444</b>
<b>Pacific Island Families Study</b>	<b>110,000</b>	<b>40,000</b>	<b>150,000</b>
<b>Monitoring (PHI)</b>	<b>50,000</b>	<b>100,000</b>	<b>150,000</b>
<b>Exposure in high-dep communities (PHI)</b>		<b>100,000</b>	<b>100,000</b>
<b>Social and economic impacts</b>	<b>100,000</b>	<b>400,000</b>	<b>500,000</b>
<b>Impact of regulatory interventions</b>	<b>30,000</b>	<b>120,000</b>	<b>150,000</b>
<b>Crime and gambling</b>	<b>26,000</b>	<b>104,000</b>	<b>130,000</b>
<b>Impact on Maori communities</b>	<b>30,000</b>	<b>120,000</b>	<b>150,000</b>
<b>TOTAL</b>	<b>954,888</b>	<b>1,464,556</b>	

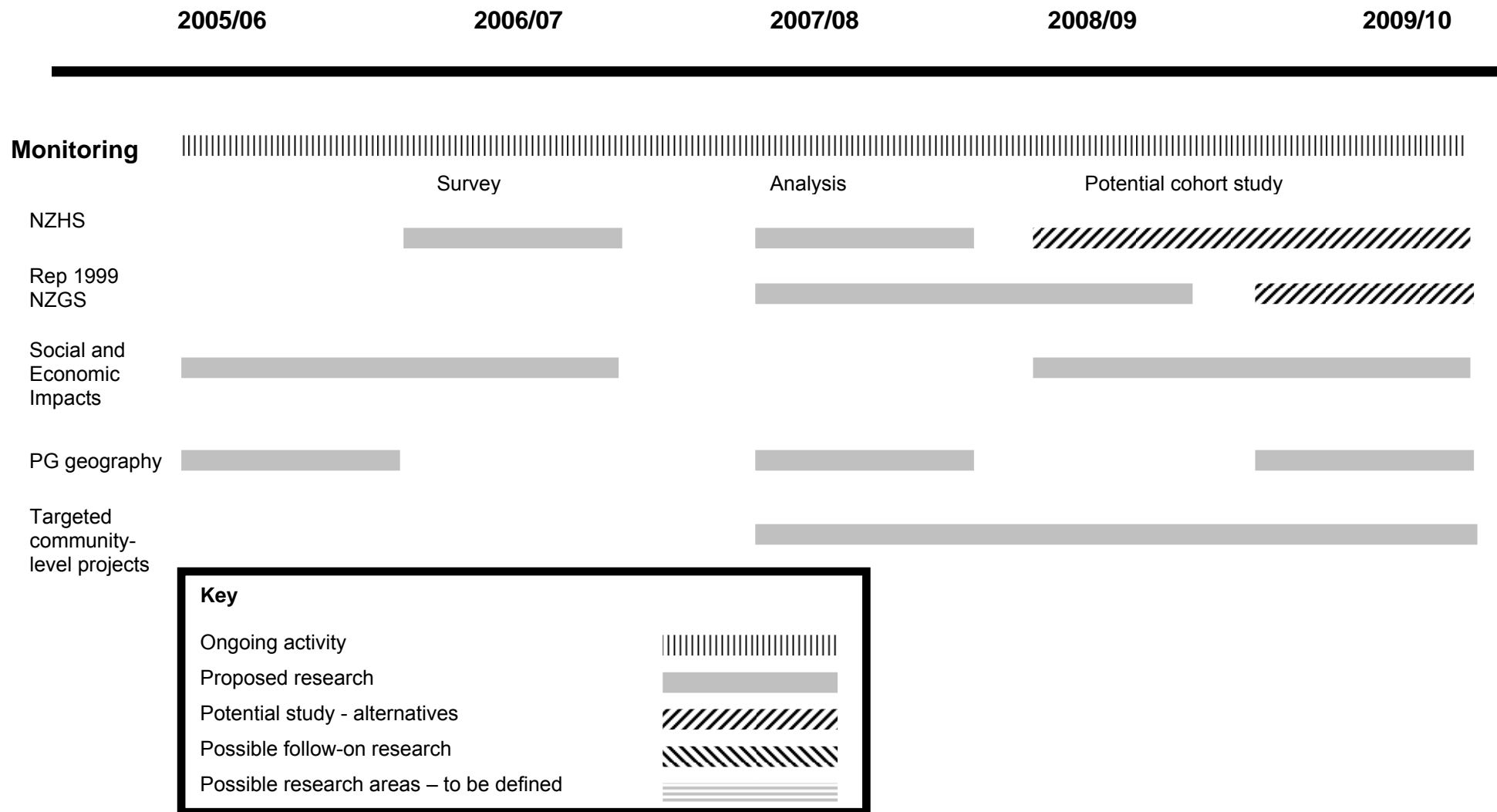


## Problem Gambling Research Programme 2005 - 2010

### Appendix 2. Proposed research budget 2007 through 2010.

<b>Project/ \$ (,000)</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>TOTAL</b>
<b>Special projects</b>				
Partial rep of 1999 NZGS	800,000	800,000		1,600,000
Social and economic impacts		800,000		800,000
Clinical trial	600,000	600,000	600,000	1,800,000
<b>Monitoring</b>				
Monitoring (PHI)	100,000	100,000	100,000	300,000
NZHS (analysis – PHI)	50,000			50,000
PG geography (PHI)	50,000		50,000	100,000
Cohort study (from either NZHS or NZGS)		100,000	200,000	300,000
Community-focused harm	200,000	200,000	200,000	600,000
<b>Help Services</b>				
Novel treatment dev/assess	200,000	200,000	200,000	600,000
<b>Gambler characteristics</b>				
Pacific Families Study		100,000	100,000	200,000
Impact on Asian communities	100,000			100,000
DIA attitudes and behaviours survey			50,000	50,000
Impact on Maori communities (follow-up research)		100,000	100,000	200,000
<b>Industry behaviour</b>				
Advertising (can be subsumed into NZGS)	150,000	150,000		300,000
Venue characteristics		100,000	100,000	200,000
Game characteristics (EGM, lab based)		100,000	100,000	200,000
<b>General</b>				
NZ validation of PG screens	100,000	100,000		200,000
Researcher/provider initiated fund	200,000	200,000	200,000	600,000
Support for emerging researchers	100,000	100,000	100,000	300,000
Need-based – e.g., regulations, distribution of venues, at-risk groups, etc)	200,000	100,000	100,000	400,000
<b>TOTAL</b>	<b>2,850,000</b>	<b>3,850,000</b>	<b>2,200,000</b>	

**Appendix 3. Proposed timeline for the Problem Gambling Research Programme.**



2005/06

2006/07

2007/08

2008/09

2009/10

**Research**

**Help Services**

Barriers to help seeking



Treatment effectiveness



Service utilisation statistics



Effective PuH approaches



Novel treatment development and assessment



2005/06

2006/07

2007/08

2008/09

2009/10

**Gambler characteristics and behaviour**

**At-risk groups**

Ongoing funding

PIF study



Impact on Maori communities



Impact on Asian communities



**Misc.**

Crime and Gambling in NZ



Culture and gambling

Protective factors and resilience

Co-morbidities

The exact focus and timeframe of these research areas will be determined according to current knowledge, and policy need. Various larger projects will provide relevant information.



Possible follow-up studies – to be defined.

