



**GAMBLING & ADDICTIONS RESEARCH CENTRE**

NATIONAL INSTITUTE FOR PUBLIC HEALTH & MENTAL HEALTH RESEARCH



Supplementary Report No. 1

**Evaluation of Problem Gambling  
Interventions and Public Health Services:  
A Review of Literature**

**Project Title: Evaluation and Clinical Audit of  
Problem Gambling Intervention and Public Health Services**

**Provider Number: 467589**

**Contract Numbers: 348109/00 and 01**

**FINAL REPORT**

**25 September 2015**

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# 1 Introduction

Problem gambling is recognised as a public health issue in New Zealand. The Ministry of Health provides a range of intervention and public health services that aim to treat as well as minimise or prevent problem gambling. The principal aim of the *Evaluation and Clinical Audit of Problem Gambling Intervention and Public Health Services* project is to evaluate and audit current Ministry of Health funded problem gambling service delivery, across both problem gambling intervention (personal health) services and primary prevention (public health) problem gambling services. This supplementary report contributes to this overarching objective by providing a synthesis of literature on nationally and internationally reported evaluations of gambling harm interventions and public health services in order to inform the development of methodological approaches and best practices for this project.

In New Zealand, secondary and tertiary gambling harm intervention services are “based on a multimodal approach, and, acknowledges the widespread impact of problem gambling on the individual and their family and affected others” (Ministry of Health, 2010, p. 20). These intervention services target at-risk and high need groups. Gambling treatment services are delivered through five types of intervention services: (1) *Helpline and Information Services*, (2) *Brief Intervention Services*, (3) *Full Intervention Services*, (4) *Facilitation Services*, and (5) *Follow-up Services*. While gambling treatment services that focus on addressing the symptoms of problem gambling have long been established within health sectors internationally, as described below, the conception of problem gambling as a public health issue is relatively new, with New Zealand being one of the pioneering countries in taking this approach.

To date, national responses to harm from gambling have concentrated by and large on establishing treatment services. Few nations have looked seriously at investing in public health responses to gambling expansion, and those that have commit only a small fraction of what they devote to treatment. Despite this indifference, efforts have already been made to articulate a public health approach to gambling... This is specially the case in New Zealand, where not only have efforts been made to formulate a comprehensive public health approach to gambling, but progress has been made in putting some aspects of this into action. These opportunities were only possible because in their 2003 Gambling Act, the New Zealand Government recognized gambling formally as a public health issue (Adams, Raeburn, & De Silva, 2009, p. 689).

New Zealand’s public health approach for addressing gambling issues is focused on three central activity areas: minimisation of gambling related harm, health promotion and political determinants (Adams et al. 2009). Harm minimisation initiatives, an area that has received the most international focus, concerns the use of evidence-based strategies to modify the gambling environment, product or facility and influence public knowledge about gambling related harm with the aim of reducing harmful gambling behaviours. The second area, health promotion, is focused on health inequalities and community action and involves building community capability, knowledge and resilience in addressing the temptations of gambling; this is based on the premise that an empowered public will be better able to inculcate responsible gambling practices. The third area, political determinants, is likely to be the most challenging intervention area considering its focus on changing the conflicting connections between the government’s social outcome objectives and the contribution of gambling profits towards its economic objectives. The Ministry of Health in New Zealand aims towards these focus areas through the delivery of five types of public health services: (1) *Policy Development and Implementation*, (2) *Safe Gambling Environments*, (3) *Supportive Communities*, (4) *Aware Communities*, and (5) *Effective Screening Environments*.

The following section provides an overview of problem gambling intervention and primary prevention public health services in New Zealand. This is followed by a review of literature that focuses on previous evaluations of different types of public health services that have been reported nationally and internationally. The final section of this review provides a discussion on the methodological aspects and other relevant findings that are of interest to our evaluation.

## 2 Overview of problem gambling intervention and primary prevention public health services in New Zealand

### 2.1 Structure of the Sector

The Ministry of Health provides funding to a number of services and activities in the problem gambling sector. As shown in the figure below, services fall within two broad areas – **intervention services** and **public health services** that are provided by organisations (generally referred to as providers) that deliver services to clients and communities. These services are delivered by some providers who deliver a combination of both intervention and public health services and others who deliver either interventions services or public health services. Funding is essentially through purchase of services from the Ministry, for delivery to clients and communities. The specific services funded by the Ministry are termed ‘purchase units’ (Ministry of Health, 2010).

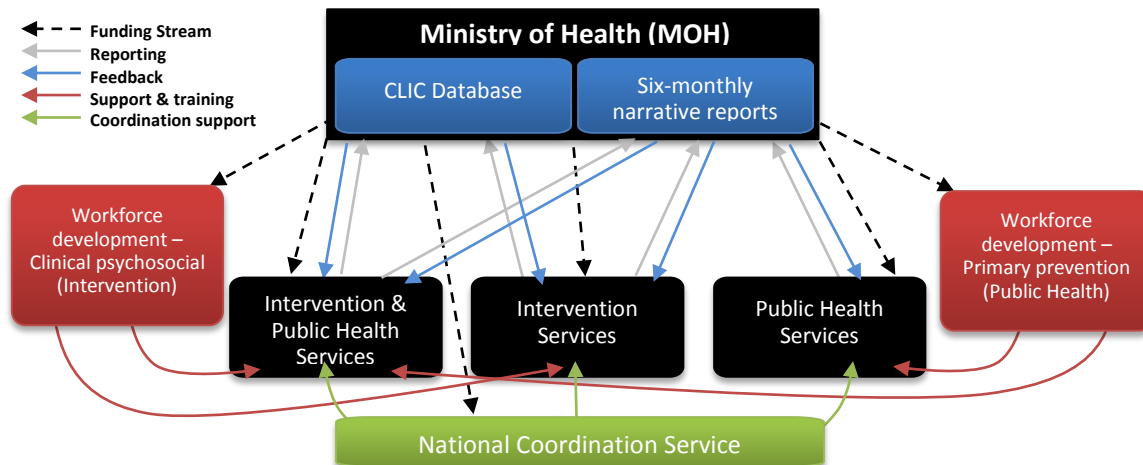


Figure 1: Problem gambling intervention and primary prevention public health services in New Zealand

In addition to direct funding support from the Ministry, a *National Coordination Service* provides coordination support and *National Workforce Development Services* provide training and capacity building for these intervention and public health services (Ministry of Health, 2008a).

As part of their contract, intervention service providers are required to provide the Ministry with monthly data on services delivered by practitioners; this is done by entering data for each individual into the Ministry’s **Client Information Collection (CLIC) database**. The data are collated by the service in the first several days of each month (Ministry of Health, 2010). This database is managed by a Ministry data manager (Ministry of Health, 2008b).

Intervention services are also required to provide the Ministry of Health with **six-monthly narrative reports** concerning successes and impediments, client types and tendencies, and other pertinent information (Ministry of Health, 2010). Likewise, public health services are required to submit six monthly reports, which include progress in delivering purchase units, number of Full Time Equivalent (FTE) staff employed, difficulties experienced, arising matters and suggestions for changes. In these reports, public health services are also required to complete a template report on harm minimisation actions regarding: gambling venues; service roles and the activities of relevant partner organisations; impediments and achievements; and, target agencies taking precedence in the next six months. All providers are required to report using standard templates provided in the Service Specification document.

### 2.2 Overview of the Services

The five different types of problem gambling intervention services that work in complementary relationships to each other are:

- 1) **Helpline and Information Services** – aim to provide “accessible information and intervention service to individuals experiencing gambling harm”; this intervention service complements “face-to-face services, because they are open longer hours and provide anonymity for people concerned about their privacy” (Ministry of Health, 2008a, p.11). These services are often “a primary point of contact for people seeking help and information on gambling problems and services via phone and or internet” (Ministry of Health, 2010, p. 23). “The help line will, through telephone counselling and support services, provide opportunities for secondary prevention for clients unable to access a face-to-face service” (Ministry of Health, 2010, p. 23).
- 2) **Brief Intervention Services** – offer services “specifically for people early in the course of developing gambling problems. The service aims to encourage individuals experiencing harm from gambling to recognise and acknowledge the consequences of their gambling and either make changes to their gambling behaviour or seek specialist support where necessary” (Ministry of Health, 2010, p. 24). “The focus of this service is people who are at risk of gambling harm and who may be experiencing some of the effects of such harm, but who do not yet associate their gambling with the problems in their lives” (Ministry of Health, 2008a, p. 11).
- 3) **Full Intervention Services** – are designed to “provide a community based assessment and intervention service for people with gambling related problems that aims to minimise problem gambling related harm to the service user and their family/significant others through provision of a range of psychosocial interventions” (Ministry of Health, 2010, p. 25). “Provision of full intervention services will include implementation of an intervention plan that addresses the problems identified during comprehensive assessment and ongoing review including the service users readiness for change” (Ministry of Health, 2008a, p. 25).
- 4) **Facilitation Services** – aim “to minimise gambling related harm to individuals and their families/significant others through facilitation to health and social services” and includes “the development of a referral plan that addresses the problems identified during brief or comprehensive assessment and ongoing review, by facilitating access to a range of allied health and social services and problem gambling psychosocial intervention services” (Ministry of Health, 2010, p. 26).
- 5) **Follow-up Services** – are intended to “provide follow-up and motivational support to clients” after they are discharged “from problem gambling intervention services (Facilitation or Full Intervention)” (Ministry of Health, 2010, p. 27). The services are flexible in terms of location and hours to accommodate user needs. “Provision of follow-up services will include follow-up and motivational support at one month, three months, six month, and 12 months from after discharge” and will include “advice and referral to other social and health services as appropriate”, “review of relapse prevention plans (including re-assessment)” and “on-going liaison between service user and referral services” (Ministry of Health, 2010, p. 27).

The five types of public health service purchase units that deliver a range of services and activities focused on minimising gambling related harm, health promotion and related policy development are:

- 1) **Policy Development and Implementation Public Health Service** – aims “to increase adoption of organisational policies that support the reduction of gambling related harm for employees and organisation’s client groups (i.e. employee assistance policies, organisational positions on accepting gambling funding, relationships with gambling venues, permitting gambling promotions in internal/external media)” (Ministry of Health, 2010, p. 30). Activities within this service includes “advising organisations on the significance of gambling related harm”; facilitating “the development of healthy public policy and planning that will contribute to the reduction of gambling related harms”; working with “local authorities and other stakeholders to address class 4 gaming machine venue policies” and encouraging “fund-raising that do not involve gambling” (Ministry of Health, 2010, p. 30).

- 2) **Safe Gambling Environments Public Health Service** – aims “to ensure that gambling environments are safe and provide effective and appropriate harm minimisation activities” (Ministry of Health, 2010, p. 32). Activities delivered within this service include assisting “gaming venues to develop, promote, support and implement adequate host responsibility measures” and facilitating collaboration between “stakeholder groups” and “gambling venues and other key organisations interested in the reduction of gambling related harm” (Ministry of Health, 2010, p. 32).
- 3) **Supportive Communities Public Health Service** – aims “to ensure that communities have access to services that provide strong protective factors and build community, family and individual resiliency” (Ministry of Health, 2010, p. 33). Activities within this service include, among others, working with “mental health promotion providers and allied organisations to deliver health promotion programmes that increase community resiliency and promote and enhance social protective factors”; promoting “public discussion and debate on gambling harm and related issues”; collaborating with communities in culturally appropriate resilience building activities such as “gambling free forms of fundraising, entertainment or skills and strategies to limit gambling related harm” and delivering “high quality, evidence based information and education” (Ministry of Health, 2010, p. 33).
- 4) **Aware Communities Public Health Service** – aims to deliver social marketing campaigns “consistently at national, regional and community levels to improve community awareness and understanding of the range of harms that can arise from gambling” (Ministry of Health, 2010, p. 34). As described in service specifications, activities within this service are expected to “complement and support the national social marketing campaign themes and messages” and could include initiatives such as promoting “public discussion and debate on gambling harm and related issues”; monitoring and responding to “public media discussions of gambling and problem gambling”; “implementing community education and social marketing campaigns to raise public awareness of gambling related harm”; and developing and implementing “programmes that provide communities with information on the odds of winning and losing, gambling behaviour and how to respond to risky gambling situations, and the health and social risks associated with gambling” among others.
- 5) **Effective Screening Environments Public Health Service** – intends to make “relevant organisations, groups and sectors ... aware of the potential harms that can arise from gambling and actively screen and refer individuals to appropriate gambling intervention services. Delivery of these services will include facilitation of community action and collaboration with a range of sectors that results in development of appropriate screening practices in appropriate organisations” (Ministry of Health, 2010, p. 35). Among others, activities include “advising organisations on the significance of gambling related harm and the relevancy of problem gambling screening and intervention to their core business”; “facilitating relationships between potential screening organisations and problem gambling intervention service providers”; and, “advocating, encouraging, and assisting, organisations to develop appropriate problem gambling screening and referral processes” (Ministry of Health, 2010, p. 35).

Details of these services are provided in the Ministry of Health’s (2008a) *Intervention Service Practice Requirements Handbook* and the Ministry of Health’s (2010) *Service Specification* document.

Each of the above problem gambling intervention and public health services may be further categorised as a specific ‘type’ of service with regard to ethnicity as recognised by the Ministry. General services are available to people of any ethnicity and deliver services within a culturally safe environment, taking into account the diverse demographic features of clients. Three ethnic-focused services, whilst not exclusive as they are required to accept people of any ethnicity, are nonetheless dedicated to the ethnicities of Māori, Pacific and Asian populations. These ethnic-focused services are subject to the particular expectation that they will practice using culturally-based models, beliefs and values, ideally be staffed by persons of that ethnicity, and be authorised by the ethnic community concerned (Ministry of Health, 2010).

The range of five types of intervention services available is in recognition of the diverse situations and points of readiness to change people are at in their lives. Whilst services are centrally concerned with problem gambling, people can also be supported by way of receiving interventions concerning their mental health, financial circumstances, alcohol and other drug use, relationships, and from social service agencies (Ministry of Health, 2008a). In addition, communities are further supported by the five types of public health services previously described that take a preventative approach to reducing or minimising of gambling related harm through awareness raising, policy development and implementation, and through health promotion.

### **2.3 Health and Disability Services Standards**

Problem gambling services are required to adhere to general (Ministry of Health & Standards New Zealand, 2008b) and core (Ministry of Health & Standards New Zealand, 2008a) standards for health and disability services. The general standards are to ensure the provision of service is reasonable and safe for clients, through continuous improvement and good practice. The aims of the general standards are the fostering of well-being through supportive and positive connections with families/whānau and peers, through inclusion and the fostering of quality of life. Services are required to communicate to individuals of all population groups in ways that are appropriate to their linguistic and cognitive understanding.

‘Good practice’ is the term used to represent effective and efficient service resources utilised to minimise risk and achieve quality outcomes for clients. Some of the components of good practice are benchmarking, authenticated guidelines, good practice guidelines, professional standards, codes of practice, and research/experience/evidence-based practice (Ministry of Health & Standards New Zealand, 2008b). With regard to the last component, the Ministry of Health and Standards New Zealand provide a list of websites from various jurisdictions where evidence can be sourced, as well as a glossary of terms relevant to the health and disability sector (Ministry of Health & Standards New Zealand, 2008b) many of which are relevant to problem gambling services.

In addition, there are 57 core Health and Disability service standards, variously subcategorised under consumer rights, organisational management, continuum of service delivery, safe and appropriate environment, restraint minimisation, safe restraint practice, seclusion, infection prevention and control services ((Ministry of Health & Standards New Zealand, 2008a).

### **2.4 Practitioner Competencies**

The *Addiction Intervention Competency Framework* by the Addiction Practitioners’ Association-New Zealand (DAPAANZ) (2011) includes competencies for professionals specialising in problem gambling. There are three elements of competencies for providing a problem gambling intervention (Addiction Practitioners’ Association-New Zealand, 2011). The first concerns understanding of problem gambling and its co-occurring conditions. This includes knowledge of the risks associated with different types of gambling activities, evidence-based techniques for changing behaviour, common co-existing issues and associated health services, principles of harm reduction, and relevant exclusion measures. The second element concerns problem gambling assessment using a holistic approach and the planning of appropriate interventions collaboratively with clients. This may include the use of standardised diagnostic tools as well culturally appropriate approaches. The third element concerns management of interventions where effective treatment strategies are used to support clients. Required competencies include knowledge of problem gambling intervention models and approaches, motivational approaches, relapse prevention, and capacity to facilitate referrals to other interventions for addressing a client’s co-existing issues and enable clients access to community resources.



### 3 Literature review: methodology and approach

#### 3.1 Objective

The objective of this literature review was to provide a summary of relevant information that can inform the current work by drawing from previous evaluations of gambling harm minimisation services (intervention and public health) that have been reported nationally and internationally. More specifically the literature review was intended to inform decision making around methodology and development of best practices.

To meet this objective, available national and international literature, including peer-reviewed journal articles and reviews (from both subscription-based and open-access journals), book chapters, and government research reports and publications were reviewed and summarised under key headers that relate to the different intervention and public health services that are of interest to the Ministry, highlighting key findings, and aspects that may inform the methodology for this project. This presentation approach facilitates the effective utilisation of relevant information while ensuring that existing literature is built upon.

#### 3.2 Search Procedures and Scope

Literature was compiled using several electronic databases (EBSCO Megafire; ProQuest Central; and Web of Science), the AUT University library catalogue, and the search engine Google, using multiple combinations of key words and search terms as shown in the figure below. The search was conducted between the period 1 August and 11 November 2013.



Figure 2: Keywords, phrases and subject categories used in the search process

A second step in the search process was a focused search on reported evaluations in the following primary journals related to gambling: *International Gambling Studies*; *Journal of Gambling Issues*; *Journal of Gambling Studies*; *Asian Journal of Gambling Issues and Public Health*; and, *International Journal of Mental Health and Addiction*. While the focus was on sources that directly related to problem gambling services and interventions, selected articles on equivalent areas such as alcohol, drug and tobacco addictions were also included. In addition to evaluation literature, this review also includes highlights from selected non-empirical papers that were highly relevant to the discussions around the respective intervention or public health service and that were regarded to be useful for the current evaluation.

To ensure that the literature review was relevant to contemporary society and captured the most recent developments, a priority was given to articles published between 2002 and 2013. However, an exception was made for highly informative literature that directly related to evaluation of problem gambling interventions, and literature on methodology.

## 4 Problem Gambling Intervention Services

In the following sections, evaluation literature of relevance to the Ministry's five intervention services is reviewed; namely, that related to *Help Line and Information Services*, *Brief Interventions*, *Full Interventions*, *Facilitation Services* and *Follow-up services*. There is a tendency for these categories of intervention types to overlap, for instance, the Help Line intervention service may also fall within the brief intervention category, while the *Full Intervention* service includes services that are described in the literature as brief interventions.

The Gambling and Addictions Research Centre's (GARC) earlier evaluation of Ministry of Health funded problem gambling intervention services suggested that even though clients were generally satisfied with the services they received (Bellringer et al. 2009; Bellringer, Coombes, Pulford, Garrett, & Abbott, 2010b) some staff responses suggested mixed views "as to whether current models of brief and full intervention were good approaches to assess or assist someone with a gambling-related problem and it was frequently suggested the contractual targets for delivering each form of intervention could be improved" (Bellringer et al. 2009, p. 9). That study also found that whilst there were "some differences between the individual gambling treatment services funded by the Ministry of Health in terms of client population group attracted and specific interventions provided, there [were] no major findings which would indicate that one type of service or intervention provision [was] significantly superior to another in relation to client outcomes" (Bellringer et al. 2009, p. 13). However, the evaluation was of a general nature and did not include in-depth individual evaluation of each type of intervention service.

### 4.1 Help Line and Information Services

As detailed in Section 2.2, the aim of this Ministry funded intervention is to ensure information availability and intervention services for individuals who are unable to access face-to-face services; these services are open for longer hours and offer the advantage of privacy. These services are often a point of initial contact that leads to more intensive face-to-face intervention support.

Services offered via the telephone appear to be expanding beyond conventional help line, information and referral services. Rodda and Lubman (2012) described a telephone-based four to six week cognitive behavioural therapy programme, in Victoria, Australia called *Ready to Change*. The programme was offered to helpline callers who were experiencing difficulty accessing face-to-face sessions. They were also given a workbook, which was designed to provide hope and direction for individuals wanting to make behavioural changes. Rodda and Lubman reported that for some clients only a few sessions were required for them to address their problems. Although they acknowledged the requirement for further research to determine number of necessary sessions and intervention effectiveness, the authors reported that their study provides early indicators that telephone-based interventions were adequate for and preferred by a proportion of help-seeking problem gamblers.

In New Zealand, a randomised study by Tse et al. (2013) compared the effectiveness of psychological interventions delivered by telephone with a conventional face-to-face counselling session in influencing problematic gambling-related beliefs and behaviours. The interventions were provided to 92 problem gamblers over a period of three months (46 in each intervention) and data were collected on their gambling behaviours; their gambling attitudes and beliefs (using the *Gambling Attitudes and Beliefs* survey (GABS)); and their self-reported satisfaction with, and effectiveness of, the counselling sessions. While the study found significant positive changes for several outcome measures (total money spent, total hours spent gambling, and proportion of total income spent, and GABS score) between baseline and post-intervention for both groups, the study did not find any significant differences between the groups in terms of their self-reports on satisfaction and effectiveness. The authors argued that their study provided preliminary evidence that both face-to-face and telephone counselling interventions were comparably effective in resulting in short-term clinical outcomes.

An evaluation of a Gambler's Helpline in Victoria, Australia focused on drawing from consumers' experiences in accessing the helpline to gauge the effectiveness of this service (Shandley & Moore, 2008). The evaluation used a questionnaire-based telephone interview immediately following a telephone call with 90 individuals and a one-month follow-up interview with 56 individuals. The use

of open-ended questions in these interviews had enabled a deeper understanding of consumers' experiences. Results indicated that consumers were generally satisfied with the service, particularly when emotional and practical support was provided. The authors drew several implications from their study including the benefits of counselling services specialising in financial advice given the large number of callers who expressed financial concerns; and suitable strategies to cater to the needs of non-gamblers who called the helpline. Considering callers' responsiveness to follow-up calls, the authors also pointed to the value of offering a series of call-backs providing support, motivation and reinforcement to make changes.

In a discussion of the evolving role of gambling helplines, Clifford (2008) referred to the New Zealand helpline example as among those that have extended the range of services offering more in terms of long distance counselling and motivation services. Although evaluation details were not provided, the New Zealand Helpline was noted to have resulted in improvements for clients, as detailed in follow-up screening carried out by the helpline.

GARC's *National Problem Gambling Intervention Effectiveness* project carried out in New Zealand was a randomised controlled trial (RCT) evaluating the effectiveness of four types of brief telephone interventions provided by the national gambling helpline: (1) helpline standard care (a manualised form of treatment as usual), (2) single motivational interview, (3) single motivational interview plus cognitive-behavioural self-help workbook, and (4) single motivational interview plus workbook and four follow-up motivational telephone interviews. The study used 451 helpline callers who randomly received one of these different treatment combinations (Abbott et al. 2012). Follow-up assessment calls to participants were made at three, six and 12 months post-intervention. Results showed that in terms of "treatment outcome, participants in all four intervention groups evidenced statistically and clinically significant, sustained improvement on the three primary measures self-reports of days gambled, money lost gambling and treatment goal success" (Abbott et al. 2012, p. 11). This was maintained at the 12-month follow-up. Considerable improvements were "also found for problem gambling severity and other measures including self-ratings of control over gambling, gambling impacts on work, social life, family and home and health, psychological distress, major and minor depression and quality of life" (Abbott et al. 2012, p. 11). As hypothesised, the study did not find significant differences in outcomes for those who received the *helpline standard care (treatment as usual)* and those who received a *single motivational interview*. However, contrary to what was hypothesised, participants who received the more intensive *single motivational interview plus self-help workbook* and *single motivational interview plus workbook and four follow-up motivational telephone interviews* did not exhibit better outcomes on the primary outcome measures in comparison to the *helpline standard care* and *single motivational interview* groups.

GARC additionally carried out an uncontrolled outcome study of the 150 participants who received the helpline standard care (which included referral to face-to-face counselling services). As with the RCT, the outcome study found substantial improvements in a number of outcome measures (including problem gambling severity, control over gambling, gambling impacts, and psychological distress) from baseline to three months and these improvements were maintained at six and 12 months. Participants also "reported substantial reductions in the adverse impacts of gambling on work, social life, family/home and physical health" (Abbott et al. 2013, p. 8). One notable finding of this study was "that clients improved substantially, both in statistical and clinical terms, with respect to problem gambling and some associated mental health problems" with improvements in many instances occurring in the first three months which were sustained at the 12-month assessment (Abbott et al. 2013, p. 8). These changes "were achieved even though most callers received only one Helpline call and did not access other, more intensive, gambling counselling or therapy" (Abbott et al. 2013, p. 8). Another key finding of this study was that additional treatment for problem gambling was not associated with improved treatment outcome.

This does not mean that these services are not of value. It might be that most clients who do not perceive a need for additional professional assistance do not require it, and that those who do perceive a need, obtain it and benefit. This could explain why there are generally no differences between those who do and do not receive additional therapy. However, if this is the case, it is surprising that those who obtained additional treatment did not have more serious gambling

problems, psychopathology and less confidence in achieving treatment goals. Further research is required to assist in the matching of clients to services. Little is known about the nature of face-to-face gambling services in New Zealand and their outcomes (Abbott et al. 2013, p. 9).

## **4.2 Brief Intervention Services**

*Brief Intervention* services may be provided in helpline or face-to-face capacities and are designed for people at the early stages of developing gambling problems or who are experiencing low levels of gambling-related harms. A key focus within these services is to encourage individuals to recognise and acknowledge gambling-related harm and change their behaviours or seek specialist support if the need arises. Activities within this intervention could include screening, problem gambling assessment, delivery of *Brief Interventions*, provision of education and information, and referrals to more intensive problem gambling services or other services. In the literature, *Brief Interventions* are also referred to as *early interventions* and include various types of initiatives.

### **4.2.1 Self-help interventions**

In a Canadian-based study, Cunningham, Hodgins, Toneatto, Rai, and Cordingley (2009) describe a self-help intervention based on personalised feedback as a brief intervention approach that enables gamblers to self-evaluate their behaviours by providing them with summary information that compares their gambling behaviours with those of the general population. In a pilot evaluation of this intervention, 61 participants were randomly assigned to receive the personalised feedback summary or to a wait-list control group. At a three-month follow-up (N=49), they found that compared to the control group, participants who received personalised feedback showed some evidence that they were spending less money on gambling.

The above intervention was then made available online at [www.CheckYourGambling.net](http://www.CheckYourGambling.net), and referred to as the *Check Your Gambling screener* (CYG). Cunningham, Hodgins and Toneatto's (2011) pilot evaluation of this online personalised feedback screener for problem gamblers pointed to the potentials of this tool for encouraging short-term decreases in gambling behaviour. The authors noted the need for further research to determine if the CYG screener is capable of encouraging reductions in gambling behaviour or motivating treatment-seeking actions among problem gamblers. They nevertheless argued that the advantages of tools such as the CYG are that they offer a gateway that is simple to access and unthreatening to motivate gamblers to seek further assistance either online or through face-to-face services.

### **4.2.2 Brief cognitive/behavioural treatment programme to influence gambling decisions**

Robson, Edwards, Smith, and Colman (2002) employed a pre-test/post-test design to evaluate the efficacy of *Gambling Decisions*, an early intervention programme in Canada. The programme had used an eclectic approach in designing a brief cognitive/behavioural treatment programme for individuals in the early stages of developing gambling problems which offered a choice of control-related goals and abstinence-related goals. The programme's aims were to reduce gambling frequency, time spent and money lost, as well as reduce the number of problems clients would face in their home, social and work lives. Their findings based on 60 individuals who participated in the programme and completed four questionnaires (prior to the programme, immediately after the programme, upon completion of six months and upon completion of 12 months) showed money lost in gambling was reduced from an average of \$680 per month to \$116 at the sixth week of the programme and to \$73 at 12 months. The average monthly hours spent on gambling was significantly reduced from 23.5 hours at the pre-test to 6.5 hours at a 12 month post-test. Gambling frequency was also significantly reduced and participants reported substantial reductions in gambling-related life problems after completing the programme.

### **4.2.3 Industry based self-exclusion programmes**

“Exclusion of patrons from gambling venues is potentially an effective early intervention for minimising harm from excessive gambling since it may contribute to the treatment and/or recovery of people with developing and established gambling problems” (Bellringer, Coombes, Pulford, and Abbott, 2010a, p.

4). The evidence surrounding existing self-exclusion strategies have led to arguments about its importance in public health intervention for problem gambling and its inclusion in public health strategies (Gainsbury, 2014).

Self-exclusion is an industry-based program allowing individuals to sign an agreement to ban themselves from entering, or allow themselves to be removed from, specified gaming venues. The ban may be for a limited time, for example from 6 months to 5 years, or a lifetime. When individuals decide to be self-excluded, they sign an agreement not to enter the gambling venue for a fixed period of time (Ladouceur, Sylvain & Gosselin, 2007, p. 85).

Ladouceur, Sylvain and Gosselin's (2007) longitudinal evaluation of such self-exclusion programmes in Quebec, Canada which involved 161 participants who were followed at 6, 12, 18 and 24-months after they had signed self-exclusion agreements found that the programme resulted in many positive outcomes. Follow-up evaluation findings included reductions in the urge to gamble, significant increases in the perception of control and significant decreases in the intensity of negative consequences of gambling in their day-to-day undertakings, frame of mind, social life and work environment.

A small-scale study of a single community problem gambling self-exclusion treatment service in New Zealand (Townshend, 2007) that was based on a survey of 35 self-excluders found that this intervention approach led to reduction in problem gambling symptoms among participants and money lost, and increases in level of control over gambling and abstinence from gambling. The study was, however, limited by the small non-representative sample, the lack of a control group and an inability to distinguish the effects of the self-exclusion agreement from overall treatment effects.

A formative investigation into the effectiveness of gambling venue exclusion processes in New Zealand by Bellringer et al. (2010a) which included focus group interviews with problem gambling service providers and gambling venue staff, a survey of 123 gamblers (both self-initiated and venue-initiated excluders) pointed to some benefits of this intervention approach. Findings showed "that current exclusion processes have a positive impact and are effective to varying degrees in reducing or stopping gambling activities and in encouraging help-seeking behaviours" (Bellringer et al. 2010a, p. 8). The study also pointed to several areas of improvement identified both by stakeholders and excluded gamblers which "focused around general practice, improving multi-venue exclusion contracts, training issues, increased awareness-raising regarding exclusion processes, length of exclusion contracts, enforcement of exclusions, and treatment provider and venue links" (Bellringer et al. 2010a, p. 9).

An "improved" self-exclusion service offered by the Montreal casino, Canada was described as follows:

... the gambler has the opportunity to meet a self-exclusion counsellor at the beginning of his self-exclusion period. This counsellor is a psychologist, independent from the casino, and located outside the casino's walls. During this meeting, the self-excluder receives detailed feedback of his gambling activities, as well as some referrals to additional resources (e.g. gambling hotlines, treatment centers, Gamblers Anonymous groups, financial counsellors). The gambler can also benefit from monthly telephone support from his counsellor for the entire duration of his agreement. This phone support, lasting for about 15 minutes, does not have a therapeutic purpose, but acts as a continual gateway toward resources to help the self-excluder respect his engagement. The Montreal self-exclusion program includes a meeting in the agreement. This mandatory meeting included an evaluation of the gambling situation, an information session about chance and responsible gambling and referrals to additional resources, if needed. The self-excluder must attend this evaluation and information session if he wants his self-exclusion to end. Failing to do so, the self-exclusion continues until the self-excluder does attend (Tremblay, Boutin & Ladouceur, 2008, p. 507).

An evaluation of this improved self-exclusion programme which drew findings by comparing data collected from 39 self-excluders during meetings at an initial and an end of agreement period, found a higher percentage of gamblers choosing the improved self-exclusion programme over the regular self-exclusion contract. A majority of participants indicated satisfaction with service and regarded it to be useful. Comparison of findings from the initial and final evaluations found major improvements in time and money spent, gambling consequences, DSM-IV scores, and psychological distress.

### 4.3 Full Intervention Services

*Full Intervention* services in New Zealand, as described by the Ministry of Health (see section 2.2) are community-based assessment and intervention services, which include a range of psychosocial interventions provided to the individual problem gambler or someone affected by another's problem gambling with the aim of minimising harm for the individual and their whānau/family. *Full Intervention* services may include activities such as screening, problem gambling assessment, education on gambling harm, comprehensive assessment, delivery of intervention service and relapse prevention, and referrals to other appropriate services.

GARC's previous evaluation of *Full Intervention* services in New Zealand found, in a survey of staff, that 79% indicated this intervention approach:

...to be a good approach for assisting someone with problems related to their or someone else's gambling. The most commonly reported positive features of the Full intervention were its comprehensive nature, the opportunity it provides for problem gamblers to engage in a counselling/change process and that it supports preferred or flexible counselling approaches. However, some participants noted (amongst other things) that the intervention length needs to be longer for some/most clients and that the screening measures are lengthy, poorly worded (in places), or restrictive" (Bellringer, et al. 2010b, p. 12).

In focus group discussions suggested that a *Full Intervention* "was seen as a broad intervention that was not necessarily suited to different clients' needs" and one of the concerns raised related to the "Ministry of Health's apparent restriction to eight sessions per client for a Full intervention" (Bellringer, et al. 2010b, p. 14).

A review of the international literature found that the components that may be included as part of a *Full Intervention* (as defined in New Zealand) are diverse in range and include self-help materials, online interventions, community-based treatment programmes, motivational treatment as well as cognitive and cognitive behavioural treatments for "pathological" gamblers. In three cases (reported in the immediate sub-sections that follow) the evaluators had referred to their treatments as either *Brief Interventions* or *brief treatments*, although the target audiences were at-risk and "pathological" problem gamblers. This highlights a lack of consistency in the definition of *Brief Interventions* and clarity around differences between *Full* and *Brief Interventions*.

#### 4.3.1 Self-help materials

In Canada, considering the need among some problem gamblers to recover by themselves without formal help, Hodgins (2005, p. 16) compiled recovery and relapse prevention techniques into a self-help workbook containing specific sections on "self-assessment, goal setting, strategies, maintenance, and other available resources." Hodgins referred to the evaluation of this workbook self-help approach as a brief intervention trial for problem gamblers. It was observed that participants with evidence of significant gambling problems were very keen on this self-help approach, suggesting the need to provide a variety of intervention options for problem gamblers to consider, as proposed in the *stepped care model* - an intervention system of providing different levels and types of interventions for gamblers in different stages of readiness for change. Hodgins also reported that over half of those participating in the trial were women; although the exact reasons behind the approach's appeal to women was unclear, it was suggested the confidentiality, the option to undergo treatment despite busy schedules, and the emphasis on self-management to be possible reasons. In addition, the study also observed that the initial positive changes were maintained at a 12- and 24-month follow-up in terms of reduction of money lost and improvements in abstinence from gambling. The study was, however, limited by the use of participants on a waiting list as a control as the waiting list group showed improvements over the month of waiting and this could have been due to the fact that individuals who were motivated to change "on their own" were recruited for the study and, in part, their improvements could have been a result of enrolling and undergoing a brief assessment. Considering the limitation of this control approach, Hodgins highlighted the criticality of the nature of the control group and their experiences. He suggested that an ideal design would require "a credible placebo treatment or comparison of one active treatment to another" (Hodgins, 2005, p. 18). He also highlighted the importance of establishing consensus around

the measurement of outcome indicators that are regarded as essential. Consistent outcome variables would also enable comparisons between different evaluations.

#### 4.3.2 Outpatient community-based treatment programmes

In a quasi-experimental evaluation, Toneatto and Dragonetti (2008) compared the efficacy of two Canadian-based *brief outpatient treatments* for problem gambling. They compared 65 individuals who underwent eight sessions of Cognitive-Behavioural Therapy (CBT) to 61 individuals who underwent eight sessions of a twelve-step treatment approach that was based on a Gamblers Anonymous' five steps approach. They found little difference between the two types of treatment in terms of outcome. In the follow-up, the study found that both the treatments led to significant reductions in gambling frequency and amount of money staked. The authors pointed out that this “suggests that a common set of process variables may mediate change, regardless of the form of the treatment intervention” (Toneatto & Dragonetti, 2008, p. 303). However,

...one-quarter of the participants continued to meet criteria for pathological gambling at the one-year follow-up. This may indicate that either the duration or type of treatment was insufficient to further improve outcomes. Participants did not take full advantage of the interventions, with the CBT group attending an average of four treatments with the 12STEP group attending between five and six sessions. Thus, they may not have received a complete intervention (Toneatto & Dragonetti, 2008, p. 302).

Other inconsistencies in their findings led the authors to conclude that “balanced evaluation of gambling treatment-related outcomes may need to separately measure gambling behavior, life satisfaction, and gambling severity” (Toneatto & Dragonetti, 2008, p. 302). Reductions in gambling behaviour and expenditure alone were regarded as insufficient for measuring clinical efficacy.

#### 4.3.3 Motivational treatments and cognitive-behavioural therapy

Petry, Weinstock, Ledgerwood, and Morasco (2008) evaluated different combinations of what they termed brief interventions for problem and pathological gamblers recruited from substance abuse treatment services, medical clinics for the underprivileged, and via advertisements. Inclusion criteria included being at least 18 years of age, and spending at least \$100 on gambling and gambling at least four times in the past two months. Problem/pathological gambler status was assessed via the South Oaks Gambling Screen (Petry et al., 2008, p. 319). They randomly assigned 180 problem gamblers to four groups: an *assessment only control*; ten-minute *brief advice*; one *motivational enhancement therapy (MET)* session; or one *MET session together with three cognitive-behavioural therapy* sessions. They found that participants in their *assessment only control* exhibited decreased gambling. They reasoned that the very act of participating in the baseline evaluation may have increased their understanding of gambling intensities, in turn increasing their aspirations to reduce their gambling regardless of the type of intervention they received. The study pointed to the benefits of the *brief advice* condition as relative to the control group the *brief advice* condition showed significant reductions in gambling from baseline to week six and was also associated with clinically significant decrease in gambling at the ninth month. Compared to the control, the group receiving *MET plus cognitive-behavioural therapy* exhibited significant decreases in gambling on one index between week six and the ninth month. Overall the authors argued that their results point to “the efficacy of a very brief intervention for reduction of gambling among problem and pathological gamblers” who do not “actively seeking gambling treatment” (Petry et al., 2008, p. 318).

Wulfert, Blanchard, Freidenberg, and Martell (2006, p. 317) highlighted the value of motivational interviewing as a complementary component to cognitive interventions as follows:

By treating clients with empathy and giving them objective, nonjudgmental feedback on the impact their addiction has on their lives, clients may begin to evaluate their situation more realistically and less defensively.

In their exploratory study, nine “severe pathological gamblers” receiving a “hybrid intervention” treatment (a combination of motivational enhancement and cognitive behaviour therapy) were compared with a control group consisting of 12 other pathological gamblers who underwent treatment as usual

(Wulfert et al., 2006, p. 315). At post treatment, they showed lower scores for SOGS<sup>1</sup> and DSM-IV<sup>2</sup> criteria relative to the control group. Preliminary results showed that although not all receiving the hybrid treatment showed equal treatment outcomes<sup>3</sup>, all nine were retained at a 12-month follow-up period, a retention rate that was significantly greater than the control group. Their study pointed to the value of combining a motivational intervention with cognitive behaviour therapy, particularly its role in preventing dropouts (Wulfert et al., 2006).

An evaluation of the *BreakEven Problem Gambling Counselling Services* (which includes face-to-face individual and group counselling and behavioural cognitive psychotherapy techniques) in Australia used a multi-methods design, which included a literature review, client data (n=3149)<sup>4</sup>, a retrospective client survey (n=150), a prospective client survey (n=43), counsellors' survey and counsellor interviews (Jackson, *et al.* 2000). The evaluation used pre- and post- client data (based on DSM-IV criteria for assessing gambling severity) to evaluate intervention outcomes. "Pre- and post-counselling measures of maladaptive behaviours" suggested that "counselling had a positive effect of between 21–29 per cent improvement on clients in eight of the ten behaviours listed" and "the number of 'problem gamblers' reduced from 76 per cent to 37 per cent" (Jackson, *et al.* 2000, p. 102).

#### 4.3.4 Online interventions

Online interventions, particularly online therapy are relatively new in the field of problem gambling treatment. While some therapists and academic critiques remain sceptical about the effectiveness of this intervention method, others have argued for the need to take advantage of opportunities offered by "the new technology and to carry out research into this potentially innovative form of therapy" (Wood & Griffiths, 2007, p. 374). A recent review of literature on self-guided online problem gambling interventions noted empirical evidence indicating this form of intervention to be effective and an important adjunct treatment for problem gamblers (Gainsbury & Blaszczynski, 2011). Advantages offered by online interventions include its convenience and geographical reach; flexibility in fitting with clients' preferred pace and sequence; relevance to the youth population; offer of privacy and anonymity; cost-effectiveness; compatibility with shared and stepped-care treatment models; and ease of data collection for evaluation.

An evaluation of online forums designed to support people with gambling issues and their affected others in the United Kingdom using content analysis of 60 forum posts, online semi-structured interviews ( $n = 19$ ), and an online survey ( $n = 121$ ), found that the:

...forums helped members to better understand and cope with their own gambling problems or with those of others. A lack of other alternative support, ease of access and availability, need for additional support, insight gained through posting and hearing other's stories, help in resisting urges to gamble, and perceived anonymity were all given as benefits of the forums. The forums were most popular with online gamblers, and had a higher ratio of females to males (with gambling problems) than any other comparable service. Significantly more females than males suggested that the forums helped them to cope better with their gambling problem" (Wood & Wood, 2009).

Another form of online intervention in the United Kingdom, referred to as GamAid, consisted of an advisory, guidance and signposting service that provided clients the options of simply browsing through web links and information, communicating with an online advisor, or requesting further information<sup>5</sup> (Wood & Griffiths, 2007). A mixed methods design (which included the researchers posing as problem

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<sup>1</sup> South Oaks Gambling Screen

<sup>2</sup> Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition

<sup>3</sup> The study found that "6 maintained total abstinence during the 12-month follow-up period, 2 were significantly improved, and 1 remained unimproved. In addition to changing their gambling behavior, many clients made successful lifestyle changes" (Petty et al., 2008, p. 315).

<sup>4</sup> This is referred to as the "BreakEven Minimum Data Set" a "definitive data set" which "is an ongoing census of all services provided to all clients in the BreakEven agencies" (Jackson et al. 2000, p. 33).

<sup>5</sup> "If the client connects to an online advisor then a real-time image of the advisor appears on the client's screen in a small web-cam box. Next to the image box is a dialogue box where the client can type messages to the advisor and in which the advisor can type a reply. Although the client can see the advisor, the advisor cannot see the client. The advisor also has the option to provide links to other relevant online services, and these appear on the left hand side of the client's screen and remain there after the client logs off from the advisor" (Wood & Griffiths, 2007, p. 375).



gamblers to gain direct experience of the service<sup>6</sup>) was used to evaluate this pilot service; the variety in data collection methods was noted by the evaluators to be a key strength of the study. An online 15-item evaluation questionnaire was completed by 80 service users (33 of whom provided qualitative feedback about the services), and secondary data were obtained from 413 distinct users who contacted an online advisor. The evaluators found that the majority of service users were online gamblers and that women tended to prefer the service more than other similar services. Despite noting some technical difficulties, the majority of users reported positively about their experience of the GamAid service. The majority of survey respondents:

...agreed that GamAid helped them to consider their options, made them more confident in seeking help, helped them to decide what to do next, made them feel more positive about the future, provided useful information for local help which they intended to follow up through the links provided (Wood & Griffiths, 2007, p. 383).

Respondents who compared GamAid to other services they had used found the service beneficial because they felt more comfortable communicating online than they did communicating by telephone or in person. The study was, however, limited by its short time frame of nine weeks, which did not enable evaluators to gauge if the GamAid service had the capacity to reduce problem gambling behavior among its clients. The authors recommended that a longer term study that enabled follow-up with clients over an extended period was necessary.

#### **4.3.5 The incorporation of physical activity in problem gambling treatment**

In Brazil, Angelo, Tavares, and Zilberman's (2013) evaluation of the outcomes of the inclusion of a physical activity component in a problem gambling treatment programme, using a controlled experiment design (n=33 treatment, and n=30 control) found that although both groups exhibited decreases in anxiety levels, depression and gambling behaviour, the group receiving physical activity as part of their treatment exhibited a more consistent and noticeable improvement. Their study was, however, limited by a non-equivalent control group, the small sample size and the lack of random assignment. The authors had recruited from physically fit patients seeking treatment for pathological gambling at a university outpatient clinic. Of the 137 individuals who were invited to participate, 33 were assigned to the physical activity group and 30 who had refused to undergo physical activity were assigned to the non-physical activity control group; the latter group was regarded to be less motivated to engage in physical activity. Nevertheless, the authors argued that their findings suggest the value of including physical activity as part of treatment programmes for pathological gamblers.

#### **4.3.6 Reviews on and recommendations for cognitive and cognitive-behavioural intervention evaluations**

A review of randomised/controlled pathological gambling treatment studies (11 studies) by Toneatto and Ladouceur (2003) found that cognitive-behavioural treatments received the best empirical support for treatment outcomes. However, they found that most of the studies they reviewed exhibited methodological flaws and they concluded that their affirming scientific knowledge about effective treatments for pathological gambling was limited. They recommended that improved gambling treatment research would require psychometric measures that are validated, the inclusion of measures to evaluate processes, improved definitions of outcomes, and more exact definitions of treatments (Toneatto & Ladouceur, 2003).

Likewise, although Gooding and Tarrier's (2009) systematic review and meta-analysis of cognitive-behavioural interventions for problem gambling (25 studies) found that, in general, cognitive-behavioural therapies resulted in significant effects in reducing gambling behaviours providing an optimistic view about the effectiveness of CBT, they cautioned against generalisation considering the

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<sup>6</sup> "The purpose of this part of the evaluation was to get some kind of first-hand understanding of the user perspective of clients interfacing with the service. This was also used to identify any technical issues. The evaluation of GamAid in this part of the evaluation is therefore necessarily interpretative. All advisors were aware before the start of the study that some of the evaluation team would be posing as problem gamblers and all accepted this as a legitimate part of the evaluation process" (Wood & Griffiths, 2007, p. 378).

heterogeneity of the studies. They also noted that evaluations of problem gambling treatments is limited compared to other fields.

A review by Westphal and Abbott (2006, p. 129) found the progress of evidence-based treatment interventions for problem gambling was restricted by sample size limitations, sample heterogeneity, “lack of protocol driven treatments, single site clinical trials, lack of replication of studies by independent investigators and high rates of nonspecific treatment response.” To overcome these barriers they argued that an unprecedented level of collaborative work between treatment providers and researchers was necessary.

A review of problem gambling treatment services undertaken by KPMG (2013) for the Victorian Responsible Gambling Foundation included an assessment of the relevance of its present treatment services model in the context of changes occurring within the health services delivery environment, the gambling environment and in help-seeking behaviour patterns. The review provided recommendations for a new model for service delivery to ensure efficient and effective delivery of treatment and support services that meets the needs of the Victorian community facing gambling harm. Among others, their recommendation for the delivery of the new model included the need for training and development that facilitates “professional linkages between counsellors and financial counsellors, and also with the broader health and community sector” (KPMG, 2013, p. 54). This would include evaluations of individual training initiatives to ensure ongoing improvements. While changes to clinical practice at an individual professional level needs to be preceded by workforce development they suggested that there was “a need to undertake a considered approach to planning, implementation and evaluation of clinical practice change and the various professional, service provider and system elements that need to be in place to facilitate this” (KPMG, 2013, p. 80). These recommendations re-emphasise the need for collaboration between treatment providers and evaluators pointed out by Westphal and Abbott (2006) above.

Walker (2005) highlighted the tendency of confusing *cognitive therapy for pathological gambling* with *cognitive-behaviour therapy*. Walker pointed to the need to distinguish between cognitive and cognitive-behavioural treatments, as this would have implications for evaluation of these therapies. The therapy first needs to be described with sufficient detail to enable consistency in how its effectiveness is evaluated across studies and therapists. The focus of cognitive therapy is essentially on changing erroneous cognitions or beliefs; for instance, mistaken beliefs about gambling competencies or unrealistic attitudes about gambling. By contrast, cognitive-behaviour therapy contains a distinct behavioural therapy component in conjunction with a distinct cognitive component.

Based on an expert panel consensus, Walker et al. (2006) provided “minimum features” for reporting the effectiveness of problem gambling treatments considering the need for more uniform outcome measures that would enable reliable cross-study evaluations of interventions and aid the development of validated best practice guidelines that can be used by clinicians for managing problem gambling.

The proposed minimum features of reporting the efficacy of treatment outcome studies are: *measures of gambling behaviour* - the net expenditure each month, the frequency (in days per month) with which gambling takes place, and the time spent thinking about or engaged in the pursuit of gambling each month; *measures of the problems caused by gambling* - especially problems in the areas of personal health, relationships, financial, and legal; these measures can be complemented by additional measures of quality of life [and] *measures of the processes of change* - whatever mechanisms of change are assumed to occur (Walker et al., 2006, p. 504).

A survey of treatment facilities in Sweden, Denmark and Finland found that cognitive-behavioural therapy focused on correcting cognitive misconceptions associated with gambling was the most common type of therapy; however, that there was very little knowledge about treatment effects over time (Hansen, 2006). The study found that only a few treatment centres conducted systematic patient assessment and treatment evaluation. This lack was despite the known importance of evidence-based knowledge for improving the quality control of treatment. Nevertheless, the interviewed therapists were clear that there was a need for improving the evaluation of treatment effects; more time would be needed for more in-depth assessment as part of evaluation of the effects of treatment of their clients.

In describing their evaluation of a cognitive-behavioural treatment for pathological gamblers, which had used multiple data sources and methods (including interviews, questionnaire, patients' daily record of gambling behaviour, assessment scales, and biochemical and neurophysiological evaluations), González-Ibnáñez, Rosel and Moreno (2005) reiterated that there were few studies comparing the effectiveness of different modalities. They also highlighted the tendency to use the same types of treatment for different types of pathological gamblers. They pointed to the necessity for developing effective treatments that account for the heterogeneity inherent in problem gamblers and the need for new instruments for measuring treatment effectiveness.

#### 4.4 Facilitation Services

As detailed in Section 2.2, *Facilitation Services* are focused on minimising gambling-related harm by offering problem gamblers and affected others a channel through which they can gain access to other health and social services that support their process of making changes. This is considering that often problem gamblers have other interconnected problems (that may or may not be related to gambling) that need to be addressed.

Although the existence of comorbid issues alongside gambling problems is acknowledged in the literature (Holdsworth, Nuske & Breen, 2013; Ibanez et al. 2001) the search, at the time of this review, did not find any international evaluation literature focusing specifically on *Facilitation Services* for problem gamblers. However, the shortcomings relating to this component of treatment provision have been noted in a previous evaluation by Stinchfield, Winters and Dittel (2008). Their evaluation of eleven state-supported pathological gambling treatment programmes/providers in Minnesota, USA found that family members who had completed a *Significant Other Discharge Questionnaire* (n = 47) which included an open-ended question about their experiences with support received or not received indicated that they were “left to deal with the financial problems” and that they needed “assistance with these issues and/or referral to other services in the community” (Stinchfield et al., 2008, p. 16). Considering the possibly high number of pathological gamblers who may not be seeking treatment, the authors suggested that key areas for service improvement were the identification of these individuals and their referral to treatment services.

GARC's previous evaluation of *Facilitation Services* in New Zealand found “a gradual, but steady increase in the number of *Facilitation* sessions provided per month between the period July 2007 to June 2008” (Bellringer et al., 2010b, p. 93). However, the findings of this evaluation also indicated:

...that many (probably most) clients of gambling treatment services do not receive a *Facilitation* session during the course of a treatment episode and that gambling treatment staff do not strictly adhere to *Facilitation* guidelines; rather, the decision to *Facilitate* a client to another service or not is seemingly made on a case by case basis... (Bellringer et al., 2010b, p. 95).

GARC's evaluation also found a frequently expressed concern about *Facilitation* and perceptions of it being a “threat to holistic or comprehensive treatment provision.” The evaluation also suggested that:

...the current level of support for *Facilitation* sessions is based on the counsellor/treatment provider maintaining a reasonably high degree of discretion as to if and when (and where to) *Facilitation* occurs. Any attempt to increase the rate of *Facilitation* that undermined this discretion is likely to encounter resistance and reduce support for the *Facilitation* model. It [was] also unknown, given the limitations of the available data, whether *Facilitation* significantly improves client outcome. Further examination of the benefits of *Facilitation*, ideally via independent and prospective research activity, on client outcome may therefore be beneficial before changes to *Facilitation* practice were sought (if changes were being considered). Future research could also examine why Māori service providers *facilitate* clients at a higher frequency relative to other service providers. The findings from such an investigation could potentially inform greater uptake of *Facilitation* in other services (Bellringer et al., 2010b, p. 95).

#### 4.5 Follow-up Services

As described by the Ministry of Health (see section 2.2), *Follow-up Services* provide a scheduled series of one-on-one contact with clients at first, third, sixth and twelfth month following the last *Full*

*Intervention* session, as a way of maintaining contact and providing motivational support. Activities within this service include advice and referral to other appropriate services and review of relapse prevention plans.

The literature search conducted for this evaluation did not find any evaluations of the effectiveness of *Follow-up Services* per se. Nevertheless evaluations that have focused on *relapse prevention* provide elements of best practice that may be of relevance to *Follow-up Services*. A study by Echeburúa, Fernández-Montalvo and Báez (2000) in Basque Country, Northern Spain, which used a one-group repeated measures design (pre- and post-treatment) and a multi-group repeated measures experimental design (pre- and post-treatment and follow-ups) found that those who underwent a relapse prevention programme exhibited a higher rate of success with relapse compared to the control group. The goal of the relapse prevention programme was to firstly train gamblers to recognise risky situations such as social pressure; adverse emotional states such as anxiety, depression, and rage; and interpersonal conflicts, where relapse is likely to occur. The programme also educated gamblers about external factors that can contribute to relapse such as alcohol overuse, irrational beliefs about gambling, poor financial planning, and the lack of alternative pastime activities. Secondly, the programme aimed to provide gamblers with suitable coping strategies when dealing with challenging circumstances. Considering the promising findings of their study, the evaluators emphasised the importance of incorporating relapse prevention components within treatment for pathological gamblers.

Additionally, other literature on relapse prevention and the relapse prevention treatment effectiveness for other addictive problems such as drugs and alcohol (Witkiewitz & Marlatt, 2004; Larimer, Palmer, & Marlatt, 1999) could be drawn upon for informing best practices in relapse prevention (RP) strategies for this intervention type. In their review, Witkiewitz and Marlatt (2004) refer to previous studies that have pointed to the success of relapse prevention interventions for other addictions such as substance use. They indicated the need to reconceptualise relapse as a multidimensional and complex system and proposed a model that focused on the “interrelationships between dispositions, contexts, and past and current experiences” and “situational dynamics” (Witkiewitz & Marlatt, 2004, p. 229).

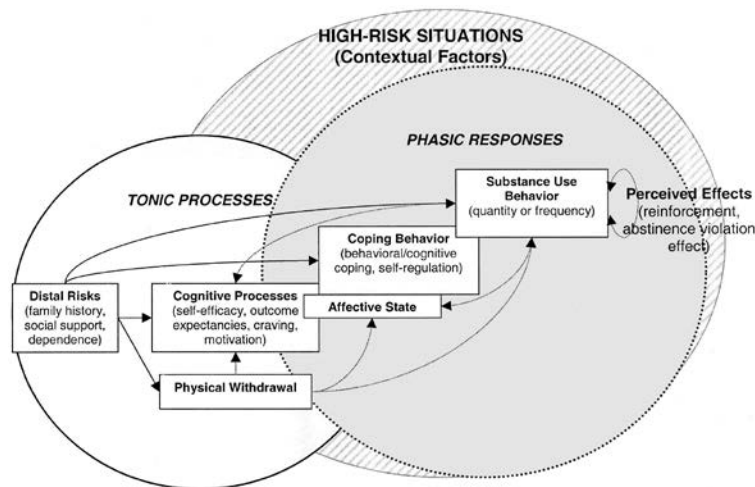


Figure 3: Dynamic Model of Relapse (Witkiewitz & Marlatt, 2004, p. 230)

Their model (shown in Figure 3) provides the connections between the different phases that predict relapse. They argued:

Incorporating the cognitive-behavioral model of relapse and RP techniques, either within the brief intervention or as a booster session, will provide additional help for individuals who are attempting to abstain or moderate their use following treatment (Witkiewitz & Marlatt, 2004, p. 232).

They pointed to the need for empirical testing of the model they proposed and the need for research to improve measurement devices and data analysis strategies for effectively evaluating behavioural outcomes.

## 4.6 National and state level multimodal gambling treatment programmes

The review of literature also considered national level evaluation of problem gambling treatment services to inform the development of methodologies for the present evaluation. This sections provides a summary of methods used in such evaluations and brief details about the reported outcomes.

Compared to evaluations of specific interventions detailed in the subsections above, there is a paucity of research and evaluation of national or state level multimodal gambling treatment programmes and services. This review found only a small number of published broad scope evaluations of state/government funded treatment programmes and services. As these large scale studies were most relevant to our current evaluation, this section provides a summary of these studies focusing on the range of methods that have been used.

In the USA, the Minnesota's state-supported gambling treatment programmes designed for pathological gamblers:

...offered multiple modalities of treatment including individual, group, education, twelve-step work, family groups, and financial counseling. The therapeutic orientation was eclectic with an emphasis on the twelve steps of Gamblers Anonymous (GA) and a treatment goal of abstinence (Stinchfield & Winters, 2001, p. 217).

An uncontrolled pre-test-post-test outcome evaluation (N = 592) of the Minnesota programme found statistically significant improvements in a number of outcome variables: gambling problem severity scores, frequency of gambling, total money spent on gambling, financial problems, psychological problems and number of gambling associates. Considering that pathological gambling impacts on multiple functioning areas of an individual the evaluators suggested that outcome variables in related evaluations need to measure multiple areas of functioning<sup>7</sup>. The evaluators used existing instruments (the *South Oaks Gambling Screen* and the *Client Satisfaction Scale*), revising items to fit the purpose of their evaluation, and developed two new scales (a 12-item *psychosocial functioning* scale and a 20-item *financial problems* scale). These were used in addition to questionnaires completed by the client, a significant other, and by treatment staff. The authors also provided detailed findings in a subsequent report (see Stinchfield et al., 2008).

Another programme in the USA, the Iowa Gambling Treatment Programme, consisted of a network of service providers contracted by the Department of Public Health to provide an outpatient treatment programme offering a range of diagnostic and primary gambling treatment services. The programme "provides multimodal services to the entire community, including problem gamblers, family members, and concerned persons" (Shaffer, LaBrie, LaPlante, Kidman, & Donato, 2005, p. 63). An evaluation based on an analysis of a variety of data collected as part of the programme<sup>8</sup> (which provided a database for 208 gamblers from baseline to follow-up stage) found that the programme had led to positive outcomes in terms of gambling abstinence and decrease in amount of money lost in gambling. Although the findings were based on an unrepresentative sample, the evaluators concluded that their study offered evidence of critical positive clinical changes that were associated with clients' experiences of treatment in the Iowa Gambling Treatment Programme.

An evaluation of the Arizona state-supported problem gambling treatment programme in the USA by Bernhard, Abarbanel, Crossman, Kalina and St. John (2009) was based on two key sources: peer-reviewed evaluation literature on problem gambling treatment and a specific framework that was recommended by expert evaluators of state-supported problem gambling treatment. They argued that this approach to methods development ensured that their evaluation remained scientifically robust while taking into account subtle local differences and meeting the unique needs of state-supported treatment programmes; an approach they believed was appropriate for evaluating the complex behavioural aspects

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<sup>7</sup> "Outcome was measured with a multidimensional assessment battery including content domains of gambling frequency, gambling problem severity, gambling-related debt and financial problems, arrests and legal status, gambling problem recognition, substance use frequency, psychosocial functioning, work absenteeism, client satisfaction with treatment, treatment component helpfulness ratings, and posttreatment service utilization" (Stinchfield & Winters, 2001, p. 225-228).

<sup>8</sup> "Participating gambling treatment facilities in Iowa recorded information from every treatment seeker and then transferred this information to the Gambling Treatment Reporting System (GTRS). This system is a computerized client-based reporting database that collects data aggregated by month. Treatment seekers and recipients provide information on the three different basic forms: (1) the Crisis Contact/Admission/Placement Screening Form, (2) the Services Form, and (3) the Discharge/Follow-up Form" (Shaffer et al., 2005, p. 64-65).

associated with the treatment of pathological gamblers. Considering the difficulty of recruiting and retaining problem gamblers identified in past evaluation literature, the authors employed a rigorous process to increase response rates, where individuals were contacted at different times in the day and on weekends, with up to 12 follow-up attempts for unsuccessful contacts which resulted in a total of 77 participants. The researchers ensured that participants were made aware that they were being sought to participate in a compensated research<sup>9</sup>, which was confidential, and conducted by independent researchers.

Using a computer-assisted telephone interview the researchers, in the above study, collected both quantitative and qualitative data on clients' experiences of the services, including experiences of being referred to other services and resources and a self-evaluation of their own improvements and recidivism. The authors found that the inclusion of open-ended questions enabled the collection of critical details that cannot be captured with quantitative data alone. Clients' comments and descriptions of what they found to be the most and least helpful components of their treatment resulted in two consistent themes: first, the client-counsellor bond, which suggested the importance of counsellor training in this area; and second, accessibility of services from a cost and geographical perspective, which suggested the need for treatment to be geographically and financially accessible. In addition, a common sentiment expressed by clients was a profound gratitude over how the programmes positively impacted their lives.

In Australia, one component of a longitudinal evaluation of problem gambling services (1996 - 2000) undertaken for the Victorian Government Department of Human Services (Melbourne) included an evaluation of the effectiveness of counselling interventions provided by the *BreakEven Problem Gambling Counselling Service* (Thomas & Jackson, 2001). The evaluation used a series of linked research and evaluation activities:

- A review of literature on research relating to the effectiveness and outcomes of therapeutic interventions for problem gambling;
- An analysis of the counselling services data set (n=3,149) which used the DSM-IV<sup>10</sup> criteria for gauging problem gambling severity among clients;
- A retrospective client survey (n=150);
- A prospective client survey (n=43, sixteen<sup>11</sup> of whom participated in a follow-up study);
- Two surveys of counsellors (n=48) who completed a *Clinical Practice Evaluation Counsellor Questionnaire* and a *Counsellor Task Analysis Questionnaire*; and,
- One-on-one interviews with counsellors.

Considering the observed improvements in clients' understanding of the nature of their gambling problem, their increased self-awareness and willingness to accept responsibility for the resultant problems, and their increased awareness of services that were available to them, the evaluators concluded that this was indicative that the counselling process resulted in an impact of increased understanding and problem resolution. An examination of the connections between the counselling process and its outcomes resulted in a number of findings including that the *therapeutic relationship* was a process variable that consistently predicted positive outcomes and that counsellors who use a mixed range of client-focused strategies had the highest problem resolution rates. Higher levels of problem resolution were also achieved by counsellors who use comprehensive psychosocial and readiness-to-change assessments; use an eclectic mix of techniques; and involve clients in realistic goal setting.

Another evaluation of the Australian *Break Even Gambling Support Services* provided for gamblers in Tasmania focused on "service standards, client outcomes and evidence of best practice effectiveness" (Evolving Ways, 2005, p. 2). The evaluators developed a programme logic framework that had two focus levels (the client and the system) to guide their evaluation process. The evaluation's methodology included the following components:

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<sup>9</sup> Participants who completed the interviews were compensated with a \$25 retail store gift card (Bernhard et al., 2009).

<sup>10</sup> Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition

<sup>11</sup> The need to protect client confidentiality meant the use of third party recruitment procedures which restricted the recruitment of respondents to participate in this longer term outcome study (Thomas & Jackson, 2001).

- Analysis of the literature relating to research on gambling service provision, focusing primarily on individual and group-based practices, service delivery models and best practice;
- Individual and small group-based discussions with personnel within the agencies delivering the Break Even Gambling Support Services, including managers, personal and family counsellors and financial counsellors;
- Interviews with personnel within community organisations who may make referrals to the Break Even Gambling Support Services, or where collaborative work has occurred with people affected by gambling;
- Interviews with personnel within agencies who have a role in supporting specific groups of people within the community, such as indigenous people, youth and migrants;
- A scoping exercise of the qualifications, experience and training needs of personnel working within the Break Even Gambling Support Services;
- Interviews with a small sample of people who have used the services provided by the Break Even Gambling Support Services;
- Review of agency-based documentation relating to practices associated with the Break Even Gambling Support Services;
- Review of quantitative data provided by GSB and agencies; and
- Analysis of qualitative and quantitative data in line with project requirements and the evaluation framework (Evolving Ways, 2005, p. 3).

Findings were reported based on the service standards of *Break Even Gambling Support Services* highlighting the strengths, areas for improvement, and recommendations for the different aspects within service provision such as inputs, activities, and processes.

In Australia, the Victorian longitudinal study (Victorian Responsible Gambling Foundation, 2012) included a qualitative component of unstructured interviews with 44 problem gamblers. The interviews included queries on interventions and the sources of support that gamblers sought to address their problem. Participants' feedback suggested that there was no particular support or intervention which stood out as being more effective than others. Participants were also unclear about the types of services that were available. For instance, those "who had called the gamblers help line often referred to having rung Gamblers Anonymous (GA) and there was considerable confusion about the services available at a community level" (Victorian Responsible Gambling Foundation, 2012, p. 54).

In general the interviews found that gamblers had used a broad range of support sources, with varying levels of success.

The most commonly used intervention was gambling-specific counselling in a face-to-face setting. This included both specialist gambling counsellors and general counsellors. The use of helplines was also quite common, however this was typically quite a while before the gambler sought more intensive counselling. A number of participants had called a telephone help line (believed to be gamblers help line). A few indicated they had received helpful information or advice, but most did not believe it had been of much help to them (Victorian Responsible Gambling Foundation, 2012 p.55)

An earlier inquiry report by the Australian Government Productivity Commission (2010) pointed to the need for improved data and evaluation to determine the effectiveness of various interventions. Their recommendations for improving counselling and treatment services include the need for improved evidence base:

A better evidence base is needed to answer basic questions about the effectiveness of prevention and early intervention strategies and counselling and treatment services. Better monitoring and evaluation also ensures that government funded services are accountable, funds are appropriately allocated between prevention, early intervention and treatment activities, as well as providing a basis for future policy direction (Australian Government Productivity Commission, 2010, p. 7.44).

The report also pointed to need for data that are collected in standardised format, and the need for longer term outcome data:

Because data are not collected in a common format (if collected at all), aggregation of client numbers and characteristics is difficult, as is undertaking comparisons across jurisdictions. Greater compatibility in terms of what data are collected and recorded would build the evidence base on clients attending help services and allow a more robust comparison of clients across problem

gambling services in Australia. There is also variation in the extent to which jurisdictions make data publicly available – and thus available to assist service providers, researchers and the community more generally (Australian Government Productivity Commission, 2010, p. 7.46).

Client data also provide only limited outcome and follow-up information needed to assess the effectiveness of interventions in reducing gambling problems. To allow for an accurate measure of client change following counselling, a standardised interview should be conducted both pre and post treatment. Follow-up assessments should be routinely carried out at regular intervals after counselling is completed (for up to two years). Data should also be collected on:

- the nature and severity of the problems with which gamblers present, including co-morbidities
- the type of interventions provided
- the number of treatments provided to individual clients
- the level of counsellor training (Australian Government Productivity Commission, 2010, p. 7.46).



## 5 Problem Gambling Public Health Services

This review found that while there were several evaluations focused on specific problem gambling interventions, there were fewer published evaluations on primary prevention public health programmes and services. The following sections, present key findings from literature of relevance to the Ministry's five public health services.

### 5.1 Policy Development and Implementation

The public health service focusing on *Policy Development and Implementation* is concerned with activities that foster various organisations' implementation and development of practices that can reduce gambling-related harms (see section 2.2). At the time of this search, although a number of articles discussing the need for workplace gambling policies and gambling policy development processes were noted (Alberta Health Services, 2010; Griffiths, 2009; Laker 2006; Makarovič, Macur & Rončević, 2011) no evaluation articles directly related to public health services focusing on *Policy Development and Implementation* were found. This review did not include a search for evaluations that may have investigated the effectiveness of individual gambling related policies.

In their review which included policy initiatives for the prevention of problem gambling, Williams, Simpson and West (2007) drew attention to different types of related policies such as those that restrict or limit gambling availability, number of gambling venues, harmful types of gambling, gambling opportunities (outside dedicated gambling venues), location of gambling venues, venue operating hours, as well as policies that place restrictions on who can gamble and how gambling services are provided. They also provided grades of "estimated effectiveness potential" for the different types of policy initiatives. However, they pointed out that the effectiveness of many of the individual initiatives remains largely unknown.

In considering internet gambling policies, Gainsbury and Wood (2011, p. 309) highlighted that the present uncertainty "and questionable effectiveness of policies in place makes it difficult for gambling operators, treatment providers, players and other stakeholders to formulate appropriate responses to online gambling".

An inquiry report by the Australian Government Productivity Commission (2010) pointed to the lack of evaluation of gambling policies as well as the lack of research-informed policy decision making by governments.

As in other areas of social research, there are many difficulties in assessing the effectiveness and impacts of gambling policies. As noted in previous chapters, in making policy decisions about gambling, governments have to weigh this uncertainty against the potential costs of inaction. However, an ongoing program of high quality, policy-focused research and evaluation will supplement policymakers' use of judgment and expert opinion, and enrich the existing evidence base. Better information may lead to new directions in policy and will allow policymakers to adapt, revoke or introduce regulations with greater certainty about their impacts (Australian Government Productivity Commission, 2010, p. 18.2).

The inquiry report provided a range of observations and recommendations for improving research and evaluation in this area including possible models for national gambling research and recommendations for improving policy evaluation and review.

Nevertheless, in a recent publication, Gainsbury, Blanders, Wilkinson, Schelleman-Offermans and Cousijn (2014) examined best practice examples of substance use public health policies (e.g. alcohol and drugs) to provide recommendations for the development of gambling-related policies. They provide a list of gambling-related public policy areas that may be considered and their potential effectiveness. They conclude that while their list is not exhaustive, it provides a point of start for commencing "dialogue that may eventuate in international consistency in standards of [gambling] harm-minimisation" (Gainsbury et al., 2014, p. 783).

Considering research limitations within the field of problem gambling policies, PGPH-05 service could draw insights from evaluations of policy-related interventions for other addictive areas. For instance,

in Washington State, USA, Wickizer, Kopjar, Franklin and Joesch (2004) used an experimental evaluation design (a treatment group consisting of 261 companies and a non-equivalent comparison group of 20,500 companies) to test the impacts of a publicly funded drug-free workplace programme in preventing occupational injuries, which was a notable public health problem. The model drug-free workplace programme included:

(1) a written policy describing the employer's expectations about drug use and consequences of policy violations; (2) an employee assistance program (EAP) to provide confidential problem assessment, counseling, referral to treatment, and follow-up support after treatment; (3) supervisor training to orient supervisors to the employer's drug abuse policy, to define the supervisor's responsibility to refer employees when job performance deficits are noted, and to recognize and respond to employees with problems; (4) employee education to describe the signs and symptoms of drug abuse and its effects on performance and to explain the program; and (5) drug testing on a controlled and carefully monitored basis (Wickizer et al. 2004, p. 93).

Their evaluation found that the programme statistically associated with a significant reduction in occupational injury rates for companies within three industry categories, and significant reductions in serious injuries that result in loss of over four workdays.

Edwards et al. (2008) conducted an evaluation to gauge the impacts of the 2003 New Zealand Smoke-free Environments Amendment Act (SEAA), which extended smoking restrictions to include bars, casinos, clubs and restaurants. Their evaluation drew from a range of data sources including literature searches, consultations with project team members and other relevant informants, and analysis of data obtained from surveys by the Health Sponsorship Council and the national Quitline<sup>12</sup>. Their evaluation also explored key stakeholders' attitudes towards, and experiences of, the SEAA and included testing of indoor air quality in venues offering hospitality services and an analysis of respiratory and cardiovascular-related hospitalisation rates. They found that an increasing majority was supportive of the SEAA and that there was a high rate of compliance among bars and pubs. Their data also showed significant decreases in exposure to second hand smoke from 20% in 2003 to eight percent in 2006. Although they did not observe definite evidence in terms of health impacts and smoking frequency, they noted that there was an increase in the number of calls received by Quitline despite reduced advertising.

Fichtenberg and Glantz's (2002) systematic review with a random effects meta-analysis<sup>13</sup> of 26 published studies that evaluated the effects of smoke-free workplace policies found that smoke-free workplaces were associated with decreases in smoking frequency as well as decreases in number of cigarettes smoked in a day among smokers. The authors argued that smoke-free policies in the workplace serve not only in terms of protection from passive smoking for non-smokers but also serve as means for positively influencing smoking behaviours among smokers.

## 5.2 Safe Gambling Environments

As described earlier in Section 2.2 of this review, the objective of *Safe Gambling Environments* public health service is to ensure safety within gambling environments by encouraging effective harm minimisation practices. This could be achieved, for instance, by assisting gambling venues to develop and implement host responsibility measures or by facilitating cooperative work between gambling venues and stakeholder groups in reducing gambling harm.

However, this primary prevention public health service is likely to be a particular challenge considering the possibility of partial responses from gambling venue operators. In New South Wales, Australia, a survey to gauge how managers of registered clubs (gambling operators) prioritised economic, legal,

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<sup>12</sup> Quitline, New Zealand is a free service funded by the Ministry of Health offered to smokers seeking help with their smoking addiction (see <http://www.quit.org.nz/>)

<sup>13</sup> As defined by Borenstein, Hedges, Higgins, & Rothstein (2010, p. 97) by contrast to the fixed-effect model for meta-analysis which is based on the assumption that all studies included in the analysis share a common effect size, the random-effects model allows "the true effect sizes to differ" enabling the inclusion of studies with different effect sizes. "Because studies will differ in the mixes of participants and in the implementations of interventions, among other reasons, there may be different effect sizes underlying different studies. If it were possible to perform an infinite number of studies (based on the inclusion criteria for the review), the true effect sizes for these studies would be distributed about some mean. In a random-effects meta-analysis model, the effect sizes in the studies that actually were performed are assumed to represent a random sample from a particular distribution of these effect sizes (hence the term random effects). Here, we use the plural (effects) since there is an array of true effects" (Borenstein et al., 2010, pl. 97).

ethical and discretionary principles found that these club managers tended to favour practices that focus on minimising secondary harm<sup>14</sup> followed by reactive primary interventions<sup>15</sup> (Hing, 2001). They were less in favour of a proactive approach to primary intervention<sup>16</sup> and discretionary practices<sup>17</sup>. Such principles and practices were contrary to those urged by key stakeholder groups i.e. the need for a more balanced and holistic set of principles and management practices for ensuring responsible gambling (Hing, 2001). These findings are also of concern considering that in another Australian study, the perspectives of problem gamblers indicated both reactive and proactive measures to be effective harm minimisation measures. A 2009 counselling services clients survey (219 respondents unequally distributed in seven jurisdictions) by the Australian Productivity Commission found problem gamblers believed the removal of ATM machines from gambling venues, technologies that enabled limit setting, and technologies that enabled self-exclusion as measures that were most likely to work (Australian Government Productivity Commission, 2010). The problem gamblers regarded signage in venues (suggesting that repeated gambling leads to increases in money loss) to be the least effective. Public health service providers in New Zealand may encounter similar situations in their efforts when working with gambling venue operators in implementing measures that are believed to be more effective.

### 5.2.1 Training for staff of gambling venues

One approach for ensuring safer gambling environments is through the provision of training programmes for staff of gambling venues. In Quebec (Canada), Giroux, Boutin, Ladouceur, Lachance and Dufour (2008) reported results of an evaluation of a training workshop for casino employees that focused on the issue of problem gambling, ways of helping gamblers who may be experiencing crisis as well as introducing them to helpful resources that were available for gamblers and for employees. Their evaluation, which relied on self-administered questionnaires (n=789) before and after the training, found improved understanding about problem gambling and notions of chance and randomness. Participants became more reassured about their role in spotting gamblers facing crisis and exhibited improved understanding about the procedures for helping gamblers. A telephone follow-up after six months revealed that understanding of the notions of randomness was maintained. They also maintained belief that it was important that they received information about the availability of help and resources. For instance, one of the resources available for problem gamblers at the casino was a self-exclusion programme; employees need to be well informed about such resources that can be used to assist problem gamblers. However, some of their perceptions about problem gambling and procedures for helping gamblers in crisis were not well sustained at six months. Considering this lack, the evaluators recommended the provision of additional information after training, such as refresher sessions and print and audio-visual information, to keep staff informed.

Also in Quebec, Canada, another evaluation to gauge the effectiveness of one such training programme among video lottery retailers found that trained staff exhibited improved understanding of problem gambling and ability to identify the right moment to assist a gambler (Ladouceur et al., 2004). Compared to untrained staff, staff who had received training tended to approach problem gamblers more frequently.

Similarly, an evaluation of a multimedia responsible gambling programme for casino employees (N=217) in the United States of America, found that from baseline to follow-up the programme increased staff understanding of responsible gambling concepts (LaPlante, Gray, LaBrie, Kleschinsky, & Shaffer, 2012). However, while the programme was effective in developing new knowledge, it was

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<sup>14</sup> Strategies to minimise secondary harm include informative materials on the signs or indicators of problem gambling and contact information of tertiary intervention providers. The aim is to enable people to recognise their own or others' problem gambling and become aware of what they can do to address the problem (Hing, 2001).

<sup>15</sup> Reactive primary interventions include measures such as self-exclusion programmes that restrict a gambler's access to gambling venues. The aim is to take away completely or reduce opportunities to engage in harm causing gambling (Hing, 2001).

<sup>16</sup> Proactive primary interventions include strategies that make it difficult for gamblers to obtain additional cash by, for example, enforcing a cool-off period after big wins, restricting ATM and EFTPOS withdrawals and the cashing of cheques. The objective is to restrict gamblers from gambling beyond their means and help them make rational decisions (Hing, 2001).

<sup>17</sup> Discretionary strategies for responsible gambling include financial and in-kind support for initiatives and measures that address problem gambling. For instance, in-kind support could be provided to develop relationships between the gambling industry and the public health sector to facilitate problem gambling awareness raising activities, referral processes, and data collection activities that enable the development of informed responsible gambling strategies at gambling venues. Financial support could be in the form of donations provided to problem gambling counselling services and to supported related research (Hing, 2001).

not as effective in rectifying their pre-existing erroneous beliefs. The evaluators suggested that the development:

...of responsible gambling programs should take note of this finding and devote more resources to correcting false pre-existing beliefs during employee training. To do so, training programs must have an understanding of common pre-existing misconceptions about gambling and the public among casino employees (LaPlante et al., 2012, p. 183).

Dufour, Ladouceur and Giroux (2010) carried out a controlled experimental evaluation (N=456) of a training session provided for employees of a video lottery terminal (VLT) venue in Quebec, Canada on problem gamblers and ways to help. They found that the training improved staff attitudes towards problem gamblers, developed their understanding of how they could help and resulted in behavioural changes (as evidenced in their reactions towards pseudo help-seeking patrons). However, considering that behavioural changes among employees after the training were not fully sustained at an eight-month follow-up phase, the evaluators suggested that such training programmes need to incorporate strategies to maintain long-term positive effects.

### **5.2.2 Responsible gambling codes of practice**

Another approach for providing safer gambling environments is through responsible gambling codes of practice. In Australia, an evaluation of Queensland's voluntary industry code of practice using qualitative methodologies (interviews with staff and managers of 14 gambling venues) found that of the six practice areas within the Code, respondents believed that the one relating to physical environments (which included the setting up of practices within the gambling premises that encourage responsible gambling) was the most effective while providing information (which included the provision of information such as the odds of winning, help availability, and gambling policy) was the least effective (Breen & Hing, 2008). The study also found that training and education of staff and managers were regarded by staff and managers as an important factor for encouraging the adoption and implementation of such a code of practice.

### **5.2.3 Responsible gambling tools and warning messages**

Responsible gambling and warning messages were also noted as tools that can be used to promote safer gambling environments; a number of evaluations on the effectiveness of this approach point to its potential. A study examining the effects of responsible gambling tools in video lottery terminal screens showed that interrupting the gambling session through the use of pauses or pop-up messages (with information about randomness in gambling) reduced the severity of erroneous beliefs and persistence to play (Cloutier, Ladouceur & Sévigny, 2006). This suggests that the insertion of messages and pauses into games could be used as an approach for encouraging responsible gambling by helping gamblers stay informed while they gamble.

Likewise, other evaluations have highlighted the potential of warning messages and provide findings for enhancing the effectiveness of such messages. A study exploring the potential effectiveness of threatening warning messages for addressing compulsive gambling by Munoz, Chebat and Suissa (2010) showed that warnings with higher threats and the medical source of warnings enhanced the depth of information processing which in turn positively affected changes in attitude change and compliance intentions. Monaghan and Blaszczynski's (2010a) comparison of two types of electronic gaming machine warning messages suggested a focus on providing gamblers with self-appraisal and self-regulation skills, rather than simplistic provision of information on winning odds, to maximise the effectiveness of these messages as a public health tool. Monaghan and Blaszczynski's (2010b) studies on warning signs in gambling venues and on electronic gaming machines pointed to the effectiveness of pop-up messages compared to static messages, the former was recalled more effectively and resulted in a significantly greater impact on gamblers' thoughts and behaviours within-session. An evaluation to determine optimal placement for pop-up messages by Gainsbury, Aro, Ball, Tobar and Russell (2015) involving a survey of regular gamblers (n=667) found that dynamic warning messages placed in the middle of the EGM screen were better recollected by the gamblers. Their results suggest that such message placement was more effective as a harm minimisation intervention when compared to messages appearing on the periphery of EGM screens.

In the United States, a controlled experiment involving a heterogeneous group of college-age gamblers (N=101) from a university was used to gauge if warning<sup>18</sup> and warning plus brief intervention messages<sup>19</sup> were effective in increasing their knowledge about the odds of winning, altering their levels of irrational beliefs, and influencing behaviours when playing a computerised roulette game (Steenbergh, Whelan, Meyers, May, & Floyd, 2004). The evaluation used previously designed instruments (*Gamblers' Beliefs Questionnaire* and *Gambling Self-efficacy Questionnaire*) as well as specifically designed tools (*Gambling History Questionnaire*, *Gambling Knowledge*, *Limit Setting Questionnaire*, and a recording form for the roulette) to evaluate the outcomes of the intervention. Although the messages did not significantly impact gambling behaviour, in comparison to the control group, participants who were exposed to the messages exhibited higher level of knowledge about gambling risk and reduced gambling-related irrational beliefs. The study pointed to informational value of the warning messages and potential of limit-setting strategies in producing cognitive change among gamblers.

### 5.3 Supportive Communities

The *Supportive Communities* public health service is focused on activities that enables community access to services that offer social protective factors and resiliency development (see section 2.2). Activities within this service include working with other health service providers and community groups in the delivery of health promotion programmes to develop community resilience, the promotion of public debate on gambling-related issues, and the promotion of more positive leisure activities.

While community based initiatives for analogous areas such as alcohol addiction (Saltz, 1988; Fagan, Hawkins, & Catalano, 2011) have long been established, similar initiatives focusing on gambling harm prevention are relatively new. At the time of this search, only one study that fit our search criteria was found. Brown, Johnson and Wyn (2001) described a community focused programme led by Women's Health West for minimising gambling harm among an Eastern African community in Melbourne, Australia. The project used a two-year action research method which trained and employed women from this community as co-researchers and cultural consultants. The women carried out focus groups, were involved in the data analysis and later drew from the findings to design and implement strategies to reduce the negative impacts of gambling in their community. The women were later provided with training and contracted to work as peer educators. Based on their involvement in the project, the authors concluded that this community group:

...established many networks and links, which have facilitated better access to a range of health and community services. The development of trust between Women's Health West as a government funded agency and the community led to the formation of connections with other types of support services. Community awareness of gambling and its potential harm has started to increase although the women acknowledge that this is the first step (Brown et al., 2001, p. 127).

### 5.4 Aware Communities

As has been detailed in section 2.2, the focus of the *Aware Communities* public health service is on activities and information that can increase the visibility of harms generated by gambling with the aim of making consumers more cognisant of the negative effects of gambling. Providers of this service could carry out activities such as encouraging public debate, responding to public discussions or carrying out social marketing campaigns that complement and support the themes and messages in the national social marketing campaign.

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<sup>18</sup> "Those in the Warning condition received a 22-second computer delivered audio-visual message that explained the odds of winning at roulette and warned viewers of the risks associated with gambling" (Steenbergh et al., 2004, p.7).

<sup>19</sup> Those in the "Warning Plus Brief Intervention" treatment "condition received the warning message ...as well as limit-setting and belief-modification components designed to produce incremental effects on gamblers' beliefs and wagering behaviour" (Steenbergh et al., 2004, p. 8)

### 5.4.1 Social marketing and advertisement campaigns

In New Zealand, an earlier report on the effectiveness of the *Kiwi Lives* advertising campaign (a national social marketing programme to minimise gambling harm) noted that although prompting help-seeking was not a primary aim of the campaign, the programme resulted in an increased number of calls to the national helpline and more people seeking help from problem gambling service providers (Hall & Dickinson, 2009). An evaluation of the *Kiwi Lives* III campaign, used a national telephone survey (using Random Digit Dialling) to gauge campaign reach and understanding, and response to the campaign (Research New Zealand, 2013). The study was based on 350 respondents who had either experienced or been exposed to harms from gambling (group 1) and 500 respondents who had not (group 2). Over 80% from both groups reported having seen or heard advertising about gambling harm with most reporting having seen the advertisements on television. However, those in the first group (i.e. those with experience of or exposure to gambling harm and the campaign's key target audience) had a higher level of awareness of the *Kiwi Lives* advertisements than the second group.

A sub-sample of respondents from the first group who were aware of the campaign (n=300) were asked to rate a set of statements about the advertisements to gauge if they found the advertisements relatable and personally relevant. Most found the *Kiwi Lives* advertisements relevant in some way with 90% agreeing that the advertisements showed the importance of seeking help early; 87% agreed that the advertisements appeared believable and 82% agreed that they were thought provoking. A lesser percentage related to the advertisements at a personal level; 65% indicated that it made them think about how to help others and 39% agreed that the messages spoke to them directly. Among this sub-sample of respondents, 38% indicated having done something because of the advertisements; for instance a few indicated having either reduced or stopped their gambling while others indicated having made the initiative to talk to someone else about their gambling.

Kiwi Lives is starting to receive international recognition; it was referred to as a programme that “offers an example of how social marketing can be used to target problem gambling” in a recent article by Gordon and Moodie (2009, p. 246) in the *International Journal of Nonprofit and Voluntary Sector Marketing*. They discussed how the campaign design was based on formative research findings on social marketing principles. The preliminary evaluation findings were noted as providing evidence for the effectiveness of using a social marketing approach for problem gambling awareness raising. They also pointed to the potential for using a similar social marketing approach for addressing problem gambling in the United Kingdom (UK) and in other nations with high prevalence of gambling problems. The authors also recommended an audit of gambling marketing communications and further research on behavioural effects resulting from gambling marketing. Evidence from such research “could contribute to upstream social marketing activities such as media advocacy and policy development”; for instance,

...regulation of gambling marketing and the gambling industry (e.g. limiting the amount of TV ads, regulating the content of marketing executions and developing social responsibility codes for the gambling industry), efforts to improve corporate social responsibility and social policy around problem gambling (Gordon & Moodie, 2009, p. 248).

Noting how “social norms” were not used in the *Kiwi Lives* campaign, the authors pointed to the value of embedding social norms in marketing campaigns<sup>20</sup>, considering the emerging evidence in the literature showing how social marketing is able to successfully challenge norms. The authors also suggested the need for “targeted interventions, using social marketing benchmark criteria” and outlined how such “benchmark criteria could be employed to tackle problem gambling in low-income groups” (Gordon & Moodie, 2009, p. 248). These suggestions and the outline they provided for implementing a similar social marketing campaign in the UK offer some important perspectives that can inform further development of *Kiwi Lives*.

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<sup>20</sup> “Social norms marketing campaigns typically involve correcting erroneous perceptions regarding the prevalence of behaviour, for example, emphasising that the majority of children do not smoke or take illicit substances” and in the case of gambling, “a social norms campaign aimed at correcting misperceptions regarding gambling expenditure and frequency, highlighting that the vast majority of adolescents and adults only gamble infrequently, and expenditure is minimal, has potential value” (Gordon & Moodie, 2009, p. 248).

Considering that social marketing has not been widely explored for problem gambling prevention programmes targeting youth, Messerlian and Derevensky (2007) used focus groups to explore adolescents' preferences for message content and communication strategy based on their exposure to messages of alcohol and tobacco use prevention campaigns. Findings of their study offer a foundation for developing a gambling prevention social marketing campaign focused on youth. They noted that their respondents indicated a preference for advertisements that:

... depict real-life stories, use an emotional appeal and portray the negative consequences associated with gambling problems. They further recommend illustrating the basic facts of gambling using simple messages that raise awareness without making a judgment. Participants caution against the "don't do it" approach, suggesting it does not reflect the current youth gambling culture (Messerlian & Derevensky, 2007, p. 101).

Although youth were critical about the barrage of television advertisements in general, the majority believed television was the best medium for reaching youth; however, exposure would need vigilant monitoring as youth tend to be susceptible to habituation and overexposure.

While television may remain an influential media, social marketing campaigns would need to consider evolving online media channels for reaching youth. Jordan (2012) argued that considering the low-cost/large-reach features of social media such as Facebook, public health practitioners need to acquaint with best practices in this field to maximise the exposure, reach and impacts of their messages. In a USA evaluation of eight different tobacco prevention social media strategies (used in two tobacco counter-marketing campaigns targeting youth by the Southern Nevada Health District and the Virginia Foundation for Healthy Youth) implemented on Facebook, the author used *Facebook Insights* (an analytic tool freely available to all Facebook users) to test the effectiveness of each strategy.

"Likes" and "Unique Visitors" were compared, as well as the average measure of weekly "People Talking About This" between the end of the first and second weeks of the trial. "Likes" were calculated by subtracting "unlikes" from "likes" to account for any strategies that may have a negative impact. Each of the 3 variables were weighted equally to form an "effectiveness" score for each of the tested strategies" (Jordan, 2012).

The strategies that were found to be effective included "mixing lifestyle with health education" and "using contests that prompt users to post their own text about the program". Strategies that were found to be ineffective included "creative content creation contests (i.e. t-shirt or video contests) and posts that were purely health-based.

In addition to the above, best practices for developing media campaigns targeting youth could also be drawn from findings and recommendations provided by Byrne, Dickson, Derevensky, Gupta and Lussier (2005) which were based on an examination of 25 health communication media campaigns related to drug, alcohol and tobacco use. The authors identified the key effectiveness features in these campaigns and assessed these in terms of their applicability for youth problem gambling, providing design and implementation recommendations. One of their recommendations concerned the use of "negative health effects messages" – although gambling health effects are not as clearly evident as effects resulting from "alcohol, drug, or tobacco use, gambling prevention messages should nonetheless highlight the risks associated with gambling" (Byrne *et al.*, 2005, p. 694). Likewise, "denormalization messages" could be used to alter the social norms of gambling. Considering the potential impacts of "industry manipulation messages", gambling harm prevention could for example include messages that "underline the fact that in order to make profits the industry must produce games designed to make individuals repeatedly lose money" (Byrne *et al.*, 2005, p. 694). The authors also stressed the need to evaluate the effectiveness of anti-gambling media messages by establishing baseline measures before programme implementation, and extensive evaluations following the campaign to gauge impacts on attitudes, knowledge, and behaviour, as well as campaign reach and exposure (Byrne *et al.*, 2005).

In the United States, Najavits, Grymala and George (2003) used a pre- to post- statewide telephone survey of 800 Indiana adult residents (400 respondents randomly sampled prior to the campaign and another 400 after the campaign) to gauge the impact of a state funded advertising campaign that aimed to increase public awareness about the signs of problem gambling and available resources for help. Advertisement messages were designed for a variety of media types including radio, billboards,

brochures and newspapers and for items such as t-shirts and pens which included the campaign slogan “Play smart. Don’t bet more than you can lose.” The study found that the campaign had a low rate of exposure (8%) and resulted in little impact. However, the few individuals who saw or heard the advertisement reported that their knowledge of problem gambling increased as a result. The authors “suggest that advertising does hold promise in educating the public about problem gambling but that more effective means of reaching people” were needed (Najavits et al. 2003, p. 326). Slogans were noted to be particularly effective, as many in their sample understood and related to the campaign slogan. The authors also recommended that future advertising campaigns on problem gambling “may benefit from a more focused approach (e.g., targeting individuals at risk for gambling problems rather than the population at large), as well as adding other, perhaps more powerful, media (e.g., television)” (Najavits et al. 2003, p. 327).

Part of the longitudinal evaluation of problem gambling services (1996 - 2000) undertaken for the Victorian Government Department of Human Services (Melbourne, Australia) included an evaluation of a national awareness campaign, community education strategies and information products (Thomas & Jackson, 2001). The evaluation drew from a mixed set of methodologies:

- A telephone survey (n=502) to gauge public knowledge about problem gambling and their recall of a recently implemented national campaign;
- Analyses of the number and nature of calls received by Victoria’s telephone counselling services (G-Line) and the number of new client registrations during and after a national television campaign;
- A structured questionnaire sent to community education and gambling liaison officers to obtain information about their work and views about problem gambling and an analysis of their diary records of undertaken tasks;
- Questionnaire sent to staff and managers of gambling venues to gauge their knowledge and use of BreakEven problem gambling counselling services;
- Face-to-face general public and venue patrons questionnaire to gauge the reach of, and people’s recollection and understanding of, the problem gambling information products that were designed and distributed during the campaign; and,
- An analysis of samples of the above problem gambling information products.

Among other things, the findings of this study pointed to a high level of residual recall of the campaign (i.e. recall of advertisements six months after its cease), increased awareness about gambling as a problem, and increased awareness about available support services. The study also found “a dramatic and immediate increase in the number of telephone calls received by G-Line during Phase II and Phase III<sup>21</sup> of the state wide campaign” and an increase in the number of registrations for the BreakEven problem gambling counselling service (Thomas & Jackson, 2001, p. 18).

#### **5.4.2 Problem gambling prevention programmes targeting youth**

Although legislations generally prohibit youth gambling, in reality indulgence in both legal and illegal forms of gambling has become a popular recreational activity among adolescents (Messerlian, Derevensky & Gupta, 2005). Such indulgences may have become exacerbated as children now have greater access to games (Todorita & Lupu, 2013) both online and through other means.

A school based prevention programme for adolescents who were gambling at non-problem levels in Alberta, Canada, consisted of information about the nature of problem gambling; exercises to reduce students’ susceptibility to cognitive errors (common misconceptions about gambling); information about, and exercises in, calculating odds in gambling activities; and teaching and practice on decision-making, social problem-solving and adaptive coping skills (Williams, 2002). A controlled evaluation of this programme (experimental n=371, control n=226) showed significant increases in knowledge and negative attitudes towards gambling and significant decreases in cognitive errors, frequency of

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<sup>21</sup> “The statewide campaign was a phased campaign with Phase I comprising radio and print advertisements, which ran for five weeks commencing on 24 November 1995. ... Phase II of the campaign ran for approximately 14 weeks (commencing 21 February 1996) and consisted of two television advertisements. Phase III used the same two television advertisements as Phase II plus radio ads. Phase III of the campaign ran between 13 July 1997 and 3 February 1998” (Thomas & Jackson, 2001, p. 17).



gambling, and amounts of money spent gambling. The evaluation noted that the observed changes in gambling behaviour were unanticipated, as the programme had not advocated abstinence and was focused on responsible gambling. While findings suggested the potential for such programmes to prevent students from becoming problem gamblers, the need for a longer term follow-up study was pointed to for a true evaluation of this hypothesis. The authors noted that the limitations of their study included the reliance on self-reports and the risk of bias caused by *demand characteristics*<sup>22</sup> and the use of a custom-designed questionnaire that was not previously tested for reliability and validity.

Turner, Macdonald, Bartoshuk and Zangeneh (2008) delivered a prevention programme at schools in Ontario, Canada which included a one hour live presentation by the authors and brief student performed skits. The programme focused on the nature of gambling, randomness, and how the winning/losing emotional states and erroneous beliefs can develop into problem gambling behaviours. A controlled experimental evaluation<sup>23</sup> (experimental n=212, control n=162) found that the prevention programme resulted in a small but significant increase in students' understanding of "random chance". However, the programme did not result in impacts in terms of changes in students' gambling behaviour, their attitudes towards gambling or their coping strategies.

A recent study in Cluj-Napoca, Romania using a controlled experimental design evaluated the influence of a specific primary prevention tool (an interactive software referred to as *Amazing Chateau*) on children's knowledge about gambling (Todorita & Lupu, 2013). The study randomly assigned 81 children into three groups (control, exposed to *Amazing Chateau*, and exposed to rational emotive education) and tested them for change using a 38-item questionnaire before and after the intervention. Findings suggested that the software resulted in significant improvements to gambling-related knowledge and corrected their understanding about how games work. The evaluators argued that the results were affirming that the use of specific primary prevention tools for the purpose of correcting misconceptions about games was more effective than using rational emotive education only.

Another controlled experimental evaluation (experimental n=145, control n=36) of a school-based intervention programme in Italy found similar results (Donati, Primi & Chiesi, 2014). The intervention aimed to develop accurate knowledge about gambling and reduce related fallacies, unrealistic optimism about gambling profitability, and superstitious beliefs. Students in the experimental group showed improvements in knowledge and reductions in misconceptions, optimistic views about gambling profitability, and superstitious thinking. The study was, however, noted to be limited as result of unequal experimental and control group sample sizes.

## **5.5 Initiatives of relevance to the "Effective Screening Environments" public health service**

The *Effective Screening Environments* public health service is focused on activities that promote awareness about, and tools that can identify, problem gamblers (see section 2.2). "Delivery of these services will include facilitation of community action and collaboration with a range of sectors that results in development of appropriate screening practices in appropriate organisations" (Ministry of Health, 2010, p. 35).

Effective screening as a public health service was, however, another area that has not been empirically well explored in the literature. Very few studies that fit within our search criteria were found and those that were found were interlinked with the provision of interventions. In Australia, a pilot project by an Adelaide-based gambling treatment service explored the role of general practitioners (GPs) in screening patients for potential gambling problems (Tolchard, Thomas & Battersby, 2007). Sixty GPs were informed of the prevalence of problem gambling within their community and were provided with information on how to identify and help problem gamblers and a list of relevant referral services. Forty

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<sup>22</sup> In experimental research, the term *demand characteristics* generally refers to how participants sometimes alter their behaviour in order to fit with what they believe the researcher is expecting of them or to fit with what they believe to be the experiment's purpose. Such an act on the part of the participant can have an impact on research results, because participants are changing their behaviour to conform with conceived expectations and not necessarily because of an intervention.

<sup>23</sup> The evaluators had included a range of measures in their pre-test and post-test questionnaire which adapted items from previous tools which included a "random event knowledge test", "the SOGS-RA", "the luck and skill questionnaire", as well as "an open-ended questionnaire asking the students how they would cope with various stressful situations" (Turner et al., 2008, p. 239).

percent of the GPs responded to a questionnaire designed to evaluate the usefulness of the resources, impacts on their knowledge, and outcomes for patients. Findings suggested that this approach was insufficient for changing practice.

Despite targeting GP's with previous referral experience there was still a distinct lack of knowledge of the extent of problem gambling in the community (61%), although 96% knew of the link between emotional, psychological or physical symptoms and problem gambling. Forty-four percent of the respondents found most of the information on the sheet [to be] new and a further 22% [found] some of the information new (Tolchard et al., 2007, p. 501).

Nevertheless, all respondents in the above study agreed that assisting individuals with gambling problems was part of their role. Therefore, while GPs may be a relevant stakeholder group for providing early identification and intervention they may lack resources and knowledge. Considering that their pilot study suggested the ineffectiveness of simply providing GPs with resource materials, the evaluators stressed the importance of also providing them with adequate training in the recognition and treatment of problem gamblers in order to build their capacity to identify and assist problem gamblers.

In New Zealand, Sullivan, McCormick, Lamont, and Penfold (2006) reported on the experiences of nine GPs who had received training on problem gambling intervention. Their training on brief interventions involved the reading and application of strategies described in the problem gambling treatment manual. Problem gamblers and their affected others were identified among their patients using the *Eight Gambling Screen*<sup>24</sup> and the *Concerned Others Gambling Screen (COGS)*<sup>25</sup> respectively. The GPs then provided brief interventions to these patients offering them feedback on their screening results, addressing related issues that had implications for their gambling behaviour and providing referrals to specialist treatment services. In focus group interviews, the GPs reported that their skills and confidence developed over time. They also reported that most patients were receptive when questioned about their gambling behaviours. Most GPs believed that it was within their role to provide help, and patients viewed them as suitable help providers. Most also believed they were able to help their patients in addressing their problem gambling issues with their intervention. However, all of them were of the view that this was time-consuming process that often required additional appointments; suggesting that insufficient time could pose as a barrier to the GPs' role in screening and providing problem gambling interventions. Nevertheless, the authors argued that appropriate training for GPs could develop their capacity to provide intervention services, which in turn contributes towards the Ministry of Health's objectives to develop primary health care settings as venues for problem gambling screening and secondary interventions.

A subsequent study by the above authors (Sullivan, McCormick, Lamont, & Penfold, 2007) aimed to gauge patients' perceptions of GPs as problem gambling help providers. In a survey of 1,580 patients (of which 7.5% tested as problem gamblers) they found that 13% had indicated they believed their doctor could help with gambling problems, while 36% indicated uncertainty and 39% did not believe that their doctor could help. Their study also found that problem gamblers were more likely than others to regard their GP as an appropriate help provider; however, affected others did not exhibit a similar view. The authors suggested that recognition of a GPs' role as a help provider for problem gambling could be developed through more information. They also recommended the need to train GPs in the use of specialist problem gambling screens.

Also in New Zealand, Sullivan, Brown and Skinner (2008) described the testing of the *Eight screen* (originally developed for use by general practitioners) and the South Oaks Gambling Screen (SOGS) with 100 inmates in a medium security prison. They found that twenty-nine of the inmates scored four or over in the *Eight Screen* or five or over in SOGS. The authors suggested that the *Eight screen* was a suitable screening method for use in prisons considering its capacity to test for both early stage and established problem gambling behaviour while requiring little resources in terms of time and training for administrators. *Eight screen* has since been adopted by the New Zealand Department of Corrections as an assessment tool.

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<sup>24</sup> A brief problem gambling screen developed for General Practice

<sup>25</sup> Screen to identify those affected by others' gambling

Within the broader primary health care sector, screening and brief intervention (SBI) have been noted to be effective prevention strategies for alcohol problems. Amaral, Rozani and Souza-Formigoni's (2010) review found that:

SBI techniques have been used in primary health care (PHC) services in many countries and are considered good prevention strategies for detecting alcohol related problems at early stages and delivering counselling to help reduce excessive alcohol consumption and its adverse consequences (p. 162).

In their own study, the authors evaluated the implementation process of an SBI programme for alcohol risk in two primary health care settings in Juiz de Flora, Brazil employing a qualitative action research methodology. They found that aspects that facilitated implementation included positive project-related expectations; the SBI technique's ease of use; the collaborative way used in planning the project and data confidentiality. On the other hand, factors that acted as barriers to implementation included time constraints; the unease among health professionals in dealing with alcohol issues; competing priorities; inconsistencies in terms of institutional support; and the culture of the organisation when it came to their own alcohol consumption (e.g. work-related celebrations). These findings could inform the implementation of screening and *Brief Interventions* for problem gambling.

The development of tools for the *Effective Screening Environments* public health service could be based on existing problem gambling screening instruments and assessment tools (Bellringer, Abbott, Volberg, Garrett, & Coombes, 2008a, Bellringer, Abbott, Coombes, Garrett, & Volberg, 2008b; Problem Gambling Research and Treatment Centre, 2011; Alberta Health Services, 2004; Fager, 2006) as well as methods described in studies on early detection. For instance, a number of authors have provided methods of early detection in physical gambling venues (Allcock, 2002; Häfeli & Schneider, 2005; Thomas, Delfabbro & Armstrong, 2014). Häfeli Lischer and Schwarz (2011) identified communication-based indicators for online gambling-related problems drawing from semi-structured interviews with customer service employees of three online gambling operators and from customer correspondence. Their testing of the effectiveness of these indicators pointed to the value of customer correspondence for predicting problem gambling; for instance, email tonality (neutral, complaint or threat), urgency (repeated emails) and content relating to payments. The authors suggested that incorporation of "these new indicators for future gambling-related problems to existing policies could increase the hit-rate for early detection as well as the time interval in which emerging problems are identified in advance" (Häfeli et al., p. 284).

## 6 Discussion on methodological aspects and other relevant findings

### 6.1 Multi-methods evaluation approach guided by intervention logic frameworks

This literature review found that evaluations of problem gambling services and interventions are largely focused on specific interventions and programmes. Evaluation of national level interventions (multi-modal programmes) were limited, although a number of reports evaluating state level programmes of this type were noted. Compared to evaluations of problem gambling interventions there were less evaluation articles and reports on public health services for problem gambling. For instance, no evaluation articles related to *Policy Development and Implementation* public health service was found at the time of our search. This is suggestive of the novelty of these types of public health services both in New Zealand and elsewhere.

The above evaluations, particularly evaluations of multi-modal programmes with multiple interventions, have used a range of evaluation methodologies. When considering methodologies for problem gambling treatment outcomes, Blaszczyński (2005) argued that well-designed randomised controlled trials using validated outcome measures are required to assess long-term outcomes, in line with best practice in related areas. However, not all evaluations reviewed in this report employed controlled experimental designs. This is understandable considering the practicability of this method in real world settings. Nevertheless, many of these evaluations have used pre-treatment and post-treatment data to measure impacts and outcomes of a programme, often using a broad range of instruments to measure multiple outcomes.

Considering the above, GARC will employ a multi-methods approach for the proposed evaluation. While it is acknowledged that the effectiveness of individual gambling treatment services and interventions are best ascertained through rigorously conducted effectiveness studies (randomised controlled trials) (Westphal & Abbott, 2006), as suggested in a previous report, an evaluation of process, impact and outcome of services “could provide indications as to optimal treatment pathways and approaches for problem gamblers and affected others, as well as identifying successful strategies currently in existence and areas for improvement in current service provision” (Bellringer et al., 2009, p. 5). Appendix 1 provides a detailed discussion of these approaches in evaluation. The use of a mixed-method approach is appropriate in this context as the underlying purpose of this approach is to provide support for the improvement of programmes as they develop, and assess their effectiveness at appropriate times (Stufflebeam, 1999). The mixed-method approach employs both quantitative and qualitative methods:

...to assure dependable feedback on a wide range of questions; depth of understanding of particular programs; a holistic perspective; and enhancement of the validity, reliability, and usefulness of the full set of findings. Investigators look to quantitative methods for standardized, replicable findings on large data sets. They look to qualitative methods for elucidation of the program’s cultural context, dynamics, meaningful patterns and themes, deviant cases, diverse impacts on individuals as well as groups, etc... By using both quantitative and qualitative methods, the evaluator secures cross-checks on different subsets of findings and thereby instills greater stakeholder confidence in the overall findings (Stufflebeam, 1999, p. 28).

Part of the rationale to evaluating services is to ensure that services are doing what they intend to, as organisations do things to realise a goal, use a plan and apply techniques as part of a process in a chain of activities – a ‘causal chain’ (White, 2009), or what is sometimes called a ‘logic model’ or interchangeably as ‘programme theory’ (Curnan, LaCava, Sharpsteen, Lelle, & Reece, 2004). The logic model is the theory of how an intervention will work; the logic used to explain the model from the start of an organisation’s goals and activities, to its end point, which is the intervention’s impact on clients. The use of a programme theory-based evaluation clarifies the questions, indicators, and assumed linkages between, and among, the elements of a programme that should be central to the evaluation (Stufflebeam, 1999).

As detailed in our proposal (AUT/KPMG, 2013) our evaluation of the Ministry’s problem gambling intervention and public health services will be guided by a logic framework which will capture the key inputs, outputs and outcomes that will be evaluated.

## 6.2 Relevant measurement tools/instruments

The present and future evaluation of problem gambling services could benefit from considering the use of, or adapting, measurement tools and instruments that have been previously developed to assess different types of services. One such tool, the *Task Analysis (Problem Gambling [CTA (PG)])* instrument, developed by Jackson, Holt, Thomas and Crisp, (2003) contains subscales addressing nine different dimensions of practice activity. In essence, the CTA (PG) provides a broad overview of the complex nature of the counsellor's role, the frequency of tasks they perform, and their beliefs about the importance of the tasks performed. The authors suggest that the CTA (PG) is broad in its applicability and could serve not only as a one-off research tool but also as a routine monitoring device for various quality improvement purposes. Among others, they suggest that the tool could be used to identify commonalities in counselling practice across organisations to better understand the influence of theoretical orientation on practice, and as a measure of the effects of training programmes. While the use of previously designed tools contribute towards its validation, and may enable between country comparisons, evaluators will need to first ensure that the tools are highly fit for purpose - particularly if local situations are unique or differ from the communities for which the tool was originally designed.

## 6.3 Clinical audits (Internal Audit Methodology)

In addition to the above evaluation methodologies, as described in our proposal (AUT/KPMG, 2013) the inclusion of clinical audits within a wider evaluation programme will provide robust findings in relation to processes, impacts and outcomes.

The audit process proposed by KPMG is based on the *Institute of Internal Auditors International Professional Practices Framework*<sup>26</sup>, a principle-based audit methodology guide. The view of KPMG is that traditionally clinical audits are undertaken by healthcare professionals and not necessarily by persons who are certified auditors. Such clinical audits often use quality improvement frameworks, rather than audit methodology to assess clinical processes.

KPMG's clinical audit methodology, which may be referred to as an Internal Audit Methodology, will cover a combination of the following:

- Compliance with the Ministry of Health contract (compliance audit)
- Assessment of practice with industry best practice (maturity assessment)
- Process evaluation (process design and effectiveness)

Therefore, the methodology will go beyond a strictly 'clinical' framework, as it will involve assessing the experiences of the service users, assessment of staff training, assessment of the facilities and assessment of cultural aspects of care. These are not clinical processes but make up the framework of service provision. Thus, while they are clinical audits and assess clinical processes, KPMG will use the Internal Audit Methodology which goes beyond clinical care to all aspects of an organisation.

## 6.4 Other aspects to consider in the proposed evaluation

### 6.4.1 Gambling-related definitions for service implementation and evaluation

Clarifying definitions at the onset appears important considering that a lack of conceptual clarity and consensus have been identified as key barriers hindering implementation as well as evaluation of responsible gambling strategies (Blaszczynski, Ladouceur & Shaffer, 2004).

In section 4.3 we discussed the differences in the definition of *Brief Interventions* in terms of how these have been defined in the international literature and how these have been described within the New Zealand context. Such inconsistencies will need be considered and if possible clarified in the current evaluation. As discussed in GARC's previous report, the "possibility of inter-service variation in what is defined and reported as a *Brief Intervention* not only "undermines confidence in the reported data and inter-service comparisons in terms of brief intervention provision" but also makes comparisons with

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<sup>26</sup> <https://na.theiia.org/standards-guidance/Pages/Standards-and-Guidance-IPPF.aspx>

international best practice difficult (Bellringer et al., 2010b, p. 24). GARC's report also identified ongoing confusion and some inflexibility around the *Brief Intervention* process and recommended clarification of a *Brief Intervention* and its place within the treatment sector.

Definition inconsistencies have also been identified in terms of description of gambling-related problems and harm. In their position paper, Blaszczynski et al. (2004) noted how measuring the effectiveness of strategies to reduce gambling-related harms was dependent on the scientist's ability to accurately measure aspects of harm. They identified a need for gambling stakeholders to agree on definitions of gambling-related harms and that such consistency was necessary to communicate clearly with public policy makers and others about the nature of these problems. While some progress has been made, it remains that the broad range of definitions and criteria used to identify gamblers with gambling-related harms (for instance, problem gambler, compulsive gambler, excessive gambler, neurotic gambler, and pathological gambler, among others) adds confusion and uncertainty to the concept being researched as well as to policy development in this area.

In New Zealand, a *problem gambler*, as defined in the Gambling Act 2003, is "a person whose gambling causes harm or may cause harm" (New Zealand Government, 2013, p. 29). The term *harm* within this definition refers to "harm or distress of any kind arising from, or caused or exacerbated by, a person's gambling" and includes "personal, social or economic harm" that may be suffered by the gambler and/or others they are in contact with such as their partner family member, their co-worker (and the workplace) or any other members of society (The New Zealand Government, 2013, p. 23-24). Considering the previous comments by Blaszczynski et al. (2004) the New Zealand definitions may be considered as somewhat broad and therefore vague as a result.

In addition to the above, it may be important to note the relationships between the terms *problem gambling* and *pathological gambling*. As pointed out by Blaszczynski et al. (2004, p. 305):

[c]linicians, researchers, public policy makers, gambling industry workers and the public have different perspectives on the construct of pathological and problem. Pathological gambling is the technical term currently used by the American Psychiatric Association to identify a gambling disorder. Problem gambling is a lay term that refers to a broader category of individuals exhibiting patterns of excessive gambling behavior that is associated with harmful effects. There currently is no formal diagnostic classification for problem gamblers. Problem gamblers may or may not suffer impaired control. Conceptually, all pathological gamblers are problem gamblers, but not all problem gamblers are pathological gamblers.

Blaszczynski (2005, p.7) argues that the term "pathological gambler" should be restricted to only "cases where there is evidence of impaired control as manifested by subjective reports of a repeated failure to control an urge to gamble more time and/or money than intended on more than 50% of occasions, and the presence of repeated unsuccessful attempts to cease." However, in more recent times, the term problem gambler has become a generally accepted term for people who are having issues controlling their gambling and this is reflected in the now widespread use of the Problem Gambling Severity Index (Ferris & Wynne, 2001) as a general population screen which categorises gamblers into non-problem gamblers, low-risk gamblers, moderate-risk gamblers and problem gamblers. The New Zealand definition of problem gambler as described in the Gambling Act 2013 is a generic term encompassing all types and categories of gamblers having issues controlling their gambling where harm is caused to themselves or others.

#### **6.4.2 Ethnic differences**

Ethnic differences are an important aspect to consider in evaluation of gambling interventions and public health activities in New Zealand. This is considering previous research findings which suggest that gambling-related harm may be different for different ethnic groups. An earlier Ministry of Health (2009) study which had included an examination of ethnic differences found that being Māori or Pacific ethnicity was one of the socio-demographic variables that was significantly associated with problem gambling. Confirming observations of previous studies in New Zealand, this study found that compared to other ethnic groups such as European and Asian, "Māori and Pacific people were disproportionately affected by gambling-related harm in New Zealand, both from their own gambling and from other people's gambling" (Ministry of Health, 2009, p. 87). Such ethnic differences are a key aspect to

consider in the design of evaluations of intervention and problem gambling services considering GARC's previous findings which found that almost "all services provided interventions for more than one ethnic group" (Bellringer et al., 2009).

### **6.4.3 Process, output, and outcome indicators**

The evaluations of national and international literature on problem gambling intervention services reviewed provide a range of process, output and outcome indicators. For instance, among the process indicators that have been reported include the gambler-counsellor therapeutic relationship, client-focused strategies used, and inclusive goal setting approaches in gambling treatment interventions. Output indicators include increase in the number of individuals seeking help and client satisfaction with the services received. Outcome indicators include improvements to knowledge about gambling risks and reductions in gambling-related irrational beliefs, gambling frequency, money spent on gambling, amount of money lost, and number of financial problems. These indicators may be drawn upon to gauge the potential effectiveness of treatment processes and outcomes. Where appropriate, these indicators may also serve as a basis for evaluating programme effectiveness by comparison with previously reported successes and best practice.

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## 8 Appendix 1: Process, Impact and Outcomes Evaluation

### Process-implementation evaluation

A process evaluation can be part of a wider series of evaluations and constructive in identifying what it is that is effective, the situation or situations in which the activities are effective and for whom the services are effective (Linnan & Steckler, 2002). Services are often delivered at a number of sites, so in seeking to ensure equality of service provision, evaluation contributes to whole-service effectiveness (Linnan & Steckler, 2002). The complexity of services has increased in recent years due to increased demands and the increased range of components that make up the services delivered. By examining the various components used in the process of delivery can, in theory, pinpoint which singular and combined activities are effective.

Service delivery incurs costs to the finances of services and their funding sources. Justifying existing and continued funding through appropriate expenditure on quality and targeted services is important for the initiation, development and maintenance of service organisations. In short, process evaluations can assist in demonstrating the service meets the requirements of economic delivery (Linnan & Steckler, 2002).

Most participants in a process evaluation are the stakeholders closest to the service, working collaboratively. Service consumers are central and their concerns, desires and needs of the service need to be determined. Project managers who have designed or are most knowledgeable about the planned outcomes are important participants. Service organisation staff who deliver services to consumers or handle data gathered by service delivery staff must also be involved. Finally investigators, usually external to the organisation, will be involved, gathering data, reviewing and reporting on it (Linnan & Steckler, 2002).

Organising a process evaluation entails considering what the theory, plan or blueprint is, or how the programme was intended to achieve goals, as well as the theory of how it would operate in doing so (Rossi, Lipsey, & Freeman, 2004). Organisations will have plans for service delivery and detailed records of those services, in terms of human and material resources drawn on to deliver services to identified individuals or groups of people, and to a particular number of people. Essentially, by comparing the plans for delivery against the services delivered, a programme can be assessed for the degree to which it meets a standard or delivery plan (Rossi et al., 2004). This is in essence, assessing the logic model against the activities involved in realising the model's aims.

The planning for a process evaluation in terms of selecting an appropriate methodology and design will likely involve iterative phases, undertaken in close consultation with stakeholders for the purposes of refining questions, identifying data that might address key questions, and to report the findings to stakeholders (Linnan & Steckler, 2002).

Understanding the entire system of factors around the service being evaluated is very important. The context in which the service is delivered is of interest and relevance, as there may be environmental factors that facilitate or inhibit service users from getting the full benefit from the services on offer (Linnan & Steckler, 2002). For instance, the universal efficacy of a problem gambling service programme may be inhibited by service users who reside in neighbourhoods in the vicinity of a casino or high densities of pubs and clubs offering opportunities to gamble.

The intended reach of the service must be considered. Any service will have an intended audience, so the percentage of the population and which members of the population the service is intended to reach will need to be considered (Linnan & Steckler, 2002). As an example, a problem gambling service intended to target problem gambling members of a particular ethnic group will require users' demographics to be accessed, to determine the severity of their gambling associated problems, and their ethnicity.

The 'dose' (Linnan & Steckler, 2002, p. 13) of service provided must also be accounted for. That is, the dose delivered and the dose received. Dose delivered is concerned with the actual services that users are offered (Linnan & Steckler, 2002). Dose received is the take-up of what was offered and has two

components. One is the exposure to dose, entailing gauging service user uptake of, and receptiveness to, the dose; the other is satisfaction with dose, involving user beliefs about service received (Saunders, Evans, & Joshi, 2005). To illustrate, a problem gambling service's records of the number and type of counselling and media delivered to clients might be considered and the information would need to be gathered concerning the reception of those services by consumers, possibly by way of face-to-face, telephone, mail postage, or online surveys.

The fidelity of the service is concerned with the quality of delivery. There are different aspects to fidelity, on one level being the matter of determining whether the services offered were aligned with those planned, and on another, as to whether the services were in the style and spirit as planned (Linnan & Steckler, 2002). As a brief example, a problem gambling service process evaluation might employ an evaluator to observe staff, staff discussions or alternatively, create a survey for staff to complete regarding numerous indicators of the services delivered and their fit with the service plans.

Evaluating implementation involves a measurement of the components of the service (reach, dose delivered and received, and fidelity). This involves a prior set of decisions over indicators, their quantification and percentages that indicate successful implementation. The defined levels of success should also be realistic, as a 100% level will likely lead to a conclusion of failure to implement, as well as low levels of 'buy-in' by service staff members involved in the evaluation. Linnan and Steckler (2002) suggested something like a 75% success level, where 75% success scores for the components of reach, dose delivered, and dose received and fidelity are added together and then divided by that number of components to calculate a total average score. As an example, a problem gambling service evaluation can be undertaken by quantifying and scoring: the degree to which services reached their intended audience; the number of particular techniques and materials available to services users; which and how many users drew on what was available, as well as their perceptions of the service, and; the alignment of the service practice with its plans for delivery.

The final but by no means least important aspect to be considered in a process evaluation is recruitment. By studying the methods used and resources deployed to attract possible service users, describing the context and possible reasons for any less-than-ideal take up of services offered, the likelihood of some individuals and groups of people to use services more than others, and possible shortcomings in the way that services were made available to potential users. This undertaking means that the evaluation can account for bias in uptake, and targeted individuals and groups who did not receive service (Linnan & Steckler, 2002). To illustrate this point, problem gambling services could possibly examine a number of factors, such as the advertising and community engagement practices undertaken, the media by which and sites wherein the public presence of the organisation was on show, as well as the service's physical site and hours of operation.

Ascertaining the content of a process evaluation requires looking at underlying theory, the specific component of services offered, deciding on questions to ask, tools to measure, quality assurance within the evaluation, and reporting on the findings (Saunders et al., 2005).

Every service has a theory, that is, the strategy and intended outcomes for the service and factors involved in reaching intended outcomes. A theory can be thought of as a story and everybody, whether a professional or a layperson has a series of theories or stories that underpin what they do. The important thing for a service is to ensure that the theory that members use is the same one, for the purposes of the organisation's work. By discussing and clarifying what the theory is, an organisation can be clearer on what it does in delivering services. For the purposes of an evaluation it identifies what the service intended and whether that resulted in the delivery of service, in accord with the theory (Weiss, 1995). There will be a logic to this theory and creating a visual model of it is a good way to concretise the theory (Saunders et al., 2005). Theory informs the service and the results of an evaluation can later be juxtaposed with the theory, for testing or revising it. The results might also be used to create new theory (Linnan & Steckler, 2002). For instance, a problem gambling service will have a theory about how with particular sorts of support, counselling, teaching and the practice of strategies, that the burdens and harms from gambling can be reduced.

There will also be a range of behaviours and resources involved in the delivery of services. These will need to be compiled into a list and then transformed into a flow chart demonstrating where various

behaviours and resources are introduced for delivery to users. Service developers are the people who have the best understanding of this element of the evaluation and are best placed to devise measurements for determining outcomes of the service delivered to support users (Linnan & Steckler, 2002). As an example, a problem gambling service will have a process used to induct and screen new users, as well as a range of professional practice techniques such as counsellor-led or introduced abstinence challenge opportunities and self-talk techniques, as well as non-human resources, such as written material to draw on and deploy to support service users. As Linnan and Steckler (2002) point out, these resources can be listed as an inventory, graphically represented and are measureable in terms of intensity, scale and duration. Every aspect of a service can be categorised and then grouped into units and each unit can be described as when the parts will be delivered, the amounts to be delivered and the techniques used for delivery. It might turn out that the service being delivered is effective, but not in accord with the proposed theory. In a case like this, problem gambling support service members could discuss the results of the evaluation and create a theory that fits with the effective practices identified by the evaluation.

Clearly, process evaluation is collaborative, and it should be consensus-based. Once the theory and actions of the service are clarified, members need to decide on what are the best questions to address in the evaluation. This is an opportunity that is likely to generate numerous possible questions. However, the scale of most process evaluations requires that questions are edited by priority. Those questions that inquire into the core intentions of an organisation are those that should be prioritised; Linnan and Steckler (2002) emphasising that they be oriented to capture, at the very least, the reach, dose, and fidelity of the service, with additional questions regarding context and recruitment, if possible. Saunders et al. (2005) note that these measurements can be for formative or summative purposes, depending on the evaluation. As brief examples, an ethnic-group targeted problem gambling support service might ask: Were 75% of services on offer delivered to people of that target ethnicity (reach)? Were 100% of target group service users made aware of the particular problem gambling risk factors faced by people of their ethnicity (dose delivered)? Did a representative sample of the target service user group return 75% positive feedback on a survey concerning the service (dose received)? To what percentage were the services delivered consistent with the underlying theory of the service where ethnicity and problem gambling risk and protective factors were concerned (fidelity)?

### ***Mixed methods for investigation***

Whilst the foregoing may have emphasised the quantitative dimension to process evaluation, qualitative information will also comprise an equally important source of data for an evaluation. A range of qualitative data collection techniques should be considered. A process evaluation can utilise any one or number of methods such as case studies, open-ended surveys, audio-visual recordings analysed for content, interviews, document review, open-ended interviews, logs and focus groups. These techniques are as varied as are those for quantitative methods such as archived documentation, attendance logs, surveys, self-completed forms and checklists (Bartholemew et al., 2001; Devaney & Rossi, 1997; McGraw, et al., 2000; Steckler & Linnan, 2002a as cited in Saunders et al., 2005).

Regardless of the method being used, the central question is one of what is the most indicative information for the evaluation. It is not a matter of a greater volume of data leading to the best evaluation, as the collection of extensive amounts of data can lead to there being 'too much' of it to make sense of (Hong et al., 2005 as cited in Munro & Bloor, 2010, p. 701). Judicious selection of the methods used for the design of the evaluation are imperative if it is to have meaningful results, so adopting a pragmatic stance through triangulation is a possibility (Moran-Ellis, et al., 2006 as cited in Munro & Bloor, 2010) and likely to be appropriate for present purposes.

### ***Decisions over mitigating factors***

There are likely to be constraints on a process evaluation, usually centred on the time and/or budget available to formulate a design, implement it and analyse and report on the results. There may also be questions concerning objectivity and the associated evaluation team participants to be considered for membership, requiring decisions over whether and which internal and/or external evaluation team members are most appropriate (Helitzer & Yoon, 2002 as cited in Saunders et al., 2005). Internal evaluation group members might not be available all the time, as service work usually needs to continue whilst the evaluation is undertaken, and a limited list of questions is likely to need to be created



accordingly. Furthermore, data collected needs to be compiled, stored and analysed. However, prioritising and iterative processes can overcome barriers (Saunders et al., 2005).

It has been suggested that evaluations of process and outcomes or impact be conducted in a specific order, starting with a process evaluation analysis, followed by outcomes or impact analysis. This is claimed to be best course for evaluators to identify the key influences in process, preceding their having knowledge of what the outcomes are, due to the possibility of bias being introduced into the analysis, should evaluators be cognisant of the impacts prior to studying the processes that result in the outcomes (Wight & Obasi, 2002, as cited in Munro & Bloor, 2010).

### **Impact and outcomes evaluation**

The very reason for the existence of services and the most important thing that services can do, is delivering service that benefits clients. Determining service effectiveness entails exploring and measuring the impacts or outcomes of the activities of the organisation and its members, for clients.

Whereas process evaluation focuses on the activities of implementing intervention or public health services (the activities of service members), outcomes evaluations focus on the collective (impacts) and individual (outcomes) results for service users. In the case of problem gambling this most centrally is the minimisation of gambling harm.

Outcomes evaluations have been of increasing interest internationally, as part of a movement away from focusing on internal organisational inputs and outputs, to examining the external effects of services (Wimbush, Montague, & Mulherin, 2012).

Service members are often intimidated by outcomes evaluation due to the beliefs that outcomes cannot be measured (Patton, 2008) or that when measured, the outcomes may indicate that an individual or the group are not effective.

The point of an outcomes evaluation is gauging the impact on clients when organisational goals are put into practice but many services confuse their activities with the effect on clients as outcomes. It is the latter that is an outcome. The former is a process and output (Patton, 2008). To use an example to delineate the two categories, a problem gambling service may be able to provide a list of the sequence taken and number of people who have received services in a month, but that list would be of processes and outputs, not outcomes. Outcomes are the extent to which gambling harm has been reduced for that number of people, for instance by clients increasing the number of financial responsibilities they meet in the context of receiving services in a month. Exacerbating this situation is the unfortunate common problem of the confusion making its way into the goals that services set for themselves in agreements with their funders. Patton provided numerous such examples of service providers' statements to a federal state human service agency and commented on them. Quoting one illustrates the distinction: "To develop a responsive, comprehensive crisis intervention plan. *Comment:* A plan is the intended outcome. I found that many service providers confuse planning with getting something done. The characteristics of the plan - "responsive, comprehensive" - reveal nothing about results for intended beneficiaries" (Patton, 2008, p. 240). Part of the cause of this tendency in services is a mind-set based on the reality that whilst services are delivered (as outputs), clients and populations often do not exhibit significant or durable changes in their behaviour (as impacts or outcomes). This can be demoralising for practitioners and service culture which may then result in refinement of the process of delivery and practice becoming the focus. The challenge is not being misled by confused service goals and processes being utilised to construct an evaluation.

Another challenge is avoiding confusion in identifying indicative data concerning outcomes for clients. Planning for data collection is operationalising the outcome (Patton, 2008) where, for instance, the concept of minimising gambling harm is transformed into something that can be identified in the real world, the real lives of clients. This entails selecting fair and valid indicators of minimised harm. Due to limited time, as well as human and economic resources available, an outcomes evaluation is not going to be able to comprehensively gather data on the many ways that receiving service may have impacted on different clients. As an example, the goal of minimising gambling harm has lifelong implications for individuals, families, communities and society, but an evaluation is going to be taking place at a particular point in time. Whilst a parent's reduced problems associated with gambling will ideally have

positive lifelong effects on their children, an evaluation can only gather data on how the parent's changed behaviour impacts on the children at the time of the evaluation. Indicators are evidence that provides the best fit in a constrained situation.

An outcomes evaluation needs to specify three particular things where indicators are concerned. First, a total and often heterogeneous population is often targeted by a service being evaluated. Relevant sub-groups are likely going to have to be chosen for focus (Patton, 2008). Problem gamblers differ in their age, gender and ethnicity and client needs often differ accordingly, so considering the overall client population and selecting characteristics of representative groups for evaluation will often be required.

Second, intended outcome(s) need to be identified. This must be clearly stated along with an illustrated example of what will constitute the outcome/s for a client (Patton, 2008). A reduction in client patronage of gambling venues is an intended outcome, demonstrated by a client's tally of a reduction in the number of days and time spent at venues.

Third, at least one indicator needs to be selected for each outcome, ensuring it reflects the realisation of the goal; Patton (2008) believed that unrefined measures that meaningfully capture outcomes are preferable over refined but possibly meaningless ones. Whilst a changed Problem Gambling Severity Index score is a refined measurement useful for generalising findings, it might not as readily or relevantly indicate clients' changed behaviour as would a self-completed diary reporting the number of times a day clients have successfully used self-talk techniques to rationalise urges to gamble in a week, when receiving a full intervention. White (2009) cautioned regarding context and heterogeneity, as a similar intervention can have different effects when carried out in different social, political and economic situations and when a range of variables, such as practitioner deviance from the planned activities, and client diversities are taken into consideration. It follows that a reduced problem gambling outcome indicator needs to be relevant to different geographic, community and client settings.

The use of the counterfactual is also important. An outcome or impact might be the result of an intervention, but it could be the result of something else taking place in the environment. A control group is the most logical way to ensure the impact is a result of the intervention (White, 2009). An outcome evaluation may determine that client or population level changes have occurred, perhaps by gambling and problem gambling levels reducing over the period that an intervention or public health service has been operating. However, it may be that reduced gambling and problem gambling is a result of another factor, such as economic recessionary impacts on disposable income. Where public health programmes are concerned, identifying the counterfactual can be problematic, as denying service to population or geographically located groups for comparative purposes would be unethical. Two situations that exist or are created can deal with this constraint. The first is when available resources limit the availability of service to a group or when the intervention will be provided to the control group subsequent to the intervention and its evaluation (Cottrell & McKenzie, 2011).

Data collected should be quantitative and qualitative (Rychetnik, Frommer, Hawe, & Shiell, 2002). Data collection methods concerning the indicator/s needs to be detailed, identifying people overseeing access to any relevant available data, collection processes, the population or sample of the client population that outcomes data will be gathered on, and any sample selection techniques used. Clear dates for reporting need to be stipulated, as does the format of the reporting, and to whom reports will be submitted (Patton, 2008).

Stipulating the usefulness of the outcomes data to be gathered is important for stakeholders in the service being evaluated. Some role playing can be constructive, putting some hypothetical results to stakeholders and asking them what they will do in response to various possible findings on client outcomes (Patton, 2008).

The final outcomes evaluation planning activity is determining outcomes targets. If a previous evaluation has been undertaken, those can be used as the basis for a new target, which should be higher than the historical outcomes, but not so high that it cannot be achieved. However, some services do not have such records. In that situation, collecting baseline outcomes data will be required (Patton, 2008). Using historical or baseline data, a problem gambling service could set a target of perhaps 70% client satisfaction with services received.

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