

A REVIEW OF RESEARCH ON ASPECTS OF PROBLEM GAMBLING

Summary, conclusions and recommendations

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INTRODUCTION TO THE SUMMARY OF THE REPORT

The Responsibility in Gambling Trust has prepared this edited version of the full report without any alteration to its content, conclusions or recommendations. The complete report can be found on the website of RIGT at www.rigt.org.uk. This edit is in three sections:

- 1. General overview and conclusions
- 2. Executive summary
- 3. Recommendations for future research

The conclusions and recommendations here are the views of the report authors and do not represent the views of the Trust. In the text below, when the term 'we' is used it should be interpreted as referring to the authors, not the Trust.

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1. GENERAL OVERVIEW AND CONCLUSIONS

General overview

Over a four-month period, the Reviewing Team was asked to prepare a critical review of research on three aspects of problem gambling. An additional topic, monitoring and measurement, was added after initial meetings with the Trust. The four members of the team, located on three different continents, retrieved and reviewed numerous publications identified through online databases and specialist libraries, searches of their personal collections, and by way of professional and informal networks. Based on our reviews, as well as consultation with key U.K. stakeholders, we came to numerous conclusions regarding the state of existing research on problem gambling as well as the most promising way forward for the U.K. and the Trust.

Our review of monitoring and measurement of problem gambling suggests the need for a comprehensive gambling monitoring system in the U.K., consisting of an integrated database, a basic research effort and a process for dissemination. The integrated database would include information on gambling participation and problem gambling prevalence as well as the availability, utilisation and effectiveness of problem gambling services, gambling industry revenues, and health, family, workplace, financial and legal impacts of gambling. The basic research component would include studies of the development of problem gambling as well as

smaller studies of the impacts of specific initiatives and require multi-year funding commitments. The process of dissemination could be accomplished through establishment of a clearinghouse to gather and synthesise information and provide stakeholders with reliable and credible information. While a growing number of governments internationally have begun to establish such systems, little is known about 'best practices' in this regard.

Despite widespread agreement that gambling problems are a robust phenomenon and can be measured, there are strong conceptual and methodological disagreements among the experts. These disputes have led to a significant degree of public confusion and uncertainty. Early conceptualisations of problem gambling were based primarily on clinical experience and expert group consensus and the tools that were developed during this period to identify problem gamblers reflect a strong psychological perspective. The emerging public health approach has led to a focus on 'harm' as the foundation of several new measures of problem gambling although these new tools continue to reflect an emphasis on the psychological aspects of problem gambling. Moving forward, there is a need for the development and use of *credible* measures of problem gambling that derive from a clear conceptual account of problem gambling.

Our review of risk factors and the development of problem gambling highlights the tremendous need for longitudinal research to improve our understanding of the relative role of different risk factors in the development of problem gambling and to identify the risk factors that problem gambling has in common with other ailments and those specific to the disorder. While there are significant gaps in our knowledge of problem gambling, what is known suggests that significant increases in access to electronic gaming machines and other continuous gambling forms will generate increases in problem gambling and related flow-on costs. Furthermore, the risk profile for problem gambling is likely to change. Problem gambling prevalence is likely to rise substantially although research suggests that it will eventually level out. What is not known is how long it will take for active measures to achieve stabilisation or if problem escalation can be prevented entirely.

While a very small number of prospective studies consistently show that problem gambling is more mutable than previously thought, there is still much that we do not know about 'natural recovery' and how to promote this process. Moving forward, it is imperative to conduct large, prospective studies that examine risk and protective factors across multiple domains and employ multivariate analyses. Another direction for the future is to work to establish problem gambling as an integral element of mainstream health services and health research agendas in the U.K.

We have noted that very few people identified as having gambling problems report them or receive assistance. Most health professionals who have contact with problem gamblers are probably unaware that they do, even in settings where moderate to large percentages of clients have gambling problems. There is a need for education and training for non-specialist professionals as well as additional training in substance misuse and mental illness among specialist professionals working with problem gamblers. There is a need for research on subtypes of problem gamblers so that therapeutic interventions can be developed or refined. There is also a need for research into 'controlled gambling' as an acceptable treatment outcome with some, probably less severe, problem gamblers. Work is needed to identify barriers to help-seeking among ethnic minority and recent migrant groups in the U.K. Finally, it will be important for existing problem gambling services in the U.K. to become more flexible in order to work effectively with an increasingly diverse client base as the characteristics of problem gamblers in the U.K. alter in response to changes in the availability of legal gambling.

With regard to the gambling industry, adoption of a public health approach to problem gambling challenges the view of this disorder as relatively rare and shifts the focus for

preventing harm to structural aspects of gambling as well as to contextual features that pose risks to many, perhaps most, regular gamblers. Research on risk factors and the development of gambling problems has potential to inform the design of gambling industry initiatives in providing consumers with information about problem gambling and sources of professional help as well as more proactive host responsibility programmes. While there is a new measure of mutual goodwill, it remains to be seen how far independent researchers and the industry can go together in this direction.

In our review of intervention options for the treatment of problem gambling, we looked at formal treatment and alternative harm reduction strategies that have been adopted internationally in relation to problem gambling. Unfortunately, funding for the evaluation of problem gambling interventions has been so scarce that little can be said with confidence about the effectiveness of such efforts. As a consequence, there are large gaps in our understanding of the most effective treatments for problem gambling that remain to be filled.

Most research on problem gambling has been based on self-selected samples of treatment-seeking problem gamblers or community volunteers. Little is known about what kinds of treatment might be effective with different subgroups of problem gamblers or with groups in the population that are unlikely to seek any assistance for a gambling problem. Whilst upcoming expansion in gambling opportunities in the U.K. can be expected to affect youth, women and ethnic and new migrant minorities disproportionately, it is unclear what their needs might be and how they might be best served by the various treatment approaches presently in place.

A public health approach to problem gambling increases the likelihood that treatment modalities based on 'controlled' gambling outcomes may be trialled, as well as the likelihood that families will be included in any consideration of the population in need of services. Review of the funding and organisation of problem gambling services internationally highlights the need for cooperation and collaboration, for continuous and reliable streams of funding for services, for rational systems of resource allocation and flexible models of problem gambling service provision.

Unfortunately, essential questions about the effectiveness and efficacy of formal treatment for problem gambling cannot be answered on the basis of existing research. While certification and credentialing of problem gambling counsellors is increasing, little is known about the most appropriate education and training for professionals who treat problem gamblers and their families. Priorities for research include monitoring the impact and effectiveness of intervention strategies that are implemented as well as broadening the focus to examine promising new interventions. There is also a need for empirical studies of the role of financial counselling and money management in problem gambling treatment. Another aspect of problem gambling treatment that has received inadequate attention is the importance of providing help for family members of problem gamblers.

Internationally, problem gambling treatment services tend to be provided by individual counsellors who have received some specialised training and who are based within larger addiction or mental health treatment programmes. There is a need for training for non-specialist counsellors in screening for gambling problems among their clients and in making appropriate referrals. Cognitive-behavioural therapy, the only treatment approach that has received sustained evaluative attention, has demonstrated positive and consistent outcomes. There are also a growing number of pharmacotherapeutic approaches being taken in the treatment of gambling problems although there is, as yet, no single, widely-accepted pharmacotherapeutic protocol. Finally, there is some research suggesting that much larger numbers of individuals may be helped through brief interventions and public awareness campaigns than through formal, clinically-based treatment programmes.

The focus of formal treatment services on the most severely affected individuals has meant that prevention efforts, which can be expected to affect the behaviour of much larger proportions of the population, are poorly developed. Another critical concern is that although formal treatment services receive the majority of available funding, evaluation and monitoring of those services has been limited. The focus on formal treatment has also led to a short-changing of research on problem gambling which has, in turn, limited the development of theoretical understanding of gambling problems and hindered the ability to design effective interventions.

Long-term strategic plans for research and evaluation are needed along with provision for multi-year funding streams to encourage and support substantial research programmes. Another need is for multidisciplinary research incorporating perspectives beyond psychology. Finally, while the gambling industry has been understandably reluctant to engage directly in interventions, there is merit in gambling industry staff having an understanding of problem gambling as well as information to provide to patrons, if required.

The public health approach has been used to develop effective responses to many physical and mental health problems. While it is not yet possible to identify the most effective public health methods to prevent the onset and progression of gambling problems in the general population, it is likely that some of the many activities presently being implemented internationally will prove effective. Internationally it has been easiest to achieve stakeholder agreement with regard to problem gambling prevention among youth. Strategies which stretch across the domains of family, school and community, include a range of activities and target multiple risk behaviours are most likely to be effective. There is also promise in the development and delivery of telephone- and Internet-based materials.

Evidence suggests that effective problem gambling awareness campaigns targeting adults can lead to measurable increases in awareness of services, in calls to helplines and in clients seeking help. Systematic reviews of mass media campaigns both for tobacco and alcohol support the effectiveness of such approaches, particularly in combination with other strategies at the national and local levels. In developing mass media campaigns, it will be essential to conduct formative research to develop targeted and effective messages, use television as a broadcast medium and plan for extended campaigns.

Industry exclusion policies are the problem gambling prevention measure that has received the greatest evaluative attention internationally. Challenges in implementing such programmes include difficulties in identification and detection as well as in enforcement and monitoring. Such measures should be viewed as a gateway to formal treatment. Research is needed on how to improve treatment-seeking and access to services once an individual has chosen exclusion. Difficulties encountered in the implementation of employee training programmes emphasise the importance of establishing centralised tracking systems and mandatory site compliance to ensure consistent and effective delivery of training. Another challenge is in the identification of 'signs' of problem gambling; this is an area where venue-based sociological research could be valuable.

Despite the intuitive appeal of Responsible Gaming Features (RGFs) and their rapid implementation in some jurisdictions, little research has been done on their effectiveness in preventing gambling problems. Research on RGFs should begin with small-scale laboratory studies followed by field studies before jurisdiction-wide implementation of 'universal' programmes is mandated. Another potentially fruitful area of investigation would be the effectiveness of pre-commitment betting limits and links between pre-commitment limits and RGFs or exclusion programmes.

Problem gambling prevention is most often carried out by specialist non-governmental organisations. Treatment practitioner contact with problem gamblers in this regard is limited. One recent innovation, problem gambling information kiosks inside gaming venues, represents a promising new partnership between practitioners and gaming operators and implementation and evaluation of such efforts in the U.K. seems warranted. Future directions for prevention research in relation to practitioners are suggested by the growing involvement of counsellors in voluntary exclusion programmes as well as the promise of brief interventions in formal problem gambling treatment. Research is needed to assess the effectiveness of such involvement in improving treatment-seeking and treatment access after exclusion. Another direction for research would be the effectiveness of single session information sessions in conjunction with time-limited exclusion in assisting in natural recovery.

Different facets of the gambling industry have been involved in problem gambling prevention for some years. However, these efforts must compete with heavily financed industry advertising campaigns that work directly to counteract their effectiveness. A possible way forward may be the adoption of industry-wide 'responsible gambling marketing and advertising' codes, along with research to monitor compliance and assess their effectiveness. Secondary prevention efforts by the gambling industry have included employee training programmes, voluntary exclusion programmes and partnerships with practitioners and government agencies to provide information and improved access to formal treatment services. However, implementation of these programmes has not always been of the highest quality and compliance has been uneven.

If 'host responsibility' training is developed in the gambling industry in the U.K., management support will be critical to its success. Another critical element will be basic research, most likely within gaming venues, to identify the most salient 'signs' of problems among different types of gamblers. There is also a need for further evaluation of the effectiveness of employee training programmes and voluntary exclusion programmes as well as research on the most appropriate methods to implement such measures. Finally, partnerships with gambling equipment suppliers, to implement problem gambling prevention measures on the products they supply to the gambling industry, have promise. Key challenges in the evolution of these partnerships include the provision of funding for research as well as ensuring the independence of the investigators.

Limitations to this review

The use of evidence to inform practice is often difficult and misunderstood. We are often now urged to make use of current research-based knowledge to inform our decision-making and to critically appraise what we find. The most highly regarded form of evidence is a systematic review of appropriate and good quality research. The systematic review differs from traditional literature reviews in that an explicit and reproducible method is used in an attempt to identify and bring together in an unbiased way all the research evidence that can answer a particular question. The aim is to avoid the biased and selective reviews that have been clearly shown to provide an unreliable basis on which to make clinical (as well as policy) decisions. The U.K. National Health Service supports a number of bodies such as the NHSCRD and the Cochrane Collaboration which conduct such reviews. Resources such as the NHSCRD's *Effective Health Care Bulletins* and the Cochrane database of systematic reviews provide practitioners with access to high quality summaries of evidence.

There are two distinct types of limitations to the present review. Methodological limitations include our ability to find unpublished studies and studies published in less prominent journals within the timeframe of the project. Another limitation is that much of the work on this review

was conducted in parallel by three different reviewers. While it would have been preferable for all three reviewers to agree on a standardised review process and for all three reviewers to consider all of the materials identified, this was not possible within the constraints of the project.

There are also important limitations to the research evidence that we were able to find. The most important limitation is that there are so few well-designed studies at all on problem gambling risk and protection factors as well as problem gambling prevention and intervention. The dearth of high quality research internationally made use of a 'quality of methodology' criterion largely impractical. There simply is not enough high-level evidence to identify promising approaches according to accepted practice in systematic reviews. The information that we were able to extract comes largely from studies limited by data and design considerations including small sample sizes, poor response rates and lack of control groups. These considerations make it difficult to determine the effectiveness of these programmes or whether they may be successfully replicated in other settings.

Another limitation is that although all of the reviewers queried our professional networks, we may not have identified promising interventions that have been implemented but that are not yet the subject of research. It is also possible that some of the studies we considered measured outcomes of relevance to the present review but that these were not reported. Another limitation is that many of the programmes that we considered have not been in existence for a sufficient time to permit assessment of their long-term effectiveness. Finally, almost all of the studies that we considered were conducted outside the U.K. with the implication that the results may not transfer easily.

2. EXECUTIVE SUMMARY AND RECOMMENDATIONS FOR FUTURE RESEARCH

What were we asked to do?

In May 2004, the Gambling Research Centre, Auckland University of Technology, Auckland, New Zealand was commissioned to prepare a critical review of research on aspects of problem gambling to enable the Responsibility in Gambling Trust (the Trust) to clarify its understanding of these issues and establish priorities for future research. The aspects of problem gambling that the Reviewing Team was asked to examine included:

- * Research on the development of, and risk factors for, problem gambling
- * Research on intervention options for the treatment of problem gambling and the effectiveness of these options
- Research on alternative approaches to public education and awareness raising about the risks of gambling and assessment of their effectiveness

We were also asked to indicate areas where the existing research provides a secure knowledge base, sufficient to inform policy and professional practice, and where understanding is thin or absent. Finally we were asked to make specific recommendations for future research projects on gambling problems in the U.K.

The role of research and its contribution to policy, practitioner contact with problem gamblers and relevant industry practice are addressed individually for each of the original three areas of concern. Issues related to measurement and monitoring of gambling problems are dealt with separately. Another separate section addresses potential areas for collaboration with non-

specialist organisations in the U.K. Additionally, the Reviewing Team's comments relating to recommendations in two other U.K. reports in regard to legislation and regulatory reforms in the gambling area are dealt with towards the end of this review.

What did we do?

The Reviewing Team included Professor Max Abbott, Dr Rachel Volberg, Dr Maria Bellringer and Dr Gerda Reith. Professor Abbott, based in New Zealand, had primary responsibility for the review of international research on the causes of and risk factors for problem gambling. Dr Volberg, based in the United States, had primary responsibility for international reviews of research on treatment and prevention of problem gambling. Dr Reith, based in Scotland, was responsible for reviewing research on all of these topics from the United Kingdom. The organisation and management of the project including drafting the methodological section and final preparation of the full report was the responsibility of Dr Bellringer, based in New Zealand.

In preparing the literature reviews for this project, the Reviewing Team members retrieved and reviewed hundreds of publications identified through online databases as well as in specialist libraries accessed through web-based searches. Each of the team members reviewed publications and reports already in their personal collections and retrieved and reviewed additional publications and reports located by way of professional and informal networks, as well as through requests for relevant materials via personal communications and online discussion groups.

Key U.K. stakeholder groups including government, industry, researchers, and primary and secondary service providers were identified and consulted between May and July 2004.

What did we find?

Monitoring and measurement

An important step toward minimising the impacts of problem gambling in the U.K. is to monitor the impacts of legal gambling over time. A comprehensive monitoring system would provide the full range of stakeholders with a neutral database for strategic analysis and decision-making to promote responsible gambling and to implement services that meet the needs of individuals with gambling problems. In our view, a model gambling monitoring system must include three basic elements. These are an *integrated database* of information on gambling participation, expenditures, problems and services; a *basic research effort* generating information to inform policy analysis and service development; and a process for *dissemination* so that responses to new developments or information can be made quickly.

Monitoring

Regular prevalence surveys with adequate sample sizes are an important first step in monitoring the impacts of legal gambling. Additional information is required regarding the availability, utilisation and effectiveness of problem gambling services, gambling industry revenues, and health, family, workplace, financial and legal impacts of gambling.

- ❖ Basic research on the development of gambling problems is needed as are studies of the impacts of specific gambling introductions. These basic research needs require multi-year commitments of funding.
- ❖ There is a need for a clearinghouse to gather information from U.K. and international studies, synthesise this information, and provide stakeholders with reliable and valid information about the impacts of gambling in different regions of the country and in relation to different types of gambling.

Whilst a number of governments have begun to establish systems to monitor the impacts of legal gambling, these efforts are only a few years old and little is known about 'best practices' in this regard. Although all of the stakeholders concerned must take responsibility for feeding information into the system, Government and the gambling industry have the greatest resources and should take joint responsibility for ensuring that a suitable system, run by an independent agency, is established and maintained.

Measurement

The assumption underlying all gambling research is that gambling problems are a robust phenomenon that exist in the community and can be measured. Despite widespread agreement at this fundamental level, there is disagreement about the concepts and measurement of gambling-related difficulties. Disputes among experts have led to a significant degree of public confusion and uncertainty about the prevalence of problem gambling and the impacts of legal gambling on society.

- ❖ Early conceptualisations of problem gambling were based primarily on clinical experience and expert group consensus. The tools that were developed during this period to identify problem gamblers reflect a strong psychological perspective.
- ❖ The emerging public health approach to gambling problems has led to a focus on 'harm' as the foundation of several new measures of problem gambling although these new tools reflect a continued emphasis on the psychological aspects of problem gambling.

Moving forward, there is a need for the development and use of *credible* measures of problem gambling that derive from a clear conceptual account of problem gambling and its components and with demonstrated reliability, validity, applicability and practicability.

Development of, and risk factors for, problem gambling

Identification of risk factors and determining the nature and relative strength of their influence is important to advance understanding of problem gambling and develop effective interventions to assist problem gamblers and prevent problem onset and progression. Like other physical and mental health disorders, problem gambling has multiple risk factors, some common to many different conditions and others specific to this disorder.

In reviewing the literature on risk factors for problem gambling, we adopted a strong public health approach (as opposed to an approach based on the narrower medical model) and distinguished as far as possible between the agent (i.e. exposure to gambling activities), the host (i.e. individual attributes and experiences that increase susceptibility and resistance to problem development) and the environment (i.e. the wider physical, social and cultural setting in which gambling occurs).

Many risk factors have been identified for problem gambling, some of which emerge consistently in a broad range of studies and others which vary over time and across populations. There is also significant overlap between risk factors for problem gambling and other disorders, particularly substance misuse and dependence. Unfortunately, understanding of the development of problem gambling and the relative role of different risk factors in the evolution of the disorder is still limited.

Role of research and contribution to policy

- ❖ While there are significant gaps in knowledge about problem gambling, what is known suggests that legislation and policies that significantly increase access to electronic gaming machines and other continuous gambling forms (such as those increasingly available via the Internet) will generate increases in problem gambling and related flow-on costs to families and communities.
- ❖ The risk profile for problem gambling is also likely to change, with disproportionate increases among women and other population sectors including ethnic and new migrant minorities. Problem gambling may also move 'up market', becoming somewhat more evenly distributed throughout socioeconomic strata and age groups.
- ❖ Whilst prevalence is likely to rise initially, research suggests it will eventually level out, even when gambling accessibility continues to increase. However, rates may rise three- or four-fold before this occurs and even then, active measures may be required to achieve stabilisation.
- ❖ Raising public awareness of the risks of excessive gambling, expanding services for problem gamblers and strengthening regulatory, industry and public health harm reduction measures can counteract some adverse effects from increased availability. What is not known is how quickly such endeavours can have a significant impact and whether or not they can prevent problem escalation entirely if introduced concurrently with increased access. A better understanding of which measures are effective is also required before we can be confident that problem escalation can be prevented.
- The small number of prospective studies undertaken to date consistently show that problem gambling is more mutable than previously thought. The potential of prospective studies to identify more precisely which factors are most responsible for problem onset, as well as for subsequent problem escalation, maintenance, reduction, relapse and resolution, is to date largely unfulfilled.
- ❖ Moving forward, research and evaluation of problem gambling must incorporate risk factors across the domains of agent, host and environment and employ multivariate analyses to examine their independent and interactive impacts on problem development. In addition to risk factors, it is important to identify protective factors that moderate or mediate the effects of exposure to risk factors. There is little research that explicitly examines protective factors related to problem gambling although it is likely that many of the factors that are protective against the development of problems

- with alcohol, tobacco and other substances are likely to be relevant to problem gambling.
- ❖ It is imperative that increasing use is made of prospective studies with large, representative samples of non-problem and problem gamblers followed over periods of years, including some studies that commence during childhood.
- ❖ With the notable exception of research on the prevalence of, and risk factors for, problem gambling among youth, gambling research is rudimentary in the U.K. This appears to be a consequence of problem gambling not being considered part of mainstream health services and health research agendas in this country.
- ❖ Given the rudimentary development of problem gambling research, both in the U.K. and internationally, it would be prudent to pilot and evaluate new policies and interventions and use that information for ongoing refinement and enhancement.

Practitioner contact with problem gamblers

- ❖ The majority of health and related professionals who have contact with problem gamblers are probably unaware that they do. Internationally, general population surveys indicate that the great majority of people identified as having problems with gambling do not report them to, or receive assistance from, professionals of any kind.
- ❖ Even in settings where moderate to large percentages of clients have gambling problems, such as alcohol and drug treatment facilities, mental health centres and outpatient clinics, probation services and prisons, it appears that screening for problem gambling and specialist referral or treatment is very much the exception rather than the rule.
- ❖ Education and training in early intervention, assessment, treatment and referral could usefully occur in all of the aforementioned settings as well as in child and family, relationships and other counselling services including financial advice.
- ❖ In the case of specialist gambling helpline and counselling services, high levels of substance misuse and some other mental disorders among problem gamblers point to the importance of practitioners understanding these conditions. In counselling situations, this includes competence in assessment of these comorbid conditions and ongoing management or referral.
- ❖ There appear to be several subtypes of problem gambler with some distinct treatment needs. Further research is required to specify these differences more clearly so that therapeutic interventions can be developed or refined to address them. This may include pharmacological as well as psychological and social approaches.
- ❖ While few in number, prospective general population studies have consistently found that most problem gamblers have fairly transient problems. These studies have also found most people overcome their problems without professional help and that those people usually return to non-problematic gambling. This is at variance with the long-held clinical view that abstinence is the only legitimate or sustainable treatment goal for problem gambling.
- There is a minority of problem gamblers with particularly serious problems, many of whom do present for treatment, when services are available. These individuals are

more likely to fit the official psychiatric and Gamblers Anonymous conceptualisation of pathological gambling as a chronic or chronically relapsing disorder or illness. Whilst abstinence may well be the optimal approach for people with serious gambling problems, this belief has yet to be empirically validated.

- ❖ Based on general population surveys, there are indications that some ethnic minority and recent migrant groups frequently contain disproportionately large numbers of problem gamblers. These same groups are also frequently under-represented as clients in mainstream services, highlighting the importance of recruiting staff from those communities and providing culturally appropriate services.
- ❖ In periods when electronic gaming machines are being introduced or made much more accessible, substantial changes can occur over relatively short periods of time in the population sectors at highest risk for problem gambling. In that situation, existing services may need to change to be able to engage and work effectively with large numbers of different types of problem gambler.

Relevant industry practice

- ❖ Gambling participation is a necessary condition for the development of problem gambling. Based on the research reviewed, it appears that increasing the availability of particular forms of gambling has a significant impact on the prevalence of problem gambling. It appears that this is not, however, inevitable. Other factors, currently only partially understood, may in some circumstances contain or even reverse this effect.
- Given that access to gambling is necessary for the development of problem gambling, reducing access is one approach that could reduce problems. However, even if this were accomplished, in today's world there would remain at-risk and problem gamblers who would seek out or initiate informal and illegal gambling opportunities and access jurisdictions (including the Internet) where gambling activities are readily available.
- ❖ The gambling industry has typically viewed pathological gambling as a rare mental disorder that is predominantly physically and/or psychologically determined. Research funding from the gambling industry has generally been directed to investigations that focus on risk factors in the host rather than the agent or environment. The gambling industry also tends to argue that the problems of a small minority do not justify curtailing the pleasure of the great majority of the population who do not experience problems with their gambling.
- Recent findings indicating that many problem gamblers have transient problems that often self-correct have generally been favourably received by industry spokespersons. However, acceptance challenges the notion that gambling problems are confined to a small, constitutionally distinct group and shifts the focus for preventing harm to structural aspects of gambling as well as to contextual features that pose risks to many, perhaps most, regular gamblers.
- While the gambling industry has long conducted and funded research designed to make their products more attractive to consumers and increase revenue, most of this research is commercially sensitive and not available outside industry circles. In some jurisdictions, the industry has also provided significant funding for problem gambling research.

- ❖ In recent years industry leaders have taken problem gambling and the findings of problem gambling research more seriously and have supported research in various ways. While there are probably many reasons for this change, this shift has been associated with an increase in industry initiatives to provide information about problem gambling and sources of professional help as well as more proactive host responsibility programmes.
- Research on risk factors and problem gambling development has potential to inform the design of industry programmes of this type. While there is a measure of mutual goodwill that has hitherto been rare, it remains to be seen how far independent researchers and the industry can go together in this direction.

Intervention options for treatment of problem gambling and their effectiveness

As in our review of risk factors for problem gambling, we adopted a public health approach in our consideration of research on intervention options for the treatment of problem gambling. We did not limit our review to formal treatment interventions; rather we considered all of the obtainable evidence available on harm reduction strategies that have been adopted internationally in relation to problem gambling.

The overall goal of harm reduction is the prevention of harm rather than the prevention of use or involvement *per se*. In relation to treatment for problem gambling, harm reduction includes a range of interventions, including but not limited to abstinence, with the goal of controlling or setting limits on people's gambling. Internationally, there is little help available to problem gamblers or their families outside specialised services that have developed in different jurisdictions. There has also been very little rigorous formal evaluation of problem gambling treatment services and approaches internationally. As a consequence, there are large gaps in our understanding of the most effective treatment(s) for problem gambling that remain to be filled.

Role of research and contribution to policy

- ❖ Funding for the evaluation of problem gambling interventions has been so scarce that little can be said with confidence about the effectiveness or efficacy of such efforts. Significant contributions of research to problem gambling policy decisions in the area of intervention options for treatment must await the provision of funding and the conduct of substantial, well-designed research agendas across a range of international jurisdictions.
- Research on problem gambling has emerged primarily from the discipline of psychology and much of this research is based on the assumption that there is a clear distinction between 'normal' and 'problematic' gambling and, furthermore, that problem gamblers are a homogeneous group for whom a single set of interventions will be effective.
- ❖ Most research on problem gambling has been based on self-selected samples of treatment-seeking problem gamblers or problem gamblers in the community recruited via advertisements. There is little knowledge about what kinds of treatment might be effective with different subgroups of problem gamblers or with groups in the population that are unlikely to seek any assistance for a gambling problem.

- ❖ In the U.K., the upcoming likely expansion in gambling opportunities can be expected to disproportionately affect youth, women and ethnic and new migrant minorities. While these individuals may be expected to have quite specific requirements in terms of formal treatment, it is unclear what these needs might be and how they might be best served by the various treatment approaches presently in place.
- ❖ As noted previously, the lack of a sound theoretical understanding of the development of gambling problems significantly hinders our present ability to design effective interventions.
- ❖ A public health approach to problem gambling increases the likelihood that treatment modalities based on 'controlled' gambling outcomes, as well as those based on abstinence, may be trialled and also increases the likelihood that families will be included in any consideration of the population in need of services. Furthermore, this approach focuses attention beyond formal treatment to consider the likely benefits of public policy and regulation in minimising the negative impacts of gambling legalisation.
- Review of the funding and organisation of problem gambling services internationally highlights the need for cooperation and collaboration between governments at the international, national, regional and local levels. Continuous and reliable streams of funding for problem gambling services are needed, as are rational systems of resource allocation and research on appropriate and flexible models of problem gambling service provision.
- ❖ Essential questions about treatment effectiveness and efficacy cannot yet be answered. Comprehensive screening and assessment tools as well as placement criteria are needed. The effectiveness of outreach programmes to underserved populations, of family interventions, and approaches for enhancing treatment engagement, retention and outcomes remain to be assessed. Research is also needed to identify clinician variables that have an impact on treatment efficacy as well as the most relevant variables in making decisions regarding treatment intensity.
- ❖ While certification and credentialing of problem gambling counsellors is increasing, little is known about the most appropriate education and training for professionals who treat problem gamblers and their families. There is also a need to evaluate the best mechanisms for reimbursing service providers who treat problem gamblers and their families.
- Additional priorities for research include monitoring the impact and effectiveness of intervention strategies that are implemented as well as broadening the focus to examine promising new interventions such as motivational interviewing, self-help workbooks, brief courses of therapy, online mutual aid and online support groups. There is also a need for empirical studies of the role of financial counselling and money management in problem gambling treatment.

Practitioner contact with problem gamblers

❖ Formal problem gambling treatment consists largely of self-help and individual and group counselling in outpatient settings. Internationally, problem gambling treatment services tend to be provided by individual addiction and/or mental health professionals who have received some specialised training and are based within larger addiction or mental health treatment programmes. Beyond programmes that provide specialised

problem gambling services, few counselling professionals screen for gambling problems among their clients. Even when a gambling problem is identified, non-specialist professionals are often uncertain about the appropriate referrals to make or what treatments to recommend.

- Screening for gambling problems among substance abusers is needed, as is education and training in the diagnosis, appropriate referral and effective treatment of gambling problems. Unfortunately, while specialised training, certification and credentialing are increasingly available, there is little uniformity in standards and requirements and little reciprocity with other counselling professions.
- ❖ Therapists working with problem gamblers employ a wide range of techniques although cognitive-behavioural therapy (CBT) is the only approach that has received sustained evaluative attention. CBT has been judged scientifically defensible and has demonstrated positive and consistent outcomes.
- Whilst most of the cognitive-behavioural techniques used in the treatment of problem gambling are shared with other addiction treatment approaches, treatment of problem gambling does include some unique elements. One aspect of problem gambling treatment that has received inadequate attention is the importance of providing help for family members of problem gamblers.
- ❖ A growing number of pharmacotherapeutic approaches are being taken in the treatment of gambling problems. Two of these approaches (naltrexone and selective serotonin reuptake inhibitors) have been deemed promising although there is, as yet, no single, widely-accepted pharmacotherapeutic protocol.
- ❖ Emerging research suggests that much larger numbers of individuals may be helped through brief interventions and public awareness campaigns than through formal, clinically-based treatment programmes. Public awareness campaigns are likely to increase people's knowledge of the availability of treatment and their willingness to acknowledge a problem as well as reduce the stigma of seeking help. Brief interventions are less costly than formal treatment and appeal to a much broader range of problem gamblers and, in the case of online approaches, offer additional benefits in overcoming stigma and inconvenience.

Relevant industry practice

- ❖ Internationally, funding for problem gambling services comes largely through voluntary or mandatory levies on revenues derived from legalised gambling operations and generally flows through major academic institutions and/or quasi-governmental bodies. It is unclear whether voluntary or mandated levies are preferable; what is clear is that levies should come from *all* sectors of the gambling industry.
- The focus of formal treatment services on the most severely affected individuals has meant that prevention efforts, which can be expected to affect the behaviour of much larger proportions of the population, are not nearly as well-developed. Another critical concern is that although formal treatment services receive the majority of available funding, evaluation and monitoring of those services has been limited.
- ❖ The focus on formal treatment has meant that few resources have been allocated for research on problem gambling. This has limited the development of theoretical understanding of gambling problems and hindered the ability to design effective

interventions. Long-term strategic plans for research and evaluation are needed along with provision for multi-year funding streams to encourage and support substantial research programmes. Another need is for multidisciplinary research incorporating perspectives beyond psychology.

❖ While the gambling industry has been understandably reluctant to engage directly in interventions, there is merit in gambling industry staff having an understanding of problem gambling as well as information to provide to patrons, if asked for. This issue is addressed in more detail in the section of the report on alternative approaches to public education and awareness raising.

Impact of alternative approaches to public education and awareness raising

From a public health perspective, individuals who experience gambling-related difficulties but would not meet a psychiatric diagnosis for pathological gambling are of as much concern as pathological gamblers because they represent much larger proportions of the population. There is a possibility that their gambling-related difficulties may become more severe over time and there is also the likelihood that their gambling can be more easily influenced by changes in social attitudes and public awareness.

The public health approach has been used to develop effective responses to many physical health problems and, more recently, to non-infectious diseases and mental disorders. While it is not yet possible to identify the most effective public health methods to prevent the onset and progression of gambling problems in the general population, efforts are going forward internationally and there is value in reviewing the range of activities that are being implemented to identify promising future directions of research.

Effective harm minimisation measures may have a substantial impact on gambling revenues, particularly from electronic gaming machines.

Role of research and contribution to policy

- ❖ There is a basic need for strategic planning with regard to problem gambling prevention, along with commitment from the full range of stakeholders to work together in the process. Once there is consensus on a strategic plan, there is a need for scientific research to inform public policy and industry policies along with monitoring and evaluation to ensure the effectiveness of the plan. As with any plan, there must be room for flexibility to respond to changing conditions as well as attention to the possibility of unforeseen negative consequences.
- Research is central to strategic planning, both in the development of appropriate interventions and in the evaluation of their effectiveness. There are two distinct directions for prevention-relevant research on problem gambling. The first direction is basic research that identifies suitable targets for prevention. The second direction is evaluative research that assesses the effectiveness of problem gambling prevention programmes as these are developed and implemented. A key challenge is ensuring the independence of evaluations while simultaneously including such efforts as an integral element of programme design.
- ❖ Internationally it has been easiest to achieve stakeholder agreement with regard to problem gambling prevention for youth. Strategies which stretch across the domains of family, school and community, which include a range of activities (e.g. education,

information, skills training, alternative activities, problem identification and referral) and which target multiple risk behaviours, are most likely to be effective. While support for 'social inoculation' and 'reasoned action' models of youth problem behaviour prevention delivered within schools is high, there is growing promise in the development and delivery of alternative telephone- and Internet-based materials.

- ❖ Evidence suggests that effective problem gambling awareness campaigns targeting adults can lead to measurable increases in awareness of community services, in the number of calls to help lines and in the number of first-time clients seeking help. Systematic reviews of mass media campaigns for tobacco and alcohol support the effectiveness of such approaches, particularly in combination with other strategies at the national and local levels.
- ❖ In developing mass media campaigns, it is essential to conduct formative research to identify targeted and effective messages, use television as a broadcast medium and plan for extended campaigns. Additional considerations include balancing the tension between creativity and budget, the need for involvement and communication among partners in the campaign and the importance of timing in launching such campaigns.
- ❖ Even effective public awareness campaigns face considerable competition from far more heavily financed industry advertising campaigns to increase gambling consumption.
- ❖ The problem gambling prevention measure that has received the greatest evaluative attention internationally is exclusion, either mandated or voluntary. Challenges in implementing such programmes include difficulties in identification and detection as well as in enforcement and monitoring. It is also important to expand our view of such measures and to see them as a gateway to formal treatment rather than as an isolated activity. Research is needed on how to improve treatment seeking and access to services once an individual has chosen exclusion.
- ❖ Employee training programmes have been implemented primarily in the casino and video lottery terminal sectors of the gambling industry. An important first step in the U.K. would be to expand such efforts to additional sectors of the gambling industry, such as on- and off-track betting facilities and charitable bingo operations.
- ❖ Difficulties encountered in the implementation of employee training programmes emphasise the importance of establishing centralised tracking systems and mandatory site compliance to ensure consistent and effective delivery of training. Another challenge is in the identification of 'signs' of problem gambling; this is an area where venue-based sociological research could be valuable. Secondary analysis of prevalence data to identify 'moderate gambling' guidelines specific to the U.K. could also be valuable.
- ❖ Despite the intuitive appeal of Responsible Gaming Features (RGFs) and their rapid implementation in some jurisdictions, little research has been conducted on their effectiveness in preventing gambling problems. Research on implementing RGFs on gaming machines as well as online gaming and wagering sites would be valuable. However, it would be advisable to fund small-scale research on RGFs, initially in the laboratory followed by field studies and to investigate the effectiveness of targeted RGFs before mandating jurisdiction-wide implementation of 'universal' programmes.

❖ Another potentially fruitful area of investigation would be the effectiveness of precommitment betting limits and the links between pre-commitment limits and RGFs or exclusion programmes.

Practitioner contact with problem gamblers

- ❖ Internationally, problem gambling prevention is most often carried out by specialist non-governmental organisations whilst treatment practitioner contact with problem gamblers in this regard is limited. Commonly, counselling staff establish relationships with gaming venue staff to ensure that information about problem gambling services is available within the venues and to assist, if desired, in managing difficult patron situations.
- ❖ One recent innovation, problem gambling information kiosks inside gaming venues, represents a significant partnership between practitioners and gaming operators and dramatically increases the likelihood of practitioner contact with individuals experiencing gambling problems *in situ*. Implementation and evaluation of such efforts in U.K. gaming venues of different kinds certainly seems warranted.
- ❖ Gambling employee training is sometimes, but not always, carried out by treatment practitioners. Staff training generally focuses on increasing understanding of problem gambling, identifying behaviours suggestive of patrons' gambling problems, increasing knowledge of resources for problem gamblers in the community and providing strategies for assisting patrons with problems. Increasingly, training in problem gambling prevention is being built into broader training and certification programmes for gaming management.
- ❖ Future directions for prevention research in relation to practitioner contact with problem gamblers are suggested by the growing involvement of counsellors in voluntary exclusion programmes as well as the promise of brief interventions in formal problem gambling treatment.
- ❖ There does appear to be value in involving problem gambling counsellors in interviews with individuals seeking exclusion and research is needed to assess the effectiveness of such involvement in improving treatment seeking and access after exclusion. Another direction for research would be the effectiveness of single session information sessions in conjunction with time-limited exclusion in assisting in natural recovery.

Relevant industry practice

- ❖ Different facets of the gambling industry have been involved in problem gambling prevention for some years. However, these efforts must compete with heavily financed gambling industry advertising campaigns that may work directly to counteract their effectiveness. A possible way forward could be the adoption of industry-wide 'responsible gambling marketing and advertising' codes, along with research to monitor compliance and assess their effectiveness.
- Secondary prevention efforts by the gambling industry have included the development and implementation of employee training programmes, mandatory and voluntary exclusion programmes and gambling venue partnerships with practitioners and government agencies to provide information and improved access to formal treatment services.

- ❖ Implementation of secondary prevention efforts by the gambling industry, such as employee training programmes and exclusion programmes, has not always been of the highest quality and compliance has often been uneven.
- Research indicates that exclusion programmes are most effective when staff roles are clearly delineated, managers are appropriately trained to conduct or call for interventions, and there are close working relationships with treatment providers in the community. Research further suggests the importance of mandatory promotion of exclusion programmes across all sectors of the gambling industry and the likely value of computerised identification checks with clearly defined penalties both for operator and patron to improve enforcement. Other promising approaches include involvement of practitioners in interviews with patrons seeking exclusion and mandatory education for excluders.
- ❖ If 'host responsibility' training is developed in the gambling industry in the U.K., management support will be critical to its success. Another critical element will be basic research, most likely within gaming venues, to identify the most salient 'signs' of problems among different types of gamblers. There is also a need for further evaluation of the effectiveness of gambling industry employee training programmes as well as voluntary exclusion programmes and research on the most appropriate methods to implement such measures.
- ❖ Partnerships with gambling equipment suppliers, to implement problem gambling prevention measures on the products they supply to the gambling industry, have promise for preventing gambling problems. Placement of 'problem gambling information' kiosks in gaming venues, programmes to permit patrons to establish 'precommitment' betting levels and implementation of RGFs on gaming machines are promising future areas for industry-practitioner-researcher collaboration. Key challenges in the evolution of these partnerships include the importance of funding for research as well as ensuring both the *actual* and *perceived* independence of the investigators.

3. What are our recommendations for future research?

The Reviewing Team has developed 37 recommendations for specific research activities, all focused in support of the Responsibility in Gambling Trust mission "to make it less likely that people will become problem gamblers and more likely that those who do will be able to seek and to secure effective help". Within each of the four areas of monitoring, risk factors, intervention and prevention, we have identified the most important short-term (12 to 18 month), intermediate (13 to 36 month) and long-term (37 to 60 month) goals and recommended projects intended to provide critical information to attain these goals. Estimated costs are provided in the body of the report but it should be noted that these estimates are based on our knowledge of the costs of similar research undertaken internationally and translated into British currency rather than on detailed knowledge of the costs of social science and health research in the U.K.

Short term

Recommendation #1

Commission a review of problem gambling assessment and screening instruments in use internationally and identify the most appropriate set of instruments for use in the U.K. in clinical screening of problem gamblers as well as in other settings, including self-administration and prevalence research.

Projected Cost: £50,000

Discussion

Doubts have been expressed by a range of U.K. stakeholders about the performance of problem gambling screens. While some work has been completed on the psychometrics of the SOGS and the DSM-IV Screen used in the British Prevalence Survey (Orford, Sproston & Erens, 2003), additional work is needed to identify the best existing tools for measuring gambling problems and gambling treatment outcomes across a range of populations and settings in the U.K. This recommendation addresses the need to develop a comprehensive approach to monitoring the impacts of gambling in the U.K. As we have noted previously, there is a need for problem gambling assessments to be conducted in primary health and community settings, alcohol and drug treatment facilities, mental health centres and outpatient clinics, probation services and prisons. Identification of a set of measures for use across these settings is an important first step in establishing a coherent monitoring system of gambling impacts and harms in the U.K.

Recommendation #2

Organise an international conference of problem gambling research funding agencies to begin the process of developing international collaborations.

Projected Cost: £40,000

Discussion

International collaboration is essential to avoid repeating mistakes and duplicating efforts. International collaboration is also important to make the fullest use of scarce resources and to ensure that information on new developments in problem gambling research, intervention and prevention is shared. Whilst significant research programmes are presently underway in Australia, Canada, New Zealand, South Africa and the U.S., contacts between funding organisations in the different countries is nascent.

To hasten the process of international collaboration, it would be valuable for representatives of key agencies from these different countries to meet in person to discuss shared concerns and critical issues. A two-day conference in London with representation from federal, state and provincial agencies in countries (e.g. Australia, Canada, Europe, New Zealand, South Africa and the U.S.) where substantial problem gambling research programmes are underway would benefit the Trust in identifying key elements of the research programmes in these countries as well as specific projects with which the Trust might wish to collaborate.

In making this recommendation, we envision something rather different than funding U.K. researchers to attend conferences in other countries or funding visiting fellowships for U.K. or international researchers. Rather, we believe there is a specific need to foster international relationships between organisations with responsibility for the allocation of research funds. Representatives of organisations such as the Victoria Gambling Research Panel, the Independent Pricing and Regulatory Tribunal of New South Wales, the Australian Ministerial Council on Gambling, the New Zealand Ministry of Health and Department of Internal Affairs, the Ontario Problem Gambling Research Centre, the Alberta Gaming Research Institute, the (U.S.) National Institutes of Health and the (U.S.) Institute for the Study of Pathological Gambling and Related Disorders all have experience with establishing priorities for research funding, developing research agendas and soliciting proposals for research on gambling and problem gambling. However, we are aware of only one previous attempt (among organisations in the Canadian provinces) to bring representatives of funding agencies together to share information about research priorities and develop agreements to conduct collaborative research projects that span jurisdictional boundaries.

Recommendation #3

Encourage the public dissemination of data from the upcoming prevalence study

Projected cost: It is not anticipated that this would incur any cost.

Discussion

It would be beneficial for the data from the upcoming prevalence study (2005) to be made publicly available, in a timely fashion, to interested and registered researchers, through one of the U.K.'s data archives such as that organised by the Economic and Social Research Council (ESRC) or the U.K Data Archive (UKDA). This would enable secondary analysis and interpretation of these data to be undertaken at no extra cost and thus would maximise the output from the primary research overall.

It would also be beneficial to explore with ESRC the possibility of making the data from the first U.K. prevalence study publicly available. The investigators responsible for this project have published several articles and a monograph based on these data but it is likely that additional valuable analyses could be conducted by investigators with different interests and/or areas of expertise. This has certainly been the case with the 1998 U.S. national prevalence

survey, where investigators who were not part of the original project team have carried out and published secondary analyses using the Public Use File available through the Inter-University Consortium for Political and Social Research.

Recommendation #4

Provide funding for the development of postgraduate research and scholarship in the area of gambling and problem gambling.

Projected Cost: £10,000 per studentship, one per year for five years

Discussion

As Arnold et al (2003) point out, funding student research would help build up a base of research expertise in the U.K., which at present is lacking. We would further suggest that the provision of such awards be linked with other sources, such as ESRC. The latter organisation has a programme whereby, in cases where the designated research area is one that is seen to meet the wider needs of the academic community, it provides funding for half of the cost of a research studentship, with another body (in this case, the Trust) providing the other half. Such an arrangement would maximise the funds available for research, allow the funding of more studentships overall, and would facilitate the creation of networks between existing academic funding bodies, young researchers and the Trust. We believe that one such studentship should be funded each year.

We are aware that budgeting only for one studentship per year may seem a rather slow approach to developing capacity for gambling research in the U.K. However, we believe that an integral element to these studentships must include mentoring from experienced gambling researchers. Given the very small number of active gambling researchers in the U.K., we believe that a slower approach to developing research capacity is warranted. This process can be accelerated in the future as new researchers gain experience, pursue gambling-related research and engage new students in this process.

Intermediate

Recommendation #5

Establish a web-based library and clearinghouse to monitor numbers of helpline calls, first time treatment seeking, problem gambling prevalence rates, gambling participation rates, gambling industry revenues, gambling tax revenues and other measures of the impacts of gambling on U.K. society.

Projected Cost: £100,000

Discussion

While peer-reviewed published literature is increasing rapidly in the gambling studies field, much of the available information remains difficult to identify and access. In several jurisdictions (e.g. Alberta, Ontario, Victoria), large amounts of research information are now disseminated primarily through the Internet. To assist U.K. researchers interested in gambling issues in gaining access to these sometimes difficult-to-obtain materials, the Trust should consider developing an extensive web-based library and clearinghouse on problem gambling issues. Such a resource would also be helpful to international researchers seeking to identify

information specific to problem gambling initiatives in the U.K., as these are implemented. Information available from the clearinghouse on trends in the impacts of gambling on U.K. society will be a further valuable resource for policy makers, regulators, programme planners, treatment providers, researchers and the general public.

This recommendation is in line with the recommendation made by Arnold et al (2003), that the Trust support an informational body to coordinate information dissemination and set standards for the work of private organisations. Whilst the first priority for the clearinghouse would be information dissemination, the clearinghouse could eventually incorporate standard-setting and research coordination functions. Eventually, although continuing to receive financial support, it will be important for the clearinghouse to become a separate entity from the Trust.

We noted earlier that there is no jurisdiction internationally that has established a comprehensive monitoring system to assess the impacts of legalised gambling over time. Similarly, there is no jurisdiction internationally that has established a clearinghouse of the type we are advocating. The best examples of gambling research clearinghouses are the Victorian Gambling Research Panel in Australia and the New Zealand Department of Internal Affairs. In Ontario, the Responsible Gambling Council supports a web-based E-library with links to numerous documents. In the U.S., the National Council on Problem Gambling is beginning to serve as a clearinghouse for problem gambling research and clinical information. In the U.K., DrugScope and Alcohol Concern provide models for the scope and organisation of the type of clearinghouse we envision for the Trust.

Recommendation #6

Commission an evaluation of the effectiveness of problem gambling services in the U.K. to assess changes in help-seeking in response to prevention and outreach efforts as well as satisfaction with available services.

Projected Cost: £130,000

Discussion

To date, evaluation of problem gambling services in the U.K. has been carried out by the organisations providing those services. By 2007, it would be desirable for the evaluation of problem gambling services in the U.K. to be conducted by an external, independent evaluating organisation. This information will assist the Trust in refining its strategic plan as well as in fine-tuning its research commitments.

Long term

Recommendation #7

Develop a researcher-initiated grant application system similar to systems established in Australia, Canada and the U.S.

Projected Cost: £230,000

Discussion

While there is presently a shortage of gambling research expertise in the U.K., we expect this situation to change as funding for gambling research becomes available. As a long-term goal

(post 2007), we believe that the Trust should become a major source of funding for researcher-initiated research projects on gambling and gambling problems. To ensure that the projects funded by the Trust meet the highest scientific standards, an independent peer-review system for screening proposals and identifying those most worthy of funding is needed. Such a system requires significant financial support over a sustained period. The projected cost provided here represents an initial investment in the long-term viability of such a system.

Like other gambling research funding bodies (e.g. the (U.S.) Institute for the Study of Pathological Gambling and Related Disorders, the Victorian Gambling Research Panel and the Ontario Problem Gambling Research Council), requests for tenders should be issued to conduct research in specific areas related to the priorities of the Trust. However, these requests for tenders should be as broad as possible to encourage the development and submission of innovative proposals. It will also be important to provide adequate reimbursement for reviewers who are asked to dedicate significant amounts of professional time to reviewing proposals as well as reports to the Trust on the results of these studies.

Development of, and risk factors for, problem gambling

Short term

Recommendation #8

Fund analysis of gambling data from an existing longitudinal study in the U.K. and development of a publishable manuscript.

Projected Cost: £30,000

Discussion

To improve our understanding of the risk and protective factors associated with the development of gambling problems, it is imperative to establish collaborative relations with investigators running prospective studies where large, representative samples of non-problem and problem gamblers can be followed over a number of years, including some studies that commence during childhood.

The Reviewing Team has identified a number of longitudinal studies presently underway in the U.K. These include:

- ❖ Millennium Cohort Study funded by the Economic and Social Research Council and directed by the Centre for Longitudinal Studies, Institute of Education, University of London. This is a nationally representative sample of approximately 19,000 children, now aged about 4 years, and their parents
- ❖ Avon Longitudinal Study of Parents and Children (ALSPAC) (see below)
- South London Child Development Study (n=170 mothers recruited at south-east London hospitals)
- ❖ Lifeways Cross-Generation Cohort Study (a sample of 1,000 Irish families)
- Southampton Women's Survey (12,500 women aged 20 to 34 years in 1998, only those experiencing pregnancy have been recruited into the longitudinal component)

There are a number of longitudinal studies underway in the U.K. that involve older adults, including the Hertfordshire Cohort Study, the 1958 Birth Cohort Study, the Aberdeen Children of the 1950s Study, the Boyd Orr Cohort of Scottish adults (all presently in their 60s), the

Newcastle Thousand Families Study (1947 birth cohort), the Glasgow Alumni Cohort (15,000 participants recruited at a university health service between 1948 and 1968).

The most promising candidate for present purposes is the Avon Longitudinal Study of Parents and Children (ALSPAC; also called the Children of the Nineties Study). ALSPAC was designed to determine ways in which the individual genotype combines with environmental pressures to influence health and development. The study includes comprehensive data (including genetic and physiological) on an entire cohort of 10,000 children born in Avon (presently aged 12 and 13 years) and their parents. The study has an open policy with regard to collaboration within strict confidentiality rules (Golding et al, 2001). ALSPAC is affiliated with the European Longitudinal Study of Pregnancy and Childhood (ELSPAC) and has contacts with numerous investigators involved in longitudinal studies in Australia, Canada, the U.S. and elsewhere (see http://celse.alspac.bris.ac.uk/ for additional information).

The Reviewing Team made contact with the study's principal investigators and learned that an abbreviated version of the SOGS was included in the most recent wave of interviews with ALSPAC parents. The ALSPAC investigators have indicated that they are interested in identifying collaborators to assist in analysing these data. Funding this analysis presents an opportunity for the Trust to rapidly and cost-effectively increase gambling research capacity in the U.K.

Recommendation #9

Fund addition of gambling and problem gambling module to an existing longitudinal study in the U.K. and development of one or more publishable manuscripts.

Projected Cost: £150,000

Discussion

In addition to the short gambling module included in the last wave of interviews with parents, the ALSPAC investigators have expressed an interest in including a gambling module in the next wave of data collection with the study children, if funding were to be available. Given their age, it is likely that these children are already involved in some gambling activities (e.g. privately with friends and family as well as on Lottery and fruit machines). This would be an ideal opportunity to assess gambling involvement and gambling participation in a cohort of 'tweens' in order to establish a baseline for future assessments.

There are two possible options for adding a module to the ALSPAC children's interview. The first is to include a gambling module in an interview with the child at the study clinic, while the second is to include a gambling module in a questionnaire that the child completes at home and returns to the investigators. These two options have very different cost implications and we have included only an estimate for the lower cost self-completion questionnaire (£90,000) along with estimated costs for analysing the data and developing one or more manuscripts for publication.

The Reviewing Team was unable to establish contact with other investigators involved in longitudinal research in the U.K., largely due to time constraints. However, given the broad public debate about gambling issues in recent years in the U.K., it is quite possible that other longitudinal studies have included some questions about gambling. Efforts are needed to identify these studies and establish collaborative relationships with the researchers involved. Particular efforts should be made with regard to the Millennium Cohort Study because of the size of the sample, the young age of the children involved and its national representation.

Recommendation #10

Solicit applications for sector-specific studies of normative and problematic gambling among regular on-course and off-course bettors, Fixed Odds Betting Terminal players, fruit machine gamblers, casino gamblers and bingo players.

Projected Cost: £120,000 (£30,000 per sector times four sectors)

Discussion

Sociological studies are needed to begin to develop understanding of different types of gambling *in situ*, the motivations that people have for engaging in these activities and the ways in which these activities fit into gamblers' lives. We envision several relatively small, naturalistic studies of different gambling venues that would yield important information about how and why people gamble regularly as well as how people sometimes get into difficulties with these activities. The results of these studies could be used to design subsequent larger surveys of regular gamblers, in the development and evaluation of public awareness campaigns aimed at regular gamblers and in the refinement of brief interventions aimed at increasing rates of 'natural recovery' in the sub-clinical problem gambling population.

Intermediate

Recommendation #11

Fund and commission a separate, follow-on study to the upcoming problem gambling prevalence survey in the U.K., scheduled to begin in 2005.

Projected Cost: £300,000

Discussion

Addition of a brief gambling 'module' to one or more longitudinal studies in the U.K. is important to enhance understanding of the relationship between problem gambling and numerous risk and protective factors. However, the brief modules added to these other larger studies do not permit in-depth examination of gambling participation and the development of gambling problems as these change in relation to each other over time. Given the dearth of longitudinal research in gambling studies overall, we believe that a separate and substantial effort to conduct longitudinal research focused specifically on changes in gambling and problem gambling over time in the U.K. is warranted.

In New Zealand and Sweden, large cross-sectional prevalence surveys have been enhanced with the addition of separate, follow-on studies with randomly selected sub-samples of respondents. Technically, these are referred to as 'two-phase' studies. In both New Zealand and Sweden, the first phase of the prevalence survey was carried out by the official statistics agency of the country while the second phase was completed by a private research organisation. In both cases, the second phase projects yielded valuable information about the accuracy of the problem gambling screens used in the larger surveys and about additional aspects of gambling involvement and lifestyle associated with gambling problems.

Adding a separate and distinct follow-on study to the upcoming prevalence survey in the U.K. would serve as the foundation for a longitudinal study of the risk and resilience factors associated with problem gambling in the U.K. and would also represent an important collaboration between the Gambling Commission and the Trust.

Recommendation #12

Fund and commission a study of Internet, wireless and remote gambling, problem gambling and help-seeking for gambling problems.

Projected Cost: £200,000

Discussion

This is our response to the request from the Trust to make specific recommendations for the U.K. Codes of Practice in the area of Internet gambling. Internet gambling has grown rapidly and is likely to continue although, as yet, regular participation is confined to a small percentage of the population. However, this may change in the future and the known demographics of these regular players are certainly cause for concern. We noted in our review of risk factors for problem gambling that research is needed to monitor Internet gambling and wagering and identify links between usage and problem gambling in different sectors of the population. We further noted, in our review of interventions and alternative approaches to preventing problem gambling that while the Internet has the potential to exacerbate excessive gambling, this medium also has the potential to curb such excesses and provide direct avenues for help-seeking. We believe there is merit in commissioning a large, well-designed study of these forms of gambling and wagering and their relationship to gambling problems and help-seeking over time.

Long term

Recommendation #13

Continue to monitor longitudinal panel study derived from 2005 U.K. prevalence survey.

Projected Cost: £300,000

Discussion

The Reviewing Team has consistently argued that there is tremendous need for longitudinal research focused specifically on the development of gambling problems in the general population. To our knowledge, there are no gambling-specific longitudinal studies in the general population underway internationally. Funding of this longitudinal panel study would be of benefit not only in the U.K. but internationally too.

Recommendation #14

Continue funding addition of gambling and problem gambling module to an existing longitudinal study in the U.K. and development of publishable manuscripts.

Projected Cost: £200,000

Discussion

As with the gambling specific longitudinal panel study, there is tremendous value in monitoring changes in gambling and problem gambling over time in a large cohort of young people. We recommend continuing to fund a brief gambling module in one or more longitudinal studies as these proceed to allow for monitoring changes in problem gambling over time and in relation to numerous other behaviours.

Intervention options for treatment of problem gambling and their effectiveness

Short term

Recommendation #15

Fund and commission a retrospective investigation of 'natural recovery'.

Projected Cost: £100,000

Discussion

Given the large numbers of individuals who experience difficulties with their gambling but recover from these problems on their own, it would be valuable to know more about how this process occurs and what can be done to facilitate it. Given the challenges and expense of funding prospective research and the importance of gaining a better understanding of this process among U.K. gamblers, we believe there is value in initially funding a retrospective study in this area. The study could be modelled on Hodgins and el-Guebaly (2000) in which participants were recruited through radio and newspaper advertisements. While the study would be limited because of its reliance on a self-selected sample, the results could be used to inform subsequent work on natural recovery in a prospective study as well as longitudinal research being undertaken separately with children and adults.

Recommendation #16

Fund and commission a systematic review of problem gambling treatment and development of a treatment guide for the U.K. context.

Projected Cost: £75,000

Discussion

Korn and Shaffer (2004) recently developed a set of practice guidelines for professionals in the Commonwealth of Massachusetts, U.S. This treatment guide is intended to assist clinicians (specialist and non-specialist) throughout the state with the identification, assessment and treatment of gambling problems. Practice guidelines have the potential to improve quality of care and recovery outcomes for people seeking help for their gambling and its adverse consequences. We believe there is value in developing a similar set of guidelines for professionals in the U.K. since these could be helpful to counsellors and helping professionals without prior experience in treating problem gambling as well as to counsellors who have some experience in this field.

We believe the somewhat smaller fiscal allocation for this effort, compared with Recommendation #15 above, is warranted because of the dearth of evaluative research on problem gambling treatment and because of the importance of improving understanding of 'natural recovery' to the overall mission of the Trust.

Recommendation #17

Fund and commission assessment of clinical education, training and certification needs in the U.K.

Projected Cost: £75,000

Discussion

The Reviewing Team has noted the value of certification in assuring that a minimum standard of care is achieved in providing help to problem gamblers and their families. Certification initiatives are emerging in several jurisdictions and in relation to 'responsible gambling' as well as problem gambling treatment. Previously, Arnold et al (2003) recommended that the Trust commission the development of a problem gambling counsellor accreditation scheme. We concur with this recommendation but believe there is value in first developing a clear set of standards for clinical education and training within the U.K. setting. This will ensure that individuals seeking help will be able to access quality services. It will also improve the likelihood that larger counselling organisations will begin to recognise the value of providing their members with gambling-specific training.

It must be emphasised that we are *not* recommending the development of a problem gambling counsellor accreditation scheme or credential as part of the research budget. The focus here is to assess what has been developed in other jurisdictions with regard to gambling counsellor education, training and certification as well as what has been developed in the U.K. with regard to other counselling specialties. The results of this work will be a valuable resource in the efforts of the Trust to develop a gambling counsellor credential as part of its intervention budget.

Recommendation #18

Fund focus group study of youth and women problem gamblers to serve as basis for developing targeted services.

Projected Cost: £50,000

Discussion

Given projected expansions in gambling availability in the U.K., it is anticipated that youth and women will be increasingly likely to develop difficulties related to their gambling. Small, qualitative studies of youth and women who have experienced difficulties with their gambling would be helpful in the development of targeted services for these subgroups in the population. Areas for investigation would include the gambling activities most likely to give rise to problems, media and messages most likely to be effective in reaching troubled youth and women gamblers, the types of interventions most likely to succeed with these groups and the best ways in which to provide information and treatment.

Intermediate

Recommendation #19

Fund a study of the use of brief interventions and evaluate the effectiveness of this approach in the U.K.

Projected Cost: £150,000

Discussion

Brief interventions are a promising new area of treatment with problem gamblers that appear to be especially successful among less severely affected individuals. As such, it would be valuable to conduct additional research into the effectiveness and efficacy of such approaches. Based on the limited research literature, it appears that an approach that includes a self-help workbook as well as motivational interviews is likely to be most effective in assisting individuals with sub-clinical gambling problems to reduce their gambling involvement or maintain abstinence. Participants should be followed for at least 12 months and measures should include initial goals, gambling involvement outcomes, and emotional and financial issues.

Another brief intervention that deserves research attention is the 'single session' consultation that involves family members along with problem gamblers. If funds are available, both of these approaches should be trialled and evaluated.

Recommendation #20

Fund and commission long-term treatment outcome study.

Projected Cost: £125,000

Discussion

The Reviewing Team has noted that for most people and problems, any of a variety of interventions appear to perform equally well. We also made note of studies that demonstrated the importance of personal qualities of therapists and clients and the nature of the interaction between them to successful treatment outcomes. What is less clear is how durable the benefits of treatment are and how treated individuals compare, long-term, with gamblers who do not receive professional help. We are strongly of the opinion that a well-designed, well-executed study of treatment outcome is needed in the problem gambling studies field. In designing this study, it is essential that one or more appropriate control groups be included in the study, and that participants' problem severity and comorbid conditions are assessed over periods of up to three years.

Recommendation #21

Fund development and evaluation of online or telephone capabilities for problem gambling support groups.

Projected Cost: £100,000

Discussion

While there is limited evidence of the effectiveness of telephone and online approaches to problem gambling treatment specifically, these approaches have shown promise with a wide range of behavioural disorders. We believe there is merit in developing and testing the effectiveness of one or both of these approaches with problem gamblers in the U.K. These approaches are particularly attractive to youth, a group that we believe will experience significant difficulties in the next three to five years as gambling availability increases in the U.K. These approaches are also likely to be effective with sub-clinical problem gamblers, a group whose needs the Trust is particularly concerned to meet. Another possibility would be to establish one or more online mutual aid groups as 'chat rooms' within the larger web-based library and clearinghouse recommended earlier (see Recommendation #5). Regardless of the developmental approach taken, a careful evaluation of outcomes as well as the process of implementation will be needed.

Recommendation #22

Fund development and evaluation of culturally appropriate services.

Projected Cost: £100,000

Discussion

We have noted the need for culturally appropriate approaches and materials for problem gamblers from ethnic minority groups and recent migrants several times in our review. At a minimum, translation of informational materials into multiple languages should be funded under this initiative and assessment of how these materials are distributed. Speciality training about problem gambling diagnosis and referral for counsellors in agencies working with ethnic and migrant communities is also needed. It may be helpful initially to conduct some small-scale, qualitative research to assess community views of gambling problems and how best to address these. Careful attention in the evaluation of these services will need to be paid to language barriers, divergent cultural views of gambling and problem gambling, and multiple perspectives within communities.

Long term

Recommendation #23

Support development of problem gambling credentialing examination and collaboration with other counselling professions

Projected Cost: £200,000

Discussion

Building on work conducted in response to Recommendation #17, we concur with Arnold et al (2003) that there is value in supporting the development of a credentialing examination for gambling counsellors. Whilst this examination should draw on other problem gambling credentialing examinations internationally, it will need to be tailored to fit U.K. requirements for the counselling professions and U.K. requirements for licensing. Eventually, it would be helpful to establish reciprocity agreements with other counselling professions and credentialing bodies in the U.K. and internationally.

Recommendation #24

Support development and evaluation of targeted services for youth, women and family members.

Projected Cost: £200,000

Discussion

As noted previously, we expect youth and women (and possibly older adults) to experience greater problem rates as gambling availability expands in the U.K. over the next three to five years. With likely increases in the prevalence of problem gambling generally, we also expect more families to be affected by a member with a gambling problem. We believe it will be advisable to support the development of targeted services for these at-risk groups and to evaluate the effectiveness of these services in mitigating gambling-related harms. Attention should be given to early identification and brief interventions for these groups as well as building specialised counselling capacity and expertise.

Recommendation #25

Fund collaboration with international agencies to develop international criteria for counselling services for problem gamblers.

Projected Cost: £100,000

Discussion

At various points in our review, we noted increasing international cooperation with regard to presenting gambling populations and approaches to helping. We view collaboration among international agencies on the development of an international public health agenda on gambling as critical. As a representative of major stakeholders in the U.K., the Trust should play an important role in supporting this agenda and helping to shape it. We recommend that the Trust collaborate with the 'International Think Tank on Presenting Gambling Populations and First

Contact Services' and the emerging 'International Forum on Gambling and Public Health' and work with their organising agencies to develop internationally agreed-upon criteria for first contact services, education, training and credentialing, and public policy initiatives.

As above with Recommendation #17, it is worth emphasising that the intent here is to foster international collaboration in the development of criteria for standards for problem gambling counselling rather than the development of counsellor services (which would more logically be a charge on the intervention budget).

Alternative approaches to public education and awareness raising

Short term

Recommendation #26

Fund and commission qualitative research on targeted messages to youth, women, machine players and track bettors.

Projected Cost: £50,000

Discussion

Lessons from the tobacco and alcohol fields as well as the gambling area emphasise the importance of formative research to develop targeted and effective messages in conducting effective mass media campaigns to affect behaviour. As a first step in the development of broad public awareness campaigns aimed at preventing the development of gambling problems among at-risk groups in the population, we believe there is merit in conducting qualitative, tightly focused research on the social and cultural meanings of gambling to these groups. A modest initial investment in research on views of gambling and problem gambling and on the most effective methods to convey messages to these groups will have long-term impacts on the later effectiveness of large media campaigns to prevent gambling problems nationally.

Recommendation #27

Fund and commission evaluation of voluntary exclusion policies across gambling sectors in the U.K.

Projected Cost: £50,000

Discussion

Although exclusion programmes have received more attention than many other problem gambling prevention programmes internationally, the existing studies are all quite small and only one study (of a mandatory exclusion programme) included a control group. As a first step in implementing effective voluntary exclusion policies in the U.K., we believe it is important to begin by developing a detailed understanding of the policies that currently exist in the different sectors of the gambling industry, how these policies and programmes are advertised, how consistently they are administered and the level of support for these policies among gaming venue management and staff.

Recommendation #28

Fund and commission systematic review of 'responsible gambling advertising codes' internationally.

Projected Cost: £50,000

Discussion

As with exclusion programmes, little is known about the content and consistency in adherence to advertising and marketing codes of conduct in the gambling industry. As a first step in implementing a consistent and coherent 'responsible gambling' marketing and advertising code of conduct, it would be helpful to collect and evaluate information about such codes internationally. This will permit future development in the U.K. based on knowledge of the most effective approaches and likely future directions of development.

Recommendation #29

Fund and commission evaluation of effectiveness of involving counsellors in exclusion interviews.

Projected Cost: £75,000

Discussion

On several occasions throughout our report, we have noted the reluctance of gambling industry staff and managers to engage in interventions with patrons who appear to be having difficulties. We have also noted the growing involvement of gambling industry managers in voluntary exclusion interviews and recommendations from several international review groups that specialist counsellors be involved in exclusion interviews to improve subsequent treatment seeking and access to services. As a second step in implementing a consistent and effective voluntary exclusion programme in the U.K., we believe there is merit in assessing the effectiveness of involving specialist counsellors in exclusion interviews. An important element in this evaluation will be random assignment to experimental and control conditions.

Recommendation #30

Fund and commission evaluation of effects of pre-commitment betting levels of gambling behaviour in casino and track betting facilities.

Projected Cost: £75,000

Discussion

There has been increasing discussion among gambling researchers and clinicians about the use of pre-commitment betting levels as a means for patrons to make informed decisions prior to gambling about how much money they wish to spend. Suggestions to permit patrons to establish pre-commitment limits at kiosks within gaming venues have been made. Other suggestions have been to link pre-commitment limits to exclusion programmes as well as to responsible gambling features on gaming machines and online gambling sites. However, to our knowledge, there has been no research on the effects of pre-commitment decisions on the behaviour of gaming venue patrons. We propose that a small-scale evaluation of pre-

commitment be conducted at selected gaming venues in the U.K. to assess the effectiveness of such measures in preventing gambling problems.

Intermediate

Recommendation #31

Fund and commission evaluation of targeted message public awareness campaign to youth and women in selected markets to assess increased general recognition of problem gambling as a disorder and improved knowledge about the availability of help.

Projected Cost: £150,000

Discussion

Building on earlier work conducted under Recommendation #24, we believe there is value in conducting a targeted public awareness campaign aimed at youth and women in selected markets. We concur with Arnold et al (2003) that objectives and measurement procedures involved in this evaluation should be agreed upon at the beginning of the projects and reviewed annually. At a minimum, changes in general recognition of problem gambling as a disorder and in knowledge about the availability of help should be assessed.

Recommendation #32

Fund and commission an evaluation of the role of gambling employee training programmes in increasing understanding of problem gambling and improving staff willingness to intervene when gambling problems are recognised.

Projected Cost: £150,000

Discussion

There are a rapidly growing number of mandated and voluntary employee training programmes in the gambling industry internationally. As far as the Reviewing Team could determine, there has been only one evaluation of the impact of such training on the willingness of gaming venue staff to approach a possibly troubled patron and intervene (Ladouceur et al, 2004). Whilst we concur with Arnold et al (2003) that the Trust should not be involved in delivering training programmes for gambling industry employees, we do believe that an evaluation of training programmes that are implemented in the U.K. gambling industry is an appropriate subject for research funding by the Trust. Comparison of venues with and without training programmes as well as pre- and post-training assessments will be important elements in this evaluation as will follow-up with patrons who are approached.

Recommendation #33

Fund and commission trial of 'gambling information' kiosk in one or more casinos and evaluation of effectiveness.

Projected Cost: £150,000

Discussion

'Gambling information' kiosks within the gaming venue, made possible by the continuing convergence of financial and information technology, can bring together a range of problem gambling prevention initiatives, including information and links to helping organisations, as well as providing the capacity to establish pre-commitment levels of expenditure and even speak directly with a problem gambling counsellor at the gaming venue. We believe that kiosks configured to provide responsible gambling information along with financial transaction capabilities and links to other gaming venue services are worthy of development and evaluation. We recommend an initial small-scale implementation and evaluation of this approach followed by full-scale implementation if the approach is proven effective.

Recommendation #34

Fund and commission laboratory studies of responsible gambling features of gaming machines.

Projected Cost: £150,000

Discussion

While the existing research on responsible gambling features is limited and equivocal, we believe that this approach holds promise and is worthy of further development and evaluation. A possible future direction for research is 'targeted' features that are only activated if the player's behaviour surpasses statistically determined parameters. Our recommendation is to fund one or more laboratory studies of responsible gambling features, perhaps in collaboration with other international organisations where research facilities are established (e.g. University of Nevada Las Vegas Gaming Studies Research Center, U.S.). If these features are found to be effective in the laboratory, future studies should be conducted in more naturalistic settings.

Recommendation #35

Fund and commission evaluation of the effectiveness of online self-help forms of assistance for problem gamblers in the U.K.

Projected Cost: £150,000

Discussion

Increasing numbers of people internationally seek help for a variety of problems through the Internet with online mutual aid groups offering a powerful and cost-effective alternative to formal interventions. There is also evidence that many people use online support as an adjunct to more traditional approaches to recovery. As with industry training programmes, we do not believe that the Trust should be involved in developing or managing online self-help or mutual support groups for problem gamblers in the U.K. However, we do believe that it is appropriate

for the Trust to fund and commission an evaluation of the effectiveness of such forums. Proving the effectiveness of such approaches will encourage their development by other organisations.

Long term

Recommendation #36

Fund and commission evaluation of targeted message public awareness campaign nationwide.

Projected Cost: £450,000

Discussion

We view this recommendation as the culmination of work undertaken in response to Recommendations #24 and #31. Public awareness campaigns have been proven effective in delaying initiation of problematic behaviours and in increasing cessation. The effectiveness of such campaigns depends on formative research to develop messages, the use of television, extensive field times and complementary local prevention initiatives. As with the preceding efforts, we believe that evaluation of the effectiveness of the national campaign is an essential element of the overall project.

Recommendation #37

Fund and commission field studies of responsible gambling features on gaming machines and online gaming sites.

Projected Cost: £300,000

Discussion

Funding of this initiative will depend on successful and satisfactory completion of work completed in response to Recommendation #34. Given rapid changes in financial and gaming technology internationally, it is difficult to specify exactly how these studies should be conducted. The Reviewing Team recommends soliciting proposals from a range of U.K. and international researchers in order to have an array of possible approaches from which to choose.

References:

Arnold, G., Collins, P., Eadington, W.R., Remmers, P. & Ricketts, T. (2003). *Towards a strategy for addressing problem gambling in the U.K: A report to the Responsibility in Gambling Trust.* London: Responsibility in Gambling Trust.

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