

Heather Wardle, Gerda Reith, David Best, [David McDaid](#)
and Stephen Platt

Measuring gambling-related harms: a framework for action

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Measuring gambling-related harms

A FRAMEWORK FOR ACTION

GAMBLING
COMMISSION

RGSB Responsible Gambling
Strategy Board
RESEARCH ■ EDUCATION ■ TREATMENT

GambleAware

Heather Wardle, Gerda Reith, David Best, David McDaid, Stephen Platt

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Foreword by Neil McArthur, CEO Gambling Commission

Collaboration to better understand gambling-related harms

I am very pleased to welcome this report – a result of close collaboration involving the Gambling Commission and GambleAware, and led by our expert advisers the Responsible Gambling Strategy Board based on the input of an expert group of academics and researchers.

The Gambling Commission exists to safeguard consumers and the wider public by making gambling fairer and safer. To do this we need to balance consumer choice and enjoyment against the risks gambling can create and its impact on wider society. Working with partners to gain a better understanding of gambling-related harms is one of the priorities we set in our three-year strategy, ***Making gambling fairer and safer***. This document is a key step towards a better understanding of gambling-related harms.

Gambling-related harms include impacts on relationships, finances and health. They are experienced by individuals, families, communities, the economy and society as whole.

This report provides a useful framework to consider how these harms can be measured and understood better. But the authors do not intend it to be definitive. It is a platform for further input and for taking the next steps on a set of priority topics where work can be focused on gathering the evidence we require.

These next steps are important to help us broaden our focus. We will move from simply identifying the numbers of people classed by screening tools as problem gamblers and consider how we will measure the real personal and societal costs which result from gambling.

And most importantly, it will help us collectively to understand where best to target our resources to tackle the full range of gambling-related harms.

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Declarations of interest and authorship

This document is the product of an expert panel led by the Responsible Gambling Strategy Board. Members of the panel and those present at the meetings are listed in Appendix A. GambleAware reimbursed expenses for expert panel attendance, with the exception of Heather Wardle who was reimbursed by the Responsible Gambling Strategy Board. Heather Wardle and Gerda Reith drafted various iterations of the report which was then reviewed and discussed at three face to face expert group meetings. All those listed as authors commented upon and helped to revise the draft manuscripts. All views are the authors' own.

Definitions

Gambling / gaming: According to The Gambling Act 2005, gambling is any kind of betting, gaming or playing lotteries. Gaming means taking part in games of chance for a prize (where the prize is money or money's worth), betting involves making a bet on the outcome of sports, races, events or whether or not something is true, whose outcomes may or may not involve elements of skill but whose outcomes are uncertain and lotteries (typically) involve a payment to participate in an event in which prizes are allocated on the basis of chance (Gambling Act, 2005).

Health: In this report, we follow the World Health Organisation's definition and take health to mean a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 1946).

Public health: Public health can be considered as 'the science and art of preventing disease, prolonging life, and promoting health through the organised efforts of society' (Detels, 2009).

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Executive Summary

Background

This report is the output of an expert group assembled to a) agree a definition of gambling-related harms to be used in British policy and practice, b) consider how gambling-related harms may be better understood, measured and monitored and c) to explore whether it is possible to attach some estimate of the social cost of gambling-related harms and make recommendations about how that may be done.

Gambling-related harms definition

Our proposed definition is that “*gambling-related harms are the adverse impacts from gambling on the health and wellbeing of individuals, families, communities and society*”.

These harms affect resources, relationships and health. The impact from them may be short-lived but can be durable, having enduring consequences and exacerbating existing inequalities. The impact of these harms can be felt by individuals, families and communities.

Framing policy action

Our proposed definition highlights how the impact of harms can be felt by individuals, families and communities. It is also important to recognise that the determinants of harms can be created and shaped at each of these levels. This means that sustained action to prevent gambling-related harms should include actions taken at the societal level, to change broader environments; the community level, to address local influences; the familial or peer level, to address interpersonal impact, as well as at the level of the individual. As such, we recommend adopting the socio-ecological model as a framework for preventive action on gambling-related harms.

Understanding, measuring and monitoring gambling-related harms

Having offered a definition of gambling-related harms, it is important to think about how we better understand harms and increase their visibility.

Part of increasing this visibility involves (but is not limited to) attempting to estimate the costs associated with harms in monetary terms. To do this, we have identified a range of different metrics that are related to the experience of gambling-related harms and then considered whether social costs could be estimated for any of these.

Over 50 different metrics of gambling-related harms were identified under the organising themes of resources, relationships and health. Of these, only a few areas currently have the potential to contribute to a social cost of gambling-related harms. These are:

- loss of employment
- experience of bankruptcy and/or debt

- loss of housing/homelessness
- crime associated with gambling
- relationship breakdown/problems
- health-related problems
- suicide and suicidality.

We have recommended that these areas be pursued and that they be used in a foundation model to begin to estimate some of the social costs associated with gambling-related harms. We recognise that this will be a deeply conservative measure and hope that our framework, outlining all possible metrics of harms, allows people to easily see where the gaps exist. We also hope this is useful in stimulating conversations and actions about how to fill these evidence gaps.

We also recognise that many of the harms listed do not lend themselves to being converted into a social cost. This does not make them any less important. We are committed to increasing the visibility of all gambling-related harms and have suggested that further research be taken to achieve this.

The content of this document is intended to stimulate debate and thought. We do not view it as definitive and welcome any comments you may have. If you have comments or suggestions, please get in touch with us at grh@rgsb.org.uk.

Introduction

Gambling is a public health issue. Many people gamble and experience no adverse consequences. Many others, however, experience harms from their engagement with gambling. To date, gambling problems tend to be framed within a medical-psychological perspective in terms of identifying particular behaviours and symptoms, rather than considering the harms themselves (Rogers et al, 2018). However, like other similar risk behaviours (alcohol, for example), there is increasing recognition that the harms which arise from gambling may be broader than medical-based criteria for problem gambling. Harms may affect not only individual gamblers but also their family, friends, communities and broader society. These wide-ranging impacts, or the magnitude of these harms, are not captured within current definitions of problem gambling.

In Britain, policy makers, regulators and the broader public health community recognise that gambling-related harms need to be better understood and measured.¹ This is underpinned by a need to enhance the visibility of gambling-related harms among both the public and policy makers so that effective policy interventions and action can be planned and implemented. The first step towards achieving this is to formulate a definition of 'gambling-related harms'. Such a definition can then go on to form the basis for action in terms of how to better measure and monitor harms arising from gambling, and ultimately to plan action to reduce them. Integral to this undertaking is the importance of better estimating the cost of gambling-related harms to society in general. Although it is recognised that gambling generates considerable tax revenue for government, provides employment, creates innovation within business communities, provides benefits to other leisure sectors and gives pleasure and enjoyment to some participants, there are also considerable societal costs arising from the harms associated with it. There is a need to better understand both these harms and costs and, where possible, attempt to develop a methodology for quantifying them.

This paper has two objectives:

- first, to provide a working definition of gambling-related harms and situate this within a new framework for policy and regulatory action, and
- second, drawing on this definition, to outline a range of measures and metrics which relate to these harms and identify which could robustly be built into a framework for measuring the social costs of gambling-related harms.

To do this, an expert group from a range of different disciplines was assembled with the express remit of considering these two objectives. Membership of this group can be found in Appendix A. The definition developed here has been created in concert with a team working for Public Health Wales to explore issues relating to gambling-related harms in a Welsh context. This work offers a closely-related definition of gambling-related harms. Ideas have been discussed, developed and shared with that team (see Rogers et al, 2018). We should note at this point that we do not consider the content of this document as definitive, but

¹ See for example the Gambling Commission's Corporate Strategy 2018-2021.

rather would like to present the views of the expert group as a basis for further consultation. As such, we would welcome any feedback on what is presented here.

Defining gambling-related harms

Across different jurisdictions, various attempts have been made to define gambling-related harms, many of them rather similar. In considering what definition should be recommended for Great Britain, we adopt a pragmatic approach. It was agreed that the definition should be clear, simple and reflect current thinking in public health strategy. To ensure our proposed definition and framing are appropriate, we have consulted a wide range of British-based evidence about the impacts and experiences of gambling on people's lives (see Appendix B). This insight has then been reflected in our proposed definition and framing. Reflecting this pragmatic approach, we allow that harms are diverse and probably reflect an interplay between individual, family and community processes. We have proposed both a single sentence definition and further contextual detail which unpacks the nature of the harms experienced.

Our proposed definition is:

Gambling-related harms are the adverse impacts from gambling on the health and wellbeing of individuals, families, communities and society.

These harms are diverse, affecting resources, relationships and health, and may reflect an interplay between individual, family and community processes. The harmful effects from gambling may be short-lived but can persist, having longer-term and enduring consequences that can exacerbate existing inequalities.

In terms of **resources**, harms generate instability in economic lives, undermine productivity in the workplace, lead to the accumulation of debt and, in more severe cases, bankruptcy and engagement in criminal activity. There is a further range of related consequences, some concerning material impacts such as housing instability, others concerning loss of opportunities and future wellbeing. The impact of these harms can be experienced by individuals, families and communities.

In terms of **relationships**, harms include disruption or erosion of partnerships, familial relationships and friendships, including emotional and social isolation from family, friends and communities. This can lead to erosion of community cohesion and resources. In families, harms erode trust and reduce emotional and financial stability in households. This diverts money, time and attention away from familial roles and responsibilities. At a societal level, these harms demand resources from wider medical, social and judicial infrastructures.

In terms of **health**, harms relate to physical ill-health, psychological distress *(such as feelings of shame, stigma and guilt), mental health problems (including anxiety and depression) and, in some cases, suicidal behaviour. These harms may be felt by both individuals and families. At a societal level these harms lead to major demands on healthcare services, increased use of social care and welfare services, all of which have negative economic impacts.

We believe this definition adequately expresses the range of harms that are associated with gambling, describes how these can be experienced by individuals, families, communities and society, and suggests that harms will tend to have durable and lasting impact. As a pragmatic definition, all elements are important as they provide a framework for policy makers to orientate action. We acknowledge that there will be considerable overlap between these domains, such as loss of money putting strains on relationships and potentially contributing to reduce health and wellbeing of the individual and affected others. Therefore, the experience of harms in each domain should not be viewed as mutually exclusive, but rather as dynamic and sometimes overlapping. Figure 1 shows how the broad range of harms included in our definition can be visualised.

Figure 1: Overview of gambling-related harms



Finally, we acknowledge that some harms may be different for children and young people and that the proposed definitions presented here should be adapted and reviewed with children and young people in mind. This work is being currently being conducted, with likely outputs to be published in late 2018 / early 2019.

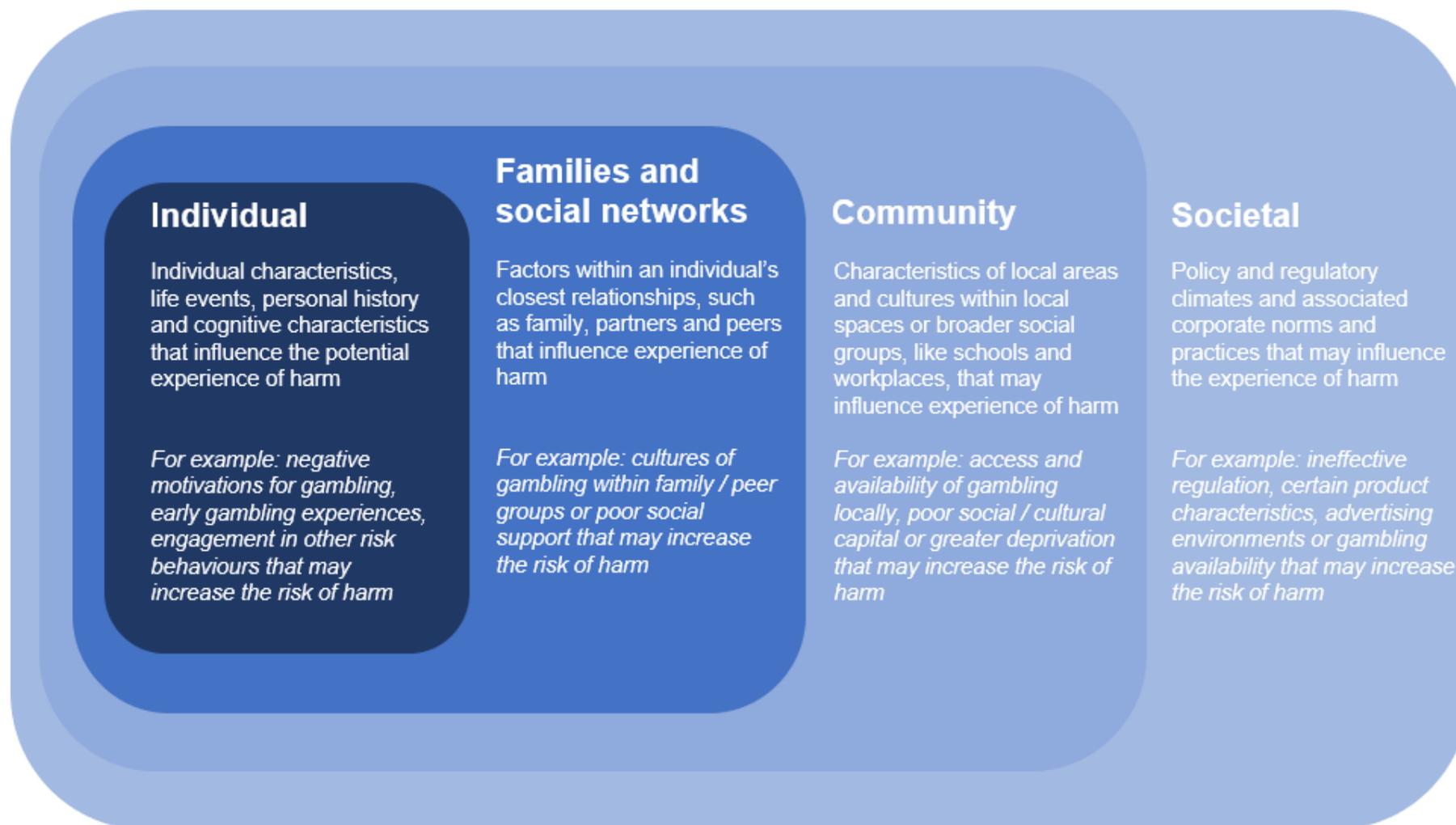
A framework for action

The proposed definition of gambling-related harms outlines how harms can be experienced by individuals, families and communities. It also highlights how policies and norms at a societal level can influence the experience of harm and how the consequences of harms draw on societal infrastructures, such as justice, health and welfare. This means that, when planning action to reduce harms, we need to think about the different risk and protective factors that can affect the experience of harms at each level and we also need to consider how each level relates to each other.

The socio-ecological model, which has been widely used in public health, does this. It recognises that the actions and choices of individuals, while important, are deeply influenced by social contexts and processes (Krieger, 2011). Thus, the 'individual' is embedded within the 'social' when it comes to the generation of gambling-related harms. From a public health perspective, this means that effective action for reducing harm will include not only action to influence individuals but also actions to mitigate risks at the societal, community and inter-personal level (families and friends). Before these steps can be taken, we need to better understand the different risk and protective factors at each level. Figure 2 shows an adapted version of the socio-ecological model for gambling and highlights some of the different types of risk factors that exist at each level. This is intended to be illustrative, not exhaustive, and, as previously noted, we acknowledge that the influences at each level are not mutually exclusive and may overlap. It is our hope that this becomes a platform for improving our understanding of the range of factors that influence gambling-related harms and that, over time, effective action and research can fill the gaps in our current understanding.

This model has been widely used in other public health areas, such as exploring risk and protective factors for suicide, improving fruit and vegetable consumption or as a framework for preventions in sexual assault or violence (Robinson, 2008; Platt et al, 2014; CDC, 2002). For example, in sexual violence prevention, policy action is planned by setting out for each level a) what the influences are, b) what the strategy is for addressing them and c) what types of prevention activities might be planned. The socio-ecological model has the benefit of being both a conceptual model, describing how harms are created and exist across multiple levels and how the individual is embedded within the social, but also is pragmatic as it allows policy makers and others to set out what sort of actions they might take at each level to prevent harm. It is for these reasons we think it is useful in our framework for understanding and addressing gambling-related harms

Figure 2: The socio-ecological model for gambling-related harms



Estimating the social costs of gambling-related harms

Introduction

The Gambling Commission has a statutory duty to advise the Secretary of State on the effects of gambling. To date, this has tended to focus on the number of people who are categorised as problem gamblers and has not provided detail on the social costs of gambling-related harms. This represents a serious gap in our understanding. Furthermore, better understanding of the social costs of harms would allow more detailed assessment of the scale of (public) resources needed to reduce harms.

Policy strategies for dealing with public health issues nearly always include some estimation of the cost of the issue as a basis for action. For example, the Welsh Government's Substance Abuse and Misuse Strategy starts with a clear exposition of the social costs of substance abuse and misuse to society. This understanding forms a critical part of the rationale for taking action. That is not to say that other arguments for action, such as those made on the grounds of social justice or health inequalities, are not important, but rather, more often than not, strategic policy action is justified in economic terms.

The full costs to society of gambling-related harm will be substantial, although not all of these costs are easy to measure in monetary terms. They include the personal impacts faced by individuals who have experienced problems in gambling, as well as associated impacts on family and friends. Examples can include declining health, the breakdown of family relationships, social ostracism and the consequences of dealing with unmanageable debts. The costs will also include resources consequences for both publicly funded and private sector services linked to gambling related harm, for instance increased demands on health, security and criminal justice services. In addition, there will be wider impacts that affect all of society. These will include not only the costs of any net reduction in economic productivity due to reduced participation in employment, voluntary activities or higher/continuing education, but also impacts which are potentially more difficult to quantify, such as a decline in trust and cohesiveness in local communities.

To date, there have been no attempts to quantify the costs of gambling-related harms to society in Britain, largely because such harms have not been defined. There has however been an attempt to quantify some of the costs associated with problem gambling. Led by the Institute of Public Policy Research (IPPR), this research provided suggestive costs focusing on four areas. These were:

- health costs: primary care (mental health) services; secondary mental health services; and hospital inpatient services
- welfare and employment costs: Job Seekers Allowance claimant costs and lost labour tax receipts
- housing costs: statutory homelessness applications
- criminal justice costs: incarcerations

The resultant estimates were costs of between £260 million and £1.6 billion.

As can be seen, these estimates are likely to be very conservative as the focus was only on a very narrow range of outcomes (six in total). Other jurisdictions, such as Australia, have taken more

comprehensive approaches, including aspects which are more difficult to monetise, and estimate the cost of problem gambling to be \$AUS 4.7 billion a year (or around £2.5 billion per year).

The IPPR report is a useful case study as it highlights the difficulty of this type of work because of the large number of assumptions to be made. We accept this will also apply to estimating the social costs of gambling-related harms. However, our view is that, provided the caveats are clear and the limitations well documented, we should not shy away from attempting better to document the costs associated with gambling-related harms. Other similar public health areas, such as substance abuse, have faced similar challenges and we should seek to learn from their experiences.

We also need to recognise that harms are dynamic and will tend to endure over time. This has implications for estimating the social costs, as the cost of harms will endure as the harms themselves do. While we have a growing understanding of addiction careers (c.f. Dennis et al, 2008) we know much less about the developmental or recovery trajectories of problem gamblers. It is likely, however, that the resolution of gambling problems will involve multiple cessation attempts with resulting harms to individuals and families. It is important that we develop a greater understanding of help seeking and its effectiveness across the life- course, in order to inform our approach to understanding and quantifying the social costs of gambling-related harms.

In the 'measures and metrics' section of this paper, we set out a framework of the types of harms associated with gambling and, taking a pragmatic approach, consider which of these could be incorporated into a framework for attaching monetary values to the harms associated with gambling. As before, we emphasise that this framework is not intended to be definitive but should be regarded as flexible and likely to evolve as knowledge expands. We first present our suggested framework of metrics, and then discuss which of these are most promising (and pragmatic) in terms of attaching monetary values to harms. This enables us to see where the gaps are, and thus gives us a sense of the type and level of under-estimation that might be associated with our proposed approach.

Before considering measures and metrics, it is useful to review three critical issues: 1) the issue of co-occurring health problems and attribution, 2) questions around who bears the costs and 3) what any resulting estimates of social costs should be used for.

Considerations

Co-occurring health problems and attribution

People who experience harms from their gambling often have a range of other health issues and vulnerabilities. Thus, when attempting to determine the social cost of gambling-related harms, it is theoretically important to try to disentangle what is associated with gambling and what is associated with other issues. We say theoretically important because in practice this is difficult to do – people's lives are messy and complex and deeply conditioned by their social experiences and contexts. It will not always be possible to determine clear pathways of attribution and to disentangle the co-occurring web of issues. We accept this and acknowledge that this creates ambiguity in attempts to attribute costs to gambling-related harms. However, we believe, following the example from alcohol, that careful consideration of evidence and consultation with key stakeholders can produce a range of assumptions that will allow some of this complexity to be unravelled, albeit within a set of tightly constrained parameters. In alcohol studies, the notion of

attributable fractions has been developed to apportion costs between different co-occurring health problems. This has also been used when attempting to quantify the contribution of fruit and vegetable consumption to the prevention of certain diseases. We believe a similar methodology should be explored for quantifying gambling-related harms.

For example, there is a common association between those experiencing harms from gambling and depression. This has been demonstrated in many cross-sectional studies, in many jurisdictions. What these studies do not tell us is whether people gamble to deal with their depression or whether people's gambling made them depressed. The common consensus is that it is probably a bit of both. In terms of attributing a social cost to this relationship, there is a broad literature exploring the social cost of mental illnesses, such as depression. The Quality Outcomes Framework in Great Britain records the number of people diagnosed with depression by primary physicians. From studies such as the Adult Psychiatric Morbidity Survey 2007, we can estimate the proportion of people living in England with depression who are problem gamblers. We therefore have a train of logic that helps us to estimate the number of people with diagnosed depression who are likely to have problems with gambling. What is missing is an estimate of the proportion of these cases in which gambling is the contributing factor, or in other words an attributable fraction. Whilst this is nevertheless a potential approach to calculating costs, we would also have to recognise that it would be a conservative estimate, as not all depression is clinically diagnosed. Such non-diagnosed depression may still be associated with gambling, so incurring some costs which are not estimable.

Whilst we acknowledge the problems associated with this kind of exercise, we do believe that it provides a potentially useful way forward for thinking about and documenting issues relating to attribution and co-occurring health problems and that it should be explored further. We also acknowledge that this may be just one of many approaches that could be taken and expect that this should be explored further in scoping work. For example, in pragmatic terms, it is likely that, for many harms, determining attribution may simply have to rely on us asking people about the impacts of gambling on various aspects of their lives. Obviously, this kind of approach has its limitations, although it also has the potential to generate some insights. In general, careful thought and planning, in terms of who would be best placed to collect the kinds of information required for this exercise, could help alleviate some of these issues. Ultimately, however, some of the information that we are seeking to uncover about harms may simply have to rely on self-reported data from individual gamblers themselves, with all the attendant methodological issues that this would involve.

We should note at this point that the over-riding principle governing this work should be one of transparency. We will expect those working on the production of estimates of social costs to be absolutely transparent about the methods they have used and the values they have attached to them. Analysis should be clear about who incurs the cost (society, the individual, families etc) and those which are easier to monetise and those which are more difficult (such as the experience of shame or stigma).

Different ways of exploring social costs

So far in this document, we have tended to assume that the social cost models will look at the costs to society resulting from gambling-related harm. This requires working with aggregated data and statistics at the population level to make inferences. However, we recognise there are other ways to estimate harms. This could include focus on individual problem gamblers, gaining in-depth

insight into their experiences across the life-course and estimating the cost of gambling to them. This could be measured in many ways, for instance via surveys, in-depth interviews and examination of individual level longitudinal datasets. It could include impacts and costs related to wellbeing and life satisfaction as well as costs relating to lost resources and opportunities and adverse impacts on families and other relationships. It could take account of contacts with health and other services. With sufficient individual case studies, information might then be aggregated to broader population levels. This would also have the benefit of allowing more specific inclusion of the personal costs incurred by families and others. These impacts may be just as pertinent but less easy to identify and monetise when relying solely on aggregated data to estimate costs. We would also recommend that alternative approaches like this be pursued in future scoping work.

What should social costs be used for?

Producing estimates of social costs will involve a range of assumptions and be subject to a number of caveats. They will also likely be an underestimation of the scale of costs as some harms will not easily lend themselves to being converted into a monetary value. A key brief from the Gambling Commission was that any methodology developed should be replicable and have the ability to be updated over time. This is important. However, given the methods likely to be used, it is also important to recognise that the estimates of social costs produced over time will be sensitive to external influences and thus not sensitive enough to show how regulatory interventions or harm reduction measures are performing. This needs bespoke evaluation of specific policies (Wardle, 2017). For example, the estimation of social costs is likely to use estimates of the number of people who are unemployed because of gambling. This will draw on national figures of unemployment and likely apply an agreed proportion to that number to produce an estimate. This makes estimating social costs over time susceptible to broader changes in society. For example, there may be some external event which rapidly increases the unemployment rate and thus increases the social costs attributable to gambling-related harms. Or the way unemployment is counted, defined and recorded may change, thus altering the social cost attributed to unemployment. These types of issues will need to be carefully considered when comparing any social costs over time.

Measures and metrics

Overview

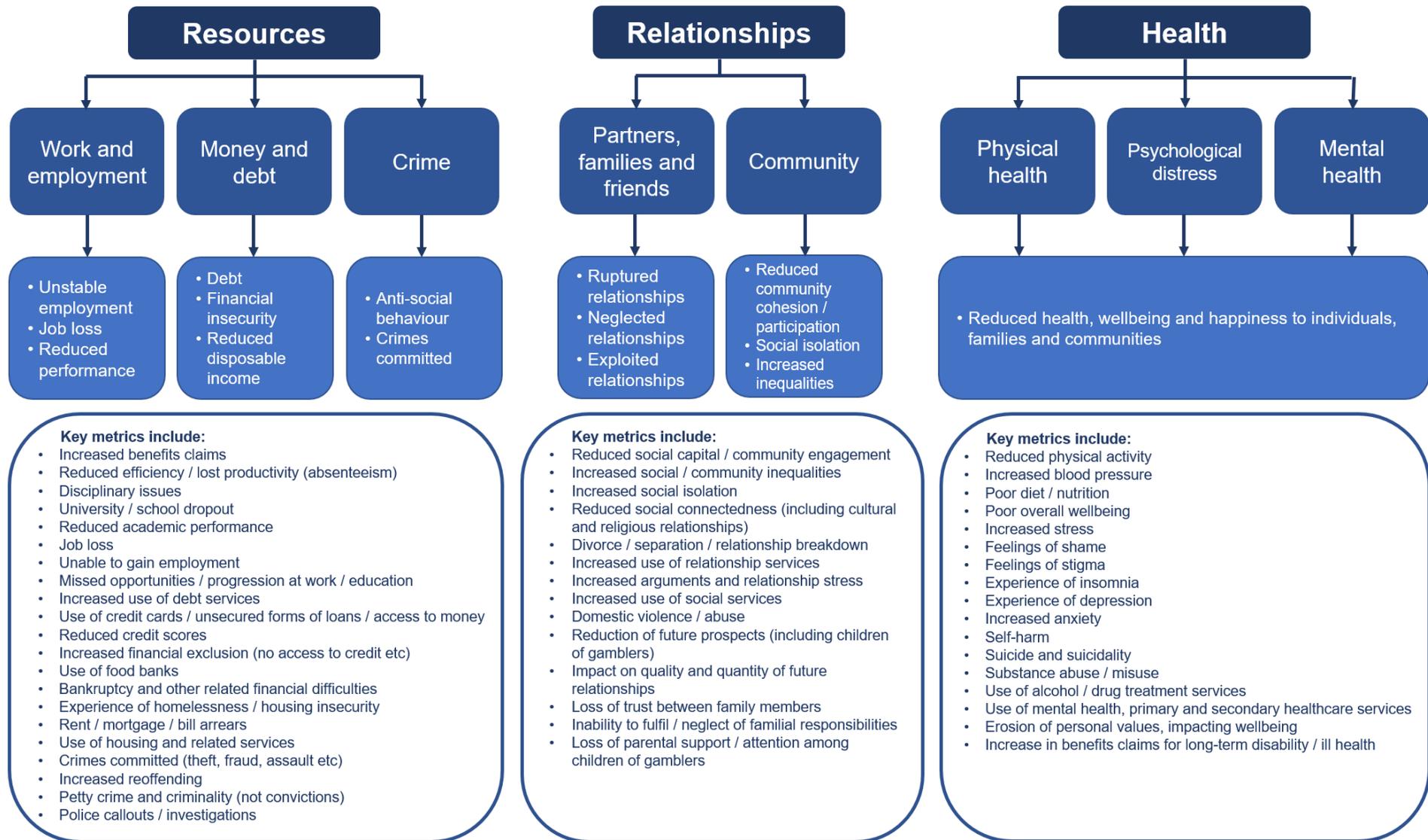
Figure 3 uses the definition of gambling-related harms presented earlier and expands this to explore the fuller range of harms that might be associated with gambling. For each domain (resources, relationships and health) there are further sub-categories of likely harms which are experienced by individuals, their families, communities or at a societal level. We also present a range of likely metrics attached to each domain, for example job losses as a metric of harms relating to resources or the experience of anxiety as a metric of harm relating to health. These metrics are drawn from understanding of the impacts of gambling derived from the best available research evidence. They are not exhaustive, and, in some cases, are likely to involve some overlaps

The aim of presenting these key metrics is to use them to consider which aspects of this framework have the most potential in terms of estimating social costs. Clearly, it will not be possible to attach social costs to all of the metrics mentioned – for example, it is likely to be exceedingly difficult to allocate a social cost to the experience of lost prospects at work because of

underperformance relating to gambling. However, self-report data should still be able to capture some information on the experience of this. This is important even if a social cost cannot be estimated. With other metrics, for example the number of jobs lost because of gambling, it is likely to be somewhat easier to attempt to quantify the social cost. This may rely on self-report data, but estimates can also be made about the proportion of jobs lost because of gambling and reasonably standard methods used to estimate the costs attached to this experience.

In the following section we outline which metrics we consider currently have the greatest potential for use in allocating social costs to gambling-related harms. The information presented is based on a pragmatic decision-making process, taking into account the following: a) the existence or likely ease of generating data about the number of people who experiencing the specific outcome because of gambling and b) ease of estimating the cost to society of the experience. Further details are provided below.

Figure 3: A framework of harms – key metrics relating to gambling-related harms



Key metrics for the estimating the social costs associated with harms

Our strategic approach for measuring and monitoring gambling-related harms is deeply pragmatic. We recognise that, whilst there may be a wide range of harms experienced, not all will be measurable as a social cost. This does not mean they are not important, just that there may be intractable issues making it difficult to attach monetary values to them. To help shape our thinking about how to measure the social costs associated with gambling-related harms, we developed and rated each of the key metrics mentioned in Figure 2 against the following criteria:

- Who bears the cost? Is it a cost to society?
- How easy is it to attach a social cost to the experience?
- Is it likely that any social cost estimate derived from this could be easily repeated at a future date?
- How easy or difficult is data collection likely to be?
- How easy or difficult is attribution to gambling likely to be?
- Is there a link to policy action or policy implication?
- What is the strength of evidence we have for the relationship? How confident are we that this is a harm from gambling?

Consideration was also given to ensuring, where possible, that there was a spread across all levels at which harm is experienced.

This shortlisting exercise was conducted at a one-day workshop comprising experts from the Gambling Commission, the RGSB and GambleAware. This was a useful exercise for identifying the metrics with the most promise for building the foundations of a social costs measuring framework; and 10 themes emerged.

Further detail on the ten shortlisted areas is given in the table below (called the 'foundation' model hereafter). It can be seen that, even with these potential metrics, there is a considerable amount of work to be conducted to be able to extrapolate data for each one and attach social costs estimations. Nonetheless, we feel this represents a useful and pragmatic starting point, where there is a realistic chance of both the necessary work being conducted to allow each metric to be included in the social cost framework and sufficient insight and data from other areas to be able to attach social costs to the experience. We hope that we can build upon this starting point and refine the methodology and data input over time.

Our basic rationale for recommending each of the ten areas in our foundation model is based on our best knowledge (outlined below). However, we would expect that experts in key substantive fields would be able to improve on our suggestions. We also want to engage with subject experts and data scientists to explore how we can improve use of existing databases to generate useful information about gambling-related harms.

Table 1: Most promising metrics for starting to attribute social costs to gambling-related harms: foundation model

Metric	Domain	Rationale
Number of job losses/increased claims on benefit system	Resources	It should be possible to generate (survey) data about the incidence of job loss due to gambling. This can then be applied to unemployment data and social costs estimated. This could include costs relating to additional benefits claims and loss of tax receipts as well as, where possible, consider the broader social costs of lost employment. Consideration would need to be given to potential double-counting in this approach.
Bankruptcy and/or Debt Relief Orders	Resources	As above, it should be possible to generate insight about the proportion of bankruptcies (even if through survey data) that are associated with gambling and apply standard estimates of the social cost of bankruptcy to this figure. It may be possible also to consider other types of arrangements, such as Debt Relief Orders, which are alternatives to bankruptcy under certain circumstances.
Homelessness applications	Resources	This was included in the IPPR report, where the proportion of statutory homelessness applications associated with gambling was estimated and a social cost applied to these cases.
Increased use of debt services	Resources	With some effort, it should be possible to generate data about the number of people seeking support from debt services because of their gambling or gambling of others. This process has already begun, with Citizen's Advice Bureaux recording this data and could be explored with others, such as StepChange. The cost of meeting that support function should be able to be estimated.
Crimes committed	Resources	Advice from Ministry of Justice officials has suggested that, with some technical input (i.e. a data scientist scraping court records), it could be possible to estimate the number of crimes in which gambling was a contributing factor and estimate both costs to the judicial system and costs arising to the victim. It may also be possible to segment costs based on types of crime committed. Clearly, there will be some

		limitations (gambling may be mentioned as a mitigating factor when it may not have been).
Divorce/separation/relationship breakdown	Relationships	Preliminary conversations with Ministry of Justice (MOJ) officials have advised that it is highly unlikely that court records could be systematically interrogated to estimate the number of divorces/separation/custody cases in which gambling is an issue. However, it should be possible to devise estimates from survey data about the proportion of relationship problems attributable to gambling and apply standard estimates of costs to those data.
Increased use of relationship services	Relationships	With sustained effort to cultivate partnerships with appropriate service providers, it may be possible to record the demand for relationship/counselling services in which gambling is an issue. It should be possible to estimate the cost of meeting that support function.
Experience of stress, depression, anxiety, non-suicidal self-harm, other mental and physical health conditions, substance abuse and misuse.	Health	The prevalence of gambling problems among people with these conditions is known from surveys such as the Adult Psychiatric Morbidity Survey (APMS). Data is recorded on diagnosis of these conditions at primary and secondary levels (through for example the Quality Outcome Frameworks, hospital episodes statistics register). Using an appropriate methodology, such as attributable fractions, it should be possible to estimate some proportion of cases attributable to gambling and estimate the social costs in terms of costs of primary and secondary healthcare provision.
Number of suicides and suicide attempts	Health	We are exploring with MOJ whether coroner's court records could be used to provide information on the number of suicides in which gambling was implicated. Coroner's court records could potentially be used qualitatively, and cases followed up with families, in an appropriate, ethical and sensitive way. Secondary analysis of APMS data could provide information about the prevalence of gambling problems among those attempting suicide which could be incorporated into estimates of social costs.

As can be seen from Table 1, the metrics rated as having the best potential for attributing social costs to the harms of gambling are those with more concrete outcomes, such as job loss, relationship loss, crimes committed or loss of life. A challenge is how to value those with less tangible outcomes, but which are nonetheless, deeply impactful, such as loss of life opportunities

and loss of family or community support and cohesion. It is important that any methodology for measuring and monitoring the costs of gambling-related harms does not lose sight of these impacts. It may be that various methodologies are needed and that overall the impact of gambling-related harms is measured not in terms of social cost but in terms of loss of wellbeing to the individual, affected others and communities. We would encourage further research to explore this potential.

Summary and next steps

In this paper we have set out our proposed definition for gambling-related harms to be adopted and used in British policy and practice. We have also set out our proposed framing for how to think about and plan preventative action by considering the differing levels at which harms are created. Finally, we have considered issues relating to measuring and monitoring gambling-related harms and provided some suggestions for understanding the social costs associated with them. To be clear, we are committed to understanding and monitoring gambling-related harms *regardless* of whether they can be easily converted into a social cost estimate – it is vital that we better understand the determinants, experience and consequences of harms at all levels. Nonetheless, there is a desire to increase the visibility of gambling-related harms by attempting to estimate their magnitude in monetary terms. This is just one way to increase visibility and does not preclude use of other methodologies. However, in order to take this aspect forward, we make a number of recommendations for next steps. These revolve around three main interwoven themes: scoping, piloting and refinement.

Scoping

This document is intended to provide a basis for future work and set the direction of travel. It is not intended to be definitive. At this stage, we need to involve a range of experts to scope and develop the methodologies further. This will include:

- Experts in questionnaire design and testing, to be able to develop survey questions about the experience of gambling-related harms and fill knowledge gaps.
- Experts in health economics, to explore different methodologies for estimating the social costs, working closely with the questionnaire design experts to ensure they get the data they need, or at least develop a strategy for obtaining this.
- Experts in data collection (both administrative and social science), analysts and/or data scientists to scope how and where different sources of data could be located, extracted and analysed to help monitor and measure gambling-related harms and fill research gaps.
- Experts in other methodologies to understand and explore harms at all levels, regardless of whether this insight can be 'monetised'.

As can be seen, a broad range of skills is required to effectively scope a strategy for measuring and monitoring gambling-related harms. Each element cannot be conducted alone, as it requires input and conversations with others to best understand what data is needed, what data is available and how to use it. This therefore requires a high degree of collaborative working to ensure that findings from each element are fed into the next. Our recommendation is that a research consortium is commissioned to work closely together to scope a proposed methodology for

measuring, monitoring and ultimately monetising the costs associated with gambling-related harms. Our primary recommendation is that this work be scoped and commissioned to an appropriate consortium with the desire to work together to build upon the insight presented within this report.

The commissioned consortium will need strategic support from policy makers and regulators to cultivate relationships with key stakeholders (eg service providers) and ultimately help facilitate access and buy-in from other organisations (eg the Ministry of Justice) which may hold data that could, with some manipulation, be useful to measuring and monitoring gambling-related harms. To this end, we recommend establishing a steering group with the express terms of reference to support and facilitate the work of the appointed experts.

Piloting

Whilst the larger scoping work is being commissioned, there are a number of smaller pilot projects that can be started now. These include scoping work with Ministry of Justice data to explore the extent to which court records can be used systematically to better understand the role of gambling in crime. Secondary analysis of key survey datasets, such as the Adult Psychiatry Morbidity Survey 2007 (and potentially 2021, if questions can be secured within this study), can help to give some insight into the relationship between self-harm, suicidal ideation and suicide attempts and problem gambling. Further analysis of GambleAware's Data Reporting Framework, which collects information on people presenting for treatment for gambling problems, and of databases from other addiction agencies would give greater insight into the range of co-occurring disorders that problem gamblers experience. This type of data is needed to help inform strategies around attributable fractions. These are example pilot projects that could be started immediately to help strengthen the evidence base for measuring and monitoring gambling-related harms.

In addition, further exploration of other, more qualitative, ways of approaching social cost measures could be scoped and explored. We recognise that there are multiple ways to approach this issue and whilst we have focused on what can be extracted from data, we are also keen to learn more about other approaches. An overview of differing ways to approach this issue could be commissioned from a relevant expert to help guide our thinking.

We recommend these potential projects are commissioned swiftly and overseen by the strategic steering group to ensure the work fits within the broader programmatic framework.

Refinement

Finally, we have noted throughout this report, we do not view our findings as definitive and would welcome comment and feedback. Feedback can be provided by emailing: grh@rgsb.org.uk. The steering group will review all feedback given and ensure that this is fed into our future work plans and, if necessary, our models refined accordingly. We would especially welcome thoughts on other pilot projects that could be commissioned, or sources of data to be explored that can start to fill the evidence gaps.

Appendix A: Membership of expert group

Heather Wardle (Chair)

Heather is an Assistant Professor at the London School of Hygiene and Tropical Medicine, working on a project funded by Wellcome. She has over 15 years experience of working in social research and has worked in gambling research for over a decade. She also runs a research consultancy, Heather Wardle Research Ltd that provides research services for public and third sector bodies and works with Geofutures on public and third sector funded contracts. She does not provide consultancy services for industry. She is the Deputy Chair of the Responsible Gambling Strategy Board, an independent advisory group who provides advice to the Gambling Commission, and through them, to government on gambling policy. In her previous employment, Heather received funding from GambleAware and has worked on GambleAware projects through her consultancy.

Gerda Reith

Gerda is a Professor of Social Science at the University of Glasgow. She has worked in the field of gambling research for twenty years, and has published extensively in the area. Her book, *The Age of Chance*, won the Philip Abrams Prize for the best book in Sociology for 2000, and her work has been translated into Korean, Chinese, Hungarian and Spanish. She has conducted a number of research projects on the longitudinal dimensions of gambling behaviour, and on its relationships with crime, debt, social networks and poverty. These were funded jointly by the ESRC and the Responsibility in Gambling Trust, and administered by the ESRC. Her most recent research project, on which she acts in an advisory capacity for the Institute of Social Marketing at the University of Stirling, is on the effect of gambling advertising on children. This project is funded by GambleAware. Gerda has also advised public and third sector organisations, both nationally and internationally, on gambling research and policy issues, and has recently joined the GambleAware Research Committee. In the past, she was a member of the Responsible Gambling Strategy Board, an independent advisory group which provides advice to the Gambling Commission, and through them, to government on gambling policy. Gerda does not provide consultancy services for industry.

Stephen Platt

Stephen is Emeritus Professor of Health Policy Research at the University of Edinburgh. He has a lifetime research interest in social, epidemiological and cultural aspects of suicide, self-harm and mental health and ill-health. He is an adviser on suicide prevention research and policy to NHS Health Scotland, the Irish National Office for Suicide Prevention and Samaritans. He has been involved in policy development and analysis relating to public mental health and mental health improvement. He has published on conceptual and methodological aspects of mental well-being and is co-developer of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS). Stephen is a former trustee of the Mental Health Foundation and Samaritans, and ex-Vice-President of the International Association for Suicide Prevention. He does not provide consultancy services for the gambling industry.

David McDaid

David is Associate Professorial Research Fellow at the Personal Social Services Research Unit and Department of Health Policy at the London School of Economics and Political Science. He is also a research associate of the WHO European Observatory on Health Systems and Policies. He has more than 20 years of research experience and over 350 publications related to different aspects of the economics and policy of promoting and protecting mental health and public health in Europe and beyond. He has acted as a consultant to a number of governments, as well as the WHO and OECD. He has no relevant disclosures to make, although he did spend a summer working in a betting shop in the north of England when he was a student.

Michael Donmall

Michael Donmall is Professor of Health & Society, University of Manchester. Involved in epidemiological and drug misuse research for 30 years, Mike established the National Drug Evidence Centre (NDEC) at the University of Manchester. In the 1990s he developed a drug misuse assessment system across the UK and this modelled for the treatment demand indicator across Europe. He was UK Expert at the European Monitoring Centre on Drugs and Drug Addiction for many years and UN advisor, co-authoring the Global Toolkit on the Reduction of Related Harm. NDEC hosts the National Drug and Alcohol Treatment Monitoring System. He is a member of the University Research Ethics Committee (UREC2), Public Health Academic (Health Sciences) with Public Health England and Fellow of the Faculty of Public Health. He has experience in 'information for policy', evaluating treatment interventions, and developing outcome and effectiveness measures.

David Best

David Best is Professor of Criminology at Sheffield Hallam University; Honorary Professor of Regulation and Global Governance at Australian National University and Adjunct Associate Professor of Addiction Studies at Monash University. He has published more than 180 research papers in addictions and criminology. He is also a director of a research consultancy called ACT Recovery that has developed screening tools for gambling treatment, funded by GambleAware. GambleAware has also funded a PhD studentship and a research study at Sheffield Hallam University.

Appendix B: References and evidence consulted

Centers for Disease Control and Prevention (2002) *The Social-Ecological Model: A Framework for Prevention*. Available at: <https://www.cdc.gov/violenceprevention/overview/social-ecologicalmodel.html>

Connolly A, Fuller E, Jones H, Maplethorpe N, Sondaal A & Wardle H (2017) *Gambling behaviour in Great Britain in 2015: Evidence from England, Scotland and Wales*.

Dennis ML, Scott CK, Funk R & Foss MA (2005) The duration and correlates of addiction and treatment careers. *Journal of substance abuse treatment*, 28 Suppl 1:S51-62.

Department for Culture, Media and Sport (2005) *The Gambling Act 2005*. London: The Stationery Office. Available at: <http://www.legislation.gov.uk/ukpga/2005/19>

Detels R. (2009) *The scope and concerns of public health*. London: Oxford University Press.

Krieger N. (2011) *Epidemiology and the People's Health: Theory and Context*. New York: Oxford University Press.

Platt S, Teuton J, Atkinson A (2014) *Prevention of suicide and self-harm: research briefing*. Edinburgh: NHS Health Scotland. <http://www.healthscotland.com/documents/23356.aspx> (accessed 15 May 2018)

Productivity Commission (2010), *Gambling*, Report no. 50, Canberra.

Reith G & Dobbie F (2011) Beginning gambling: The role of social networks and environment. *Addiction Research and Theory*, 19 (6), pp. 483-493.

Reith G & Dobbie F (2013) Gambling careers: a longitudinal qualitative study of gambling behaviour. *Addiction Research and Theory*, 21 (5): pp. 376-390.

Reith G & Dobbie F (2013) The socio-temporal dynamics of gambling: Narratives of change over time. In: Cassidy R, Pisac A, Loussouarn C (ed.). *Qualitative Research in Gambling: Exploring the production and consumption of risk*, London: Routledge, pp. 28-42.

Robinson T (2008) Applying the Socio-ecological Model to Improving Fruit and Vegetable Intake Among Low-Income African Americans. *Journal of Community Health*, 33(6), pp.395-406.

Rogers R, Wardle H, Sharp C, Dymond S, Davies T, Bellis M, Hughes K, Woods S & Astbury G (2018) Framing a public health approach to gambling harms in Wales: Challenges and opportunities. (publication pending).

Thorley C, Stirling A and Huynh E (2016) *Cards on the table: The cost to government associated with people who are problem gamblers in Britain*, IPPR. <http://www.ippr.org/publications/cards-on-the-table>

Wardle H, Moody A, Spence S, Orford J, Volberg R, Jotangia D & Dobbie F (2011) *British Gambling Prevalence Survey 2010*, London: Stationery Office.

Wardle H, Seabury C, Ahmed H, Payne C, Byroin C, Corbett J & Sutton R (2014) *Gambling behaviour in England and Scotland: Findings from the Health Survey for England 2012 and Scottish Health Survey 2012*.

Wardle H, Sproston K, Orford J, Erens B, Griffiths M.D, Constantine R, & Pigott S (2007) *The British Gambling Prevalence Survey 2007*. London: National Centre for Social Research.

Wardle H (2015) *Exploring area-based vulnerability to gambling-related harm? Who is vulnerable? Findings from a quick scoping review*. London: Westminster City Council

Wardle H (2018) Learning lessons: The need for effective evaluation of regulatory change. *International Journal of Drug Policy*, 53, pp. 123-124.

World Health Organisation (1946) *Constitution of WHO: principles*.