# GREO BRIEFING NOTE PUBLIC HEALTH APPROACHES TO GAMBLING – GLOBAL INITIATIVES

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#### **BACKGROUND**

There is growing recognition of the benefits and importance of adopting a public health approach to gambling. <sup>1-6</sup> In 1999 Korn and Shaffer's seminal paper on adopting a public health approach to gambling outlined the objectives of a potential strategy to reduce gambling harms. <sup>2</sup> These objectives included improving public education and awareness, early identification of gambling harms, evidence-based and accessible treatment interventions, health promotion at both the individual and community levels, and protecting vulnerable populations from gambling harms. <sup>2</sup> Many strategies have been used to help achieve these objectives, including educational messaging, and restrictions on venues and venue locations.

Health promotion activities, guided by the World Health Organization's Ottawa Charter for Health Promotion, focus on using a diverse set of actions such as regulation, taxation, legislation, and planning. These activities support the World Health Organization's health promotion goals to build healthy public policy, create supportive environments, improve community capacities and action, reorient to prevention services, and develop personal skills, so that making healthy choices is as easy as possible.<sup>7, 8</sup>

Adopting a public health approach to gambling is important because it addresses:

- **Destigmatization**: it shifts the responsibility of preventing and reducing gambling harms from being solely on the individual and their behaviours, which can heavily stigmatize individuals.<sup>7, 9</sup>
- **Population health:** the majority of gambling harms stem from low- to moderate-risk behaviours, due to the sheer size of the low- and moderate-risk gambling population in comparison to the high-risk gambling population. Public health approaches focus on reducing gambling harm across the entire population.<sup>10, 11</sup>
- **Comorbidities:** public health principles have been applied to other issues such as mental health disorders and substance misuse, and have achieved improved outcomes for health issues that share upstream and overarching contributors.<sup>12-14</sup>

While a public health approach to reducing harms from gambling can take many forms, it is based on the following principles:

- Integrating health promotion and harm reduction, the two main principles of public health action
- Adopting interventions that are population wide, multifaceted, implemented in multiple settings, delivered simultaneously, and tailored to different groups or needs
- Building system capacity by improving access to services, supporting local initiatives, and engaging with communities through education and prevention messaging
- Encouraging and coordinating actions at the individual, community, built environment, health system, and broader societal levels.



#### SCAN DISCUSSION

There are many models and approaches to gambling and gambling harms that have been applied in different jurisdictions, including the Medical model, Consumer model, Reno model, and the public health approach.

- Medical Model: In the medical model gambling harms are a discrete exposure incurred by an individual, that harms are experienced only by individuals with problem gambling, and that reducing harm should be done through treating individuals with problem gambling.<sup>12</sup>
- Consumer Model: In the consumer model gambling is a service and consumer product, which rational and informed consumers have the freedom and responsibility to make their own decisions to maximize their utility and avoid gambling harms.<sup>15</sup>
- Reno Model: In the Reno model a consumer model safe levels of gambling are emphasized by key stakeholders by using evidence-based principles, and the total social benefits of gambling (recreational, social, and economic) must exceed the costs and harms.<sup>16</sup>

Although many health promotion and harm reduction interventions have been designed, they have generally not been evidence-based or proven effective in reducing problem gambling or gambling harms, or that the benefits exceed the costs.<sup>17</sup> Overall, a public health approach focuses on the interrelatedness of factors that influence health and emphasizes the integration of health promotion into the goals of other systems and sectors to promote good health as a resource for everyday life.

Applying a public health approach reveals many policy and intervention options that can address gambling behaviours and harms. Understanding and designing the best mix of intervention and policy options to address harms for specific contexts, groups, or outcomes is critical to the success of public health approaches. The behaviour change model developed by Michie and colleagues provides insight on how to influence gambling behavior through capabilities, opportunities, and motivations. 18 This model identifies nine intervention functions (education, persuasion, incentivization, coercion, training, restriction, environmental restructuring, modelling, and enablement), and seven categories of policies (communication and marketing, guidelines, fiscal measures, regulation, service provision, legislation, and environmental and social planning) relevant to a public health approach to behaviour change.<sup>18</sup> When these intervention and policy options are situated within the goals of the World Health Organization's Charter of Health Promotion, they can be used to develop comprehensive and evidence-based strategies to reduce gambling harm from a public health perspective. For example, to further develop or enhance personal skills, an education intervention that is legislated through a set of workplace policies may increase knowledge of odds and the features of different game types, self-exclusion services available, and the importance of limit setting in the reduction of gambling harms. The following discussion is the result of an investigation of the application of relevant public health interventions to gambling across the world.



First, a case study will describe the gambling environment in New Zealand, where government responsibility and commitment to a public health approach is legislated. The initial evaluation results of two ongoing aspects of the gambling harm prevention and minimization strategy will be discussed. Second, other jurisdictions that have public departments, professional groups, or community organizations implementing parts of a public health approach to gambling will be discussed, including Canada, Australia, the United Kingdom, and Sweden.

The search was conducted in PubMed, Google Scholar, and the GREO Evidence Centre over December 2018 to February 2019. The search strategy consisted of various combinations of 'gambling\*', 'public health\*', 'harm reduction', and 'health promotion'. Resources that described, discussed, or evaluated components of a public health approach to gambling for a particular jurisdiction were included.



#### CASE STUDY: NEW ZEALAND

- New Zealand is the only country with a legislated national public health approach to gambling.
- The Ministry of Health is responsible for developing and implementing interventions that align with public health and harm minimization principles through community involvement and capacity building initiatives.
- There are five main areas of focus: policy development and implementation, safe gambling environments, effective screening environments, aware communities, and supportive communities.

New Zealand's Gambling Act is legislation designed to regulate the gambling market, ensure the fairness, safety, and legality of games and gambling opportunities, prevent and minimize gambling harms, and ensure that communities benefit from the proceeds of gambling activities. The Act was passed in 2003 and amended in 2015 in response to changes in the gambling environment and the work done to reduce gambling harms since the original legislation. This has made New Zealand a leader in addressing prevention and harm minimization through multisectoral collaborations and localized initiatives.

The Gambling Act gives the Ministry of Health the authority to promote a public health approach to gambling by coordinating initiatives that minimize gambling harm, reduce problem gambling, and pursue independent research on gambling and gambling harms. Recently, the Ministry of Health has developed a nine-year strategic plan that is guided by successive three-year service plans, each with several key objectives to address toward achieving their overall goals. Currently, the Ministry of Health's work in this area is guided by its 'Strategy to Prevent and Minimize Gambling Harm' for 2016-2019. Key principles of the 2016-2019 service plan include: addressing health equity, preventing gambling harm for priority populations, ensuring culturally-accessible services, developing evidence-based and comprehensive services, and strengthening community capacities.<sup>4</sup>

As part of the efforts to promote a public health approach, the Ministry of Health focuses on five main programs: policy development and implementation, safe gambling environments, effective screening environments, aware communities, and supportive communities. Initial evaluations of some of the main programs has been completed. The initial results from the policy development and implementation, and aware and supportive communities' initiatives are discussed as case studies and best practices are identified.

Policy Development and Implementation

New Zealand's policy development and implementation program has three focus areas with the objective of increasing adoption of harm reduction policies at organizational and local council levels.<sup>20</sup>

 Workplace and organizational gambling policies focus on highlighting problem gambling as a possible cause of social, health, and financial issues. Organizations are offered tools to identify problem gambling among their clients or service users, and resources to enable implementation of harm reduction practices. Evaluation results



- show there has been increased awareness of the issue but there was not widespread adoption, partly due to time and resource costs for other organizational priorities.<sup>20</sup>
- 2. Non-gambling fundraising policies focus on encouraging fundraising methods that do not involve gambling, and developing a standard of non-acceptance of gambling funding and influence. However, evaluation results showed that these policies were not popular because some organizations relied on the availability of electronic gaming machine proceeds and equal value, alternative sources of funding were unavailable, as well, unintended consequences had to be discussed.<sup>20</sup>
- 3. Council policies on electronic gambling machines focus on motivating city councils to include community concerns in policies related to location and distribution of electronic gaming machine venues. A policy approach that is encouraged is a "sinking lid" approach, wherein after closure of an electronic gaming machine venue, consent is not provided by the council for an alternative location, thus reducing electronic gaming machine venues. Evaluation results showed that, in most cases, there had been successful community involvement to generate public pressure and support for a shift towards the "sinking-lid" approach. However, some councils have rejected the approach, or have weakened it, by allowing alternative location requests.<sup>20</sup>

# Aware and Supportive Communities

The Aware Communities program aims to build community awareness of gambling harms through public discussions, culturally relevant community-led campaigns, and community education. For health and social service organizations, learning how gambling harms are often interrelated with other issues and conditions enhances their understanding of problem gambling. Across these initiatives, culturally appropriate media and venues are used to deliver harm-minimization messages to at-risk ethnic communities. Efforts also encourage the development of culturally-sensitive public health approaches, including reframing and translating existing gambling-related public health messages, designing programs to reflect culturally-held ideologies, and using culturally-appropriate communication. To reach at-risk populations, one strategy included members from these populations in media interviews and used appropriate languages for population members. Initial findings suggest that service providers and communities developed better understanding of how gambling harms are associated with other conditions. However, the process of engaging with groups and developing culturally appropriate strategies requires significant time and resources.

The Supportive Communities program aims to build community resiliency and enhance social protective factors (e.g., community connectedness and cultural identity) through health promotion, education, and awareness raising with stakeholder groups (e.g., social services, community groups).<sup>21</sup> These programs provide the skills and competencies individuals need to improve their resiliency (individual protective factors), and encourage youth to reconnect with their cultural identity, to take ownership of raising awareness of gambling harms, and to be agents of change within their communities. Initial findings suggest that program access was a significant barrier to improving resiliency and capacity of targeted populations such as youth or different ethnocultural groups, and that significant change at the community level required greater time and resource commitments to establish program sustainability.<sup>21</sup>



#### **CANADA**

- Most gambling activities in Canada are regulated by provincial governments.
- There is no national strategy or comprehensive plan to reduce gambling harms, but many institutions and jurisdictions have long advocated for a public health approach.
- A significant source of knowledge and support for Ontario organizations working to reduce gambling harms is Gambling Research Exchange Ontario.

There is a long history of advocating for a public health approach to gambling and gambling harms in Canada. In 2000, the Canadian Public Health Association acknowledged that problem gambling is a serious public health concern, and that a public health approach to gambling should be adopted.<sup>22</sup> They stated that a public health approach should shift focus from the individual-level factors to systems-level factors (physical, social, cultural, and political) to better address and encourage action on gambling harm prevention and minimization.<sup>1,2</sup> As part of their position statement, the Canadian Public Health Association communicated their support for programs or policies that prevent harms, promote education and awareness, protect vulnerable and priority groups, and advocate for a national public policy review to address the impacts of gambling and gambling harms in Canada.<sup>22</sup>

Further work is necessary, but many jurisdictions in Canada have begun adopting aspects of a public health approach to meet these objectives, and have developed local initiatives to address gambling harms:

### Ontario

- Active Organizations in Ontario:
  - Ontario Medical Association (OMA).
  - Public Health Ontario (PHO).
  - Toronto Public Health Position Statement.
  - Gambling Research Exchange Ontario (GREO).
  - Centre for Addictions and Mental Health (CAMH).

In 2005 the Government of Ontario reviewed their gambling policies and strategy to assist and protect those with or at-risk of experiencing harms, while also permitting the enjoyment of gambling as a recreational activity. The review suggested that Ontario's strategy to reduce gambling harms should focus on harm minimization initiatives to address four core components: treatment, prevention and awareness through education, research, and consumer protection.<sup>23</sup> The Ontario Medical Association has also stated the need for interventions that reduce gambling harms at the population level, including re-evaluating gambling environments and venue access, regulating online gambling, sharing gambling data, dedicating research and public education funds, and monitoring health and social impacts from gambling transparently.<sup>24</sup>



# Public health organizations

While not mandated as a public health issue in Ontario's Public Health Standards, many of Ontario's public health units have responded to the potential health impact of gambling harms at the community level. In 2012, the Board of Toronto Public Health published a position statement and two reports that outlined specific public health interventions to prevent or minimize gambling harm, in response to a proposed casino development in the area.<sup>25</sup> They suggested that harms can be minimized by addressing gambling availability, venue locations, hours of operation, and on-site harm reduction measures such as limiting daily bets and bet sizes, limiting credit and alcohol access, prohibiting loyalty programs, and providing access to player gambling data.<sup>25</sup> Health service providers across the province have also cautioned against the harms of local casino developments, and suggested preventing gambling harm under a public health framework.<sup>25</sup>

# Gambling Research Exchange Ontario

In 2014 Gambling Research Exchange Ontario transitioned from a primarily research funding organization to an organization specializing in gambling knowledge translation and exchange services. In 2017, <u>Gambling Research Exchange Ontario</u> established a <u>public health program</u> to pursue and support a public health approach to gambling harms. The program identifies local knowledge needs and service provider priorities, establishes meaningful networking and partnership opportunities for stakeholders, mobilizes relevant knowledge products and information on systems level factors, and supports localized community capacities to address gambling.

A major part of Gambling Research Exchange Ontario's public health program is the <u>Build</u>, <u>Engage</u>, <u>Translate</u> (<u>BET</u>): <u>System Impact</u> funding stream. The purpose of this funding is to support community and public health organizations to develop systems-level approaches that prevent or reduce gambling harms, promote health and wellbeing, and reduce health inequities. Funded projects aim to reduce harms directly, or indirectly through existing strategies that address comorbid conditions (e.g., substance abuse, addictions, and mental health). Past projects have spearheaded partnerships or networks to improve population health. These projects addressed gambling harms, developed messaging and communication campaigns for services and supports, advanced policies and regulations to reduce gambling harms, and engaged with vulnerable and at-risk groups.

In May 2019 GREO was notified by the Government of Ontario that as part of a larger restructuring of public health and healthcare systems, the Ministry of Health and Long-Term Care would no longer be funding their operations. GREO quickly mobilized amongst their network and contacts to obtain other funding agreements, but, at the time of publication, the future of the program remains in doubt.



# **British Columbia**

- In 2009 the Provincial Health Officers Annual Report, <u>Lower the Stakes</u>, advocated for a public health approach to gambling in British Columbia.
- In 2015 the provincial government released a plan for public health and gambling in British Columbia.
- The University of British Columbia's <u>Centre for Gambling Research</u> investigates program and treatments to reduce problem gambling.

In British Columbia, there has been recognition that gambling harm is a significant public health issue that needs to be addressed through a strategy that balances health and social impacts with revenue generation. Similar to other provinces in Canada, British Columbia's gambling harms strategy includes community-based counselling services, self-exclusion programs, public helplines, awareness and education initiatives, and marketing regulations.<sup>23</sup> In 2013, the British Columbia Provincial Health Officer released a report titled 'Lower the Stakes' calling for greater harm-prevention and harm-minimization initiatives to combat gambling harms, including: coordinating strategies with other relevant departments, providing effective awareness and education at the population level, developing group-specific messaging, encouraging responsible gambling techniques and guidelines, and evaluating interventions by their ability to reduce gambling harms.<sup>3</sup> Several research groups investigate gambling programs and policies in relation to gambling harms in British Columbia, with a focus on modifying electronic gaming machine labels, interruptive information and messaging to reduce harm, pre-commitment or limit setting, near miss and loss-disguised-as-win outcomes, and comorbid mental health issues.<sup>26-28</sup>

# Alberta

- <u>The Alberta Gambling Research</u> Institute supports and promote gambling research in the province.
- <u>A national study of gambling and problem gambling in Canada</u> is being conducted by researchers from Alberta universities.
- <u>Alberta Health Services</u> provides programming aimed at preventing gambling harms.

Research from Alberta has supported the benefits of adopting a public health approach to gambling and gambling harms in Alberta. In a 2002 report, the Alberta Gaming Research Institute stated that these benefits include a more comprehensive view of gambling and gambling harms, the opportunity to address and examine both the costs and benefits of gambling, and the relevance of a wider set of policy and program strategies to promote health and minimize gambling harms from numerous points.<sup>29</sup> In 2017, Alberta Gambling Research Institute hosted a think-tank for collaboration and advancement of a public health approach to gambling, which focused on identification and assessment of broad gambling harms and appropriate actions to take.<sup>30</sup>



#### **AUSTRALIA**

- Most gambling activities in Australia are regulated by state and territorial governments.
- Harm reduction interventions are incorporated into every level of prevention, and community-based interventions are well supported.
- The Victorian Responsible Gambling Foundation is recognized as a prominent institution that has taken a public health approach to gambling and pursues research that aligns with and further explores this perspective.

There is strong support in Australia for programs and policies that are part of a public health approach to gambling. A 2017 survey of public attitudes revealed that more than 75% of participants agreed with a complete ban on gambling promotions and advertising during children's viewing hours, on a reduction in electronic gaming machines, and an increase in educational messaging.<sup>31</sup>

Many government and community initiatives have adopted a public health approach to gambling in Australia. As part of their broader mandate, the Public Health Association of Australia works to increase independent gambling research funding, ensure transparent disclosure of potential conflict of interest in gambling research, and strengthen legislation to protect youth and priority populations from gambling advertising and promotions. In a 2016 policy position statement, the Public Health Association of Australia communicated their commitment to a public health approach for reducing gambling harms by clearly stating their refusal of gambling industry funding. They then released a statement in 2017 that aimed to raise awareness of a broader conceptualization of gambling harms, emphasizing upstream harm-minimization at all levels, and collaborating with multidisciplinary bodies to reduce gambling harms.

Gambling and gambling harms are approached differently across states and territories. However, in 2012, the Australian Capital Territory Gambling and Racing Commission (ACTGRC) began funding the Australian National University Centre for Gambling Research to determine how Australia could adopt a public health approach to problem gambling nationally. In 2015, the ACTGRC outlined the core components of a public health approach to gambling and suggested directions to address gambling harms.<sup>34</sup> The report stated that a public health approach should be comprehensive, be coordinated across services and professional groups, should address comorbidities through multiple levels of prevention, and should support evidence- and community-based interventions.<sup>34</sup>

In the state of Victoria, The Victorian Responsible Gambling Foundation is a leader in the development and implementation of evidence-based public health approaches to programs and policies aimed at reducing gambling harms in Australia. Established by parliament in 2011, they work to prevent gamblers from becoming 'at-risk' (primary prevention), progressing from 'at-risk' to experiencing harm (secondary prevention), and from relapsing and experiencing the worst impacts of harm (tertiary prevention).<sup>35</sup>

Victorian Responsible Gambling Foundation's guiding principles include fostering community-based and collaborative approaches to research, education, prevention, and treatment. They aim to strengthen the capacity of individuals, communities, and health service organizations to



respond to and resolve gambling harms. They also target initiatives, programs, and services to vulnerable and priority populations.<sup>35</sup> The Foundation activates these principles by using evidence-based interventions, placing the individual at the centre of a holistic health model, supporting local needs and initiatives, and by working with a diverse set of stakeholders on developing a diverse set of actions.<sup>35</sup> The 2018-2021 strategic vision is based on three objectives: preventing gambling harm through a public health approach, working in partnership with those who share their vision to improve community health and wellbeing, and building a collaborative and respected centre of expertise to deliver their mission for all Victorians.<sup>36</sup>



#### UNITED KINGDOM

- The Responsible Gambling Strategy Board has created <u>recommendations for applying a public health approach</u> similar to alcohol and tobacco for gambling.
- The Gambling Commission has explicitly stated the aim of their programs are to reduce harms and not to promote responsible gambling.
- A recently released <u>framework for action</u> proposes a new focus on measuring and reducing gambling harms in society.

Across the United Kingdom (UK), there are growing calls for gambling and gambling harms to be approached from a public health perspective that balances harm minimization with recreational enjoyment.<sup>17</sup> A 2016 report on policy and program issues relevant to gambling in the UK states the need for greater appreciation of how environmental and individual factors combine to produce positive or negative outcomes from gambling participation. Some of the recommendations to consider to reduce gambling harms included: limiting automatic play on electronic gaming machines while introducing slower play, providing informative display messaging, and interruptive pop-up messaging, reducing incentives such as loyalty programs or free alcohol, and limiting cash and credit access.<sup>37</sup>

In 2018, the Faculty of Public Health of the Royal Colleges of Physicians of the United Kingdom released a position statement on the current failures of strategies to reduce gambling harms and advocated for action at the national level. Their statement encourages a national strategy that incorporates elements of a public health approach: a comprehensive and coordinated strategy across government departments and services, a review of gambling advertising and regulation of marketing and promotion, targeting attitude and responsibility shifts, adequate funding for research, prevention, and health promotion, and adequate treatment services and providers.<sup>38</sup>

The Gambling Commission was established under the 2005 Gambling Act to regulate commercial gambling and lotteries in the UK. The Gambling Commission's principles state that their actions must support an appropriate balance between regulations intended to reduce harm and the freedom of individuals and players. Their objectives are to prevent gambling from being used to finance crime, to ensure that games are conducted in a fair and transparent manner, and to protect vulnerable populations from gambling harms. The Responsible Gambling Strategy Board provides evidence and support to the Gambling Commission. Their strategic objectives are to develop and evaluate new harm-minimization initiatives, to evaluate policy and treatment interventions on harm-minimization, to support and provide resources for evidence-based and community-coordinated programs, and to advocate for a wider range of organizations to accept greater responsibility and to work co-operatively to address gambling harms.

GambleAware is an independent charity tasked to fund research, education, and treatment services to help to reduce gambling-related harms in the UK. Their activities are guided by the National Responsible Gambling Strategy. The charity's goals are to broaden public understanding of gambling-related harms and to advance the cause of harm prevention while providing effective and accessible treatment options.<sup>40</sup> GambleAware supports public health interventions through their annual harm-minimization conference that focuses on the



importance of a public health approach to gambling, and a shift in perspective to address the socioecological factors of gambling harms.<sup>40</sup>

# **Scotland**

In 2016, the Scottish Public Health Network (SPHN) recommended that the Scottish Directors of Public Health recognize gambling-related harm as a public health issue, encourage transparent and evidence-based discussions about gambling and gambling harms, initiate a health needs assessment of gambling harms, and engage key stakeholders in developing a comprehensive and coordinated strategy to preventing gambling harms in Scottish communities.<sup>41</sup> The SPHN further outlined that an effective public health approach to gambling and gambling harms would be policy based, promote corporate social responsibility and responsible gambling, address a wide range of gambling harms and comorbidities, identify and support vulnerable populations, improve awareness and education levels of gambling harms, and take action on surveillance and evaluation of all its associated efforts.<sup>41</sup>

# Wales

The balancing of benefits and harms from gambling is central to the discussion about gambling in Wales. At the population level, there is acknowledgement by national institutions that a large number of people experience small amounts of harm while a small number of people experience large harms (this is known as the prevention paradox). Also, that harms are not equally distributed amongst the population (follow a socioeconomic gradient).<sup>42</sup> It has been recommended that a multi-faceted policy intervention at the systems level is required to produce real change. This must address consumer protection, regulation, stigma, protection of vulnerable populations, and harms to families and communities.<sup>42</sup> However, there is no comprehensive strategy or population-level interventions to reflect this perspective.



#### **SWEDEN**

- <u>Swelogs</u> is a multi-disciplinary longitudinal dataset investigating gambling and health that aims to prevent gambling harms.
- Regaps is a research program that aims to redesign treatments and strategies to prevent and reduce gambling harms.

New laws and regulations on gambling in Sweden were put into effect on January 1st, 2019 through the Swedish Gambling Act.<sup>43</sup> The new legislation reinforces the Swedish Gambling Authority's powers, including: operator licensing, regulation and surveillance, taxing of commercial gambling organizations, and enforcing strict advertising and promotion bans.<sup>43</sup> Although the focus of gambling legislation in Sweden is on regulating and licensing operators, some organizations have incorporated a public health approach to gambling. As part of this approach, there is acknowledgement of a broader conceptualization of harms (extended to family and friends, and community-level harms), similar to how substance misuse and addiction to alcohol and tobacco are framed in Sweden.

The Public Health Agency of Sweden designs and implements initiatives for preventing gambling problems and harms in partnership with the Swedish Gambling Authority. As part of these efforts, the Public Health Agency works to increase knowledge of gambling harms, develop and distribute support for gambling harm prevention, facilitate coordination of services and policies, and develop methods for prevention and treatment of problem gambling. 44 It also distributes funds to gambling-related research and community organizations, to further the prevention and treatment of gambling harms. 44

Another initiative of the public health approach to gambling in Sweden is the Swelogs survey. The Swelogs study is rooted in a multi-disciplinary public health perspective and conceptualizes gambling behaviour on a spectrum of varying problems, rather than as a clear-cut clinical dichotomy with pathological gambling at one end and "healthy" gambling at the other. The longitudinal study of the prevalence, incidence, and patterns of gambling and gambling harms in Sweden enrolled 15,000 participants in 2008, and another 21,000 in 2015.



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