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COMMENTARY

Considering the Public Health and Reno Models: Strategic and Tactical Approaches for Dealing with Gambling-Related Harms

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Abstract
Some critics of the Reno model appear to have misinterpreted its fundamental tenets by expressing the belief that the model is incompatible with the public health model. Both the public health and Reno models attempt to influence policies and strategies designed to promote responsible gambling and the reduction of gambling-related harms. In this article, we describe four principles that characterize a public health perspective focusing on gambling and discuss how the Reno model complements the public health approach. Both models encompass principles and guidelines that emphasize the shared responsibilities across multiple stakeholders including governments, industry, community welfare, and individuals. The Reno model represents a tactical framework for responsible gambling complementing the broader population public health approach, each model consistent in attempting to prevent the incidence, reduce the prevalence, and minimize gambling disorders and related harms. Paradoxically, although stakeholders are in agreement about the general principles and objectives, differences are evident in the manner different interventions are chosen and applied in efforts to achieve common goals.

Keywords Reno Model · Public Health Model · Gambling · Public Policy · Responsible Gambling

Since the publication of the Public Health (Korn and Shaffer 1999; Shaffer and Korn 2002) and Reno models (Blaszczynski et al. 2004) as templates for managing gambling-related activities, supporters and critics of these frameworks have struggled to interpret, understand, and properly apply their fundamental principles and guidelines. We suggest that the Reno and

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Public Health models are not equivalent or competitive, and do not reside on the same conceptual level (Blaszczynski et al. 2004; Collins et al. 2015; Hancock and Smith 2017; Korn et al. 2003; Korn and Shaffer 1999; Korn and Skinner 2000; Ladouceur et al. 2016; Shaffer and Korn 2002; Shaffer et al. 2015). The distinctions between these models need to be clarified and fully understood. Accordingly, the primary objective of this paper is to describe both models and advance the argument that the Reno model is a more narrowly focused and tactical example of a public health strategy, simply one of many public health-driven options that hold the potential to prevent the incidence and reduce the prevalence of gambling-related harms.

The public health framework has a long history of endeavors directed toward understanding the distribution of disease (e.g., prevalence) across population segments and identifying the environmental, social, and economic determinants of health. By using epidemiology to map the prevalence of diseases within communities, and the application of scientific theories describing causal relationships, government and related agencies have sought to implement policies designed to eradicate diseases and improve population level health. The public health model has expanded to incorporate lifestyle behaviors and quality of life.

In the following discussion, we will highlight the main features of the public health and Reno models. Then, taking into account the goal of responsible gambling (RG), we will discuss some misuses of these models by individuals who decide, on an a priori basis, their rationale for justifying the development of RG programs—even in the absence of evidence. Finally, in our concluding remarks, we will argue that, regardless of the model adopted by different groups or legislation, the main goal and objective of RG activities should always be to integrate interventions that have been demonstrated to produce positive and expected outcomes or, at least, are being evaluated to assess their effectiveness.

Understanding Theories and Models

It is important to recognize that both the Reno model and public health model are models. Simply put, models are incomplete theories about how some aspect of the world works. Models also can have different levels of foci. A public health model, for example, targets population level problems and provides guidance for individual, population, and government level responses. Reno model—responsible gambling programs focus more narrowly than public health programs on particular at-risk groups and provide guidance for individual players, community agencies, gambling purveyors, and governments. Both of these models fall short of becoming genuine theories—like the theory of relativity—because each lacks one or more of the four fundamental elements required for a theory: (1) concepts, (2) syntax or rules for how concepts relate, (3) semantics or operational definitions, and finally (4) a foundation of evidence.

It is important to bear in mind that strategies and tactics are different. Strategies identify and define long-term goals and purposes. Strategies incorporate plans and initiatives that stakeholders systematically implement to achieve their defined objectives and outcomes. Tactics, however, represent singular or multiple sets of activities that work in combination toward achieving those strategic objectives and outcomes.

We consider the public health approach toward gambling as a set of strategies for establishing (1) the incidence and prevalence of gambling-related harms, (2) the determinants responsible for influencing the distribution of such harms, and (3) data to inform consumer

protection policies. Such a public health strategy invokes the application of specific tactics (e.g., sampling, research methodologies and procedures, and measurements) to gather data that can inform appropriate policy responses and the development of responsible gambling programs to reduce the incidence and prevalence of gambling-related harms.

Crucially, stakeholders must not assume that public health strategies or Reno model activities are effective simply because their stated intentions or tactics appear sensible. For both the public health and Reno models, strategic activities can be best thought of as identifying the "what" while tactics target the "how" with evaluation and empirical evidence demonstrating progress toward the intended outcomes.

Are the public health and Reno models incompatible or divergent in their fundamental premises? Do the public health and Reno models seek to achieve different objectives? During recent years, some academics (e.g., Hancock and Smith 2017) have criticized the Reno model for being less integrative and useful than the public health model. However, we must determine the effectiveness of each model by establishing systematic and rigorous scientific evaluation. This program of evaluation research needs to consider that these two models are not competitive: they are two distinct and interactive models. Although both are models, the public health model focuses on a strategic roadmap for developing activities that can prevent the incidence and reducing the harms associated with gambling. Once a strategy for preventing and reducing harms is formulated, then stakeholders can select and implement responsible gambling programs, specific interventions, and initiatives. Essentially, the Reno model represents a focused and tactical subset of a global strategic public health model. Unfortunately, some academics have failed to understand the differences between strategic and tactical approaches for preventing and reducing the incidence and prevalence of gambling-related harms (Blaszczynski et al. 2011; Collins et al. 2015; Ladouceur et al. 2016; Shaffer et al. 2015). Public health programs provide the broad framework for establishing goals and objectives while Reno model activities focus on how to navigate that framework to achieve specific goals.

Public Health Policies and Programs

The way we frame social issues has "...direct impact on public policy debates; some frames provide for an expansive policy debate, while others act to curtail debate" (Korn et al. 2003, p. 236). Under the large umbrella of public health, there have been many specific programs to "improve" the public health. These have included quarantining leprosy cases during the Middle Ages, improving sanitation following the bubonic plague during the fourteenth century, and establishing measures to eradicate or control malaria, smallpox, and polio through environmental management and vaccination campaigns. Public health policies reside within the wider context of public policies that, since the Great Depression and post-World War II, have expanded to address a broad range of health, lifestyle, and economic factors that influence the quality of life in modern day societies (Hassel 2015) (e.g., birth control, gun control, tobacco, drug and alcohol use, suicide, assisted suicide, mental health, obesity, diabetes, cardiovascular diseases, and pollution). The fundamental objectives of public health policy are to define the core problem and key stakeholders, clarify and operationalize intended outcomes, integrate knowledge drawn from science and available evidence to develop strategic solutions, and establish systems to monitor and evaluate achievements set against benchmark metrics (Hassel 2015). So, public health models can be examined at a macro level and at a micro and specific level.

Bambra et al. (2005) argue that public health policies are "profoundly political" in nature because their implementation occurs across the backdrop of competing community subsections, values, and conflicting interests (Klimczuk 2015). The politics of health are immersed in debates centering on social equity, justice, and the fair allocation of resources and funds; public health policies are developed within the context of multiple competing and conflicting social, economic/business, political, and community stakeholders, competing moral and religious values, and criticism of the "intrusive" or "paternalistic" role of governments in limiting civil freedoms and lifestyle consumption patterns of community members (e.g., the so-called "nanny-state") (Hassel 2015). Moreover, determinants of health and well-being are related causally to the interplay of a wide range of broader cultural, social, and economic factors such as employment, income, housing, education, and ethnicity/race. This broad context might explain why some academics, who hold negative moral perspectives towards gambling per se, have criticized some basic assumptions of the Reno model (Collins et al. 2015).

Despite its 30-year history as applied in the field of gambling, the public health model has gained popularity and momentum during the last decade and a half. Furthermore, the public health model has been advanced in part by criticisms of the Reno model (Blaszczynski et al. 2004) and its purported influence on industry and government policies and strategies. For various reasons, some academics appear to have misinterpreted and/or misunderstood the general principles and objectives of the Reno model, considering the model to be at variance with traditional versions of the public health model (Hancock and Smith 2017). Consequently, it is timely to revisit and reflect on the current situation with the primary aim of clarifying the fundamental principles of the Reno model and how these intersect with the public health approach.

Basic Principles of the Public Health Model[1]

For much of the history of gambling, observers considered intemperate betting to be a moral weakness (Quinn 1891; Savory 1884). Gradually, as psychological thinking advanced, people began to consider excessive gambling as a psychological problem. Most recently, neurobiological views of intemperate gambling have started to emerge. Each of these different perspectives emphasizes the individual gambler and their various bio-psycho-social attributes and vulnerabilities.

Currently, the field of gambling studies might be facing an important paradigm shift—at least a sea change—with clinicians, researchers, and public policymakers beginning to view gambling from a public health perspective (Korn and Shaffer 1999; Shaffer and Korn 2002). Approaching gambling from a public health perspective promotes the examination of health-related phenomena through a population-based lens. One benefit of this view is that it promotes consideration of health-related phenomena at a macro level that might not be available using more individually oriented research approaches. In the following discussion, we can examine four basic principles that are seen to guide the use of a public health model: (1) scientific research is the foundation of public health knowledge, (2) public health knowledge derives from population-based observations, (3) health initiatives are proactive (e.g., health promotion and prevention are primary while treatment is secondary), and (4) public health is balanced and considers both the costs and benefits of gambling.

[1] This section presents material adapted from a previously released technical report (Shaffer 2003).

Principle 1: Scientific Research is the Foundation of Public Health Knowledge

A public health perspective requires evidence derived from scientific research. Currently, there is considerable debate about what research is scientific and what research is biased by beliefs and opinions rather than the independent pursuit of knowledge. There are pro- and anti-gambling advocates, for example, and some of these advocates also present themselves as "experts" or "scientists" on gambling and gambling-related problems. To assure objectivity, public health workers examine scientific evidence with an impartial and detached eye; advocates, however, often use only the scientific evidence that supports their firmly held and often immutable position and political agendas. This unfortunate circumstance provides the context for the emergence of the antithesis of science, that is, pseudo or junk science, promoting a moral stance masked in the guise of public health endeavors.

As real science progresses, new replicable findings recast existing, but irreproducible, knowledge and send it to the science junkyard. This process is typically very slow, and it tends to repeat itself. "...[T]he fate of all scientific endeavors is oblivion and the lucky scientist dies well before the first cracks appear in his edifice" (Rosenfield 2000, p. 58). A public health strategy must consider the costs (e.g., risks) and benefits (e.g., protective factors) of phenomena under investigation. A public health strategy cannot focus on just the social costs of gambling; it must consider the potential benefits. Without a balanced investigative portfolio, scientists might never have discovered the risks and benefits associated with various treatments (e.g., Albanese and Shaffer 2003; Humphreys and Weisner 2000; Kelly and Greene 2013; Schuman-Olivier et al. 2010) or the benefits associated with low dose exposure to substances that have toxic effects at high levels of exposure (i.e., hormesis) (e.g., Calabrese 2005).

To advance scientific understanding and the health of the public, new gambling-related research initiatives require well-developed theoretical maps to guide studies focusing on the distribution and determinants of disordered gambling. For example, epidemiological research focusing on the distribution of gambling has established reliable base rates of gambling-associated disorders across international boundaries. Consequently, gambling research should begin to follow the recommendations offered previously for psychiatric epidemiology. That is, once scientists identify the base rate of an illness with some degree of precision, they should direct their attention to vulnerable groups with very high rates of the disorder and comparatively to groups with very low rates of the disorder. This strategy allows investigators to test causal hypotheses (Regier and Robins 1991).

The concept of gambling disorders has evolved as scientists refine gambling-related theory, instrumentation, and research findings. As scientific theory advances our understanding of gambling disorders, a "gold" standard likely will emerge. Indices that do not rely on the self-reported adverse consequences of gambling will provide a gold standard (e.g., neurobiological indices, psychosocial indices that accurately identify gambling problems but are not directly related to gambling or its consequences). Ultimately, this development will permit clinicians to improve the diagnostic sensitivity and specificity of screening instruments; in turn, this advance will make available improved opportunities for more effective treatment matching. Similarly, researchers will become better able to distinguish sub-types of gamblers, match people with the appropriate type and level of preventive and clinical services, and distinguish those individuals and groups that do not require intervention.

Principle 2: Public Health Knowledge Derives from Population-based Observations

A public health approach to gambling considers the distribution and determinants of gambling and gambling-related health concerns across a target population. Epidemiological studies have identified certain segments of the population with vulnerabilities that place them at increased risk for developing gambling-related problems. Researchers have identified low socio-economic groups, elderly, youth, and those with co-morbid mental disorders as possible high-risk groups; there is a need to better understand the specific external and internal characteristics contributing to the increased risk. For example, lower-income households spend *proportionately* more of their money on gambling than higher-income households. Given that some gambling revenue goes to the government (e.g., lotteries), these data have encouraged the view that gambling expenditures represent a voluntary regressive tax that proportionately has greater impact on lower incomes (Clotfelter and Cook 1989).

Despite being derived from population-based evidence, the idea that gambling is a regressive tax can be misleading. Examining gambling as a tax provides an interesting illustration of a public health perspective and how such a view operates. Poverty often is associated with increased financial risk-taking, perhaps because of the psycho-economics of gambling (Lopes 1987). People living in poverty perceive greater potential to change their lives from a significant gambling win than individuals with greater wealth. The opposite also is true: individuals with wealth perceive little opportunity to change their lives from a gambling win—unless the magnitude of the potential win reaches a particularly meaningful level. This psycho-economic driving force is powerful; it can subdue public health and other social setting forces that encourage abstinence or moderation. The psycho-economics of gambling is a complex determinant for gambling frequency and intensity; it also has multiple correlations with many other determinants of health status (e.g., smoking and drinking). Consequently, it provides the landscape against which pro- and anti-gambling forces interact to shape gambling patterns among various population segments.

Gambling research has been concerned primarily with describing the individual-level characteristics of gamblers (i.e., idiographic factors); this focus is consistent with the natural tendency toward scientific reductionism, that is, the tendency to oversimplify (Hofstadter 1979). Since 1980, when the American Psychiatric Association first recognized intemperate gambling as a psychiatric disorder (American Psychiatric Association 1980), this approach to understanding gambling emphasized a gambler's thoughts, emotions, and behavioral attributes. In addition, this focus on internal events can be associated with shifts from healthy to unhealthy gambling. For example, clinicians have speculated that gambling was an attempt to change a gambler's feelings by distracting or shifting their attention. Treatment providers and researchers subscribing to this view developed a definition of disordered gambling and then created screening instruments based on the diagnostic criteria associated with these definitions.

Recently and because of its emphasis on population-based evidence, the public health perspective on gambling has encouraged a shift from a narrow focus on individual gamblers to a more expansive nomothetic examination of the social setting (i.e., cultural, social, and economic factors that mediate gambling). Just as classification and description is the foundation for understanding a data set, epidemiologic research represents the beginning phase for understanding population-based phenomenon. Consequently, many gambling researchers have embarked on a course of epidemiological study to describe the distribution and determinants of gambling in the general population. Throughout the world, epidemiological evidence on the prevalence of gambling disorders indicate rates have stabilized, and a relatively reliable

description of the distribution of gambling involvement and gambling problems has emerged for many segments of the population (Shaffer et al. 2004).

Principle 3: Public Health Initiatives are Proactive Public Health Programs that Emphasize Prevention and Harm Reduction

Because population-based research shows that certain population segments are more vulnerable to gambling problems than others, a public health strategy should protect and advance health by (1) preventing gambling-related problems among individuals and groups at risk for gambling addiction; (2) promoting balanced and informed attitudes, behaviors, and policies toward gambling and gamblers both by individuals and by communities; and (3) protecting vulnerable groups from gambling-related harms (Korn and Shaffer 1999; Shaffer and Korn 2002).

Proactively, public health workers who deal with gambling need to incorporate harm reduction strategies and tactics. Rather than exclusively working toward the eradication of gambling-related problems, public health authorities should embrace harm-reduction strategies directed toward minimizing the adverse health, social, and economic consequences of gambling behavior for individuals, families, and communities. At the very least, these initiatives would include four components: (1) healthy gambling guidelines for the general public (i.e., similar to low-risk drinking guidelines); (2) vehicles for the early identification of gambling problems; (3) moderation and abstinence goals for problem gamblers that can be offered non-judgmentally; and (4) systems for monitoring and reporting gambling-related participation trends as well as the incidence and burden of gambling-related illness.

Unfortunately, the antithesis of a proactive public health principle is to react, after the fact, to the presence of gambling and related problems. A medical strategy, for example, would be to wait for problems to emerge and then treat them. This type of reactive strategy discourages the development of coordinated programs. Reactivity pits pro- and anti-gambling forces against each other as if these groups were working toward disparate goals. For example, while some anti-gambling groups oppose gambling on moral grounds and hold a strict prohibitionist posture, other anti-gambling forces are not opposed to gambling in general, but rather to the adverse consequences of gambling (e.g., human suffering). Pro-gambling forces are equally against the adverse consequences of gambling either because of genuine social concern or because of the negative commercial impacts. A proactive rather than a reactive posture encourages both of these groups to come together to minimize any potential adversities associated with gambling. Unfortunately, as members of a cottage industry, both anti-gambling and treatment providers alike must paradoxically sustain gambling if they are to continue their current gambling-related purposes. Prohibitionists historically have increased interest in the objects of prohibition by those most at risk for developing problems; treatment providers sustain a manufactured interest in the adverse activity since they must focus on it to provide clinical services.

Principle 4: A Public Health Perspective is Balanced

A public health perspective toward gambling encourages the balance of many different perspectives. This balance includes a variety of research-related issues. In addition, a public health perspective encourages communities to articulate and evaluate its social values toward gambling; by careful identification and classification, these values can be successfully integrated into a community strategy toward gambling.

The public policy arena only recently has provided the setting to examine and debate the long-term social, economic, and health impacts arising from the dramatic expansion of gambling. For governments, there is considerable ambivalence as to the appropriate balance between permitting new gambling programs and regulating policies. For example, the government of Ontario, Canada, one of the largest owners of gambling operations in North America, reversed its policy to expand charity casinos throughout the province following widespread local controversy. Some church groups opposed the expansion of gambling on moral and ethical grounds. In the USA, the casino industry strenuously lobbies states and municipalities for opportunities to offer its gaming entertainment. Local communities engage in vigorous debate as to the impact of gambling on the public (e.g., safety and quality of life for their neighborhoods and families). State and provincial councils on compulsive or pathological gambling provide public education, help lines, and referral services, as well as advocacy for people and their families affected by gambling-related problems that require treatment services and insurance reimbursement for such care.

Public policymakers are struggling to calculate a cost-benefit analysis of the factors associated with gambling. This is complicated precisely because a public health position recognizes that gambling can yield both potential costs and benefits. These considerations affect all aspects of the community, including health, social, and economic dimensions. A cost-benefit analysis that incorporates the distribution of costs and benefits across a range of subgroups and vulnerable populations is essential to any evaluation of community impact. Only after weighing these matters can a public health strategy be developed that resolves important concerns and supports worthwhile initiatives.

The scientific literature and the mass media have attributed a range of difficulties for individuals, families, and communities that might be related indirectly or directly to gambling. Unfortunately, determining whether gambling causes each of these adversities has been—and remains—a complex and heatedly disputed matter. Research suggests that gambling can have a negative impact on health because of associated crime, substance abuse, poverty, and domestic violence.

Most gambling research has focused on its adverse mental health and social consequences. To date, with one notable exception (Rosecrance 1988), the study of gambling behavior has ignored the possibility of health gains associated with gambling. The possibility of "healthy" gambling (Korn and Shaffer 1999; Shaffer and Korn 2002) might help to explain the attraction of gambling. After all, gambling has a negative expected value; therefore, in the absence of alternative explanations, gambling seems to be at odds with people behaving in their self-interest.

For communities, groups, and individuals, the central public health question is whether gambling adds to or detracts from the quality of life. Estimates of the health, social, and economic costs of problem and pathological gambling have been proposed but the methodologies require further refinement (National Research Council 1999). The National Gambling Impact Study Commission (National Gambling Impact Study Commission 1999) estimated that the annual cost for problem and pathological gamblers is $5 billion (U.S.) per year and an additional $40 billion (U.S.) in lifetime costs for productivity reductions, social service, and creditor losses. Where casinos have been introduced into a community, unemployment rates, unemployment insurance, and welfare payments decline by one-seventh and earnings rise in construction, hospitality, transportation, recreation, and amusements sectors (Gerstein et al. 1999). While focusing on the adverse effects of gambling, Politzer, Yesalis, and Hudak suggest that each problem gambler negatively affects 10 to 17 people around him or her, including

family, employer, and government (Politzer et al. 1992). However, taken together, the current state of gambling costs and benefits research rarely highlights the distribution of costs and benefits. Consequently, contemporary cost-benefit estimates fail to provide certainty about the nature of this relationship at either the community or the individual level of analysis.

Basic Assumptions, Premises, and Principles of the RENO Model

The Reno model is consistent with and supports a public health approach to responsible gambling and harm reduction. Ironically, one of the co-authors of the seminal public health publications (Korn and Shaffer 1999; Shaffer and Korn 2002) also is a co-author of the Reno model. In their original article, Korn and Shaffer argued for the application of a population lens to responsible gambling. This strategy will encourage mapping the distribution of, and social and economic variables contributing to, gambling-related problems, and the interaction between agent, host, and environment. A population lens does not negate the importance of adequate allocation of funds to support providing health services, equity accessing treatment options, and the effective treatments at the individual level. Both foci are important with the latter shrinking as the former acts to reduce the incidence and subsequently the prevalence of gambling disorders and related harms.

Interestingly, the rationale encouraging a shift to a public health model (Korn et al. 2003) predates several of the tenets advanced by the Reno model: healthy gambling is possible, gambling can enhance an individual's experience and wellbeing, and responsible gambling is predicated on the presence of informed choice and participating in low-risk situations. The Reno model articulates these principles. For example, the Reno models holds the assumption that safe levels of gambling participation are possible, and that the activity offers recreational, social, and economic benefits to individuals and community. Concomitantly, the Reno model accepts that a proportion of participants, family members, and others can suffer significant harm because of excessive gambling, and therefore, the social license to provide products is predicated on the basis that the total social benefits of gambling must exceed total social costs. The Reno model further assumes that the ultimate decision to gamble or not belongs to the individual and must be based on informed choice; however, the responsibility for consumer protection resides with multiple stakeholders, and not simply the individual. Flowing from these assumptions, the Reno model adopts the premises that controlled participation and return to safe levels of play represents an achievable goal for some with a gambling disorder. Abstinence becomes a viable and important, but not necessarily essential goal.

Consistent with the principles of public policy development, the Reno model clearly states that different stakeholders should work together; be guided by scientific research rather than ideology, political imperatives, or anecdotes; and use minimally intrusive and restrictive measures so that most recreational users are not unduly affected. This principle does not assume that all stakeholders have the same goals and interests. Quite the opposite; on some issues, stakeholders might have different goals and, at times, even conflicting interests. Stakeholders need to recognize this circumstance and be able to establish a congruous working agenda.

From this vantage point, the Reno model complements the public health approach through principles and guidelines that emphasize the shared responsibilities across multiple stakeholders including governments, industry, community welfare, and individuals. It represents a tactical framework for responsible gambling where the primary outcomes are the prevention and reduction of gambling-related harms across the full spectrum of gamblers. The Reno

model emphasizes that the ultimate decision to gamble belongs to the individual. This situation does not imply that all the responsibility for gambling rests on the shoulders of individual players. Thinking that gamblers are completely responsible for their gambling rests on the erroneous belief that the "ultimate decision" to gamble is equivalent to "responsibility" for gambling. Responsibility implies that individuals maintain some control over their decisions, actions, and behaviors. Without this modicum of control, individuals are rendered helpless.

Misuse and Misrepresentation of the Reno Model

One of the unfounded criticisms of the Reno model relates to a common misrepresentation of what the model states with respect to individual responsibility (e.g., Crosby and Vander Linden 2019). A close and unbiased reading of the Reno model article clearly indicates that this model ascribes responsibility to many stakeholders, not just the individual. It is not open to conjecture as to who makes the final decision to gamble: if not the individual, who then makes the decision? This is not to claim that the decisions made are necessarily in the best interests of the player but that timely, accurate, and full information is a necessary, but not sufficient, condition for informed choices to be made. The Reno model is clear: The primary stakeholders responsible for gambling activities and responsible gambling are "…consumers, gambling industry operators, health service and other welfare providers, interested community groups (i.e., including those in favor and opposed to legalized gambling), as well as governments and their related agencies that have the responsibility to protect the public… (with emphasis on its most vulnerable segments)" (Blaszczynski et al. 2004, p. 303). It is worth repeating: "The Reno model states that the government has the final responsibility for maintaining legislative and regulatory functions to protect consumers, and the industry to implement responsible gambling strategies to minimize harm and to provide sufficient and necessary information on which informed choices can be made" (Shaffer et al. 2017, p. 1198).

Unfortunately, while developing and promulgating the Reno model, we failed to sufficiently address players with impaired capacity to make informed decision due to concurrent mental or physical health conditions (e.g., manic depression, Parkinson's medication, intellectual disabilities, dementia, and other co-occurring disorders). Let us be clear: in these cases, there is no dispute that consumer protection and additional interventions are required to address excessive gambling behaviors. Research in the neurosciences (e.g., dopaminergic dysregulation), personality (e.g., impulsivity, low self-esteem), and family influences (e.g., genetics, dysfunctional family history, abuse and trauma) highlight the complex matrix of causal and contributory factors on the capacity for effective self-control and self-regulation. However, as with alcohol, tobacco, and psychoactive drug use, individuals remain accountable for decisions made related to aspects of their behavior. As described, we do not intend to diminish or negate the responsibility of others who promote and supply products to prevent the adverse impact of consumption or excessive ingestion of these products; all have a serious and significant part to play in protecting the public. Where the balance of responsibility lies is an issue that remains open to debate and subject to opinions and moral judgments.

Conclusions

Four principles characterize a public health perspective on gambling. Each principle represents a strategic position that compels both pro- and anti-gambling stakeholders to pause and

consider the merits of their respective positions as well as the evidence available to support these positions. These strategic positions also provide a framework for tactical activities. Interestingly, these positions often emerge from subjective opinions and selective use or misrepresentations of research. It is important to recognize that the public health view tends to shift the gaze of research and public policy toward broad-based, macro population considerations. Despite this tendency, a public health perspective does not eliminate the importance of individual experiences (Shaffer and Kidman 2004). Instead, while featuring a macro population-based view, public health strategies integrate both personal and population-based evidence into our understanding of gambling and other health-related concerns. The more specific a conceptual model is, the more it tends to open the door to criticisms and personal opinions. It is easier to debate the details. All stakeholders can agree about the general principles of a model, but easily can differ about the way to apply different interventions to achieve their goal (Shaffer et al. 2019). Finally, a public health perspective rests upon broad-based scientific principles that guide the interpretation of evidence requiring rigor while simultaneously acknowledging the values of the community. As public health science advances, public policy debates follow. This is the inevitable wake that follows efforts to translate scientific research into practice and public policy; unfortunately, this often occurs within a social setting that cannot easily distinguish science from junk science. When viewing the public health and Reno models as reflecting the common aim of minimizing gambling-related harms, more can be achieved by proponents of both approaches than by criticizing each and working at cross purposes. Both models have significant contributions to make, each in its own but complementary actions.

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Compliance with Ethical Standards

Ethics Approval This article does not contain any studies with human participants or animals performed by any of the authors.

Conflict of Interest The authors declare that they do not have conflict of interest.

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