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A Public Health Perspective for Youth Gambling

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ABSTRACT *The recent emergence of gambling problems among youth around the world is alarming. For those most vulnerable in our society, children and adolescents, problem gambling presents a serious public health concern. Our current knowledge and understanding of the magnitude of the problem and its considerable impact upon the well-being of youth compels us to respond in a timely and effective manner. A general public health paradigm to gambling, originally articulated by Wynne (1997) and Korn and Shaffer (1999), highlights the importance of such an approach. However, a conceptual model and framework to understand and specifically address youth problem gambling within a public health framework is needed. This article articulates a theoretical framework and model that will help facilitate the development, implementation and evaluation of a comprehensive, multi-level health promotion and prevention strategy for youth problem gambling.*

Introduction

Researchers, clinicians and parents have only recently begun to recognise the importance of adolescent gambling behaviour. While the actual prevalence rates of problematic gambling among youth are somewhat contentious (see Derevensky *et al.*, 2003 for a thorough discussion of this issue), there is considerable empirical research which reports that a large number of adolescents are gambling and that the prevalence rates of adolescent problem gambling are between 4–8% with another 10–15% at-risk for gambling problems (Hardoon and Derevensky, 2002; Jacobs, 2000; National Research Council, 1999; Shaffer and Hall, 1996). Despite the potential serious negative consequences associated with at-risk gambling to the individual, their family and peers and the far-reaching impact upon society, gambling has become a popular form of recreation for adolescents as well as adults.

Although traditionally viewed as an innocuous adult pastime, more and more underage youth have been drawn to participating in gambling activities. The easy accessibility and availability of multiple forms of regulated and unregulated gambling has resulted in widespread gambling opportunities. The social acceptability, excitement, entertainment and potential financial freedom accompanying gambling are also attractive to youth. These factors, coupled with their general willingness to engage in high-risk behaviours and the lack of school-based or community prevention and awareness programs, have made youth even more vulnerable to the risks associated with gambling.

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Problem gambling remains socially invisible and masked by popular misconceptions. Studies show that a large number of adults perceive gambling to be a relatively harmless form of entertainment and a possible means of achieving financial freedom (Azmier, 2000). Stereotypes of the typical pathological gambler, the fact that adolescents have minimal access to large sums of money and the belief that age prohibitions and legal statutes prevent youth from gambling in most jurisdictions have negated the concept of an adolescent pathological gambler. Furthermore, governmental ownership and/or sponsorship of gambling venues, widespread advertising and the glamorisation of gambling through the mass media have succeeded in both legitimising and destigmatising gambling in the general population and have helped reinforce erroneous beliefs about gambling in society (Azmier, 2000; Zangeneh *et al.*, 2003).

However, the consequences of gambling-related problems among youth can be devastating. Behavioural, psychological, social, academic and interpersonal problems including delinquency, criminal acts, poor academic performance, early school truancy, disrupted familial and peer relationships and suicide pose a strain on not only the individuals affected, but also for families, peers, communities, health services and society in terms of human suffering and the social and economic costs (Crockford and el-Guebaly, 1998; Hardoon and Derevensky, 2002; Korn, 2000; Korn and Shaffer, 1999).

Until relatively recently, gambling has not been viewed as a public health issue (Korn and Shaffer, 1999; Wynne, 1997). The importance of such a framework lies not in merely how the issue is conceptualised, but rather, a public health perspective applies a different approach for understanding gambling behaviour, analyzing both its benefits and costs, as well as identifying multilevel strategies for action, intervention and prevention (Korn, 2000; Korn *et al.*, 2003; Korn and Shaffer, 1999; Messerlian *et al.*, in press; Shaffer, 2003). While such a model has been articulated elsewhere for adult gamblers and gambling in general (see Korn, 2000; Korn *et al.*, 2003; Korn and Shaffer, 1999; Shaffer, 2003; Wynne, 1996), few attempts have applied this perspective for adolescents (although Dickson *et al.* (2004) have examined the harm minimisation approach in preventing youth gambling problems and Messerlian *et al.* (in press) have provided a general model for public health workers). Movement towards this model is not without its obstacles (see Korn *et al.*, 2003). Nevertheless, by presenting a detailed model and framework we hope its adoption will become easier.

The intent of this paper is not to provide a comprehensive review of our existing knowledge of the risk factors associated with youth gambling problems but rather to examine and provide a theoretical public health approach as it relates to the prevention of youth gambling problems. Derevensky *et al.* (2001) conducted a comprehensive review of existing gambling prevention initiatives and concluded that while empirical knowledge of the prevention of youth gambling problems and its translation into science-based initiatives is limited, the growing field of youth gambling can make use of the considerable literature and prevention initiatives on adolescent alcohol and substance use given their many similarities. As such, the strategies and recommendation presented here are theory-based and require implementation and empirical evaluation in order to begin to develop the evidence-base necessary for best-practices.

Population-Based Approach

Problem gambling is governed by a complex set of interrelating factors, causes and determinants. It is the interplay of multiple factors that determines an individual's propensity to developing a gambling-related problem (Jacobs, 1986). Recognising the origins of the problem requires viewing the rapid expansion of gambling and subsequent gambling problems through a social, political and economic lens. A population-based approach aims to shift the distribution of all risk factors in a favorable direction (Rose, 1992).

The application of a population approach has not yet been fully developed for a number of reasons: 1) knowledge about the risk factors associated with youth having gambling problems is only in its infancy; 2) the traditional approach to dealing with youth with gambling problems has incorporated a medical model; 3) there has been insufficient awareness concerning the prevalence and the short- and long-term consequences of youth gambling problems; 4) mental health professionals and school personnel are generally unaware of the problem; and 5) few science-based education and prevention programs have been developed, implemented and evaluated.

Within the more traditional medical model, individuals are identified and treated for their gambling problem, often through government-funded treatment programs, and are held accountable for their health. The weakness of such an approach is that it is temporary, palliative and fails to alter the underlying causes of the problem (Rose, 1992). The consequence of not addressing the underlying factors (social and environmental determinants as well as individual risk factors) that result in individuals developing a gambling problem suggests that a continuous flow of new individuals (incidence cases) will likely arise. Even if individuals identified as problem gamblers enter treatment and relapse is minimal, this approach does little to reduce the incidence of new cases. From a public health perspective, gambling professionals should focus efforts on a population level and work at reducing problem gambling by addressing the biological, social, economic and environmental determinants.

Applying Rose's (1992) theory of prevention to gambling, the prevalence of gambling problems is a function of society's overall level of gambling participation. Hence, the population's level of gambling availability and participation partly predicts the number of individuals with gambling problems. On a societal level, an increase in the number of gambling venues and opportunities (i.e., exposure to gambling opportunities) implies an increase in the number of social gamblers and, consequently, results in an increase in the number of problem gamblers (Griffiths, 1999, 2002; Jacobs, 2000). An exposure type model, as described by Shaffer (2003), has some support; however, additional research is needed to validate some of the assumptions. Nevertheless, public health and gambling professionals must consider what effect an *increase* in the number of gambling venues and a decrease in the age of exposure/onset have on the number of youth gambling and those with gambling problems. As well, consider the alternative; what effect would a *decrease* in the population's overall level of gambling participation have on the prevalence of gambling problems among youth?

A Framework for Action

A public health framework incorporates a multi-dimensional perspective, recog

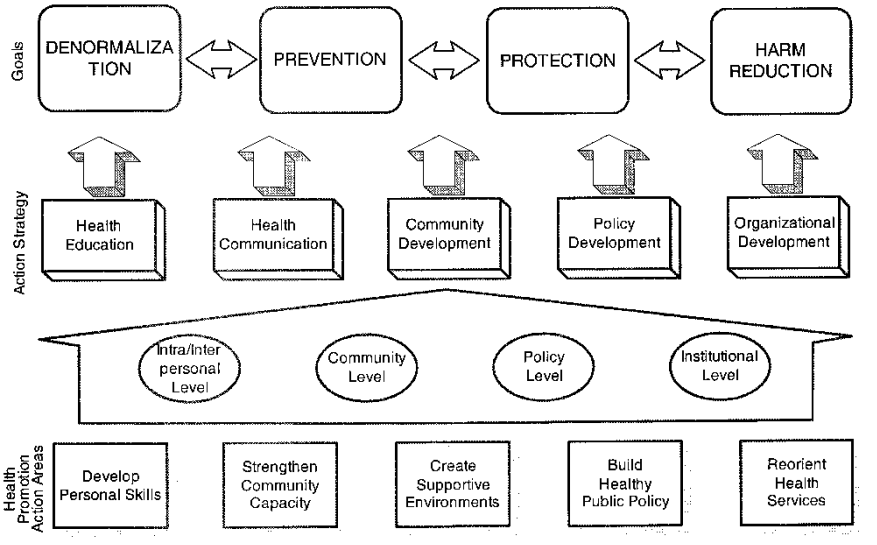

Figure 1. A public health policy framework for action

nises the individual and social determinants, draws upon health promotion principles and applies population-based theory. This approach represents a proactive move towards addressing youth gambling. The Framework for Action (see Figure 1) depicts a theoretical model to guide public health action in the area of youth gambling. Drawing from the widely accepted Ottawa Charter for Health Promotion (WHO, 1986), five action areas—*development of personal skills, strengthening community action, creating supportive environments, reorienting health services* and *building healthy public policy*—are articulated. The framework moves from the bottom, at the five health promotion action areas, and flows upward to the four gambling-related goals. Within each stage, the framework helps guide and direct action towards achieving the principle public health goals.

Health Promotion Action Areas

The first action area, *development of personal skills*, helps individuals, including youth, parents and professionals (i.e., doctors, nurses, teachers and counsellors) to acquire accurate knowledge and skills required to make sound decisions concerning unhealthy gambling behaviour. Through learning new skills, professionals and parents can identify, protect or support youth who may be experiencing a gambling problem, or individuals at-risk of developing problems.

Strengthening community capacity is an important prerequisite for action in addressing youth gambling problems. Effective public health action must be formulated with an appreciation of the history of each community and be appropriate within the local context (e.g., approaches in North America and Europe may differ from those in Australia or New Zealand). Strategies that seek to educate and empower communities may help bring gambling issues to the

public policy agenda. Raising the visibility and awareness of the potential burden and benefits associated with gambling within communities may help catalyze action toward meaningful and sustainable policy and community development. Furthermore, the importance of increasing the visibility of youth problem gambling to those in a position that can affect policy should not be overlooked. Support and political commitment may be acquired through emphasis related to the responsibility to protect youth. Enhancing communication and dissemination of information on the social costs and negative consequences of youth gambling may help garner support for public health action.

Creating supportive environments includes fostering a physical, social-economic, political and cultural environment that promotes and enhances the health and well-being of individuals and of society as a whole. It also consists of eliminating factors, creating barriers and improving conditions that harm an individual's health. Environments where children and youth live and play should be supportive and conducive to their developmental needs and to their life skills and decision-making ability. Strategies include reducing youth exposure to gambling promotions and advertising, enforcing legislative statutes concerning minimum age requirements, limiting the number and location of gambling outlets and promoting school and home environments that do not encourage gambling behaviour. These are among some of the important public health considerations in helping to foster a healthier environment for youth.

Building healthy public policy consists of implementing strategies that make healthier choices easier through government legislation, regulation and fiscal measures. It can also include advocacy for the development of sensible social policy. All sectors of government have a responsibility to work at developing policies and regulations that limit the expansion of gambling in communities, funding research examining the socio-economic and health impact of gambling to individuals and communities, enforcing existing regulations and statutes, as well as influencing legislation on advertising and marketing of gambling products to youth.

Lastly, *reorienting health services* in primary care settings and health and social services care facilities are necessary in order to ensure that professionals working with youth are sensitive to their special developmental needs, able to identify potential gambling problems, intervene if needed and refer youth with severe gambling problems when necessary. Organisational development, including policy development, may be the principle strategy by which health services provision is influenced. Implementing professional training and education can help ensure that appropriate early identification and support for gambling problems is provided. Health centres and organisations need to develop policies stating that gambling prevention, training, treatment and support will be provided. Research-based treatment programs should also be implemented and easily accessible in communities.

Levels of Action

The ecological health promotion model (McLeroy *et al.*, 1988) describes five levels of influence on health behaviour; strategies are directed at modifying intrapersonal, interpersonal, institutional, community and public policy factors. These five factors can be viewed as levels of determinants of gambling behaviour as well as powerful resources for change. Examining gambling behaviour

from an ecological perspective predicates moving beyond treatment and counselling and instead focuses on addressing gambling from both individual and social-environmental levels. By examining and understanding the various factors that influence gambling behaviour, it becomes clear that any public health framework must target interventions and work at modifying all five levels within this ecological model (see Messerlian *et al.* (in press) for a complete discussion).

Health Promotion Strategies

Health Communication and Health Education

Health education begins with increasing knowledge and awareness of the potential risks and consequences of underage gambling in not only the adolescents themselves, but in parents, peers, school personnel, health professionals and the general public. Adolescents' attitudes about gambling may be formed through mass media marketing and promotion of gambling (Griffiths, 2002) and modeling of parents and peers (Hardoon *et al.*, 2003). There is considerable evidence that school administrators, parents and the general public fail to view gambling among adolescents as a serious problem (Derevensk *et al.*, 2003). Implementing health promotion measures, including health education in schools and health communication (e.g., social marketing) within communities enhances public awareness and knowledge of the risks of gambling among youth. These strategies encourage the public to be more aware of the risk, costs and consequences of underage gambling and may help diminish its social acceptability.

Health communication campaigns have been one of the most widely used vehicles in educating the public about risky behaviours (Brown and Walsh-Childers, 1994). Mass communication strategies, through disseminating persuasive information on unhealthy behaviours to the public, have the potential to influence social norms and attitudes regarding that behaviour (Yanovitzky and Stryker, 2001). Other theories, such as Tones' model of health promotion, propose that community health education can help set the public health agenda and raise critical consciousness of community health issues (Tones, 1993; Tones *et al.*, 1990). This critical consciousness raising may empower and enable individuals and communities to take more control over their health. Public education measures such as social marketing and the use of the mass media can help mobilise community participation and create pressure and support for policy change. Further, health communication campaigns can increase public awareness of risky health behaviour (Lapinski and Witte, 1998); however, public education independently is not sufficient to change behaviour (Hornik, 1997). In order to be effective, public education strategies need to be part of an integrated approach, which includes implementing healthy public policy that modifies the existing environment (Tones, 1993).

Community Development

A community development approach is a process by which a community defines its own health needs, considers how those needs can be met and decides collectively on priorities for action (CHIRU/LCHR, 1987). Although there are numerous advantages to this approach, a number of challenges and barriers

exist. Nevertheless, community development, or participation on any level, is an important element of health promotion. Involving individuals and community groups in the development and implementation of programs and the policy-making process helps strengthen public support and enhances public knowledge and perception of the risks of gambling in youth. Community development can also help mobilise community organisations to build and strengthen bottom-up strategies.

Policy Development

Under economic constraint, many countries, states, provinces and communities have become dependent on revenues generated by the gambling industry and may be reluctant to change regulations in favour of public health policies. However, there remains a need to develop responsible social policies that balance public health interests with the economic gains of governments and industry and the entertainment value afforded to the consumer. Public policy development may be a cost-effective and socially responsible way of reducing the burden of gambling disorders and related problems, while simultaneously protecting the public's health. Through public education, research, and policy and media advocacy, governments may be influenced to establish sensible, responsible public policies on the regulation, growth and expansion of gambling products, activities and venues.

Policy development approaches further focus on the social and political factors that facilitate or impede behavioural choice and they aim to remove structural barriers to health-protective action as well as constructing barriers to risk-taking (Campbell *et al.*, 1999). Policy measures that help create supportive environments can be effective in that they *enable* youth to change their behaviour rather than *persuade* them to change (Tawil *et al.*, 1995). For example, the age of onset of gambling behaviour represents a significant risk factor; the younger the age of initiation the greater the risk of developing a gambling related problem (Gupta and Derevensky, 1997, 1998; Jacobs, 2000; Wynne *et al.*, 1996). Decreasing the age of first exposure to gambling participation by limiting the accessibility and availability of gambling products, venues and activities and/or by raising the age of participation is an important policy development issue. Further, advocacy and development of healthy public policies on regulating and limiting the expansion of gambling in communities will help develop an environment where gambling is less accessible and less visible to minors. Without the development of policies that foster an environment supportive of behaviour change, educational programs at the community or school level are not likely to be effective (Campbell *et al.*, 1999).

Organisational Development

Corporate, school and organisational culture and policies are important factors that have a profound influence on knowledge, beliefs and attitudes about health and health-related issues. Organisational development within the gambling industry includes, but is not limited to, developing policies and programs offering information to retailers on legal liabilities, the importance of enforcing the legal age for gambling participation and the reasons for doing so, all of which help increase barriers for underage youth trying to gamble. Furthermore,

strategies that advocate for the development of global industry standards regulating the promotion and marketing of gambling products and venues in light of research suggesting that youth are adversely affected by advertising tactics (Griffiths, 1999, 2003; Felsher *et al.*, 2004) would be another example of how this strategy can be developed with the gaming industry.

Organisational development can further include developing policies and standards of care that are oriented towards gambling prevention and treatment in primary care settings. For example, out-patient facilities including clinics and community health centres can offer training programs to their staff. These programs can include identifying, assessing and providing brief intervention to youth with gambling problems. Through such organisational development, primary care facilities can ensure that all staff have access to professional training and have at their disposal the resources and tools needed to respond to youth gambling issues including access to gambling screens, information pamphlets, treatment guidelines and referral contacts.

Public Health Goals in Youth Gambling

The four public health goals, *denormalisation, prevention, protection and harm-reduction* (Figure 1), are independently relevant and important; however, together these goals address the spectrum of youth gambling issues. Each of the goals have been adapted and applied to youth problem gambling.

Denormalisation within the context of youth gambling involves questioning and critically assessing underage gambling and challenging current attitudes (see Dickson *et al.*, 2002). Similar to strategies used in tobacco prevention, denormalisation can also include drawing attention to the marketing strategies and tactics employed by the gambling industry. Specifically, denormalisation aims to influence social norms and attitudes on youth gambling, challenge current myths and misconceptions among youth and the general public and promote realistic and accurate knowledge of the impact of youth gambling.

Prevention on primary, secondary and tertiary levels remains an important overall public health goal. In order to prevent gambling problems at all levels of risk among youth, prevention objectives should aim to increase knowledge and awareness of the risks of gambling among youth, professionals and the general public; promote informed decision-making in individuals and families; increase the early identification and treatment of youth experiencing gambling problems or at-risk of developing one; help youth develop effective problem-solving, coping and social skills required for healthy adolescent development; and minimise the harm of gambling problems in youth, their families and communities.

Society performs an important function in that it provides *protection* for children and youth through developing and implementing sound public health and social policies and programs. Governments, the industry and the public have a responsibility to protect children and adolescents from potentially harmful activities such as access and exposure to gambling. This goal, as applied to youth gambling, should aim to protect youth from exposure to gambling products and promotion through effective institutional policy and government legislation and reduce the accessibility and availability of all forms of gambling for underage youth. Further, efforts to protect youth from the direct and indirect

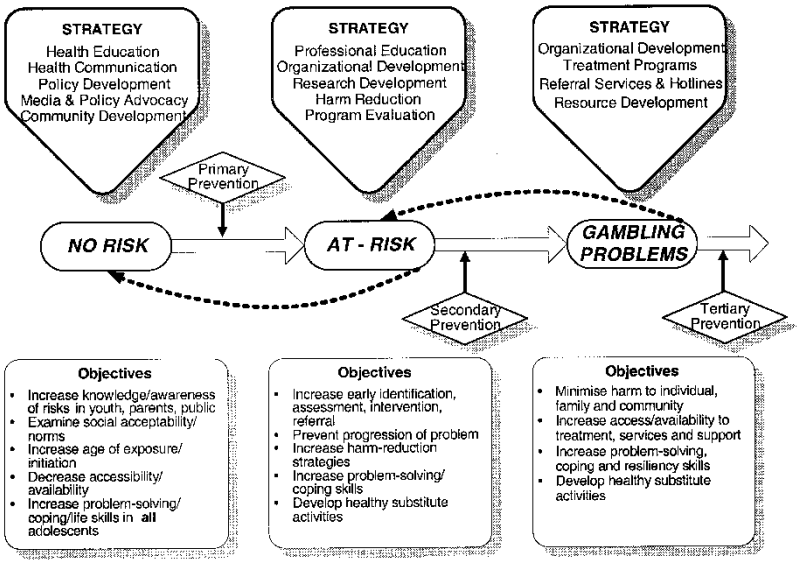

Figure 2. Youth Gambling Risk Prevention Model

marketing and advertising of gambling products and venues and support for the development and implementation of prevention programs is required.

Harm-Reduction focuses on preventing problem behaviour without requiring abstinence for adolescents already involved in gambling. As an overall goal, harm-reduction strategies should be targeted to those already gambling and those at-risk. Harm-reduction aims to reduce the risk of developing a gambling problem among youth who gamble in an at-risk manner and decrease the potential negative consequences of gambling among youth without necessarily making abstinence a goal (see Dickson *et al.* (2004) for a discussion of the harm minimisation approach as applied to gambling).

Action Along a Continuum

The *Youth Gambling Risk Prevention Model* (Figure 2) emphasises the importance of addressing youth gambling behaviour along a continuum and the need for different forms of intervention to address each level of risk. The model illustrates the continuum of gambling risk; the primary, secondary and tertiary prevention intervention points; the related prevention objectives for each level of risk along the continuum; as well as the recommended health promotion strategies required to achieve the prevention objectives.

The benefit of this model is that it is bidirectional and delineates two primary trajectories: 1) a risk continuum; and 2) a prevention pathway. The risk continuum moves from *no-risk* to *at-risk* and from *at-risk* to *gambling problems*. The continuum can also move beyond *gambling problems* indicating that problem gambling can range from mild to severe and in some cases lead to devastating outcomes. The prevention pathway moves in the opposite direction and aims at reversing the risk at each level along the continuum. The three prevention points block or prevent the progression at each stage in the gambling risk continuum.

Further, the model links clusters of health promotion strategies to the prevention objectives outlined at all three levels of risk. The health promotion strategies need to be designed, tailored and implemented to address and achieve objectives according to the needs of individual communities. Various elements from the *Youth Gambling Risk Prevention Model* are applied and organised into Table 1 which outlines specific objectives, suggested strategies and recommendations under all levels of prevention for each of the three risk groups (see Messerlian *et al.* (in press) for a complete discussion of this model).

Conclusions

Today's youth are growing up in a society where gambling venues and opportunities are abundant, legally sanctioned and government supported. For most adolescents gambling poses no serious risk; however, for some, gambling problems can lead to devastating consequences. Moreover, individual consequences impact the wider social community. The development of problem gambling is rooted in social, economic, environmental and biological determinants. As such, no single explanation dominates and, therefore, simple, quick-fix solutions will likely not be effective. Some governments, such as New Zealand, have recently enacted a public health framework as part of their legislation on responsible gambling. As an emerging public health issue, stakeholders including professionals, governments, communities and the industry must work together and find a balance that meets economic interests while preventing and protecting youth from the possible risks and harm associated with gambling.

This paper has proposed a theoretical public health framework and prevention model for youth problem gambling by exploring basic health promotion and prevention theories. It is evident, through examining youth problem gambling along a continuum of risk, that public health goals must be set in order to delay the onset, reduce the risk and minimise the negative consequences of gambling problems among youth. It is suggested that the model described will help those working in the field of gambling begin to examine and address youth issues through a public health lens. This model hopefully serves as the starting point for future work and movement towards a public health approach. However, it is recommended that this model be tailored to community and cultural needs and be tested in order to assess its viability and applicability to different settings and populations.

As gaming technology expands and the industry continues to burgeon, so too will gambling opportunities and participation. With this growth, we are likely to observe a rise in the concomitant effects of gambling in youth. Heeding lessons from the past, those working in the field of adolescent health must build upon current knowledge, forge effective partnerships, advocate for more resources and work at nesting gambling policies and programs within a wider and more cohesive social policy framework. There is an urgent need to increase our knowledge and understanding of the risk factors and social costs associated with youth problem gambling, to influence social policy and to develop, implement and evaluate treatment and prevention programs.

Table 1. Application of Youth Gambling Risk Prevention Model

Level of prevention	Objective	Strategy	Recommendations
Primary	Increase knowledge awareness of risk in youth, parents and public	Health education	Develop, implement and evaluate interactive school-based prevention program with a peer-led component and booster sessions
			Develop parent education programs Organise public education forums and conferences on risks, costs, consequences of youth gambling
	Examine and challenge social acceptability and norms about youth gambling	Health communication	Implement social marketing/public awareness campaigns
			Disseminate effective anti-gambling advertising program
			Design point of purchase awareness materials (e.g., signs on lottery booths, statements on play slips or tickets)
			Implement Gambling Awareness Weeks with special focus on youth
	Increase age of exposure and initiation	Policy development	Develop and enforce regulations and statutes on underage gambling
			Legislate policy on increasing the legal age for all gambling to 21
			Develop school policies on gambling
	Decrease accessibility and availability of gambling to youth	Policy development	Develop government regulations on marketing and advertising of gambling products and venues
		Policy and media advocacy	Advocacy and development of policy on regulating the expansion of gambling in communities
			Limit the location and density of VLT outlets and ticket vendors
			Implement awareness and education programs for retailers and venue operators
	Increase problem-solving, coping and life skills in adolescents	Community development	Develop educational resources and programs for youth
Secondary	Increase early identification, assessment, intervention and referral	Professional education	Implement education and training for teachers, health care professionals and social service providers
			Advocate for youth service groups to include gambling prevention in existing programs

Table 1.—*continued*

Level of prevention	Objective	Strategy	Recommendations
	Prevent progression of problem	Harm reduction	Incorporate youth gambling harm-reduction programs in existing youth services
			Promote existing telephone help-lines
			Develop and distribute education materials such as harm-reduction wallet cards for each type of game
	Increase problem-solving and coping skills	Organisational development	Develop resources and programs for at-risk youth
	Develop healthy substitutes activities	Organisational and community development	Develop alternatives programs for at-risk youth
Tertiary	Minimise harm to individual, family and community	Organisational development	Implement professional training on early identification and brief intervention
			Develop standards of care for gambling prevention and treatment
	Increase access and availability to treatment services and support	Treatment program development	Develop and implement empirically validated youth treatment programs
			Institute policies in hospitals, clinics and treatment facilities on provision of gambling prevention and treatment
	Develop healthy substitutes	Organisational development	Develop alternatives programs for at-risk youth

References

Azmier, J. 2000. *Gambling in Canada: Triumph, Tragedy, or Tradeoff. Canadian Gambling Behaviour and Attitudes*. Canada West Foundation, Calgary, AB.

Brown, J.D. and Walsh-Childers, K. 1994. 'Effects of media on personal and public health', in J. Bryant and D. Zillmann (eds) *Medial Effects: Advances in Theory and Research*. Lawrence Erlbaum, Hillsdale, NJ: pp. 389–415.

Campbell, C., Wood, R. and Kelly, M. 1999. *Social Capital and Health*. Health Education Authority, London.

Community Health Initiatives Resource Unity/London Community Health Resource (CHIRU/LCHR). 1987. *Guide to Community Health Projects*. NCVO, London.

Crockford, D.N. and el-Guebaly, N. 1998. 'Psychiatric comorbidity in pathological gambling: A critical review', *Canadian Journal of Psychiatry—Revue Canadienne de Psychiatrie*, 43, pp. 43–50.

Derevensky, J., Gupta, R., Dickson, L. and Deguire, A-E. 2001. 'Prevention efforts toward minimising gambling problems', Paper prepared for the National Council on Problem Gambling, Center for Mental Health Services (CMS) and the Substance Abuse and Mental Health Services Administration (SAMHSA), Washington, DC., June.

Derevensky, J., Gupta, R., Hardoon, K., Dickson, L. and Deguire, A.E. 2003. 'Youth gambling: Some social policy issues', in G. Reith (ed.) *For Fun or Profit? The Controversies of the Expansion of Gambling*. Prometheus Books, New York: pp. 239–57.

Derevensky, J., Gupta, R. and Winters, K. 2003. 'Prevalence rates of youth gambling problems: Are the current rates inflated?' *Journal of Gambling Studies*, 19, pp. 405–25.

Dickson, L., Derevensky, J. and Gupta, R. 2002. 'The prevention of youth gambling problems: A conceptual model', *Journal of Gambling Studies*, 18, pp. 97–159.

Dickson, L., Derevensky, J. and Gupta, R. 2004. 'Harm reduction for the prevention of youth

gambling problems: Lessons learned from adolescent high-risk prevention programs', *Journal of Adolescent Research*, 19, pp. 233–63.

Felsher, J.R., Derevensky, J.L. and Gupta, R. 2004. 'Lottery playing amongst youth: Implications for prevention and social policy', *Journal of Gambling Studies*, 20, pp. 127–153.

Griffiths, M. 1999. 'Gambling technologies: Prospects for problem gambling', *Journal of Gambling Studies*, 15, pp. 265–84.

Griffiths, M.D. 2002. 'Adolescent gambling: Risk factors and implications for prevention, intervention and treatment', Paper presented at the Conference on Reducing Adolescent Risk: Toward an Integrated Approach, Pennsylvania, June.

Griffiths, M.D. 2003. 'Does gambling advertising contribute to problem gambling?', Paper presented to the World Lottery Association Conference, London, England, September.

Gupta, R. and Derevensky, J.L. 1997. 'Familial and social influences on juvenile gambling behavior', *Journal of Gambling Studies*, 13, pp. 179–92.

Gupta, R. and Derevensky, J. 1998. 'Adolescent gambling behavior: A prevalence study and examination of the correlates associated with excessive gambling', *Journal of Gambling Studies*, 14, pp. 319–45.

Hardoon, K. and Derevensky, J. 2002. 'Child and adolescent gambling behaviour: Our current knowledge', *Clinical Child Psychology and Psychiatry*, 7, pp. 263–81.

Hardoon, K., Derevensky, J. and Gupta, R. 2003. 'Empirical vs. perceived measures of gambling severity: Why adolescents don't present themselves for treatment', *Addictive Behaviour*, 28, pp. 1–14.

Hornik, R.C. 1997. 'Public health education and communication as policy instruments for bringing about changes in behaviour', in M.E. Goldberg, M. Fishbein and S.E. Middlestadt (eds) *Social Marketing: Theoretical and Practical Perspectives*. Lawrence Erlbaum, Mahwah, NJ: pp. 45–58.

Jacobs, D.F. 1986. 'A general theory of addictions: A new theoretical model', *Journal of Gambling Behaviour*, 2, pp. 15–31.

Jacobs, D.F. 2000. 'Juvenile gambling in North America: An analysis of long term trends and future prospects', *Journal of Gambling Studies*, 16, pp. 119–52.

Korn, D. and Shaffer, H. 1999. 'Gambling and the health of the public: Adopting a public health perspective', *Journal of Gambling Studies*, 15, pp. 289–365.

Korn, D. 2000. 'Expansion of gambling in Canada: Implications for health and social policy', *Canadian Medical Association Journal*, 163, pp. 61–4.

Korn, D., Gibbons, R. and Azimer, J. 2003. 'Framing public policy towards a public health paradigm for gambling', *Journal of Gambling Studies*, 19, pp. 235–56.

Lapinski, M.K. and Witte K. 1998. 'Health communication campaigns', in L.D. Jackson and B.K. Duffy (eds) *Health Communication Research: A Guide to Developments and Directions*. Greenwood Press, Westport, CT: pp. 139–61.

McLeroy, K.R., Bibeau, D., Steckler, A. and Glanz, K. 1988. 'An ecological perspective on health promotion programs', *Health Education Quarterly*, 15, pp. 351–77.

Messerlian, C., Derevensky, J. and Gupta, R., in press. 'Youth gambling problems: A public health framework', *Health Promotion International*.

National Research Council (NRC). 1999. *Pathological Gambling: A Critical Review*. National Academy Press, Washington, DC.

Rose, G. 1992. *The Strategy of Preventive Medicine*. Oxford University Press, Oxford.

Shaffer, H.J. and Hall, M.M. 1996. 'Estimating the prevalence of adolescent gambling disorders: A quantitative synthesis and guide toward standard gambling nomenclature', *Journal of Gambling Studies*, 12, pp. 193–214.

Shaffer, H. 2003. *A Public Health Perspective on Gambling: The Four Principles*. Report prepared for the American Gaming Association Responsible Gaming Lecture Series, Chicago, Illinois.

Tawil O., Verster A. and O'Reilly K. 1995. 'Enabling approaches for HIV/AIDS prevention: Can we modify the environment and minimise the risk?', *AIDS*, 9, pp. 1299–306.

Tones, K., Tilford, S. and Robinson, Y. 1990. *Health Education: Effectiveness and Ffficiency*, Chapman and Hall, London.

Tones, K. 1993. 'Changing theory and practice: Trends in methods, strategies and settings in health education', *Health Education Journal*, 52, pp. 126–39.

World Health Organization (WHO). 1986. Ottawa charter for health promotion, *Canadian Journal of Public Health*, 77, pp. 425–30.

Wynne, H., Smith, G. and Jacobs, D. 1996. *Adolescent Gambling and Problem Gambling in Alberta*. A report prepared for the Alberta Alcohol and Drug Abuse Commission. Wynee Resources, Edmonton, Alberta.

Wynne, H.J. 1997. 'Gambling as a public health issue', Paper presented at the Canadian Foundation on Compulsive Gambling Annual Conference, Toronto.

Yanovitzky, I. and Stryker, J. 2001. 'Mass media, social norms and health promotion efforts: A longitudinal study of media effects on youth binge drinking', *Communication Research*, 2, pp. 208–39.

Zangeneh, M., Suissa, A.J., Reed, S. and Haydon, E. 2003. *The Portrayal of Gambling in Advertising*, unpublished manuscript.