



Office of Health Promotion  
*Addiction Services*

2003  
Nova Scotia  
Gambling Prevalence Study  
Highlights

**2003 Nova Scotia Gambling Prevalence Study  
Nova Scotia Office of Health Promotion  
Final Report: Highlights  
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Any errors or omissions are solely the responsibility of the principal investigators at Focal Research Consultants. The opinions expressed in the report are those of the authors and do not necessarily reflect the views or policies of the Nova Scotia Office of Health Promotion, or any regulatory or community gaming body, group or organization in the province.

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## HIGHLIGHTS

The 2003 Nova Scotia Gambling Prevalence Study, commissioned by the Nova Scotia Office of Health Promotion, marks the third gambling prevalence study to be conducted in the province (1993, 1996 and 2003) and the first using the new Canadian Problem Gambling Index (CPGI) measure. This Report describes the prevalence of gambling and problem gambling among adults 19 years of age and older who are permanent residents of Nova Scotia, living in private households in the province. In addition to examining general gambling prevalence using the PGSI – Problem Gambling Severity Index (scored items of the CPGI) to identify problem gambling, self-reported involvement in problem gambling was also obtained independently by type of gambling activity. This data represents the first opportunity to systematically compare gambling prevalence by type of gambling activity as critical input to planning, management and resource allocation. Therefore, the results of the 2003 Nova Scotia Gambling Prevalence Study can be used as a resource for various provincial stakeholders for gambling in Nova Scotia.

From April 11th to June 13th, 2003, 2,800 adults living in 1,733 randomly selected households throughout the province completed a telephone survey incorporating standardized and adapted instruments as well as customized questions to measure:

- Gambling participation and problem gambling, in general and by gambling activity
- Gambling perceptions, attitudes, behaviours and other problem gambling correlates
- Exposure to problem gambling at a household, family and community level
- Awareness and use of problem gambling support service and programs
- Other substance use and dependency
- General health and well being

An overall response rate of 68% was achieved for the study with 79.8% of all eligible, randomly selected households on the sample fully screened and 85.1% of all adults identified in each household successfully taking part in the study. Results for total adults in the study are accurate within  $\pm 1.85\%$  at the 95% confidence interval (95 times out of 100).

### **Gambling in Nova Scotia**

Currently, seven forms of legalized gambling are available in Nova Scotia including inter-provincial tickets and lotteries, VLTs, Casinos, Bingos, Charitable Lotteries and Raffles, First Nation gaming activities and Harness Racing.

Since the last prevalence study in 1996, the primary changes in gambling activities available in the province include:

- Opening of the expanded, permanent Casino site in Halifax (April, 2000).
- Expansion of ALC Sport Lottery, Sport Select Pro Line to include an Over/Under game (August 2002).
- Introduction of a daily lottery Draw game, Keno Atlantic (October 2002).

There have been a number of initiatives directed specifically at Video Lottery in Nova Scotia during the same time period, including:

- 1998 VLT Moratorium Act capping the machines at 3,234.
- 1999 VLT Retailer Responsible Gaming Program.

- Introduction of new and modified VLTs with responsible gaming features (on-screen clock, pop-up messages at 60, 90 and 120 minutes of continuous play, warning and mandatory cash-out at 150 minutes of continuous play) as well as other features such as bill acceptors, enhanced graphics and new games (2000/01).

Based on the Nova Scotia Annual Gaming Report (Nova Scotia Alcohol and Gaming Authority) key changes in gambling wagers and revenues in Nova Scotia since the last gambling prevalence study in 1996 consist of the following (1996/97 versus 2001/02):

- **Total gambling wagers** (i.e. total amounts bet) have increased by 46.5% since 1996 (\$1.2 billion versus \$844 million). In 2001/02, Nova Scotians bet approximately \$1.2 billion dollars on gambling, the majority of which was allocated to VLTs (47%) and Casino gambling (29%).
- The **actual amount spent on gambling** in Nova Scotia (i.e. total wagered – winnings=losses by gamblers) has increased by 35% since 1996 (≈ \$392.5 million versus ≈ \$290 million). It can be estimated that the average annual gambling expenditure on government operated and regulated gambling activities had climbed from about \$415.00 in 1996 to about \$545.00 per adult by 2002. Over half of the increase in expenditure is attributable to VLTs which account for 41% of the total amount spent (i.e. losses) on gambling in the province.
- Due to strong increases in the expenditures at the two Casinos in the province (37.5% increase compared to 1996/97 figures), amounts spent on Casino gambling are now similar to the amount spent on ALC lottery ticket products. Both types of gambling each account for about 25% (≈ \$100 million) of total gambling expenditures (i.e. losses) in the province.
- Since 1996, there has been a 44% increase in **net gambling profits** returned to the province of Nova Scotia. VLTs continue to be the most profitable form of gambling, contributing about 60% of net provincial gaming revenue in 2001/02. Despite generating similar levels of expenditures (i.e. losses), Casino gambling only returns about half the net provincial revenues of ALC ticket lotteries (13.7% versus 25%).
- Collectively, charitable Bingo and Charity Raffles and Draws in 2001/02 account for about 8% of total gambling wagers in the province, about 8% of the total gambling expenditures and only contribute about 1% (\$1.5 million) of net provincial gaming revenues. These types of charitable gambling are making contributions to not-for-profit groups throughout the province of approximately \$5.1 million.

## Problem Gambling Prevalence

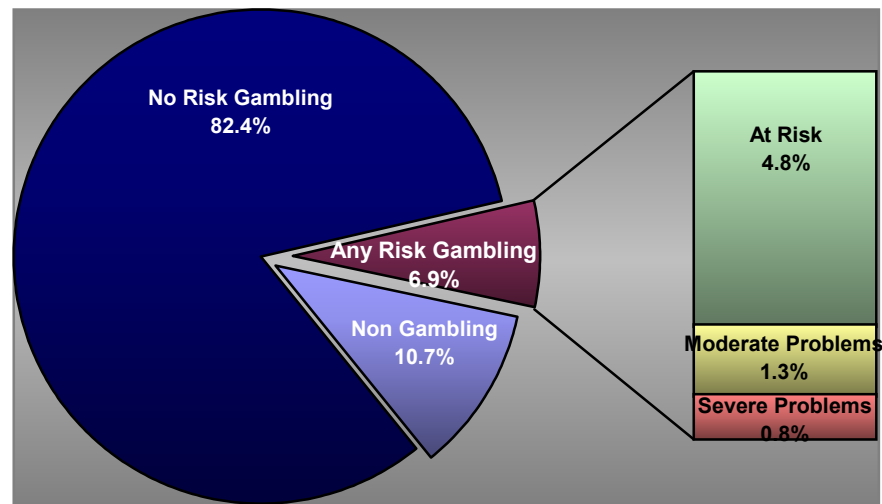
### Nova Scotia Prevalence Estimates (1993, 1996 & 2003)

In the Ontario Prevalence Study (Wiebe, Single & Falkowski, 2001) and, more recently, the British Columbia Prevalence Study (Volberg, R.A. & Ipsos-Reid, 2003) the original labels for the four gambling levels identified in the CPGI (Ferris & Wynne, 2001) were modified to reflect differing theories about the progression of gambling problems as measured by the new screen.

| CPGI Score | Risk Categories  |                  |
|------------|------------------|------------------|
|            | Original Labels  | Revised Labels   |
| 0          | Non-Problem      | No Risk          |
| 1-2        | Low Risk         | At Risk          |
| 3-7        | Moderate Risk    | Moderate Problem |
| 8+         | Problem Gambling | Severe Problem   |

This approach has set a new standard for positioning responses in other provinces. Continuing debate is expected in assessing the efficacy of the approach but, in the interim, the results in Nova Scotia are also examined using the modified labels for comparative purposes.

Figure 1: 2003 Nova Scotia Gambling Prevalence by Canadian Problem Gambling Index Classification (CPGI)



- Based on the Canadian Problem Gambling Index, it is estimated that approximately 6.9% ( $\pm .64\%$ ) or about 50,000 adults in Nova Scotia are at some level of risk for problem gambling. Of these 50,000 adults, about one-third (2.1%;  $\approx 15,000$  adults) are currently identified as being involved at problem levels, with 1.3% ( $\pm .42\%$ ) scoring for Moderate Problems and .8% ( $\pm .33\%$ ) identified as Severe Problem Gamblers.
- When the results are adjusted in order to allow for any meaningful comparison between SOGS (1993 & 1996) and CPGI-based scores (2003), the percentage of adults identified as Problem Gamblers appears to have remained relatively constant over the 3 measures ranging from 1.7% ( $\pm .90\%$ ) in 1993 to 2.1% ( $\pm .53\%$ ) in 2003. However, use of the CPGI has resulted in the identification of approximately 15,000 more adults at potential risk for a gambling problem than was the case 10 years ago (1993: 3.1%; 1996: 3.6%; 2003: 4.8%). This represents an increase of almost 50% in NS over the last decade and is a conservative estimate given that the 1993 figures represent lifetime rates of problem gambling rather than current rates, as is the case in 1996 and 2003.
- Based on the results of the current study, approximately 40% of gambling expenditures (i.e. losses) in Nova Scotia are estimated to come from 6.9% of adults in the province who are currently scoring at any level of risk for problem gambling.

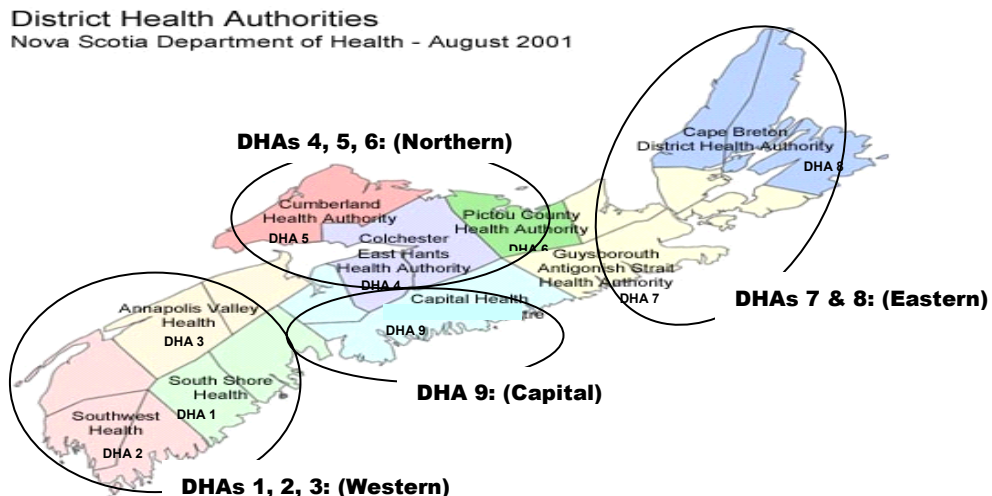
#### **Comparative Canadian Prevalence Estimates**

- Nova Scotia is the 7th province in Canada to measure gambling prevalence in the general population using the scored items comprising the Canadian Problem Gambling Index (CPGI). Participating provinces to date are Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia.
- Rates of Severe Problem Gambling ( $\approx 1.1\%$ ,  $\pm \approx .44\%$ ) are similar in all participating provinces with the exception of British Columbia ( $.4\% \pm .25\%$ ). BC is the only province that does not offer widespread access to electronic gambling machines in licensed establishments (e.g. VLTs) or slot machines outside of controlled venues. However, the impact of recent gambling expansion in British Columbia, especially Casino gambling (slots) and electronic/linked Bingo, may be reflected in this province having amongst the highest rates of adults scoring for Moderate problems (4.2%) and as being At Risk for problem development (11.1%).

- While the rate for **Severe Problems** in Nova Scotia is statistically similar to the other provinces, the proportion scoring at **Moderate Problem** levels is lower in Nova Scotia (1.3% ± .42%), New Brunswick (1.8%, ± .92%) and, to a lesser extent, Manitoba (2.3%, ± .53%) than in Ontario (3.1%) and the three Western provinces (Saskatchewan: 4.7%; Alberta: 3.9%; British Columbia: 4.2%).
- The proportion of adults identified as **At Risk** (but not at problem levels) is also lower in Nova Scotia (4.8%), New Brunswick (4.9%) and Manitoba (6.0%), with the two Maritime Provinces having rates about half that observed in the remaining participating provinces (≈ 4.8% versus 9.3% to 11.1%).
- In those provinces with the highest rates of adults scoring as “*At Risk*” for having gambling problems, there tends to be higher per capita access to Casino type gambling options and other new forms of continuous gambling formats such as linked or electronic Bingo, “racino” operations (race track, slot/gambling machine combinations), improved access to wagering (e.g. on-line, expanded sites) and multi-draw daily lotteries. (Statistics Canada, 2002 Fact Sheet on Gambling: Canadian Gaming News, 2001, Provincial Annual Gaming Reports). Widespread VLT and gambling machine access continues to be associated with higher rates of problem gambling (Moderate to Severe problems).
- Aside from the introduction of two Casinos in Halifax and Sydney in 1994 and the expansion of ALC products to include another Sports Lottery game (Over/Under, August 2002) and a daily Draw game (Keno Atlantic, October 2002), the majority of government activity related to gambling in the province of Nova Scotia has been directed at addressing Video Lottery. Video Lottery wagers and losses in Nova Scotia have continued to increase. In 2001/02, Nova Scotians wagered about \$575.5 million on VLTs with this product alone accounting for over half of the growth in gambling expenditures (i.e. losses by gamblers) over the past 6 years and contributing 60% of net provincial gambling revenue. During the same time period, an almost 50% increase has been observed in the percentage of adults identified at some level of risk for problem gambling (1993: 4.8% versus 2003: 6.9%), even though no appreciable change has been observed in the number of adults taking part in Video Lottery gambling (participation rates).
- Compared to those provincial jurisdictions where gambling expansion has been more aggressive during the past 5 to 7 years (e.g. Ontario, British Columbia, Alberta, and Saskatchewan) Nova Scotia appears to have a slower growth rate in the percentage of adults scoring At Risk for problem gambling. However, despite limited gambling expansion in Nova Scotia there has been no reduction in problem gambling rates, with the percentage of adults identified as “At Risk” for problems continuing to increase.

**Risks for Problem Gambling in Nova Scotia by Key Population Segments**

**SHARED SERVICE AREA (NOVA SCOTIA DISTRICT HEALTH AUTHORITIES)**



- Prevalence for Problem Gambling appears to be higher in DHA 9 (Capital; 2.2%) and DHAs 7 & 8 (Eastern; 2.7%) as compared to DHAs 4, 5 & 6 (Northern; 1.0%) and DHAs 1, 2 & 3 (Western; 1.8%). However, the only statistically significant difference at the 95% confidence level was for comparison between DHAs 7 & 8 (Eastern; 2.7%) versus DHAs 4, 5 & 6 (Northern; 1.0%). Differences in Problem Gambling levels in DHA 9 (Capital; 2.2%) only reached statistical significance at the 90% confidence level ( $p=.097$ ). One distinguishing feature among the regions is the location of the Sydney Casino in DHAs 7 & 8 and the Halifax Casino in DHA 9. The skewed distribution of VLTs in urban areas of the province, in particular DHA 9 which includes Halifax, may also be a factor influencing differences in problem gambling prevalence among Addictions Services Shared Service Areas.
- Involvement in Casino gambling is twice as high in the DHA 9 (Capital) and DHAs 7 & 8 (Eastern), where the two casinos are located. About 30% of adults living in the Shared Service Areas with the casinos have visited such a venue during the past year versus  $\approx 15\%$  in the other two areas. Regular monthly involvement is also significantly higher in these two regions ( $\approx 2-5\%$ ), with  $< 1\%$  of adults residing in either the Western (.2%) or Northern (.4%) Shared Service Areas reporting regular Casino gambling. Regular monthly gambling on slots machines is over twice as high in DHAs 7 & 8 (Eastern) as compared to anywhere else in the province (5% versus DHA 9: 1.8%).
- Adults living in DHA 9 (Capital) are significantly more likely have gambled on VLTs in the last year (28% versus  $\approx 16\%$ ) and to be playing the machines on a regular monthly basis as compared to those living elsewhere in Nova Scotia (8% versus  $\approx 5\%$ ). Regular sports betting also tends to be higher in Capital Shared Service Area (3.3%) than in DHAs 4, 5 & 6 (Northern: 1.3%) and DHAs 1, 2 & 3 (Western: 1.4%).
- In DHAs 7 & 8 (Eastern) the rate of regular gambling is identical for slot machines ( $\approx 5\%$ ) and VLTs ( $\approx 5\%$ ) suggesting that in contrast to the other Addiction Services areas, involvement in slot machine gambling can be expected to have a similar impact as VLTs. Regular Bingo gambling is also comparatively higher in this part of the province (7.9% versus  $\approx 4\%$  to 5%).

## GENDER

- The percentage scoring at any level of risk for problem gambling is about 1.5 times higher among men in Nova Scotia as compared to women (8.3% versus 5.5%,  $p<.05$ ). However, the percentage of men identified at Problem levels (Moderate to Severe) only differs from women at the 90% confidence level (2.5% versus 1.6%,  $p=.09$ ). Despite the skew in gambling problems towards men in the province, women still comprise about 40% of those scoring on the CPGI for Problem Gambling in Nova Scotia.
- Males are more likely than women to participate in weekly Draw games, VLTs, Sports Betting and Casino Table games whereas women are more inclined than men to play Scratch 'n Wins, Break-opens and/or Bingo. No differences were observed by gender for Slot Machines or Charity Raffles or Draws.

## AGE

- The percentage of adults scoring at any level of risk for problem gambling declines with age. However, for adults under 65 years of age, the percentage scoring for problem gambling (Moderate+) is fairly constant within all age groups.
- Problem gambling rates are only significantly higher in the 25-34 year old age segment as compared to seniors, 55 years or older, in the province (3.4% versus .5% to 1.5%). This 25-34 years age cohort reached the age of majority at a time of rapid growth in gambling options and accessibility in Nova Scotia, in particular the introduction of VLTs and Casino gambling. The results suggest that increased risk observed among young adults in previous studies in Nova Scotia has translated into higher prevalence rates for problem gambling as the group has aged. Given greater family, professional and financial responsibilities for gamblers in this age group (25-34 years) as compared to those aged 19-24,

gambling problems can be assumed to have more significant consequences at a family, household and community level.

- The prevalence of problem gambling has remained stable over time for those 35 years of age or older. Therefore, it can be predicted that, under the current scenario, increased risk and prevalence for problem gambling among younger adults in the province (19 to 34 years) will also hold steady as they continue to age. If this occurs, it will lead to increased problem gambling rates in the province over time.
- With the exception of Weekly Lottery Draws, Bingo and Charity Raffles past year participation in all other forms of gambling declines with age. In terms of regular gambling involvement, the decline associated with age was only observed for Video Lottery, Sports Betting, and Break-opens tickets.
- Regular involvement in slot machine gambling does not differ significantly among any of the age segments with adults 65 years or older just as likely to play slot machines each month (2.4%) as those under 25 years of age (3.1%). Regular Bingo involvement is higher among adults 55 years of age or older ( $\approx 8.4\%$ ) as compared to those under 25 years of age (3.6%)
- Regular purchasing of weekly draw tickets is similar among adults age 35 -65 years ( $\approx 46\%$ ) and least likely to be played regularly by those under 25 years of age (16.9%).
- Adults under 35 years of age (19-34 years) are significantly more likely than those over 35 years to be involved regularly in VLTs ( $\approx 10\%$ ), and specifically in the case of those 19-24 years, Sports Betting (7.1%) and Instant Scratch 'n Win tickets (24.4%).
- For Seniors (55 years +) in the province, regular monthly gambling tends to center on Lottery tickets in general ( $\approx 50\%$ ), Scratch 'n Wins specifically (15%), Bingo (8%), and Slot Machine gambling (2% to 3%).
- For those Seniors living in the Shared Service Areas where the casinos are located, participation rates for slot machine gambling are at least three times higher compared to seniors living elsewhere in the province (Past year participation:  $\approx 21\%$  versus 7.5%; Regular Monthly Participation:  $\approx 4\%$  versus  $<1\%$ ). This means that about one in 5 Seniors in Eastern (DHA 7 & 8) and Capital (DHA 9) Shared Service Areas gambled on slot machines in the past year with almost one-quarter of these same adults taking up regular playing patterns.

## HOUSEHOLD INCOME

- In Nova Scotia, adults at all levels of annual household income are equally likely to be "At Risk" or score for problem gambling. Annual Household Income was only found to be related to general involvement in gambling. The likelihood of having taken part in some type of gambling activity over the past year increases with annual household income, although the majority in all income brackets had gambled in the 12 months preceding the survey (Low: 85%; Mid: 89%; High 95%). For those in the highest income bracket (\$60K+), this increased involvement did not translate into greater risk but rather into higher rates of No Risk gambling as compared to those with household incomes under \$30,000 per year.
- Participation in Bingo and Break-open lottery tickets decreases as income goes up, whereas likelihood of taking part in Casino gambling, especially Table games, and Sports Betting increases with income. However, regular participation in Slot Machine gambling or VLTs is the same in all income segments.

## Gambling Activity in Nova Scotia

### General Gambling Participation

- Consistent with previous findings in Nova Scotia and elsewhere in Canada, gambling is a common activity. Almost all adults in Nova Scotia have wagered money on a game of chance at some time

(96.8%) with 89.3% having gambled in the last year, spending, on average, about \$645.00. The vast majority ( $\approx 95\%$ ) of this amount spent goes to government operated gambling in the province ( $\approx \$610.00$  per gambler/year).

- Adults in Nova Scotia are more likely to be involved in gambling on a regular (55.3%) rather than casual (34.0%) basis. Regular Gamblers (i.e. those who gamble at least once a month) on average spend \$1000.00 per year gambling, while Casual Gamblers (those playing less often than once a month) spend only \$40.00 per year. Therefore, approximately 92% of gambling revenues in the province are coming from Regular Monthly Gamblers.
- Lottery tickets account for the majority of adult involvement in gambling in Nova Scotia; 79.1% have purchased any lottery ticket game in the past year and 44.5% play regularly, once a month or more. Charity Raffles and Draws (64.5%) and 50/50 draws (39.3%) are also popular purchases over the past year but fall far behind ALC lotteries in terms of regular monthly purchasing (7.6% and 12.9% respectively).
- Past year participation for Casino gambling (23.3%) exceeds that reported for both VLTs (19.0%) and Bingo (15.3%) but regular gambling patterns for the latter two activities are over twice as high (VLTs: 5.1%, Bingo: 5.5% versus Casinos: 1.9%).
- Over the past year, approximately 38.9% of adults only purchased lottery ticket type games (ALC, Charity, 50/50 Draws) on a regular basis each month, spending about \$422.00/year on all their gambling and contributing about 28% of annual gambling expenditures in the province.
- There are 6.6% of adults who regularly take part in VLTs & Casino gambling each month, spending on average \$3,760.00 in the past year and contributing about 43% of annual gambling expenditures in Nova Scotia.
- There are 9.9% of adults who regularly take part in any other form of gambling, including sports betting, Bingo or card games. On average these regular gamblers are spending about \$1,422.00/year and contribute about 23% of all monies spent on gambling in the province.
- Past year participation in non-regulated gambling activities largely consisted of informal card games (16.9%), or to a lesser extent Sports bets/pools (7.5%) and personal bets on games of skill (pool, darts, golf) (4.6%). Involvement in Internet Gambling in Nova Scotia is currently low with only .2% of the adult population having wagered on-line during the past year.
- Only about 5% ( $\approx \$22$  million;  $\approx \$30.00$ /adult) of all gambling expenditures in the province go towards any non-regulated form of gambling with about \$405 million (\$548/adult) reportedly spent on government regulated gambling during the twelve months preceding the survey (2002).
- Overall, based on the results of the survey, the average annual gambling expenditure per adult in Nova Scotia is estimated at \$578.00 (Regulated: \$548.00 + Non-regulated \$30.00). When examined using the CPGI categories the average amount spent per year increases dramatically by risk for problem gambling: No Risk Gamblers  $\approx \$430.00$  /year; At Risk Gamblers  $\approx \$1,800.00$ /year, Problem Gamblers  $\approx \$7,000.00$ /year.

#### **Changes in Gambling Participation Rates**

- Compared to 1996 there has been no change in the percentage of adults taking part in at least one gambling activity (1996: 92 versus 2003: 89%), although the average amount spent on regulated gambling per adult in Nova Scotia has increased by about 32% moving from  $\approx \$415.00$ /adult to  $\approx \$548.00$ /adult .

Past Year Participation Rates (1996 versus 2003)

| Type of Gambling                      | 1996 | 2003  |
|---------------------------------------|------|-------|
| Any Gambling                          | 92%  | 89%   |
| Lottery Draws                         | 73%  | 74%   |
| Charity Raffles/Draws                 | 68%  | 65%   |
| Instant Tickets (S'n Ws, Break-opens) | 65%  | ↓ 50% |
| VLTs                                  | 21%  | 19%   |
| Casino Slots                          | 29%  | ↓ 22% |
| Casino Table Games                    | 6%   | ↓ 4%  |
| Bingo                                 | 14%  | 15%   |
| ALC Pro Line                          | 5%   | 5%    |

- The only changes in past year gambling participation rates between 1996 and 2003 was a decline in the percentage of adults in Nova Scotia having purchased any Instant lottery tickets (1996: 65% versus 2003: 50%) and a decline in the percentage of adults gambling on slot machines (1996: 29% versus 2003: 22%) or Casino table games (1996: 6% versus 2003: 4%). For all other forms of gambling there were no changes observed in past year participation rates between the two measurement periods.

**Self-Reported Problems with Gambling Activities**

- About 2.5% ( $\pm$  .58%) of Nova Scotian adults self-report having ever experienced problems with some type of gambling, with just over half (56%) of these same people continuing to report problems with some aspect of their gambling (1.4%,  $\pm$  .43%).
- Based on the results of the current study, it can be estimated that about 18,000 adults in Nova Scotia believe they have experienced problems with their gambling at some time. Approximately 10,000 report that they are continuing to experience difficulties with the amount of time or money spent on any gambling activity.
- The majority (64%+) of those adults self-reporting past and present problems with gambling tend to associate their concerns with a single, specific type of gambling (primarily VLTs) rather than reporting problems across the whole range of gambling activities in which they are involved. In fact only .3% of adults report having ever had a problem with three or more types of gambling.

**LOTTERY TICKETS**

- Collectively, approximately 88% of adults have purchased a lottery ticket at some time with about .8% ( $\pm$  .33%) of adults reporting having ever experienced problems with any type of lottery ticket game, and about .5% ( $\pm$  .20%) or 3,600 adults still expressing concerns about the amount of time or money they are spending on the activity.
- Compared to 1996 there has been no change in the percentage of adults purchasing ALC Draw tickets with 74% having purchased a Draw ticket in the last year. At least twice as many adults in Nova Scotia buy lottery Draw tickets on a regular monthly basis compared to any other type of gambling (37.4% versus 15.4% or less). Yet, only .2% ( $\approx$  1,500 adults) currently believes they are spending too much on lottery Draw tickets and that they have not yet solved their problem with this form of gambling.
- There has been a decline in past year participation rates for Instant lottery tickets in general. In 1996 65% of adults reported having purchased some type of ALC Instant ticket game but this has dropped to 50% in 2003. During the same time period the average price point for instant games increased.

- Scratch 'n Wins tickets appear to pose greater risks to players than the Draw games. Although regular participation levels are half that noted for Draw games (15.4%), a similar proportion of adults report current problems with these instant ticket games (.3%;  $\approx$  2,200 adults).
- Of special note is Keno Atlantic, the new daily lottery Draw game introduced in October 2002. Only 9% of adults in Nova Scotia have ever tried any daily lottery Draw at some time with about 6.4% having purchased this new game within the past year and about 2% playing on a regular basis of once per month or more. However, almost 2% of all trial players ( $\approx$  .1% of adults) have already reported having problems with the amount of time or money spent on this daily Draw game as compared to only about .4% of all those who have ever purchased weekly Draw tickets.
- Charity tickets and 50/50 draws have higher rates of past year or regular monthly play than either VLTs or casino gambling, however, adults report little to no problems associated with their involvement in these types of activities. Thus, the results suggest that both of these types of gambling currently present low risk to adults in the province. The percentage of adults purchasing Charity tickets in the past year has remained constant compared to 1996 (65%).

### CASINO GAMBLING

- Past year participation rates in Casino gambling is ranked second to lottery ticket games in terms of government operated gambling. Unlike the results for more provincially accessible forms of gambling, participation levels are not as strongly skewed towards regular playing patterns. However, more than a quarter of those self-reporting problems with gambling in Nova Scotia are citing Casino gambling as the source, in particular slot machines for which .3% ( $\approx$  2,200 adults) are reporting current problems. It is noteworthy that significantly fewer adults in Nova Scotia reported playing either slots (1996: 29% versus 2003: 22%) or Casino table games (1996: 6% versus 2003: 4%).

### VIDEO LOTTERY

- Playing patterns for Video Lottery have remained fairly stable in Nova Scotia compared to previous measures (1997/1998 NS Regular VL Player Survey). There have been no significant changes in trial (1998: 38.5% versus 2003: 36.7%), or regular involvement (1998: 5.7% versus 2003: 5.1%) since the new machines were introduced in 2001, although past year participation rates have fallen (1998: 23.4% versus 2003: 19.0%,  $p=.03$ ). VLTs continue to be associated with over half of all past (1.4%;  $\approx$  10,000 adults) and current self-reported gambling problems (.8%;  $\approx$  6,500 adults) despite the fact that only about 5% of adults are regularly involved in the activity each month. There is no significant difference in the percentage of adults self-reporting current problems with VLTs as compared to 1998 (.9%  $\pm$  .33%).

### OTHERS

- Participation in most other forms of gambling available in the province of Nova Scotia is either not being associated with any problems (e.g., non-regulated card games, personal bets on games of skill) or participation rates are too low to yield sufficient sample sizes to accurately assess risk within the player base (e.g. Internet gambling, ALC's Sport Lottery (Sport Select), Keno Atlantic). Regardless, the outcome is the same, such that at present these forms of gambling are not having a significant impact on self-reported gambling problems by adults in Nova Scotia.

### **Self-Reported Gambling Problems by Level of Involvement in each Type of Gambling Activity**

When self-reported risk is examined by current play patterns, certain forms of gambling emerge as posing greater risk for gamblers in Nova Scotia. In some cases, this risk is masked due to low participation levels. However, participation levels can be influenced by accessibility, promotion and other marketing, regulatory and policy changes. Therefore, examining risk only among the player bases for each gambling activities identifies the proportion of gamblers that are reporting problems independently of the absolute number of adults engaged in the activity. It should be kept in mind that in this analysis risk is operationally defined by those who are self-identifying problems with each form of gambling. Self-identification rates, as in this current study,

typically are lower than risk assessments obtained using standardized screens such as the CPGI. This is largely due to the fact that gambling related consequences must reach a personally significant threshold in order to be identified as problematic. A dichotomous “problem versus no problem” self-classification will not be sensitive in detecting consequences that fall below this threshold but conversely there is greater certainty that those who are self-identifying are experiencing gambling problems (“true positives”) whether or not it reaches a clinical threshold for diagnoses.

- Video Lottery exhibits the highest levels of relative problems. About one out of every 28 people (3.6%) who have ever tried these gambling machines report having experienced problems with the amount of time or money spent on the activity. Among past year VLT gamblers, the proportion jumps to one in 17 (5.8%) but increases dramatically to about one out of six adults (16%) who take part in VLT gambling at least once per month. This is the highest rate of self-reported problem development compared to any other form of gambling available in Nova Scotia.
- Approximately .4% of adults report problems with Casino gambling, especially Slot Machines (.3% of adults). This is only about half the proportion of adults self-identifying for problems with VLTs (.8%). This difference between Casino gambling and VLTs is largely due to lower regular playing patterns for Casino gambling. When only regular monthly Casino gamblers are considered the percentage reporting gambling problems does not differ significantly from rates observed for VLTs. Self-reported problems climbs to one out of every nine regular monthly Casino gamblers; only slightly lower than reported for VLTs (11.3% versus 16%). It is noteworthy that the rate of problem gambling is substantially lower for past year Casino gamblers (2.5%; 1 out of every 40 current casino patrons). This reflects the influence of casual, non-regular casino patrons, who collectively report lower levels of associated problems. The risk drops to one-third that of VLTs among those who have ever played at a Casino (1.3% versus 3.6%) suggesting that only 1 out of every 75 adults in Nova Scotia who have ever visited the casino has experienced any problems with their participation. Therefore, for Slots especially, it is involvement in regular monthly gambling that is associated with problems, whereas problems with Video Lottery are higher among all segments as well as increasing with frequency of play. This difference reflects the fact that playing patterns for VLTs, a more accessible form of gambling in Nova Scotia, are skewed more heavily towards regular than casual play as compared to Casino Gambling in the province.
- Three other forms of gambling in Nova Scotia also emerge as being associated with higher levels of problems for those who take part in the activity: Bingo, ALC Sports Lottery and Break-open tickets. All of these games contribute a small proportion of self-reported problems, yet among regular gamblers for each activity, prevalence of self-reported problems almost doubles. While the percentage of regular gamblers reporting problems with any of these activities is substantially lower than for VLTs and Casino gambling, it appears that one in about every 30 regular Bingo players (3.2%) and one in every 45-50 regular Sports Lottery (2.2%) and Break-open gamblers (2.1%) has experienced problems related to their involvement with such gambling. This has implications for product expansion or other changes that influence accessibility and player’s level of involvement with these types of gambling.
- In the case of Keno Atlantic, the new daily lottery Draw had only been launched six months prior to the survey with only about 6.4% of adults having purchased at least one of these tickets. Yet 2.2% of those who had played during this introductory time period were already reporting problems, a rate that is at least three times higher than that reported among past year players for any other lottery ticket game (2.2% versus .4% to .7%).

#### **Risk for Problem Gambling by Type of Gambling Activity (CPGI)**

Unlike player self-reports and other diagnostic problem gambling screens (SOGS, DSM IV), the CPGI provides greater sensitivity in assessing levels of risk for problem development. This is important for planning and preventative purposes. However, a limitation of the CPGI, and other overall measures of problem gambling, is that it does not effectively differentiate among problems for the various gambling activities. Risk for problem gambling associated with one form of gambling will also show up for any other type of gambling

that person also takes part in, whether or not this activity is contributing to any problems for the individual. Therefore, it is difficult to use the measure to test for differences in problem gambling rates by type of gambling activity (e.g., it is not possible to determine whether an activity is directly contributing to problem gambling development or is simply a gambling option more likely to be played by those with gambling problems). Despite this limitation, it is still clear from the CPGI data in Nova Scotia that, consistent with player self-reported gambling problems, more continuous forms of gambling available in the province are associated with greater risk for problems, in particular for those who are involved in the activity on a regular monthly basis.

- Involvement in regular gambling is associated with increased likelihood of experiencing problems, especially among certain types of gambling. Therefore, it is not surprising to find that those scoring for No Risk gambling are less likely to be involved in any form of gambling on a regular monthly basis and when they do take part regularly, tend to be involved in lower risk activities such as weekly Draws and Charity raffles or 50/50 tickets.
- The only notable distinctions in past year gambling involvement among adults scoring At Risk versus Problem Gambling are observed for Keno Atlantic, a new daily lottery ticket game (14.2% versus 26.8%), and VLTs (53% versus 82.1%). However, at present, Video Lottery is the only gambling activity in Nova Scotia for which regular involvement increases with risk for problem gambling (as identified by the CPGI) at the 95% confidence level (No Risk: 3.5%, At Risk: 24.6%, Problem: 51.8%). Increased risk for Casino gambling was observed at only the 90% confidence level ( $p=.10$ ).
- Just under half (43%) of regular VLT gamblers are currently scoring at some level of risk for problem gambling on the CPGI, with 20% identified at moderate to severe problem levels. This means that almost one in two monthly VLT gamblers in Nova Scotia is scoring at some level of risk, with one in five scoring for problems.
- Casino gambling (34%) and ALC's Sports Lottery, Sport Select (35%), also tend to reflect relatively higher levels of risk for regular gamblers. However, the percentage of adults gambling each month on either of these activities is relatively low (<2% of adults) and, therefore, the magnitude of impact will be less than for other, less risky, gambling options played by a larger proportion of the population (e.g., lottery Draw and Instant tickets). In the case of Casino gambling, the impact of problems associated with regular Casino gambling will be much higher in the Addiction Services Shared Service Areas where the casinos are located (DHA 9: Capital; DHAs 7 & 8: Eastern).

### **Use of Alcohol, Tobacco, and Additional Sources of Money While Gambling by Risk for Problem Gambling (CPGI)**

The differences in behaviours observed among the risk segments are primarily related to the type of gambling activities associated with risk for problem gambling in Nova Scotia. Risk for problem gambling in Nova Scotia is related to participation rates in Video Lottery and Casino gambling, both of which are offered in licensed establishments that generally have also provided gamblers with smoking privileges and easy access to various cash sources. Not surprisingly, No Risk Gamblers, who largely gamble regularly on lottery ticket games, are less likely to be using any of these substances or services while gambling.

- As expected, alcohol and especially tobacco use while gambling increases with risk for problem gambling. Just over half of all those scoring at Moderate+ Problem levels almost always smoke when gambling (51.8%) versus only 5.8% of No Risk Gamblers.
- While most high risk gamblers in Nova Scotia (64%) consume alcohol on at least an occasional basis while gambling, only about one-third regularly drink while gambling, with the vast majority reporting that they never (60%) or only sometimes (27%) gamble while "drunk or high".
- Use of additional sources of money while gambling is one of the strongest discriminators of risk for problem gambling. No Risk Gamblers rarely, if ever, access additional sources of money when gambling.

with the use of ATMs exclusively reported by those scoring at any level of risk for problem gambling, especially Moderate and Severe Problem Gamblers. Only 28.9% of those scoring as Problem Gamblers report that they never use a bank machine to get additional cash while gambling as compared to 73.9% of At Risk Gamblers and 96.8% of those scoring at No Risk.

## Awareness and Use of Problem Gambling Services

### Awareness of Problem Gambling Services in Nova Scotia

- Almost two-thirds (62.9%) of adults in Nova Scotia have heard of some kind of program or service to assist people who are encountering problems with their gambling. Just under half of all adults (47.6%) report awareness of such services to assist families affected by gambling problems.
- While general awareness that problem gambling services exist is high, familiarity with specific services is substantially lower. When asked to reference problem gambling services, less than half (47.3%) of those surveyed could cite even one specific service, with fewer than one-third mentioning any one of the primary programs or services offered in the province.
- Unaided awareness was highest for Gamblers Anonymous (30%), followed by the Problem Gambling Help Line (21.6%) and any programs or services associated with Addictions Services (11.9%).
- Unaided recall increases with risk for problem gambling only for the Problem Gambling Help Line. Almost half of all Moderate to Severe Problem Gamblers in Nova Scotia cited this source without being prompted. This high level of top-of-mind awareness for the Problem Gambling Help Line is most likely related to the tendency for Problem Gamblers in Nova Scotia to be involved in VLT gambling. The number for the Help Line is now posted on all gambling machines in the province. This approach appears to be effective in preferentially generating awareness among those at highest risk for gambling problems.

### Level of Exposure to Problem Gambling (All Adults)

- Overall, 20% of adults in Nova Scotia ( $\approx$  150,000 people) are personally aware of someone they believe is currently having a problem with their gambling. For the vast majority of these people (12.4% of adults or 62% of those personally aware of a problem gambler), contact with the problem gambler is fairly intimate through family members (8%) or close friends (7%). This suggests about 93,000 adults across the province know of at least one person they care about who is having a gambling problem.
- Approximately 2.4% ( $\approx$  18,000 adults) report direct exposure to problem gambling in their household, with 6.3% ( $\approx$  46,600 adults) citing current gambling problems among other family members.
- Similar to players' self-reports of problem gambling, Video Lottery is mentioned most often in association with general exposure to problem gambling through friends and family members (17.6% of adults personally know at least one person in Nova Scotia who currently is having a problem with VLTs). This means that about 86% of those who personally know someone with a gambling problem cite VLTs as being involved.
- About half as many adults are reporting exposure to problems associated with Casino gambling (8.5% of adults cite problems with Casino gambling, especially slots (7.5%) in relation to others' gambling problems).
- Scratch 'n Win tickets, Bingo and Casino Table games are only mentioned by 3% of adults as playing a role in the gambling problems they are exposed to by others.

- General gambling problems were reported by only .4% of the adults, suggesting that similar to adult's self-reported experience, in Nova Scotia problem gambling is perceived to be more activity-specific rather than a generalized condition.
- Approximately 5%,  $\approx$  37,000 adults, in Nova Scotia have knowingly provided either financial (3.4%) or other non-monetary assistance (3.0%) to someone who is experiencing problems with their gambling.

### **Use of Problem Gambling Services**

- At this time, 4% of adults in Nova Scotia are exposed to problem gambling, either personally or through someone else, and have sought out any information or assistance for a current gambling problem, with the majority (3.8%,  $\approx$  27,360 adults) contacting formal or professional services.
- Consistent with other previous studies conducted in Nova Scotia (1999 Prevalence of Attitudes and Opinions in Nova Scotia, NSAGA; 1998 NS VL Players Survey, NSDOH), most of those seeking information/assistance from any source ( $\approx$  88%) are doing so to help someone else with a gambling problem rather than to help themselves. Overall 3.5% ( $\approx$  26,000 adults) have been motivated to help someone else with a current gambling problem versus .5% ( $\approx$  3,700 adults) seeking assistance or information for a personal problem.
- Use of formal services increases with risk for problem gambling. Problem Gamblers as identified by the CPGI are more inclined to be accessing formal sources of assistance (16.1%) over informal help from friends and family members (10.7%). This is in marked contrast to previous studies that had found Problem VLT Gamblers were more inclined to go to friends and family members for assistance (26%) than to formal sources of help (15%) (1998 NS Regular VL Players Study, p 3-103). While the percentage of Problem Gamblers accessing formal sources of assistance is similar to previous levels of use, it appears that informal support is now being sought out less often.
- In general, family doctors are accessed as often as other designated problem gambling services ( $\approx$  1% of all adults), especially by those at highest risk for gambling problem (10.7% of Problem Gamblers). Problem Gamblers report going to their Doctors more often than Gamblers Anonymous (7.1%), the Problem Gambling Help Line (5.4%) or Addictions Services (3.6%). This suggests that family doctor offices/GP clinics can be an important contact point for disseminating information.
- Primary barriers in seeking out assistance to help someone else with a gambling problem center on reluctance to get involved due to uncertainty related to the problem itself, and the problem gambler's response to any intervention.
- For those who are personally experiencing difficulties or are at high risk for problem gambling (n= 24), primary barriers to seeking out formal assistance consist of concerns about privacy, embarrassment, lack of understanding or knowledge about what is out there to help, inconvenience of getting access to help, a belief that what is currently available can't help them and a belief that they must overcome the problem on their own with support from friends and family.

### **Suggested Improvements for Services Offered to Problem Gamblers**

- The two most popular suggestions put forth by those exposed to problem gambling, either personally or through another's involvement, consisted of "*more advertising and promotion*" for the services (30%) and "*ban or get rid of the VL machines*" (22%). There was an additional 10% who argued for "*reduced access*" to the Video Lottery machines by restricting them to controlled locations or casino venues. These recommendations were endorsed more strongly by those scoring at any level of risk for problem gambling, with two-thirds of Problem Gamblers arguing for elimination or restrictions for Video Lottery

(67% versus  $\approx 27\%$  in the other risk segments). All adults felt that more advertising was essential to ensure that people are aware of the issue and know where to go to get help or information.

- Improved distribution and access to information and materials (18%) and greater emphasis on education and prevention (8%) were also mentioned by those exposed to problem gambling. There was an emphasis that education, prevention and intervention options need to be more visible and accessible.

## Other Substance Use and General Health

### Other Substance Use

- Smoking, self-reported problems (past and current) with alcohol, non-prescription drug use, and the use of prescription medications (for pain, to sleep, anxiety or depression) all increase with risk for problem gambling. However, despite the strong association, only a minority of those identified as Moderate to Severe Problem Gamblers are currently experiencing any difficulties with other substance use, with the exception of tobacco use (54% smoke tobacco daily). Rates of smoking among Problem Gamblers are twice as high as in the population at large (54% versus 23.5%).
- Those at any level of risk for problem gambling are more inclined to report drinking on a regular weekly basis than No Risk Gamblers but, overall, there are no significant differences among any of the CPGI gambler groups in the percentage consuming alcohol each month. However, there is a significant relationship between self-reported alcohol problems and gambling problems. The percentage who report past or current problems with alcohol increases with risk for problem gambling. Despite this strong relationship, only 12.5% of adults scoring for Problem Gambling are also reporting a current drinking problem. Among those scoring for Severe Problem Gambling in the current study (CPGI score=8+; n=21) 19% are self-reporting a concurrent problem with alcohol, however, the margin of error surrounding this estimate is large ( $\pm 16.75\%$ ) due to the small sample size for Severe Problem Gamblers in the current study. Therefore, while there is a significant association between alcohol and gambling problems, the majority of Problem Gamblers are not reporting alcohol problems nor consuming at rates that differ significantly from Non Problem Gamblers.
- In contrast to findings for alcohol consumption, gamblers scoring at any level of risk for problems are more likely to be using non-prescription drugs. This reflects the younger age skew for those identified as at risk for problem gambling in Nova Scotia. The only difference between the At Risk and Problem Gamblers is observed for self-reported problems. Again, the percentage of adults reporting non-prescription drug problems increases significantly with risk for problem gambling. About 9% of those at scoring for gambling problems also report having had a drug problem in the past, with 3.6% reporting current problems associated with their non-prescription/illicit drug use.
- During the past year, Problem Gamblers are more likely to have used prescription medication to help them sleep or for depression as compared to adults in any of the other CPGI segments. Almost one in 5 adults scoring for Problem Gambling took medication for these reasons over the past year.
- The percentage of adults self-reporting current problems with alcohol (1.5%) and gambling (1.4%) in Nova Scotia is comparable, and exceeds levels reported for either prescription (.7%) or non-prescription drug abuse (.3%).

### **General Health and Well Being**

- All respondents taking part in the study were asked whether or not they had experienced any of the following events or incidents over the past year: income/job loss, debt or financial problems, loss of spouse/partner, relationship problems, health problems, work problems, loneliness/increased isolation and depression. They were then questioned as to whether or not any of these experiences were related to gambling (their own gambling, someone else's, or both).
- Over the past year, only 38% of adults in Nova Scotia reported any of the negative experiences measured, although this climbs with risk for problem gambling to 71% of all those scoring for Moderate to Severe Problem Gambling.
- With the exception of health-related problems, which occur equally among all adults, Problem Gamblers are more likely to have experienced each of the other items measured. Almost one in two cite debt and financial problems, one in three note relationship problems and one in four report job and income losses over the past 12 months. For about one out of every five Problem Gamblers, depression, loneliness, and work-related problems were also reported.
- By obtaining estimates of the general incidence of such events and then determining if the experience was related to gambling (either by self or gambling by others), it is possible to assess whether or not certain situations/experiences are more likely to be risk factors or consequences of gambling.
- In the majority of instances, gambling is not cited as a contributing factor although about 40% of those scoring as Problem Gamblers directly attribute financial problems and debt to their gambling.
- Gambling is implicated in about 6% of all relationship problems reported by adults in the province and about 5% of all financial problems in Nova Scotia over the past year.
- The preliminary results suggest that depression, loneliness and loss of spouse or partner are more often reported to be unrelated to gambling and, thus, may be precipitating factors or vulnerabilities that precede problems; whereas financial problems are more likely to be cited as a consequence of play (although not always, which suggests that pre-existing "money problems" are also a risk factor for problem gambling).
- Despite significant differences in mental health correlates, there is no significant variance in self-reported "state of health" among any of the risk segments. Compared to others their own age, about 60% of adults in all groups rate their personal state of health as "excellent" to "very good". Only 11% of Nova Scotian adults are reporting that their health is only fair (9%) or poor (2%).

## Recommendations

*Based on the results of the study, the Nova Scotia Office of Health Promotion has identified 6 primary recommendations:*

1. To develop a media and resource development plan for Problem Gambling Services using social marketing. The findings from this study will be used to develop an array of new, evidence-based materials and resources to increase knowledge of problem gambling and awareness of the services available for those at any level of risk problem gambling.
2. To develop prevention programs for targeted high risk populations as identified in this study. Such target groups consist of : Regular Gamblers for continuous forms of gambling especially electronic gambling machines (VLTs, slots); adults age 19-24 years (risk reduction) ; adults age 25-34 years (risk and problem reduction); Seniors (Adults 55 years +) in particular for Casino gambling, instant lottery products and other continuous forms of gambling.
3. To develop and disseminate self help manuals and educational materials for those at any level of risk for problem gambling and their families as part of a long-term intervention strategy.
4. To develop a comprehensive research plan for Problem Gambling Services that will: set the research priorities, including the conduct of prevalence studies at 5 year intervals; focus upon the social and economic impact of gambling in Nova Scotia; and make provisions to conduct target specific studies of continuous forms of gambling which present the greatest threat to public health.
5. To develop a comprehensive training and educational program for Addiction Services staff in the district health authorities and for health and social service providers who work with those having problems with gambling and their families.
6. To develop, in a timely manner and in collaboration with the gaming sector, evidence based policies and procedures that ensure a socially responsible balance between public health interests and revenue generation.