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THE 2006 STUDY  
OF GAMBLING AND PROBLEM GAMBLING  
IN NEW MEXICO

*Report to the  
Responsible Gaming Association of New Mexico*

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June 21, 2006

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## ACKNOWLEDGEMENTS

We would like to thank all of the residents of New Mexico who were interviewed for this survey. We would also like to thank the Responsible Gaming Association of New Mexico for initiating and funding this study. Finally, we would like to thank Dr. Michael O'Neil and the staff of O'Neil Associates who conducted the interviews as well as Dr. Anthony Lucas, Associate Professor in the Department of Hotel Management at the University of Nevada, Las Vegas and Dr. A. K. Singh in the Department of Mathematics at the University of Nevada, Las Vegas who assisted with the analysis of the data.

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# EXECUTIVE SUMMARY

This report summarizes the findings of a comprehensive survey of gambling participation and gambling-related problems among adult residents of New Mexico. The main purpose of this survey was to determine the scope of problem gambling in New Mexico and to identify the groups in the population most affected by the disorder. The results of this study also provide information about the impacts of problem gambling in New Mexico and will help public health decision-makers determine the best courses of action when making policy decisions in the future.

Problem gambling is a broad term that refers to all of the patterns of gambling behavior that compromise, disrupt or damage personal, family or vocational pursuits. Pathological gambling lies at the most severe end of a continuum of problematic gambling involvement. Pathological gambling is a treatable mental disorder characterized by loss of control over gambling, chasing of losses, lies and deception, family and job disruption, financial bailouts and illegal acts. This report relies on the most up-to-date methods to provide information on gambling behaviors ranging from this most severe status to more common and everyday forms of gambling behavior. Importantly, this report concludes with recommendations for how to put this information to use in a way that benefits all of the stakeholders in the gaming industry—from the state government to operators to patrons to employees to residents.

## *Methods*

The New Mexico problem gambling prevalence survey was completed in three phases. The first phase included finalizing the questionnaire and the sampling approach, translating the questionnaire into Spanish (a vital consideration in New Mexico, which has a very high proportion of Hispanic residents), programming it for computer administration, and training the interviewers. The second phase of the project included data collection and “cleaning” (a necessary task that readies the numbers for analysis). The third phase of the project included data analysis, development of preliminary tables and preparation of a full report on the project.

The final general population sample for this study included 2,850 residents of New Mexico aged 18 and over. To address the unique demographic characteristics of the New Mexico population, which includes a large proportion of Native Americans, we interviewed a separate oversample of 589 Native American residents of New Mexico. Data collection was carried out between September, 2005 and January, 2006. To ensure that the results could be generalized to the adult population of New Mexico, the sample was weighted by age and ethnicity to account for under-representation of young men and Hispanics, two groups that are particularly difficult to engage in surveys. In presenting the results of the survey, we first examine results from the main sample of the general population. Results from our Native American respondents are considered in a separate section of the report.

## *Gambling in New Mexico*

- The majority of adults in the United States have gambled at some time in their lives. Nationally, the proportion of the population that has ever gambled ranges from 81% in the Southern states to 89% in the Northeast. In New Mexico, 85% of the

respondents in the main sample indicated that they had gambled at some time in their lives. Two-thirds (68%) of New Mexico adults have gambled in the past year and one-fifth (20%) gambles monthly or more often. Only 9% of New Mexico adults gamble weekly or more often.

- The types of gambling that New Mexico adults are most likely to have ever tried are lottery and casino games. Nearly two-thirds of New Mexico adults (64%) have ever tried these activities. Approximately one-quarter of New Mexico adults have ever wagered on horse races, sports and private games and approximately one-sixth of New Mexico adults have ever played non-casino bingo or non-casino gaming machines. Lifetime participation rates are very low for non-lottery numbers games and for Internet gambling.
- The types of gambling that New Mexico adults are most likely to do on a regular basis are playing the lottery and, although monthly participation is much lower, gambling at a casino.
- Non-gamblers and infrequent gamblers in New Mexico are significantly more likely than more frequent gamblers to be female, aged 55 and over, widowed, to have less than a high school education and to be retired or keeping house.
- Monthly and weekly gamblers are significantly more likely than past-year gamblers to be male, to be Hispanic, to have an annual household income over \$50,000 and to have military experience. Monthly and weekly gamblers are significantly less likely than past-year gamblers to have attended college.
- About one-third (30%) of all gamblers in New Mexico say that slot machines are their favorite gambling activity and another 16% identify casino table games as their favorite type of gambling. Another 16% of the gamblers in New Mexico indicate that playing the lottery is their favorite type of gambling.
- Non-gamblers and infrequent gamblers are most likely to say that the possibility of losing money is an important or very important reason for not gambling, followed by moral or ethical concerns. Monthly and weekly gamblers are most likely to say that entertainment is an important or very important reason for gambling, followed by winning money. Monthly and weekly gamblers are significantly more likely than less frequent gamblers to say that convenience is an important reason for gambling.

### *Problem Gambling in New Mexico*

- Two problem gambling screens were used in the New Mexico survey. The NORC DSM-IV Screen for Gambling Problems (NODS) was used to provide a measure of problem gambling based on the most recent psychiatric criteria for pathological gambling as well as comparability with recent national and statewide surveys. In addition, the problem gambling severity items from the recently developed Canadian Problem Gambling Index (CPGI) were used in New Mexico as a secondary measure of gambling-related impacts and to provide a first opportunity to compare the performance of these two problem gambling screens in a single survey.

- In problem gambling prevalence surveys, individuals are classified as **problem gamblers** or **pathological gamblers** on the basis of their responses to the questions included in one of the standard problem gambling screens. As our understanding of the distribution of gambling problems in the population improves, the characteristics of individuals who score even lower on problem gambling screens (**at-risk gamblers**) have gained importance. These individuals are of interest because they represent such a large proportion of the population, because of the possibility that their gambling-related difficulties may become more severe over time, and because the prospects of changing their behavior through effective public awareness and education campaigns are better than for more troubled gamblers. In addition, it may well be that this relatively larger group may create even greater problems than more severely affected groups, simply because of their numerical strength.
- Based on the NODS, the prevalence of pathological gambling in New Mexico is 1.1% and the prevalence of problem gambling is 1.1%. The prevalence of at-risk gambling in New Mexico is 6.4%. The overall prevalence rate of at-risk, problem and pathological gambling in New Mexico is at the lower end of the range of prevalence rates identified in other states and nationally using this screen.
- The most recent census identified 1.3 million individuals living in New Mexico aged 18 and over. Based on these figures, there are between 9,400 and 19,400 New Mexico adults who can be classified as pathological gamblers. Another 9,400 to 19,400 New Mexico adults can be classified as problem gamblers. Finally, an additional 72,100 to 95,600 New Mexico adults can be classified as at-risk gamblers.
- Differences in prevalence rates by gender, ethnicity, marital status, education, employment status and religion are all statistically significant, meaning that the differences observed among subgroups in these populations are greater than would be expected by chance. The prevalence of problem and pathological gambling is particularly high among respondents who have never married and among respondents who are disabled or unemployed.
- Problem and pathological gambling prevalence rates are highest among past-year players of non-casino bingo and among respondents who wager privately. Problem gambling prevalence is also high among past-year sports bettors and casino gamblers.

### *Comparing Non-Problem and Problem Gamblers in New Mexico*

- Problem gamblers in New Mexico are significantly more likely than non-problem gamblers to be male, Hispanic, unmarried and disabled or unemployed. Problem gamblers in New Mexico are significantly less likely than non-problem gamblers to have graduated from college and to be retired. Although five in ten problem gamblers in New Mexico work fulltime, two in ten are disabled or unemployed compared with only one in twenty non-problem gamblers.
- Problem gamblers in New Mexico are most likely to gamble regularly (once a month or more often) on the lottery and at a casino. These individuals are significantly more likely than non-problem gamblers to gamble regularly on sports and private games of skill as well as on non-casino gaming machines and non-casino bingo.

One in six problem gamblers in New Mexico reports having gambled in the past year on the Internet, indicating that this relatively new type of gambling may become an increasing concern in the future.

- Problem gamblers in New Mexico are most likely to identify slot machines, whether located at casinos or at racetracks or social clubs, as their favorite type of gambling.
- Problem gamblers in New Mexico are significantly more likely than non-problem gamblers to say that excitement and winning money are important or very important reasons to gamble. They are significantly less likely than non-problem gamblers to say that inexpensive entertainment is an important or very important reason to gamble.
- Problem gamblers in New Mexico are significantly more likely than non-problem gamblers to use tobacco daily, consume alcohol regularly and to have used marijuana and other illicit drugs in the past year. Problem gamblers in New Mexico are also significantly more likely than non-problem gamblers to rate their physical health only fair or poor, to have ever experienced a manic episode, and to have ever been depressed.
- In contrast to earlier studies, problem gamblers in New Mexico are not significantly more likely than non-problem gamblers to have ever declared bankruptcy. However, problem gamblers in New Mexico are significantly more likely than non-problem gamblers to have ever been arrested and to have been incarcerated. Problem gamblers in New Mexico are also significantly more likely than other gamblers to have been troubled by the gambling of someone in their family.
- For the most part, at-risk gamblers fall between non-problem and problem gamblers demographically but their gambling participation looks much more like that of problem gamblers than non-problem gamblers. At-risk gamblers are more likely than either non-problem or problem gamblers to say that inexpensive entertainment is an important reason for gambling and to identify casino table games and horse race betting as their favorite types of gambling.

### *Comparing Native Americans and Non-Native Americans*

- The New Mexico prevalence survey included an oversample of 589 Native American residents aged 18 and over. Data from the main sample and oversample were analyzed to determine whether there were significant differences between Native Americans and non-Native Americans in New Mexico in gambling participation and problem gambling prevalence.
- Native American respondents were significantly younger than non-Native American respondents. They were also significantly less likely to be married, to have annual household incomes over \$25,000 and to have graduated from college.
- While the majority of both Native Americans and non-Native Americans in New Mexico have gambled in the past year, a significantly larger proportion of Native Americans have gambled in the past year compared with non-Native Americans (73% vs. 67%). Native Americans in New Mexico are significantly more likely to

have gambled in the past year at a casino and to have played bingo outside a casino while non-Native Americans are more likely to have gambled in the past year on horse races, sports and private games.

- Native Americans in New Mexico are less likely than non-Native Americans to view socializing and entertainment as important reasons for gambling and more likely to view convenience and excitement as important reasons to gamble.
- The prevalence of at-risk, problem and pathological gambling is significantly higher among Native Americans in New Mexico than among non-Native Americans. While statistically significant, these differences are smaller than might have been expected based on research among other Native American and indigenous groups internationally.

### *Directions for the Future*

The impacts of problem gambling can be substantial for communities, businesses, families, and individuals. Pathological gamblers experience physical and psychological stress and exhibit substantial rates of depression, alcohol and drug dependence and suicidal ideation. The families of problem and pathological gamblers experience physical and psychological abuse as well as harassment and threats from bill collectors and creditors. Other significant impacts include costs to employers, creditors, insurance companies, social service agencies and the civil and criminal justice systems.

Studies in many other jurisdictions suggest that problem gambling services play an important role in minimizing rates of problem gambling in the general population. There is also the question of how to prevent progression toward more severe gambling-related problems among the proportion of the population in New Mexico that is at risk for developing more severe gambling-related difficulties.

New Mexico has done well in minimizing gambling problems in the adult population. Consideration should be given to continuing to provide financial support for treatment services in New Mexico. However, it may also be time to consider expanding the Association's efforts to include problem gambling prevention in order to reduce as much as possible the rate of at-risk gambling in New Mexico. A full range of ameliorative measures in New Mexico would include fostering responsible gambling policies and programs by the full range of gambling operators, expanding training opportunities for treatment professionals, expanding the gambling counselor certification program, establishing procedures to improve the helpline referral process, providing increased funding to support public education and prevention services as well as problem gambling treatment, and continued monitoring of gambling and problem gambling prevalence to assess the impacts of legal gambling on the residents of New Mexico.

# INTRODUCTION

Since the 1970s, the availability of gambling has grown ten-fold in the United States. Today, a person can make a legal wager of some sort in every state except Utah and Hawaii; 38 states have lotteries, 28 states have casinos and 22 states have off-track betting (National Gambling Impact Study Commission, 1999; North American Association of State & Provincial Lotteries, 2003). Just as telling as the expansion of gambling into new jurisdictions is the growth of the gambling industries. Between 1975 and 2001, revenues from legal wagering in the United States grew twenty-fold, from \$3 billion to \$64 billion while gambling expenditures more than doubled as a percentage of personal income (Christiansen, 2000; Christiansen & Sinclair, 2002; Kallick et al, 1976).

The main purpose of this survey, funded by the Responsible Gaming Association of New Mexico, was to determine the scope of problem gambling in New Mexico and identify the groups in the population most affected by the disorder. The results of this study are also intended to provide information about the impacts of problem gambling in New Mexico and will be useful to the Association, the State and other stakeholders in efforts to help individuals and groups in New Mexico affected by this disorder.

This report is organized into several sections for clarity of presentation. The **Introduction** includes a definition of the terms used in the report, a brief review of methods for assessing problem gambling and conducting prevalence surveys in the general population, and background information on gambling and problem gambling in New Mexico. This is followed by a review of research on **Risk Factors for Problem Gambling**. The **Methods** section addresses the details of conducting the survey. The next four sections present findings from the survey in the following areas:

- gambling in New Mexico;
- prevalence of problem gambling in New Mexico;
- comparing non-problem and problem gamblers in New Mexico; and
- comparing Native Americans with other population groups in New Mexico.

The report concludes with a summary of the findings of the study and consideration of the number of problem gamblers likely to seek treatment in New Mexico on an annual basis as well as suggestions for the future development of services for problem gamblers and their families in New Mexico. There are two appendices to the report including a technical section comparing the performance of the two problem gambling screens used in the New Mexico survey and a copy of the questionnaire.

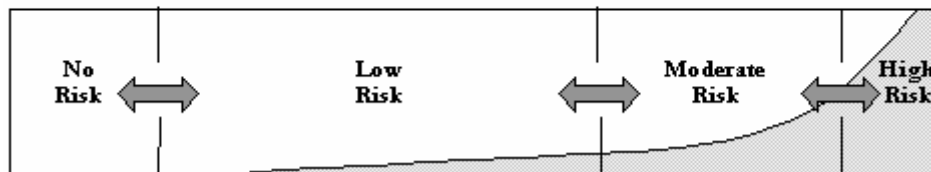
## *Defining Our Terms*

Gambling is a broad concept that includes diverse activities, undertaken in a wide variety of settings, appealing to different sorts of people and perceived in various ways by participants and observers. Failure to appreciate this diversity can limit scientific understanding and investigation of gambling and gambling problems. Another reason to note the differences between various forms of gambling arises from accumulating evidence that some types of gambling are more strongly associated with gambling-

related problems than others (Abbott & Volberg, 1999a). People take part in gambling activities because they enjoy them and obtain benefits from their participation. For most people, gambling is generally a positive experience. However, for a minority, gambling is associated with difficulties of varying severity and duration. Some regular gamblers develop significant, debilitating problems that also typically result in harm to people close to them and to the wider community (Abbott & Volberg, 1999a).

Gambling problems exist on a continuum and there is mounting evidence that such problems may not necessarily be chronic and progressive (Abbott et al, 2004c). Gambling problems vary in duration and severity and a substantial proportion of these problems occur in persons who are not pathological gamblers but who engage in risky gambling. Risky gambling includes a broad range of gambling behaviors (e.g., persistently betting more than planned or spending more time gambling than intended, chasing losses and borrowing money to gamble) as well as cognitions (e.g., superstitions, illusions of control and misunderstandings about the nature of probability and randomness) that support the adoption and maintenance of risky gambling behaviors. Although risky gambling is not a clinically defined condition, it is generally viewed as gambling in ways that may pose a risk of physical or emotional harm to the gambler or others but has not produced effects that would result in a clinical diagnosis. Figure 1 presents the continuum of gambling involvement and gambling problems graphically. The terms used in the present report are not identical to the terminology included in this illustration; however, our view of the continuum of gambling problems as highly dynamic and not inevitably progressive is very similar.

**Figure 1: OPGRC Problem Gambling Framework<sup>1</sup>**  
**Figure 5**  
**Dynamics Among Categories**



**Pathological gambling** was first included in the third edition of the Diagnostic and Statistical Manual (DSM-III) of the American Psychiatric Association (1980). Each subsequent revision of this manual has seen changes in the diagnostic criteria for pathological gambling. The essential features of pathological gambling are presently defined as: (1) a continuous or periodic loss of control over gambling; (2) a progression, in gambling frequency and amounts wagered, in the preoccupation with gambling and in obtaining monies with which to gamble; and, (3) a continuation of gambling involvement despite adverse consequences (Rosenthal & Lesieur, 1992). A formal diagnosis of pathological gambling is arrived at by an appropriately qualified and experienced clinician following an extensive clinical interview. To make a diagnosis, a clinician must determine that a patient has met five or more of the ten diagnostic indicators associated with pathological gambling. Table 1 on the following page presents the current

<sup>1</sup> Ontario Problem Gambling Research Foundation. *Problem Gambling Framework*. Available at <http://www.gamblingresearch.org/framework.sz>.

diagnostic criteria for pathological gambling (American Psychiatric Association, 1994: 618):

**Table 1: Diagnostic Criteria for Pathological Gambling**

|   |  |
|---|--|
| Persistent and recurrent maladaptive gambling behavior as indicated by five (or more) of the following: |  |
| Preoccupation   | Preoccupied with gambling (e.g. preoccupied with reliving past gambling experiences, handicapping or planning the next venture, or thinking of ways to get money with which to gamble) |
| Tolerance   | Needs to gamble with increasing amounts of money in order to achieve the desired excitement  |
| Withdrawal  | Restless or irritable when attempting to cut down or stop gambling   |
| Loss of Control   | Has repeated unsuccessful efforts to control, cut back or stop gambling  |
| Escape  | Gambles as a way of escaping from problems or relieving dysphoric mood (e.g. feelings of helplessness, guilt, anxiety or depression)   |
| Chasing   | After losing money gambling, often returns another day in order to get even ("chasing" one's losses)   |
| Lying   | Lies to family members, therapist or others to conceal the extent of involvement with gambling   |
| Illegal Acts  | Committed illegal acts, such as forgery, fraud, theft or embezzlement, to finance gambling   |
| Risked Relationship   | Has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling  |
| Bailout   | Relies on others to provide money to relieve a desperate financial situation caused by gambling  |
| The gambling behavior is not better accounted for by a Manic Episode.                                   |  |

The term **problem gambling** is used in a variety of ways. In some situations, its use is limited to those whose gambling-related difficulties are less serious than those of pathological gamblers. In other situations, it is used to indicate **all** of the patterns of gambling behavior that compromise, disrupt or damage personal, family or vocational pursuits (Cox et al, 1997; Lesieur, 1998). From this perspective, pathological gambling can be regarded as one end of a continuum of gambling-related problems. Problem gamblers, as well as individuals who score even lower on problem gambling screens (**at-risk gamblers**) are of concern because they represent much larger proportions of the population than pathological gamblers. These groups are also of interest because of the possibility that their gambling-related difficulties may become more severe over time. Problem and at-risk gamblers are also important because the prospects of changing their behavior through effective public awareness and education campaigns are better than for more troubled gamblers (Hodgins & el-Guebaly, 2000; Shaffer & Korn, 2002).

In considering the public health risks of problem gambling, it is important to note that not all of the features of pathological gambling need be present at one point in time (Abbott & Volberg, 1999a; Gerstein et al, 1999). Some of the impacts that at-risk, problem and pathological gamblers may experience include psychological difficulties, such as anxiety, depression, guilt, exacerbation of alcohol and drug problems and attempts at suicide as well as stress-related physical illnesses such as hypertension and heart disease. Interpersonal problems include arguments with family, friends and co-workers and breakdown of relationships, often culminating in separation or divorce. Job and school problems include poor work performance, abuse of leave time and loss of job. Financial effects loom large and include reliance on family and friends, substantial credit card debt, unpaid creditors and bankruptcy. Finally, there may be legal problems as a result of criminal behavior undertaken to obtain money to gamble or pay gambling debts (Lesieur, 1998; Volberg, 2001a).

## *Measuring Gambling Problems*

State governments began funding services for individuals with gambling problems in the 1980s. As a first step toward establishing these services, policy makers sought information about the number of people who might seek help for their gambling problems and what they looked like. In responding to these questions, researchers adopted methods from the field of psychiatric epidemiology to investigate the prevalence of gambling problems in the general population.

In the 1980s, few tools existed to measure gambling problems, and only one—the South Oaks Gambling Screen (SOGS)—had been rigorously tested for performance (Lesieur & Blume, 1987). Closely based on the original psychiatric criteria for pathological gambling, the SOGS was developed to screen for gambling problems in clinical populations. Like other tools in psychiatric research, the SOGS was quickly adopted for use in epidemiological research as well as in clinical settings. The SOGS was first used in a prevalence survey in New York State (Volberg & Steadman, 1988). Since then, the SOGS—or one of several variants of the original screen, most often the SOGS-R (Abbott & Volberg, 1996)—has been used in population-based research in more than 50 jurisdictions in the United States, Canada, Europe, Asia, and Oceania (Abbott & Volberg, 1996, 2000; Bondolfi, Osiek & Ferrero, 2000; Duvarci et al, 1997; Lund & Nordlund, 2003; Orford et al, 2003; Productivity Commission, 1999; Shaffer, Hall & Vander Bilt, 1999; Volberg, 2001a; Volberg, Abbott et al, 2001; Welte et al, 2001).

Beginning in the 1990s, dissatisfaction with the SOGS grew, particularly among Australian and Canadian researchers. The main criticism of the SOGS was that this screen was developed and tested in a clinical setting and the characteristics of its performance in community samples were unknown (Walker & Dickerson, 1996; Wiebe, Single & Falkowski-Ham, 2001). However, this view ignores studies that did assess the SOGS and SOGS-R in general population contexts (Abbott & Volberg, 1996; Stinchfield, 2002). There have been additional criticisms of the SOGS, reflecting concerns that the screen does not reflect the DSM conceptualization of pathological gambling; that some of the items would be equally endorsed by non-problem gamblers; that the lifetime frame of reference of the original screen overestimates the current prevalence of gambling problems; and that the screen is insensitive to culturally diverse contexts (Abbott et al, 2004c; Battersby et al, 2002; Thomas, Jackson & Blaszczynski, 2003).

In 1994, the fourth edition of the *Diagnostic and Statistical Manual* (DSM-IV) adopted a new set of criteria for the diagnosis of pathological gambling (American Psychiatric Association, 1994). The new criteria incorporated empirical research—primarily epidemiological research—that more firmly linked pathological gambling conceptually to other addictive disorders like alcohol and drug dependence (Lesieur & Rosenthal, 1998).

One response to this and other changes in the gambling studies field was the development of a large number of new screens for problem and pathological gambling (Govoni, Frisch & Stinchfield, 2001). Some of these new screens are based on the most recent revision of the DSM; others use a broader definition of problem gambling. In addition to ongoing use of the SOGS and SOGS-R, the screens and measures that have been most widely used in prevalence surveys since the late 1990s include the DSM-IV-MR, the NODS and the Canadian Problem Gambling Index (CPGI) (see Abbott & Volberg, in press for a review). While performance on these various measures generally

shows moderate to high levels of agreement, especially in the case of people with severe problems, they generate somewhat different prevalence estimates.

### *Considerations in Designing Prevalence Studies*

On the face of it, finding out how many people there are in a community with gambling problems appears to be straightforward. A random sample of the population is selected, assessed using a valid problem gambling instrument, and a prevalence estimate is then generated from the results. In reality, for a variety of financial and technical reasons, this process is an evolving and increasingly complex one.

For one thing, because problem gambling is a relatively rare phenomenon, large sample sizes are necessary to conduct meaningful analyses. Without a large sample size, it becomes difficult to determine whether differences observed in a study are in fact generalizable to the population from which it is drawn. Most gambling researchers agree that it is essential to interview large samples of respondents to establish reliable prevalence estimates, particularly for subgroups of the population.

Another issue that requires careful attention is the sampling design, especially as it pertains to those who choose not to participate in surveys. For one thing, increasing attention has been devoted to not only randomly sampling households, but also randomly sampling *within* households (using increasingly complex methods) in order to ensure that those who answer the phone (often females) are not over-represented. Also, because of the fact that response rates in general are declining, it is vital that researchers devote special attention to achieving the highest possible response rates. In contrast to popular polls conducted by major news organizations (generally done over the course of a few days), the New Mexico problem gambling prevalence survey relied heavily on substantial callbacks—re-contacting potential respondents several times to encourage their participation. Completing substantial callbacks requires significant resources and time and also means that only interviewers with demonstrated success at completing lengthy interviews and converting those whom researchers call “refusals” are employed. All of these developments mean that prevalence research is getting more complex and more expensive.

### *Gambling and Problem Gambling in New Mexico: Background*

Throughout the world, gambling participation and attitudes toward gambling are linked to the communities in which these behaviors occur and to the norms and values of members of those communities. Differences have been found in the types of gambling preferred by middle-class and blue-collar gamblers, by white and black Americans and by men and women (Dixey, 1996; Drake & Cayton, 1945; Henslin, 1967; Hraba & Lee, 1996; Light, 1977; Zola, 1964). It is equally important to note that individual and community definitions of gambling can vary widely. For example, a recent Gallup poll found that 52% of respondents defined stock market investment as a form of gambling while 22% did not consider buying lottery tickets to be gambling (Gallup, 1999).

## **Gambling in New Mexico**

The citizens of New Mexico have access to a wide range of legal gambling opportunities available throughout the state. The major forms of commercial gambling in New Mexico include Indian casino gambling, pari-mutuel wagering on horse races, the New Mexico Lottery and electronic gaming machines both at racetracks and at social and fraternal clubs.

As in many other states, pari-mutuel wagering on horse races is the oldest major form of legal gambling in New Mexico. In 1997, after decades of declining attendance, the five commercial horse tracks in New Mexico were permitted to begin operating slot machines. In 2004, attendance reached over 1 million at the five tracks and total handle reached \$166 million of which \$130 million was returned to the public in winnings (New Mexico Racing Commission, 2005). Separately from racing handle, slot machines were expected to generate approximately \$176 million in gross revenues in FY 2005. One-fifth of these gross revenues goes to purses and another 25% goes to the State's general fund. In 2001, the New Mexico racetracks were permitted to increase the number of machines from 300 to 750 per location (Cole, 2005).

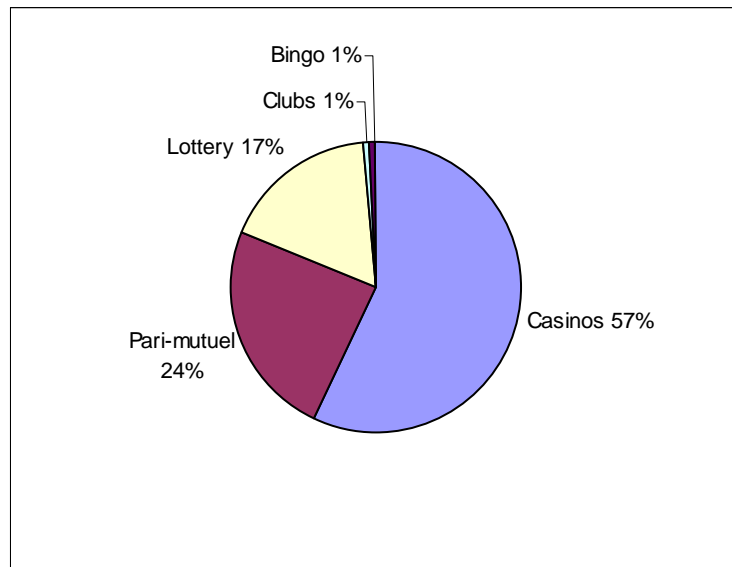
The New Mexico Lottery was authorized in 1995 and launched in 1996. There are approximately 1,100 lottery ticket sales outlets throughout the state. State lottery proceeds in New Mexico are earmarked for education and, since the lottery's inception, approximately 32,000 college scholarships have been funded with lottery proceeds (Heild, 2005). In FY 2004, lottery ticket sales reached \$147 million of which 24%--or \$36 million—went to the scholarship program (New Mexico Lottery, 2005).

In the wake of the Indian Gaming Regulatory Act, Governor Gary Johnson negotiated compacts with a number of New Mexico tribes. These compacts were approved by the 1997 New Mexico State Legislature, paving the way for the 1999 Compact Negotiation Act, which established the process for negotiations between the Tribes and the State. Thirteen tribes presently operate 18 casinos throughout New Mexico. Under the compacts, the tribes pay the State a percentage of the "net win" from slot machines and, in calendar year 2004, this net win reached \$484 million (New Mexico Gaming Control Board, 2005).

Finally, the state's veterans and fraternal clubs are permitted to offer charitable gaming through electronic gaming machines and bingo. Sixty-one clubs are permitted to operate a maximum of 15 slot machines per location although most have fewer machines. Of the more than \$10 million that was won on club gaming machines in fiscal year 2004, the state received just over \$1 million, with an additional \$1.9 million going to charitable causes. Bingo offerings have declined substantially since the introduction of Native American casinos but bingo still earned \$30 million in FY 2005 prior to paying out prizes and expenses (Gallagher, 2005).

Altogether, there are presently about 14,750 gaming devices operating at New Mexico's five racetracks, 18 casinos and 61 veteran/fraternal clubs (or approximately 1 machine for every 1,000 New Mexico adults). Overall, gambling in New Mexico generates approximately \$1 billion in gross annual revenues. Figure 2 shows the relative proportion of the New Mexico gaming industry represented by the different sectors of the industry. Even without considering revenues from table games—which typically represent between 20% and 30% of casino revenues—tribal casinos represent the largest sector of the gaming industry in New Mexico. The racing industry, with revenues from both pari-mutuel wagering and gaming machines, is the second largest sector of the industry followed by the New Mexico Lottery. Bingo and gaming machines at veterans and fraternal clubs are the smallest sectors of the gaming industry in New Mexico, representing only about 2% of gross gaming revenues.

**Figure 2: New Mexico Gaming Industry**



### **Problem Gambling Services in New Mexico**

Although a growing number of states fund services for problem gamblers, the major sources of help for problem gamblers and their families remain the self-help groups, Gamblers Anonymous and Gam-Anon, and not-for-profit state councils on problem gambling.

In New Mexico, both the tribes and the racetracks are required to contribute  $\frac{1}{4}$  of 1% of gross slot machine revenues to problem gambling programs. In FY 2004, with additional contributions from the New Mexico Lottery, funding for problem gambling services in New Mexico reached \$2 million (or about  $\frac{2}{10}$ ths of 1% of gross gaming revenues). New Mexico has a well-advertised toll-free helpline, a fund that finances treatment for those who cannot afford help and training programs for healthcare workers and casino workers. However, there is no state coordination of spending on problem gambling services and critics have argued that there is a need for a more balanced approach to targeting these resources (Heild, 2005).

The New Mexico Council on Problem Gambling was established in 1998 and operates the state's bilingual, 24-hour helpline. Callers are referred to local professional treatment services, debt counseling programs, Gamblers Anonymous meetings and/or Gam-Anon (New Mexico Council on Problem Gambling, 2006). In 2001, the New Mexico Council established an Indigent Care Treatment Fund that has provided over \$250,000 to New Mexico residents in need of problem gambling treatment who could not afford to pay for these services.

In addition to the New Mexico Council, Gamblers Anonymous provides assistance through self-help (12-step) programs in Albuquerque, Los Lunas, Rio Rancho, Santa Fe and Tularosa. The group meetings characteristic of Gamblers Anonymous, wherever these are held, offer a fellowship with other individuals who are themselves working to overcome their problems with gambling. Gam-Anon provides similar services to those who have family members with gambling problems (New Mexico Gaming Control Board, 2005).

# RISK FACTORS FOR PROBLEM GAMBLING: A LITERATURE REVIEW

There are different ways to characterize or classify risk factors for problem and pathological gambling. The National Research Council (1999) identified risk factors at three levels – those which initiated gambling, those which caused progression from social to problem or pathological gambling, and those associated with chronicity and maintenance of problematic gambling. A recent trend in the behavioral sciences has been a convergence of biological, psychological, and social theories into a **biopsychosocial** perspective that attempts to explain psychiatric conditions (Engel, 1980). From this perspective, behavioral illnesses are caused by a combination of risk factors from three separate domains, including disturbances in brain function, altered psychological processes and social factors.

In this section of the report, we summarize the most current scientific evidence on the biological, psychological and social risk factors that contribute to the development of pathological gambling. As is the case with many other psychiatric disorders, the current evidence suggests that there is a combination of risk factors that contribute to pathological gambling. Understanding of these risk factors serves to focus on areas in prevention, treatment and early intervention where efforts may be most effectively and efficiently concentrated. A clearer understanding of the risk factors associated with pathological gambling can also help direct public policies in relation to legal gambling.

## *Biological Factors*

Investigating the biological causes of pathological gambling is uniquely challenging because there are no consistent animal models and because there are likely subtypes of pathological gambling that may or may not share certain biological characteristics. Nevertheless, research into the biological causes of pathological gambling is important, not least because, with no neurotoxic substances involved, this disorder serves as a natural model of addictive behaviors.

**Genetic Contribution.** Genetic studies are important in understanding psychiatric illnesses because they help prove that these disorders are biological diseases and not simply a matter of excessive appetites or immoral behavior. There are several approaches to identifying the impact of genetics on pathological gambling, including family studies to determine the heritability of the disorder; twin studies to tease out genetic versus environmental influences, and studies that focus on differences in genetic factors of pathological and non-pathological gamblers.

Family studies have found high rates of pathological gambling among family members of pathological gamblers as well as among substance dependent patients (Gambino et al, 1993; Lesieur, 1985). A recent meta-analysis of 28 family studies examining pathological gambling found a relatively weak effect overall although a stronger familial effect appears to hold for those with more severe gambling problems (Walters, 2001). This is similar to findings related to alcohol dependence, suggesting a parallel process and supporting the notion that a small genetic effect can have a powerful impact on behavior when exposed to an environment that allows genetic vulnerabilities to be expressed in a clinically significant manner.

Twin studies are considered more powerful than family studies because both genetic and environmental impacts on the heritability of disorders are incorporated. If a disorder has a true genetic component, monozygotic (identical) twins will have a higher frequency of the disorder compared to dizygotic (fraternal) twins who will, in turn, have a higher frequency of the disorder than other first-degree relatives or the general population. The largest twin study of pathological gambling, based on the Vietnam Era Twin Registry, found that this disorder was as heritable as alcohol dependence and that genetic factors were the predominant contributor to familial transmission of pathological gambling (Slutske et al, 2000, 2001). In a smaller study, heritability explained “high action” gambling in male twins but not “low action” gambling (Winters, 1999).

Overall, genetic studies of pathological gambling support the notion that there are clinically significant, inheritable risk factors for pathological gambling. These factors may determine one’s initial emotional response to gambling or code for a predisposition to impulsivity/addictive behaviors. They may also be responsible for an inability to control behavior or an inability to adapt and learn from losing.

**Neurotransmitter Functioning.** Neurobiological research has identified genetic differences between pathological gamblers and controls in the dopamine, serotonin and norepinephrine systems. Several studies have found differences between pathological gamblers and controls in dopamine receptor genes and in serotonin transporter genes, suggesting that the disorder may be associated with deficiencies in the brain’s reward systems (Comings et al, 2001; Ibanez et al, 2000, 2003; Perez et al, 1999).

Recent advances in neuroimaging techniques have allowed researchers to identify abnormalities in areas of the brain that control decision-making, reward processing and information processing in pathological gamblers similar to those among persons with substance use disorders (Goudriaan et al, 2004; Potenza et al, 2003; Potenza & Winters, 2003). Pathological gamblers have been shown to have alterations in levels of the dopamine, serotonin and norepinephrine systems, all implicated in the neurobiological roots of impulsivity (Chambers & Potenza, 2003; Potenza, 2001).

Serotonin has been implicated in the regulation of impulsivity and compulsivity, norepinephrine in the mediation of arousal and novelty seeking, and dopamine in reward and reward dependency. Some researchers believe that all three neurotransmitters are involved in pathological gambling, but at different stages of the gambling cycle. Anticipatory arousal may be linked to the noradrenergic system, the ‘high’ of the actual gambling episode may be associated with the serotonergic system, and difficulties extinguishing the behavior may be under the aegis of the dopaminergic system (Rosenthal & Fong, 2004).

While these results are important, a great deal more work is needed to investigate the role of neurotransmitters in the development and maintenance of pathological gambling. As such work proceeds, it will be important to include larger samples as well as paying greater attention to racial composition and subtypes of problem gamblers, in order to clarify the relationship between these genetic risk factors and the precise behaviors they may encode.

## *Psychological Factors*

Psychological factors determine how people interact with the environment and with others and how they view themselves and the world. Personality traits, ways in which people manage stressful events, and comorbid psychiatric disorders are all important psychological factors related to the development of pathological gambling.

**Comorbidity.** Like other addictive disorders, pathological gamblers have much higher rates of co-occurring psychiatric conditions and substance use disorders than are found in the general population. Rates of these disorders are particularly high among pathological gamblers, both clinically and in the general population. For example, two recent national surveys found rates of alcohol and substance dependence among problem and pathological gamblers in the general population that are approximately ten times higher than among low risk gamblers and nongamblers (Gerstein et al, 1999; Welte et al, 2001). There is also evidence that mood disorders—primarily major depression—frequently co-occur with problem and pathological gambling (Gerstein et al, 1999; Specker et al, 1995).

There are several theories as to why comorbid disorders are so common in pathological gamblers. There is disagreement about whether these disorders are caused by the same biological and psychological risk factors or whether one disorder causes the other (i.e., depression causes pathological gambling or vice versa). In developing effective interventions for pathological gambling, it is important to understand not only why comorbid conditions are so common but how they may cause pathological gambling. It is also important to improve our understanding of how gambling may be used to self-medicate for other disorders, whether psychological or physical.

**Personality Traits.** There is research suggesting that certain aspects of personality development, including impulsivity and competitiveness, can predispose toward pathological gambling. However, simply having these personality traits is not enough to “cause” pathological gambling nor does an absence of these traits protect from the development of gambling problems.

Pathological gambling is classified as an impulse control disorder and it is important to understand precisely how impulsivity, which contains elements of risk-taking, sensation seeking and arousal, contributes to loss of control over gambling. Research in clinical settings shows that pathological gamblers tend to be highly impulsive compared to healthy controls and suggests that pathological gamblers are less likely to think about future consequences and are more likely to act in the moment (Blaszczynski et al, 1997; Petry, 2001; Vitaro et al, 1999).

Sensation seeking tends to be high among casino and racetrack gamblers and low among electronic gaming machine players. The difference seems to conform to a distinction that is made in the gambling studies field between those who play competitive, skill-based games (“action seekers”) and those who play non-competitive games primarily based on luck (“escape gamblers”) (Lesieur, 1988; Lesieur & Blume, 1991). Pathological gamblers who are sensation seekers are more apt to be early onset male gamblers who wager primarily on competitive skill-based games and are likely to have other addictions involving risk or danger, including alcohol, drugs and sex.

**Stress and Coping.** Addictions research has made major strides in recent years in demonstrating the contributions of internal and external stressors in the initiation and maintenance of substance use disorders. However, research on the relationship between pathological gambling and stress is in its infancy. Nevertheless, it appears that early interventions for problem gambling that focus on stress reduction may be helpful in preventing full blown development of the disorder.

Research into mood disorders has linked early adverse experiences as a contributing factor to the development of depression as well as a mediator of treatment response (Heim et al, 2004). Recent research by Petry et al (in press) found high rates of childhood maltreatment, including emotional abuse and neglect, physical abuse and neglect, and sexual abuse among male and female treatment-seeking pathological gamblers with severity of maltreatment strongly associated with earlier age of onset of gambling and increased severity of gambling problems. These results suggest the importance of further investigation into the role of childhood maltreatment in the development of pathological gambling as well as the need for research on resiliency factors shown by some who experience childhood maltreatment but do not develop addictive disorders including pathological gambling. This area of research is critical in order to begin to identify protective factors that can be utilized for prevention.

Coping (or defense) mechanisms are dynamic processes that are used to resolve psychological conflicts. Such mechanisms are learned responses to stress that people use to minimize uncertainty or emotional pain. Pathological gamblers are more likely than non-problem gamblers to make use of a range of coping mechanisms that are considered immature and counterproductive, including avoidance, procrastination and dissociation (Brown, 1986; Diskin & Hodgins, 1999; Jacobs, 1988; Rosenthal, 1996, 2004). Pathological gamblers appear to be more boredom-prone although the relationship between boredom susceptibility, depression and problematic gambling requires further exploration. Finally, studies have demonstrated that gambling in general is highly arousing and there is research suggesting that some pathological gamblers are motivated by the excitement of gambling rather than by the desire to win money (Anderson & Brown, 1984).

**Learning Theories.** Some researchers believe that addictive behaviors occur as a direct result of learned experiences. While learning theories are likely to be useful in understanding pathological gambling, much more research is needed in this area. Gambling activities operate directly on the principles of intermittent reinforcement, one of the most effective approaches to reinforcing and perpetuating behavior. Gambling also promotes cognitive distortions and irrational thinking, an area that has received far more research attention (Gilovich, 1983; Ladouceur & Walker, 1996; Langer, 1975; Toneatto et al, 1997).

What remains unclear is exactly how cognitive distortions are acquired and maintained although we can speculate that these distortions probably arise in response to a combination of personality traits, adaptation strategies and biological mechanisms that are responsible for learning. Further research is needed on the relationship between specific forms of gambling and the acquisition of cognitive distortions as well as the identification of modifiers of cognitive distortion.

## *Social Factors*

There are a number of social factors that influence gambling behavior and may contribute to the development of pathological gambling. From a policy perspective, one of many important questions is whether increasing access to gambling increases rates of pathological gambling in the population and, if so, whether putting prevention programs in place prior to increasing access will limit the number of people who develop problems.

**Age.** Internationally, research has identified high rates of problem gambling among adolescents. This, along with reports of especially early ages of onset among treatment-seeking pathological gamblers, has formed the basis for the widespread belief that early initiation into gambling is a risk factor for later pathological gambling (Gupta & Derevensky, 1998; National Research Council, 1999). However, Rosenthal and Fong (2004) point out that early experiences with gambling occur as part of normal social development and that early exposure to family card games or other socially managed gambling activities could serve as a protective factor in the development of problem gambling. The question is whether adolescent experimentation with gambling can be managed in ways that promote “maturing out” and transition to non-problematic involvement in gambling.

Any consideration of age as a risk factor for problem gambling must consider the other end of the life span and the impact of legal gambling on older adults. Prevalence surveys do not support the notion that older adults are at greater risk than younger adults for the development of problem gambling (National Research Council, 1999; Volberg & McNeilly, 2003). However, research does show that older adults are more likely to gamble now than in the past (Gerstein et al, 1999) and it is possible that developmental issues such as impaired physical status, loss, isolation and limited recreational alternatives may contribute to growing numbers of older adults experiencing gambling-related problems. There is evidence that older adults represent a growing proportion of callers to problem gambling helplines in the U.S. (Volberg & McNeilly, 2003).

**Gender.** In most of the United States and other Western countries, rates of problem and pathological gambling are about two times higher among men than among women (Abbott & Volberg, 1996; American Psychiatric Association, 1994; Gerstein et al, 1999; Volberg, 2001a, 2003b). In some jurisdictions, notably Australia and some U.S. states where electronic gaming machines are widely distributed, rates of problem and pathological gambling are about equal for men and women (Productivity Commission, 1999; Volberg, 2003b).

Compared to female pathological gamblers, male pathological gamblers are younger, have higher incomes, began gambling at an earlier age, have a longer duration of gambling problems, have more severe legal problems, are more likely to have alcohol or drug related problems, to be diagnosed with antisocial personality disorder, and to gamble on cards, sports or the racetrack (Grant & Kim, 2002; Ladd & Petry, 2002; Potenza et al, 2001). Women are more apt to describe loneliness and relationship problems as precipitants of their gambling; they are also more likely to be diagnosed with depression. Women also report starting to gamble later in life than men.

These studies seem to support a longstanding characterization of men as early onset gamblers who play competitive, skill based games, and women as late onset gamblers

who play non-competitive, luck based games. According to this description, men gamble for excitement or action while women gamble to numb themselves or escape. However, an analysis of “early onset” and “late onset” gamblers in the general population in Arizona found that the majority of “action gamblers” in that sample actually identified slot machines as their favorite gambling activity (Volberg, 2003a). Clearly, more research is needed to understand the relationships between gambling careers, gambling preferences and the development of gambling problems.

Another consistent finding is that women’s gambling progresses more rapidly to problematic gambling (Ladd & Petry, 2002; Paton-Simpson, Gruys & Hannifin, 2004; Potenza, 2001; Tavares et al, 2001). Various explanations have been offered for this phenomenon, including the greater stigma attached to women’s gambling problems, the limited financial resources available to women compared with men, experiences of loss and the stresses of caring for children and aging parents, and the greater difficulty of hiding gambling excursions and debts from family and friends. Breen and Zimmerman (2002) present data on gambling problems related to electronic gambling machines to suggest a radically different explanation: that it is not gender which accounts for the telescoping phenomenon, but rather involvement in machine gambling.

**Ethnicity and Culture.** Most research on problem and pathological gambling has focused on white male gamblers. However, there is growing evidence to support the notion that disproportionate numbers of African Americans, Hispanics, Asians, and Native Americans are problem and pathological gamblers (Abbott et al, 2004c; Volberg, 2001a, 2003b; Volberg & Abbott, 1997; Welte et al, 2001; Zitzow, 1996). While there is research suggesting that a strong ethnic identity can act as a protective factor against drug use in some ethnic groups, there is no research examining this relationship with regard to gambling.

Another cultural factor that appears to contribute to pathological gambling is the immigration process. Gambling may appeal to immigrants as an enticing way to make money but also as a recreational activity that does not require English language ability, provides opportunities for socialization and relieves the stresses of acculturation. In one small study, Petry et al (2003) surveyed Southeast Asian refugees in the community and identified 59% of their sample as pathological gamblers.

**Societal Attitudes Toward Gambling.** Attitudes toward gambling in the U.S. have always been highly ambivalent. On the one hand, gamblers have been stigmatized as greedy and immoral. On the other hand, gambling has often been identified with American ideals of independence, risk-taking and entrepreneurship. Prior to the involvement of governments in legislation and regulation, gambling was viewed as a morally suspect industry with close associations to organized crime. Over the last 30 years, as state legislatures have turned to gambling as a way to raise revenues without increasing taxes, attitudes have shifted and gambling is now generally viewed as an acceptable form of recreation and entertainment.

This change in attitude has been accompanied by two other significant developments. The first development is the “normalization” of gambling as these activities spread far beyond the confines of gambling-specific venues and out into the community. The second development is the “democratization” of gambling as groups that would not have gambled previously—particularly women and older adults but also youth and ethnic and cultural minorities—now do.

**Access to Legal Gambling.** The relationship between increased access to legal gambling and the prevalence of problem and pathological gambling is an important issue in light of the remarkable expansion of gambling throughout the United States and internationally. Commissions and official government reviews in a number of countries including the United States, Great Britain, Australia and New Zealand have all concluded that increased gambling availability has led to an increase in problem gambling and that future increases will generate additional problems (Abbott, 2001; Gambling Review Body, 2001; National Research Council, 1999; Productivity Commission, 1999). Historically, the introduction and expansion of new forms of gambling, especially continuous forms such as electronic gaming machines, track betting and casino table games, have resulted in substantially increased rates of problem gambling. This has been documented across whole populations as well as within sub-populations that previously had low levels of gambling participation.

Expansion of gambling has been largely due to legislation permitting increases in gambling opportunities, demonstrating how public policies can intersect with clinical conditions. Increased gambling opportunities create more problem gamblers by increasing the risk of exposure. As more people gamble, the risks are greater that individuals with specific vulnerabilities will gamble and develop problems related to their gambling. Results from a number of studies demonstrate that the location of a major gambling venue in a community is associated with rates of problem and pathological gambling that are approximately double the rates in communities without such venues (Gerstein et al, 1999; Welte et al, 2004).

There is research to suggest that the prevalence of problem gambling will eventually level out, even when accessibility continues to increase. However, rates are likely to rise dramatically before stabilization occurs and active measures, including raising public awareness, expanding services and strengthening regulatory measures are probably required to achieve stabilization sooner rather than later (Abbott et al, 2004c).

**Role of Technology.** The gambling industry has taken advantage of recent technological advances to increase the efficiency, reliability and accessibility of gambling options. The most dramatic changes have been the introduction of computer technologies in electronic gaming machine design, changes in the accessibility of credit and financial services for gamblers, and the creation of new, online forms of gambling.

There is a strong belief among gambling counselors and researchers that electronic gaming machines are more addictive than other forms of gambling (Turner & Horbay, 2004). Electronic gaming machines (EGMs) are the most profitable form of gambling; they account for 80% of casino profits in the U.S. and Canada and are found in a growing number of non-traditional gambling locations. Internationally, a growing proportion of problem and pathological gamblers contacting helplines or accessing treatment are identifying EGMs as their primary form of gambling (Abbott et al, 2004c; Doiron & Mazer, 2001; Productivity Commission, 1999; Smith & Wynne, 2004). In addition to high intensity play and intermittent reinforcement, EGMs possess additional highly addictive features including near misses, frequent small wins, the possibility of large jackpots, non-availability of payout probabilities and illusions of skill (Turner & Horbay, 2004).

## Natural Recovery

Natural recovery refers to the process by which individuals with maladaptive behaviors attain a state of recovery without the help of a formal treatment program or self-help. In the case of problem gambling, the exact number of individuals who recover on their own is unknown but is likely to be much higher than the number of problem gamblers who access professional treatment (Abbott & Volberg, 1996; Abbott, Williams & Volberg, 2004b; Smith, Volberg & Wynne, 1994). Research has begun to shed some light on natural recovery from pathological gambling.

Prospective studies of adolescents, college students, casino employees and problem gamblers in the community have all found high rates of “problem resolution” over periods ranging from one to seven years (Abbott et al, 2004b; Hodgins & el-Guebaly, 2000; Shaffer & Hall, 2002; Slutske, Jackson & Sher, 2003). These studies challenge the notion enshrined in the DSM of pathological gambling as a chronic and inevitably progressive disorder. The data further suggest that natural recovery may be the rule rather than the exception, particularly among subclinical problem gamblers.

The likelihood that natural recovery is common among problem gamblers provides hope for effectively preventing gambling disorders in the community (Abbott et al, 2004c). If problem gamblers’ behavior is as susceptible to change as these few studies indicate, prevention messages could be targeted to specific groups in the population most at-risk for progression to pathological gambling. It would also be possible to target specific behaviors associated with progression towards more problematic gambling. Finally, given the relationship between problem gambling and hazardous drinking, treatment initiatives are needed to screen for gambling problems in alcohol treatment programs and either refer for specialty gambling treatment or train providers in effective approaches to treating gambling problems among substance abusers.

## METHODS

The survey of gambling and problem gambling in New Mexico was completed in three stages. In the first stage of the project, staff from Gemini Research consulted with the Responsible Gaming Association of New Mexico as well as O'Neil Associates, the organization responsible for data collection, regarding the final design of the questionnaire and the sample. In the second stage of the project, staff from O'Neil Associates translated and programmed the questionnaire and completed telephone interviews with a sample of 3,596 residents of New Mexico aged 18 years and older. Data collection was carried out between September 20, 2005 and January 12, 2006. O'Neil Associates then provided Gemini Research with the data for the third stage of the project, which included analysis of the data and preparation of this report.

### *Questionnaire*

The questionnaire included sections on gambling participation, problem gambling, alcohol and drug use, experience of depression and manic episodes, help-seeking, other impacts of gambling including bankruptcy and involvement with the legal system, and demographics (see Appendix B for a copy of the questionnaire).

Researchers in the field of gambling studies recommend using more than one measure of problem gambling in surveys of the general population (Abbott & Volberg, 1999b; Gambino, 1999; Shaffer, Hall & Vander Bilt, 1997). Indeed, Shaffer and his colleagues argue that the use of multiple problem gambling screens should be one measure of the quality of problem gambling prevalence studies. As noted above (see *Measuring Gambling Problems* on Page 4), several problem gambling screens based on the most recent psychiatric criteria for pathological gambling have recently been developed. The NORC DSM-IV Screen for Gambling Problems (NODS) was used in the present survey to provide a measure of problem gambling based on the most recent psychiatric criteria for pathological gambling as well as comparability with recent national and statewide surveys. The Problem Gambling Severity Index (PGSI), developed in Canada for use in population studies of gambling problems and impacts, was also used in the New Mexico a U.S. state-level survey for the first time (see Appendix A for a comparison of the performance of these two problem gambling screens).

### **Translation of the Questionnaire**

Census data show that 42% of the adult population of New Mexico is Hispanic or Latino. To enable interviews to be completed with Hispanic and Latino individuals who did not speak English, it was necessary to translate the questionnaire. The questionnaire was translated into Spanish by specialists at O'Neil Associates. The translation process entailed one translator translating the questionnaire from English into Spanish and a second translator translating the questionnaire back from Spanish into English. The original English version and the Spanish-to-English translation were then compared. The two translators discussed discrepancies between the two versions, including the nuanced meaning of discrepant words and phrases, before reaching a consensus on the Spanish translation's final wording.

Interviewers were instructed to arrange to conduct the interview in Spanish if the person answering the telephone spoke Spanish or indicated that they wanted to complete the

interview in that language. Four percent (N=114) of the interviews were conducted in Spanish.

### **Pretest**

The questionnaire was pre-tested with 15 randomly selected residents of New Mexico. The main goal of the pretest was to test respondent comprehension and the programming of the questionnaire. Respondents had no difficulties comprehending the content of the questionnaire and responding to items. The programming of the questionnaire worked well and only a few minor changes were necessary prior to fielding the full survey.

### *Survey Design*

The main sample for this survey included 3,007 residents of New Mexico aged 18 and over. Participants in the main sample were selected by means of random-digit dialing (RDD), a method that ensures that each telephone-owning household in New Mexico had an equal probability of selection into the sample. This sampling approach ensures that the overall sample is representative of New Mexico residents within a known margin of error. The study also included an oversample of 589 Native American New Mexico residents aged 18 and over. These respondents were selected from a random sample of telephone numbers likely to belong to a Native American household. Native American ethnicity was confirmed for all respondents in the Native American oversample before conducting the interview.

All interviews were conducted at the O'Neil Associates facility in Phoenix, Arizona by trained interviewers under close supervision and with random monitoring for technique and adherence to procedures. In addition to general training in telephone interviewing techniques, interviewers received training in the specific requirements for this study. Interviews were conducted using a computer-aided telephone interviewing (CATI) system which minimizes the potential for interviewer errors by controlling progression through the questionnaire and preventing out-of-range responses.

Interviews were conducted afternoons and evenings on weekdays and weekends. A minimum of eight attempts to establish contact with each piece of sample was made, unless the interviewer received a definitive refusal. If contact was made with a household but an interview was not completed in the course of eight calls, interviewers continued to make attempts to complete the interview during the fieldwork period.

### **Sample Disposition and Response Rate**

Table 2 on the following page presents information about the disposition of the main sample and the Native American oversample for the New Mexico prevalence survey. Table 2 shows that a total of 18,621 numbers were called over the course of the data collection period. At the end of this period, interviewers were able to determine that 4,565 of these numbers were not valid for the study, leaving 14,056 potentially eligible numbers. Of these, 6,483 numbers were persistently unavailable (i.e. numerous attempts were made without reaching anyone or it was only possible to leave messages on an answering machine or voice mail) and 416 were determined to be ineligible, leaving a total of 7,752 households with which contact was made and eligibility was determined. Of 7,752 screened households, 3,596 completed the interview.

**Table 2: Disposition of New Mexico Sample**

|   | Main Sample  |              | Native American Sample |              |
|---|--------------|--------------|------------------------|--------------|
| <b>Total Numbers</b>                    | <b>14960</b> | <b>100.0</b> | <b>3661</b>            | <b>100.0</b> |
| <b>Invalid Sample</b>                   | <b>3938</b>  | <b>26.3</b>  | <b>627</b>             | <b>17.1</b>  |
| Not in Service (Disconnected)           | 3110         |              | 606                    |              |
| Non-Residential                         | 825          |              | 18                     |              |
| Language Barrier - Non-Spanish          | 3            |              | 3                      |              |
| <b>Total Non-Contacts or Ineligible</b> | <b>4646</b>  | <b>31.1</b>  | <b>2253</b>            | <b>61.5</b>  |
| Answering Machine/Voice Mail            | 2770         |              | 595                    |              |
| No Answer                               | 1537         |              | 560                    |              |
| Busy or Fast Busy Signal                | 339          |              | 87                     |              |
| Not Native American                     | N/A          |              | 416                    |              |
| <b>Eligible Contacts</b>                | <b>6376</b>  | <b>42.6</b>  | <b>1376</b>            | <b>37.6</b>  |
| Completed Interview                     | 3007         |              | 589                    |              |
| Callback Scheduled                      | 244          |              | 201                    |              |
| Refused to Participate                  | 3049         |              | 571                    |              |
| Partial Interview                       | 9            |              | 6                      |              |
| Appointment                             | 3            |              | 1                      |              |
| Other/Sick                              | 64           |              | 8                      |              |

There are a variety of ways to calculate response rates. One definition is the number of completed interviews divided by the number of units in the sample determined to be eligible (i.e. the number of completes divided by the total of completes, refusals, callbacks, partial interviews, and others). This approach is more properly termed the completion rate rather than response rate. Based on this approach, a completion rate of 47% was achieved in the main body of the New Mexico prevalence survey. Another, more conservative approach is to multiply the completion rate by the screening rate (i.e. the proportion of numbers for which it was possible to determine eligibility). Using this approach, the main body of the New Mexico survey achieved a 37% cooperation rate.

Response rates for telephone surveys in the general population have declined precipitously in recent years as individuals in the general population become increasingly reluctant to participate in this type of research and as technological barriers proliferate (e.g. answering machines, caller id). Given these declines, the completion and cooperation rates achieved in this survey are excellent compared with similar surveys.

### *Weighting and Imputation*

The data from the main survey were weighted with regard to gender, ethnicity and age. The sample weights were derived from 2000 U.S. census data (Census Table DP-1). Since the demographic profile of the respondents in the main survey differed from that of the 2000 New Mexico census, the weights were designed to match the sample demographics to that of the census.

The sample weights were algebraically derived by solving equations for unknown values. In some cases, such as gender, these initial weights remained intact. However, the initial weights for age and ethnicity were adjusted via sensitivity analysis to minimize the variance between the achieved sample demographics and the population parameters

from the census. At the group level, twelve unique weights—two for gender (male and female), three for ethnicity (Caucasian, Hispanic and Other) and two for age (18-34 and 35+)—were ultimately produced. The twelve unique weights were used to describe all of the cases in the main survey sample. For each case, the corresponding gender, age and ethnicity weights were multiplied to produce the case weight so that the weight applied to a 37-year old, Hispanic female was different from the weight applied to a 25-year old, Caucasian male.

Since gender, age, and ethnicity variables were employed in the sample weighting scheme, a response was required in each of these categories for a case to be included in the data analysis. No response in any of these categories would result in a case weight of zero, effectively removing the case from any data analysis. In a preliminary data screening process, it was determined that 231 cases were missing a valid age response and 157 cases were missing a valid response to the ethnic origin item.

Several attempts were made to predict age by producing various multiple regression equations from the existing data. However, none of these attempts was deemed successful. Consequently, the mean and standard deviation of the age variable were used to create imputed age values for the 231 missing cases. Once the missing age values were replaced, 157 cases with missing ethnicity responses remained. Ethnicity was a nominal rather than continuous variable and there were fewer effective options for estimating missing values. The research team elected to omit these 157 cases from the analysis. This decision reduced the number of valid cases in the main sample to 2,850.

The weighted sample results were produced by multiplying the original sample cases by derived case weights. Despite some considerable differences between the demographic profile of the unweighted sample and that of the 2000 census, the use of unique weights made it relatively easy to achieve a sample demography that was nearly identical to that of the 2000 New Mexico census. Table 3 compares the demographics of the achieved sample to those of the 2000 census and the weighted sample.

**Table 3: Demographics of Achieved and Weighted Samples**

|           |             | Achieved<br>Sample<br>% | 2000<br>Census<br>% | Weighted<br>Sample<br>% |
|-----------|-------------|-------------------------|---------------------|-------------------------|
| Gender    |             |                         |                     |                         |
|           | Male        | 39.6                    | 49.2                | 48.9                    |
|           | Female      | 60.4                    | 50.8                | 51.1                    |
| Age       |             |                         |                     |                         |
|           | 18 – 34     | 16.4                    | 31.9                | 31.2                    |
|           | 35 and over | 83.6                    | 68.1                | 68.8                    |
| Ethnicity |             |                         |                     |                         |
|           | White       | 65.1                    | 44.7                | 44.1                    |
|           | Hispanic    | 29.4                    | 42.1                | 42.0                    |
|           | Other       | 5.5                     | 13.2                | 13.9                    |

## *Statistical Analysis*

Once the data were delivered to Gemini Research, all of the variables were checked carefully for correct skip procedures. The data were analyzed using the Statistical Package for the Social Sciences (SPSS 13.0). Numerous analytic variables were constructed from the raw data, including generalized gambling participation levels, scores on the problem gambling screens, levels of alcohol and drug use, experience of depression and mania, and help-seeking. Chi-square analysis and other nonparametric techniques were used to test for statistical significance.

In the three sections of the report that follow, we present information on the results of the main sample separately from the results of the Native American oversample. There are two reasons for this approach. First, as noted above, the sampling frames for the main sample and oversample were somewhat different, with the main sample consisting of a random probability sample of New Mexico households with telephones and the oversample comprising a list-assisted sample. Second, given the prominence of Native American gambling issues in New Mexico, it seemed appropriate to present the results from our Native American respondents separately from those of the main sample.

As noted above, the majority of data analyses were carried out using SPSS 13.0. Minitab was used in our analyses comparing data from the Native American respondents with data from the general population (see *Comparing Native American and Non-Native Americans in New Mexico* on Page 46). The general population and Native American data were delivered in two separate SPSS files. However, there were 193 Native American respondents in the weighted general population data set. The research team elected to remove these respondents from the main data set and add them to the Native American data set. To protect the integrity of the data, the research team further elected to maintain the files separately.

To test for statistically significant differences in response frequencies across the two samples, crosstabulations were first produced in the general population file. A categorical variable identifying the Native Americans in this file isolated their responses. Once categorized and isolated, these responses were added to the responses on the same items in the Native American data file. As the counts from the general population file were simply added to the counts from the Native American data file, the data were now at the summary level. Since SPSS will not compute chi-square tests on summary level data, Minitab was employed for these analyses.

A separate issue relates to the case weights when comparing data across the two samples. It was determined that the general population data should remain weighted when comparing results against the Native American sample. As a result, weighted responses from the general population (i.e. non-Native American respondents) were compared to the pooled responses from all of the Native American respondents. These pooled data consisted of weighted responses from the Native American cases in the general population file and unweighted responses from the cases in the Native American data file.

There was also the issue of the case weights when comparing data across the two samples. It was determined that the data from the general population file should remain weighted when comparing results against the Native American sample. As a result, weighted responses from the general population (i.e. non-Native Americans) were

compared to the pooled responses from the Native Americans. These pooled data consisted of weighted responses from the Native American cases from the general population file and unweighted responses from the cases in the Native American data file.

## GAMBLING IN NEW MEXICO

This chapter examines gambling participation among adults in New Mexico. To assess the full range of gambling activities available to New Mexico residents, the instrument for the survey included questions about ten different wagering activities. All respondents were asked if they had ever gambled or bet money on the following activities:

- casino games
- gaming machines outside of a casino
- lottery games
- numbers games other than the New Mexico State Lottery
- horse or dog races
- bingo outside of a casino
- private games (cards, dice or dominoes in someone's home or at a club or organization, or a game of skill such as golf, pool or bowling)
- the outcome of sports or other events with friends, co-workers, a bookie or some other person
- Internet or World Wide Web
- any other kind of gambling (e.g. raffles, sweepstakes, baby pools, pull-tabs, betting on a dogfight or cockfight)

### *Gambling in the General Population*

In every recent survey of gambling and problem gambling, the majority of respondents acknowledge participating in one or more gambling activities. Nationally, the proportion of the population that has ever gambled ranges from 81% in the Southern states to 89% in the Northeast (Gerstein et al, 1999). In 2005, 85% of the New Mexico respondents acknowledged ever participating in one or more of the ten activities included in the questionnaire.

Table 4 on the following page shows lifetime, past-year, monthly and weekly participation for all of the types of gambling included in the New Mexico survey. Lifetime participation among New Mexico adults was highest for casino gambling and lottery play. Just over six in ten New Mexico adults acknowledge having ever been to a casino or played the lottery. Two in five New Mexico adults has bet on horse or dog races and one in four New Mexico adults has gambled privately or bet on sports. One in five New Mexico adults has ever played non-casino bingo or non-casino gaming machines.

Past-year participation rates among New Mexico adults were highest, again, for lottery play and then casino gambling. About one in six New Mexico adults acknowledge gambling in the past year on sports or on a private game of chance or skill. Past-year

participation in all other activities is much lower. The majority of monthly and weekly gambling participation among New Mexico adults is explained by lottery play and casino gambling.

**Table 4: Gambling Participation in New Mexico**

|                            | Lifetime Participation (2850) % | Past Year Participation (2850) % | Monthly Participation (2850) % | Weekly Participation (2850) % |
|----------------------------|---------------------------------|----------------------------------|--------------------------------|-------------------------------|
| Lottery                    | 64.0                            | 51.7                             | 14.1                           | 5.8                           |
| Casino                     | 64.0                            | 36.6                             | 3.9                            | 1.4                           |
| Pari-mutuel                | 29.9                            | 7.0                              | 0.4                            | 0.1                           |
| Sports                     | 25.7                            | 14.7                             | 2.9                            | 1.0                           |
| Private                    | 24.9                            | 13.3                             | 2.3                            | 0.9                           |
| Non-casino bingo           | 17.6                            | 5.5                              | 0.8                            | 0.2                           |
| Non-casino gaming machines | 17.6                            | 5.5                              | 0.4                            | 0.2                           |
| Other                      | 16.0                            | 9.4                              | 1.0                            | 0.3                           |
| Non-lottery numbers        | 3.1                             | 1.3                              | 0.1                            | 0.1                           |
| Internet                   | 1.8                             | 1.4                              | 0.8                            | 0.5                           |
| Total                      | 85.0                            | 67.6                             | 19.8                           | 8.6                           |

Nearly one-fifth (17.9%) of the respondents in the New Mexico survey only acknowledge having gambled on one activity in their lifetime. The majority of these respondents (N=374) are casino and lottery players. Over half of these respondents (57%) have played the lottery and 42% have been to a casino. Much smaller percentages of this group (between 3% and 7%) have gambled on private games, sports, horseracing, non-casino machines or “other” activities.

Endorsement of the usually residual “Other” category was higher in this survey than in some other gambling surveys. Respondents who said that they had done some other type of gambling in the past year were somewhat more likely than those who did not endorse this item to be female and to be employed fulltime. These respondents were significantly more likely than those who did not gamble on “other” activities to be between the ages of 45 and 64, White, to have attended college and to have annual household incomes over \$50,000. This suggests that endorsement of participation in these activities is probably more closely related to charitable gambling than to illegal or culturally-specific activities such as cockfighting.

### *Patterns of Gambling Participation*

To understand patterns of gambling participation, it is helpful to examine the demographics of respondents who wager at increasing levels of frequency. To analyze levels of gambling participation, respondents were divided into five groups:

- **non-gamblers** who have never participated in any type of gambling (15% of the total sample);
- **infrequent gamblers** who have participated in one or more types of gambling but not in the past year (17% of the total sample);

- **past year gamblers** who have participated in one or more types of gambling in the past year but not on a weekly basis (48% of the total sample); and
- **monthly gamblers** who participate in one or more types of gambling on a monthly basis (11% of the total sample).
- **weekly gamblers** who participate in one or more types of gambling on a weekly basis (9% of the total sample).

Table 5 presents information about the demographic characteristics of these different groups in New Mexico. For easier comprehension, non-gamblers and infrequent gamblers have been collapsed into a single group, as have monthly and weekly gamblers.

There are some important differences between non- and infrequent gamblers in New Mexico. Non-gamblers are significantly more likely than infrequent gamblers to be under 35, Hispanic, keeping house and to have an annual household income under \$25,000. Non-gamblers in New Mexico are significantly less likely than infrequent gamblers to have attended college and to have military experience. The only significant difference between monthly and weekly gamblers in New Mexico is that weekly gamblers are more likely than monthly gamblers to have graduated from college.

**Table 5: Demographics of Gamblers in New Mexico**

|                |                      | Non- & Infrequent Gamblers (923) % | Past Year Gamblers (1363) % | Monthly & Weekly Gamblers (564) % | Sig. |
|----------------|----------------------|------------------------------------|-----------------------------|-----------------------------------|------|
| Gender         | Male                 | 43.3                               | 48.4                        | 59.2                              |      |
|                | Female               | 56.7                               | 51.6                        | 40.8                              | .000 |
| Age            | 18 – 34              | 28.9                               | 33.8                        | 30.0                              |      |
|                | 35 – 54              | 26.9                               | 32.8                        | 37.2                              | .000 |
|                | 55+                  | 44.2                               | 33.5                        | 32.8                              |      |
| Ethnicity      | White                | 43.4                               | 45.9                        | 41.2                              |      |
|                | Hispanic             | 41.5                               | 39.5                        | 48.7                              | .002 |
|                | Other*               | 15.1                               | 14.6                        | 10.1                              |      |
| Marital Status | Married              | 62.9                               | 62.8                        | 65.2                              |      |
|                | Widowed              | 11.0                               | 5.3                         | 5.4                               | .000 |
|                | Divorced/Separated   | 11.9                               | 12.7                        | 12.1                              |      |
|                | Never Married        | 14.3                               | 19.1                        | 17.3                              |      |
| Education      | Elementary / Some HS | 18.9                               | 7.0                         | 10.2                              |      |
|                | HS Grad              | 24.2                               | 26.9                        | 33.6                              | .000 |
|                | Some College         | 26.4                               | 32.9                        | 30.6                              |      |
|                | BA Degree            | 15.5                               | 19.5                        | 17.2                              |      |
|                | Graduate Study       | 15.0                               | 13.6                        | 8.4                               |      |

\* Includes Native American, African American and Other.

**Table 5: Demographics of Gamblers in New Mexico (cont'd)**

|                        |                          | Non- & Infrequent Gamblers (923) % | Past Year Gamblers (1363) % | Monthly & Weekly Gamblers (564) % | Sig. |
|------------------------|--------------------------|------------------------------------|-----------------------------|-----------------------------------|------|
| Employment             | Working Full Time        | 37.7                               | 55.6                        | 55.9                              | .000 |
|                        | Working Part Time        | 12.0                               | 11.2                        | 10.8                              |      |
|                        | Keeping House            | 14.3                               | 6.7                         | 5.7                               |      |
|                        | Retired                  | 22.5                               | 16.1                        | 17.6                              |      |
|                        | Disabled / Unemployed    | 6.2                                | 4.8                         | 6.2                               |      |
| Income                 | Up to \$25,000           | 21.6                               | 18.3                        | 15.7                              | .000 |
|                        | \$25,001 - \$35,000      | 11.7                               | 10.5                        | 13.0                              |      |
|                        | \$35,001 - \$50,000      | 9.5                                | 15.2                        | 11.2                              |      |
|                        | \$50,001 - \$75,000      | 11.7                               | 16.1                        | 17.7                              |      |
|                        | \$75,001 - \$125,000     | 8.3                                | 13.0                        | 19.6                              |      |
|                        | Over \$125,000           | 3.2                                | 4.8                         | 6.3                               |      |
|                        | Refused                  | 34.0                               | 22.1                        | 16.5                              |      |
| Religion               | Fundamentalist/Christian | 24.6                               | 23.3                        | 22.8                              | .000 |
|                        | Protestant               | 28.3                               | 22.8                        | 20.1                              |      |
|                        | Catholic                 | 31.0                               | 37.7                        | 44.1                              |      |
|                        | Other                    | 11.8                               | 11.1                        | 9.4                               |      |
|                        | None                     | 4.3                                | 4.9                         | 3.6                               |      |
| Armed Forces Service   |                          | 15.9                               | 17.3                        | 24.5                              | .000 |
|                        |                          |                                    |                             |                                   | .000 |
| Interviewed in Spanish |                          | 11.5                               | 2.6                         | 2.0                               |      |

Overall, Table 5 shows that significant differences in gambling participation are associated with gender, age, ethnicity, marital status, education and employment status. Important differences in gambling participation are also associated with income, religion and military experience. Non- and infrequent gamblers are significantly more likely than past-year, monthly and weekly gamblers in New Mexico to be female, aged 55 and over, widowed, to have less than a high school education and to be retired or keeping house. Non- and infrequent gamblers are also significantly more likely than more frequent gamblers to have refused to provide information about their annual household income and to have been interviewed in Spanish.

Monthly and weekly gamblers are significantly more likely than past-year gamblers to be male, to be Hispanic, to have an annual household income over \$50,000 and to have military experience. Monthly and weekly gamblers are significantly less likely than past-year gamblers to have attended college.

### *Gambling Preferences*

For several types of gambling, respondents who acknowledged participating in the past year were asked about their preferences for particular games. These types of gambling included lottery, casino, pari-mutuel and non-casino gaming machines.

**Lottery.** Respondents who had played the lottery in the past year (N=1473) were asked what kinds of tickets they usually purchased. Respondents were permitted

multiple answers to this question. The most popular lottery games in New Mexico are Powerball and Scratchers. Eight in ten of these respondents (80%) reported that they usually bought Powerball tickets and another 27% said that they usually bought instant tickets, or Scratchers. Two-thirds (67%) of these respondents reported that they usually only bought Powerball tickets, 14% reported only buying Scratchers and 13% reported that they usually bought one or the other of these lottery products. Only 6% of these respondents reported that they usually bought other kinds of lottery tickets.

**Casino.** Respondents who had gambled at a casino in the past year (N=1044) were asked what casino game they usually played. The majority (74%) said that they usually played slot machines or video poker at the casino. Another 19% said that they usually played card games such as blackjack or poker. Only 7% of these respondents indicated that they usually gambled on anything besides card games or machines at the casino.

These respondents were also asked what city or location they visited on the last occasion when they went to a casino. Four out of five of these respondents (80%) indicated that their last visit was to a casino in New Mexico while 20% indicated that their last visit was to a casino outside of New Mexico. Among respondents whose last visit was to a casino in New Mexico, 88% indicated that this was a tribal casino and 4% were not sure if the casino were tribally owned or not. Among respondents who last visit to a casino was outside New Mexico, 78% indicated that the casino was located in Nevada, 16% said they visited a casino in Arizona or Colorado and 5% visited a casino even further afield.

**Pari-mutuel.** Respondents who had wagered on horse or dog races in the past year (N=187) were asked whether they usually did so at a racetrack in New Mexico, an off-track betting facility in New Mexico, a tribal casino or somewhere else. Eight in ten of these respondents (83%) indicated that they usually wagered at a racetrack in New Mexico. Another 4% of these respondents said that they usually wagered at an off-track betting facility in New Mexico. The small group of remaining pari-mutuel gamblers usually wagered at an off-track facility outside New Mexico.

**Gaming Machines.** Respondents who had wagered on gaming machines outside a casino in the past year (N=153) were asked where they usually played these machines. Nearly one-quarter of these respondents (23%) indicated that they usually played gaming machines at a racetrack. Only about one in eight of these respondents (12%) played gaming machines at social or fraternal organizations. Other places where respondents said that they usually played gaming machines included bars, taverns or restaurants (15%) and grocery and convenience stores (20%).

## **Favorite Gambling Activities**

Table 6 on the following page presents information about favorite gambling activities among infrequent, past-year, monthly and weekly gamblers. Questions about preferred gambling activities were only asked of respondents who indicated that they had gambled five or more times in their lifetime. If an individual acknowledged gambling once a month or more often on any of the activities included in the questionnaire, this variable was automatically coded "Yes." If a person had ever gambled or had gambled in the past year but said "No" to this question, this variable was coded "No" and these items were not asked.

Table 6 shows that electronic gaming machines were the preferred gambling activity across all of these groups. Infrequent gamblers were significantly more likely to say that they had no favorite gambling activity than other gamblers and significantly less likely than more frequent gamblers to identify the lottery as their favorite gambling activity.

**Table 6: Favorite Gambling Activities Among New Mexico Gamblers**

|                              | Infrequent Gamblers<br>(93)<br>% | Past Year Gamblers<br>(736)<br>% | Monthly Gamblers<br>(319)<br>% | Weekly Gamblers<br>(244)<br>% | Sig. |
|------------------------------|----------------------------------|----------------------------------|--------------------------------|-------------------------------|------|
|                              |                                  |                                  |                                |                               | .000 |
| Slot machines (casino & non) | 19.1                             | 32.6                             | 28.5                           | 26.6                          |      |
| Casino table games           | 18.1                             | 15.8                             | 12.9                           | 17.6                          |      |
| Lottery                      | 3.2                              | 14.9                             | 19.7                           | 18.0                          |      |
| Private or sports            | 14.9                             | 12.8                             | 20.4                           | 15.6                          |      |
| Pari-mutuel                  | 8.5                              | 4.2                              | 3.4                            | 6.1                           |      |
| Bingo                        | 4.3                              | 2.0                              | 3.4                            | 2.5                           |      |
| Other/None                   | 31.9                             | 17.8                             | 11.6                           | 13.5                          |      |

### *Reasons for Gambling*

Another important question in gambling studies is why people choose whether or not to gamble. Respondents who had gambled five or more times in their lifetime were asked why they generally gambled, and to indicate whether any of several different reasons was “very important,” “somewhat important,” or “not at all important.” Table 7 presents information on the proportion of respondents who indicated that each of these reasons was “very important” or “somewhat important.”

**Table 7: Reasons for Gambling Among New Mexico Gamblers**

| Somewhat or very important | Infrequent Gamblers<br>(93)<br>% | Past Year Gamblers<br>(736)<br>% | Monthly Gamblers<br>(319)<br>% | Weekly Gamblers<br>(244)<br>% | Sig. |
|----------------------------|----------------------------------|----------------------------------|--------------------------------|-------------------------------|------|
|                            |                                  |                                  |                                |                               |      |
| Entertainment or fun       | 69.9                             | 79.9                             | 81.8                           | 82.0                          | .025 |
| To win money               | 46.2                             | 57.9                             | 65.8                           | 63.9                          | .003 |
| Excitement or challenge    | 46.2                             | 55.5                             | 56.4                           | 60.2                          | .150 |
| To be with people          | 41.9                             | 46.7                             | 44.8                           | 49.2                          | .606 |
| Convenience                | 31.2                             | 40.9                             | 50.0                           | 50.0                          | .001 |
| Inexpensive entertainment  | 28.0                             | 50.0                             | 49.5                           | 50.8                          | .001 |
| As a distraction           | 10.8                             | 19.7                             | 24.8                           | 19.6                          | .046 |

Table 7 shows that the majority of New Mexicans gamble for entertainment although infrequent gamblers are significantly less likely to endorse this reason than more frequent gamblers. As gambling participation increases, winning money becomes an increasingly important reason for gambling as does excitement or challenge, inexpensive entertainment and convenience. The importance of gambling in order to be with people is not significantly different for these different groups of gamblers. However, infrequent gamblers are significantly less likely than more frequent gamblers to say that distraction is a somewhat or very important reason for gambling.

Given differences in gambling participation by gender, age and ethnicity, differences in reasons for gambling associated with these important demographic variables were examined. The only difference between men and women was that men were significantly more likely to say that they gamble because it is exciting and challenging and because it is easy and convenient to do. Respondents under the age of 35 were significantly more likely than older respondents to say that winning money, excitement and being around or with other people were important reasons for gambling. White respondents were significantly more likely than respondents from other ethnic groups to say that they gambled for entertainment or fun and significantly less likely to say that they gambled to distract themselves from everyday problems. Hispanic respondents were significantly less likely than other respondents to say that they gambled because it was inexpensive entertainment.

In the New Mexico survey, respondents who had never gambled or gambled infrequently<sup>2</sup> were asked whether any of several different reasons to not gamble was “very important,” “somewhat important” or “not at all important.” Losing money was the most important reason for not gambling among these respondents, followed by moral or ethical concerns. Women in this group were significantly more likely than men to say that moral or ethical concerns, the possibility of losing money and inconvenience were all important reasons that they did not gamble. Hispanic respondents were significantly more likely to say that losing money and inconvenience were important reasons not to gamble while White respondents were significantly more likely to say that moral and ethical concerns were important reasons not to gamble. There were no significant differences in reasons for not gambling by age.

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<sup>2</sup> Respondents who had gambled in the past year but had not gambled five or more times in their lifetime were included in the group that was asked their reasons for not gambling.

## PROBLEM GAMBLING IN NEW MEXICO

Two problem gambling screens were used in the New Mexico survey. The NORC DSM-IV Screen for Gambling Problems (NODS) was used to provide a measure of problem gambling based on the most recent psychiatric criteria for pathological gambling as well as comparability with recent national and statewide surveys. The Problem Gambling Severity Index (PGSI) from the recently developed Canadian Problem Gambling Index (Ferris & Wynne, 2001) was used in New Mexico as a secondary measure of gambling-related impacts and to provide a first opportunity to compare the performance of these two problem gambling screens in a single survey.

### *The NORC DSM-IV Screen for Gambling Problems (NODS)*

In 1998 the National Gambling Impact Study Commission contracted the National Opinion Research Center (NORC) and partner organisations to undertake a national survey of problem gambling in the United States. The Commission specified the use of DSM-IV criteria in this survey which meant that neither the SOGS nor any of its variants could not be used. After reviewing the available DSM-IV screens, the research team elected to develop a new measure designed specifically for administration in large population surveys. This instrument has 17 lifetime and 17 past-year items. Several items are only administered if a preliminary screening question is endorsed and past-year items are only administered if the corresponding lifetime item is endorsed. Each criterion item is scored zero or one, to produce maximum scores of ten for each of the “lifetime” and “current” frames. Scores of zero were interpreted as indicating low risk, one or two at risk, three to four problem gambling, and five or more pathological gambling.

One important step in developing the NODS was a validation study with a national clinical sample of 40 individuals enrolled in outpatient problem gambling treatment programs and an additional random telephone sample of 45 respondents in the Chicago metropolitan area. Ninety-five percent of the clinical sample scored five or more points on the lifetime NODS; the remaining two cases scored four points. The test-retest reliability of the NODS was examined in a half-sample of 44 cases drawn equally from the clinical and telephone pilot samples. The lifetime and past-year scores on the NODS were found to be highly reliable ( $r=0.99$  and  $0.98$ , respectively) (Gerstein et al, 1999). Based on the field test, the research team concluded that the NODS had strong internal consistency, retest reliability and good validity.

In addition to the U.S. national survey the NODS has been used in several state level prevalence surveys and an older persons study in the U.S. (Shapira et al, 2002; Volberg, 2001a, 2001b, 2001c, 2002, 2003a; Volberg & McNeilly, 2003). It has also been used in a Norwegian national survey (Lund & Nordlund, 2003) and in a Spanish provincial study (Becoña, 2004). The NODS is increasingly being used in North American clinical settings as an assessment and outcome measure (Hodgins, 2002, 2004) as well as in research studies of problem gamblers in the community (Sartor et al, in press; Scherrer et al, 2005) and its use is mandatory for all clients entering drug and alcohol treatment programs in Michigan (Herriff, personal communication). In this section of the report and the two that follow, the **lifetime NODS** serves as the primary measure of at-risk, problem and pathological gambling in New Mexico.

## *Prevalence Rates*

In epidemiological research, prevalence is a measure of the number of individuals in the population with a disorder at one point in time. In epidemiology, prevalence contrasts with incidence which is a measure of the number of new cases that arise over a specific period of time. In problem gambling prevalence surveys, individuals are classified as **at-risk**, **problem** or **pathological** gamblers on the basis of their responses to a previously established number of items from a valid and reliable problem gambling screen.

Prevalence rates are based on samples rather than the entire population. One important source of uncertainty in generalizing from a sample to the population—sampling error—is generally presented as a measure of the uncertainty around the identified value. Calculations of the size of this variation—sometimes called the confidence interval and sometimes referred to as the margin of error—are based on the percentage of the sample with a particular characteristic and the size of the sample.

To illustrate, the margin of error for the main sample of respondents in New Mexico (N=2,850) is  $\pm 1.8\%$ . The margin of error for an entire sample is generally calculated for a situation in which half of the respondents answer a question “Yes” and the other half answer “No.” The confidence interval allows us to assume with reasonable certainty—95 times out of 100—that the “true” value is somewhere between 48.2% and 51.8%.

The confidence interval narrows as the value approaches either 0% or 100%. For example, a value of 5% in the New Mexico survey has a margin of error of  $\pm 0.8\%$ . This means that we can be reasonably certain that the “true” value falls between 4.2% and 5.8%. As values near these extremes, the confidence interval can approach or exceed the value itself. The closer the confidence interval comes to the value, the less reliable the value itself is considered to be. In several of the tables that follow, confidence intervals that equal or exceed 50% of the value of the prevalence estimate are flagged with an asterisk and readers are advised to treat these estimates with caution.

Table 8 on the following page presents information about the proportion of the main sample (N=2,850) who scored on an increasing number of items on the lifetime and past-year NODS. Table 8 also summarizes the prevalence of problem and pathological gambling based on established criteria for discriminating between respondents without gambling-related difficulties and those with moderate and severe problems (Gerstein et al, 1999; Toce-Gerstein, Gerstein & Volberg, 2003).

**Table 8: Scores on Lifetime and Past Year NODS**

| <b>Number of Items</b>       | <b>Lifetime</b> | <b>Past Year</b> |
|------------------------------|-----------------|------------------|
|                              | (2850)          | (2850)           |
| <b>Non-Gamblers</b>          | <b>15.0</b>     | <b>32.4</b>      |
| 0                            | 76.5            | 62.9             |
| <b>Non Problem Gamblers</b>  | <b>76.5</b>     | <b>62.9</b>      |
| 1                            | 4.6             | 2.4              |
| 2                            | 1.8             | 1.2              |
| <b>At-Risk Gamblers</b>      | <b>6.4</b>      | <b>3.6</b>       |
| 3                            | 0.7             | 0.4              |
| 4                            | 0.4             | 0.3              |
| <b>Problem</b>               | <b>1.1</b>      | <b>0.7</b>       |
| 5                            | 0.4             | 0.2              |
| 6                            | 0.4             | 0.2              |
| 7                            | 0.1             | 0.1              |
| 8                            | 0.1             | 0.0              |
| 9                            | 0.0             | 0.0              |
| 10                           | 0.1             | 0.1              |
| <b>Pathological</b>          | <b>1.1</b>      | <b>0.6</b>       |
| <b>Combined Problem/Path</b> | <b>2.2</b>      | <b>1.3</b>       |

## Population Estimates

According to the most recent census of the population (U.S. Bureau of the Census, 2001), the population of New Mexico aged 18 and over in 2000 was 1,310,472. Based on these figures, we estimate that between 9,400 (0.7%) and 19,400 (1.5%) New Mexico adults can be classified as pathological gamblers. Another 9,400 (0.7%) to 19,400 (1.5%) New Mexico adults can be classified as problem gamblers. Finally, an additional 72,100 (5.5%) to 95,600 (7.3%) New Mexico adults can be classified as at-risk gamblers.

## Prevalence Across Demographic Groups

Problem gambling prevalence rates can be significantly different among subgroups in the population. Because the confidence intervals around prevalence estimates can be large, most comparisons between these groups must be interpreted with caution. However, the size of the main sample in New Mexico means that, in this instance, confidence intervals exceed 50% of the variance for relatively few of the prevalence estimates for subgroups in the population. In presenting these data, all instances where the confidence interval equals or exceeds the prevalence estimate have been suppressed. Table 9 on the following page presents information about the size of each group as well as the confidence interval for the combined problem and pathological gambling prevalence rate.

**Table 9: Differences in Prevalence by Demographic Group**

|                |                       | Group Size | Prevalence Rate (3+) | Conf. Interval |
|----------------|-----------------------|------------|----------------------|----------------|
| Gender         | Male                  | 1393       | 2.6                  | ±0.8           |
|                | Female                | 1457       | 1.6                  | ±0.6           |
| Age            | 18 – 34               | 859        | 2.8                  | ±1.1           |
|                | 35 – 54               | 868        | 2.3                  | ±1.0           |
|                | 55+                   | 1002       | 1.3*                 | ±0.7           |
| Ethnicity      | White                 | 1257       | 1.4                  | ±0.6           |
|                | Hispanic              | 1196       | 2.8                  | ±0.9           |
|                | Other**               | 396        | 2.3*                 | ±1.5           |
| Marital Status | Married               | 1786       | 1.4                  | ±0.5           |
|                | Never Married         | 486        | 4.5                  | ±1.8           |
| Education      | HS Graduate           | 768        | 3.4                  | ±1.3           |
|                | Some college          | 852        | 2.9                  | ±1.1           |
| Employment     | Fulltime              | 1421       | 1.9                  | ±0.7           |
|                | Disabled / Unemployed | 157        | 8.3                  | ±4.3           |
| Religion       | Fundamentalist        | 621        | 2.9                  | ±1.3           |
|                | Catholic              | 966        | 2.6                  | ±1.0           |

\* Confidence interval equals or exceeds 50% of the prevalence estimate.

\*\* Includes Native American, African American and Other.

Table 9 shows that there are substantial differences in the prevalence of problem gambling across different subgroups in the population in New Mexico. Differences in prevalence rates by gender, ethnicity, marital status, education, employment status and religion are all statistically significant. The prevalence of problem and pathological gambling in New Mexico is significantly higher among men, among non-Caucasians, among respondents who have never married, among respondents who are disabled or unemployed and among respondents who are fundamentalist Christians or Catholic. Differences in prevalence rates by age, household income and military service are not statistically significant.

### **Prevalence by Type of Gambling**

Another approach to understanding the relationship between gambling involvement and gambling-related problems is to examine the prevalence of problem gambling among individuals who participate in specific types of gambling. Table 10 on the following page shows the prevalence of problem and pathological gambling among respondents who have ever gambled, among those who have gambled in the past year and among those who gamble monthly and weekly. Table 10 also shows the prevalence of problem and pathological gambling among respondents who have participated in specific types of gambling in the past year. All results where the confidence interval exceeds 50% of the prevalence estimate have been flagged with an asterisk. As in Table 9, all instances where the confidence interval equals or exceeds the prevalence estimate have been

suppressed. This includes weekly gamblers as well as past year gambling on the Internet and gambling on non-lottery numbers games.

**Table 10: Prevalence by Type of Gambling**

|                                | Group Size | Prevalence (3+) % | Conf. Interval |
|--------------------------------|------------|-------------------|----------------|
| All Gamblers                   | 2422       | 2.5               | ±0.6           |
| Past-Year Gamblers             | 1926       | 3.0               | ±0.8           |
| Monthly Gamblers               | 563        | 6.2               | ±2.0           |
| <b>Among Past Year Players</b> |            |                   |                |
| Non-Casino Bingo               | 157        | 8.9               | ±4.5           |
| Private                        | 378        | 6.1               | ±2.4           |
| Sports                         | 418        | 5.0               | ±2.1           |
| Casino                         | 1044       | 4.5               | ±1.3           |
| Other                          | 268        | 3.7*              | ±2.3           |
| Pari-mutuel                    | 200        | 3.5*              | ±2.6           |
| Lottery                        | 1473       | 3.3               | ±0.9           |

\*Confidence interval equals or exceeds 50% of the prevalence estimate.

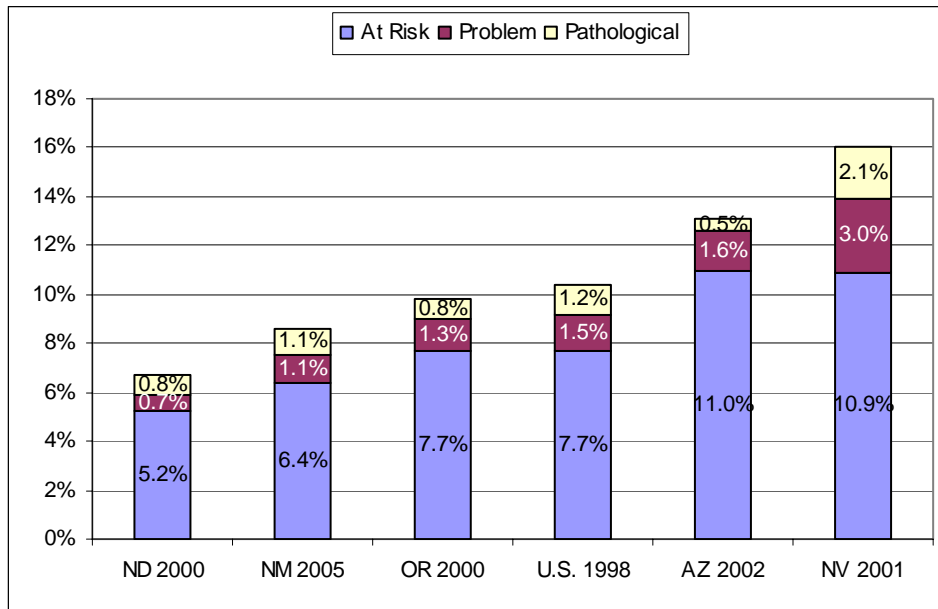
Table 10 shows that problem gambling prevalence rates increase along with gambling participation. Although the group is quite small, the prevalence of problem gambling is highest among past-year players of non-casino bingo. Problem gambling prevalence rates are also high among past-year private bettors, past-year sports bettors and past-year casino gamblers. Prevalence rates among these groups of past-year players are more than twice as high as the problem gambling prevalence rate in the population as a whole.

### *Comparing New Mexico with Other Jurisdictions*

As with gambling participation, it is helpful to compare the prevalence of problem and pathological gambling in New Mexico with comparable prevalence estimates elsewhere in the United States. Although the jurisdictions where problem gambling surveys have been done in the United States differ substantially in the types of gambling available, in levels of gambling participation and in the demographic characteristics of the general population, it is helpful to understand how New Mexico compares with other jurisdictions.

Figure 3 on the following page presents lifetime NODS prevalence rates for states where similar surveys have been conducted in the United States. Overall, Figure 3 shows that the prevalence of at-risk, problem and pathological gambling in New Mexico is at the lower end of a range of problem gambling prevalence rates based on the same problem gambling screen. The prevalence of at-risk, problem and pathological gambling in New Mexico is somewhat higher than the prevalence rate obtained in North Dakota in 2000 but lower than prevalence rates identified in Oregon in 2000 and the United States as a whole in 1998. The prevalence of at-risk, problem and pathological gambling in New Mexico is well below the prevalence rates identified in recent surveys carried out in Arizona and Nevada (Volberg, 2002, 2003a).

**Figure 3: Comparing NODS Rates Across States (Lifetime)**



The comparison between New Mexico and Arizona is particularly interesting, not only because the two states are contiguous but also because their demographics are quite similar with large Hispanic and Native American populations. Although the population of Arizona is nearly three times greater than the population of New Mexico, the two states have nearly identical levels of educational attainment and workforce participation. The median household income in Arizona is only slightly higher than in New Mexico (U.S. Census, 2001). There are similar numbers of tribal casinos and racetracks in both states as well as mature state lotteries. One important difference between the two states is that neither racetracks nor veterans and fraternal clubs in Arizona are permitted to operate gaming machines.

The finding that New Mexico has approximately half the rate of at-risk gambling as Arizona and twice the rate of pathological gambling at a point in time when the duration of exposure to expanded gambling opportunities is about the same in the two states suggests several intriguing possibilities. Perhaps the rate of at-risk gambling in New Mexico is increasing and will eventually rise to the level identified in Arizona. Another possibility is that the rate of at-risk gambling in Arizona is decreasing and will eventually reach the level identified in New Mexico. With regard to pathological gambling, it is possible that pathological gambling in New Mexico is decreasing and will eventually drop to the level in Arizona. Alternatively, it is possible that pathological gambling in Arizona is increasing and will eventually reach the level identified in New Mexico. Another possibility is that there are moderating factors that affect the prevalence of at-risk, problem and pathological gambling in ways that are not yet recognized or understood. Future surveys of gambling and problem gambling in these two states would help test these and other hypotheses, as would prospective, longitudinal research on the development of gambling problems within individuals over time.

## COMPARING NON-PROBLEM AND PROBLEM GAMBLERS

In considering how best to develop and refine policies and programs for problem gamblers, it is important to direct these efforts in an effective and efficient way. The most effective efforts at prevention, outreach and treatment are targeted at individuals who are at greatest risk of experiencing gambling-related difficulties. Since the purpose of this section is to examine vulnerable individuals, our focus will be on differences between individuals who gamble, with and without problems, rather than on the entire New Mexico sample.

As noted above, the *lifetime NODS* serves as the primary measure of at-risk, problem and pathological gambling in New Mexico. In this section of the report, we examine differences between groups of respondents who score at increasing levels of severity on the lifetime NODS in terms of demographics, gambling participation and other important correlates of problem and pathological gambling.

### *Demographics*

Table 11 shows that, as in many other jurisdictions, problem and at-risk gamblers in New Mexico are demographically distinct from non-problem gamblers. At-risk and problem gamblers in New Mexico are significantly more likely than non-problem gamblers to be male, Hispanic, unmarried and disabled or unemployed. At-risk and problem gamblers in New Mexico are significantly less likely than non-problem gamblers to have graduated from college. Problem gamblers are significantly less likely than non-problem and at-risk gamblers to be retired.

**Table 11: Demographics of Non-Problem, At-Risk and Problem Gamblers**

|                |                    | Non-Problem Gamblers (2180) % | At-Risk Gamblers (182) % | Problem & Pathological Gamblers (60) % | Sig. |
|----------------|--------------------|-------------------------------|--------------------------|--|------|
| Gender         | Male               | 49.6                          | 62.6                     | 60.0                                   | .001 |
|                | Female             | 50.4                          | 37.4                     | 40.0                                   |      |
| Age            | 18 – 34            | 30.2                          | 33.1                     | 42.1                                   | .173 |
|                | 35 – 54            | 32.7                          | 32.0                     | 35.1                                   |      |
|                | 55 +               | 37.2                          | 34.8                     | 22.8                                   |      |
| Ethnicity      | White              | 46.4                          | 47.5                     | 28.3                                   | .012 |
|                | Hispanic           | 39.8                          | 44.2                     | 56.7                                   |      |
|                | Other*             | 13.8                          | 8.3                      | 15.0                                   |      |
| Marital Status | Married            | 63.5                          | 59.7                     | 41.7                                   | .005 |
|                | Widowed            | 6.3                           | 8.7                      | 6.7                                    |      |
|                | Divorced/Separated | 12.9                          | 14.4                     | 15.0                                   |      |
|                | Never Married      | 17.2                          | 17.7                     | 36.7                                   |      |

\* Includes Native American, African American and Other.

**Table 11: Demographics of Non-Problem, At-Risk and Problem Gamblers (cont'd)**

|                      |                       | Non-Problem Gamblers (2180) % | At-Risk Gamblers (182) % | Problem & Pathological Gamblers (60) % | Sig. |
|----------------------|-----------------------|-------------------------------|--------------------------|--|------|
| Education            | Less than HS          | 9.0                           | 11.6                     | 8.5                                    | .001 |
|                      | HS Graduate           | 26.7                          | 29.8                     | 44.1                                   |      |
|                      | Some College          | 31.4                          | 29.3                     | 42.4                                   |      |
|                      | BA Degree             | 19.3                          | 19.3                     | 3.4                                    |      |
|                      | Graduate Study        | 13.6                          | 9.9                      | 1.7                                    |      |
| Employment           | Working Full Time     | 52.8                          | 50.0                     | 45.8                                   | .000 |
|                      | Working Part Time     | 11.3                          | 12.6                     | 16.9                                   |      |
|                      | Keeping House         | 6.9                           | 4.9                      | 3.4                                    |      |
|                      | Retired               | 18.6                          | 17.0                     | 8.5                                    |      |
|                      | Disabled / Unemployed | 4.7                           | 11.5                     | 22.0                                   |      |
| Income               | Up to \$25,000        | 23.9                          | 29.4                     | 22.7                                   | .172 |
|                      | \$25,001 – \$35,000   | 14.0                          | 14.3                     | 15.9                                   |      |
|                      | \$35,001 – \$50,000   | 17.8                          | 9.5                      | 15.9                                   |      |
|                      | \$50,001 – \$75,000   | 20.8                          | 17.5                     | 22.7                                   |      |
|                      | \$75,001 – \$125,000  | 17.3                          | 19.0                     | 20.5                                   |      |
|                      | \$125,001 or more     | 6.2                           | 10.3                     | 2.3                                    |      |
|                      | Refused               | 23.4                          | 20.3                     | 12.0                                   |      |
| Religion             | Fundamentalist        | 23.7                          | 21.2                     | 33.3                                   | .028 |
|                      | Protestant            | 24.2                          | 18.8                     | 9.3                                    |      |
|                      | Catholic              | 37.1                          | 40.6                     | 46.3                                   |      |
|                      | Other                 | 9.9                           | 14.7                     | 11.1                                   |      |
| Armed Forces Service |                       | 19.3                          | 22.0                     | 11.7                                   | .425 |

It is interesting that, in contrast to many other jurisdictions, the differences between non-problem, at-risk and problem gamblers in New Mexico with regard to age, income and military service are not statistically significant.

### *Gambling Participation*

While information about the demographic characteristics of at-risk and problem gamblers is useful in designing prevention and treatment services, it is also helpful to understand differences in the gambling behavior of non-problem, at-risk and problem gamblers. Information about the behavioral correlates of problem gambling can help professionals design appropriate prevention and treatment measures, effectively identify vulnerable individuals and establish accessible services.

Before considering gambling participation, it is useful to examine differences in the preferences that problem, at-risk and non-problem gamblers express for different gambling activities.<sup>3</sup> Table 12 presents information about favorite gambling activities among non-problem and problem gamblers in New Mexico.

<sup>3</sup> Only respondents who indicated that they had ever gambled five or more times were asked to identify their favorite gambling activity.

**Table 12: Comparing Favorite Gambling Activities**

|                              | Non-Problem Gamblers (1151) % | At-Risk Gamblers (182) % | Problem & Pathological Gamblers (60) % | Sig. |
|------------------------------|-------------------------------|--------------------------|--|------|
| Slot machines (casino & non) | 29.4                          | 24.4                     | 53.3                                   | .000 |
| Private or sports            | 14.6                          | 16.7                     | 20.0                                   |      |
| Casino table games           | 14.6                          | 21.7                     | 16.7                                   |      |
| Lottery                      | 17.1                          | 10.6                     | 5.0                                    |      |
| Pari-mutuel                  | 4.1                           | 9.4                      | 1.7                                    |      |
| Bingo                        | 2.7                           | 2.4                      | ---                                    |      |
| Other/None                   | 17.5                          | 15.0                     | 3.3                                    |      |

Table 12 shows that problem gamblers in New Mexico are significantly more likely than at-risk or non-problem gamblers to identify slot machines (whether at a casino or racetrack or social club) as their favorite gambling activity. Non-problem gamblers and at-risk gamblers are significantly more likely than problem gamblers to say that lottery games are their favorite gambling activity or that they have no preference for a particular gambling activity.

**Past Year Gambling.** Table 13 shows differences in past-year involvement in different types of gambling by non-problem, at-risk and problem gamblers in New Mexico. Only those types of gambling for which past-year participation among problem gamblers is 10% or higher are shown. Table 13 shows that at-risk and problem gamblers in New Mexico are significantly more likely than non-problem gamblers to have gambled in the past year on most of the different types of gambling included in the survey. While all three groups of gamblers are most likely to have gambled in the past year on the lottery, at-risk and problem gamblers far more likely to have gambled at a casino than non-problem gamblers. Second-tier gambling activities among non-problem, at-risk and problem gamblers in New Mexico include private wagering and betting on sports. Problem gamblers in New Mexico are substantially more likely than at-risk or non-problem gamblers to have gambled in the past year on non-casino gaming machines, non-casino bingo and the Internet. It is interesting that at-risk gamblers are more likely than either non-problem or problem gamblers to have gambled in the past year on horse races.

**Table 13: Past Year Gambling Among Non-Problem and Problem Gamblers**

|                            | Non-Problem Gamblers (2180) % | At-Risk Gamblers (182) % | Problem & Pathological Gamblers (60) % | Sig. |
|----------------------------|-------------------------------|--------------------------|--|------|
| Lottery                    | 59.0                          | 75.7                     | 81.7                                   | .000 |
| Casino                     | 40.3                          | 65.4                     | 78.3                                   | .000 |
| Private                    | 13.5                          | 33.5                     | 38.3                                   | .000 |
| Sports                     | 15.0                          | 38.1                     | 35.0                                   | .000 |
| Non-casino gaming machines | 4.9                           | 14.3                     | 35.0                                   | .000 |
| Non-casino bingo           | 6.0                           | 7.1                      | 23.3                                   | .000 |
| Other                      | 10.1                          | 21.4                     | 16.7                                   | .000 |
| Internet                   | 1.1                           | 5.0                      | 15.0                                   | .000 |
| Pari-mutuel                | 7.2                           | 20.3                     | 11.7                                   | .000 |

When they gamble at a casino, non-problem gamblers and problem gamblers in New Mexico are more likely than at-risk gamblers to report that they usually play slot machines or video poker. Three-quarters (76%) of the non-problem gamblers and 75% of the problem gamblers who had gambled at a casino in the past year said that they usually played slot machines or video poker in contrast to 59% of the at-risk gamblers. In contrast, 31% of the at-risk gamblers who had gambled at a casino in the past year said that they usually played blackjack or poker compared to 17% of the non-problem gamblers and 17% of the problem gamblers (Pearson chi-square=17.684, p=.007).

All three groups of New Mexico gamblers who have played the lottery in the past year are most likely to say that they usually play Powerball. Scratchers are the second most preferred lottery game among all three groups of New Mexico gamblers. However, at-risk and problem gamblers are significantly more likely than non-problem gamblers to prefer instant scratch lottery games over large jackpot games like Powerball. Only 25% of the non-problem gamblers in New Mexico who have played the lottery in the past year say that they usually buy “scratchers” compared with 37% of the at-risk gamblers and 45% of the problem gamblers (Pearson chi-square=16.643, p=.000).

**Monthly.** Table 14 shows differences in monthly involvement in different types of gambling by non-problem, at-risk and problem gamblers in New Mexico. Although most of these differences are significant, only those types of gambling for which monthly participation among problem gamblers is 10% or higher are shown. Overall, Table 14 shows that while one-half to three-fifths of at-risk and problem gamblers in New Mexico gamble once a month or more often, only one-fifth of non-problem gamblers gamble this frequently. Two points to note are that at-risk gamblers are generally intermediate in monthly participation between non-problem and problem gamblers and that monthly Internet gambling is quite high among problem gamblers in New Mexico.

**Table 14: Monthly Gambling Among Non-Problem and Problem Gamblers**

|          | Non-Problem Gamblers (2180) % | At-Risk Gamblers (182) % | Problem & Pathological Gamblers (60) % | Sig. |
|----------|-------------------------------|--------------------------|--|------|
| Lottery  | 15.0                          | 28.2                     | 41.7                                   | .000 |
| Casino   | 2.9                           | 14.8                     | 35.0                                   | .000 |
| Private  | 1.6                           | 9.3                      | 20.0                                   | .000 |
| Sports   | 2.2                           | 13.2                     | 18.3                                   | .000 |
| Internet | 0.3                           | 3.9                      | 11.7                                   | .000 |
| Total    | 20.0                          | 50.8                     | 58.3                                   | .000 |

**Weekly.** Overall, problem gamblers in New Mexico are significantly more likely than non-problem gamblers to gamble once a week or more often. While only 8% of non-problem gamblers wager this often, 26% of at-risk gamblers and 45% of problem gamblers gamble weekly or more often. All three groups of gamblers are most likely to gamble weekly on the lottery. However, weekly participation rates among problem gamblers are also high for casinos, private wagers and sports betting.

## Other Significant Differences

In addition to their demographic characteristics and gambling involvement, there are other significant differences between non-problem, at-risk and problem gamblers in New Mexico. These include differences in respondents' perceptions of their gambling careers and involvement, differences in their reasons for gambling, and differences in the impacts of their gambling on physical and mental health as well as on family, finances and community.

### Gambling Careers and Styles<sup>4</sup>

Table 15 presents information about important differences between non-problem, at-risk and problem gamblers in New Mexico in gambling "careers" and "style." Table 15 shows that at-risk and problem gamblers in New Mexico are significantly more likely than non-problem gamblers to have started gambling before the age of 18 and to have felt nervous about their gambling. Table 15 also shows that problem gamblers in New Mexico are significantly more likely than at-risk gamblers or non-problem gamblers to gamble alone and less likely to gamble with a spouse or other family members. Problem gamblers are significantly more likely than at-risk or non-problem gamblers to gamble for six or more hours when they gamble or to claim that they do not know how long they usually gamble.

**Table 15: Differences in Gambling Careers and Style**

|                                       | Non-<br>Problem<br>Gamblers<br>(1152)<br>% | At-Risk<br>Gamblers<br>(182)<br>% | Problem &<br>Pathological<br>Gamblers<br>(60)<br>% | Sig. |
|---------------------------------------|--|-----------------------------------|--|------|
| Started gambling before 18            | 19.1                                       | 36.0                              | 37.9   | .000 |
| Ever felt nervous about your gambling | 13.4                                       | 37.9                              | 71.7   | .000 |
| Company                               |  |                                   |  | .002 |
| Spouse or partner                     | 27.7                                       | 18.7                              | 13.3   |      |
| Alone                                 | 25.0                                       | 28.0                              | 45.0   |      |
| Other family member                   | 11.7                                       | 12.6                              | 6.7  |      |
| Other individuals, organizations      | 31.7                                       | 39.0                              | 28.3   |      |
| Time spent gambling                   |  |                                   |  | .000 |
| Less than 1 hour                      | 31.6                                       | 17.0                              | 18.6   |      |
| 1-2 hours                             | 33.2                                       | 34.6                              | 15.3   |      |
| 3-5 hours                             | 22.8                                       | 29.7                              | 23.7   |      |
| 6 or more hours                       | 5.3  | 12.6                              | 28.8   |      |
| Don't know                            | 6.5  | 5.5                               | 13.6   |      |

<sup>4</sup> As noted above in relation to favorite gambling activities, only respondents who indicated that they had ever gambled five or more times were asked to identify their favorite gambling activity.

**Table 15: Differences in Gambling Careers and Style(cont'd)**

|                          | Non-Problem Gamblers (1152) % | At-Risk Gamblers (182) % | Problem & Pathological Gamblers (60) % | Sig. |
|--------------------------|-------------------------------|--------------------------|--|------|
| Distance                 |                               |                          |  | .007 |
| Don't travel             | 18.6                          | 14.8                     | 10.0                                   |      |
| 5 miles or less          | 25.8                          | 22.5                     | 13.3                                   |      |
| 6 – 30 miles             | 22.3                          | 35.2                     | 33.3                                   |      |
| 31 – 60 miles            | 7.0                           | 5.5                      | 11.7                                   |      |
| More than 60 miles       | 21.1                          | 18.1                     | 30.0                                   |      |
| Average monthly spending |                               |                          |  | .000 |
| \$10 or less             | 62.0                          | 30.2                     | 24.6                                   |      |
| \$11 - \$99              | 25.5                          | 42.3                     | 24.6                                   |      |
| \$100 or more            | 8.0                           | 19.8                     | 47.5                                   |      |
| Largest single day loss  |                               |                          |  | .000 |
| Less than \$10           | 16.4                          | 4.5                      | 1.7                                    |      |
| \$10 - \$99              | 53.0                          | 35.0                     | 5.2                                    |      |
| \$100 - \$999            | 27.5                          | 50.3                     | 58.6                                   |      |
| \$1,000 or more          | 3.2                           | 10.2                     | 34.5                                   |      |
| Largest single year loss |                               |                          |  | .000 |
| Never lost money         | 1.6                           | 3.3                      | ---                                    |      |
| \$10 - \$99              | 40.1                          | 16.5                     | 4.9                                    |      |
| \$100 - \$999            | 40.4                          | 44.5                     | 24.6                                   |      |
| \$1,000 or more          | 6.6                           | 17.6                     | 44.3                                   |      |
| Don't know               | 10.6                          | 17.0                     | 18.0                                   |      |

Table 15 also shows problem gamblers in New Mexico are significantly more likely than at-risk or non-problem gamblers to travel when they gamble with nearly one-third usually traveling more than 60 miles. Finally, Table 15 shows that problem gamblers in New Mexico are significantly more likely to spend \$100 or more on gambling in an average month, to have lost \$100 or more in a single day and to have lost \$1,000 or more in a single year.

### Reasons for Gambling

Table 16 on the following page presents information about the reasons that non-problem, at-risk and problem gamblers in New Mexico endorse as “somewhat important” or “very important.” Table 16 shows that entertainment is the most important reason for gambling among non-problem, at-risk and problem gamblers in New Mexico. However, problem gamblers are significantly more likely than at-risk or non-problem gamblers to believe that excitement or challenge and winning money are important reasons for gambling.

**Table 16: Comparing Reasons for Gambling**

|   | Non-Problem Gamblers (1152) % | At-Risk Gamblers (182) % | Problem & Pathological Gamblers (60) % | Sig. |
|---|-------------------------------|--------------------------|--|------|
| Somewhat or very important                                  |                               |                          |  |      |
| Entertainment or fun  | 79.2                          | 86.3                     | 86.7                                   | .040 |
| Excitement or challenge                                     | 53.0                          | 69.8                     | 80.0                                   | .000 |
| To win money  | 56.5                          | 74.7                     | 90.0                                   | .000 |
| Convenience   | 42.7                          | 51.7                     | 57.6                                   | .009 |
| As a distraction  | 16.5                          | 34.3                     | 57.6                                   | .000 |
| Inexpensive entertainment                                   | 48.3                          | 57.8                     | 40.0                                   | .021 |
| To be with people   | 45.7                          | 50.0                     | 58.3                                   | .107 |
| Gambling compared with other recreational/social activities | 6.0                           | 26.9                     | 50.0                                   | .000 |

Table 16 also shows that problem gamblers are also significantly more likely than at-risk or non-problem gamblers to say that distraction is an important reason for gambling. In contrast, non-problem and at-risk gamblers are significantly more likely than problem gamblers to say that inexpensive entertainment is an important reason to gamble. Finally, Table 16 shows that problem gamblers are significantly more likely than at-risk or non-problem gamblers to indicate that gambling is an important activity compared with their other recreational or social activities.

### **Physical and Mental Health**

Table 17 presents differences between non-problem, at-risk and problem gamblers on several health-related dimensions. Table 17 shows that problem gamblers are significantly more likely than at-risk or non-problem gamblers in New Mexico to identify their physical health status as poor or fair, rather than as good or excellent. Problem gamblers are also significantly more likely than at-risk or non-problem gamblers to acknowledge that they are presently very troubled by their “emotions, nerves or mental health” and to acknowledge that they have experienced symptoms of a manic episode or major depression at some time in their lives.

**Table 17: Differences in Physical and Mental Health**

|                                     | Non-Problem Gamblers (2180) % | At-Risk Gamblers (182) % | Problem & Pathological Gamblers (60) % | Sig. |
|-------------------------------------|-------------------------------|--------------------------|--|------|
| Physical health status fair or poor | 16.6                          | 20.6                     | 32.2                                   | .003 |
| Troubled by emotions, nerves, MH    | 16.8                          | 20.9                     | 40.0                                   | .000 |
| Manic episode (ever)                | 1.5                           | 13.7                     | 35.0                                   | .000 |
| Depression (ever)                   | 33.3                          | 48.4                     | 78.3                                   | .000 |
| <b>Alcohol and Drug Use</b>         |                               |                          |  |      |
| Daily tobacco use                   | 19.1                          | 35.4                     | 29.1                                   | .000 |
| Weekly alcohol use                  | 14.2                          | 25.3                     | 21.7                                   | .000 |

**Table 17: Differences in Physical and Mental Health (cont'd)**

|  | Non-Problem Gamblers (1314) % | At-Risk Gamblers (121) % | Problem & Pathological Gamblers (36) % | Sig. |
|--|-------------------------------|--------------------------|--|------|
| Typical # of drinks per day                              |                               |                          |  | .001 |
| 1 – 2  | 73.4                          | 58.2                     | 51.4                                   |      |
| 3 – 4  | 16.8                          | 27.0                     | 28.6                                   |      |
| 5 – 7  | 6.8                           | 10.7                     | 13.9                                   |      |
| 8 or more  | 3.0                           | 3.3                      | 8.3                                    |      |
|  | Non-Problem Gamblers (2180) % | At-Risk Gamblers (182) % | Problem & Pathological Gamblers (60) % | Sig. |
| Past year marijuana use                                  | 3.6                           | 8.4                      | 18.3                                   | .000 |
| Past year cocaine use                                    | 1.0                           | 2.2                      | 1.7                                    | .275 |
| Past year other drugs                                    | 0.7                           | 0.5                      | 6.7                                    | .000 |
| <b>Help Seeking</b>                                      |                               |                          |  |      |
| Gotten into trouble for alcohol (past year)              | 1.6                           | 3.2                      | 11.9                                   | .000 |
| Gotten into trouble for drugs (past year)                | 0.6                           | ---                      | 6.8                                    | .000 |
| Sought help for alcohol or drug problems (ever)          | 4.4                           | 9.9                      | 28.3                                   | .000 |
| Consider seeking help sought for gambling problem (ever) | ---                           | 0.5                      | 6.8                                    | .000 |

Table 17 also shows that at-risk and problem gamblers are significantly more likely than non-problem gamblers in New Mexico to use tobacco on a daily basis and to consume alcohol once a week or more often. In addition to their more frequent alcohol consumption, at-risk and problem gamblers who consume alcohol are significantly more likely than non-problem gamblers who consume alcohol to typically consume five or more drinks per occasion. In addition to tobacco and alcohol, Table 17 shows that problem and at-risk gamblers are significantly more likely than non-problem gamblers to have used marijuana and other illicit drugs (with the interesting exception of cocaine) in the past year.

Table 17 further demonstrates that problem gamblers in New Mexico are significantly more likely than at-risk or non-problem gamblers to have gotten into trouble because of using alcohol or drugs in the past year and to have ever sought help for an alcohol or drug problem. Finally, Table 17 shows that very few gamblers, regardless of their problem status, have ever considered seeking help for a gambling problem.

Table 18 on the following page presents information about respondents' awareness of the problem gambling services that are available in New Mexico. Awareness of problem gambling services in New Mexico, including the toll-free helpline and outpatient services as well as Gamblers Anonymous appears to be quite high among the survey respondents and increases with the severity of respondents' gambling problems. However, very few respondents, regardless of the severity of their gambling problems, indicated that they or someone they know would use these services. Indeed, 4% of non-problem gamblers and 5% of at-risk gamblers responded that they would not be likely to utilize such services.

**Table 18: Awareness of Problem Gambling Services**

|                           | Non-Problem Gamblers (2180) % | At-Risk Gamblers (182) % | Problem & Pathological Gamblers (60) % | Sig. |
|---------------------------|-------------------------------|--------------------------|--|------|
| Toll-free helpline        | 42.9                          | 50.5                     | 66.7                                   | .000 |
| Gamblers Anonymous        | 38.0                          | 45.6                     | 66.7                                   | .000 |
| Outpatient services       | 29.1                          | 40.1                     | 43.3                                   | .001 |
| Likely to use PG services | 1.1                           | ---                      | 3.3                                    | .155 |

## Other Impacts of Gambling

Table 19 shows differences in the impacts of gambling on family, finances and the criminal justice system among non-problem, at-risk and problem gamblers in New Mexico. Interestingly, Table 19 shows that problem gamblers are significantly more likely than at-risk or non-problem gamblers to say that they have been troubled in the past year by the gambling of someone with whom they live. Table 19 also shows that problem gamblers in New Mexico are more likely than at-risk or non-problem gamblers to have \$100,000 or more in debt although the difference is only significant because non-problem gamblers are more likely to claim that they do not know the extent of their indebtedness or refuse to answer the question.

**Table 19: Differences in Family, Financial and Criminal Justice Impacts**

|                                     | Non-Problem Gamblers (2180) % | At-Risk Gamblers (182) % | Problem & Pathological Gamblers (60) % | Sig. |
|-------------------------------------|-------------------------------|--------------------------|--|------|
| Troubled by someone else's gambling | 9.5                           | 12.1                     | 31.7                                   | .000 |
| Household debt                      |                               |                          |  | .017 |
| None                                | 15.9                          | 23.1                     | 20.0                                   |      |
| \$1,000 - \$9,999                   | 18.4                          | 19.2                     | 13.3                                   |      |
| \$10,000 - \$99,999                 | 27.8                          | 26.9                     | 30.0                                   |      |
| \$100,000 or more                   | 14.2                          | 16.5                     | 25.0                                   |      |
| Don't know or refused               | 23.6                          | 14.3                     | 11.7                                   |      |
| Ever filed for bankruptcy           | 7.9                           | 8.2                      | 6.7                                    | .926 |
| Ever arrested                       | 15.2                          | 32.4                     | 45.0                                   | .000 |
| Ever incarcerated                   | 6.9                           | 21.4                     | 35.0                                   | .000 |

Finally, Table 19 shows that problem gamblers in New Mexico are significantly more likely than at-risk or problem gamblers to have ever been arrested and incarcerated. However, very few respondents, regardless of the severity of their gambling problems, attribute any such arrests or incarcerations to their gambling.

### *Highlight on At-Risk Gamblers*

For the most part, at-risk gamblers in New Mexico fall between non-problem and problem gamblers. This is true with regard to many aspects of their demographics as well as their gambling preferences and participation rates, their gambling “careers” and many of the impacts associated with problematic gambling.

Overall, at-risk gamblers are more similar to non-problem gamblers than to problem gamblers in terms of demographics. In terms of gambling participation, at-risk gamblers are more similar to problem gamblers although at-risk gamblers are unique in terms of their preferences for casino table games and for pari-mutuel wagering. While at-risk gamblers’ gambling participation is more like that of problem gamblers, their tendency to gamble alone and the average amounts that they report spending on gambling are more similar to non-problem gamblers. With regard to reasons for gambling, at-risk gamblers are unique in rating “inexpensive entertainment” as an important reason for gambling. Finally, while the physical and mental health status as well as levels of indebtedness of at-risk gamblers in New Mexico are more like non-problem gamblers, their rates of tobacco and alcohol use are more like those of problem gamblers.

## COMPARING NATIVE AMERICANS AND NON-NATIVE AMERICANS

In their review of the sparse empirical literature on what they refer to as “North American Aboriginal Populations” (encompassing indigenous populations in the United States and Canada), Wardman, el-Guebaly and Hodgins (2001, p. 81) summarize by stating that “(g)ambling appears to be problematic” among these populations. They also lament, however, that research on these populations is limited and warn against making broad generalizations based upon the relatively few studies that have thus far been conducted. A major problem of many of these studies is that they lack a comparison to non-Native American populations. Wardman et al (2001) also suggest that a profound limitation in the few studies that have been published is their reliance upon outdated or academically scorned methodologies. Future studies, they add, would benefit from using the NODS, which relies upon the latest diagnostic criteria and is deemed “more demanding and restrictive” than previous instruments.

In this section, we seek to add to the sparse literature on gambling and problem gambling among indigenous populations by contributing a new comparative analysis of Native American and non-Native American samples using the NODS to assess problem and pathological gambling rates. To remind readers, the main sample of the survey included 3,007 residents of New Mexico aged 18 and over and the oversample included 589 Native American residents of New Mexico aged 18 and over. Native American ethnicity was confirmed for all respondents in the Native American oversample before conducting the interview.

### *Demographics*

Table 20 presents information on the basic demographic characteristics of our survey samples (Native Americans and non-Native Americans). The gender distribution is statistically similar in the Native American and non-Native American samples, meaning that the two samples do not differ significantly in terms of the proportion of females and males who were interviewed. A look at the age distribution, however, does reveal some statistically significant differences: the non-Native American sample appears to be significantly older than the Native American sample.

**Table 20: Demographics of Native American and Non-Native American Respondents**

|                |                         | Native American<br>(782)<br>% | Non-Native American<br>(2657)<br>% | Sig. |
|----------------|-------------------------|-------------------------------|------------------------------------|------|
| Gender         | Male                    | 48.5                          | 45.7                               | .167 |
|                | Female                  | 51.5                          | 54.3                               |      |
| Age            | 18-35                   | 38.4                          | 29.9                               | .000 |
|                | 36+                     | 70.1                          | 61.6                               |      |
| Marital Status | Married/Living Together | 49.6                          | 63.7                               | .000 |
|                | Widowed                 | 4.6                           | 7.3                                |      |
|                | Divorced                | 7.5                           | 11.3                               |      |
|                | Separated               | 2.6                           | 1.4                                |      |
|                | Unmarried               | 34.3                          | 16.2                               |      |

**Table 20: Demographics of Native American and Non-Native American Respondents(cont'd)**

|           |                    | Native American<br>(782)<br>% | Non-Native American<br>(2657)<br>% | Sig. |
|-----------|--------------------|-------------------------------|------------------------------------|------|
|           |                    |                               |                                    |      |
| Income    | Less than \$25,000 | 34.1                          | 24.6                               | .000 |
|           | \$25,000-\$35,000  | 22.1                          | 14.0                               |      |
|           | \$35,000-\$50,000  | 15.5                          | 17.2                               |      |
|           | \$50,000-\$75,000  | 15.5                          | 20.9                               |      |
|           | \$75,000-\$125,000 | 10.0                          | 17.2                               |      |
|           | \$125,000 and over | 2.8                           | 6.1                                |      |
|           |                    |                               |                                    |      |
| Education | Elementary/Some HS | 8.9                           | 11.8                               | .000 |
|           | HS Graduate        | 33.3                          | 26.8                               |      |
|           | Some College       | 39.6                          | 29.1                               |      |
|           | BA Degree          | 11.9                          | 18.2                               |      |
|           | Graduate Study     | 5.9                           | 13.4                               |      |
|           |                    |                               |                                    |      |
|           |                    |                               |                                    |      |
| Religion  | Protestant         | 15.9                          | 24.1                               | .000 |
|           | Catholic           | 26.3                          | 38.0                               |      |
|           | Agnostic           | 1.5                           | 2.3                                |      |
|           | Atheist            | 2.1                           | 2.0                                |      |
|           | Other              | 54.1                          | 33.6                               |      |
|           |                    |                               |                                    |      |

Table 20 also shows that the two samples differ significantly in many other basic demographic dimensions. Native Americans in our sample were significantly less likely to be married (though divorce rates among Native Americans were lower than among non-Native Americans), significantly more likely to fall into the lower income and education categories assessed and significantly more likely to identify their religious affiliation as “Other.”

When considering tribal affiliations among the Native American sample, by far the dominant tribe represented is the Navajo. Half of the respondents in the Native American sample indicated that they were enrolled members of the Navajo (50%). Another 18% of the respondents indicated that they were Pueblo. Most notably, 21% of these respondents gave their tribal affiliation as “Other,” indicating perhaps that, in some cases, Native American identity may not be tribe-specific but rather a more general identifier. Other tribal affiliations identified among the small remaining proportion of Native American respondents included Cherokee, Sioux, Choctaw, Yaqui and Pomo.

### *Gambling Participation*

Research in the United States, New Zealand and Sweden has found that subgroups in the population where a large proportion of the group has little or no involvement in gambling and a significant minority gambles frequently and with high expenditures have particularly high rates of gambling problems (Abbott, Volberg & Rönnerberg, 2004a). In addition to Native Americans in North Dakota and Maori and Pacific Islanders in New Zealand, this “bi-modal” pattern is characteristic of recent migrant groups as well as among women, youth and older adults at different points in the introduction of widespread legal gambling. These appear to be sectors of the population that are

beginning to enter the gambling “market.” During their initial exposure to legal gambling opportunities, in addition to their bimodal participation patterns, these groups also have high rates of problem gambling. It has been proposed that as gambling becomes more widespread in these high risk population sectors, gambling problems will initially increase, then level out and decline over time (Abbott et al, 2004c). As this proposed adaptation takes place, it is predicted that prevalence differences relative to groups that have gone through this transition previously will diminish.

Comparison of gambling participation rates among Native American and non-Native American respondents in New Mexico shows that while the majority of both Native Americans and non-Native Americans in New Mexico have gambled in the past year, a significantly larger proportion of Native Americans gambled in the past year compared with non-Native Americans. In addition to overall past-year participation, Table 21 presents information about past- gambling participation rates for different gambling activities among Native Americans and non-Native Americans in New Mexico.

**Table 21: Past Year Gambling Participation**

|                            | Native American<br>(782)<br>% | Non-Native American<br>(2657)<br>% | Sig. |
|----------------------------|-------------------------------|------------------------------------|------|
| Lottery                    | 50.3                          | 52.2                               | .339 |
| Casino                     | 50.9                          | 35.6                               | .000 |
| Pari-mutuel                | 1.7                           | 7.2                                | .002 |
| Sports                     | 9.4                           | 15.2                               | .000 |
| Private                    | 9.7                           | 13.0                               | .013 |
| Non-casino bingo           | 8.8                           | 5.4                                | .000 |
| Non-casino gaming machines | 4.7                           | 5.3                                | .548 |
| Other                      | 6.4                           | 9.7                                | .004 |
| Numbers games              | 1.7                           | 1.2                                | .277 |
| Internet                   | 1.0                           | 1.4                                | .424 |
| Total                      | 71.7                          | 67.2                               | .014 |

Table 21 shows that Native Americans in New Mexico are significantly more likely than non-Native Americans to have gambled in the past year at a casino and to have played bingo outside a casino. In contrast, non-Native Americans are significantly more likely than Native Americans in New Mexico to have gambled in the past year on horse races, sports and “Other” activities and to have wagered privately.

It is interesting to consider differences between Native American and non-Native American gamblers with regard to their willingness to travel in order to gamble. Non-Native American gamblers (N=1326) are substantially more likely than Native American gamblers (N=308) to say that they don’t travel at all to gamble or that they travel 5 miles or less (45% vs. 29%). Native American gamblers are far more likely than non-Native American gamblers to say that they usually travel between 5 and 60 miles in order to gamble (48% vs. 33%).

Previous research has suggested that gambling is valued in unique ways in Native American cultures and future research might explore these relationships between culture and gambling behavior. For instance, Cozzetto and Laroque (1996) note that gambling has a long history in many Native American cultures. Salter (1979) has emphasized

gambling rituals' relationships with religion and spirituality among indigenous groups. Salter has also suggested that heavy gambling (and even excessive gambling) has been associated with prestige in some Native American cultures. However, Native American cultures are extremely diverse, and generalizations across these different cultures are not advisable (and probably not possible). We concur with Wardman et al (2001) that qualitative research would contribute to a more nuanced understanding of the ways in which culture and gambling intersect.

Table 22 further explores differences in gambling behaviors between the two samples interviewed for this survey. Table 22 shows that the largest differences are to be found among Native Americans' preference for casino games (where the chi-square contribution is 8.082) and their preference for bingo outside of a casino (where the chi-square contribution is 6.649). The preference for casino games is perhaps predictable given that the Native American population in New Mexico is more likely than non-Native Americans to live in areas near tribal casinos. It is less clear why Native Americans would be so much more likely than non-Native Americans to prefer playing non-casino bingo although it is possible that this is related to the important role that non-casino bingo plays in the social life on Native American tribal lands since similar findings come from earlier surveys among Native Americans in Montana and North Dakota as well as among the Maori in New Zealand (Polzin et al, 1998; Volberg & Abbott, 1997).

**Table 22: Favorite Gambling Activities**

|                      | Native American<br>(782)<br>% | Non-Native American<br>(2657)<br>% | Sig. |
|----------------------|-------------------------------|------------------------------------|------|
|                      |                               |                                    | .000 |
| Casino Games         | 71.0                          | 54.9                               |      |
| Bingo outside casino | 11.0                          | 18.9                               |      |
| Numbers              | 4.2                           | 5.3                                |      |
| Horse/dog race       | 3.5                           | 3.0                                |      |
| Private games        | 6.0                           | 9.7                                |      |
| Sports               | 4.2                           | 8.2                                |      |

Table 23 on the following page presents information about the importance that Native American and non-Native American respondents in New Mexico place on different reasons for gambling. While time precluded tests of significance on these variables, it is clear from Table 23 that these groups differ substantially on these variables as well. Table 23 shows that Native Americans in New Mexico are less likely than non-Native Americans to view socializing and entertainment as important reasons for gambling and more likely to view convenience and excitement as important reasons to gamble.

**Table 23: Reasons for Gambling**

| Somewhat or very important | Native American (782) % | Non-Native American (2657) % |
|----------------------------|-------------------------|------------------------------|
| To be with people          | 46.8                    | 53.8                         |
| Convenience                | 52.5                    | 44.6                         |
| To win money               | 60.8                    | 60.6                         |
| Entertainment or fun       | 60.8                    | 80.5                         |
| Excitement or challenge    | 60.0                    | 56.4                         |
| Inexpensive entertainment  | 50.5                    | 48.1                         |
| As a distraction           | 23.3                    | 20.5                         |

### *Problem Gambling*

Finally, we turn to examine the degree to which Native Americans and non-Native Americans in New Mexico differ with regard to rates of problematic gambling. Table 24 presents information about the rates of lifetime and past-year problem gambling prevalence among Native American and non-Native American respondents in New Mexico. Based on these data, it is clear that the prevalence of at-risk, problem and pathological gambling, both lifetime and in the past year, is significantly higher among Native Americans.

**Table 24: Problem Gambling Prevalence Rates**

|                  | Native American (782) % | Non-Native American (2657) % | Sig. |
|------------------|-------------------------|------------------------------|------|
| <b>Lifetime</b>  |                         |                              | .000 |
| At Risk          | 7.8                     | 6.6                          |      |
| Problem          | 2.7                     | 1.1                          |      |
| Pathological     | 2.2                     | 0.9                          |      |
| <b>Past Year</b> |                         |                              | .000 |
| At Risk          | 6.8                     | 3.6                          |      |
| Problem          | 1.9                     | 0.5                          |      |
| Pathological     | 1.8                     | 0.6                          |      |

While significant, these differences are actually smaller than might have been expected based on research among other Native American and indigenous groups internationally (Volberg & Abbott, 1997; Wardman, el-Guebaly & Hodgins, 2001). In an analysis of five studies of indigenous groups in Canada, New Zealand and the United States, Wardman et al (2001) found that rates of problem and pathological gambling ranged from 2 to 16 times higher among indigenous respondents compared with non-indigenous groups in the same jurisdictions. The differences in prevalence rates between Native American and non-Native Americans in New Mexico are clearly at the lower end of this spectrum with the rate of lifetime **pathological** gambling 2.4 times higher among Native Americans, the rate of lifetime **problem** gambling 2.5 times higher and the rate of lifetime **at-risk** gambling 1.2 times higher than among non-Native Americans.

Wardman et al (2001) point out that some risk factors for gambling problems among indigenous groups relate to greater opportunities to gamble within indigenous

communities (e.g., at tribal casinos and on bingo). They also note that the stressful nature of reservation life, with lack of employment and educational opportunities as well as widespread health and family problems and lack of social and community services, may contribute to higher rates of gambling problems within indigenous communities. However, the research literature on Native American and indigenous gambling and problem gambling is extremely limited and a great deal of work is needed to identify with confidence the factors that may contribute to higher rates of problem gambling in Native American communities.

## SUMMARY AND CONCLUSION

The main purpose of this survey was to determine the scope of problem gambling in New Mexico and to identify the groups in the population most affected by the disorder. The results of this study also provide information about the impacts of problem gambling in New Mexico and will help public health decision-makers determine the best courses of action when making policy decisions in the future.

### *Summary*

The majority of adults in the United States have gambled at some time in their lives and New Mexico is no exception. The results of this survey show that 85% of the adult population of New Mexico has gambled at some time, that 68% of New Mexico adults have gambled in the past year and that 20% gambles monthly or more often. The types of gambling that New Mexico adults are most likely to have ever tried are lottery and casino games. Second-tier gambling activities in New Mexico include wagering on horse races and on sports and private games. Lifetime participation rates for other types of gambling in New Mexico are very low.

Non-gamblers and infrequent gamblers in New Mexico are significantly more likely than more frequent gamblers to be female, aged 55 and over, widowed, to have less than a high school education and to be retired or keeping house. Non-gamblers and infrequent gamblers are most likely to say that the possibility of losing money is an important or very important reason for not gambling, followed by moral or ethical concerns.

Monthly and weekly gamblers are significantly more likely than past-year gamblers to be male, to be Hispanic, to have an annual household income over \$50,000 and to have military experience. Monthly and weekly gamblers are significantly less likely than past-year gamblers to have attended college. Monthly and weekly gamblers are most likely to say that entertainment is an important or very important reason for gambling, followed by winning money.

Based on the lifetime NODS, the prevalence of pathological gambling in New Mexico is 1.1% and the prevalence of problem gambling is 1.1%. The prevalence of at-risk gambling in New Mexico is 6.4%. The overall prevalence rate of problem and pathological gambling in New Mexico is at the lower end of the range of prevalence rates in other states and nationally identified using this screen. Based on the most recent census data, there are between 9,400 and 19,400 pathological gamblers in New Mexico and another 9,400 to 19,400 problem gamblers. An additional 72,100 to 95,600 New Mexico adults can be classified as at-risk gamblers. The prevalence of problem and pathological gambling is particularly high among respondents who have never married and among respondents who are disabled or unemployed. Problem and pathological gambling prevalence rates are highest among past-year players of non-casino bingo and among respondents who wager privately. Problem gambling prevalence is also high among past-year sports bettors and casino gamblers.

Problem gamblers in New Mexico are significantly more likely than non-problem gamblers to be male, Hispanic and unmarried. They are significantly less likely to have graduated from college and to be retired. Although five in ten problem gamblers in New Mexico are working fulltime, two in ten are disabled or unemployed compared with only

one in twenty non-problem gamblers. Problem gamblers in New Mexico are most likely to gamble regularly on the lottery and at a casino. They are significantly more likely than non-problem gamblers to gamble regularly on sports and private games of skill as well as on non-casino gaming machines and non-casino bingo. One in six problem gamblers in New Mexico reports having gambled in the past year on the Internet, indicating that this relatively new type of gambling may become an increasing concern in the future.

Problem gamblers in New Mexico are most likely to identify slot machines, regardless of location, as their favorite type of gambling. They are also significantly more likely than non-problem gamblers to say that excitement and winning money are important or very important reasons to gamble. Problem gamblers in New Mexico are significantly more likely than non-problem gamblers to use tobacco daily, consume alcohol regularly and to have used marijuana and other illicit drugs in the past year. They are also significantly more likely to rate their physical health only fair or poor, to have ever experienced a manic episode, and to have ever been depressed. It is interesting that these individuals are significantly more likely than other gamblers to have been troubled by the gambling of someone in their family.

For the most part, at-risk gamblers fall between non-problem and problem gamblers on many dimensions although their gambling participation looks much more like that of problem gamblers than non-problem gamblers. At-risk gamblers are more likely than either non-problem or problem gamblers to say that inexpensive entertainment is an important reason for gambling and to identify casino table games and horse race betting as their favorite types of gambling.

Based on an oversample of Native American respondents, we found that Native Americans in New Mexico are significantly younger than non-Native Americans. They are also significantly less likely to be married, to have annual household incomes over \$25,000 and to have graduated from college.

While the majority of both Native Americans and non-Native Americans in New Mexico have gambled in the past year, a significantly larger proportion of Native Americans gambled in the past year compared with non-Native Americans. Native Americans are significantly more likely to have gambled in the past year at a casino and to have played bingo outside a casino while non-Native Americans are significantly more likely to have gambled in the past year on horse races, sports and private games. Native Americans are less likely to view socializing and entertainment as important reasons for gambling and more likely to view convenience and excitement as important reasons to gamble.

The prevalence of at-risk, problem and pathological gambling is significantly higher among Native Americans in New Mexico than among non-Native Americans. While statistically significant, these differences are actually smaller than might have been expected based on research among other Native American and indigenous groups internationally.

### *Directions for the Future*

The impacts of gambling-related problems can be high, not only for individuals but also for families and communities. Pathological gamblers experience physical and psychological stress and exhibit substantial rates of depression, alcohol and drug dependence and suicidal ideation. The families of pathological gamblers experience physical and

psychological abuse as well as harassment and threats from bill collectors and creditors. Other significant impacts include costs to employers, creditors, insurance companies, social service agencies and the civil and criminal justice systems (Lesieur, 1998; Volberg, 2001a).

The impacts of gambling-related problems are not limited to those at the most severe end of the problem gambling continuum. Indeed, it is likely that problem and at-risk gamblers account for the largest proportion of the social costs of disordered gambling (Korn & Shaffer, 1999). It is also likely—if the addiction model applies—that problem and at-risk gamblers will be more responsive than pathological gamblers to prevention and intervention efforts (Hodgins & el-Guebaly, 2000; Shaffer & Korn, 2002).

## How Many To Plan For?

One important purpose of prevalence surveys is to identify the number of individuals in a jurisdiction who may need treatment services for gambling-related difficulties at a given point in time. Experience in many jurisdictions suggests that not all of the individuals in need of treatment for a physical or psychological problem will seek out such treatment. From a policy perspective, the question is: How many individuals should we plan to provide for?

Recent research indicates that approximately 3% of individuals with severe alcohol-related difficulties actually seek treatment in any one year (Smith, 1993). Based on research in Australia as well as in the United States in jurisdictions where services for problem gamblers are widely available, it appears that the proportion of pathological gamblers who seek treatment in any one year is quite similar (Dickerson, 1997; Volberg, 1997). In calculating the number of problem and pathological gamblers who might seek treatment in New Mexico, we focus on the group of individuals who score as pathological gamblers (e.g. the 9,400 to 19,400 individuals represented by the confidence interval around the point estimate for pathological gambling in New Mexico). Based on this approach, we estimate that the number of individuals likely to seek treatment for a gambling problem on an annual basis in New Mexico is between 280 and 600.

In considering the number of individuals who *might* seek treatment for a gambling problem in New Mexico, it is helpful to consider how many people *have* sought help for a gambling problem over the past year. Based on quarterly reports to the Association, the New Mexico Council on Problem Gambling received 475 calls from individuals in crisis in 2005. Just over half of these callers (N=250) were referred to a counselor; another one-third (N=143) were referred to Gamblers Anonymous, 6% were referred to Gam-Anon and 9% were sent informational literature. The number of individuals contacting the problem gambling helpline is well within the parameters we have estimated.

What remains unclear is how many of the helpline callers who are referred to a counselor actually access problem gambling treatment services in New Mexico. Based on information from the New Mexico Council on Problem Gambling, 144 individuals received problem gambling treatment paid for by the Indigent Care Treatment Fund in 2005. In the same period, the Evolution Group—which operates a problem gambling treatment program in the Greater Albuquerque Metropolitan Area—enrolled 63 individuals in its problem gambling treatment program (Blackwood, personal communication). It is unclear whether the clients enrolled in the Evolution Group program overlap with the clients whose treatment was paid for through the fund in 2005. Based on the available information, it

appears that between 58% and 83% of the helpline callers who were referred to a counselor actually received professional treatment. This suggests that work is needed to improve links between the problem gambling helpline and the problem gambling treatment services that are available in New Mexico (Arnold et al, 2003; Marotta, 2004; Moran-Cooper et al, 2003).

## Recommendations

Studies in many jurisdictions suggest that problem gambling services play an important role in minimizing rates of problem gambling in the general population (Volberg, 2001a). There is also the question of how to prevent progression toward more severe gambling-related problems among those residents of New Mexico who are at risk. A full range of ameliorative measures in New Mexico would include:

- fostering of gaming industry **responsible gaming policies and programs** by the full range of gambling operators in New Mexico—including tribal casinos, the racetracks, the New Mexico Lottery and the veterans and fraternal clubs—to minimize gambling-related problems;
- expanding **training opportunities** to educate more mental health, alcohol and substance abuse treatment professionals as well as law enforcement and criminal justice professionals in how to screen for gambling problems as well as when and where to refer such individuals for appropriate treatment;
- expansion of the state-level **gambling counselor certification program** to ensure that individuals seeking help for gambling-related difficulties receive appropriate and effective services;
- establishing procedures to **improve the helpline referral process** and increase the likelihood that callers are able to make and keep appointments with trained counselors;
- providing increased funding to support **public education and prevention services** targeted toward particularly vulnerable groups in New Mexico (e.g. men, Hispanics, disabled and unemployed individuals, those with alcohol and drug problems and incarcerated persons) as well as toward venues where problem gamblers are most likely to be found, including casinos and racetracks; and
- continued **monitoring** of gambling and problem gambling prevalence to assess the impacts of legal gambling on the residents of New Mexico.

In conclusion, New Mexico has done well in minimizing gambling problems in the adult population. Consideration should be given to continuing to provide substantial financial support for treatment services in New Mexico. However, it may also be time to consider expanding the Association's efforts to include problem gambling prevention in order to reduce as much as possible the rate of at-risk gambling in New Mexico.



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## APPENDIX A

*Comparing Two Problem Gambling Screens in New Mexico*

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Two problem gambling screens were used in the New Mexico survey to provide comparability with both existing and emerging research on problem gambling. The NODS was employed as the primary measure of problem gambling to assess pathological gambling in New Mexico using the most current psychiatric criteria. The NODS was also used to permit comparisons of the New Mexico survey with a recent U.S. national survey as well as with a growing number of statewide surveys (Gerstein et al, 1999; Volberg, 2001b, 2001c, 2002). The 9-item Problem Gambling Severity Index (PGSI) from the longer Canadian Problem Gambling Index (CPGI) (Ferris & Wynne, 2001) was included in the New Mexico survey to provide, for the first time, an opportunity to examine the performance of an emerging international problem gambling screen in a U.S. jurisdiction.

This technical section of the report is intended for readers interested in the comparative performance of the NODS and the PGSI in the New Mexico survey. While the analysis presented here does not answer questions about the validity and reliability of the NODS or the PGSI in relation to clinical assessments, this survey provides an opportunity to examine how these two widely used methods to identify problem and pathological gamblers in the general population operate in relation to one another.

### ***Development of the CPGI***

In 1997, an inter-provincial group of Canadian government agencies with responsibility for addressing problem gambling, commissioned the Canadian Centre on Substance Abuse to conduct a three-year study to clarify the concept of problem gambling in the general population, develop an operational definition to guide research, treatment and prevention, and design and test a new instrument for measuring problem gambling in non-clinical settings. The goal was to develop a more meaningful measure of problem gambling specifically for use in general population surveys that placed this disorder in a wider social and environmental context.

The research team developed an instrument called the Canadian Problem Gambling Index (CPGI) which was tested for its performance in a national survey that included a large general population sample, re-testing of a sub-sample of respondents from the larger survey, and clinical validation interviews with a separate sub-sample (Ferris & Wynne, 2001). The research team examined the reliability, validity and classification accuracy of the CPGI and concluded that the screen measured non-pathological gambling problems better than the SOGS.

The full CPGI includes over 30 items assessing gambling involvement, gambling problems, correlates and demographics. A subscale of nine scored items—sometimes referred to as the Problem Gambling Severity Index (PGSI)—assesses problem gambling directly.<sup>5</sup> These items include chasing losses, escalating gambling to maintain excitement (analogous to tolerance in other addictions), borrowing or selling to obtain money to gamble, betting more than one can afford, feeling guilty, being criticized by others, harm to health, financial difficulties to one's household and feeling that one might have a problem with gambling. With two exceptions (harm to health and financial difficulties to one's household) all of these items are drawn directly from the SOGS or

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<sup>5</sup> There is some confusion associated with published reports on the performance of the Canadian Problem Gambling Index. Apart from some Canadian surveys, most researchers have employed only the subscale of scored items but nevertheless refer to this subscale as the CPGI.

from the DSM-IV criteria for pathological gambling. As the developers of the CPGI point out, this screen represents an evolution of older measures rather than something entirely new (Ferris & Wynne, 2001).

The PGSI is administered only to survey respondents who have gambled in the past year. Responses to each of the nine CPGI items are scored as follows: Never (0), Some of the time (1), Most of the time (2) and Almost always (3). Respondents are classified as Non-Gamblers if they have not gambled in the past year and as Non-Problem Gamblers if they have gambled in the past year but score zero on the CPGI. Respondents with a score of 1 or 2 are classified as At Risk Gamblers. Those with a score of 3 to 7 are classified as Moderate Problem Gamblers. Those with a score of 8 or more are classified as Severe Problem Gamblers.

Despite claims that the CPGI reflects a public health rather than a mental disorder perspective and assesses harm rather than individual psychopathology, this is more evident in rhetoric than reality. The content of this new measure differs only slightly from other problem gambling screens and the degree of correlation between the CPGI and these other measures is such that an impartial observer would conclude that they are measuring essentially the same thing (Abbott & Volberg, in press).

The full CPGI has been used in general population surveys in seven Canadian provinces including Alberta, British Columbia, Manitoba, New Brunswick, Nova Scotia, Ontario and Saskatchewan (British Columbia Ministry of Public Safety, 2003; Focal Research Consultants, 2001; Patton et al., 2002; Schrans & Schellinck, 2004; Smith & Wynne, 2002; Wiebe, Single & Falkowski-Ham, 2001; Wynne, 2002). The smaller subset of nine problem gambling items (PGSI) has been used in a national community mental health survey in Canada as well as in general population surveys in Queensland and Victoria, Australia (Marshall & Wynne, 2004; Queensland Policy Directorate, 2001; Wenzel et al., 2004).

As with many other problem gambling screens, concerns have been expressed about the lack of theoretical framework that underlies the CPGI. Even if the screen reliably differentiates between problem and non-problem gamblers, it is not clear why this is the case. Concerns have also been expressed about the substantial overlap between the CPGI and the SOGS as well as an apparently high rate of false positives generated by the CPGI in relation to post-assessments involving formal clinical diagnosis (Neal et al., 2004).

### **Prevalence Based on the CPGI**

Table 25 on the following page presents information about the proportion of the main New Mexico sample (N=2,850) who scored on an increasing number of items on the PGSI. These data are based on the weighted sample to reflect the prevalence of gambling-related harms for the New Mexico population as a whole.

**Table 25: Scores on the PGSI**

| Number of Items           | PGSI Score | Proportion of Sample % |
|---------------------------|------------|------------------------|
|                           |            | (2850)                 |
| Non-Gamblers              | ---        | 32.4                   |
| Non-Problem Gamblers      | 0          | 58.3                   |
| At-Risk Gamblers          | 1-2        | 6.5                    |
| Moderate Problem Gamblers | 3-7        | 2.2                    |
| Severe Problem Gamblers   | 8-27       | 0.6                    |

Based on the population aged 18 and over living in New Mexico in 2000, there are presently approximately 8,000 severe problem gamblers and 29,000 moderate problem gamblers in New Mexico. In addition, there are approximately 85,000 gamblers who are at risk for developing more serious gambling problems. While the estimate for severe problem gambling is slightly lower than the estimate for pathological gambling based on the NODS, the estimate for moderate problem gambling based on the PGSI is substantially higher than the estimate for problem gambling based on the NODS (see *Population Estimates* on Page 32 of the report).

It is also helpful to compare the prevalence of gambling problems across the jurisdictions where the PGSI has been used in surveys of gambling and problem gambling. Table 26 presents prevalence rates of severe problem gambling (PGSI equal to or greater than eight) in all of the jurisdictions where this screen has been used. As with the NODS prevalence, the rate of severe problem gambling as assessed with the PGSI is at the lower end of the range of such studies.

**Table 26: Comparing CPGI Rates Across Jurisdictions**

| Jurisdiction      | Year        | CPGI = 8+   |
|-------------------|-------------|-------------|
| British Columbia  | 2003        | 0.4%        |
| <b>New Mexico</b> | <b>2005</b> | <b>0.6%</b> |
| Ontario           | 2001        | 0.7%        |
| Nova Scotia       | 2003        | 0.8%        |
| Queensland, AUS   | 2001        | 0.8%        |
| Victoria, AUS     | 2004        | 1.0%        |
| Manitoba          | 2001        | 1.1%        |
| Saskatchewan      | 2002        | 1.2%        |
| Alberta           | 2002        | 1.3%        |
| New Brunswick     | 2001        | 1.4%        |

Sources: British Columbia Ministry of Public Safety, 2003; Focal Research Consultants, 2001; Patton et al., 2002 ; Queensland Policy Directorate, 2001 ; Schrans & Schellinck, 2004 ; Smith & Wynne, 2002; Wenzel et al., 2004 ; Wiebe, Single & Falkowski-Ham, 2001 ; Wynne, 2002.

## Statistical Properties of the PGSI<sup>6</sup>

The accuracy of any instrument is measured by looking at the reliability and validity of the instrument (Litwin 1995). The **reliability** of an instrument refers to the ability to reproduce the results of the application of the test. The **validity** of an instrument refers to the ability of the instrument to measure what it is intended to measure. In examining the psychometric properties of the PGSI among New Mexico respondents, we assess its reliability by examining the internal consistency of the screen and then analyze the individual items to determine the ability of the screen to discriminate effectively between non-problem and problem gamblers. We then examine several forms of validity for the NODS.

### Reliability

The most widely accepted test of reliability is a measure of the internal consistency of an instrument. The reliability of the PGSI among New Mexico respondents is good with Cronbach's alpha of .832. This alpha is substantially higher than the .70 that is generally accepted as representing good reliability. In addition to testing the internal consistency of the PGSI, the screen was analyzed to assess how the individual items cluster together. This analysis indicates that the PGSI is a homogeneous scale since all of the items load on a single factor which accounts for 46% of the total variance in the score. Table 27 presents information on the relationship of the PGSI items to this single factor.

**Table 27: PGSI Principal Component Analysis**

|  | Component Loading |
|--|-------------------|
| Gambling caused financial problems                   | .797              |
| Felt you had a gambling problem                      | .786              |
| Felt guilty about your gambling                      | .759              |
| Felt gambling caused health problems                 | .698              |
| People criticized your gambling                      | .683              |
| Bet more than you could afford to lose               | .671              |
| Needed to gamble with more \$ to maintain excitement | .581              |
| Borrowed or sold to get money to gamble              | .580              |
| Gone back another day to win money lost              | .481              |

### Item Analysis

Endorsement of the PGSI items among New Mexico gamblers ranged from a high of 5.5% (Chasing) to a low of 1.2% (Health Problems and Borrowing or Selling to Get Gambling Money). It is instructive to compare positive responses to specific items by pathological and problem, at-risk and non-problem gamblers to see how well the different items discriminate between these groups. For this analysis, we used the lifetime NODS classification to prevent confusion between the method of classifying respondents and the items by which they were classified.

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<sup>6</sup> Unweighted data were used for this analysis since the purpose was to assess performance rather than generalize the results of the analysis to the population. It is also important to note that only respondents who had gambled in the past year were included in the analysis since the PGSI was only administered to past-year or more frequent gamblers.

Table 28 shows that all of the PGSI items discriminate effectively between NODS-defined pathological and problem, at-risk and non-problem gamblers in New Mexico. The largest gap in endorsement rates between the NODS groups is for Chasing with 54% of the NODS lifetime problem and pathological gamblers giving a positive response in contrast to only 1.6% of the non-problem gamblers. The next largest gap is for Bet More Than Could Afford to Lose, with 54% of the NODS lifetime problem and pathological gamblers giving a positive response compared to 2.2% of the non-problem gamblers. In addition to the individual items, there is also a significant difference in mean scores on the PGSI items for non-problem, at-risk and problem and pathological gamblers. This provides some support for the notion that the PGSI measures something similar to the lifetime NODS.

**Table 28: Comparing PGSI Items Among NODS Groups**

| PGSI Items   | Non-Problem<br>(1765) | At Risk<br>(168) | Problem & Path<br>(46) | Sig. |
|--|-----------------------|------------------|------------------------|------|
| Bet more than you could afford to lose               | 2.2                   | 15.5             | 58.7                   | .000 |
| Gone back another day to win money lost              | 1.6                   | 33.3             | 54.3                   | .000 |
| Felt guilty about your gambling                      | 1.9                   | 19.6             | 52.2                   | .000 |
| Felt you had a gambling problem                      | 0.6                   | 8.9              | 50.0                   | .000 |
| People criticized your gambling                      | 1.0                   | 11.3             | 39.1                   | .000 |
| Needed to gamble with more \$ to maintain excitement | 0.7                   | 7.1              | 39.1                   | .000 |
| Gambling caused financial problems                   | 0.3                   | 4.8              | 37.0                   | .000 |
| Borrowed or sold to get money to gamble              | 0.3                   | 2.4              | 30.4                   | .000 |
| Felt gambling caused health problems                 | 0.4                   | 3.0              | 26.1                   | .000 |

## Validity

There are several different types of validity that can be measured to assess the performance of an instrument. Content validity is a subjective measure of how appropriate the items seem to a set of reviewers who have some knowledge of the subject matter. Since the development of the CPGI included review by experts in the problem gambling research and treatment fields, it is likely that the screen has good face validity (Ferris & Wynne, 2001).

Criterion validity requires that the instrument be judged against some other method that is acknowledged as a standard for assessing the same phenomenon. As a first step, we calculated the correlation coefficient between the PGSI and the lifetime NODS. The result of this analysis was statistically significant at the .01 level (Pearson correlation coefficient=.720). To better understand how the NODS and the PGSI operate in relation to one another, it is helpful to examine how respondents scored on each of these instruments in more detail. Table 29 on the following page shows the number of respondents who scored at different levels on the PGSI and the lifetime NODS. This table shows that respondents who score low on the PGSI also tend to score low on the NODS and 75% of the respondents who score as severe problem gamblers on the PGSI also score 5 or more on the lifetime NODS. As with other problem gambling screens, agreement at the intermediate levels is not as good as agreement at the extremes of each screen.

**Table 29: Comparing Scores on the NODS and PGSI**

| NODS  | PGSI |       |       |    | Total |
|-------|------|-------|-------|----|-------|
|       | 0    | 1 - 2 | 3 - 7 | 8+ |       |
| 0     | 1041 | 99    | 11    | 2  | 1153  |
| 1 - 2 | 71   | 69    | 27    | 1  | 168   |
| 3 - 4 | 5    | 8     | 11    | 1  | 25    |
| 5+    | 2    | 1     | 6     | 12 | 21    |
| Total | 1119 | 177   | 55    | 16 | 1367  |

Finally, since two of the items on the PGSI and NODS are quite similar, it is possible to check whether respondents answered similar questions differently. Table 30 shows that respondents answered these two very similar questions in very similar ways at two different points in the telephone interview.

**Table 30: Comparing Endorsement of Similar NODS and PGSI Items**

|           |   | Positive Score (2556) % |
|-----------|---|-------------------------|
| CHASING   | Often return another day to get even (NODS)                           | 1.6                     |
|           | Often gone back another day to try and win back money you lost (PGSI) | 1.7                     |
| TOLERANCE | Need to gamble with increasing amounts to get same excitement (NODS)  | 4.3                     |
|           | Need to gamble with larger amounts to get same excitement (PGSI)      | 4.3                     |

## Conclusion

This first examination of the performance of the PGSI in a U.S. population sample shows that the instrument performs quite well. The prevalence of the most severe levels of problematic gambling are quite similar when assessed by the past-year PGSI and the lifetime NODS. As with the NODS, the prevalence of severe problem gambling in New Mexico is quite low compared with other jurisdictions where the PGSI has been used. The PGSI demonstrates good internal consistency and appears to be quite homogeneous with a single factor that explains nearly half of the total variance in scores. The PGSI discriminates well in relation to the lifetime NODS with significantly higher proportions of NODS-based problem and pathological gamblers scoring significantly higher than at-risk or non-problem gamblers on all nine of the PGSI items. The two screens are clearly correlated with the best levels of agreement at the two ends of the scoring continuum. In the future, research is needed to examine the congruencies of these two screens in greater detail.

## APPENDIX B

*Questionnaire for the New Mexico Problem Gambling Survey*

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**INTRODUCTION**

Hello, my name is \_\_\_\_\_ and I am calling from O'Neil Associates. We're not selling anything; we are conducting a survey in the State of New Mexico about people's attitudes toward gambling.

In order to interview the right person, I need to speak with the member of your household, 18 years or older, who has had the most recent birthday. Would that be you?

IF NO, ASK TO SPEAK TO THAT PERSON. [REPEAT INTRO W/ NEW PERSON]  
IF NOT AVAILABLE, ARRANGE CALL-BACK.

Your household is one of 3,000 being asked to participate in this important study. The study consists of a telephone interview that is about 15 minutes in length. Because your household was selected scientifically to represent thousands of households like yours, your participation is very important to us.

Your number was randomly selected by a computer and I do not know your name. All of your answers will be kept strictly confidential and will only be used when combined with those from all the other people in the survey for reporting purposes. If I come to questions that you prefer not to answer, please just say so and I will move on to the next question.

May we begin?  
Yes GO TO INTRO  
No THANK AND END

**SECTION A: GAMBLING INVOLVEMENT**

**SKIP RULES:** ASK ALL RESPONDENTS *Lifetime Participation (A1, A2, A3, A4, A5, A6, A7, A8, A9, A10)*. IF RESPONDENT DOES NOT ACKNOWLEDGE ANY GAMBLING, GO TO CHECKPOINT A.

IF RESPONDENT ACKNOWLEDGES ANY *Lifetime Participation*, ASK *Past Year Participation (A1A, A2A, A3A, A4A, A5A, A6A, A7A, A8A, A9A, A10A)* AND FOLLOW-UP QUESTIONS FOR EACH TYPE OF GAMBLING ACKNOWLEDGED.

I would like to ask about your experience with various kinds of gambling. By gambling, I mean placing a bet on the outcome of a race, buying a lottery ticket, betting on a sporting event or at a casino, playing the stock market or playing a game – including for charity – in which you might win or lose money.

First, I would like to ask you about some popular activities.

A1. Have you ever gambled at a **casino**? (READ IF NECESSARY: A casino is a large gambling hall with many different kinds of games, for example, in a resort hotel or in a gambling hall on a riverboat or cruise ship.)

- 1 Yes GO TO A1A
- 2 No GO TO A2
- 8 DON'T KNOW GO TO A2
- 9 REFUSED GO TO A2

A1A. About how often did you gamble at a **casino** in the past 12 months?

- 1 Daily (30+ times per month)
- 2 Several times a week (6 – 29 times per month)
- 3 Several times a month (3 – 5 times per month)
- 4 Once a month or less (6 – 12 times per year)
- 5 Only a few days all year (1 – 5 times per year)
- 6 Not at all in the past 12 months (0 times) GO TO A2
- 8 DON'T KNOW GO TO A2
- 9 REFUSED GO TO A2

A1B. (ASK IF A1A = 1-5) When you gamble at a **casino**, what game do you usually play? (DO NOT READ LIST)

- 1 Blackjack
- 2 Table poker (not video poker at machines)

- 3 Video poker
- 4 Slot machines (spinning reel-based machines)
- 5 Keno
- 6 Sports
- 7 Horse or dog race betting
- 8 Bingo
- 9 Pull-tabs
- 10 Other [SPECIFY]
- 88 DON'T KNOW
- 99 REFUSED

A1C. Now please think about the last time, the most recent day, when you bet money at a casino. Was the casino located in New Mexico?

- 1. Yes [SKIP TO A1D]
- 2. No
- 8. DON'T KNOW
- 9. REFUSED

A1CA. In what state was the casino located?

DO NOT READ LIST

- 1. New Mexico
- 2. California
- 3. Nevada
- 4. Arizona
- 5. Colorado
- 6. Atlantic City
- 7. Gulf Coast, Mississippi
- 8. Cruise ship
- 9. Another location [SPECIFY]

A1D. Was the casino you played in owned by an Indian tribe?

- 1. Yes
- 2. No
- 8. DON'T KNOW
- 9. REFUSED

A1E. Thinking about the last time you bet money at a casino, did you win or lose?

- 1. Won
- 2. Lost
- 8. DON'T KNOW [SKIP TO A2]
- 9. REFUSED [SKIP TO A2]

A1EA. How much money did you [PROGRAM CORRECT WORD BASED ON ANSWER TO A1E: win/lose]? ENTER AMOUNT

A2. Have you ever gambled on **a gaming machine outside of a casino**, such as a slot machine, or video poker or keno at a club, bar, convenience store, race track or other location? *(INCLUDE VIDEO LOTTERY TERMINALS, OTHER GAMES WHERE ONE PLAYS AGAINST THE MACHINE. DON'T INCLUDE INTERNET GAMBLING, PULLTABS OR GAMES WHERE R ONLY MADE SIDE BETS ON OUTCOME OF GAME WITH AN ACQUAINTANCE)*

- 1 Yes GO TO A2A
- 2 No GO TO A3
- 8 DON'T KNOW GO TO A3
- 9 REFUSED GO TO A3

A2A. About how often did you gamble on **a gaming machine outside of a casino** in the past 12 months?

- 1 Daily (30+ times per month)
- 2 Several times a week (6 – 29 times per month)
- 3 Several times a month (3 – 5 times per month)
- 4 Once a month or less (6 – 12 times per year)
- 5 Only a few days all year (1 – 5 times per year)

- 6 Never GO TO A3
- 8 DON'T KNOW GO TO A3
- 9 REFUSED GO TO A3

A2B. (ASK IF A2A = 1-5) When you gamble on a **gaming machine outside of a casino**, where do you usually play? (DO NOT READ LIST)

- 1 Bar or tavern
- 2 Race track
- 3 Convenience store
- 4 Restaurant or lounge
- 5 Grocery or convenience store
- 6 Private club or social/fraternal organization
- 7 Truck stop
- 8 Bingo hall
- 9 Pool hall or billiard parlor
- 10 Or somewhere else [SPECIFY]
- 88 DON'T KNOW
- 99 REFUSED

A2C. Thinking about the last time you gambled on a gaming machine outside of a casino, did you win or lose?

- 1. Won
- 2. Lost
- 8. DON'T KNOW [SKIP TO A3]
- 9. REFUSED [SKIP TO A3]

A2CA. How much money did you [PROGRAM CORRECT WORD BASED ON ANSWER TO A2C: win/lose]? ENTER AMOUNT

A3. Have you ever spent money on **lottery games like Powerball, Pick-3, Scratchers, Roadrunner Cash, or 4 This Way**?

- 1 Yes GO TO A3A
- 2 No GO TO A4
- 8 DON'T KNOW GO TO A4
- 9 REFUSED GO TO A4

A3A. About how often did you play the **lottery** in the past 12 months?

- 1 Daily (30+ times per month)
- 2 Several times a week (6 – 29 times per month)
- 3 Several times a month (3 – 5 times per month)
- 4 Once a month or less (6 – 12 times per year)
- 5 Only a few days all year (1 – 5 times per year)
- 6 Never GO TO A4
- 8 DON'T KNOW GO TO A4
- 9 REFUSED GO TO A4

A3B. (ASK IF A3A = 1-5) When you play the lottery, what kind of lottery tickets do you usually buy? (DO NOT READ LIST) (ACCEPT MULTIPLE RESPONSES)

- 1 4 This Way
- 2 Powerball
- 3 Pick-3
- 4 Scratchers
- 5 Other [SPECIFY]
- 8 DON'T KNOW
- 9 REFUSED

A3C. How much money did you spend on the last day you played the lottery? ENTER AMOUNT

- A4. Have you ever spent money on a **numbers game other than the New Mexico State Lottery**?
- 1 Yes GO TO A4A
  - 2 No GO TO A5
  - 8 DON'T KNOW GO TO A5
  - 9 REFUSED GO TO A5
- A4A. About how often did you play a **numbers game** in the past 12 months?
- 1 Daily (30+ times per month)
  - 2 Several times a week (6 – 29 times per month)
  - 3 Several times a month (3 – 5 times per month)
  - 4 Once a month or less (6 – 12 times per year)
  - 5 Only a few days all year (1 – 5 times per year)
  - 6 Never
  - 8 DON'T KNOW
  - 9 REFUSED
- A4B. *(ASK IF A4A = 1-5)* How much money did you spend on the last day you played a numbers game other than the New Mexico State Lottery?  
ENTER AMOUNT
- A5. Have you ever placed a bet on a **horse race or dog race**? *(INCLUDE BETTING WITH A BOOKIE)*
- 1 Yes GO TO A5A
  - 2 No GO TO A6
  - 8 DON'T KNOW GO TO A6
  - 9 REFUSED GO TO A6
- A5A. About how often did you bet on a **horse or dog race** in the past 12 months?
- 1 Daily (30+ times per month)
  - 2 Several times a week (6 – 29 times per month)
  - 3 Several times a month (3 – 5 times per month)
  - 4 Once a month or less (6 – 12 times per year)
  - 5 Only a few days all year (1 – 5 times per year)
  - 6 Never GO TO A6
  - 8 DON'T KNOW GO TO A6
  - 9 REFUSED GO TO A6
- A5B. *(ASK IF A5A = 1-5)* When you gamble on horse or dog races, do you usually do so at a ...
- 1 Racetrack in New Mexico
  - 2 OTB (off-track-betting) facility in New Mexico
  - 3 OTB facility outside New Mexico
  - 4 Tribal casino
  - 5 Or somewhere else (SPECIFY)
  - 8 DON'T KNOW
  - 9 REFUSED
- A5C. Thinking about the last time you bet money on horse or dog races, did you win or lose?
- 1. Won
  - 2. Lost
  - 8. DON'T KNOW [SKIP TO A6]
  - 9. REFUSED [SKIP TO A6]
- A5CA. How much money did you [PROGRAM CORRECT WORD BASED ON ANSWER TO A5C: win/lose]? ENTER AMOUNT

- A6. Have you ever played **bingo for money outside of a casino**?
- 1 Yes GO TO A6A
  - 2 No GO TO A7
  - 8 DON'T KNOW GO TO A7
  - 9 REFUSED GO TO A7
- A6A. About how often have you played **bingo for money outside of a casino** in the past 12 months?
- 1 Daily (30+ times per month)
  - 2 Several times a week (6 – 29 times per month)
  - 3 Several times a month (3 – 5 times per month)
  - 4 Once a month or less (6 – 12 times per year)
  - 5 Only a few days all year (1 – 5 times per year)
  - 6 Never
  - 8 DON'T KNOW
  - 9 REFUSED
- A6C. How much money, not including winnings, did you spend on the last day you played bingo for money outside of a casino?  
ENTER AMOUNT
- A7. Have you ever gambled on a **private game** such as cards, dice or dominoes in someone's home or on a game of skill such as golf, pool or bowling? (*DO NOT INCLUDE PRIVATE GAMES ON THE INTERNET IF A THIRD PARTY IS TAKING A CUT OR PLAYERS ARE PLAYING AGAINST "THE HOUSE."*)
- 1 Yes GO TO A7A
  - 2 No GO TO A8
  - 8 DON'T KNOW GO TO A8
  - 9 REFUSED GO TO A8
- A7A. About how often have you gambled on a **private game** in the past 12 months?
- 1 Daily (30+ times per month)
  - 2 Several times a week (6 – 29 times per month)
  - 3 Several times a month (3 – 5 times per month)
  - 4 Once a month or less (6 – 12 times per year)
  - 5 Only a few days all year (1 – 5 times per year)
  - 6 Never
  - 8 DON'T KNOW
  - 9 REFUSED
- A7B. Thinking about the last time you bet money on a private game, did you win or lose?
1. Won
  2. Lost
  8. DON'T KNOW [SKIP TO A8]
  9. REFUSED [SKIP TO A8]
- A7CA. How much money did you [PROGRAM CORRECT WORD BASED ON ANSWER TO A7B: win/lose]? ENTER AMOUNT
- A8. Have you ever bet on the **outcome of sports or other events with friends, co-workers, a bookie or some other person**?
- 1 Yes GO TO A8A
  - 2 No GO TO A9
  - 8 DON'T KNOW GO TO A9
  - 9 REFUSED GO TO A9
- A8A. About how often have you gambled on **sports** in the past 12 months?
- 1 Daily (30+ times per month)
  - 2 Several times a week (6 – 29 times per month)

- 3 Several times a month (3 – 5 times per month)
- 4 Once a month or less (6 – 12 times per year)
- 5 Only a few days all year (1 – 5 times per year)
- 6 Never
- 8 DON'T KNOW
- 9 REFUSED

A8B. (ASK IF A8A = 1-5) Thinking about the last time you bet money on a private game, did you win or lose?

- 3. Won
- 4. Lost
- 8. DON'T KNOW [SKIP TO A9]
- 9. REFUSED [SKIP TO A9]

A8CA. How much money did you [PROGRAM CORRECT WORD BASED ON ANSWER TO A7B: win/lose]? ENTER AMOUNT

A9. Next I'd like to ask you about wagering on the computer over the Internet and World Wide Web. Have you ever bet your money in this way? (INCLUDE LOTTERY TICKETS BOUGHT OVER THE INTERNET.)

- 1 Yes GO TO A9A
- 2 No GO TO A10
- 8 DON'T KNOW GO TO A10
- 9 REFUSED GO TO A10

A9A. About how often have you gambled on the **Internet** in the past 12 months?

- 1 Daily (30+ times per month)
- 2 Several times a week (6 – 29 times per month)
- 3 Several times a month (3 – 5 times per month)
- 4 Once a month or less (6 – 12 times per year)
- 5 Only a few days all year (1 – 5 times per year)
- 6 Never
- 8 DON'T KNOW
- 9 REFUSED

A9B. (ASK IF A9A = 1-5) Thinking about the last time you gambled on the Internet, did you win or lose?

- 1. Won
- 2. Lost
- 8. DON'T KNOW [SKIP TO A10]
- 9. REFUSED [SKIP TO A10]

A9BA. How much money did you [PROGRAM CORRECT WORD BASED ON ANSWER TO A9B: win/lose]? ENTER AMOUNT

A10. Have you ever gambled on **any other kind of game** I haven't mentioned? Examples might include raffles, sweepstakes, baby pools, pull-tabs or betting on a dogfight or cockfight.

- 1 Yes GO TO A11A
- 2 No GO TO CHECKPOINT A
- 8 DON'T KNOW GO TO CHECKPOINT A
- 9 REFUSED GO TO CHECKPOINT A

A10A. About how often have you gambled on **any other kind of game** I haven't mentioned in the past 12 months?

- 1 Daily (30+ times per month)
- 2 Several times a week (6 – 29 times per month)
- 3 Several times a month (3 – 5 times per month)
- 4 Once a month or less (6 – 12 times per year)

- 5 Only a few days all year (1 – 5 times per year)
- 6 Never
- 8 DON'T KNOW
- 9 REFUSED

A10B. (ASK IF A10A = 1-5) How much money, not including winnings, did you spend on the last day you gambled on any other kind of game?  
ENTER AMOUNT

**CHECKPOINT A**

**SKIP RULE:** ASK FOLLOWING QUESTION ONLY IF R HAS EVER GAMBLED (ONE OR MORE OF A1–A10 IS “YES”) **AND** DID NOT GAMBLE MORE THAN ONCE A MONTH ON ANY GAME (A1A—A10A NOT IN (1 2 3)). ELSE GO TO CHECKPOINT B.

*PROGRAMMING NOTE: IF A1A–A10A IN (1 2 3), AUTOMATICALLY CODE RESPONSE TO A11 AS 5.*

A11. Now I'd like you to think about how many days you have **ever** gambled. Was it more than 5 days in your life?

- 1 Yes GO TO CHECKPOINT C
- 2 No GO TO CHECKPOINT B
- 3 DON'T KNOW GO TO CHECKPOINT B
- 4 REFUSED GO TO CHECKPOINT B
- 5 LOGICAL IMPUTE YES GO TO CHECKPOINT C

**SECTION J: QUESTIONS FOR NON-GAMBLERS**

**CHECKPOINT B**

**SKIP RULE:** ASK J1 TO J3 ONLY IF R HAS REPORTED NO GAMBLING EVER (A1–A10 ARE ALL “NO” OR A11 = 2, 3 OR 4). ELSE GO TO CHECKPOINT C.

You have indicated that you have never or seldom gambled. Now I would like to ask you about some possible reasons why you have never gambled. Please tell me whether each of the following reasons is very important, somewhat important, or not at all important to you as a reason for **not** gambling.

- J1. Inconvenient or you live too far away
  - 1 Very important
  - 2 Somewhat important
  - 3 Not at all important
  - 8 DON'T KNOW
  - 9 REFUSED
- J2. Moral or ethical concerns
  - 1 Very important
  - 2 Somewhat important
  - 3 Not at all important
  - 8 DON'T KNOW
  - 9 REFUSED
- J3. The possibility of losing money
  - 1 Very important
  - 2 Somewhat important
  - 3 Not at all important
  - 8 DON'T KNOW
  - 9 REFUSED

**SECTION B: GENERAL GAMBLING QUESTIONS**

**CHECKPOINT C**

**SKIP RULE:** ASK FOLLOWING QUESTIONS ONLY IF R IS A GAMBLER (A11 = 1 OR 5); ELSE

GO TO CHECKPOINT D.

- B1. *IF R HAS DONE MORE THAN ONE TYPE OF GAMBLING, ASK:* Thinking about the sorts of activities we have discussed, can you tell me which is your favorite gambling activity? *(DO NOT READ LIST)*
- 1 Blackjack at a casino
  - 2 Poker at a casino
  - 3 Other table games (e.g., roulette, craps) at a casino
  - 4 Video poker at a casino
  - 5 Slot machines at a casino
  - 6 Bingo at a casino
  - 7 Other game at a casino (SPECIFY)
  - 8 Gaming machines outside of a casino (e.g., in a veterans' or fraternity club)
  - 9 Bingo outside of a casino (e.g., in a veterans' or fraternity club)
  - 10 Lottery games
  - 11 The Numbers (Illegal: Not State Run)
  - 12 Horse race or dog race
  - 13 Private game (e.g., private poker game)
  - 14 Sports
  - 15 Poker on internet
  - 16 Slots or video poker on the internet
  - 17 Sports on the internet
  - 18 Other games on the internet
  - 19 Other NOT at a Casino (Specify)
  - 88 DON'T KNOW
  - 99 REFUSED

- B2. When participating in your favorite type of gambling, who do you usually gamble with?
- 1 Alone
  - 2 Spouse or partner or significant other
  - 3 Other family member(s)
  - 4 Friend(s), co-worker(s), neighbor(s), club member(s)
  - 5 Some other individual or group
  - 6 Whoever is around
  - 8 DON'T KNOW
  - 9 REFUSED

- B3. When participating in your favorite type of gambling, can you tell me what distance you usually travel, if any? *(PAUSE, READ IF NECESSARY)*
- 1 Don't travel
  - 2 5 miles or less
  - 3 6 to 15 miles
  - 4 16 to 30 miles
  - 5 31 to 45 miles
  - 6 46 to 60 miles
  - 7 More than 60 miles
  - 8 DON'T KNOW
  - 9 REFUSED

- B4. When participating in your favorite type of gambling, how long do you usually play?
- 1 Less than one hour
  - 2 1 to 2 hours
  - 3 3 to 5 hours
  - 4 6 to 12 hours
  - 5 More than 12 hours
  - 8 DON'T KNOW
  - 9 REFUSED

Next, I would like to ask you about reasons you may have for gambling. Please tell me whether each of the following reasons is very important, somewhat important, or not at all important to you as a reason for gambling. [RANDOMIZE ORDER B5 TO B11]

- B5. To be around or with other people
- 1 Very important
  - 2 Somewhat important
  - 3 Not at all important
  - 8 DON'T KNOW
  - 9 REFUSED
- B6. Because it's convenient or easy to do
- 1 Very important
  - 2 Somewhat important
  - 3 Not at all important
  - 8 DON'T KNOW
  - 9 REFUSED
- B7. To win money
- 1 Very important
  - 2 Somewhat important
  - 3 Not at all important
  - 8 DON'T KNOW
  - 9 REFUSED
- B8. For entertainment or fun
- 1 Very important
  - 2 Somewhat important
  - 3 Not at all important
  - 8 DON'T KNOW
  - 9 REFUSED
- B9. Because it's exciting and challenging
- 1 Very important
  - 2 Somewhat important
  - 3 Not at all important
  - 8 DON'T KNOW
  - 9 REFUSED
- B10. Because it is inexpensive entertainment
- 1 Very important
  - 2 Somewhat important
  - 3 Not at all important
  - 8 DON'T KNOW
  - 9 REFUSED
- B11. To distract yourself from everyday problems
- 1 Very important
  - 2 Somewhat important
  - 3 Not at all important
  - 8 DON'T KNOW
  - 9 REFUSED
- B12. How old were you, the first time you gambled any amount of money?
- \_\_\_\_\_ years
- 97 97 YEARS OLD OR OLDER
  - 98 DON'T KNOW
  - 99 REFUSED
- B13. What kind of game did you play, the first time you gambled?
- a. Informal bet with relative or friend
  - b. Private game (e.g., private poker game)
  - c. Blackjack at a casino
  - d. Poker at a casino

- e. Other table games (e.g., roulette, craps) at a casino
- f. Video poker at a casino
- g. Slot machines at a casino
- h. Bingo at a casino
- i. Gaming machines outside of a casino (e.g., in a veterans' or fraternity club)
- j. Bingo outside of a casino (e.g., in a veterans' or fraternity club)
- k. Lottery games
- l. The Numbers (Illegal: Not State Run)
- m. Horse race or dog race
- n. Sports
- o. Poker on internet
- p. Slots or video poker on the internet
- q. Sports on the internet
- r. Other games on the internet
- s. Other (Specify)
- 98 DON'T KNOW
- 99 REFUSED

B14. Was there any time when the amount you were gambling made you nervous?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

B15. How old were you the first time that happened?

- \_\_\_\_\_ years
- 98 DON'T KNOW
  - 99 REFUSED

B16. What kind of game were you playing the first time that happened?

- a. Informal bet with relative or friend
- b. Private game (e.g., private poker game)
- c. Blackjack at a casino
- d. Poker at a casino
- e. Other table games (e.g., roulette, craps) at a casino
- f. Video poker at a casino
- g. Slot machines at a casino
- h. Bingo at a casino
- i. Gaming machines outside of a casino (e.g., in a veterans' or fraternity club)
- j. Bingo outside of a casino (e.g., in a veterans' or fraternity club)
- k. Lottery games
- l. The Numbers (Illegal: Not State Run)
- m. Horse race or dog race
- n. Sports
- o. Poker on internet
- p. Slots or video poker on the internet
- q. Sports on the internet
- r. Other games on the internet
- s. Other (Specify)
- 98 DON'T KNOW
- 99 REFUSED

B17. Compared to other recreational or social activities, how important is gambling to you? Would you say it is ... (READ LIST)

- 1 Very important
- 2 Somewhat important
- 3 Not at all important
- 8 DON'T KNOW
- 9 REFUSED

- B18. About how much do you spend on gambling in an average month? *(IF HESITANT, SAY "I'm just looking for an approximate amount." IF STILL HESITANT, READ LIST)*
- 1 Less than \$1
  - 2 \$1 to \$10
  - 3 \$11 to \$49
  - 4 \$50 to \$99
  - 5 \$100 to \$199
  - 6 \$200 to \$299
  - 7 \$300 to \$499
  - 8 \$500 to \$999
  - 9 More than \$1000
  - 88 DON'T KNOW
  - 99 REFUSED
- B19. What is the largest amount of money you have ever lost gambling in one day? *(PAUSE, PROMPT WITH HIGHEST NUMBER IN EACH RANGE IF NECESSARY)*
- 1 Less than \$1
  - 2 \$1 - \$9
  - 3 \$10 - \$99
  - 4 \$100 - \$999
  - 5 \$1,000 - \$9,999
  - 6 \$10,000 or more
  - DON'T KNOW
  - REFUSED
- B20. In all your years of gambling, what is the largest amount you have lost in a year?  
*[PAUSE, PROMPT WITH HIGHEST NUMBER IN EACH RANGE IF NECESSARY]*
- 1 Never lost money
  - 2 \$10 - \$90
  - 3 \$100 - \$999
  - 4 \$1,000 - \$9,999
  - 5 \$10,000 - \$99,999
  - 6 \$100,000 - \$499,000
  - 7 Over \$500,000
  - 8 REFUSED

### SECTION C: NORC DSM-IV SCREEN FOR GAMBLING PROBLEMS

**SKIP RULE:** ASK FOLLOWING QUESTIONS ONLY IF R IS A GAMBLER (A11 = 1 OR 5); ELSE GO TO CHECKPOINT D.

Next, I would like to ask you some questions about how you feel about your gambling. There are no right or wrong answers. We want to know what your experiences have been. Remember that all the information you share is confidential.

- C1. Have there ever been periods lasting 2 weeks or longer when you spent a lot of time thinking about your gambling experiences or planning out future gambling ventures or bets?
- 1 Yes
  - 2 No
  - 8 DON'T KNOW
  - 9 REFUSED
- C1A. *IF C1 YES* Has this happened in the past year?
- 1 Yes
  - 2 No
  - 8 DON'T KNOW
  - 9 REFUSED
- C2. Have there ever been periods lasting 2 weeks or longer when you spent a lot of time thinking about ways of getting money to gamble with?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C2A. *IF C2 YES* Has this happened in the past year?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C3. Have there ever been periods when you needed to gamble with increasing amounts, or make larger bets than before, in order to get the same feeling of excitement?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C3A. *IF C3 YES* Has this happened in the past year?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C4. Have you ever tried to stop, cut down, or control your gambling?

- 1 Yes GO TO C5
- 2 No GO TO C8
- 8 DON'T KNOW GO TO C8
- 9 REFUSED GO TO C8

C5. On one or more of the times when you tried to stop, cut down, or control your gambling, were you restless or irritable?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C5A. *IF C5 YES* Has this happened in the past year?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C6. Have you ever tried *but not succeeded* in stopping, cutting down, or controlling your gambling?

- 1 Yes GO TO C7
- 2 No GO TO C8
- 8 DON'T KNOW GO TO C8
- 9 REFUSED GO TO C8

C7. Has this happened three or more times?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C7A. *IF C7 YES* Has this happened in the past year?

- 1 Yes
- 2 No
- 8 DON'T KNOW

9 REFUSED

C8. Have you ever gambled as a way to escape from personal problems?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C8A. *IF C8 YES* Has this happened in the past year?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C9. Have you ever gambled to relieve uncomfortable feelings such as guilt, anxiety, helplessness or depression?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C9A. *IF C9 YES* Has this happened in the past year?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C10. Has there ever been a period when, if you lost money gambling one day, you would return another day to get even?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C10A. *IF C10 YES* Has this happened in the past year?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C11. Have you ever lied to family members, friends, or others about how much you gamble or how much you lost on gambling?

- 1 Yes GO TO C12
- 2 No GO TO C13
- 8 DON'T KNOW GO TO C13
- 9 REFUSED GO TO C13

C12. *IF YES:* Has this happened three or more times?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C12A. *IF C12 YES* Has this happened in the past year?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C13. Have you ever written a bad check or taken money that didn't belong to you, from family members or anyone else, in order to pay for your gambling?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C13A. *IF C13 YES* Has this happened in the past year?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C14. Have you ever done **anything else** that could have gotten you in trouble with the law, in order to pay for your gambling?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C14A. *IF C14 YES* Has this happened in the past year?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C15. Has your gambling ever caused serious or repeated problems in your relationships with any of your family members or friends?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C15A. *IF C15 YES* Has this happened in the past year?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C16. Has your gambling ever caused you any problems in school or to have trouble with your job, to lose a job, or miss out on an important job or career opportunity?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C16A. *IF C16 YES* Has this happened in the past year?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C17. Have you ever needed to ask family members or anyone else to loan you money, or otherwise bail you out of a desperate situation that was largely caused by your gambling?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

C17A. *IF C17 YES* Has this happened in the past year?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

#### **SECTION D: THE CANADIAN PROBLEM GAMBLING INDEX**

**SKIP RULE:** *ASK FOLLOWING QUESTIONS ONLY IF R IS A PAST YEAR GAMBLER (A1A—A10A LESS THAN 6); ELSE GO TO CHECKPOINT D.*

The next set of questions is part of a standard scale. Some of the questions may seem similar to questions I have already asked but there are some differences. Remember that there are no right or wrong answers to the questions that follow and that all the information you share is confidential.

Thinking about the last 12 months since [CURRENT MONTH, LAST YEAR]...

D1. How often have you bet more than you could really afford to lose? Would you say never, sometimes, most of the time, or almost always?

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always
- 8 DON'T KNOW
- 9 REFUSED

D2. Still thinking about the last 12 months, how often have you needed to gamble with larger amounts of money to get the same feeling of excitement. Would you say never, sometimes, most of the time, or almost always?

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always
- 8 DON'T KNOW
- 9 REFUSED

D3. When you gambled, how often have you gone back another day to try to win back the money you lost?

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always
- 8 DON'T KNOW
- 9 REFUSED

D4. How often have you borrowed money or sold anything to get money to gamble?

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always
- 8 DON'T KNOW
- 9 REFUSED

D5. How often have you felt that you might have a problem with gambling?

- 1 Never
- 2 Sometimes

- 3 Most of the time
- 4 Almost always
- 8 DON'T KNOW
- 9 REFUSED

D6. How often have you felt that gambling has caused you any health problems, including stress or anxiety?

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always
- 8 DON'T KNOW
- 9 REFUSED

D7. How often have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always
- 8 DON'T KNOW
- 9 REFUSED

D8. How often has your gambling caused financial problems for you or your household?

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always
- 8 DON'T KNOW
- 9 REFUSED

D9. How often have you felt guilty about the way you gamble or what happens when you gamble?

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always
- 8 DON'T KNOW
- 9 REFUSED

**SECTION E. AWARENESS OF PROBLEM GAMBLING RESOURCES AND HELP-SEEKING**

**CHECKPOINT D**

**SKIP RULES:** ASK ALL RESPONDENTS *Awareness of Problem Gambling Resources and Help-Seeking.*

Next I'd like to ask you some questions about the types of help that might be available in some communities to assist problem gamblers and other concerned individuals.

E1. (ASK ONLY IF D5 = 2,3,4. ELSE, GO TO E3.) Was there ever a time when you thought you should see a doctor, counselor, or other health professional, or seek any other help for your gambling, but you didn't go?

- YES GO TO E2
- NO GO TO E3

E2. What was your most important reason for not getting help?

---

RECORD VERBATIM

**SUPERVISOR CODE FROM LIST BELOW AT END OF SHIFT**

Was afraid would have to stop gambling  
Didn't want to go  
Wanted to go, but health insurance didn't cover  
Couldn't afford to pay the bill  
Didn't think anyone could help  
Didn't know any place to go for help  
Didn't have any way to get there  
Didn't have the time  
The hours were inconvenient  
Couldn't arrange for child care  
Was too embarrassed to discuss it with anyone  
Was afraid of what my boss, friends, family, or others would think  
Was afraid I would lose my job  
Thought it was something I should be strong enough to handle alone  
Hated answering personal questions  
A member of my family objected  
Can't speak English very well  
Couldn't find group for the Deaf  
Access issues due to vision or hearing impairment, or mobility issue  
Thought the problem would get better by itself  
Didn't think problem was serious enough  
Stopped gambling on my own  
Friends or family helped me stop gambling  
Had to wait too long to get into a program  
Tried getting help before and it didn't work  
Other reason

E3. Can you tell me whether any of the following services are available in your community?  
[RANDOMIZE ORDER E3\_1 TO E3\_4]

a. A toll-free hotline that provides crisis help or referral to problem gamblers and their friends and families [IF NECESSARY, READ: Is this available in your community?]

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

b. Gamblers Anonymous [IF NECESSARY, READ: Is this available in your community?]

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

c. Outpatient services for problem gambling, such as private counseling [IF NECESSARY, READ: Is this available in your community?]

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

- E4. (ASK ONLY IF ALL RESPONSES TO E3 = NO) If any of these services existed in your community, do you think that you or someone you know would use them now, or would have used them in the past?
- 1 Yes
  - 2 No
  - 3 Not sure
  - 8 DON'T KNOW
  - 9 REFUSED

## SECTION F: ALCOHOL AND DRUGS

**SKIP RULES:** ASK ALL RESPONDENTS Alcohol and Drug Questions.

Now I have some questions about some other things that some people do. Remember all your answers are totally confidential.

- F1. In the last 12 months, have you used **cigarettes, chewing tobacco or snuff** daily, several times a week, several times a month, once a month or less, only a few days all year, or never during the past 12 months?

- 1 Daily (more than 30 times per month)
- 2 Several times a week (6 – 29 times per month)
- 3 Several times a month (3 – 5 times per month)
- 4 Once a month or less (6 – 12 times per year)
- 5 Only a few days all year (1 – 5 times per year)
- 6 Never
- 8 DON'T KNOW
- 9 REFUSED

- F2. In the last 12 months, have you had **an alcoholic beverage** daily, several times a week, several times a month, once a month or less, only a few days all year, or never during the past 12 months? IF RESPONDENT ASKS, A DRINK IS DEFINED AS: *a can or bottle of beer or malt liquor, a 4-oz glass of wine, a mixed drink or a one and one-half oz shot*

- 1 Daily (more than 30 times per month)
- 2 Several times a week (6 – 29 times per month)
- 3 Several times a month (3 – 5 times per month)
- 4 Once a month or less (6 – 12 times per year)
- 5 Only a few days all year (1 – 5 times per year)
- 6 Never
- 8 DON'T KNOW
- 9 REFUSED

- F3. On a typical day when you drink, how many drinks do you have?

\_\_\_\_\_ [RECORD NUMBER]  
 888 DON'T KNOW  
 999 REFUSED

**SKIP RULES:** ASK F4 ONLY IF R HAS REPORTED DRINKING ALCOHOL MORE THAN ONCE A MONTH (F2 = 1, 2, 3). ELSE GO TO F5.

- F4. In the last 12 months, how many times have you gotten into difficulties of any kind because of your drinking?

- 1 None
- 2 1
- 3 2-3
- 4 4-9
- 5 10 times or more
- 6 DON'T KNOW
- 7 REFUSED

- F5. In the last 12 months, have you used **marijuana or hashish** daily, several times a week, several times a month, once a month or less, only a few days all year, or never during the past 12 months?
- 1 Daily (more than 30 times per month)
  - 2 Several times a week (6 – 29 times per month)
  - 3 Several times a month (3 – 5 times per month)
  - 4 Once a month or less (6 – 12 times per year)
  - 5 Only a few days all year (1 – 5 times per year)
  - 6 Never
  - 8 DON'T KNOW
  - 9 REFUSED
- F6. In the last 12 months, have you used **cocaine or crack** daily, several times a week, several times a month, once a month or less, only a few days all year, or never during the past 12 months?
- 1 Daily (more than 30 times per month)
  - 2 Several times a week (6 – 29 times per month)
  - 3 Several times a month (3 – 5 times per month)
  - 4 Once a month or less (6 – 12 times per year)
  - 5 Only a few days all year (1 – 5 times per year)
  - 6 Never
  - 8 DON'T KNOW
  - 9 REFUSED
- F7. In the last 12 months, have you used **other drugs for non-medical reasons**, including amphetamines or methamphetamines, barbiturates, tranquilizers, hallucinogens or narcotics daily, several times a week, several times a month, once a month or less, only a few days all year, or never during the past 12 months?
- 1 Daily (more than 30 times per month)
  - 2 Several times a week (6 – 29 times per month)
  - 3 Several times a month (3 – 5 times per month)
  - 4 Once a month or less (6 – 12 times per year)
  - 5 Only a few days all year (1 – 5 times per year)
  - 6 Never
  - 8 DON'T KNOW
  - 9 REFUSED

**SKIP RULES: ASK F8 ONLY IF R HAS REPORTED USING DRUGS MORE THAN ONCE A MONTH (F5, F6 OR F7 = 1, 2, 3). ELSE GO TO F9.**

- F8. In the last 12 months, how many times have you gotten into difficulties of any kind because of your drug use?
- 1 None
  - 2 1
  - 3 2-3
  - 4 4-9
  - 5 10 times or more
  - 8 DON'T KNOW
  - 9 REFUSED
- F9. Have you ever sought help to stop using alcohol or drugs?
- 1 Yes GO TO F9A
  - 2 No
  - 8 DON'T KNOW
  - 9 REFUSED
- F9A. What type of help was that?  
(DO NOT READ. CODE ALL THAT APPLY)
- Family member
  - Friend
  - Family doctor

Alcoholics or Narcotics Anonymous  
 Treatment program in New Mexico  
 Treatment program outside New Mexico  
 Veterans Administration  
 Employee assistance program (EAP)  
 Psychologist or psychiatrist  
 Other counselor  
 Minister/priest/rabbi  
 Hospital in New Mexico  
 Hospital outside New Mexico  
 Other  
 Refused

**SECTION G: MENTAL HEALTH**

**SKIP RULES:** ASK ALL RESPONDENTS *Mental Health Questions.*

Now I would like to ask you some questions about your physical and mental health.

- G1. How would you describe your general health over the past 12 months? Would you say it was excellent, good, fair or poor?
- 1 Excellent
  - 2 Good
  - 3 Fair
  - 4 Poor
  - 8 DON'T KNOW
  - 9 REFUSED

- G2. In the past 12 months, has someone close to you gambled so much it troubled you?
- 1 Yes GO TO G2A
  - 2 No GO TO G3
  - 8 DON'T KNOW GO TO G3
  - 9 REFUSED GO TO G3

G2A. What is their relationship to you? If you are thinking about more than one person, please say each one. (CODE ALL THAT APPLY)

- 1 Spouse/partner/significant other
- 2 Parent
- 3 Brother or sister
- 4 Child (own, adopted, foster)
- 5 Other relative
- 6 Other non-related person
- 8 DON'T KNOW
- 9 REFUSED

- G3. Has there ever been a period of at least one week when you were so happy or excited that you got into trouble, or your family or friends worried about it, or a doctor said you were manic?
- 1 Yes GO TO G3A
  - 2 No GO TO G4
  - 8 Don't know GO TO G4
  - 9 Refused GO TO G4

G3A. Was this behavior ever the result of taking medication, drugs or alcohol?

- 1 Yes GO TO G3B
- 2 No GO TO G4
- 8 Don't know GO TO G4
- 9 Refused GO TO G4

- G3B. Was this period of being happy, excited, high or manic always the results of taking medication, drugs or alcohol?
- 1 Yes
  - 2 No
  - 8 Don't know
  - 9 Refused
- G4. Has there ever been a period of at least one week when you were so irritable that you threw or broke things, started arguments, shouted at people or hit someone?
- 1 Yes GO TO G4A
  - 2 No GO TO G5
  - 8 Don't know GO TO G5
  - 9 Refused GO TO G5
- G4A. IF YES: Was this behavior ever the result of taking medication, drugs or alcohol?
- 1 Yes GO TO G4B
  - 2 No GO TO G5
  - 8 Don't know GO TO G5
  - 9 Refused GO TO G5
- G4B. IF YES: Was this period of being so irritable always the results of taking medication, drugs or alcohol?
- 1 Yes
  - 2 No
  - 8 Don't know
  - 9 Refused
- G5. Now I want to ask you about periods of feeling sad, empty or depressed. In your lifetime, have you ever had a period of 2 weeks or longer when nearly every day you felt sad, empty or depressed for most of the day?
- 1 Yes
  - 2 No
  - 8 Don't know
  - 9 Refused
- G6. In your lifetime, have you ever had a period of 2 weeks or longer when you lost interest in most things like work, hobbies, and other things you usually enjoyed?
- 1 Yes
  - 2 No
  - 8 Don't know
  - 9 Refused
- G7. In the past 12 months, have you gone to a clinic, doctor, counselor, or outpatient treatment for problems with your emotions, nerves, or mental health?
- 1 Yes
  - 2 No
  - 8 DON'T KNOW
  - 9 REFUSED
- G8. Right now, how troubled or bothered are you by your emotions, nerves, or mental health? Would you say not at all, somewhat or very much?
- 1 Not at all
  - 2 Somewhat
  - 3 Very much
  - 8 DON'T KNOW
  - 9 REFUSED

**SECTION H: OTHER IMPACTS**

**SKIP RULES:** ASK ALL RESPONDENTS *Other Impacts Questions*.

Now I have some questions about your household. By household, I mean all the relatives and other people who live with you who share their money for common living expenses.

H1. About how much would you say that you or other members of your household owe all together? Please include car loans, student loans, credit card debt, and other loans. Is it less than \$1,000, between \$1,000 and \$9,000, between \$10,000 and \$24,000, between \$25,000 and \$49,000, between \$50,000 and \$99,000, between \$100,000 and \$200,000, or more than \$200,000?

|                     |          |
|---------------------|----------|
| less than \$1,000   | GO TO H2 |
| \$1,000-\$9,999     | GO TO H2 |
| \$10,000-\$24,999   | GO TO H2 |
| \$25,000-\$49,999   | GO TO H2 |
| \$50,000-\$99,999   | GO TO H2 |
| \$100,000-\$200,000 | GO TO H2 |
| more than \$200,000 | GO TO H2 |
| DON'T OWE ANY MONEY | GO TO H4 |
| DON'T KNOW          | GO TO H4 |
| REFUSED             | GO TO H4 |

H2. From which of the following sources did you or other members of your household get the money that you owe? Tell me as many as apply. Did you borrow from...

Credit cards,  
A bank or credit union,  
A loan company,  
Other family members, or  
Other people or places?  
DON'T KNOW  
REFUSED

ASK H3 **ONLY** IF R IS A GAMBLER (A11 = 1 OR 5). ELSE GO TO H4.

H3. Of all the money that you or other members of your household owe, was any of that borrowed in order to gamble or to pay for debts due to gambling?

YES GO TO H3A  
NO GO TO H4  
DON'T KNOW  
REFUSED

H3A. Were these debts your own, or were they someone else's?

OWN  
SOMEONE ELSE'S  
BOTH  
DON'T KNOW  
REFUSED

H4. Have you ever filed for bankruptcy?

|              |           |
|--------------|-----------|
| 1 Yes        | GO TO H4A |
| 2 No         | GO TO H5  |
| 8 Don't know | GO TO H5  |
| 9 Refused    | GO TO H5  |

H4A. Was gambling a significant factor or cause of this bankruptcy?

1 Yes  
2 No  
8 Don't know  
9 Refused

- H5. Have you ever been arrested by the police or a sheriff?
- |              |           |
|--------------|-----------|
| 1 Yes        | GO TO H5A |
| 2 No         | GO TO K1  |
| 8 Don't know | GO TO K1  |
| 9 Refused    | GO TO K1  |

H5A. How many times have you been arrested?

\_\_\_\_\_ [RECORD NUMBER]  
 97 97 TIMES OR MORE  
 98 DON'T KNOW  
 99 REFUSED

H4B. Was gambling ever a significant factor in [your arrest/any of your arrests]?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

- H6. Have you ever been incarcerated in prison or jail for any reason?
- |              |           |
|--------------|-----------|
| 1 Yes        | GO TO H6A |
| 2 No         | GO TO K1  |
| 8 Don't know | GO TO K1  |
| 9 Refused    | GO TO K1  |

H6A. Was gambling a significant factor in your incarceration?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

**SECTION K: DEMOGRAPHICS**

**SKIP RULES:** ASK ALL RESPONDENTS *Demographic Questions.*

The following questions are for statistical purposes only and your answers will be confidential.

K1. Are you currently married, living as married, widowed, divorced, separated, or have you never been married?

- Married, common-law
- Living as married
- Widowed
- Divorced
- Separated
- Never married
- Refused

K2. What is the highest level of education you have completed? (*READ IF NECESSARY*)

- 1 Elementary school
- 2 Some high school
- 3 High school degree or GED
- 4 Less than 2 Years of College
- 5 Associate degree or other degree (vocational, technical or trade school) or Minimum 2 years of College (minimum 60 credits)
- 6 Bachelors degree
- 7 Masters degree
- 8 Postgraduate degree (PhD or JD)
- 9 Other [SPECIFY]
- 88 DON'T KNOW
- 99 REFUSED

- K3. Last week, were you working full-time, part-time or not working?  
 1 Working full-time GO TO K4  
 2 Working part-time GO TO K3A  
 3 Not working last week GO TO K3B  
 88 DON'T KNOW  
 99 REFUSED
- K3A. *IF WORKING PART-TIME, ASK:* Have you previously retired from any fulltime jobs?  
 1 Yes  
 2 No  
 3 DON'T KNOW  
 4 REFUSED
- K3B. *IF NOT WORKING, ASK:* Are you a student, homemaker, completely retired, disabled, unemployed or something else?  
 1 Student  
 2 Homemaker  
 3 Completely retired  
 4 Disabled  
 5 Unemployed  
 6 Something else  
 8 REFUSED  
 9 DON'T KNOW
- K4. In what year were you born?  
 8888 DON'T KNOW  
 9999 REFUSED
- K5. How many months of the year do you live in New Mexico?  
 \_\_\_\_\_ RECORD NUMBER (1 - 12)
- K6. Are you Hispanic or Latino?  
 1 Yes  
 2 No  
 8 DON'T KNOW  
 9 REFUSED
- K7. Which of the following best describes your racial or ethnic group? Are you ...  
 American Indian GO TO K7A  
 Asian or Pacific Islander GO TO K8  
 Black or African American GO TO K8  
 White or Caucasian GO TO K8  
 Or something else (SPECIFY) GO TO K8  
 DON'T KNOW  
 REFUSED
- K7A. Are you an enrolled member in a federally or state recognized tribe?  
 YES GO TO K7B  
 NO GO TO K8
- K7B. Which tribe are you enrolled in?  
 APACHE  
 MESCALERO APACHE, NM  
 APACHE (NOT SPECIFIED)  
 OTHER APACHE [Ask for spelling] (SPECIFY): \_\_\_\_\_  
 BLACKFEET  
 BLACKFOOT/BLACKFEET  
 CHEROKEE  
 WESTERN CHEROKEE  
 CHEROKEE (NOT SPECIFIED)  
 OTHER CHEROKEE [Ask for spelling] (SPECIFY) \_\_\_\_\_

CHOCTAW  
 CHOCTAW OKLAHOMA  
 CHOCTAW (NOT SPECIFIED)  
 OTHER CHOCTAW [Ask for spelling] (SPECIFY): \_\_\_\_\_

NAVAJO  
 NAVAJO (NOT SPECIFIED)

POMO  
 HOPLAND BAND, HOPLAND RANCHERIA  
 SHERWOOD VALLEY RANCHERIA  
 POMO (NOT SPECIFIED)  
 OTHER POMO [Ask for spelling] (SPECIFY): \_\_\_\_\_

PUEBLO  
 HOPI  
 YSLETA DEL SUR PUEBLO OF TEXAS  
 PUEBLO (NOT SPECIFIED)  
 OTHER PUEBLO [Ask for spelling] (SPECIFY): \_\_\_\_\_

SIOUX  
 OGLALA/PINE RIDGE SIOUX  
 SIOUX (NOT SPECIFIED)  
 OTHER SIOUX [Ask for spelling] (SPECIFY): \_\_\_\_\_

YAQUI  
 PASCUA YAQUI TRIBE OF ARIZONA  
 YAQUI (NOT SPECIFIED)  
 OTHER YAQUI [Ask for spelling] (SPECIFY) \_\_\_\_\_

OTHER  
 OTHER [Ask for spelling] (SPECIFY): \_\_\_\_\_

K8. Have you ever been in the Armed Services?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

K9. What, if any, is your religious preference? Are you Protestant, Roman Catholic, Jewish, Mormon, Muslim, Hindu, or an Orthodox religion such as the Greek or Russian Orthodox Church, Agnostic, or Atheist?

- Protestant (Baptist, Lutheran, Methodist, Episcopalian, Anglican, Presbyterian) 1
- Roman Catholic 2
- Jewish 3
- Mormon, LDS 4
- Muslim 5
- Hindu 6
- Orthodox Religion 7
- Christian (VOLUNTEERED) 8 (ASK K9A)
- Believe in God – no specific Denomination (VOLUNTEERED) 9
- Agnostic 10
- Atheist 11
- Other (Specify) 12
- DON'T KNOW 88
- REFUSED 99

K9A. Do you consider yourself to be a born again Christian?

- Yes
- No
- REFUSED

The following question concerns income, and is for classification purposes only.

K10. Can you tell me approximately what your total household income was last year? *IF DON'T KNOW OR REFUSE, SAY: Is that ... AND READ 1-8.*

- 1 Up to \$15,000

- 2 \$15,001 to \$25,000
- 3 \$25,001 to \$35,000
- 4 \$35,001 to \$50,000
- 5 \$50,001 to \$75,000
- 6 \$75,001 to \$100,000
- 7 \$100,001 to \$125,000
- 8 Over \$125,000
- 88 DON'T KNOW
- 99 REFUSED

K11. How many months of the year do you live in New Mexico? *IF NECESSARY, ASK FOR NUMBER OF MONTHS IN THE PAST YEAR*

- \_\_\_\_\_ RECORD NUMBER BETWEEN 1 AND 12
- 88 DON'T KNOW
- 99 REFUSED

K12. How long have you lived in New Mexico?

- \_\_\_\_\_ YEARS [IF LESS THAN ONE YEAR, CODE 0 HERE]
- \_\_\_\_\_ MONTHS
- DON'T KNOW = 88, 88
- REFUSED = 99, 99

K13. What is your home zip code? *PROBE IF NECESSARY: Where you lived for the most time since [CURRENT MONTH] [PRIOR YEAR].*

- \_\_\_\_\_ ZIP CODE
- 88888 DON'T KNOW
- 99999 REFUSED

K14. What language do you mainly speak at home? *IF R SAYS THEY LIVE ALONE, SAY "WHAT LANGUAGE DO YOU USE WHEN YOU'RE THINKING TO YOURSELF ABOUT SOMETHING?"*

- English
- Spanish
- Other (SPECIFY) \_\_\_\_\_
- DON'T KNOW
- REFUSED

K15. RECORD RESPONDENT GENDER. DON'T GUESS. *(IF CANNOT TELL, SAY "I am required to ask, are you male or female?")*

- 1 Male
- 2 Female

That was the last question. Thank you very much for your time and cooperation.