Impacts of a Casino in Ulster County on Problem Gambling

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Introduction

Gaming has experienced rapid growth in recent years as jurisdictions around the world have looked to gaming as a source of revenue to governments and a source of economic development for the communities in which they operate. Concurrent with this growth has been an increase in scientific inquiry on the social impact of new gaming ventures.

This analysis focuses on the issue of problem gambling. In this context we have examined the following:

- First, a definition of problem and pathological gambling
- Secondly, an examination of state and national prevalence rates of problem gaming and specifically in relation to a new gaming facility in an area.
- Thirdly, a review of the services and requirements mandated by Massachusetts' statute.
- Finally, an outline of actions that facilitate responsible gaming to mitigate pathological and problem gaming.

Definition of Problem Gambling

It is important to differentiate between problem gamblers and pathological gamblers in order to correctly distinguish the difference between prevalence rates. The American Psychiatric Association (2004) defines a pathological gambler as a person who features a continuous loss of control over gambling. Furthermore this gambler illustrates a progression, in gambling frequency and amounts wagered, in the preoccupation with gambling and in obtaining monies with which to gamble. However, problem gambling is a more loosely defined term and is commonly associated with gaming-related difficulties that are considered less serious than those of a pathological gambler. For the sake of this report we will utilize the definition by noted researchers Cox, Rosenthal and Volberg which defines problem gambling as a pattern of gambling behaviors that compromise, disrupt or damage personal, family or vocational pursuits.[1]

The National Research Council[2] utilizes a three-level metric. Level 1 gambling is considered social and or recreational gambling with no appreciable harmful effects. Level 2 gambling is synonymous with problem gambling. Level 3 gambling is synonymous with pathological gambling. Problem gambling is an urge to gamble despite harmful negative consequences or a desire to stop. It is often defined by whether harm is experienced by the gambler or others, such as the gamblers family, significant other, spouse, friends, or coworkers. A problem gambler may or may not be a pathological gambler. Pathological or compulsive gambling is defined as a mental disorder characterized by a continuous or periodic loss of control over gambling, a preoccupation

1 Cox, S., H. R. Lesieur, R. J. Rosenthal & R. A. Volberg. 1997. *Problem and Pathological Gambling in America: The National Picture.* Columbia, MD: National Council on Problem Gambling.
2 National Research Council, pp. 20-21.

with gambling and with obtaining money with which to gamble, irrational thinking, and a continuation of the behavior despite adverse consequences.

To distinguish a pathological gambler from a problem gambler ten diagnostic criteria were developed. For a clinical diagnosis of pathological gambling, a patient exhibits five of the ten indicators. However, problem gambling researchers Volberg & Abott point out that in regards to public health risks not all of the features of problem or pathological gambling need be present at one point in time.[3] A further caveat is that all ten items have equal weight even though some of the criteria have greater negative consequences than others.

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	Restlessness or irritability when attempting to cut down or stop gambling
Escape	Gambling as a way of escaping from problems or relieving dysphoric mood (e.g. feelings of helplessness, guilt, anxiety or depression)
Chasing Losses	After losing money gambling, often return another day in order to get even ("chasing one's losses)
Lying	Lies to family members, therapists or others to conceal the extent of involvement with gambling
Loss of Control	Made repeated unsuccessful efforts to control, cut back or stop gambling
Illegal Acts	Committed illegal acts, such as forgery, fraud, theft or embezzlement, in order to finance gambling
Risked Significant Relationship	Jeopardized or lost a significant relationship, job, educational or career opportunity because of gambling
Bailout	Reliance on others to provide money to relieve a desperate financial situation caused by gambling

Source: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition

The term disordered gambling is often used by researchers as the umbrella term for problem and pathological gambling.

Prevalence Studies

Given the importance of problem gambling and its relationship to other disorders, it is critical to have an understanding of the proportion of the population likely to suffer from this addiction. The following presents a summary of how problem gambling prevalence rates are calculated.

3 Gerstein, D. R., R. A. Volberg, R. Harwood, E. M. Christiansen et al. 1999. *Gambling Impact and Behavior Study: Report to the National Gambling Impact Study Commission.* Chicago, IL: National Opinion Research Center at the University of Chicago.

Prevalence rates to determine adult problem gambling rates are measured by administering a survey (often a variation of the South Oaks Gambling Screen or a modified DSM-IV questionnaire) to a statistically valid sample of the adult population of the jurisdiction being measured. Adolescent rates are measured in a similar manner. Such a method and analysis of data that accompanies the process is referred to as a general population prevalence study.

Jurisdictions in several countries have conducted studies to estimate the percentage of the population that could be classified as having some level of problem gambling behavior. These studies, commonly referred to as prevalence studies, are designed to reflect the scope and severity of problem gambling behavior.[4]

One of the most frequently cited studies on prevalence rates is *Estimating the Prevalence of Disordered Gambling Behavior in the United States and Canada: A Meta-analysis by the Harvard Medical School Division on Addictions*. The meta-analysis method of estimating prevalence rates has been used in related addiction fields of drug prevention and patterns of alcohol use and alcohol treatment and is considered a more cost-effective method than a national study since it makes use of existing research already conducted in a field.

The Harvard Medical School study, believed to be the first to use meta-analysis measurements for problem gambling prevalence rates, analyzed 152 distinct previous prevalence studies available for review by June 15, 1997. The study determined that 2.0 percent of the adult population could be considered as Level 2 of disordered gambling (often referred to as problem gambling) and 0.9 percent of Level 3 or disordered gambling (also referred to as pathological gambling) during the past year. The vast majority of adults in the general population, then, do not experience gambling-related problems of any clinical significance.

The meta-analysis raw data was given to the Committee on the Social and Economic Impact of Pathological Gambling of the National Research Council (NRC) in its analysis for the National Gaming Impact Study Commission. After an extensive review, the NRC agreed with the above rates of problem gambling and used the numbers in its own analysis of problem gambling in its final report.

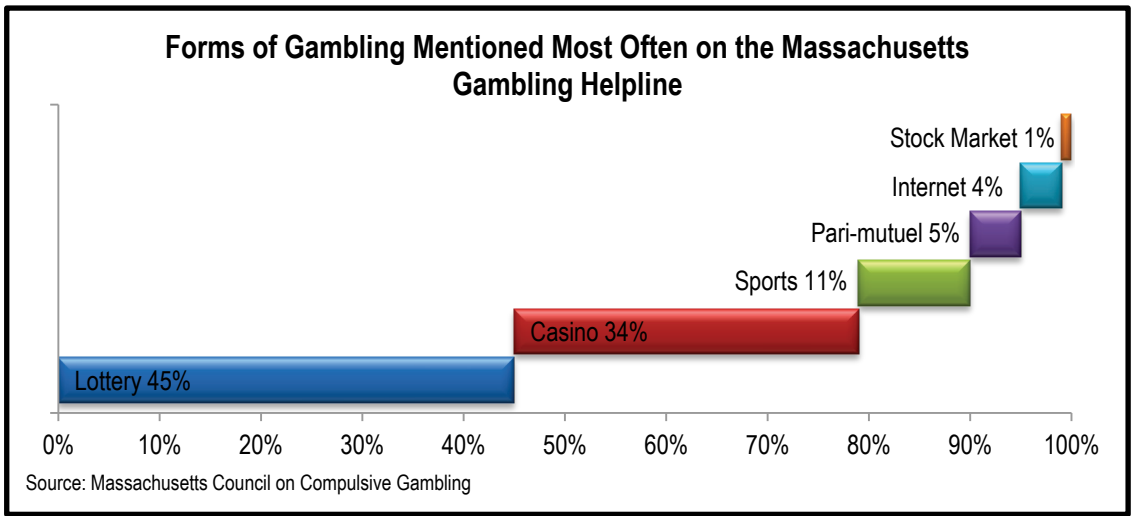
Determining the number of problem gamblers is often a subject of intense debate. Even deciding what the phenomena should be called can be as problematic as determining the number who "fit" into each category.

Rates are not static and can vary by jurisdiction. For example, one study in the 1990s found that the rates were lowest in the Midwest and highest in the Northeast sections of

4 *Estimating the Prevalence of Disordered Gambling Behavior in the United States and Canada: A Meta-analysis*, Harvard Medical School Division on Addictions, 1997.

the United States.[5] They may also vary within a jurisdiction from one period of time to another. Some are suggesting that measuring prevalence might be more valid if exposure to gambling were to be included. Though researchers are finding that prevalence rates are similar throughout the world, they have been known to vary by ethnicity.

It should be noted that problem gambling is not limited to states with casinos, since most states have other forms of gambling and since casino options are available in other states. For example, in an effort to monitor problem gambling in Massachusetts, a state currently without a traditional casino option but with options in neighboring states, the Massachusetts Council on Compulsive Gambling instituted a 24-hour helpline. Since 1989, the council has been monitoring the type of calls coming to the helpline from all gambling outposts. According to the latest data available by the Massachusetts Council on Comprehensive Gambling the annual helpline calls reached nearly 1,500. Furthermore, the lottery accounts for 45% of helpline calls followed by casino gambling with 34%, as shown in the chart below. It should be noted that the calls associated with casinos are likely associated with Massachusetts residents who are visiting casino facilities in Rhode Island and Connecticut. While Massachusetts bears the burden of treating these individuals, it does so without the benefit of resources that would be provided by in-state casinos. As a result we would expect that the resources available to treat problem gambling in Massachusetts will improve significantly with the advent of in-state casinos.



Co-Morbidity

Co-Morbidity is defined as the presence of two or more disorders for example numerous studies suggest that substance abusers are more susceptible to gambling disorders than

5 Cox, Sue, Henry Lesieur, Richard Rosenthal and Rachel Volberg (1997), *Problem and Pathological Gambling in America: The National Picture.*

those who do not use such substances. The National Opinion Research Center (NORC) study found the rate of alcohol or other drug abuse was nearly seven times greater in problem gamblers than among non-gamblers. The study also found that persons in *recovery* from alcohol or drug dependence encountered difficulties with gambling or lost their sobriety in the process of gambling. These other addictive behaviors are not thought to be caused by problem gambling, but rather are associated with the personality problems of the individual and are largely pre-existing conditions unrelated to gaming.

Additional studies have shown that pathological gambling is strongly related to other disorders. For example, Dr. Jon Grant points out that:

- 76 percent of an inpatient pathological gambling treatment sample met criteria for major depressive disorder;
- 24 percent lifetime prevalence of bipolar disorder in persons with problem gambling;
- 20 percent met criteria for lifetime attention-deficit hyperactivity disorder;
- Problem gamblers suffer from high rates of lifetime anxiety disorders (16-40 percent).[6]

Numerous other studies have identified a variety of psychiatric disorders in persons with pathological gambling. It should be noted that these disorders are not caused by problem gambling, but rather are reflective of the general addictive and personality problems of the individual expressed. The table on the following page shows that pathological gamblers have a propensity for higher anxiety, substance abuse disorders, along with other disorders. Overall, 13%-78% of people who are pathological gamblers are also likely to suffer from a mood disorder. They will also report increased rates of lifetime anxiety disorders. Alcohol or drug dependence has been consistently reported with pathological gamblers. Approximately 28% of pathological gamblers had current alcohol dependence while the rate was only 1% for non-pathological gamblers.[7]

The table that follows summarizes the co-morbidity axis of psychiatric disorders in persons with pathological gambling disorders found in various studies over the past 25 years.

6 Grant JE, Kim SW: "Comorbidity of impulse control disorders in pathological gamblers." *Acta Psychiatrica Scandinavica* 2003;108:207-213

7 Grant, J.; and Potenza, M. *Pathological Gambling – A Clinical Guide to Treatment.* American Psychiatric Publishing, Inc. 2004

Comorbid Axis I Psychiatric Disorders in Persons with Pathological Gambling[8]

Study	Sample Size	Assessment Method	Mood Disorders	Psychotic Disorders	Attention Deficit/ Hyperactivity Disorder (ADHD)	Obsessive-Compulsive Disorder (OCD)	Substance Abuse Disorders	Impulse Control Disorders	Anxiety Disorders	No Disorder
McCormick et al. 1984	50	RDC	76%	N/A	N/A	N/A	36%	N/A	N/A	N/A
Linden et al. 1986	25	SCID	72%	N/A	N/A	20%	48%	N/A	28%	N/A
Bland et al. 1993	30	DIS	33%	0%	N/A	17%	63%	N/A	27%	N/A
Specker et al. 1995	40	Operationalized diagnostic interview for ADHD; MIDI	N/A	N/A	20%	N/A	N/A	35%	N/A	N/A
Specker et al. 1996	40	SCID	78%	3%	N/A	3%	60%	N/A	38%	8%
Black & Moyer 1998	30	DIS	60%	3%	40% (childhood conduct disorder)	10%	63%	43%	40%	N/A
Cunningham-Williams et al. 1998	161	DIS	MDD (9%); dysthymia (4%)	4%	N/A	1%	Alcohol (45%); illicit drugs (40%)	N/A	Panic disorder (23%); GAD (8%); phobias (15%)	N/A
Hollander et al. 1998	10	N/A	30% Bipolar disorder I & II*	*	20%	10%	Current*	N/A	N/A	50%
Hollander et al. 2000b	10	N/A	50%	N/A	N/A	10%	10%	N/A	20%	N/A
Grant & Kim 2001	131	SCID-IV	34%	N/A	N/A	0%	35%	18%	9%	N/A
Zimmerman et al. 2002	15	SCID-IV; DID; BDI	53% Mania*	*	N/A	N/A	Current*	N/A	20%	N/A

* Excluded Condition Notes: BDI=Beck Depression Inventory; DID=Diagnostic Inventory for Depression; DIS=Diagnostic Interview Schedule, Version III; GAD=Generalized Anxiety Disorder; MDD=Major Depressive Disorder; MIDI=Minnesota Impulsive Disorders Interview; N/A=Not Available; RDC=Research Diagnostic Criteria; SCID=Structured Clinical Interview for DSM-III; SCID-IV=Structured Clinical Interview for DSM-I

8 Grant, J.; and Potenza, M. *Pathological Gambling – A Clinical Guide to Treatment*. American Psychiatric Publishing, Inc. 2004.

In addition, The University of Connecticut Health Center cites the following correlations with those that have been diagnosed as pathological gamblers:

- 75 percent of pathological gamblers had an alcohol disorder;
- 38 percent had a drug use disorder;
- 60 percent had nicotine dependence;
- 50 percent had a mood disorder;
- 61 percent had a personality disorder;
- 41 percent had an anxiety disorder.

Past research focusing on the co-occurrence of disordered gambling and other mental health disorders has left no doubt that significant overlap exists between disordered gambling and substance use, mood, and anxiety disorders. A large Canadian study[9] investigated this relationship in a face-to-face survey of 36,885 respondents. The study concluded that:

- The presence of lifetime mental disorders other than substance use disorders increased the prevalence of past-year moderate/problem gambling from 1.7% to 2.9%;
- The more severe the past-year substance use disorder, the higher the prevalence of past-year moderate/problem gambling – from 1.0-1.4% among abstainers to 9.1-9.6% among those with substance dependence.

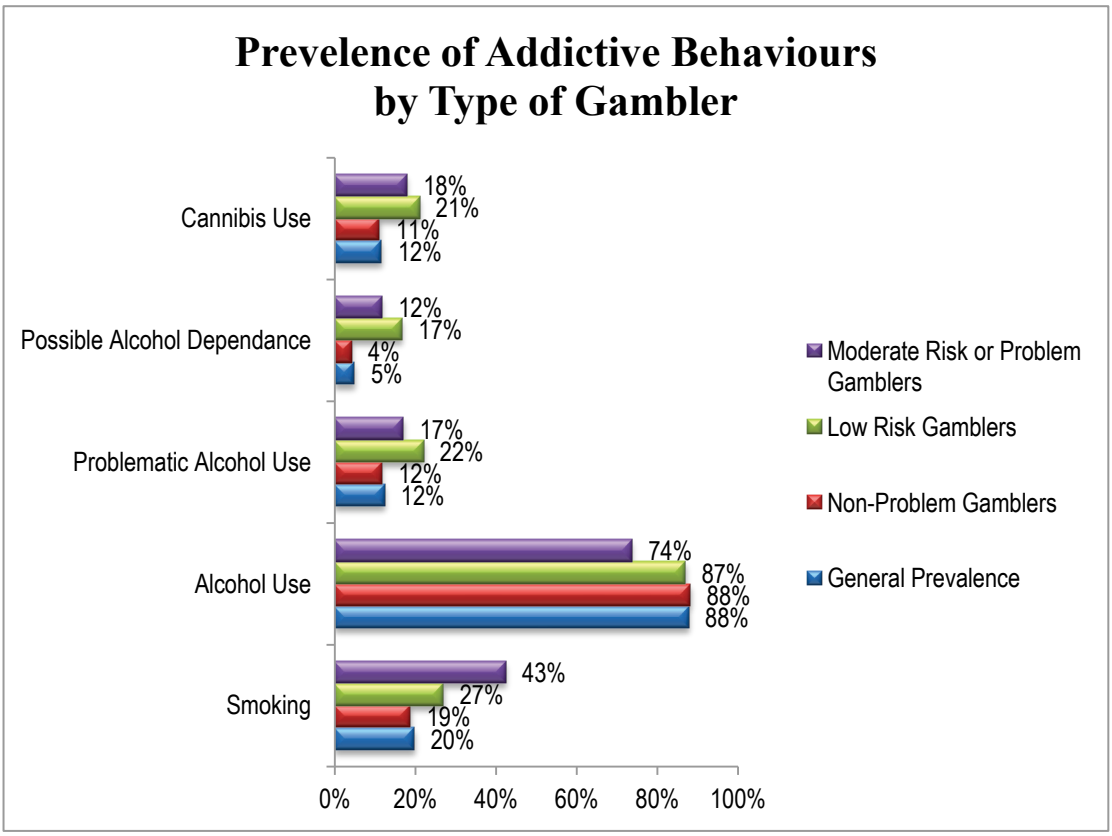
The relationship between past-year substance use disorders and past-year gambling problems was not affected significantly by the lifetime presence or absence of other mental disorders.

According to the 2006 Canadian Community Health Survey[10], 5% of the population over 15 years old in Québec experienced major depression, while 4.2% experiences anxiety disorders, and 2% experienced social phobias. The 2009 Portrait of Gambling in Quebec revealed that moderate risk and problem gamblers are more prone to be smokers, use cannabis, and develop alcohol problems as shown in the chart that follows[11].

9 Rush, B. R., Bassani, D. G., Urbanoski, K. A., & Castel, S. (2008). "Influence of co-occurring mental and substance use disorders on the prevalence of problem gambling in Canada." *Addiction*, 103, 1847-1856.

10 Statistics Canada (2006). *Canadian Community Health Survey (CCHS): Mental Health and Well Being Cycle 1*.

11 Kairouz, Sylvia, Louise Nadeau, and Catherine Paradis. *Portrait of Gambling in Quebec: Prevalence, Incidence and Trajectories Over Four Years*. Tech. N.p.: University of Concordia, 2011. Print.



From the perspective of casino gaming in New York, the aforementioned addictions and co-morbidity relationships suggest that problem gamblers are likely to be already exhibiting other disorders and are already a cost burden to society; the introduction of additional casinos in New York should be accompanied with a realization that any public health consequences related to casinos are already being experienced in, particularly since casino-style gaming has been operating for approximately a decade in the surrounding states of New Jersey, Connecticut, Rhode Island and in the Province of Ontario with more recent additions in Pennsylvania. Furthermore these effects can be mitigated to some degree through various education programs and will be discussed further in later sections.

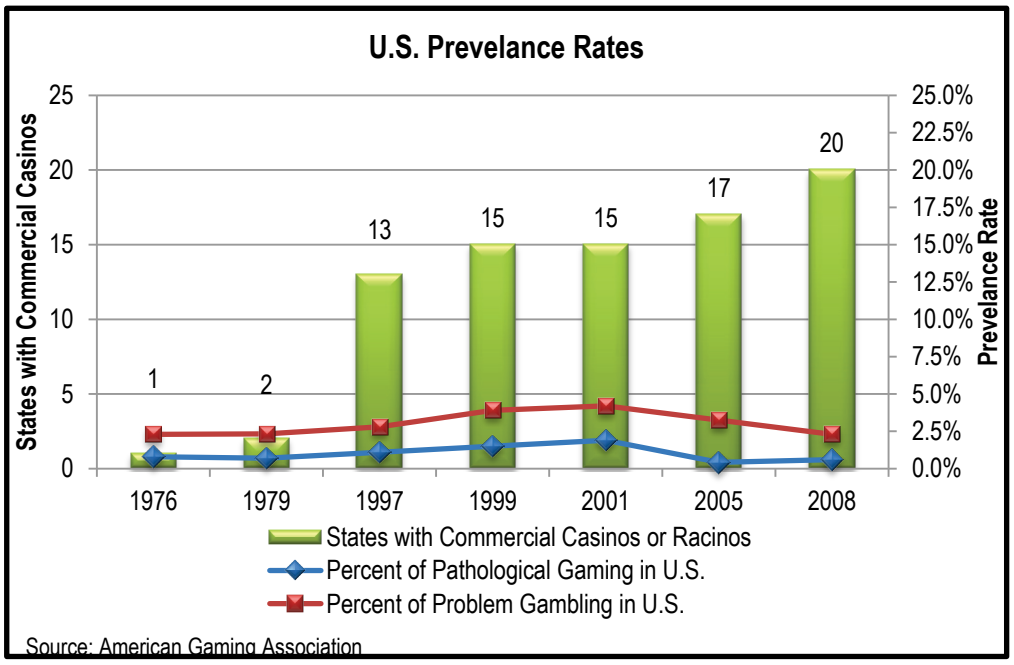
National Prevalence Rates

In order to gain a trend analysis of the prevalence rates in the nation, The Innovation Group acquired numerous national studies similar to those mentioned previously. According to the National Center for Responsible Gaming (NCRG), prevalence rates of pathological and problem gambling from 1979 to 2008 have remained relatively stable with an average of 1% of the U.S. population being pathological gamblers and 2% being problem gamblers.[12] Although there are several ways to categorize pathological and

[12] National Center for Responsible Gaming. *Increasing the Odds: A Series Dedicated to Understanding Gambling Disorders*. Rep. Gambling and the Public Health, Part 1 ed. Vol. 3. N.p.: n.p., n.d. Print.

problem gamers other than using the Diagnostic and Statistic Manual Method described above, the majority of studies have arrived at similar results.

The graph below illustrates the trend of pathological and problem gaming rates in relation to the number of states in the United States that allow commercial gaming. Prior to 1979, Nevada and New Jersey were the only states that featured commercial casinos. With the opening of riverboat and racetrack gaming jurisdictions from 1979 to 2001, there was a 50.0% and 72.7% increase in problem gaming and pathological prevalence rates, respectively. However, since 2001 the prevalence rate has actually declined despite even more gaming jurisdictions being added. One of the more recent published research reports by Kessler and Shaffer, in 2008, indicates that the pathological gambling rate is 0.6% in the United States and the problem gambling prevalence rate is 2.3%, which are twenty year lows,[13] despite the fact that the number of states that allow commercial casinos has increased more than tenfold since 1979.



International Perspective and Demographic Profiles

Compared with other similar gaming jurisdictions internationally, the United States has consistently had lower rates than those seen in Australia and Canada. Moreover, the overall downward trend in prevalence rates in all three nations since 2004[14] is an encouraging and perhaps counter-intuitive trend given the increase in gaming options in these jurisdictions in that time. The following chart shows the results of a meta-study

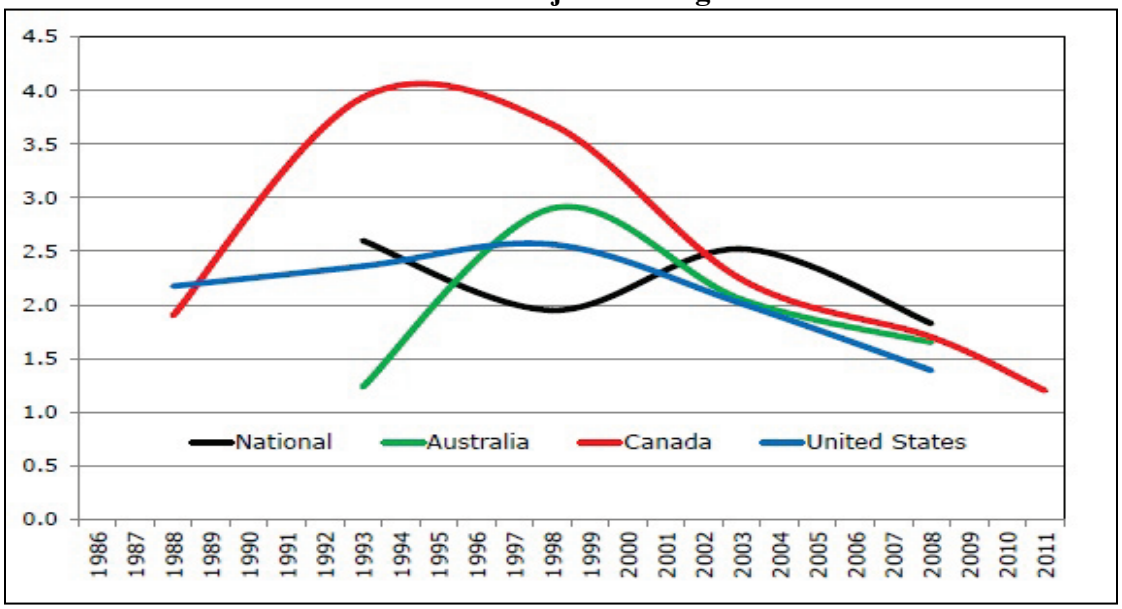
[13] Kessler, R. C., Hwang, I., LaBrie, R., Petukhova, M., Sampson, N. A., Winters, K. C., et al. (2008). DSM-IV pathological gambling in the National Comorbidity Survey Replication. *Psychological Medicine*, *38*

[14] Volberg, Rachel A. *Examining Changes in Problem Gambling Prevalence Over Time*. Rep. Boston: Massachusetts Gaming Commission, 2012. Print.

that examined 202 prevalence studies in the United States, Australia and Canada, as follows:

- 68 nationwide U.S. studies ("National")
- 67 statewide studies from the U.S. ("United States")
- 27 studies from Australian states/territories
- 40 studies from Canadian provinces

Prevalence Rates in Major Gaming Jurisdictions



Source: Volberg, Rachel A. *Examining Changes in Problem Gambling Prevalence Over Time*. Rep. Boston: Massachusetts Gaming Commission, 2012. Print.)

The United Kingdom

The British Gambling Prevalence Study conducted in 2010 examines the demographic profiles of problem and pathological gamers. This study surveyed over 7,000 residents and was the first survey since the implementation of the Gaming Act of 2005. Additionally, it was the first DSM-IV study for the UK since 1999.

The survey was split evenly between men and women, but the prevalence of problem gambling was much higher among men, 1.5% compared to 0.3% for women. Overall, less than 1% of the British population has a DSM-IV or Problem Gaming Survey Index (PGSI) score that is consistent with the problem gambling definition used by each screen.

The highest proportion of problem gamblers was in the 16-24 year old group. However the prevalence rates of problem gambling illustrated a decline as the population ages. The UK study found that Asian or British Asians feature the highest prevalence rate of problem gambling at 2.8%. In regards to income levels, the lowest tier had the highest prevalence rate at 1.3% and the highest tier had the lowest prevalence rate of 0.7%.

Semi-routine and routine occupations had the highest rate while intermediate occupations featured the lowest prevalence. The highest prevalence rate of all, 6.1%, was found among people with very severe money problems.

Problem Gambling Prevalence, by Socio-Demographic Characteristics

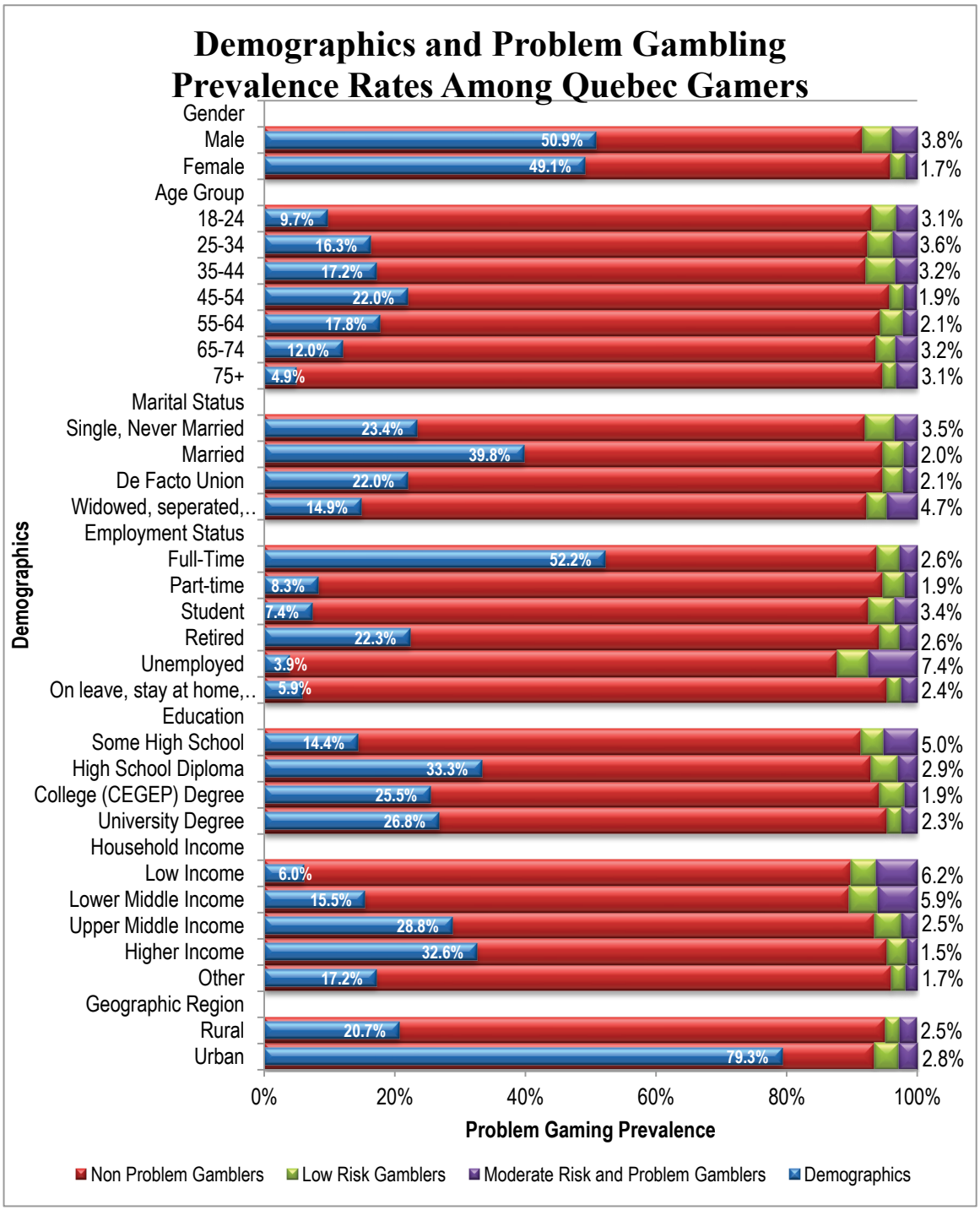
Socio-Demographic Characteristics		DSM-IV Problem Gamblers	Bases Weighted	Bases Un-weighted
Sex				
Male	%	1.5	3,791	3,570
Female	%	0.3	3,956	4,178
Age group				
16-24	%	2.1	1,160	975
25-34	%	1.5	1,237	1,117
35-44	%	1.0	1,407	1,436
45-54	%	0.6	1,303	1,346
55-64	%	0.3	1,141	1,224
65 and over	%	0.2	1,499	1,650
Marital Status				
Married/living as married	%	0.7	4,742	4,789
Separated/divorced	%	1.1	627	720
Single, never married	%	1.8	1,900	1,721
Widowed	%	-	478	518
Ethnic Group				
White/White British	%	0.8	6,977	7,073
Asian/Asian British	%	2.8	353	308
Black/Black British	%	1.5	229	202
Other ethnic group	%	0.8	174	151
NS-SEC of Household Reference Person				
Managerial & professional occupations	%	1.0	3,042	3,007
Intermediate occupations	%	0.3	699	740
Small employers & own account workers	%	0.6	917	913
Lower supervisory & technical occupations	%	0.8	806	801
Semi-routine & routine occupations	%	1.4	1,941	1,990
Equivalised Household Income Tertile				
1st (lowest)	%	1.3	2,079	2,081
2nd	%	1.1	2,110	2,070
3rd (highest)	%	0.7	2,018	2,093
Highest Educational Qualification				
Professional qualification or above	%	0.8	2,883	2,884
GCSEs/'O' levels or 'A' levels or equivalent	%	1.2	2,843	2,761
None/other	%	0.7	2,003	2,086
Index of Multiple Deprivation (England only)				
1st (least deprived)	%	0.6	1,315	1,333
2nd	%	0.6	1,400	1,405
3rd	%	0.7	1,384	1,353
4th	%	1.8	1,262	1,216
5th (most deprived)	%	0.8	1,301	1,240
Economic Activity of Individual				
Paid work	%	0.9	4,116	4,054
Unemployed	%	3.3	240	222
Long-term disability	%	1.0	256	272
Looking after family/home	%	0.5	639	678
Retired	%	0.1	1,621	1,781
Full time education	%	1.2	667	537
Other	%	4.6	205	201
Money Problems				
No problems	%	0.5	5,517	5,558
Slight problems	%	1.7	1,749	1,717
Definite problems	%	2.9	329	323
Very severe problems	%	6.1	133	132

Source: British Gambling Prevalence Survey 2010

Quebec

Québec also recently conducted a survey of problem gamblers. The study provides a demographic snapshot of gamers and the status of problem gambling across various demographic segments throughout Québec. The demographic characteristics and problem gambling prevalence percentage, shown to the right of the chart, provide a useful tool with which to understand and spot problem gamblers going forward. It also helps to identify which segments to target first when implementing social impact initiatives.

Prevalence rates throughout the province vary significantly across gambler demographics. The blue line on the chart that follows highlights the demographic differences of the 12,000-person survey. The purple lines with data points indicate the moderate risk and problem gamblers. As in the United Kingdom, the survey revealed a higher prevalence of problem gambling in men, 3.8% compared to 1.7% for women. Additionally, the highest proportion of gamblers was in the 45-54 age cohort. Commensurate with findings in various studies cited in this report, the prevalence of pathological gaming was higher among the younger populations, reaching 3.6% in the 25-34 age cohort. While a greater proportion of married people gambled, problem-gambling prevalence was much higher in those that have either never been married, or those who were widowed, divorced or separated, 3.5% compared to 4.7% respectively. In terms of employment, those that were employed full time were more likely to be gamblers, as they likely have more discretionary income with which to wager; however, problem-gambling prevalence was over twice as likely for unemployed respondents, reaching 7.4%, followed by students at 3.4%. Gambling was more popular with those that had at least a high school diploma or higher; however, those that only had only some high schooling had much higher problem gambling prevalence rates, reaching 5%. Not surprisingly, as income grows, so does the participation of gambling; however those with lower-middle income or less had higher problem gambling prevalence estimated at 5.9% and 6.2% respectively.


Demographics and Problem Gambling Prevalence Rates Among Quebec Gamers
Demographics
Gender
Male
Female
Age Group
18-24
25-34
35-44
45-54
55-64
65-74
75+
Marital Status
Single, Never Married
Married
De Facto Union
Widowed, seperated,..
Employment Status
Full-Time
Part-time
Student
Retired
Unemployed
On leave, stay at home,..
Education
Some High School
High School Diploma
College (CEGEP) Degree
University Degree
Household Income
Low Income
Lower Middle Income
Upper Middle Income
Higher Income
Other
Geographic Region
Rural
Urban
50.9%
49.1%
9.7%
16.3%
17.2%
22.0%
17.8%
12.0%
4.9%
23.4%
39.8%
22.0%
14.9%
52.2%
8.3%
7.4%
22.3%
3.9%
5.9%
14.4%
33.3%
25.5%
26.8%
6.0%
15.5%
28.8%
32.6%
17.2%
20.7%
79.3%
3.8%
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1.9%
3.4%
2.6%
7.4%
2.4%
5.0%
2.9%
1.9%
2.3%
6.2%
5.9%
2.5%
1.5%
1.7%
2.5%
2.8%
0%
20%
40%
60%
80%
100%
Problem Gaming Prevalence
Non Problem Gamblers
Low Risk Gamblers
Moderate Risk and Problem Gamblers
Demographics

Prevalence Rate Impact

Theoretical Background

A critical question for this report is the effect the Nevele Resort, Casino and Spa would have on problem gambling prevalence rates in New York. According to the access or exposure theory, an increase in access to gaming opportunities leads to higher prevalence rates. A major cornerstone of this theory is research showing that gambling facility employees exhibit a higher prevalence rate of disordered gaming,[15] and the major research touchstone is the National Gaming Impact Study (1999), which found that within fifty miles of a casino the prevalence rate was double that of areas outside of fifty miles from the casino.[16] However, the methodology behind this finding has been criticized[17] and its validity remains controversial.

More recent research, prompted by the apparent stability of lifetime prevalence rates over the past 35 years or so despite the widespread proliferation of casinos and lotteries, has led to the development of the adaptation theory, which was pioneered by Harvard Medical School gambling researcher Howard Shaffer. The adaptation theory proposes that while a new gaming facility will tend to correspond to a short-term increase in prevalence rates, over time the local population adapts to the new facility and rates decline. As summarized in a 2011 article in the Annual Review of Clinical Psychology:

> Consistent with the exposure model, observers often identify increases in the rate of gambling-related problems soon after new opportunities to gamble become available. However, consistent with the adaptation model, research also shows that the prevalence rate of gambling disorders only increases in the short term; over time, the rate stabilizes and then tends to decline (Bondolfi et al. 2008, Jacques & Ladouceur 2006, Jacques et al. 2000).[18]

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15 Howard J. Shaffer, Joni Vander Bilt and Matthew N. Hall, "Gambling, Drinking, Smoking and Other Health Risk Activities Among Casino Employees," *American Journal of Industrial Medicine* 36 (1999): 365-378, and Howard J. Shaffer and Matthew N. Hall, *The Journal of Social Psychology* 142, no. 4: 405-424.

16 National Gaming Impact Study Commission, June, 1999 - National Opinion Research Center (NORC).

17 DeHaven-Smith, Lance. "Assessment of the Final Report of the National Gambling Impact Study Commission." (2000): Ii-10. Web. 28 Aug. 2012. <http://fliog.govoffice3.com/vertical/Sites/%7BAAE2D2A5-8082-4BA9-9915-A43E05212106%7D/uploads/%7BB457177B-723D-4647-8DC0-B43C8EC142D4%7D.PDF>.

18 Howard J. Shaffer and Ryan Martin, "Disordered Gambling: Etiology, Trajectory, and Clinical Considerations," *Annual Review of Clinical Psychology*, 2011. 7:483–510, page 492. It should be noted that this article also raises methodological issues with lifetime prevalence rates: "There is a growing interest in avoiding the use of lifetime prevalence estimates for psychiatric disorders. For example, many studies focusing on psychiatric epidemiology are cross-sectional and report lifetime estimates of disordered gambling prevalence; these results consistently show declining prevalence rates with advancing age (Streiner et al. 2009). However, in a closed cohort with no mortality, the lifetime prevalence of a disorder must increase or remain constant. The observed paradoxical decline in lifetime prevalence is likely caused by a variety of factors, such as study design and/or participant forgetting and reframing (Streiner et al. 2009)." 492.

Shaffer credits this adaptation to a variety of factors, including the novelty of the new casino wearing off, population shifting focus on newer past times, education on problem gambling and a natural selection of problem players being weeded out due to treatment, bankruptcy or imprisonment.[19]

There are a number of studies suggesting that problem gambling prevalence rates can decline as a result of the effective provision of problem gambling programs and services, including self-exclusion and treatment programs. One study (Volberg 2006[20]) of four states – Montana, North Dakota, Oregon and Washington State – showed an increase in Montana and North Dakota but a decrease in Oregon and Washington after gambling expansion:

> The author concluded that 'these data suggest that something more than gambling availability and participation can affect the prevalence of problem and pathological gambling' (Volberg 2006). Looked at more closely, that factor appears to be the presence or absence of services to treat problem gambling. While Oregon spent around $2 million per year on services and Washington State around $150,000, Montana and North Dakota spent virtually nothing.[21]

There are additional studies from Canada, Australia, New Zealand, and the UK that support this proposition. As summarized in a 2006 literature review by Scottish authorities:

> Overall, the results clearly demonstrated that problem gambling prevalence declined in the states with services and increased in the states without them. This indicates that availability is not the only factor at play in determining changes in rates of problem gambling, and that appropriate service provision can also be a crucial factor here.[22]

Several studies in New Zealand performed by Abbott and Volberg in 1991, 1996 and 1999 revealed that the pathological gambling population repeatedly declined despite greater availability to casino facilities.[23]

Based upon this information and the already multiple forms of gaming, including full casinos, that are already available in New York and surrounding states we would not expect a large increase in Problem Gambling.

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[19] National Center for Responsible Gaming. *Increasing the Odds: A Series Dedicated to Understanding Gambling Disorders*. Rep. Gambling and the Public Health, Part 1 ed. Vol. 3. 19-25. Print.
[20] Volberg, Rachel. "Prevalence Studies of Problem Gambling in the United States." *Journal of Gambling Studies* 12.2 (2006): 111-28. Web.
[21] Dr Gerda Reith and The Scottish Centre for Social Research, "Research on the Social Impacts of Gambling, Final Report." Scottish Executive Social Research, 2006, 4.70.
[22] Ibid, 4.34.
[23] Abbott, M.W. & Volberg, R.A. (2000). *Taking the Pulse on Gambling and Problem Gambling in New Zealand: Phase One of the 1999 National Prevalence Survey. Report Number Three of the New Zealand Gaming Survey*. Wellington: Department of Internal affairs.

New York Problem Gambling Funding

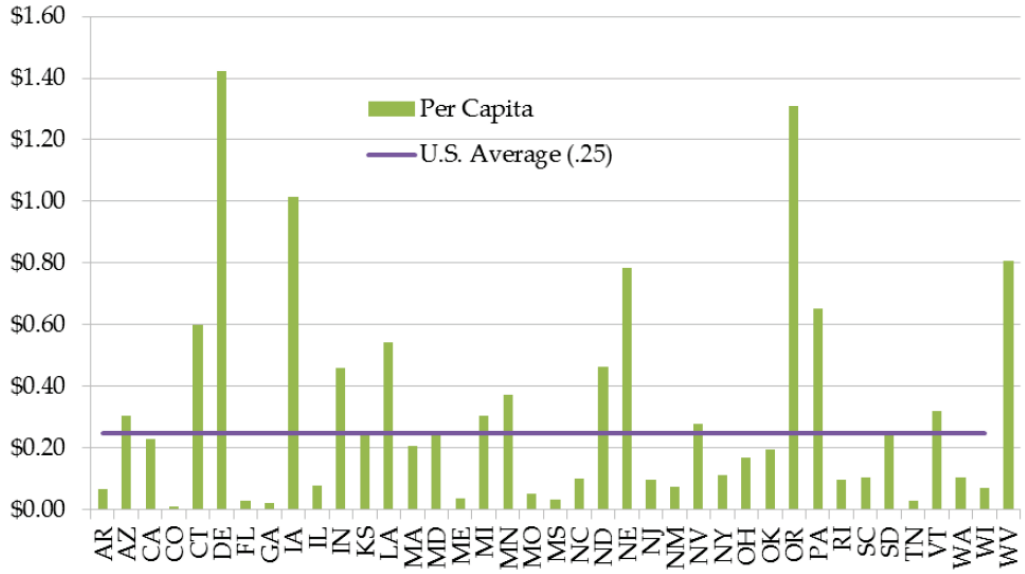
Until 2013, the State of New York had no specific legislation to create a distinct fund for problem gambling services. However, the legislature has historically allocated general fund dollars to support problem gambling services. In SFY 2013 those funds totaled $2,235,000 and were administered by the New York State Office of Alcoholism and Substance Abuse Services (OASAS).

In addition to the OASAS, the New York Council on Problem Gambling (NYCPG), a non-profit organization, provides problem gambling services in the state and serves as the state affiliate to the National Council on Problem Gambling (NCPG). In SFY 2013 the NYCPG operated on a budget of $1,015,000, including a state contract for $985,000, $20,000 in revenues from sales of training or conference registrations, and $10,000 in grants from the gaming industry (non-operator). The operating budget supported program administration, counselor training, workforce development, prevention services, and advocacy and public awareness efforts.

In 2013, New York ranked 27th out of the 50 U.S. states in terms of per-capita public funds plus unduplicated NCPG affiliate funds invested in problem gambling services. The average per capita allocation for problem gambling services in the 39 states with publicly funded services was 32 cents; New York's per capita public investment was 11 cents. See following charts.[24]

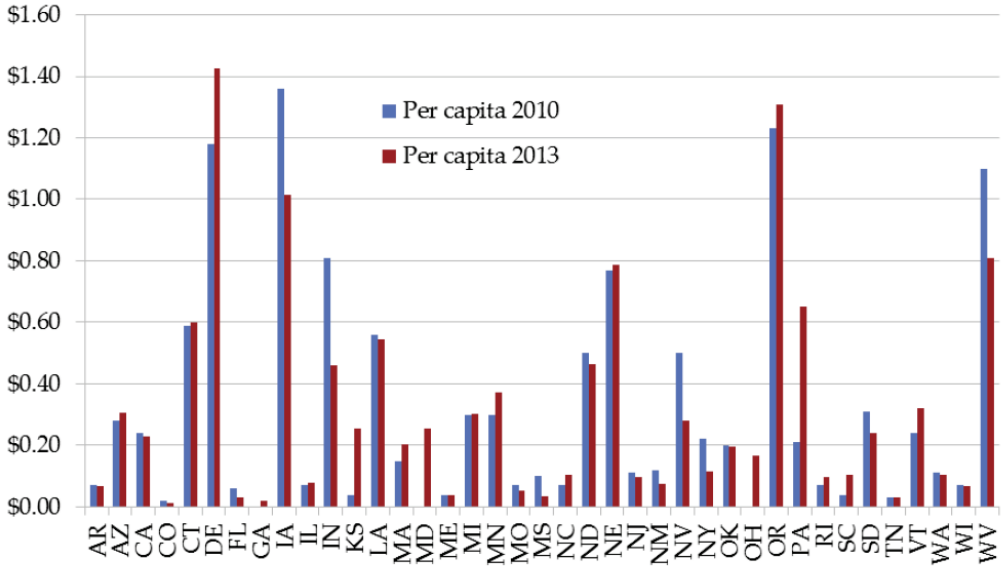
[24] "2013 National Survey Of Problem Gambling Services" March 2014, Prepared by Problem Gambling Solutions, Inc. for the National Council on Problem Gambling

Figure 2. 2013 Per Capita Allocation for Problem Gambling Services by U.S. States



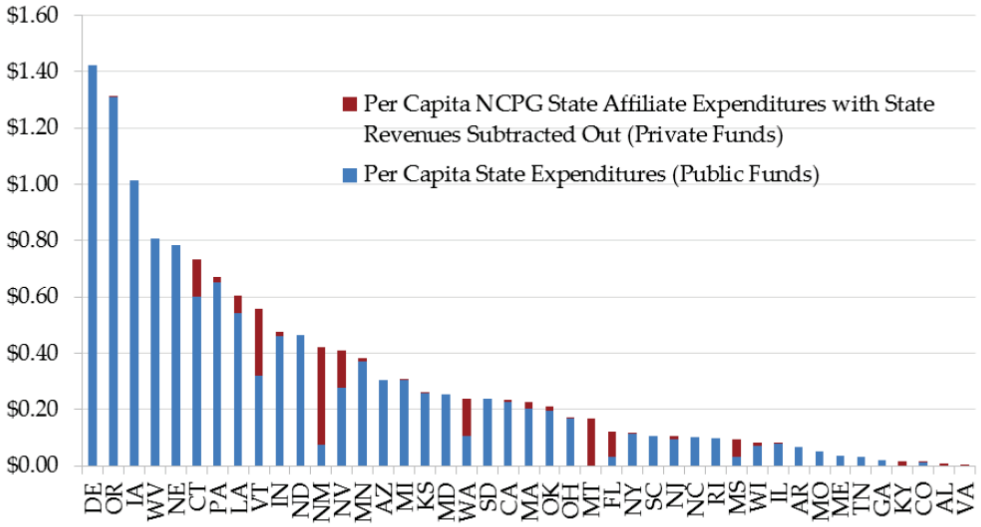
Note: Includes only funds line itemed for problem gambling services and passing through a state agency. Missing states do not fund problem gambling services through legislative actions or utilize state agency budgets line itemed for problem gambling services. U.S. average is based on all 50 states, including the 11 states without public funding but not including Washington, D.C.

Figure 3. Comparison between 2010 and 2013:
Per Capita Allocation on Problem Gambling Services



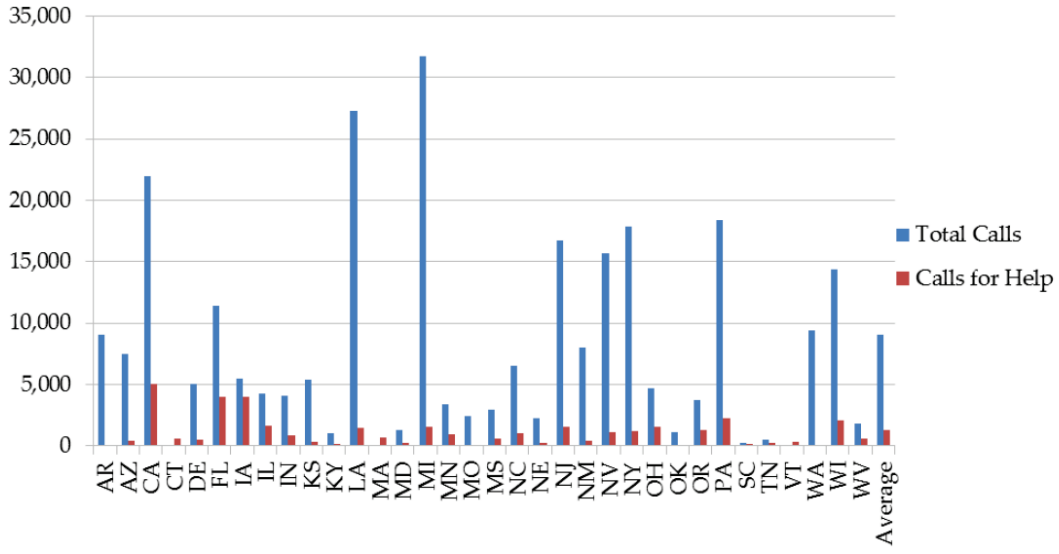
Note: Includes only funds line itemed for problem gambling services and passing through a state agency.

Figure 5. Combined 2013 Per Capita Problem Gambling Services Allocation by U.S. States and NCPG State Affiliates



Note: NCPG Affiliate spending (in red) represents all funds except those derived through contracts with state agencies. NCPG State Affiliate private funds are primarily derived from donations from gaming industry, with most of those from Indian gaming casinos.

Figure 15. Helpline Call Volume and Calls for Help



Note: On average, 14% of calls are for help, ranging from 5% (MI) to 73% (IA).

The state-funded New York State Hopeline, administered by the Mental Health Association of New York City, received 1,224 calls for help specifically for problem gambling. At the time of the present survey there were a total of 359 certified problem gambling treatment counselors in the state as well as an additional 36 credentialed prevention practitioners specializing in problem gambling. In SFY 2013, 390 gamblers and 24 significant others received state-funded outpatient counseling services for problem gambling. The State also funds some residential treatment services for problem gambling and a myriad of prevention and awareness activities.

New York has fallen short in terms of funding for problem gambling, given the extent of gaming that is available to residents both from casinos and other forms of gaming, in-state and out of state.

Perhaps in recognition of this deficit in funding the Upstate NY Gaming Economic Development Act establishes a fund for Problem Gambling which is annually equivalent to $500 per slot machine and per table game. For the Nevele Resort, Casino and Spa this would amount to approximately $1.04 million annually. On top of this Nevele Resort, Casino and Spa will develop its own internal and external Problem Gambling programs and initiatives which will be funded by the casino.