GEMINI RESEARCH

Impacts of Legalized Gambling in Connecticut

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Prepared for the Connecticut Department of Mental Health and Addiction Services (DMHAS)

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INTRODUCTION

Connecticut has been expanding the availability of legalized gambling for over 80 years. This began with the legalized introduction of bingo in 1939 followed by the legalization and/or provision of: bazaars and raffles in 1955; parimutuel betting[1] (on or off track) on horse racing in 1971; a state lottery in 1971 (the fourth U.S. state to do so); parimutuel betting on dog racing and jai alai in 1972; instant/scratch tickets in 1975; sealed/pull-tab tickets in 1987; tribal casinos in 1992 and 1996; Keno in 2016; and online and land-based sports betting, online casinos, and online purchase of lottery tickets in 2021.[2]

In order to understand the impacts of this expansion, the State of Connecticut created legislation requiring periodic reviews of the impacts. Thus, a review was conducted in 1997 (WEFA Group, 1997), and again in 2009 (Spectrum Gaming, 2009). The present 2023 study is the third review in this series. The specific legislative mandate of the present study as specified in Connecticut Public Act No. 22-118 was to: *" … conduct a study concerning the effect of legalized gambling on the citizens of this state including, but not limited to, an examination of the types of gambling activity engaged in by the public and the desirability of expanding, maintaining or reducing the amount of legalized gambling permitted in this state … The study shall take into consideration the findings on the effects of legalized gambling from the most recent study completed pursuant to this subsection, and shall use such findings to inform the current study. In conducting each study, the commissioner, or a contractor chosen by the commissioner to conduct [the] study … shall (1) consider data from other states to inform recommendations on best practices and proposed regulatory changes, (2) review available data to assess the problem gaming resources available in the state, and 3) consult with stakeholders to inform the study analysis, including, but not limited to, elected and appointed government officials, nongovernmental and charitable organizations, municipal officials, businesses and entities engaged in legalized gambling activities in the state."*

On October 21, 2022 the Connecticut Department of Mental Health and Addiction Services (DMHAS) issued a Request for Proposals (RFP) for this study (RFP #DMHAS-SWS-Gambling Impact Study-2023). After evaluating the competitive bids, in January 2023 DMHAS awarded a contract to a team led by Gemini Research, Inc., based in Northampton, Massachusetts. The 12 members of this multidisciplinary team include faculty and/or staff from the University of Massachusetts (Amherst) School of Public Health and Health Sciences; the Donahue Institute; the Department of Hospitality and Tourism Management in the Isenberg School of Management; and the University of Lethbridge, in Alberta, Canada.

The Gemini Research team subsequently carried out this investigation between January and August 2023 with the results contained in the present report.

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[1] Parimutuel betting is a betting system in which the winning payout for a particular outcome (e.g., certain horse coming in first place) is not fixed but rather varies as a function of how much money is bet on that outcome relative to other outcomes. In general, the size of the winning payout decreases as a function of the amount of money that is bet on that outcome. The purpose of this system is to help ensure the gambling provider 'breaks even' regardless of what outcome occurs. (In parimutuel systems the gambling provider makes a profit by taking out a fixed percentage of the overall amount of money wagered).

[2] Online sales of lottery tickets had not yet commenced as of the writing of this report.

There are six sections to this report:

1. The **Executive Summary**, which provides a comprehensive overview of our findings and recommendations.

2. A section on the **History and Current Availability of Legalized Gambling in Connecticut**.

3. A section on the **Methodology for the Current Study**, that includes a description of our theoretical framework, principles for conducting socioeconomic impact analyses of gambling, and our data sources.

4. The **Social and Health Impacts** section, which is subdivided into Attitudinal impacts; impacts on Gambling Behavior; impacts on Problem Gambling and Related Indices; impacts on Crime; and impacts on Other Social Indices.

5. The **Economic and Fiscal Impacts** section, which is comprised of two main sections. The first is the Direct Economic impacts of each of the main types of legalized gambling in Connecticut. The second section uses these direct impacts to project the overall Indirect Economic and Fiscal Impacts on the Connecticut economy.

6. A **Review of Connecticut Problem Gambling Prevention and Treatment Services** which includes an evaluation of the adequacy of these services as well as recommendations for further improvement.

EXECUTIVE SUMMARY

The present study was undertaken using a 'state-of-the art' theoretical framework along with a mixed methods research strategy that utilized both primary and secondary data collection/analysis as well as quantitative and qualitative research methods. Gambling is just one of many economic forces contributing to the dynamic social and economic landscape of Connecticut, making disentangling gambling's unique contribution difficult. The use of multiple methods aids in this task, as it allows for triangulation of findings. The specific data sources utilized in the present study were:

(1) Interviews with 47 key informant stakeholders having direct first-hand knowledge about specific social and/or economic gambling impacts they have observed;
(2) A representative population survey of 5,259 Connecticut adults (18+) supplemented by a separate online panel survey of 2,847 Connecticut adults (18+);
(3) A collection of secondary data pertaining to a wide range of social and economic indices, with annual variations in these indices being examined relative to variations in larger geographic regions (e.g., state, country) as well as changes in Connecticut gross gambling revenue;
(4) Historical Connecticut population studies of gambling as well as prior economic and socioeconomic analyses so as to contextualize the present results;
(5) Data from gambling operators and the Connecticut government regarding gambling revenue as a function of type of gambling and operator; employment numbers for each type; and revenue spent on wages, supplies, and allocated to the commercial operator and different sectors of government and society;
(6) Economic modelling using Regional Economic Models, Incorporated (REMI) to estimate the additional indirect economic impacts on the Connecticut economy from the identified direct economic impacts;
(7) AirSage cell phone location analysis to establish the portion of Connecticut casino revenue deriving from out-of-state residents; the Connecticut-county origin of Connecticut casino revenue; and the amount of casino revenue leaving the state due to Connecticut patronage of out-of-state casinos.

A separate but related investigation was a review of Connecticut problem gambling prevention and treatment services. Some of the information pertinent to this issue was collected in the course of the above data collection activities. However, additional data was collected pertaining to prevention, responsible gambling/harm minimization, and treatment services in Connecticut, as well as documentation of their historical timelines, locations, magnitude, utilization, and known effectiveness.

Social and Health Impacts

Attitudes

- Gambling is 'not at all' or 'not very important' as a recreational activity for the vast majority of people (93.5%), although 1.8% indicate it is actually a 'very important' recreational activity.
- Many more people believe that the harm of gambling outweighs the benefits (67.2% vs 8.6%).
- The majority of people (63.4%) do not believe that gambling is morally wrong.
- The majority of people (69.1%) believe that some types of gambling should be legal and some types should be illegal.
- The majority of people (67.8%) consider the current availability of gambling to be fine, whereas 26.2% believe it is too widely available and 5.9% believe it is not available enough.

- The majority of people (70.8%) believe the responsibility for minimizing gambling-related harm is shared between the gambler and the provider.
- The majority of people (68.7%) have no opinion about the integrity and fairness of how gambling is provided in Connecticut, with another 21.3% being satisfied and 9.9% being dissatisfied.
- The majority of people (62.6%) have no opinion about the adequacy of Connecticut government and gambling provider efforts to minimize the harm associated with gambling, with another 20.0% being satisfied and 17.3% being dissatisfied.
- There is a wide range of things that people identify as the single most positive impact of legalized gambling in Connecticut, with employment (21.6%) and increased government revenue (20.1%) being the most commonly endorsed options.
- The majority of people (69.2%) identify increased gambling addiction as the single most negative impact of legalized gambling in Connecticut.

Gambling Behavior

The past year prevalence of the different types of gambling in Connecticut in 2023 is as follows:

- 69.2% Any past year gambling
- 51.6% Weekly lotteries (Powerball, Mega Millions, Lotto)
- 35.4% Scratch tickets and Fast Play
- 26.5% Charity tickets
- 22.8% Daily lotteries (Play3, Play4, Cash5, Lucky for Life)
- 18.5% Land-based casinos (88.1% in CT, 13.2% MA, 5.3% NV, 4.0% NY, 3.5% NJ, 2.6% RI, 6.3% Other)
- 13.8% Social Gambling
- 13.0% Financial speculation (48.9% cryptocurrency; 28.8% day trading; 23.9% penny stocks)
- 10.7% Any type of online gambling
- 10.2% Sports betting (76% football, 46.9% basketball, 23.4% baseball, 16.2% horse racing, 15.9% fantasy sports)
- 7.2% Online casinos
- 6.1% Bingo
- 4.5% Keno

Among past-year gamblers, the average number of different types of gambling participated in was 2.8, with the median amount spent being $413 (average of $4,047 and mode of $60).

Compared to 2008:

- Largely Unchanged: Overall past year gambling, lottery play, and scratch ticket play.
- Decreased: Horse race betting (7.4% to 1.7%), bingo (9.0% to 6.1%), and land-based casinos (35.6% to 18.5%).
- Increased: Online gambling (2.0% to 10.7%) and sports betting (8.4% to 10.2%).

Problem Gambling and Related Indices

Gambling categories in 2023 with the Problem and Pathological Gambling Measure (PPGM):

- 30.7% Non-Gamblers
- 62.6% Recreational Gamblers
- 4.9% At-Risk Gamblers
- 1.8% Problem Gamblers (equivalent to roughly 50,000 adults and 150,000 people totally impacted when including spouses and children)

A direct comparison with the same instrument used in 2008 (NODS) found no change in problem gambling rates (1.4% in both time periods), although a small increase to 1.7% in 2023 occurs when controlling for methodological differences in survey administration between the two time periods. Larger increases might have been anticipated considering the recent 2021 legalization of sports betting and online gambling. However, participation levels for these new types of gambling are comparatively low and land-based casino gambling has decreased by 50% since 2008.

Connecticut rates of problem gambling are mid-range compared to other states, and low compared to earlier time periods in the state (3.2% in 1991 and 2.9% in 1996).

Elevated rates of gambling-related harm are seen in: males; people under 65; Blacks, Asians, Hispanics, and 'Other' Race/Ethnicities; and people with lower educational attainment. However, *elevated risk* does not directly correspond to the *relative prevalence* in the population due to different groups comprising larger or smaller proportions of the general population. Thus, the majority of people with gambling problems in Connecticut are: male, ages 18 – 34, Whites, and non-immigrants.

Compared to recreational gamblers, people with gambling problems are more likely to gamble to 'escape or relieve stress,' 'to compete or for the challenge,' because it 'makes me feel good about myself,' and to 'win money.' The majority of people with gambling problems do not report there being a particular type of gambling causing more harm. For those who do report a problematic type, the specific type identified largely parallels participation rates.

The most commonly reported harms associated with problem gambling are: mental health problems (67.2%), financial problems (51.6%), relationship problems (30.0%), work/school problems (19.9%), engaging in illegal behavior (16.7%), and physical health problems (10.0%). The most commonly reported discrete impacts are: 14.0% domestic violence, 13.5% bankruptcy, 11.4% receiving public financial assistance, 8.5% child welfare involvement, 7.3% separation/divorce, 5.6% being arrested, 4.0% losing job or quitting school, and 1.4% attempting suicide.

Certain indices that are reliably associated with gambling problems were also examined. Bankruptcy rates in Connecticut and New London County were found to have declined in the past 10 years. Family violence, divorce rates, and child abuse rates have also been steadily declining in Connecticut. While there has been an increased rate of suicide in Connecticut since 2008, this closely parallels the national trend.

Crime

Crime caused by problem gambling is fairly uncommon (reported by 16.7% of people with gambling problems), and it is very uncommon for this type of crime to result in being arrested (5.6%), convicted (5.5%), or incarcerated (0.13%).

Violent crime rates in Connecticut, New London County, Ledyard, and Montville have all substantially decreased since the 1990s and the decreases in each of these regions have closely paralleled each other.

Property crime in Connecticut, New London County, Ledyard, and Montville has also trended downward since the 1990s. However, the decreases have been more modest in Ledyard and Montville, which is consistent with research literature which has shown that facilities with large numbers of visitors in

general, including stadiums or shopping malls as well as casinos, have associations with property crime (Barthe & Stitt, 2009; Walker, 2010).[3]

Driving under the influence (DUI) arrests were stable across Connecticut from 2000 to 2010 and have declined since that time. However, key informant interviews indicate that driving under the influence of alcohol is still a relatively common occurrence after leaving the casinos.

The number of reports of illegal gambling is very low in Connecticut (never more than 60 in a year, and typically less than 10), which supports the contention that it has largely been displaced by legal forms. That said, key informant interviews and the population surveys show that it still exists to some degree. The most common types of illegal gambling in the population surveys were out-of-state online sports betting (1.5% of the population); out-of-state online casinos (1.3%); underground sportsbooks or bookies (0.8%); and illegal/underground casinos (0.1%).

Other Social Indices

- Census data and key informant interviews indicate a localized population increase in the town of Montville that is plausibly related to the introduction of the casinos.
- Key informants report a housing shortage in the casino host and surrounding communities.
- Traffic undoubtedly increased in the areas proximate to the new casinos. However, there is no compelling evidence that this has been associated with a marked increase in crashes or DUI injuries in the casino communities.

Economic and Fiscal Impacts

Direct Economic Impacts: Casinos

Gross gambling revenue (GGR) at the casinos rose from zero in 1992 to a peak of approximately $2.2 billion in 2007. Revenue has been steadily declining since 2007, with a marked drop during the pandemic, but with a slight recovery post-pandemic. Current casino GGR is estimated to be $1.1 billion, half of the 2007 levels. This decline is even more dramatic when taking inflation into account, as $2.2 billion in 2007 is worth $3.2 billion in 2023. Despite the decline, casino GGR is still considerably higher than any other type of gambling revenue in Connecticut (double the Lottery GGR).

Cell phone location data suggest that approximately 50.5% of the revenue at the Connecticut casinos currently comes from CT residents, 19.9% from MA residents, 12.9% from NY residents, 8.8% from RI residents, and 7.8% from people from other states/jurisdictions. These proportions are very similar to proportions estimated in 2015 using license plate surveys but differ from the proportions estimated in 1999 (at that time 37% of CT casino revenue was estimated to derive from CT residents). If the 2015 data is accurate, it indicates that the New England casino expansion since 2015 (e.g., the three new MA casinos) has had a relatively minor impact on Connecticut casino revenue. In terms of county, 36.2% of current revenue from CT residents is estimated to come from residents of New London County, which is significantly higher than any other county, especially in light of the fact that New London County only accounts for 7.5% of the CT population. A total of 8.1% of CT casino gamblers patronized casinos in other states, with MA being the primary destination (67.7%), followed by RI (19.0%), and NY (13.2%). MGM Springfield in MA is the only casino with significant patronage from CT (38.3%). Subtracting

[3] See Page 36 for an explanation of the ability to draw causal attribution from the correlation matrix for property crime in CT presented in Table 29, as well as the other associations included in this report.

monetary outflow from monetary inflow, the estimated net casino revenue gain for Connecticut is approximately $340 million per year.

The two casinos are estimated to currently employ approximately 13,900 people, down from a peak of over 26,000 between 2003 and 2008. Average casino wages have kept pace with inflation and are estimated to be roughly $43,470 in 2021.

The primary recipients of slot and table game revenue from the two Connecticut casinos are the Mashantucket Pequot Tribe and the Mohegan Tribe. The next major beneficiary is the State of Connecticut, which receives 25% of gross slot revenue from the two casinos into its General Fund, which amounted to just over $215 million in 2022. A portion of this is then allocated to municipalities ($51.4 million in recent years).

Direct Economic Impacts: Lottery

The Connecticut Lottery's GGR from traditional lottery products was $552 million in fiscal 2022, with 44.2% coming from instant/scratch tickets, 32.7% from daily lotteries, 12.2% from weekly lotteries, 8.9% from Keno, and 2.0% from Fast Play. From this $552 million, a total of $84 million was paid to the approximately 2,800 lottery vendors in commissions. Lottery GGR has steadily increased almost every year since 1979, with these increases more than doubling the rate of inflation during this time period.

The main Lottery employment comes from the 2,800 retail lottery vendors, as the Lottery itself has only averaged 158 employees since 2019.

Most lottery revenue is deposited in Connecticut's General Fund utilized to fund state operations and programs. This revenue contribution was just over $402 million in FY22, around two-thirds of total current gambling revenue to the state.

Direct Economic Impacts: Sports Betting and Online Casino Gambling

Total sports betting GGR has been $178 million from October 2021 to June 2023, which projects to roughly $102 million over a 12-month period.

Total online casino revenue has been $416 million for these 21 months, which represents an average of $238 million over a 12-month period.

The comparatively lower GGR compared to land-based casinos and the Lottery is due to their lower participation rates, leakage to illegal betting shops and out-of-state online sites, and lower profit margins.

Employment impacts within Connecticut are unknown but are anticipated to be fairly modest due to the comparatively small number of people typically employed to provide sports betting services.

The small amount of Connecticut Lottery revenue currently received from sports betting is deposited in Connecticut's General Fund. The majority of the tribal sports betting and online casino revenue is kept by the tribes. However, the state taxes online sports betting at 13.75% of GGR and online casino gambling at 18% of GGR (which will increase to 20% in FY27). Thus, online casino gambling payment from the tribes to the Connecticut General Fund has been $75 million from October 2021 - June 2023 and sports betting payments to the General Fund have been roughly $24 million.

Direct Economic Impacts: Parimutuels and Off-Track Betting

Parimutuel betting on horse racing, dog racing and jai alai have a long history in Connecticut but have been in decline since the mid-1990s with live jai alai ending in 2001 and live greyhound racing ending in 2006 (live horse racing ended in the 1960s). Off-track betting on live events in other states and countries has continued, however. Total combined parimutuel and off-track betting GGR peaked in 1987 at $111.4 million and has declined to only $27 million in 2022.

The actual number of people in Connecticut currently employed from OTB is unknown but will be relatively small due to the small number of OTB venues and the relatively small OTB revenue relative to other types of gambling.

Historically, the main beneficiary of parimutuel and off-track betting was the racetrack and/or simulcast venue that hosted the event and which kept between 18.7% and 23.8% of the total amount wagered.

Direct Economic Impacts: Charitable Gambling

Charitable gambling GGR in the form of bingo, raffles, pull-tabs, and bazaars has been in decline since 1993, when GGR peaked at roughly $20 million, declining to only about $500,000 in 2022. Revenue is kept by the charitable organization for charitable activities. Employment impacts are very small.

Total Gambling Revenue

Casino and lottery revenue account for the vast majority of total Connecticut GGR. Overall GGR peaked in FY07 at approximately $2.6 billion and has declined substantially since that time. Coming out of the pandemic years, there has been some resurgence in GGR in FY22 to approximately $1.9 billion with the advent of sports betting and online casinos.

Transfers of GGR to the General Fund have also declined since 2007, but not as much. While overall casino revenue has declined sharply, it only contributes 25% of slot revenue to the General Fund, whereas lottery revenue has been steadily increasing over time and almost 100% of this is transferred to the General Fund.

The population surveys show that 75% of all reported gambling expenditure was accounted for by 5.1% of Connecticut gamblers (3.5% of CT adults). Relative to their proportion in the general population, the following demographic groups make a disproportionately high contribution to Connecticut gambling revenue: males, ages 35-49, non-Whites (i.e., Blacks, Hispanics, Asians, and Other Ethnicity), and people with high school or lower educational attainment. The proportion of Connecticut gambling revenue from the 1.8% of people with gambling problems ranges from 12.4% for lottery products to 51.0% for sports betting, and is 21.5% for all legalized gambling.

Indirect Economic Impacts

The direct economic impacts of legalized gambling have significant indirect spin-off effects. In total, we estimate that the economic activity generated by the operation of legalized gambling supports approximately 22,832 jobs in Connecticut through the combination of direct and spinoff effects in the economy with 20,702 of these jobs estimated to be in the private sector. In addition, the industry supports an estimated $3.7 billion in gross state output, $2.3 billion of which is estimated to be value added (the portion of the output which is directly created by firms' capital goods and labor), as well as $1.6 billion in personal income. Nearly all this economic activity originated and is concentrated in New London County, the site of both of Connecticut's casinos. Employment is heavily concentrated in a

handful of industries, most notably the accommodation and amusement, gambling, and recreation sectors which comprise the casino industry.

Summary of Impacts and Recommendations

The above description provides a comprehensive profile of the current socioeconomic impacts of legalized gambling in Connecticut. Overall, legalized gambling has some significant positive impacts, with the following being the main ones:

(a) The primary benefit is that it has **increased overall economic activity and employment**, particularly in New London County. This, in turn, is attributable to the presence of the two large tribal casinos in that county which generate considerable economic activity as well as attracting new money into the state and retaining money that would have been spent at out-of-state casinos.
(b) It has important **recreational value** as evidenced by the fact that 69.2% of the population has engaged in it within the past 12 months.
(c) It has **decreased illegal gambling.** Although illegal gambling still exists to some extent, the level of illegal gambling in Connecticut is very low, especially relative to other jurisdictions.

However, legalized gambling in Connecticut also has significant negative impacts, with the following being the main ones:

(a) The primary negative impact is that 1.8% of the adult population are currently classified as **problem gamblers**, with mental health problems, financial problems (including bankruptcy), and relationship problems (including domestic violence) being the most common manifestations. That said, it is important to recognize that:
    - The legal availability of gambling is only partly responsible for the current rate of problem gambling, as people with gambling problems existed to some extent prior to legal provision.
    - Gambling is only partly responsible for the problems occurring within these individuals, as their associated mental health and substance use comorbidities are additional contributing factors.
(b) There is some evidence of a **slightly higher rate of property-related crime in the areas proximate to the casinos** compared to other parts of Connecticut.
(c) The introduction of any new large business is often associated with **increases in local traffic volume and the number of people to the area.** While these are normal occurrences, it does potentially put some strain on local housing and school resources.

In light of the impacts observed, one of the directives of the present study was to address the "*desirability of expanding, maintaining or reducing the amount of legalized gambling permitted in this state".* In this regard:

1. Further **expansion of the *types* of legalized gambling is not feasible**, as virtually every form of commercial gambling has now been legalized in Connecticut (with the exception of betting on entertainment and political events, which constitute a minor source of gross gambling revenue (GGR)). Similarly, reducing the number of different types of legalized gambling is also not advisable, as this would redirect the activity underground, with less net benefits to the state and its citizenry. Thus, the status quo is the only viable option.
2. **Expansion of existing types of gambling is possible.** As seen in the present study, the introduction and/or expansion of legalized gambling usually results in both positive (typically economic) and negative (typically social) impacts, and thus the decision to introduce or expand gambling needs to weigh the likely positive impacts against the negative impacts. In this regard:

a) Although there is minor casino leakage to other states, *building new casinos is not economically advisable* due to the large capital costs and the declining patronage of traditional casino gambling among Connecticut residents (and residents of many North American jurisdictions). Rather, diversification of non-gambling casino offerings in the existing facilities has more potential.
b) Online gambling, particularly online casino gambling, is the only type of gambling with significant future growth and revenue potential. In jurisdictions that have had online gambling for a much longer period of time (i.e., Europe) it constitutes a much larger portion of GGR than currently seen in North America. *Thus, there would be significantly greater economic benefits to the citizenry of Connecticut if online gambling was also offered by the Connecticut State Lottery* (in addition to their online sports betting offering). We recognize that this may not be possible because of the online casino exclusivity provided in the existing tribal compacts. We presume that online casino gambling was made exclusive to the tribes in part to mitigate any cannibalization of their land-based casino revenue. However, there is very little evidence that this occurs. Rather, online casino gambling tends to be complementary rather than competitive with land-based casinos (Marionneau & Nikkinen, 2017; Philander et al., 2015). Although increased gambling opportunities are associated with increased rates of gambling-related problems (particularly for increased online casino gambling if the state ever did offer it) it is also the case that problematic gambling tends to decline with extended exposure (LaPlante & Shaffer, 2007; Shaffer, LaBrie & LaPlante, 2004; Volberg & Williams, 2014; Williams, Leonard et al., 2021). It is notable that despite currently having a more extensive array of legalized gambling than other states, Connecticut's rate of problem gambling is mid-range and the current rate of problematic gambling is lower than in the 1990s.

Summary of Current Prevention and Treatment Services and Recommendations

A second mandate of the present study was to *"review available data to assess the problem gaming resources available in the state"* and to *"consider data from other states to inform recommendations on best practices and proposed regulatory changes."* In general, it can be said that problem gambling treatment and prevention in Connecticut has been quite proactive and provides a good model for the rest of the country. It is also the case that the **treatment resources currently available are more than adequate to meet the demand**. More specifically, the population surveys found that only 62.8% of people with gambling problems in Connecticut wanted help for their problems, with most preferring to control their gambling on their own. Furthermore, the large majority of people who did want help, successfully accessed that help (79.3%). Help was accessed from a wide variety of sources, with self-help materials, voluntary self-exclusion agreements, and support from family/friends being the most common sources.

That said, there are areas for further improvement:

1. **Additional outreach is warranted,** as a minority of people with gambling problems were deterred from seeking help because of stigma, not believing treatment would work, being unaware of where to get help, and perceived costs. It is also the case that 32.5% of people with gambling problems were unaware of the CT problem gambling helpline and 51.4% were unaware of the CT voluntary self-exclusion programs. These outreach efforts need to promote the fact that treatment works; that there are free publicly-funded types of treatment; that there is no shame in seeking help; and that there are locations where help is available. These efforts should be particularly targeted at:

- Groups with the largest number of people with gambling problems: Whites; males; ages 18-34; and non-immigrants; and
- Groups with below average treatment-seeking propensities: ages 65+, Blacks, Whites, people with middle or higher educational attainment, and non-immigrants.

2. Because of the strong preference for relying on one's own resources, **self-help materials should be pervasively available** online, at gambling venues, and at mental health and substance use treatment facilities.
3. Continue to **integrate problem gambling services with mental health, substance use and behavioral health programs.** Furthermore, establish a requirement that treatment providers seeing people with substance use and mental health issues screen for gambling problems. A simple two item screen about average monthly frequency of gambling and expenditure would suffice (e.g., Rockloff, 2012), and would be less stigmatizing than asking about problem gambling symptomatology.
4. **Merge the three separate self-exclusion lists** in Connecticut and align the self-exclusion periods across the three self-exclusion programs. Additionally, develop a strategy to create a regional self-exclusion program to allow people from all of the New England states to self-exclude from all of the venues and online gambling operators in the region.
5. In terms of the **Problem Gambling Helpline**, add a) a 'warm hand-off' functionality; b) regular follow-up with individual callers; and have c) improved data collection and a regular reporting schedule.
6. In terms of the criminal justice system, a) establish **gambling diversion programs** to work within the judicial system like those that deal with people experiencing substance use problems; and b) **increase education** and training for probation officers, bail commissioners, and law enforcement officers concerning how gambling is related to domestic violence and criminal offending.
7. **Monitor changes in problem gambling prevalence** by conducting annual online panel surveys and add a periodic validated module assessing gambling behavior and problems to the Brief Risk Factor Surveillance Survey (BRFSS) conducted jointly by the states and the U.S. Centers for Disease Control and Prevention.

Prevention efforts in Connecticut were also deemed to be sufficient. In terms of recommendations going forward:

1. Continue efforts to **publicly promote responsible gambling**. While existing efforts have been fairly successful, there are still many more people exposed to and aware of advertising promoting gambling relative to people aware of responsible gambling messaging.
2. Continue efforts to **increase prevention work with groups at higher risk** of developing gambling-related problems. These groups are: males, LGBTQ+, people younger than 65, people with lower educational attainment, and non-Whites (i.e., Blacks, Hispanics, Asians, and Other Ethnicity). In this latter regard, there is value in increasing multicultural efforts through outreach and delivery of services in languages other than English as well as geared to other cultures.
3. Prevention work should **disseminate information pertaining to: risk factors for problem gambling; signs of problem gambling; countering gambling fallacies by clearly explaining how gambling works, the true odds, and the negative mathematical expectation**. (It is notable that gambling 'to win money' was a particularly important motivation among people with gambling problems in Connecticut). Prevention work should also endeavor to teach more adaptive coping skills, as gambling to 'escape or relieve stress' and 'to feel good about myself' were disproportionately common motivations among people deemed to be 'at-risk' and/or having existing gambling-related problems.

4. Endeavor to **reduce the industry's financial reliance on at-risk and problem gamblers** as the 70.6% of revenue from this 6.7% of the population is much too high which serves to increase the chronicity of problem gambling and the likelihood of 'at-risk' gamblers transitioning to problem gamblers. The most effective way of preventing future problem gambling is to mitigate the risk within this at-risk group. In this regard:
    a. Consider sending automated alerts to people with Reward Cards and/or playing online when their gambling behavior escalates.
    b. Consider changing the parameters of Reward Cards so that they reward responsible gambling (e.g., no points after a certain amount spent; extra points for taking a problem gambling screen, etc.), rather than rewarding people for total amount spent.
    c. Consider restricting hours of service (both online and in-person), recognizing that people with gambling problems and at-risk for gambling problems disproportionately access services between 3am and 9am.
    d. Consider restricting ATM access or withdrawal amounts, recognizing that ATMs in gambling venues are disproportionately utilized by people with gambling-related problems and people at-risk for gambling problems.
    e. Consider implementing mandatory pre-commitment of gambling limits, which has been shown to be much more effective than voluntary limits.

HISTORY AND CURRENT AVAILABILITY OF LEGALIZED GAMBLING IN CONNECTICUT

History

Note: **red font** denotes the first time a type of gambling is introduced.

Prior to 1900	• Gambling was an important part of the cultural traditions of North American Indigenous people for at least 1,000 years prior to European contact (Binde, 2005; Culin, 1907; Williams, Stevens, & Nixon, 2011). These **traditional Indigenous games** involved contests of physical skill, guessing games, and 'dice' games.[4] Engaging in gambling was believed to promote the gathering of supernatural spirits. Consequently, it was often part of ceremonies associated with ensuring a good harvest or hunt, producing rain, or marking the changing of the seasons. For similar reasons, gambling games were engaged in to help cure sickness, expel demons, aid in fertility, and to facilitate passage to the afterlife (Culin, 1907; Salter, 1974, 1980). These games were also an important aspect of inter-tribal interaction as they provided a forum for nonviolent competition as well as an opportunity for socializing and trade (Binde, 2005; Williams et al, 2011). • European colonization transformed the nature and types of gambling in North America. In contrast to the more spiritual/ceremonial/social purpose of traditional Indigenous gambling, Western forms of gambling have a recreational and commercial orientation. Gambling was common in colonial New England among European immigrants who brought their gambling traditions with them, with **horse racing, cockfighting, bullbaiting, card games, dice games, and raffles/lotteries** being particularly popular (Findlay, 1986; Schwartz, 2006). Legal lotteries helped finance both private and public ventures such as roads, colleges, libraries, and military ventures as an alternative to direct taxation (Rabushka, 2010; Schwartz, 2006).[5] Nevertheless, there have always been certain segments of society that opposed gambling and bans did periodically occur. One of those periods was the late 1890s, when a combination of religious denouncement and lottery scandals contributed to the eventual banning of virtually all forms of gambling in most of the United States, including Connecticut (Schwartz, 2006; Thompson, 2001).
1900 to 1960s	• **Illegal gambling was fairly common** along with inconsistent law enforcement. CT Newspaper reports and digital archives contain frequent stories of illegal gambling: ○ Betting on horse racing and sports (mostly baseball and football) via bookmakers and/or betting pools from 1900 to the 1970s. Horse and

[4] *Contests of physical skill* involved things such as archery, spearing moving objects, foot races, wrestling, sliding sticks on snow/ice for distance, and several different types of ball games including lacrosse. G*uessing games* involved guessing which person, or container, or hand was concealing the hidden object (bone, stone, stick), or whether the person was holding an even or odd number of sticks, or which hand held the 'marked' object, or the relative position of the hidden objects. *Dice games* were played with several 2-sided dice made of shells, pits, bone, stone, or wood that were either tossed or contained in a bowl/basket that was struck with scores kept by means of counters that were exchanged (Williams, Stevens, & Nixon, 2011).

[5] In 1750 Connecticut used a lottery to raise money for a new building at Yale University at New Haven.

	harness racing was a very popular spectator sport (Riess, 2016) and CT had race tracks at Groton Driving Park (closed 1917), Charter Oak Park (closed 1931), Sage Park (closed late 1940s), and Crystal Lake/Her-Del Stables. ○ Card rooms/gaming houses from 1900 until the 1950s. Gambling was also prevalent in men's social clubs (and is/was legal as long as it was "incidental to a bona fide social relationship"). ○ Slot machines, typically in cigar stores and saloons, particularly between 1900 and 1920 but continuing until the 1960s. ○ Bucket shops from 1900 until the 1929 stock market crash (made illegal in CT in 1908). ○ Punchboards from 1910 to 1940s (available at stores and bars). ○ Numbers/policy games particularly in the 1930s and 1940s and persisting until the legal lottery in 1972 (Jacoby, 1950). These games were disproportionately patronized in lower socioeconomic neighborhoods. ○ **Bingo** from 1929 until it was **legalized in 1939** (only legal operators being churches, fraternal organizations and similar non-profit agencies). ○ **Bazaars and raffles** (typically run by charities and churches) from 1900 until **legalized in 1955** (conditional on town or city approval and when conducted by churches, fraternal organizations and other non-profits). • See Jacoby (1950) for additional historical context.
1971	• **Parimutuel betting on horse racing legalized** (on or off track) to raise state revenue and curb illegal betting**.** (No live horse racetracks were in operation in CT in 1971). • A **state lottery was legalized** for the purposes of raising state revenue. CT was the fourth state to legalize a state lottery after New Hampshire (1964), New York (1967), and New Jersey (1969).
1972	• **Parimutuel betting on dog racing and jai alai legalized** (on or off track). • CT Lottery sold its first tickets for a **weekly draw game** (The Lottery) through 3,000 retail locations with a $5,000 maximum prize. • Non-profit organizations were permitted to operate casino games during 'Las Vegas Night' fundraisers (law repealed in 2013).
1975	• **Scratch/instant lottery tickets** (Instant Match) offered by the CT Lottery through its retailers with a $10,000 maximum prize.
1976	• **Off-track betting (OTB) operations opened at 11 state-run OTB parlors.** • **Live greyhound racing began** with the opening of Plainfield Greyhound Park. • **Jai alai frontons established** in Hartford and Bridgeport (and Milford in 1977). • CT Lottery *televised* a weekly lottery game (Double Play) with $200,000 top prize.
1977	• CT Lottery offered its **first daily lottery** (Daily Numbers) through its retailers with a $2,500 maximum prize.
1980	• CT Lottery offered Play4, a weekly lottery with a $25,000 maximum prize. Drawing later increased to twice a day.
1983	• CT Lottery offered a weekly lottery with a $1,000,000 maximum prize (Lotto). Later offered twice a week. Original weekly lottery game phased out by 1985.
1986	• **High-stakes bingo parlor** opened by Mashantucket Pequot Tribe on reservation land after a federal court ruled that tribal land is exempt from the state's $500 daily bingo limit. (The tribe had received federal recognition in 1983).
1987	• **Sealed/pull-tab tickets legalized** for nonprofit organizations.

1988	• Indian Gaming Regulatory Act passed by Congress, allowing any federally recognized Indian tribe to operate any gambling activity already authorized by the state after negotiating a compact with the state.
1992	• Mashantucket Pequot Tribe **opened Foxwoods Resort Casino** (table games only) on tribal land in Ledyard. This followed the tribe successfully suing the state in 1990 in federal court for failing to negotiate a tribal-state gaming compact given that CT allowed charities to periodically operate 'Las Vegas Nights'. The U.S. Secretary of the Interior imposed procedures governing tribal casino gambling in CT that included a moratorium on slot machines until the dispute between the state and the tribe about their legality was resolved. Foxwoods was the world's largest casino at the time. • CT Lottery offered a weekly lottery with a $100,000 maximum prize (Cash Lotto). Later becomes a daily lottery game (Cash5).
1993	• **Foxwoods adds slot machines** after the State of CT agreed to allow the Mashantucket Pequots to operate slot machines in exchange for 25% of gross slot machine revenue. • State of CT privatized OTB.
1994	• Mohegan Tribe gained federal recognition and negotiated a similar gaming compact whereby they provide 25% of gross slot machine revenue to the state.
1995	• CT Lottery joined a **multi-state lottery game** (Powerball) with a minimum jackpot of $5,000,000.
1996	• The Mohegan Tribe **opened the Mohegan Sun Casino** on tribal land in Montville. Mohegan Sun also becomes one of the world's largest casinos.
2001	• Jai alai ends in CT with the closure of the Milford fronton. (Bridgeport and Hartford's frontons closed in 1995).
2006	• Live greyhound racing ends in CT with the closure of Shoreline Star Greyhound Park (Plainfield Greyhound Park closed in 2005).
2009	• CT Lottery offers another multi-state lottery game (Lucky4Life).
2010	• CT Lottery joins the multi-state lottery game Mega Millions. • CT Lottery provides vending machines for scratch/instant lottery tickets.
2015	• CT passes an act allowing the Mashantucket Pequot and Mohegan tribes to potentially establish additional casinos in the state on non-tribal land conditional on municipal and state approval.
2016	• CT Lottery begins offering **Keno** with drawings every 4 minutes.
2019	• CT Lottery vending machines now provide all CT Lottery games.
2020	• CT Lottery provides Fast Play games.
2021	• **Online and land-based sports betting, online casinos, and online sale of lottery tickets legalized.** Sports betting is provided by the two tribal casinos and the CT Lottery. Foxwoods provides a sportsbook at their casino and online in partnership with DraftKings online sportsbook and Mohegan Sun provides a sportsbook at their casino and online in partnership with FanDuel Online Sportsbook. The Lottery provides sports betting at land-based off-track betting sites, sports bars/restaurants and online at www.PlaySugarHouse.com. • Online casino gambling is provided by the tribal casinos: www.MoheganSunCasino.com and www.FoxPlay.com.

Current Availability

Connecticut prohibits all types of gambling unless there is legislation that specifically allows it. (Informal social gambling between individuals is legal as long as it is "incidental to a bona fide social relationship.") The Department of Consumer Protection (DCP) Gaming Division regulates all legal gambling with the exception of charitable gambling, where individual municipalities are responsible for issuing permits and general oversight. Federal, state and local law enforcement authorities are responsible for enforcing the laws.

Charitable Gambling

'Charitable gambling' refers to the provision of bingo, a raffle, a bazaar, or sealed tickets/pull-tabs by any of the following qualified entities:

- Educational and/or charitable organizations
- Civic, service, or social clubs
- Fraternal or fraternal benefit societies
- Church or religious organizations
- Veteran organization/associations
- Volunteer fire companies
- Political party or town committee of the municipality in which the activity is to be held

There are currently 18 bingo halls in Connecticut with many of them located in churches or legion halls. The maximum bingo prize cannot exceed $250 in value. There are three classes of annual bingo permits, with Class A permitting between 15-40 games one day a week, Class B permitting 15-40 games per day for a maximum of 10 consecutive days, and Class C permitting 15-40 games one day a month.

There are six classes of raffle permits that vary depending on the duration of the raffle (1-15 months) and the maximum value of the prizes ($100-$100,000). With some exceptions, prizes must be merchandise rather than cash.

A permit for a bazaar entitles the operator to conduct an event for a period of no more than 10 consecutive days where various games of chance can be offered (e.g., knock-a-block games, 50/50 draws, teacup raffles, etc.). With some exceptions, prizes must be merchandise rather than cash and there is no limit to the maximum value of the prizes.

Sealed tickets/pull-tabs must be purchased from DCP approved retail vendors. At least 45% of the resale value of the tickets must be provided as prizes. Each ticket typically costs between $0.50 to $2 with the maximum prize usually being no more than $500. Sealed tickets can be provided in conjunction with a bazaar permit, certain bingo permits, or on their own.

Municipalities are responsible for the permitting, oversight and enforcement of charitable games in their community.

The legal age to purchase sealed tickets in Connecticut is 18 but there is no age restriction for bingo, raffles, and bazaars.

Lottery

The Connecticut Lottery currently offers the following lottery products through its 2,800 retailers and 200 vending machines. (Online sales are not currently available but will be in the near future).

- Three weekly lotteries:
  - Lotto! (2 draws/week; $1 tickets; $1,000,000 minimum jackpot)
  - Mega Millions (multi-state; 2 draws/week; $2 tickets; $20,000,000 minimum jackpot)
  - Powerball (multi-state; 3 draws/week; $2 tickets; $20,000,000 minimum jackpot)
- Four daily lotteries:
  - Play3 (2 draws/day; $.50 to $5 per wager; $2,500 maximum prize)
  - Play4 (2 draws/day; $.50 to $5 per wager; $2,500 maximum prize)
  - Cash5 (1 draw/day; $1 to $1.50 per wager; $100,000 maximum prize)
  - Lucky for Life (multi-state; 1 draw/day; $2 per wager; maximum prize of $365,000 per year for life)
- Keno (draws every 4 minutes throughout the day; $1 to $20 to play; $1,000,000 maximum prize)
- Scratch/instant lottery tickets ($1 to $30 per ticket; maximum prize ranging from $100 to $1,000,000)
- Fast Play, which is both an instant lottery as well as a progressive jackpot lottery

The Connecticut Lottery also offers both land-based sports betting at off-track betting sites, sports bars/restaurants, as well as online. In October 2021 the Lottery initiated a partnership with Rush Street to offer www.PlaySugarHouse.com. However, in August 2023 it was announced that Rush Street will be leaving the Connecticut market and the Lottery will find a replacement.

The legal age to purchase or participate in traditional lottery games in Connecticut is 18. Non-CT residents are eligible to participate and collect prizes. Sports betting is restricted to ages 21 and older.

Casinos

Connecticut has two tribal casinos:

Opened in 1992, Foxwoods Resort Casino is owned and operated by the Mashantucket Pequot Tribal Nation on approximately 207 acres of tribal land in Ledyard, in New London County. It is one of the largest casinos in the world as well as the United States. A 2020 property fact sheet reported having 340,000 square feet of gaming floor space containing approximately 3,400 slot machines, 300 table games, and a high stakes bingo parlor. In 2021 a sportsbook run in partnership with DraftKings was added to the gaming floor. Foxwoods also provides online sports betting in partnership with DraftKings online sportsbook as well as online casino gambling at www.FoxPlay.com. Foxwoods is a destination resort with associated hotels (2,230 rooms), convention space, entertainment venues for concerts and events, spas, shops, restaurants, bars, indoor kart racing, etc.

On September 8, 2023, Foxwoods added a new casino to its complex, the 'Pequot Woodlands Casino'. The 50,000 square-foot casino, which replaced the area occupied by the former Grand Pequot Ballroom, has 430 slot machines, 24 table games, a high-limit slot room, and bars.

Foxwoods Resort Casino (stock photo)

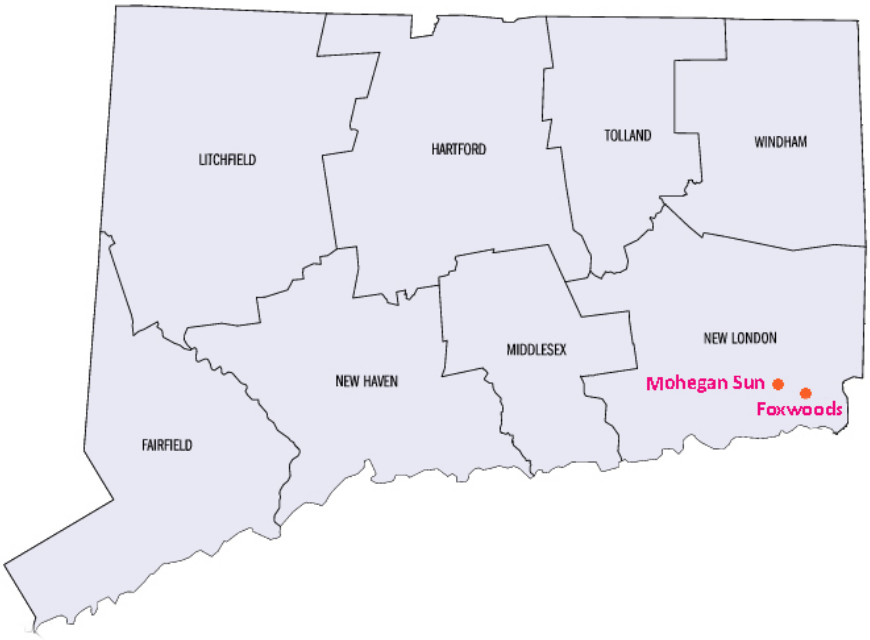
Opened in 1996, Mohegan Sun is owned and operated by the Mohegan Tribe on 240 acres of their tribal lands in Uncasville, a village in southeastern Montville, in New London County. Mohegan Sun is also one of the largest casinos in the world as well as the United States. In its September 2022 Form 10-K SEC filing it reports having 310,000 square feet of gaming floor space containing 3,650 slot machines, 250 table games,[6] and a sportsbook that is operated in partnership with FanDuel. Mohegan Sun provides online sports betting in partnership with FanDuel Online Sportsbook as well as online casino gambling at www.MoheganSunCasino.com. Mohegan Sun is also a destination resort with associated hotels (1,562 hotel rooms), convention space, entertainment venues for concerts and events, and approximately 83 food and beverage retail outlets (spas, shops, restaurants, bars, pools, etc.).

Mohegan Sun Casino (stock photo)

[6] However, their website reports having "nearly 4,000 slot machines and more than 300 table games."

Both casinos are located in New London County as shown in Figure 1.

Figure 1. Location of the Connecticut casinos within New London County



The legal age for casino gambling in Connecticut is 21. The legal age for high stakes bingo at Foxwoods is 18 (Mohegan Sun does not offer high stakes bingo).

Sports Betting

Horse and Dog Racing

There is currently no live horse racing or dog racing in Connecticut (live dog racing ended in 2006 and live horse racing in the 1960s).

However, there are currently 13 parimutuel off-track betting parlors/racebooks throughout the state where Connecticut residents can bet on live simulcast thoroughbred races, harness racing, and greyhound racing occurring in other states and countries.

- 11 of these facilities are owned and operated by Sportech:
  - Nine are Winners venues (in Bradley/Windsor Locks, Hartford, Manchester, Milford, New Britain, Norwalk, New Haven, Stamford, and Waterbury)
  - Two are Bobby V Restaurant and Sports Bars (in Bradley/Windsor Locks and Stamford)
- One is at Mohegan Sun (the racebook is a separate area within the FanDuel Sportsbook)
- One is at Foxwoods Resort Casino (the racebook is a small area within the DraftKings Sportsbook)

The legal age for betting on horse and dog racing in Connecticut is 18.

Other Sports

Full-fledged land-based sportsbooks for betting on other types of sports (e.g., professional sports, esports, fantasy sports, etc.) are available at:

- Mohegan Sun (FanDuel Sportsbook)
- Foxwoods Resort Casino (DraftKings Sportsbook)
- Arooga's Grille House & Sports Bar (in Shelton) (in conjunction with the CT Lottery)

The CT Lottery has added self-service sports betting kiosks to almost all of the off-track betting parlors:

- Eight at Winners venues (in Bradley/Windsor Locks, Hartford, Manchester, Milford, New Britain, New Haven, Stamford, and Waterbury)
- Two at Bobby V Restaurant and Sports Bars (in Bradley/Windsor Locks and Stamford)

The CT Lottery recently announced a partnership with the Capital Region Development Authority (CDRA) to open a new, 5,000 square foot sportsbook at the XL Center in Hartford in mid-September 2023. The CDRA will operate the restaurant and bar and the Lottery will operate the sportsbook.

Online sports betting is also available via the Connecticut Lottery (www.PlaySugarHouse.com), Mohegan Sun (FanDuel Online Sportsbook), and Foxwoods (DraftKings online sportsbook).

Sports betting is available for a comprehensive range of major sporting events being played around the world. U.S. college sports betting is also allowed, except for wagers on Connecticut-based college teams.

The legal age for betting on sports (other than horse or dog racing) in Connecticut is 21. *Online* sports betting within Connecticut is restricted to people who are physically within the state borders when the bet is made.

Online Gambling

As mentioned, online sports betting is available via the Connecticut Lottery (www.PlaySugarHouse.com), Mohegan Sun (FanDuel Online Sportsbook), and Foxwoods (DraftKings online sportsbook).

Online *casino gambling* is available through the tribal casinos: www.MoheganSunCasino.com and www.FoxPlay.com. Mohegan Sun and Foxwoods have contracted with Evolution, an online casino gaming studio, to produce live gambling table games. The legislation permitting legal online casinos also permitted online bingo, which is available at www.FoxPlay.com. Online instant games (analogous to scratch/instant tickets) are also available at www.MoheganSunCasino.com.

The online purchase of traditional lottery tickets will occur in the near future.

The legal age for online casino and sports betting in Connecticut is 21. Online casino and sports betting is restricted to residents of Connecticut. Furthermore, Connecticut residents cannot legally gamble online outside of the state, as online gambling must be conducted with companies having a valid state online gambling license.

METHODOLOGY FOR THE CURRENT STUDY

Theoretical Framework

The theoretical approach used to study the effects of gambling is a fundamentally important determinant of the results obtained, as well as the validity of these results. This issue has been the focus of conferences (Wynne & Shaffer, 2003); special issues of the *Journal of Gambling Studies* (June 2003) and *Managerial and Decision Economics* (June 2004); books (Grinols, 2004; Hsu, 2014; Walker, 2007, 2013; Williams & Siegal, 2013); comprehensive reviews (Williams, Rehm, & Stevens, 2011; Walker & Sobel, 2016); and many individual articles and reports.

Despite all this work there remain several contentious issues, with one of the main ones being how to capture and quantify the social impacts (Collins & Lapsley, 2003; Eadington, 2003; Walker, 2003, 2008a, 2008b; Williams, Rehm & Stevens, 2011). Some studies have ignored social impacts, choosing to only measure the economic benefits that are easily quantifiable (e.g., gambling revenue, tax revenue, employment numbers). Examples include the American Gaming Association's (2018) study of U.S. gambling and the Canadian Gaming Association's analysis of the impacts of gambling in Canada (HLT Advisory, 2017). However, this creates an unbalanced analysis in that the positive economic impacts are not evaluated in the context of the negative social impacts. More comprehensive socioeconomic impact studies have cast a wider net and have included economic impacts as well as important social impacts such as problem gambling and crime (e.g., SEIGMA, 2018; Summit Economics & Williams, 2019; Williams, Belanger & Arthur, 2011).

An additional problematic issue concerns how to compare the social impacts with the financial/ economic ones so that an overall determination of the positive or negative nature of gambling can be made. Some studies have done this by estimating the monetary value of the social impacts so that they can be combined with the monetary/economic impacts in other areas. This is the cost-benefit analysis (CBA) approach to gambling best illustrated by the work of the economist Earl Grinols (2004).

However, while determining the financial costs and benefits of some social impacts is reasonably straightforward (e.g., costs of treating people with gambling problems, the costs of prosecuting and incarcerating gambling-related crime), estimating costs and benefits for many other social impacts is not. This includes things such as the costs of suicides, divorces, loss of social capital, the psychological trauma of being having gambling problems, as well as the leisure benefits of recreational gambling. Some studies have tried to establish an approximate financial estimate for these more intangible impacts by including indirect costs (e.g., in addition to funeral costs of a gambling-related suicide, the estimated costs of lost future productivity). Other studies have tried to establish the financial value of social impacts by asking people "how much would you pay not to be a problem gambler"; and/or quantifying the leisure benefit of gambling by calculating 'consumer surplus' (i.e., the difference between what people say they would be willing to pay for gambling versus what they actually pay). Unfortunately, the figures obtained from all of these approaches depend on a large and somewhat arbitrary set of assumptions, and thus are fairly unreliable, producing widely different estimates. It also remains unclear how to create a monetary value for some variables (e.g., loss of social capital).

Aside from these practical issues, an argument can be made from a theoretical standpoint that it is inappropriate to apply an arbitrary monetary amount to something that is clearly nonmonetary in its value or consequences to the participant. Furthermore, doing so simply reinforces the erroneous notion that money is the most appropriate and important metric upon which to judge the impact and/or the overall value of gambling.

This latter issue is not restricted to gambling. Widespread dissatisfaction with reliance on financial measures such as gross domestic product (GDP)[7] or cost-benefit analysis to measure societal progress or impacts on overall societal well-being has existed for many years (e.g., Atkinson, 2000; Daly & Cobb, 1989; Dasgupta & Mäler, 2000; Fioramonti, Coscieme & Mortensen, 2019; Giannetti et al., 2015; Tinbergen & Hueting, 1992). This situation has led directly to the development of several alternative measures to assess progress/impacts in a more comprehensive fashion. These measures include the United Nations Human Development Index, the Index of Sustainable Economic Welfare, the Green National Product and the Genuine Progress Indicator (GPI). Most of these measures recognize economic productivity (e.g., GDP) as an important aspect to be considered, but they do not make it the central basis upon which a judgement about progress or societal well-being is made.

Unfortunately, while these approaches are more theoretically satisfying, they have practical problems of their own. First, although they all have similar goals, their specifics are markedly different from each other. This illustrates the fact that determining which indicators contribute to societal well-being is a highly value-laden task for which there is not widespread agreement. Second, most of these approaches have the same problem as cost-benefit analysis in that they aspire to combine impacts into a single index, usually just by adding up the number of beneficial indicators against the detrimental ones. This is problematic because it makes all impacts equivalent in value and/or requires a subjective judgement about the relative value/weight of one impact against the others.

The reality is that *there is no reliable way of combining social impacts with monetary impacts to produce a single valid summative measure*. *Instead, assessing the overall positive or negative nature of an enterprise that has wide ranging social and economic impacts (such as gambling) will always be a subjective judgement about the relative importance of the observed social impacts compared to the observed economic impacts.*

However, this reality does not preclude conducting meaningful socioeconomic analyses of gambling. Rather, there are many basic **principles for conducting socioeconomic impact studies** that can *ensure that the obtained results are comprehensive, balanced, and scientifically rigorous*. The purpose of the next section of this report is to outline these principles. These principles ensure there is a meaningful accounting of the social impacts of gambling as well as: (a) enshrine basic principles of economic gain/value in the evaluation (Walker 2003, 2008a, 2008c; Walker & Barnett, 1999), and (b) outline scientifically rigorous strategies to ensure that things such as attributional fractions[8] and the causal direction of impacts can be better established.

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[7] GDP is the dollar value of all goods and services produced in a jurisdiction over a one-year time period (primarily measured by the aggregate volume of monetary transactions/sales that occur). This measure has been critiqued because although it provides a rough measure of the magnitude of economic activity, it does not measure whether this economic activity is sustainable, efficient, or conducive to societal well-being.

[8] In the present context 'attributable fraction' concerns how to appropriately proportion costs attributable to gambling, when many people with gambling problems have comorbid disorders (e.g., substance use problems, mental health problems) that contribute to the negative consequences they experience such as suicide, divorce, and crime (Australia Productivity Commission, 1999; Walker, 2008c).

Principles for Conducting Socioeconomic Impact Analyses of Gambling

Much of the following is adapted from Williams, Rehm & Stevens (2011).

Measure 'Impacts' rather than 'Costs and Benefits'

While many gambling impacts are clearly negative (e.g., increased problem gambling) or positive (e.g., employment gains), the positive or negative nature of several other changes is less clear and somewhat subjective (e.g., changed societal pattern of leisure pursuits, cannibalization of competing industries, increase in tax revenue). 'Impact' is a better term than 'costs and benefits' as it conveys the fact that a change has occurred without having to necessarily characterize it as positive or negative. Use of this term also avoids confusion with the cost-benefit analysis (CBA) approach's use of the terms 'cost' and 'benefit'.

Avoid Applying Arbitrary Monetary Values to Impacts that are clearly Non-Monetary in Nature.

As mentioned, it is a mistake not to capture social impacts that do not have significant monetary consequences. However, it is also a mistake to try to capture them within a cost-benefit economic framework by applying an arbitrary monetary value to them. CBA fails to recognize that the true nature of the impact is largely non-monetary/economic in nature. Thus, in most cases, social impacts *are best quantified and reported simply by means of percentage change in the variable and/or the actual number of people impacted (e.g., % change in rate of problem gambling, % change in crime, change in pattern of leisure behavior, etc.).*

Create a Profile of the Economic and Social Impacts Rather than Trying to Combine them into a Singular Aggregate Value.

The advantage of a common metric (e.g., money) is that it potentially allows for the combination of all impacts into an overall aggregate value. However, this approach is problematic because of: (a) difficulties applying monetary values to many social impacts, (b) the need to construe everything as either a cost or benefit, and (c) the inappropriateness of using money as a way of characterizing the nature and magnitude of some social impacts (e.g., suicide). In most cases the best way of treating these impacts is to simply list them and to create a profile of impacts. For most social impacts, reporting the percentage change in the variable and/or the percentage of people impacted is most descriptive. This can also be done for the economic impacts. However, for many of the economic impacts a monetary value can be used to quantify the magnitude of the effect within each impact area. There can also be value in aggregating the monetary amounts within and/or across economic impact areas.

Apply Basic Economic Principles to Evaluate the Positive or Negative Nature of the Economic Impacts

One of the critiques of some socioeconomic approaches to gambling is that they fail to adequately consider important economic principles in judging the overall impacts (Walker 2003, 2008a, 2008c; Walker & Barnett, 1999). For example, several 'costs' of gambling in the Anieski & Braatan (2008) SEIG framework (e.g., theft, unemployment, costs of treating people with gambling problems) are unlikely to result in any real reduction in the economic wealth within a society/jurisdiction (i.e., these are simply transfers of wealth within society) (Eadington, 2003; Walker, 2003, 2008a; Walker & Barnett, 1999). There is no doubt that theft and treatment for people with gambling problems are important negative impacts that need to be identified and documented. However, the point is that these types of impacts have relatively little influence on the overall economic vitality/wealth of a jurisdiction.

Rather, for something to have a meaningful economic/monetary impact one of the following needs to occur:

- *The economic activity causes either an influx of money/assets from outside the jurisdiction or a loss of money/assets to an outside jurisdiction.* For gambling, an influx occurs when the primary patronage base is from outside the jurisdiction, or capital investments are made in the community by outside agencies (e.g., casino developer, private businesses, government).

- *The economic activity increases or decreases the value of existing assets.* This impact generally does not apply to gambling, or to entertainment industries more generally, as gambling primarily involves a transfer of wealth rather than a creation of wealth.[9] However, it can occur when the introduction of a new gambling venue either increases or decreases the real estate market value of neighboring property. It can also occur in the manufacturing of gambling equipment (e.g., electronic gambling machines) that can be sold for an amount worth more than the sum of the parts.

- *The economic activity produces increased or decreased utilization of existing money.* Money that sits dormant has very little economic utility to the broader economy. It has much greater utility if it is spent on gambling, this gambling revenue is then spent on employee wages, and these wages are then used to buy local goods and services. In general, money has increased economic value as a function of the number of people that use the money and the speed of the cash flow from one person to the next (Walker, 1999, 2007). Increased utilization of existing money is more likely to occur if gambling patronage comes from individuals who are not financing their gambling by reducing their spending on other activities or going into debt to finance their gambling (i.e., the income class of the patronage potentially speaks to this). Evidence of increased utilization of existing money is seen if the increased revenues and employment in the gambling industry (and supporting/complementary industries) occurs without there being offsetting declines in the revenues and employment in other industries. There is good evidence that adding a new and interesting service/good to the economy (e.g., gambling) can at least temporarily create increased monetary flow without negative impacts on other businesses (Walker & Jackson, 1998; 2007).

[9] Wealth creation is more typical of manufacturing industries. For example, a car manufacturing industry creates wealth by making things that are worth more than the sum of their constituent parts. Most entertainment industries, in contrast, simply redirect monetary flow from one sector of the economy to another.

- *The transfer of wealth and shifts in monetary flow related to the new economic activity strengthen or weaken sectors of the economy capable of producing an influx/outflow of wealth, increased/decreased value of existing assets, or increased/decreased utilization of money.* One of the potential concerns with gambling is that it may redirect money from wealth-producing sectors (i.e., private business) to sectors not known for wealth creation (i.e., government, charity).

- *Failure to implement the economic activity would have resulted in an influx/outflow of wealth, increased/decreased value of existing assets, or increased/decreased utilization of money.* Even if there is not a clear economic gain, an economic benefit still exists if the gambling activity prevented assets or money from leaving the jurisdiction, prevented a decrease in the value of existing assets, or prevented decreased utilization of existing money.

Identify How Much Money is Involved, Where it is Coming From, and Where it is Going

The principles listed up to this point have been focused primarily on resolving the central methodological issue of how to handle the social impacts of gambling. The following principles are focused on some of the practical issues involved in conducting socioeconomic analyses of gambling and ensuring optimal scientific rigor.

As mentioned, gambling is an economic activity characterized by a transfer of wealth. There are groups and sectors that are winners and there are groups and sectors that are losers, and *most of the impacts are seen in these groups/sectors*. Thus, the first step in a socioeconomic analysis of gambling is to document: (a) how much money is being transferred (a rough gauge of the magnitude of the potential impacts), (b) where the money is coming from, and (c) where the money is going. The demographic characteristics of the gamblers are particularly important, with the most important socioeconomic variables being age, gender, race/ethnicity, income, and problem gambling status. The geographic origin of the gamblers is also very important because it speaks to: (a) whether the revenue is an infusion of new wealth or just local money that has been redirected, and (b) the geographic range in which to expect (and therefore, measure) impacts.

Next, it is important to clearly document which groups/sectors are the primary recipients of gambling revenue (i.e., private operator, different levels of government, charity, local community) as well as the geographic location of each of these groups. It is also essential to document how these groups then disburse or spend the money to identify all the downstream beneficiaries. The geographic origin of the operating expenses to run the new type of gambling, as well as the origin of any equipment purchased are also relevant to a socioeconomic accounting.[10]

[10] If gambling revenues are primarily collected at the state or federal level, rather than at the municipal level, and are redistributed statewide or federally, then there is a good chance that there will be a net outflow of money from the local municipality hosting the gambling venue. Some jurisdictions compensate for this by providing municipalities with a guaranteed fixed percentage of the profits, but this often does not fully compensate for the outflow.

Establish both the Micro and Macro Geographic Impacts

Most socioeconomic impact studies have only focused on the changes in the community that received the new form of gambling. However, for a full understanding of the impacts it is necessary to go beyond these boundaries, as financial inflow/benefits in one region usually come at the expense of financial outflow or loss of benefits in adjoining regions. Thus, one should aspire to assess both the micro (community specific) impacts and the macro (greater regional) impacts. As mentioned, the geographic origin of the patronage is a good indication of the regional scope of the impacts. Once the boundary of this larger region/jurisdiction is established, it is important to clearly identify the impacts within the community of interest as well as regionally.

Assess Impacts for Years before and for Years after the Introduction of New Gambling Venues/Opportunities

The length of time it takes for all the economic and social impacts of gambling to manifest themselves is quite variable. Some of the economic impacts (e.g., revenues, employment, etc.) tend to be immediate. On the other hand, it can take a few years for competing industries to fail or for increased utilization of infrastructure (e.g., roads, sewers, etc.) to result in the need for repairs. Some economic impacts will also reverse themselves in a resilient economy as industry repositions itself. Social impacts may take longer to appear than economic impacts. While some individuals experience rapid onset of gambling problems, others gamble safely for several years before problems develop (Committee on the Social and Economic Impact of Pathological Gambling, 1999). There is also good evidence that rates of gambling and problem gambling decline with extended exposure (LaPlante & Shaffer, 2007; Shaffer, LaBrie & LaPlante, 2004; Volberg & Williams, 2014; Williams, Leonard et al., 2021). It is also very important to realize that new gambling opportunities are always added to existing gambling opportunities (even if they are illegal). Thus, lag effects of these pre-existing opportunities can easily be mistaken for immediate impacts of the new forms. To isolate such effects, it is important to document prior gambling opportunities and socioeconomic effects for several years before as well as for several years after the introduction of a new form of gambling.

Comprehensively Assess all Potential Economic and Social Impacts

It is self-evident that all impacts of gambling must be included in an impact analysis. There are a multitude of different and equally legitimate ways of organizing and categorizing these impact areas. It is also difficult to clearly separate social from economic impacts, as virtually all 'social' impacts also have some economic consequences and most 'economic' impacts have some social consequences. Thus, the important thing is not the overall organization but ensuring that: (a) all of the potential impact areas are covered, and (b) economic/monetary impacts are given equal prominence to the social/nonmonetary impacts. **The following table is the organization of the impact areas employed in the present study.**

Table 1. Social and economic impact areas in the present study

SOCIAL and HEALTH IMPACTS (i.e., impacts that are primarily non-monetary)	
Attitudes	Perceived impacts of gambling, perceived availability, benefits vs. harms, morality of gambling
Gambling Behavior	Past Year Participation: frequency, expenditure, and location/modality for each type
Problem Gambling (PG) and Related Indices	Population Prevalence of Problem Gambling
	Treatment (number and percentage of problem gamblers wanting, requesting, and receiving treatment)
	Financial Problems (number and percentage of people reporting significant financial problems and/or bankruptcy because of gambling; personal bankruptcy rates)
	Mental Health Problems (number and percentage of people reporting mental stress due to gambling, including suicidal ideation and attempts; suicide rates)
	Relationship Problems (number and percentage of people reporting significant relationship problems, domestic violence, divorce/separation, and child neglect because of gambling; domestic violence rates; divorce rates; child maltreatment rates)
	Work/School Problems (number and percentage of people reporting work or school problems due to gambling, including losing their job or having to quit school; rates of receiving public financial assistance)
	Physical Health Problems (number and percentage of people reporting physical health problems due to gambling including receiving medical help)
Crime	Number and percentage of people reporting illegal behavior because of gambling; crime rates (violent, property, DUIs, illegal gambling)
Other Social Indices	Impacts on the overall population; real estate and housing; demographic make-up of the student body; traffic volume and accidents
ECONOMIC and FISCAL IMPACTS (i.e., impacts that are primarily monetary)	
Direct Economic Impacts	Gambling revenue, employment, wages, and spending for each type of legalized gambling
	Geographic (state and county) and demographic origin of gambling revenue
	Immediate distribution of gambling revenue as a function of sector (i.e., what percentage goes to the commercial provider, state, tribes, and municipalities)
	Known/documented distribution of this revenue within each sector (i.e., how much is spent on wages, etc.)
Indirect Economic Impacts	Employment levels (projected overall employment impacts; employment rates in different industry sectors; overall unemployment rates)
	Personal income levels (projected overall impacts on income; average wages; poverty rates)
	Total economic activity (projected overall economic output and new economic activity; overall number of business establishments; business bankruptcies; number of business establishments in different industry sectors)
	Government and fiscal (state and municipal revenue and expenditures)

Employ Methodologies that Facilitate Causal Attribution

It is often difficult to unambiguously attribute observed socioeconomic changes to the introduction of gambling as there are many other socioeconomic forces at work in society and in the economy that may be partially or fully responsible. The absence of change in a certain social or economic variable provides reasonable evidence there has been no impact on that variable at the specific geographic level measured. However, when there is a change in a variable in the expected direction that is temporally associated with the introduction of a new type of gambling often all that can be said is that the change is *consistent* with a potential impact.[11]

Socioeconomic impact studies need to use methodologies that strengthen this causal attribution. The likelihood that an observed change is actually attributable to gambling becomes stronger when: (a) many variables are assessed such that there is an ability to point to analogous changes in several variables theoretically related to gambling and the absence of change in variables not theoretically related to gambling, and (b) other sources of information pertaining to the same variable are collected and make more direct attributions (e.g., gamblers in population surveys directly attributing their separation or bankruptcy to the new type of gambling; key informants in the local community also making these direct attributions).

Speculate on What the Situation Would have been Without the Introduction of Gambling

Most studies compare economic and social indicators after the introduction of gambling to what these indicators were before the introduction of gambling. However, the justification for the introduction of a new form of gambling is often the desire to stem the outflow of gambling dollars to neighboring jurisdictions that already offer this new form of gambling. Thus, an even more relevant comparison than 'baseline' is what the likely economic and social situation would have been if gambling had not been introduced (i.e., the 'counterfactual situation'). The extent to which the introduction of local gambling opportunities has prevented losses to neighboring jurisdictions is very difficult to judge and highly speculative, but nonetheless merits consideration.

Recognize that Assessing the Overall Positive or Negative Nature of the Observed Impacts is a Qualitative Assessment that Often Involves Some Subjectivity

The assessment of whether the overall impacts of gambling are positive or negative (and the degree to which they are positive or negative) requires a joint qualitative assessment of the: (a) positive or negative profile of the social impacts, against the (b) positive or negative profile and economic value of the economic impacts. When these things are aligned, then this assessment is straightforward (i.e., mostly positive social impacts and positive economic value; mostly negative social impacts and negative economic value).

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[11] In a similar way, many of the adverse effects of problem gambling cannot be uniquely attributed to the introduction of a new gambling venue or type of gambling, as most people with gambling problems engage in a wide variety of gambling activities and also have comorbid conditions that contribute to their problems (e.g., substance use problems, mental health problems) (Australia Productivity Commission, 1999; Lorains, Cowlishaw & Thomas, 2011; Walker, 2008c).

However, the assessment is inherently subjective when these things are not in alignment (e.g., net economic gains but mostly negative social impacts). In this situation, the overall assessment will depend on the importance one assigns to the economic versus social impacts. In particular, for gambling the overall assessment often depends on whether one believes that the net economic value of the activity adequately offsets the negative social impacts.[12]

Report the Limitations and Parameters of these Results

The final principle is to recognize and report that the results obtained are very much a function of the context in which the study was conducted. More specifically:

- *Impacts are Dependent on the Magnitude of the Change in Gambling that has Occurred for the Population.* Adding a large casino to a small community without prior gambling opportunities will usually have a much larger impact than adding a new casino to a large city that already has existing casinos and/or other gambling opportunities.
- *Impacts are Somewhat Specific to the Type of Gambling Studied.* Different types of gambling have different profiles of impacts in terms of their potential for contributing to problem gambling (e.g., online gambling vs. lotteries), the number of jobs they produce (horse racing vs. slot machines), and their likelihood of cannibalization of other industries, etc. Hence, it is necessary to qualify results as being specific to the type of gambling studied.
- *Impacts are Somewhat Specific to the Jurisdiction Studied.* Jurisdictions differ widely in how gambling revenue is distributed, pre-existing availability of gambling, the strength of policy and educational initiatives to prevent problem gambling, baseline levels of poverty and unemployment, and the vulnerability of the population to addiction. Hence, it is important to recognize that the results will be somewhat dependent on the conditions that exist in the jurisdiction being studied.
- *Impacts are Somewhat Specific to the Time Period Studied.* The period during which impacts are studied is critical, as gambling availability and gambling policy can change rapidly within a jurisdiction. Furthermore, evidence shows that populations with extended exposure to gambling have lower rates of problems (due to adaptation) compared to places with more recent introduction of gambling (LaPlante & Shaffer, 2007; Shaffer et al. 2004; Volberg & Williams, 2014; Williams, Leonard et al., 2021).

[12] Other areas of subjectivity also exist; for example, how some of the ambiguous impact categories are construed (e.g., is increased government revenue a positive or negative thing). Another example concerns whether the micro (community-level) impacts are considered more or less important than the macro (regional-level) impacts.

Data Sources for the Present Study

In line with the above principles, the present study employed a **mixed methods research strategy** that utilized both primary and secondary data collection/analysis as well as quantitative and qualitative research methods. Gambling is just one of many economic forces contributing to the dynamic social and economic landscape of Connecticut, making disentangling gambling's unique contribution difficult. The use of multiple methods aids in this task, as it allows for triangulation of findings. Each of these data sources is described below.

Key Informant Interviews

Purpose

Key informants are individuals with important first-hand knowledge about gambling by virtue of their employment and/or long years of experience. The information these individuals provide: (a) helps contextualize and provide insight to our quantitative findings, (b) potentially identifies impacts that are not addressed with our primary or secondary data collection, (c) potentially identifies other key informants that the Research Team may be unaware of.

Our key informant interviews provided information on the following indices: problem gambling and related indices; crime; other social indices; direct economic impacts; and indirect economic impacts.

Methodology

Key informants were divided into informants on Social issues and informants on Economic issues. We established a Key Informant Interview working group, consisting of one team responsible for the Social interviews and one team responsible for the Economic interviews. Each team drafted a list of categories of organizations that they wanted to interview. Once these lists were finalized, each team conducted an online search to identify the most appropriate individuals to contact within these categories. The initial lists were shared with representatives from DMHAS who reviewed and approved the lists and provided additional names and categories of people to contact. Each team also asked each interviewee for suggestions of other people they believed we should contact. Lists of questions specific to the Social and Economic domains were drafted by each team.

The final Social list of prospective interviewees consisted of 77 individuals grouped into 11 categories: (1) DMHAS; (2) Connecticut Council of Problem Gambling (CCPG); (3) Regional Behavioral Health Action Organizations (RBHAOs); (4) Problem gambling treatment providers (from Bettor Choice); (5) Disordered Gambling Integration Project (DiGIn); (6) Persons with problem gambling lived experiences; (7) Connecticut Department of Consumer Protection; (8) Other government officials; (9) Nongovernmental, nonprofit, charitable and community based organizations; (10) Researchers; and (11) Criminal justice.

The final Economic list of prospective interviewees consisted of 51 individuals grouped into four categories: (1) State government; (2) Regional organizations, including government and business

advocacy groups; (3) Local municipalities, including host casino communities; and (4) Gambling operators, including the Connecticut Lottery Corporation and the two Connecticut casinos.[13]

The teams followed somewhat different procedures to recruit interviewees: the Social team sent an informed consent letter and the proposed list of questions as attachments to the initial invitation email while the Economic team sent initial invitation emails with follow-up email requests and/or telephone calls.

The Social team was successful in interviewing 36 people, with at least one individual from each of the eleven categories. Sixteen people declined to participate and 23 people did not respond to either the initial email or subsequent attempts to schedule an interview. The 36 people interviewed concerning social impacts were:

Department of Mental Health and Addiction Services (DMHAS)

- Jeremy Wampler: Behavioral Health Clinical Supervisor of DMHAS Problem Gambling Services
- Fiorigio (Fred) Fetta: Behavioral Health Program Manager of Problem Gambling Services (PGS)
- Kelly Leppard: Certified Prevention Specialist and Primary Prevention Services Coordinator for Problem Gambling Services
- Haley Brown: Certified Prevention Specialist and Primary Prevention Services Coordinator for Problem Gambling Services, focusing on underserved and special populations
- Shelly Nolan: Director of DMHAS Women's Services/Problem Gambling Services
- Dr. Lori (Loreen) Rugle: Former Program Director for DMHAS Problem Gambling Services; currently Assistant Professor of Psychiatry, Program Director for the Maryland Center of Excellence on Problem Gambling (University of Maryland)
- Susan McLaughlin: Former Prevention Services Coordinator for DMHAS Problem Gambling Services; Former Coordinator of the Helpline and Youth Programs for the CCPG

Connecticut Council on Problem Gambling (CCPG)

- Diana Goode: Executive Director of the CCPG; Secretary of the National Council on Problem Gambling's Affiliates Committee
- Valerie Tebbetts: Helpline Coordinator for CCPG; former peer counselor with Bettor Choice; prior lived experience with problem gambling

Regional Behavioral Health Action Organizations (RBHAOs)

- Ingrid Gillespie: Liberation Programs, Director of Prevention; The Hub: Behavioral Health Action Organization for Southwestern CT (a division of the Regional Youth Adult Social Action Partnership (RYASAP), Coordinator for Problem Gambling, Facilitator for Gambling Awareness Team (DMHAS Region 1)
- Pam (Pamela A.) Mautte: Alliance for Prevention and Wellness (BHcare), Director (Region 2)
- Angela Rae Duhaime: Southeastern Regional Action Council (SERAC), Executive Director (Region 3)
- Wende Cooper: Amplify, Program Manager for Problem Gambling, Prevention Coordinator (Region 4)
- Kathy Hanley: Western CT Coalition, Behavioral Health Director (Region 5)

[13] The key informant interview responses from the Mohegan Tribe regarding Mohegan Sun and the Mashantucket Pequot Tribal Nation regarding Foxwoods Resort Casino were submitted as written responses, both of which are included as Appendix I of this report.

Problem gambling treatment providers (Bettor Choice)

- Melodie Keen: Clinical Manager of Gambling Services (Clinical Director of Bettor Choice program) at Connecticut Renaissance (Region 1)
- Celaura Estrada: Supervisor for the Bettor Choice gambling treatment program at United Community & Family Services (UCSF) Healthcare (Region 3)
- Katie Kirch: Clinical Supervisor for the gambling treatment program at Wheeler Clinic / Bettor Choice Program (Region 4)
- Earle Sanford: Program Manager of PGS with MCCA (Midwestern Connecticut Council of Alcoholism) / Bettor Choice Program (Region 5)
- Scott Nelson: Outpatient Clinical Director with MCCA (Region 5)
- Elizabeth Genovese: ERM Counseling Services; Bettor Choice Counselor (LPC) with MCCA (Region 5)

Disordered Gambling Integration Project (DiGIn)

- Brian Morris: Clinical coordinator at the Center for Human Services (CHS) - part of the Recovery Network of Programs; previously Care Manager at CHS (Region 1)
- Lesbia (Leslie) Nieves: Director of Residential Programs & Services at the CT Department of Veteran Affairs (Region 4)
- Jamie Calvano: Director of Training and Compliance for the McCall Behavioral Health Network (Region 5)

Persons with problem gambling lived experience

- Stephen Matos: Peer Counselor/Recovery Support Specialist at MCCA (Midwestern Connecticut Council of Alcoholism); prior lived experience with problem gambling
- Brian Hatch: Creator and Host of “ALL IN: The Addicted Gambler's Podcast”; Peer Recovery Specialist; prior lived experience with problem gambling
- Rob Zuckerman: Problem Gambling Peer Counselor and Recovery Coach at Connecticut Renaissance; prior lived experience with problem gambling

Connecticut Department of Consumer Protection (DCP)

- Kristopher Gilman: Director, DCP Gaming
- Tammy Kreyer: Assistant Director for DCP Gaming, previously a Gaming Regulation Officer, DCP Gaming - Sports Wagering/iCasino/Fantasy Sports
- Joseph Peplau: License & Applications Supervisor, DCP Gaming - Casino Licensing
- Walter Wilkowski: Gaming Regulation Supervisor, DCP Gaming - Sports Wagering/iCasino/Fantasy Sports

Other government officials

- Orlando Velazco: Director of the CT DPH Office of Health Equity

Nongovernmental, nonprofit, charitable and community-based organizations

- Mui Mui Hin-McCormick: Asian American and Pacific Islander (AAPI) Ambassador Gambling Awareness Project (DMHAS PGS & Amplify) Consultant; Vice-Chair of the Asian Pacific American Coalition of Connecticut (APAC-CT)
- Bonnie (Weyland) Smith and Alyssa Gilbert: B. Weyland Smith Consulting LLC
- Kim (Kimberly) Brewer: Grants and Special Projects Unit at the Capitol Region Education Council

Researchers

- Dr. Marc Potenza: Yale School of Medicine Professor of Psychiatry, Director of Center of Excellence in Gambling Research

Criminal justice

- Lieutenant Lee Grabner: Detective Bureau Commander and Records Division at the New Milford Police Department

The Economic team was successful in interviewing 12 people with at least one individual in each of the major categories of interest. We sought and successfully interviewed representatives of host and impacted communities; state-level coalitions/conferences of municipal governments; tribal nations; the Connecticut Lottery Corporation; online and sports betting operators; regional councils of governments; housing advocacy groups; industry advocacy groups; and economic and community development organizations. In a few cases, individuals represented multiple categories. There were 27 individuals who did not respond to the initial email or subsequent attempts to schedule an interview. Nine individuals recommended more appropriate contacts that the research team followed up with. One individual provided data. One individual initially offered to provide a written response or interview, but then declined to participate as they were not able to provide a response within the study period. The 12 people interviewed concerning economic impacts were:

- Fred B. Allyn III (Mayor, Town of Ledyard CT)
- Kevin Brown (President, Norfolk Community Development Corporation)
- Charles Bunnell (Chief of Staff, Mohegan Tribe; coordinated by Cathy Soper, Director of Strategic Initiatives & Communications, Mohegan Tribe, Tribal Communications)
- M. Randall Collins Jr. (Advocacy Manager, Connecticut Conference of Municipalities)
- Christopher Davis (Responsible Gaming Manager, Government Relations, Connecticut Lottery Corporation)
- Jody A. Cummings, General Counsel, Mashantucket Pequot Tribal Nation
- Amanda Kennedy (Executive Director, Southeastern Connecticut Council of Governments & Southeastern Connecticut Housing Alliance)
- Ginny Kozlowski (Executive Director, Connecticut Lodging Association; Key Principal, South Central Connecticut Regional Economic Development Corporation; CEO, Economic Development Corporation of New Haven)
- Ronald K. McDaniel (Mayor, Town of Montville, Uncasville CT)
- Gregory Smith (President & CEO of Connecticut Lottery Corporation)
- Ted Taylor (President of Sportech Venues - online and sports gambling)
- Jessica Vonashek (Chief of Economic and Community Development, City of Norwalk)

The Economic team also **reviewed four written testimonies** submitted in relation to Connecticut Bill # 1213, January Session 2023, *An Act Concerning the Mashantucket Pequot and Mohegan Fund*. The written testimonies represent the official statements of:

- Rodney Butler, Tribal Chairman, Mashantucket Pequot Tribal Nation
- M. Randall Collins Jr., Advocacy Manager, The Connecticut Conference of Municipalities
- Betsy Gara, Executive Director, The Connecticut Council of Small Towns
- James Gessner, Chairman, The Mohegan Tribe

The Social interviews were completed via Zoom between late March and mid-April 2023 and the Economic interviews were conducted via Zoom between late March and May 2023.

Each of the interviews was reviewed with important quotes being transcribed into a written document. Each of those quotes was then coded by theme, with these themes being roughly aligned with the impact areas being examined in this study. All quotes having the same theme were then aggregated into the specific impact area.

Population Surveys

Purpose

Population surveys were conducted primarily to identify social impacts. These surveys capture: state-wide attitudes toward gambling; past year participation in each type of gambling; the demographic/geographic origin of Connecticut gambling revenue; past year participation in financial speculation (e.g., cryptocurrency); motivations for gambling; responsible gambling practices; prevention awareness; and data pertaining to problem gambling and related indices (i.e., prevalence rate; demographic, gambling and comorbidity profile; treatment seeking; bankruptcy; divorce; gambling-related crime; etc.).

However, these surveys also contain some information pertaining to economic issues. More specifically, they identify the extent to which Connecticut residents engage in casino gambling, sports betting, and online gambling *within-state* (allowing the revenue to be retained) versus out-of-state.

Methodology

Two population surveys were employed.

NORC Address-Based Sample (ABS). ABS is currently the gold standard for optimizing sample representativeness (Harter et al., 2016; Iannacchione, 2011; Olson et al., 2021). This approach involves sending a mailed solicitation to a random sample of addresses from the listing of Connecticut residential addresses provided by the U.S. Postal Service and asking people to complete a survey for a financial incentive.

NORC at the University of Chicago has extensive experience in ABS and was contracted to recruit a random sample of 4,000 CT adults, with a minimum of 500 respondents in certain groups: African Americans, Hispanics, ages 18-34, 35-49, 50-64, 65+, and people from New London County (where the two casinos are located).

The initial invitation letter (Appendix A) informed households that they had been selected to participate in the 'CONN-ACTS: Connecticut Assessment of Consumer PasTimes Study', which was described as "a very important statewide survey about health and recreational behaviors in Connecticut." The letter asked the adult (18+) in the household with the most recent birthday to complete our online survey. A $1 pre-incentive was included in the letter and recipients were told they would receive an additional $10 gift card upon completion of the survey. A reminder postcard was sent one week later. Three weeks after the initial letter was sent all households that had not responded were sent a final reminder letter. The invitation letters and online questionnaire were available in both English and Spanish.

The survey was conducted between March 24, 2023 - April 27, 2023 with a final obtained sample of 5,259 respondents after eliminating surveys that were incomplete. The overall response rate was 11.75% (AAPOR Response Rate 3). The sample was subsequently weighted to match the basic demographic census profile for Connecticut. The final weight for each case was calculated in four steps:

1. An initial base weight was calculated based on the probability of selection. This involved identifying the number of obtained cases in each census tract divided by the actual number of people in each of these tracts.

2. Next, an adjustment for known eligibility allocated the weight from cases with unknown eligibility to cases with known eligibility (i.e., completes, partials, non-residential, and non-deliverable). An adjustment factor was calculated for each county based on the sum of base weights of the obtained sample within the county and the sum of base weights for the sample with known eligibility. The base weights were multiplied by this adjustment factor.
3. An adjustment for non-response was then made at the state level using a similar method as the known eligibility response adjustment. The known-eligibility-adjusted weight of partial completes was allocated to the completes based on a flat adjustment. A county-level adjustment was not justified because there were not a sufficient number of partial completes in each county.
4. In the last step, the non-response-adjusted weights were raked to state level census profiles for: sex (Male, Female), age group (18-34, 35-54, 55-74, 75 and older), race (White and Non-White), ethnicity (Hispanic and Non-Hispanic), and education level (less than high school, high school degree or equivalent, Associate's degree or trade school or some college, Bachelor's degree or higher). Some imputation was required for missing demographic information, which was undertaken using multiple imputation with additive regression, bootstrapping, and predictive mean matching. An iterative process of raking and trimming was performed to ensure alignment with the demographic census profiles. Outlier weights were trimmed to the median weight plus six times the inter-quartile range. The final design effect was 1.8.

The primary purpose of the ABS survey was to obtain accurate statewide prevalence rates for the variables being assessed.

Centiment Online Panel Survey (OPS). The advantages of online panel surveys are that: (a) the validity of answers to 'sensitive questions' (e.g., gambling) tends to be higher in self-administered formats (Tourangeau & Smith, 1996; van der Heijden et al., 2000), (b) everyone has agreed and expects to be contacted (unlike telephone or ABS surveys), (c) the results can be obtained in a much shorter period of time, and (d) they are much less expensive (Olson et al., 2021).

The main limitation of online panels is that panelists are not randomly selected but rather self-enrolled. While online panel companies generally stratify their samples to be demographically representative of the population, significant behavioral biases typically remain that are not corrected by this stratification or by demographic weighting (e.g., Pickering & Blaszczynski, 2021; Lee, Back, et al., 2015). However, these behavioral biases are an advantage in studies such as the present one where these biases can be utilized to obtain a higher 'yield' of people with gambling problems (as heavy gambling involvement is one of these reliable behavioral biases). Thus, with an online panel sample of 3,000 CT adults, we anticipated recruiting ~300 people classified as problem gamblers representative of people with gambling problems in the general population (i.e., not just treatment-seeking problem gamblers).

An email was sent to all members of the Centiment panel who resided in Connecticut inviting them to participate in a new online survey in return for the usual monetary compensation. The email indicated that this survey was "on behalf of the State of Connecticut which wishes to obtain an updated profile of gambling and related behaviors in the state." This email and the survey were only available in English.

The survey was conducted between March 1 – 30, 2023, with a final obtained sample of 2,847 respondents after eliminating everyone without a Connecticut residence; everyone who did not complete 100% of the survey; and everyone who finished the survey in less than 5 minutes. A total of 329 people classified as problem gamblers were obtained. These individuals were combined with the 86

problem gamblers identified in the ABS for a combined problem gambling sample of 415. No data weighting was applied to the online panel survey or to this combined problem gambling sample.

The purpose of the OPS was to understand the demographic and behavioral profile of people with gambling problems in CT (as the sample of problem gamblers just in the ABS survey was too small for this purpose).

Questionnaire. The questionnaire in the ABS and OPS surveys (Appendix B) was virtually identical, except for the recruitment solicitation.

- **ABS survey:** Intrinsic interest in the survey topic is one of the main determinants of survey participation (Groves et al., 2004; Keusch, 2013). Thus, 'gambling surveys' routinely under-recruit non-gamblers and over-recruit heavy gamblers and people with gambling problems leading to inflated prevalence rates of the latter (Williams & Volberg, 2009). Because the purpose of the ABS survey was to obtain accurate prevalence rates, a generic description of the survey ('health and recreation') was utilized so as not to bias the sample.
- **OPS survey:** The purpose of the OPS survey was to over-recruit heavy gamblers and people with gambling problems. Thus, the Centiment email subject line identified the survey as a 'New Survey on Gambling' and the email solicitation specifically indicated that the survey was intended to provide a profile of gambling and related behaviors.

The survey had sections on Demographics; Comorbidities; Gambling Attitudes; Prevention Awareness; Past Year Gambling Participation; Speculation; Gambling History; Gambling Motivation; Gambling Context; Casino & Sports Gambling; Online Casino & Sports Gambling; and Gambling Problems. There were 128 total questions, however, people with no gambling involvement typically only received 53 questions, whereas heavily involved gamblers with associated problems typically received 100 – 120 questions. The majority of respondents received between 75-100 questions. The median time for completion of the OPS survey was 10 minutes and 16 seconds, with 95% of people completing within 29 minutes.

Problem gambling was assessed with the: (a) past year NORC DSM-IV Screen for Gambling Problems (NODS) (Gerstein et al., 1999) (Appendix C) for direct comparisons with the last statewide prevalence survey in 2008 where this instrument was also used; as well as the (b) Problem and Pathological Measure (PPGM) (Williams & Volberg, 2010, 2014) (Appendix D). The NODS is an operationalization of the 1994 DSM-IV criteria for pathological gambling and differs somewhat from the more recent 2013 DSM-5 criteria for disordered gambling. The NODS produces a total score of between 0 and 10, with individuals scoring in the 1-2 range conventionally identified as 'at-risk', and individuals scoring in the 3 or higher range conventionally identified as problem or pathological (5+) gamblers.

While the NODS was employed for comparison purposes, the PPGM was employed to provide a more accurate assessment of the level and nature of problem gambling in the state, as it is the best instrument in the population assessment of problem gambling due to its superior construct validity as well as better sensitivity, specificity, and overall classification accuracy (Christensen et al., 2019; Molander & Wennberg, 2022; Williams & Volberg, 2010, 2014). The PPGM has good internal consistency (Cronbach's alpha = 0.76-0.81) as well as one month test-retest reliability (r = 0.78) (Williams & Volberg, 2010, 2014).[14]

[14] An updated version of the PPGM has just recently been published (Gooding, Williams, & Volberg, in press), but was not utilized in the present study.

The PPGM has a Harm scale consisting of seven items asking whether the person has experienced significant harm in the areas of finances, mental health, relationships, physical health, work/school, and illegal activity.[15] The PPGM also has an Impaired Control scale consisting of four items asking about difficulty controlling and/or limiting gambling and an Other Issues scale that includes three items asking about preoccupation, tolerance, and withdrawal.

The unique scoring system of the PPGM is part of the reason behind its better performance. Unlike most instruments which simply use a total score threshold to designate problem gambling status, the PPGM requires a particular pattern of item endorsement. Specifically, individuals must report experiencing both impaired control and harm deriving from that impaired control to receive a problem gambling designation. Individuals who meet these criteria and have a score of five or more are sub-designated as 'pathological gamblers,' indicating greater severity and associated chronicity. The PPGM also endeavors to limit false positives and false negatives. The former is accomplished by requiring individuals to gamble monthly or more often in the past year to receive a past-year problem gambling designation. The latter is accomplished by classifying individuals as having problem gambling if they report some problem gambling symptomatology and have a frequency and expenditure that is equivalent to individuals unambiguously identified as having problem gambling, and/or if other people have indicated the person has both impaired control and harm deriving from this impaired control.

The PPGM classifies people into one of four categories:

- **Non-Gamblers**, who have not engaged in any gambling in the past year;
- **Recreational Gamblers**, who show no signs of excessive gambling or problem gambling symptomatology;
- **At-Risk Gamblers**, who report some signs of problem gambling symptomatology and/or are gambling at very high levels similar to problem gamblers; and
- **Problem Gamblers**, who have impaired control over their gambling that is also associated with significant negative consequences for themselves or others.

Secondary Data

Purpose

Secondary data was used to: (a) triangulate findings from our primary data, and (b) to provide a historical context for impacts, as our primary data largely speaks to *current* impacts. Secondary data informs the following indices: problem gambling and related indices; crime; other social indices; and indirect economic impacts.

Methodology

The data necessary for these analyses was available online from various state and federal government agencies and included personal bankruptcy filings; suicides; domestic violence; protective/restraining orders; divorce rate; child abuse; public assistance; crime rates (property; violent; DUIs, illegal gambling); overall population; # English learners in school; vehicle crashes and DUI-related injuries; #

[15] When a person endorses a harm additional branching questions ask about specific discrete harms within that general area (e.g., financial concerns → bankruptcy; mental stress → suicidal ideation; etc.).

business establishments; employment, and unemployment rates. When available, comparisons were made at a state level relative to other states; New London County relative to CT generally, and the specific casino towns of Ledyard and Montville compared to New London County and/or CT. To identify potential causal connections with gambling, the secondary data examined changes in these indices from the 1990s to the present time as these correlated with changes in aggregate gross gambling revenue over the same time period.

Historical Reports

Purpose

Prior studies were utilized to contextualize our present results.

Methodology

There have been two prior comprehensive socioeconomic impact studies in CT by the WEFA Group (1997) and Spectrum Gaming (2009). These studies documented the nature and magnitude of impacts at earlier time periods and provide important benchmarks to which findings in 2023 can be compared. However, there are also:

- 11 other more circumscribed social and/or economic impact studies of gambling in Connecticut, most of which have focused on casino impacts, and some of which are very recent (e.g., Mohegan Sun and Foxwoods economic impacts).[16] These studies: (a) serve to further triangulate some of our current analyses (e.g., integrating and aligning the recent casino economic impact studies with our own independent analyses of their impacts); and (b) provide additional context on the historical impacts of gambling.
- Five other population studies of the prevalence of gambling and problem gambling in Connecticut from 1977 to 2021. These studies provide a timeline of gambling and problem gambling rates that may speak to the impacts of the introduction of different types of gambling and serve as potential benchmarks against which our current rates will be compared.

Gambling Operators and Government Data

Purpose

There are several indices that constitute the Direct Economic Impacts of gambling and that must be collected. These are: amount of gambling revenue as a function of type of gambling and operator; employment numbers for each type of gambling; and the level of gambling revenue spent on wages, supplies, and allocated to the commercial operator as well as different sectors of government and society.

[16] Most of the socioeconomic impact studies prior to 2012 are reported in Williams, Rehm & Stevens (2011).

Methodology

Much of the gambling revenue data was available online from the CT Department of Consumer Protection. Some of these revenue estimates were also based on information obtained from Security Exchange Commission (SEC) filings. Information was also requested and collected from major gambling operators concerning their employment numbers and spending on wages and supplies, as well as how much of the revenue is allocated to the commercial provider, versus tribes, state, and municipalities. When available, the distribution of this revenue across the commercial operator, tribes, state, and municipalities was identified. Collectively, this information informs the 'direct economic impacts' of legalized gambling.

Economic Modeling

Purpose

The direct economic impacts of gambling generate additional effects in the Connecticut economy due to the combination of business and consumer spending. Thus, economic modeling is needed to estimate these additional 'indirect economic impacts' to understand the overall economic impacts.

Methodology

These additional indirect impacts are estimated utilizing the PI^{+} model from Regional Economic Models, Incorporated (REMI). Impacts are estimated for the state as a whole; for different counties within CT; and for different industry sectors corresponding to the 3-digit codes of the North American Industry Classification System (NAICS).

AirSage Cell Phone Location Analysis

Purpose

The population surveys identify the within-state geographic origin of Connecticut casino patrons, but do not establish the portion of casino revenue deriving from out-of-state patrons. Historically, Connecticut casinos were said to derive between 50% and 66% of their revenue from out-of-state residents,[17] which is a major economic benefit as it represents 'new money' to the state rather than money redirected from other sectors of the state economy. However, with the recent creation of many new casinos throughout New England the current percentage of out-of-state patronage is unclear. A secondary purpose of the AirSage analysis was to: (a) estimate the amount of casino revenue in neighboring states *that derives from Connecticut residents*, so as to calculate an overall net inflow of 'new money' versus outflow of Connecticut spending; and (b) to determine the county-specific origin of Connecticut casino revenue.

[17] These estimates derive from the license plate surveys in the New England Casino Gaming Updates conducted from 1995-2015.

Methodology

We undertook this investigation using AirSage cell phone location data. This involved collecting the geographic origin (i.e., county, state, and country) for all cell phones detected at the two Connecticut casinos as well as the seven casinos within 70 miles of the state border for 14 consecutive days in January 2023 (Jan 16th to the 29th). This provides a fairly comprehensive picture of the casino's actual patronage, as 85%+ of U.S. adults currently carry a smartphone (Pew Research Center, 2021) which typically contains several apps that track their location (e.g., Google Maps) (and very few people turn off their cell phones and/or disable all the apps that provide tracking). The nine casinos selected for the present study are listed below, along with information pertaining to size and gambling opportunities provided by each casino.[18]

Table 2. Casinos included in the AirSage analysis

State	Facility	Date First Providing Slots &/or Table Games	Current Gaming Floor Sq. Footage	Current # Slots	Current # Live Table Games	Driving Distance (miles & driving minutes) from CT State Line
CT	Foxwoods Resort Casino	1992	340,000	3,400	300	0
CT	Mohegan Sun	1996	310,000	3,650	250	0
MA	Springfield MGM	2017	109,000	1,814	102	7 miles; 11 minutes
MA	Plainridge Park Casino	2015	50,000	1,250	0	38 miles; 47 minutes
MA	Encore Boston Harbor	2019	210,000	2,700	254	70 miles; 76 minutes
RI	Bally's Twin River Lincoln	1992	162,420	3,802	114	25 miles; 35 minutes
Rl	Bally's Tiverton Casino	2018	33,840	1,000	32	43 miles; 50 minutes
NY	Empire City Casino at Yonkers	2006	290,000	5,000	0	12 miles; 22 minutes
NY	Resorts World New York	2011	330,000	6,500	1,300	39 miles; 70 minutes

The geographic origin of cell phones detected at these venues was used to estimate: (a) the percentage and amount of Connecticut casino revenue that comes from each state (as well as each Connecticut county), and (b) the percentage and amount of casino revenue that other states are receiving from Connecticut residents. This data informs the 'direct economic impacts.'

Note that all cell phones that were detected for 18 days or more during the month of January were excluded from the patron counts, as these were deemed to most likely be employees of the casino. However, this 18-day cut-off was subsequently determined to be insufficient to effectively exclude most part-time employees, who are estimated to constitute about 36% of all employees (and would represent thousands of individuals for the larger casinos). Thus, a 50% reduction in the counts was made in the 'home county' for all casinos, where the large majority of casino employees reside. The detailed rationale for this additional 'home county' adjustment is contained in Appendix F.

[18] One venue within the 70-mile criteria that was excluded was Jake's 58 Hotel & Casino in New York State (65 miles from CT border; 1 hr 38 m driving time). It was excluded due to its comparatively small size (64,000 sq ft; 1,000 slots; no table games) and the additional cost of adding this venue to the analysis.

Review of CT Problem Gambling Prevention & Treatment

This is a related but separate investigation. It is related because some of the information pertinent to this issue was collected in the course of our Key Informant Interviews, Population Surveys, and Secondary Data collection. However, it is separate in that:

- There was additional collection of data pertaining to prevention, responsible gambling/harm minimization, and treatment services in CT, as well as documentation of their historical timelines, locations, magnitude, utilization, and known effectiveness; helpline calls; clients enrolled in Bettor Choice; etc.
- These efforts and results were then contrasted with best practices internationally in prevention, responsible gambling, and treatment.
- Details of the methodology used for this review are contained in the **CONNECTICUT PROBLEM GAMBLING PREVENTION & TREATMENT REVIEW** section.

SOCIAL AND HEALTH IMPACTS

This section of the report examines the social and health impacts of gambling in Connecticut in the areas of Attitudes, Gambling Behavior, Problem Gambling and Related Indices, Crime, and Other Social Indices (following the organization in Table 1). Most of this data pertains to impacts on the adult (18+) population of Connecticut. However, when available, data is also reported as a function of demographic subgroup, county, town, and over time.

Attitudes towards Gambling

The present section provides an overview of Connecticut adult (18+) attitudes towards gambling as derived from the NORC ABS data (*n* = 5,259; weighted). The first section profiles attitudes of the general population and the second section profiles attitudes as a function of demographic characteristics.

As shown in Figures 2 to 11, general population attitudes can be summarized as follows:

- Gambling is 'not at all' or 'not very important' as a recreational activity for the vast majority of people (93.5%), although 1.8% indicate it is actually a 'very important' recreational activity.
- Many more people believe that the harm of gambling outweighs the benefits (67.2% vs. 8.6%).
- The majority of people (63.4%) do not believe that gambling is morally wrong.
- The majority of people (69.1%) believe that some types of gambling should be legal and some types should be illegal.
- The majority of people (67.8%) consider the current availability of gambling to be fine, whereas 26.2% believe it is too widely available and 5.9% believe it is not available enough.
- The large majority of people (70.8%) believe the responsibility for minimizing gambling-related harm is shared between the gambler and the provider.
- The majority of people (68.7%) have no opinion about the integrity and fairness of how gambling is provided in CT, with another 21.3% being satisfied and 9.9% being dissatisfied.
- The majority of people (62.6%) have no opinion about the adequacy of CT government and gambling provider efforts to minimize the harm associated with gambling, with another 20.0% being satisfied and 17.3% being dissatisfied.
- There is a wide range of things that people identify as the single most positive impact of legalized gambling in CT, with employment (21.6%) and increased government revenue (20.1%) being the most commonly endorsed options.
- The large majority of people (69.2%) identify increased gambling addiction as the single most negative impact of legalized gambling in CT.

General Population Attitudes

Figure 2. How important is gambling to you as a recreational activity?

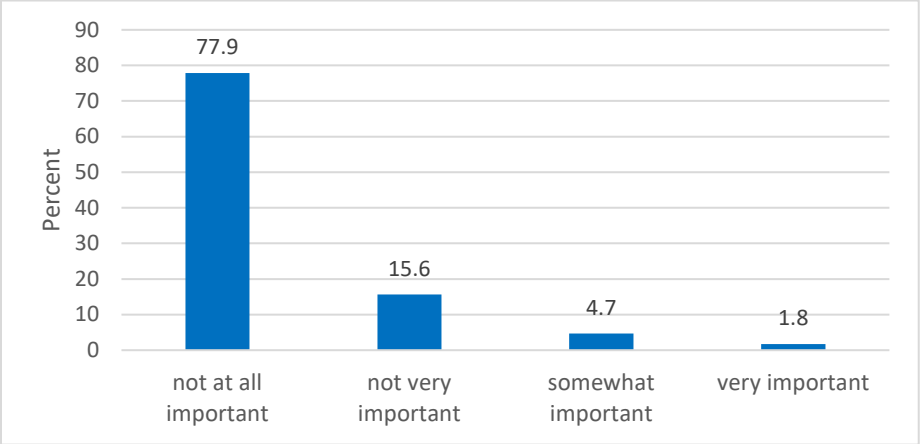


Figure 3. Which best describes your belief about the benefit or harm that gambling has for society?

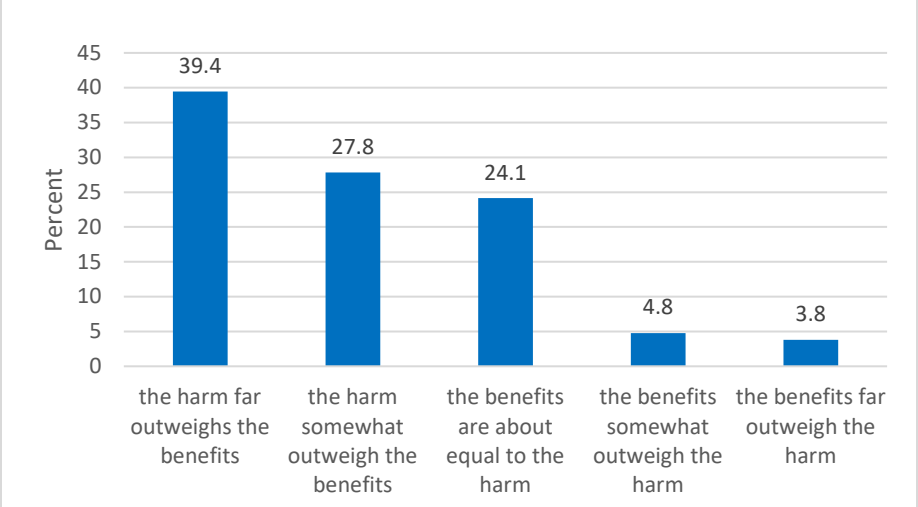


Figure 4. Do you believe that gambling is morally or ethically wrong?

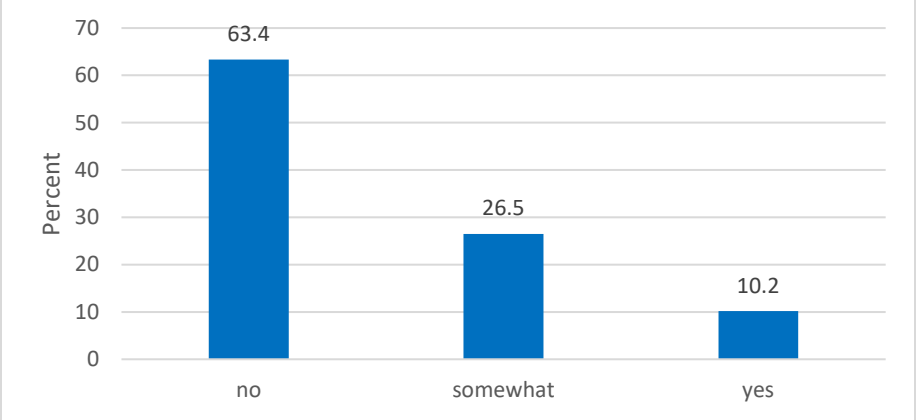


Figure 5. Which best describes your opinion about legalized gambling?

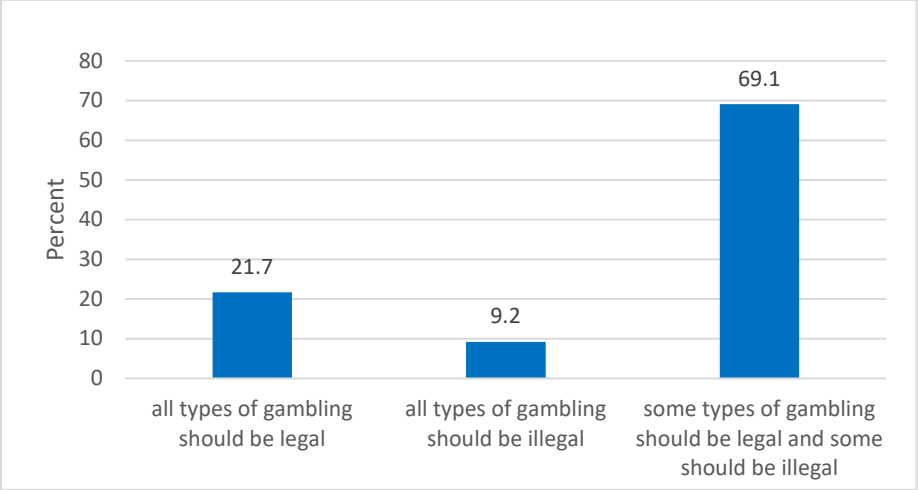


Figure 6. Which best describes your opinion about gambling opportunities in Connecticut?

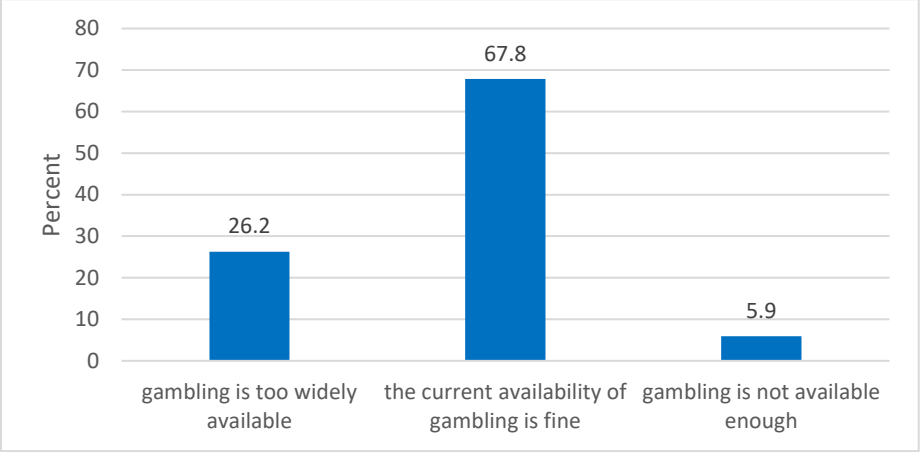


Figure 7. Who do you think has the responsibility for minimizing the harm associated with gambling?

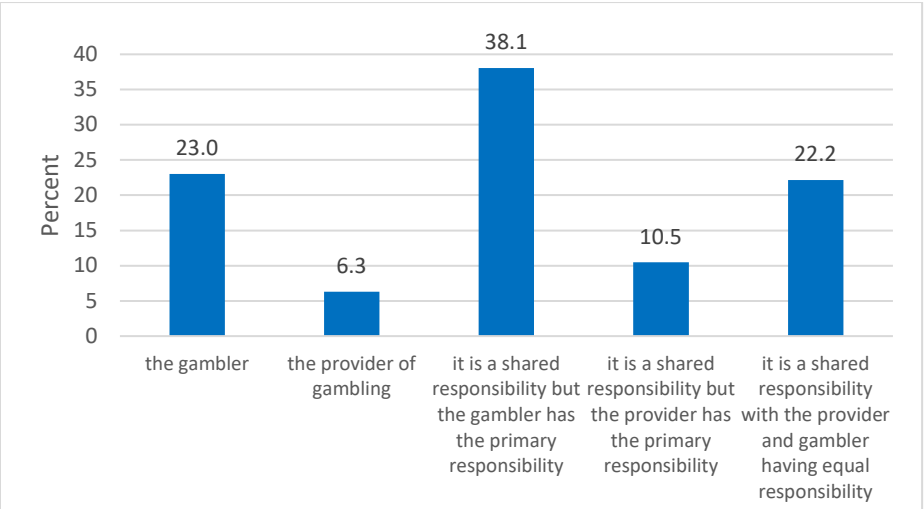


Figure 8. How satisfied are you with the integrity and fairness of how gambling is provided in CT?

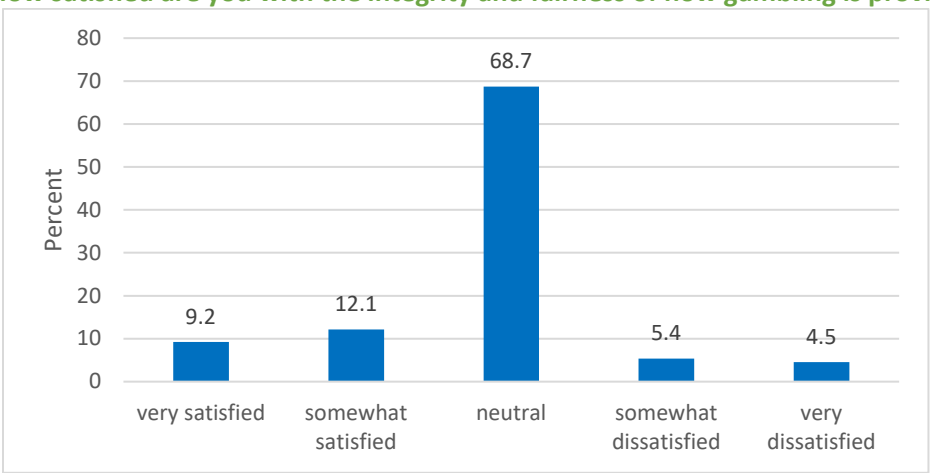


Figure 9. How satisfied are you with the CT government and gambling provider efforts to minimize the harm associated with gambling?

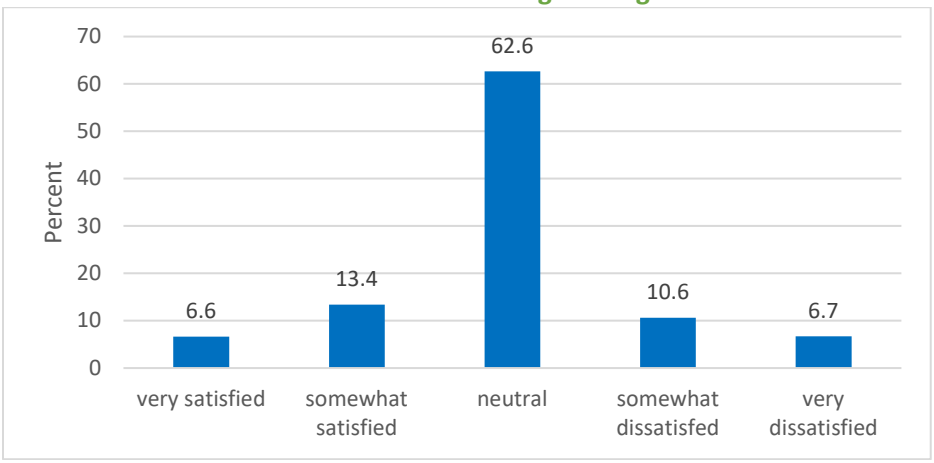


Figure 10. What do you believe has been the single most positive impact of legalized gambling for CT?

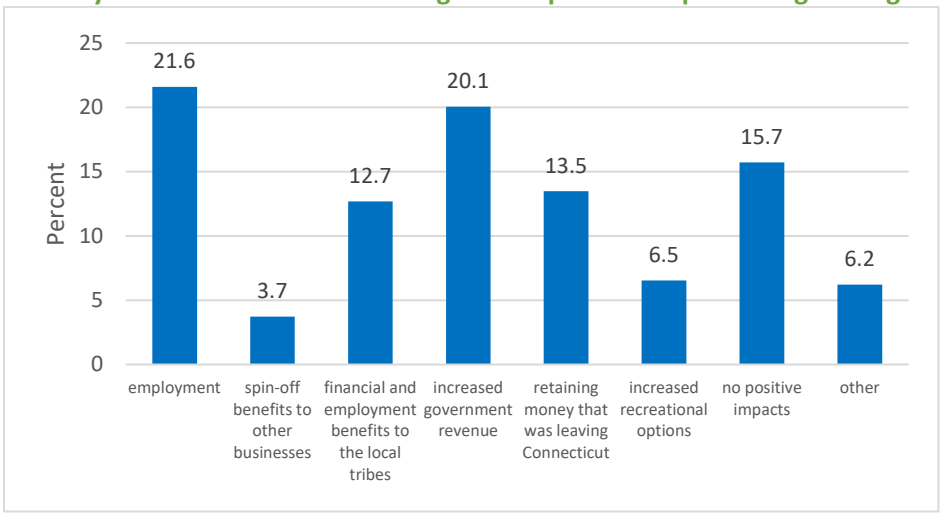
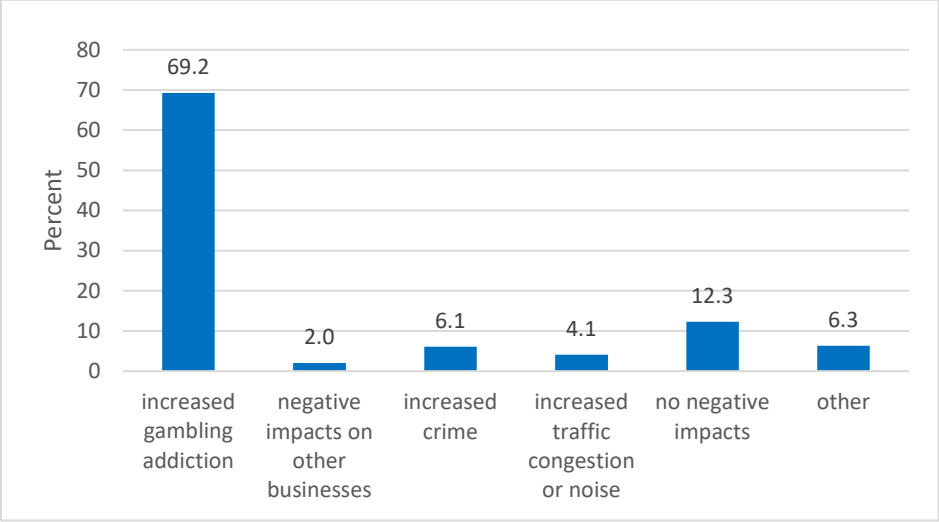


Figure 11. What do you believe has been the single most negative impact of legalized gambling for CT?



Demographic Specific Attitudes

The present section provides an overview of Connecticut adult (18+) attitudes towards gambling as a function of demographic group. The data is from the NORC ABS survey (n = 5,259; weighted[19]). A chi-square test determined that there were significant differences within each demographic category. A z-test of column proportions was then utilized ($p < .05$ with Bonferroni correction) to identify specific demographic differences within each response option. An asterisk denotes that a significant difference was found between that percentage and one or more other percentage(s) also with an asterisk. Note: for Race/Ethnicity the test of column proportions is for that ethnic group *versus all other groups combined.*

Demographic-specific attitudes are summarized below, with the detailed results contained in Tables 3 to 10. The following are the groups more likely to endorse certain attitudes relative to other groups:

'Gambling is an important recreational activity' more likely endorsed by:

- Males, younger people, non-Whites (i.e., Blacks, Hispanics, Asians, and Other Ethnicity), people with lower educational attainment, people with lower household income, and immigrants.

'The harm of gambling far outweighs the benefits' more likely endorsed by:

- Females, ages 65+, 'other race/ethnicity,' and people with household incomes <$60K.

'Gambling is immoral' more likely endorsed by:

- Females, ages 18-34, Asians, people with lower educational attainment, people with lower household income, and immigrants.

'All types of gambling should be illegal' more likely endorsed by:

- Females, ages 18-34, non-Whites (i.e., Blacks, Hispanics, Asians, and Other Ethnicity), people with high school of lower educational attainment, people with household incomes <$60,000, and immigrants.

[19] In the present case the data was weighted to the sample size of 5,259, rather than the total CT adult population of 2,825,371,458 to facilitate statistical testing (i.e., with the population weights all comparisons would be significant because of the large subgroup sizes). Weighting to the sample involved dividing the population weight for each case by 543.6337 to produce a 'sample weight.' The total sample weights then added to 5,259.

'Gambling is too widely available' more likely endorsed by:

- Ages 65+ and people with lower household income.

'Responsibility for minimizing gambling harm lies with the provider' more likely endorsed by:

- Ages 18-49, Hispanics and people of 'other race/ethnicity,' people with lower household income, and immigrants.

'Dissatisfied with the integrity and fairness of how gambling is provided in CT' more likely endorsed by:

- Ages 18-34, 'other race/ethnicity', and people with lower educational attainment and lower household incomes.

'Dissatisfied with government and gambling provider efforts to minimize the harm of gambling in CT' more likely endorsed by:

- Males, ages 65+, 'other race/ethnicity,' people with lower household incomes, and non-immigrants.

Table 3. How important is gambling to you as a recreational activity (demographic specific)?

	Not at all important	Not very important	Somewhat important	Very important
Male	73.3%*	19.1%*	5.7%	1.8%
Female	82.1%*	12.5%*	3.8%	1.6%
Other Gender	85.9%	7.4%*	1.9%	4.8%
18-34	77.3%	14.4%	4.9%	3.4%*
35-49	74.9%	16.7%	6.4%*	2.0%
50-64	79.2%	14.9%	4.8%	1.1%
65+	79.8%	16.6%	3.0%*	0.5%*
White	79.0%*	15.7%	4.2%	1.0%*
Hispanic	69.5%*	17.7%	6.3%	6.4%*
Black	75.8%	17.9%	5.0%	1.2%
Asian	77.1%	13.0%	9.6%*	0.3%*
Other Race/Ethnicity	79.3%	10.0%	4.7%	6.0%
High School or Less	74.1%*	16.0%	6.1%*	3.8%*
Some College &/or Assoc Degree	78.2%	18.1%*	2.9%*	0.8%*
Bachelor's or Higher	81.2%*	13.6%*	4.7%*	0.5%*
HH Income <$60K	75.9%	15.4%	5.6%	3.1%*
HH Income $60K-$119.9K	77.9%	17.3%	3.7%	1.0%*
HH Income $120K+	80.2%	14.4%	4.8%	0.6%*
Immigrant	74.6%	15.2%	4.9%	5.2%*
Born in U.S.	78.4%	15.7%	4.7%	1.2%*

An asterisk denotes that a significant ($p < .05$) difference was found between that percentage and one or more other percentage(s) also with an asterisk.

Table 4. What is your belief about the benefit or harm gambling has for society (demographic specific)?

	Harm far outweighs benefits	Harm somewhat outweighs benefits	Benefits equal to the harm	Benefits somewhat outweigh harm	Benefits far outweigh harm
Male	36.9%*	29.7%*	24.1%	5.7%*	3.6%
Female	42.0%*	25.8%*	24.5%	4.0%*	3.9%
Other Gender	39.3%	32.0%	11.6%	0.0%*	17.1%
18-34	39.4%	24.5%*	26.8%*	4.5%	4.7%*
35-49	33.8%*	26.5%	28.9%*	4.5%	6.4%*
50-64	39.0%	27.9%	23.2%	6.1%	3.8%*
65+	44.5%*	32.2%*	18.2%*	4.3%	0.7%*
White	38.9%	29.7%*	25.1%*	4.4%	2.0%*
Hispanic	37.8%	20.5%*	23.6%	7.6%	10.5%*
Black	34.7%	27.0%	20.7%	8.3%	9.2%*
Asian	46.4%	27.8%	19.9%	3.1%	2.9%
Other Race/Ethnicity	46.8%	16.9%*	17.8%	4.3%	14.2%*
High School or Less	41.3%	21.6%*	25.1%	5.3%	6.7%*
Some College &/or Assoc Degree	39.8%	29.1%*	24.6%	4.0%	2.5%*
Bachelor's or Higher	37.7%	32.6%*	22.8%	4.8%	2.1%*
HH Income <$60K	42.2%*	24.6%*	22.0%*	5.0%	6.2%*
HH Income $60K-$119.9K	38.6%	28.0%*	27.1%*	4.0%	2.3%*
HH Income $120K+	35.0%*	33.4%*	24.3%	5.3%	2.0%*
Immigrant	42.4%	23.7%*	20.4%	5.6%	7.9%*
Born in U.S.	38.9%	28.6%*	24.7%	4.7%	3.1%*

Table 5. Do you believe that gambling is morally or ethically wrong? (demographic specific)?

	No	Somewhat	Yes
Male	67.2%*	24.7%	8.1%*
Female	59.7%*	28.2%	12.1%*
Other Gender	55.2%	33.2%	11.6%
18-34	54.8%*	31.1%	14.0%*
35-49	65.1%*	25.5%	9.5%
50-64	66.6%*	24.8%	8.6%*
65+	66.7%*	24.7%	8.5%*
White	70.6%*	21.6%*	7.7%*
Hispanic	38.4%*	47.0%*	14.7%*
Black	47.8%*	42.0%*	10.2%
Asian	38.8%*	32.9%	28.2%*
Other Race/Ethnicity	49.8%*	26.7%	23.6%*
High School or Less	53.4%*	33.5%*	13.1%*
Some College &/or Assoc Degree	66.3%*	25.4%*	8.3%*
Bachelor's or Higher	70.5%*	20.8%*	8.7%*
HH Income <$60K	52.6%*	33.2%*	14.2%*
HH Income $60K-$119.9K	68.7%*	24.1%*	7.2%*
HH Income $120K+	74.3%*	18.8%*	6.9%*
Immigrant	38.5%*	41.6%*	19.9%*
Born in U.S.	67.6%*	23.9%*	8.5%*

Table 6. What best describes your opinion about legalized gambling (demographic specific)?

	All types should be legal	All types should be illegal	Some types should be legal and some illegal
Male	27.9%*	7.6%*	64.5%*
Female	15.9%*	10.7%*	73.4%*
Other Gender	21.2%	8.3%	70.5%
18-34	20.6%	13.0%*	66.4%
35-49	26.2%*	7.2%*	66.7%
50-64	22.3%	7.9%*	69.8%
65+	18.7%*	8.6%	72.6%
White	23.7%*	6.3%*	70.0%
Hispanic	17.6%*	17.9%*	64.5%
Black	21.5%	14.7%	63.8%
Asian	12.2%*	17.2%*	70.6%
Other Race/Ethnicity	11.1%*	18.4%*	70.5%
High School or Less	22.0%	13.2%*	64.8%*
Some College &/or Assoc Degree	23.3%	6.8%*	69.9%
Bachelor's or Higher	20.5%	6.9%*	72.5%*
HH Income <$60K	19.5%*	13.4%*	67.1%
HH Income $60K-$119.9K	22.9%	6.3%*	70.8%
HH Income $120K+	24.8%*	5.3%*	69.9%
Immigrant	13.3%*	20.6%*	66.1%
Born in U.S.	23.2%*	7.2%*	69.7%

Table 7. What best describes your opinion about gambling opportunities in CT (demographic specific)?

	Gambling too widely available	Current availability is fine	Gambling not available enough
Male	25.4%	68.2%	6.5%*
Female	27.2%	67.3%	5.5%*
Other Gender	16.2%	83.8%	0.0%*
18-34	23.1%	65.9%	11.0%*
35-49	19.6%*	72.5%*	7.9%*
50-64	25.8%*	69.9%*	4.2%*
65+	35.7%*	63.4%*	0.9%*
White	26.6%	69.1%*	4.3%*
Hispanic	25.3%	60.6%*	14.1%*
Black	20.2%*	68.2%	11.6%
Asian	20.7%	73.0%	6.3%
Other Race/Ethnicity	30.9%	60.2%	8.9%
High School or Less	26.9%	64.0%*	9.1%*
Some College &/or Assoc Degree	25.6%	69.7%	4.6%*
Bachelor's or Higher	26.0%	70.0%*	4.0%*
HH Income <$60K	27.9%*	64.7%*	7.4%*
HH Income $60K-$119.9K	25.9%	70.1%	4.1%*
HH Income $120K+	22.7%*	71.3%*	6.1%
Immigrant	24.2%	66.6%	9.1%*
Born in U.S.	26.5%	68.1%	5.4%*

Table 8. Who do you think has the responsibility for minimizing the harm associated with gambling (demographic specific)?

	The gambler	Gambling provider	Shared responsibility with gambler primarily responsible	Shared responsibility with provider primarily responsible	Equal responsibility between gambler and provider
Male	23.6%	6.8%	36.1%	11.6%	21.8%
Female	22.6%	5.8%	40.0%	9.2%	22.5%
Other Gender	14.5%	8.9%	26.5%	24.9%	25.3%
18-34	19.1%*	9.2%*	33.3%*	15.7%*	22.7%
35-49	25.1%	7.5%*	36.7%	9.1%*	21.5%
50-64	26.5%*	3.9%*	39.6%	9.0%*	21.1%
65+	22.2%	4.6%*	42.0%*	8.1%*	23.1%
White	23.4%	5.6%*	40.1%*	10.2%	20.7%*
Hispanic	20.1%	9.6%*	31.7%*	11.4%	27.2%*
Black	22.1%	6.0%	36.8%	8.7%	26.4%
Asian	18.2%	4.3%	37.6%	16.0%*	23.9%
Other Race/Ethnicity	23.1%	13.3%	27.5%*	14.2%	22.0%
High School or Less	27.2%*	7.5%	32.6%*	9.3%*	23.4%
Some College &/or Assoc Degree	25.7%*	5.4%	40.1%*	8.0%*	20.7%
Bachelor's or Higher	17.7%*	5.6%	41.4%*	13.1%*	22.1%
HH Income <$60K	24.7%	7.6%	31.4%*	10.9%	25.4%*
HH Income $60K-$119.9K	22.1%	5.5%	44.4%*	9.3%	18.8%*
HH Income $120K+	20.9%	5.2%	41.4%*	11.6%	21.0%*
Immigrant	18.6%*	8.3%	33.0%*	13.5%	26.6%*
Born in U.S.	23.8%*	6.0%	38.8%*	10.0%	21.4%*

Table 9. How satisfied are you with the integrity and fairness of how gambling is provided in CT (demographic specific)?

	Very satisfied	Somewhat satisfied	Neutral	Somewhat dissatisfied	Very dissatisfied
Male	10.6%	14.7%*	64.9%*	6.0%	3.9%
Female	7.9%	9.7%*	72.3%*	4.9%	5.2%
Other Gender	8.4%	9.1%	72.5%	2.3%	7.6%
18-34	8.3%	11.8%	68.5%	5.1%	6.2%*
35-49	9.5%	11.9%	69.5%	5.1%	4.1%
50-64	11.3%	12.9%	66.1%	4.5%	5.3%*
65+	7.9%	12.3%	70.2%	6.8%	2.7%*
White	9.8%	12.6%	69.0%	5.2%	3.5%*
Hispanic	8.8%	10.5%	66.3%	7.3%	7.0%
Black	7.4%	9.8%	71.1%	5.4%	6.4%
Asian	6.5%	14.4%	70.8%	4.6%	3.7%
Other Race/Ethnicity	5.4%*	7.9%	65.5%	2.7%*	18.5%*
High School or Less	9.8%	11.2%	65.9%	6.8%	6.4%*
Some College &/or Assoc Degree	8.2%	12.3%	70.4%	5.4%	3.8%
Bachelor's or Higher	9.5%	12.8%	70.2%	4.2%	3.3%*
HH Income <$60K	8.6%	10.2%*	69.1%	5.7%	6.4%*
HH Income $60K-$119.9K	8.7%	14.5%*	67.7%	5.1%	4.0%
HH Income $120K+	11.1%	12.9%	69.2%	4.8%	2.1%*
Immigrant	6.9%*	10.0%	70.5%	7.9%	4.7%
Born in U.S.	9.6%*	12.4%	68.5%	5.0%	4.5%

Table 10. How satisfied are you with CT government and gambling provider efforts to minimize the harm associated with gambling (demographic specific)?

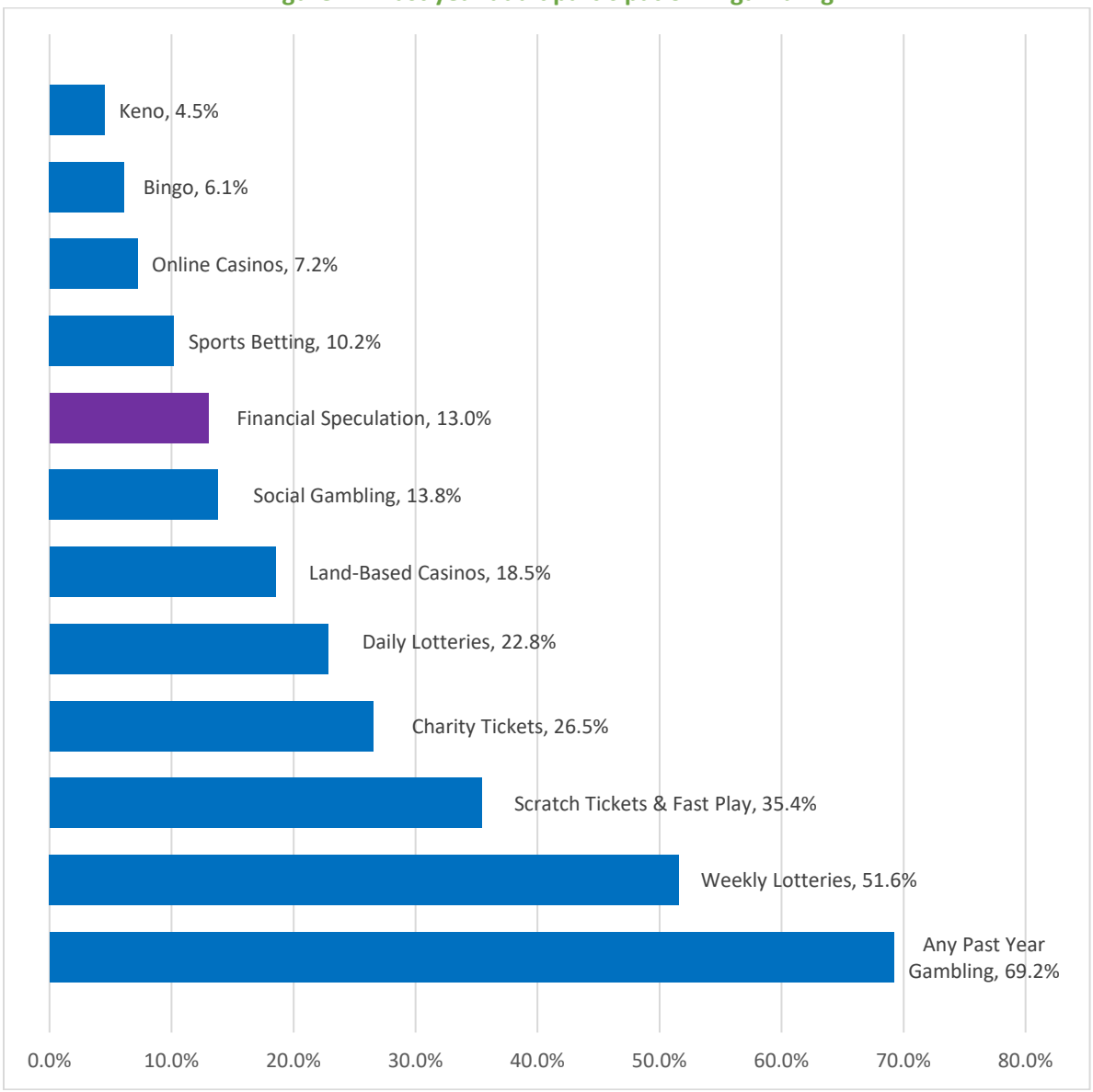
	Very satisfied	Somewhat satisfied	Neutral	Somewhat dissatisfied	Very dissatisfied
Male	7.5%	15.8%*	57.6%*	12.0%*	7.0%
Female	5.8%	11.2%*	67.4%*	9.2%*	6.4%
Other Gender	5.6%	9.1%	61.1%	15.2%	9.1%
18-34	5.7%	12.5%	66.5%*	8.2%*	7.2%
35-49	8.3%	11.8%	65.3%	8.4%*	6.0%
50-64	7.9%	14.0%	60.1%	11.3%	6.8%
65+	4.9%	15.3%	58.8%*	14.3%*	6.7%
White	6.6%	13.4%	62.6%	11.4%*	6.1%
Hispanic	7.8%	13.3%	62.2%	7.7%*	9.1%
Black	7.9%	14.1%	65.7%	4.7%*	7.6%
Asian	2.3%*	16.2%	64.3%	15.0%	12.1%*
Other Race/Ethnicity	6.7%	8.1%*	54.4%	13.6%	17.1%*
High School or Less	7.6%	12.4%	62.9%	9.0%	8.1%
Some College &/or Assoc Degree	7.0%	14.5%	61.4%	10.9%	6.3%
Bachelor's or Higher	5.7%	13.5%	63.3%	11.9%	5.6%
HH Income <$60K	7.1%	12.5%	60.6%	11.1%	8.7%*
HH Income $60K-$119.9K	6.2%	14.7%	64.2%	9.3%	5.5%*
HH Income $120K+	6.9%	13.2%	64.6%	11.0%	4.3%*
Immigrant	7.1%	12.3%	66.9%	8.0%*	5.7%
Born in U.S.	6.6%	13.5%	62.0%	11.1%*	6.8%

Gambling Behavior

This section of the report provides an overview of Connecticut adult (18+) past year participation in different types of gambling as derived from the NORC ABS data (*n* = 5,259; weighted). The first part of this section profiles participation levels of the general population and the second part of the section profiles participation as a function of demographic characteristics and type of gambler.

General Adult Population

Figure 12. Past year adult participation in gambling



Financial speculation is a different color because it is not traditionally seen as a type of gambling.

As seen in Figure 12, the majority of the adult population (69.2%) has participated in some type of gambling in the past year (this 69.2% figure does not include financial speculation). The most common type of participation at 51.6% is in the large jackpot lotteries that are held two or three times a week (i.e., Powerball, Mega Millions, Lotto). Instant lotteries in the form of scratch tickets and Fast Play are also fairly popular (35.4%), as are charity tickets (50/50, raffles, sealed/pull-tabs) (26.5%), and lotteries that are held once or twice a day (Play3, Play4, Cash5, Lucky for Life) (22.8%).

A total of 18.5% of adults reported patronizing a land-based casino in the past year. In terms of where they played, people reporting visiting casinos in the following states:

- 88.1% Connecticut casinos
- 13.2% Massachusetts casinos
- 5.3% Nevada casinos
- 4.0% New York casinos
- 3.5% New Jersey casinos
- 2.6% Rhode Island casinos
- 6.3% casinos in other states or countries, and
- 0.7% illegal/underground Connecticut casinos.

In terms of what type of gambling they engaged in at the casino, people reported:

- 80.9% slot machines
- 33.3% casino table games
- 9.9% poker
- 9.3% sports betting
- 7.8% high stakes bingo
- 3.9% keno
- 3.0% horse race betting

Social gambling between individuals was the next most common type of past year gambling in Connecticut at 13.8% of the adult population. This includes activities such as poker or other card, dice or board games with friends; betting on games of skill that one personally participates in such as a pool game, bowling, and darts; and betting between friends/colleagues on professional sports or other events; etc.

A total of 10.2% of Connecticut adults reported betting on professional sports such as football, basketball, baseball, horse racing, boxing, motor racing, golf, e-sports and fantasy sports *at either a sportsbook, casino or online site*. In terms of where they bet, people reported that they engaged in sports betting at the following sites:

- 67.5% Connecticut online sports betting site
- 15.5% Connecticut land-based casino
- 14.4% out-of-state online sports betting site
- 13.2% Connecticut land-based sportsbook
- 7.5% illegal/underground Connecticut betting shop or bookmaker

The following documents what people reported betting on:

- 76.0% football
- 46.9% basketball
- 23.4% baseball
- 16.2% horse racing
- 15.9% fantasy sports

- 13.0% boxing or mixed martial arts
- 12.3% ice hockey
- 11.9% soccer
- 11.0% golf
- 3.8% motor racing
- 1.9% esports
- 3.9% other sports

A total of 7.2% of respondents reported gambling at an online casino in the past year, with 84.8% indicating they patronized a Connecticut online casino and 18.1% reporting they patronized an out-of-state online casino.

As seen in Figure 12, the least common past year gambling activities among Connecticut adults were bingo at 6.1% and keno at 4.5%.

Although it is not formally aggregated with the other types of gambling there is a strong empirical and conceptual relationship between financial speculation and traditional types of gambling (Arthur et al., 2016; J.Williams, Williams, et al., 2023). It is also the case that as participation in traditional types of gambling declines, participation in financial speculation has increased. Financial speculation refers to things such as purchasing cryptocurrency (e.g., Bitcoin), penny stocks, options or futures; or day trading, shorting, or betting on the direction or future value of a financial index (e.g., Dow Jones Industrial Average). A total of 13.0% of Connecticut adults reported engaging in some type of financial speculation in the past 12 months. The following shows what people reported they are speculating on:

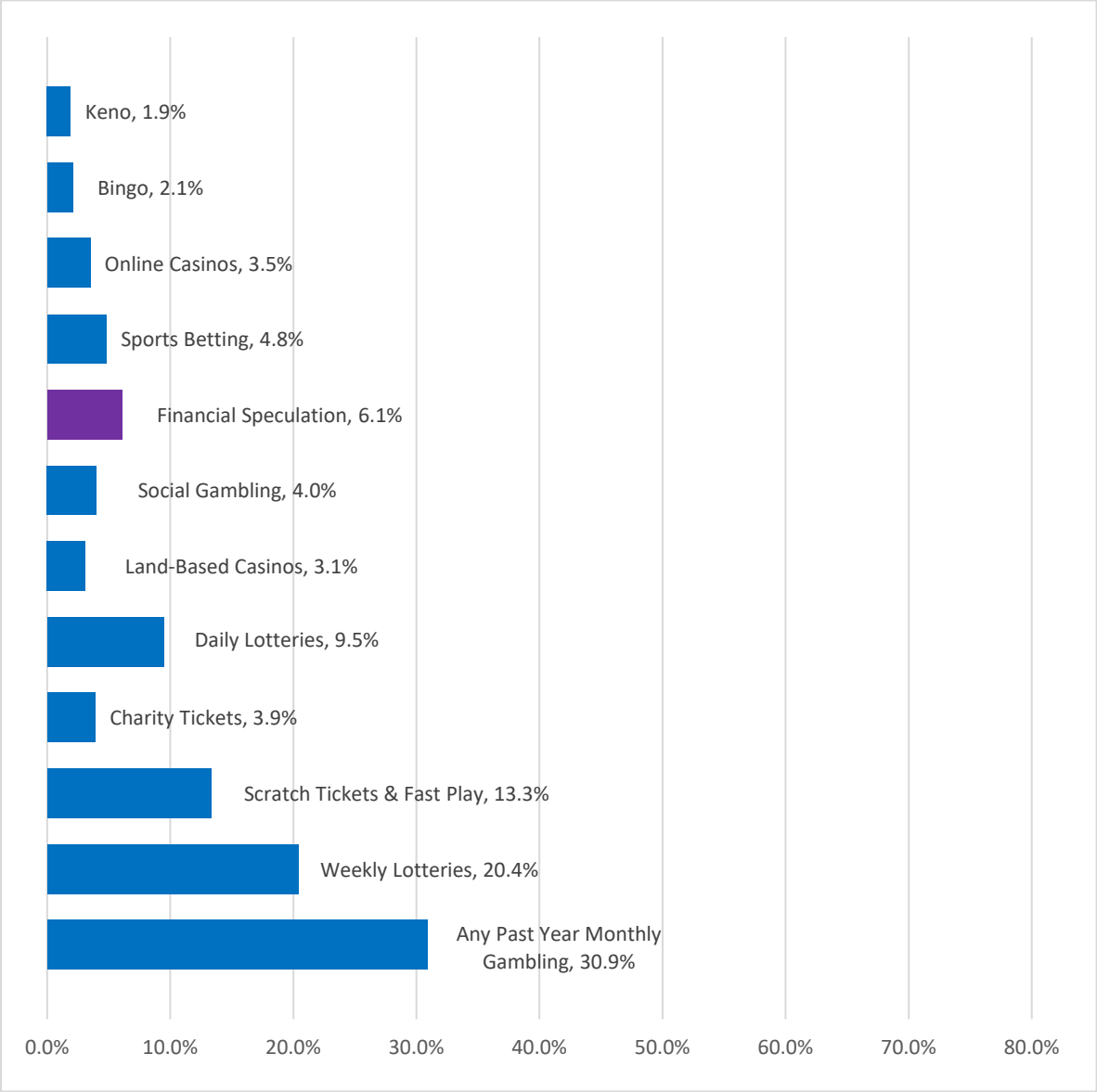
- 48.9% cryptocurrency
- 28.8% day trading
- 23.9% penny stocks
- 19.1% options or futures
- 7.7% financial index betting
- 7.2% shorting stocks or other assets

In terms of their net win/loss, 41.1% of speculators reported they currently have a net loss; 31.2% reported neither being ahead or behind; and 27.7% reported they currently have a net win.

A total of 10.7% of the adult population reported gambling online in the past year. Among past-year gamblers, the average number of different types of gambling participated in was 2.8 (1.8 SD). In terms of past year expenditure, the average amount spent among past year gamblers was $4,046.87 ($43,022 SD), the median was $413, and the mode was $60.

Figure 13 shows levels of past year *monthly* participation in gambling. This figure illustrates that regular involvement in gambling is much less common than past year gambling, with only 30.9% of people being monthly or more frequent gamblers compared to 69.2% being past year gamblers. The relative engagement in different types of monthly or more gambling is quite similar to the relative engagement in past year gambling, with monthly gambling prevalence typically being 40-50% of past year gambling prevalence. The exceptions to this pattern are charity tickets with only a 15% ratio (i.e., 3.9% monthly participation versus 26.5% past year participation), land-based casinos with only a 17% ratio (3.1% monthly participation versus 18.5% past year), and social gambling with a 29% ratio (4.0% monthly participation versus 13.8% past year).

Figure 13. Past year adult monthly participation in gambling



It is interesting to note that while only 6.5% of Connecticut adults reporting gambling to be a somewhat or very important recreational activity (see Figure 2), most people nonetheless participate in gambling, with a large minority participating on a regular basis. These participation levels illustrate the recreational value that gambling has for many Connecticut residents.

This point is also made by several key informants:

- *Casinos are major outlets for socializing, especially for older people. There are also a lot of social interactions with sports betting, fantasy sports and OTB, and many young people build important trust relationships through these. (Tebbetts, Matos, Taylor, Calvano, Brewer, Morris, Zuckerman, Cooper, Genovese)*

- *"It does create jobs, excitement, interest, activities… social networking, especially when it comes to sports betting… There are some instances where gambling is a conduit to developing rapport between folks, especially young males. They coalesce around gambling on a sporting event." (Nelson)*

Changes from 2008

A final consideration concerns how the current pattern of gambling behavior compares to the pattern when last comprehensively assessed in 2008 (Spectrum Gaming, 2009). While not all the questions are directly comparable, most are. The results are presented in
Increased: Online gambling and sports betting.

Table 11 and summarized below:

- Largely Unchanged: Overall past year gambling, lottery play, and scratch ticket play.
- Decreased: Horse race betting, bingo, and land-based casinos. As will be seen later in this report, these declines parallel comparable declines in revenue for these types of gambling.
- Increased: Online gambling and sports betting.

Table 11. Past year adult gambling in 2023 compared to 2008

	2008	2023
Online gambling	2.0%	10.7%
Horse race betting	7.4%	1.7%
Sports betting	8.4%	10.2%
Bingo	9.0%	6.1%
Land-Based Casinos	35.6%	18.5%
Scratch Tickets	37.0%	35.4%
Any Lottery product	53.7%	57.1%
Any Gambling	70.0%	69.2%

The changing pattern of gambling behavior was also noted by key informants:

- *Some forms of gambling have decreased (e.g., OTB) or disappeared (e.g., Jai Alai, dogtrack) from the gambling scene in Connecticut. (Keen, Wilkowski)*

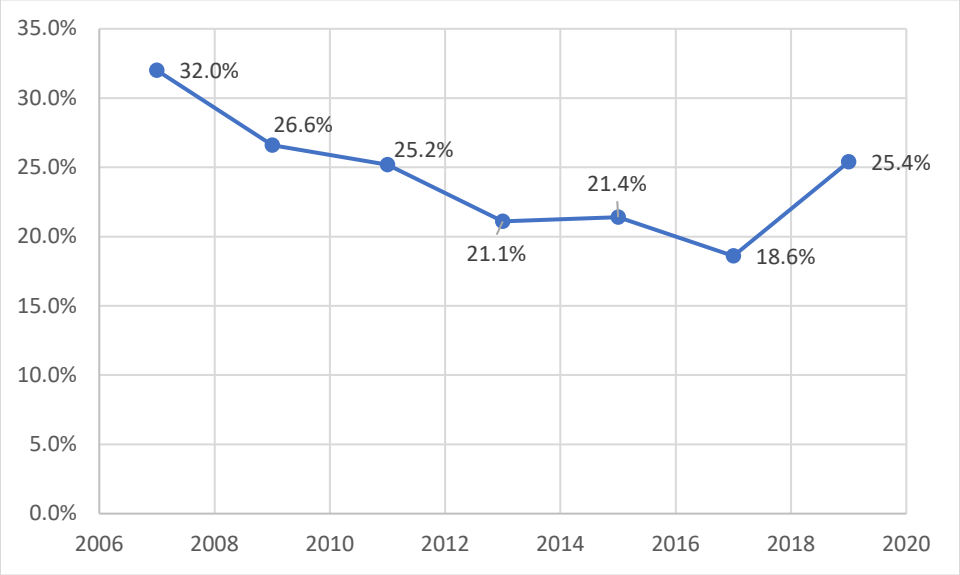
Adolescents

The present study did not assess adolescent gambling participation. However, in the interests of comprehensiveness we are including the results of a very recent publication (Stefanovics et al., 2023) that reported on the level of adolescent gambling participation from 2007 to 2019. This study analyzed the results of anonymous self-administered surveys conducted every two years in Connecticut schools for ages 12-18 (*N* = 14,401). As shown in Figure 14, overall past year gambling participation gradually decreased from 32.0% in 2007 to 18.6% in 2017 but increased again to 25.4% in 2019. However, the 2019 increase is potentially artifactual, as the survey question became more detailed and extensive. Prior to 2019 the question was "During the past 12 months, how many times did you gamble for money or possessions? (Include buying lottery tickets, betting money on sports teams, or playing card games for money.)." In 2019 the question was expanded to say "During the past 12 months, how many times have you gambled on a sports team, gambled when playing cards or a dice game, played one of your

state's lottery games, gambled on the Internet, or bet on a game of personal skill such as pool or a video game?" Research shows that more expansive/detailed wording such as this typically produces higher rates of endorsement compared to simpler global questions (Serdula et al., 1999; Williams, Volberg, Stevens et al., 2017; Wood & Williams, 2007). However, by the same token, singular global questions asking about all types of gambling tend to produce underestimates of actual gambling involvement compared to asking about each individual type and then totaling the responses (Serdula et al., 1999; Williams, Volberg, Stevens et al., 2017; Wood & Williams, 2007).

Stefanovics et al. (2023) reported that predictors of gambling involvement across all survey years were: male gender, older age, alcohol and marijuana use, higher levels of traumatic experiences at school, depression, and low levels of social support.

Figure 14. Prevalence of CT adolescent past year gambling participation by survey year



From Stefanovics et al. (2023)

Demographic Specific Adult Gambling Participation

The present section provides an overview of Connecticut adult (18+) past year participation in different types of gambling as a function of demographic group. The data is from the NORC ABS survey (n = 5,259; weighted[20]). A chi-square test determined that there were significant differences within each demographic category. A follow-up z-test of column proportions was utilized ($p < .05$ with Bonferroni correction) to identify specific significant demographic differences within each response option. An asterisk denotes that a significant difference was found between that percentage and one or more other percentage(s) also with an asterisk. Note: for Race/Ethnicity the test of column proportions is for that ethnic group *versus all other groups combined.*

[20] The data was again weighted to the sample, rather than the population, so as to facilitate statistical testing.

As seen in Table 12:

Any past year gambling is higher among:

- Males, ages 50-64, Whites, people with some college education or an associate degree, people with middle or high household incomes, and non-immigrants.

Weekly lottery participation is higher among:

- Males, ages 50-64, Whites, people with some college education or an associate degree, people with middle or high household incomes, and non-immigrants.

Scratch tickets and Fast Play is higher among:

- Females, ages 35-64, non-Asians, people with lower or middle educational attainment, people with average levels of household income, and non-immigrants.

Charity ticket purchase is higher among:

- Ages 50-64, Whites, people with middle and higher educational attainment and middle and higher household income, and non-immigrants.

Daily lottery participation is higher among:

- Ages 50-64, Blacks, and people with lower educational attainment and lower household income.

Land-based casino patronage is higher among:

- Ages 35-49, people with middle and higher household income, and non-immigrants.

Social gambling is higher among:

- Males, ages 18-34, people with higher educational attainment, and non-immigrants.

Financial speculation is higher among:

- Males, ages 18-34, Asians, and people with higher educational attainment and household income.

Sports betting is higher among:

- Males, ages 18-49, people with higher educational attainment, people with middle or higher household income, and non-immigrants.

Online casino patronage is higher among:

- Males, ages 18-49, Hispanics, people with lower educational attainment, and non-immigrants.

Bingo participation is higher among:

- Females, ages 35-49, Hispanics, and people with lower educational attainment and household income.

Keno participation is higher among:

- Ages 35-49, Hispanics, and people with lower educational attainment and lower household income.

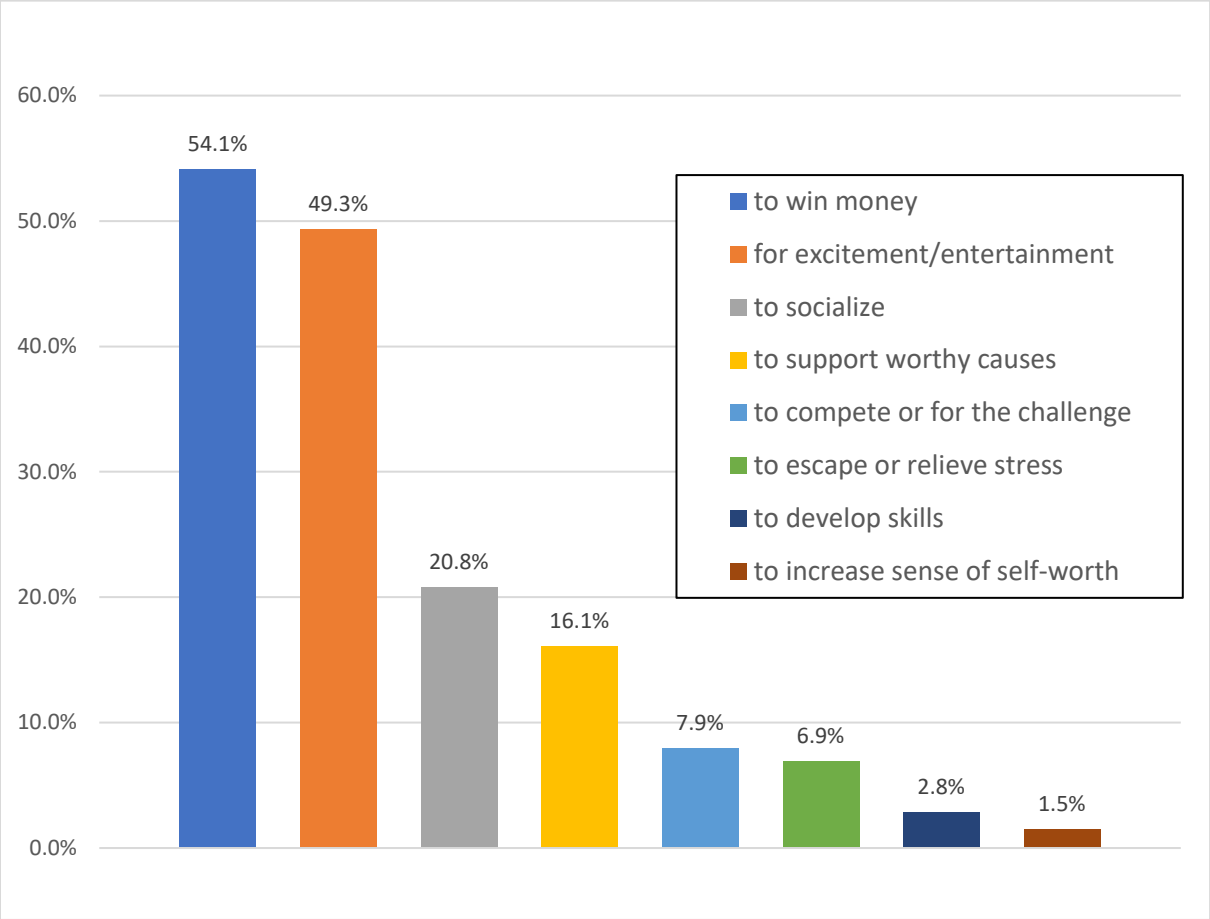
Table 12. Demographic specific past year adult participation in gambling

	Any Gambling	Weekly Lotteries	Scratch Tickets & Fast Play	Charity Tickets	Daily Lotteries	Land-Based Casinos	Social Gambling	Financial Speculation	Sports Betting	Online Casinos	Bingo	Keno
Male	72.4%*	55.5%*	33.8%*	25.8%	23.5%	19.6%	18.3%*	18.6%*	14.3%*	9.4%*	3.8%*	4.8%
Female	66.5%*	48.4%*	37.3%*	26.9%	22.3%	17.5%	9.5%*	7.8%*	6.5%*	5.1%*	8.3%*	4.1%
Other Gender	50.6%	33.0%	17.1%*	26.4%	15.5%	10.5%	15.6%	16.3%	1.6%*	3.8%	13.1%	8.0%
18-34	60.1%*	32.5%*	26.7%*	19.5%*	16.6%*	17.1%	18.2%*	19.2%*	14.9%*	10.3%*	6.7%	4.1%
35-49	71.2%*	54.0%*	40.8%*	29.1%	24.5%*	21.8%*	13.9%*	15.6%*	13.9%*	11.1%*	8.3%*	6.6%*
50-64	76.6%*	64.8%*	40.4%*	32.1%*	27.3%*	19.7%	14.5%*	11.9%*	8.7%*	5.8%*	5.9%	4.7%
65+	69.3%*	56.3%*	34.3%*	26.0%*	23.0%*	15.8%*	9.2%*	5.8%*	3.8%*	2.1%*	4.0%*	2.8%*
White	71.7%*	53.3%*	36.3%	29.5%*	20.3%*	19.0%	14.2%	12.3%*	10.1%	6.6%	5.2%*	3.5%*
Hispanic	62.1%*	45.1%*	34.5%	17.9%*	31.7%*	17.7%	12.8%	13.3%	10.1%	10.6%*	12.0%*	9.1%*
Black	65.6%	49.8%	38.3%	14.7%*	39.3%*	16.5%	15.9%	17.5%	14.9%	11.1%	7.9%	7.1%
Asian	60.2%*	47.4%	20.5%*	17.7%*	12.9%*	20.3%	15.4%	25.6%*	11.7%	9.2%	5.2%	1.6%*
Other Race/Ethnicity	55.9%*	41.1%*	29.1%	19.3%	20.1%	17.0%	8.0%*	17.9%	9.8%	12.3%	12.2%	7.5%
High School or Less	68.3%	52.3%	39.5%*	21.9%*	28.7%*	18.0%	13.0%	9.4%*	8.6%*	9.2%	9.2%*	6.5%*
Some College or Assoc Degree	72.5%*	57.2%*	38.9%*	27.0%	27.1%*	19.4%	11.4%*	12.2%*	8.7%*	6.4%	5.7%*	4.5%*
Bachelor's or Higher	67.9%*	47.6%*	29.5%*	30.1%*	14.6%*	18.2%	16.1%*	16.9%*	12.7%*	5.8%	3.5%*	2.5%*
HH Income <$60K	62.7%*	47.6%*	35.2%	18.4%*	25.1%*	15.8%*	11.2%*	9.6%*	7.7%*	7.5%	8.4%*	5.9%*
HH Income $60K-$119.9K	74.0%*	54.7%*	38.4%*	29.5%*	23.9%*	21.2%*	15.8%*	14.9%*	11.6%*	7.7%	4.7%*	4.3%
HH Income $120K+	74.4%*	54.7%*	32.9%*	36.0%*	17.9%*	20.5%*	16.7%*	17.1%*	13.7%*	6.7%	4.1%*	2.7%*
Immigrant	55.1%*	44.0%*	24.3%*	14.0%*	23.8%	12.9%*	9.4%*	15.8%	6.2%*	4.4%*	4.2%	4.0%
Born in U.S.	71.5%*	52.9%*	37.2%*	28.5%*	22.6%	19.3%*	14.5%*	12.6%	10.9%*	7.6%*	6.3%	4.5%

Motivations for Gambling

This section of the report provides an overview of Connecticut adult (18+) motivations for gambling among past year gamblers as derived from the NORC ABS data (*n* = 3438; weighted). Figure 15 illustrates that most CT gamblers engage in gambling either to win money or for excitement/entertainment. However, as will be seen later in this report, these motivations vary as a function of type of gambler (i.e., recreational versus problem).

Figure 15. Current motivations for gambling among past year adult gamblers



Problem Gambling and Related Indices

Population Prevalence of Problem Gambling

Problem gambling was assessed with the past year NORC DSM-IV Screen for Gambling Problems (NODS) (Gerstein et al., 1999) (Appendix C) for direct comparisons with the last statewide prevalence survey in 2008 where this instrument was also used, as well as the Problem and Pathological Measure (PPGM) (Williams & Volberg, 2010, 2014) (Appendix D) to provide an accurate assessment of the level and nature of problem gambling in the state.

It is not uncommon to find differences in the prevalence rates between different instruments. This was also found in the present study, as illustrated in Table 13 where the weighted NORC ABS survey found a 1.4% NODS (0.7% + 0.7%) past year adult (18+) prevalence rate of problem gambling and a 1.8% PPGM (0.8% + 1.0%) past year adult (18+) problem gambling prevalence rate. (The PPGM typically achieves somewhat higher rates compared to other instruments as it is better at identifying problem gamblers in denial; Williams & Volberg, 2014). Of particular importance to the present study is the fact that the 1.4% NODS problem gambling prevalence rate in 2023 *is unchanged from the 1.4% rate established by Spectrum Gaming (2009) in 2008*.

Table 13. Gambling categories in 2008 and 2023

Category	2008 NODS Percentage	2023 NODS Percentage	2023 PPGM Percentage	2023 PPGM *N*
Non-Gambler	30.0%	30.8%	30.7%[21]	878,764
Recreational Gambler	64.5%	61.2%	62.6%	1,789,387
At-Risk Gambler	4.1%	6.7%	4.9%	138,960
Problem Gambler	0.8%	0.7%	0.8%	22,536
Pathological Gambler	0.6%	0.7%	1.0%	29,323

However, there are two important caveats regarding this 'unchanged' rate:

- First, the subclinical 'at-risk' percentage in the NODS *has increased* from 4.1% to 6.7%.
- Second, survey methodology has an impact on obtained rates in addition to the survey instrument (Williams & Volberg, 2009; Williams, Volberg & Stevens, 2012). More specifically, telephone interviews produce significantly lower rates compared to self-administered surveys as self-administered surveys facilitate more honest/candid responding due to their greater perceived anonymity (Williams & Volberg, 2009). Also, as mentioned earlier in this report, when the solicitation for a study identifies the survey as a 'gambling survey' it results in under-recruitment of non-gamblers (due to lack of interest) and over-recruitment of heavy gamblers and people with gambling problems (Williams & Volberg, 2009). Williams, Volberg & Stevens (2012) undertook a comprehensive study of the magnitude of these effects for the 202 worldwide problem gambling prevalence studies that had been conducted up through 2012 to develop 'conversion factors' that could standardize rates across studies. These conversion factors were then applied to all studies conducted between 1975 - 2012, including the five previous Connecticut studies (reproduced in

[21] This figure differs from 30.8% because there were a couple of people who had not gambled in the past year but still had residual symptoms of problem gambling from a prior year and were designated as 'at-risk gamblers'.

Appendix E).[22] Thus, the *standardized* CT problem gambling rate in 2008 **was 1.3%** rather than 1.4% (as it used a telephone modality and described the survey as a 'gambling survey') whereas the standardized rate in 2023 **is 1.7%** rather than 1.4%.

Thus, there is reason to believe that there *has been a modest increase* in gambling-related harm from 2008 to 2023. Higher rates compared to 2008 might have been anticipated considering the introduction of Keno in 2016, online and land-based sports betting in 2021, and online casinos in 2021. However: (a) participation rates in these newer types of gambling is comparatively low (4.5%, 10.2%, and 7.2% respectively); and (b) participation in these new types of gambling is offset by a 50% reduction in land-based casino participation from 2008 to 2023.

It should also be noted that the current standardized rate of 1.7% (or 1.8%) is well below the 1991 standardized rate of 3.2% as well as the 1996 standardized rate of 2.9% (see Appendix E). In general, this is very consistent with overall North American trends which show that problem gambling rates peaked in the late 1990s/early 2000s and have been declining ever since. The 1990s and early 2000s is the period with the most rapid introduction and expansion of legal gambling opportunities (particularly electronic gambling machines (EGM) and casinos), the greatest increase in gambling revenue (see

Figure 32), and the peak in the overall rate of gambling participation. For example, in Connecticut the past year rate of gambling participation was 74% in 1986, 86% in 1991, 88% in 1996, 70% in 2008, and 69.2% in 2023 (Appendix E).

Considering that legal gambling availability has continued to increase both in Connecticut and North America more generally beyond the early 2000s, the present fairly low rate of problem gambling illustrates that populations tend to adapt to the presence of legalized gambling over time. There are several mechanisms likely responsible. These include: (a) decreased overall population participation in gambling (due to greater wariness as well as the novelty having worn off); (b) increased population awareness of the potential harms of gambling (creating less susceptibility); (c) people being removed from the population pool of people with gambling problems due to severe adverse consequences deriving from their gambling (e.g., bankruptcy, suicide); (d) increased industry and/or government efforts to provide gambling more safely, to enact programs to prevent problem gambling, and to provide treatment resources; and (e) increasing age of the population, with older people generally having lower rates than younger people (Williams, Volberg & Stevens, 2012).

Nonetheless, there are still significant numbers of people in Connecticut who are problem and/or at-risk gamblers in 2023. Using the PPGM data,

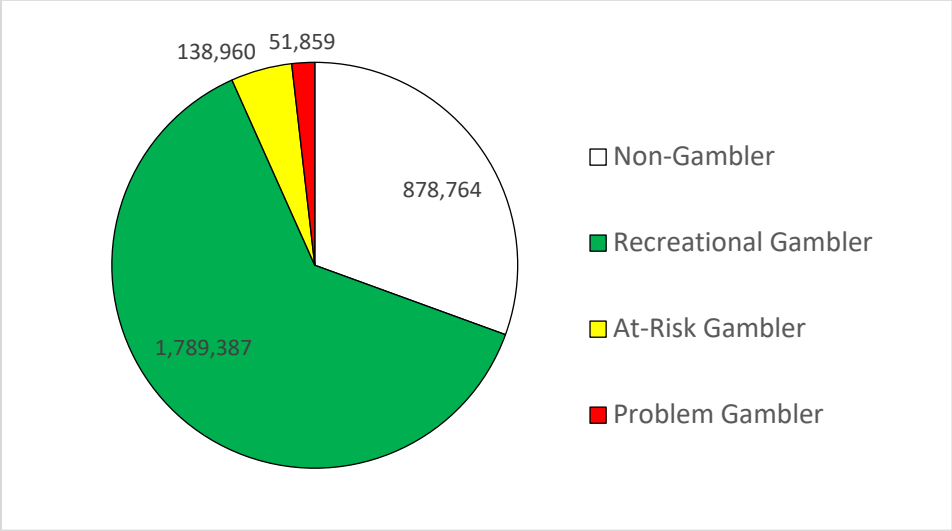
Figure 16 shows that there are an estimated **51,859 people with gambling problems in Connecticut and an additional 138,960 who are 'at-risk'**. However, there are many other people impacted by gambling problems in addition to the affected individuals. Between 42.0% (ABS weighted sample) and 39.0% (ABS+OPS merged unweighted sample)[23] of people with gambling problems reported being married

[22] Standardized PG Rate = Unstandardized rate x PPGM Conversion factor (Table 9 in Williams, Volberg et al., 2012) x Administration Modality factor (Table 15 in Williams, Volberg et al., 2012) x Survey Description factor (Table 16 in Williams, Volberg et al., 2012).

[23] As a reminder, ABS is the representative sample weighted to the population of Connecticut, whereas the ABS+OPS is the merged unweighted sample of 415 problem gamblers from the Address-Based Sample (ABS) survey and the online panel survey (OPS).

and/or in a common law relationship. Furthermore, people with gambling problems reported having an average of 1.23 (1.31 SD) (ABS+OPS, unweighted) to 1.61 (1.4 SD) children (ABS, weighted). Thus, **the total number of people directly or indirectly impacted by gambling-related problems in Connecticut is conservatively estimated to be: 51,859 + (51,859 x .405) + (51,859 x 1.42) = 146,502.**

Figure 16. Number of CT adults in each PPGM gambling category in 2023



Proportionally: 30.7% Non-Gamblers; 62.6% Recreational Gamblers; 4.9% At-Risk Gamblers; 1.8% Problem Gamblers

A final consideration concerns how the 1.8% rate in Connecticut in 2023 compares *to other states*. Table 14 shows the 13 problem gambling surveys that have been conducted in other U.S. states since 2015 as well as their standardized problem gambling prevalence rates. As can be seen, **the 1.8% CT rate is mid-range** between the 2.8% New Jersey rate and the 0.7% New York rate (the New York rate is anomalously low because the survey was conducted in the midst of the COVID-19 pandemic: July – December 2020). (Note that the anomalously high unstandardized Oklahoma and Missouri problem gambling prevalence rates are likely attributable to the inclusion within the sample of online panelists and people recruited via social media, as well as identifying the survey as a 'gambling study.')

Table 14. Recent U.S. adult problem gambling prevalence studies

Year	State	Administration Modality	Response Rate	Sample Size	Past Year Gambling Prevalence	Problem Gambling (PG) Instrument	PG Rate	Survey Description	Standardized Problem Gambling Rate
2015	New Jersey	Telephone interview (cell + landline)	5.3%	1,500	69.8%	PGSI 8+[24]	0.6%	health and recreation	0.6 * 2.17 * 2.18 * 1.0 = **2.8%**
2017	Maryland	Telephone interview (cell + landline)	6.6%	3,761	87.0%	NODS 3+	1.9%	views on gambling	1.9 * 1.19 * 2.18 * 0.51 = **2.5%**
2017	Kansas	ABS: self-administered paper or online	Not reported	1,755	48.0% (monthly)	Mix of 8 PGSI & NODS items	2.7% high risk	Kansas gambling survey	Cannot be calculated
2018	Iowa	Telephone interview (cell + landline)	26.3%	1,761	73.8%	PGSI 8+	0.8%	public attitudes and behaviors toward gambling	0.8 * 2.17 * 2.18 * 0.51 = **1.9%**
2019	Minnesota	ABS: self-administered paper or online	25.0%	8,512	67.0%	PPGM	1.3%	recreation and well-being	1.3 * 1.0 * 1.0 * 1.0 = **1.3%**
2020	New York	ABS: self-administered paper or online	27.9%	3,845	29.4%	PPGM	0.7%	health and recreation	0.7 * 1.0 * 1.0 * 1.0 = **0.7%**
2021	Illinois	ABS: self-administered online (85.7%); phone interview (14.3%)	4.1%	2,029	68.4%	PPGM	3.8%	Illinois survey of gambling	3.8 * 1.0 * 1.1 * 0.51 = **2.1%**
2021	Washington State	ABS: self-administered paper or online	19.2%	9,413	43.5%	PGSI 5+	1.5%	health and recreation	1.5 * 1.0 * 1.0 * 1.0 = **1.5%**
2021/ 2022	Massachusetts[25]	ABS: self-administered paper or online (98.3%); phone interview (1.7%)	27.5%	6,293	60.2%	PPGM	1.4%	health and recreation	1.4 * 1.0 * 1.0 * 1.0 = **1.4%**
2022	Indiana	ABS: self-administered paper or online	19.6%	855	89.3%	NODS 5+ PGSI 8+ DSM-5 4+[26]	1.6% 1.3% 2.3%	Unclear: "invitation letter provided a description of the study"	1.6 * 2.60 * 1.0 * 0.51 = **2.1%** 1.3 * 2.17 * 1.0 * 0.51 = **1.4%**
2022	Oklahoma	Unspecified mix of multimodal ABS + online panel + social media recruitment	NA because of inclusion of convenience samples	4,035	57.9%	DSM-5 4+ (derived from PPGM questions)	6.3%	"recreation and leisure activities, including betting and gambling"	Cannot be calculated
2022	Missouri			3,259	63.9%		4.1%		
2023	Connecticut	ABS: self-administered online	11.8%	5,259	69.2%	NODS 3+ PPGM	1.4% 1.8%	health and recreation	1.4 * 1.19 * 1.0 * 1.0 = **1.7%** 1.8 * 1.0 * 1.0 * 0.51 = **1.8%**

[24] PGSI is the Problem Gambling Severity Index (Ferris & Wynne, 2001).
[25] This report is forthcoming and will be available on the SEIGMA website in late 2023.
[26] Conversion factors have not been developed for the DSM-5 criteria.

Demographic Profile of Recreational, At-Risk, and Problem Gamblers

The left part of Table 15 illustrates the pattern of PPGM gambling categorizations as a function of demographic group as derived from the weighted NORC ABS data, whereas the far-right column shows the profile of the 415 people classified as problem gamblers from the ABS and OPS surveys combined. As before, a z-test of column proportions was utilized ($p < .05$ with Bonferroni correction) to identify specific significant demographic differences within each response option for the left part of the table. An asterisk denotes that a significant difference was found between that percentage and one or more other percentage(s) also with an asterisk. Note: for Race/Ethnicity the test of column proportions is for that ethnic group versus all other groups combined.

As shown, **elevated rates of gambling-related harm are seen in: males, people under 65, non-Whites (i.e., Blacks, Hispanics, Asians, and Other Ethnicity), and people with lower education**. However, *elevated risk* does not directly correspond to the *relative prevalence* in the population of people with gambling problems in Connecticut due to different demographic groups comprising different proportions of the general population. Thus, the column on the right illustrates that the **majority of people with current gambling problems in Connecticut are: male, ages 18 – 34, Whites, and non-immigrants.**

Table 15. PPGM gambling category demographic patterns

	Non-Gambler	Recreational Gambler	At-Risk Gambler	Problem Gambler	Problem Gambler (combined sample) *n* = 415 (unweighted)
Male	27.5%*	64.3%	5.9%*	2.2%	57.7%
Female	33.5%*	61.3%	3.8%*	1.4%	42.0%
Other Gender	49.4%	39.4%	6.5%	4.8%	0.2%
18-34	39.8%*	53.2%*	4.7%	2.3%*	51.0%
35-49	28.8%*	62.5%*	6.4%	2.2%*	29.7%
50-64	23.4%*	68.8%*	5.3%	2.5%*	13.3%
65+	30.5%*	65.9%*	3.3%	0.3%*	6.0%
White	28.3%*	66.2%*	4.1%*	1.4%*	60.7%
Hispanic	37.8%*	51.8%*	7.2%	3.2%	20.5%
Black	34.4%	52.7%*	8.7%	4.3%*	21.0%
Asian	39.8%*	49.7%*	6.5%	3.9%	5.3%
Other Race/Ethnicity	43.4%*	47.1%*	5.9%	3.6%	4.1%
High School or Less	31.7%	59.4%*	6.3%*	2.6%	28.0%
Some College or Assoc Degree	27.4%*	65.6%*	5.4%*	1.6%	39.8%
Bachelor's or Higher	32.0%*	63.5%	3.3%*	1.3%	32.3%
HH Income <$60K	37.2%*	54.9%*	5.9%	2.0%	46.3%
HH Income $60K-$119.9K	25.9%*	67.7%*	4.4%	2.1%	37.6%
HH Income $120K+	25.6%*	69.0%*	4.0%	1.4%	16.1%
Immigrant	44.7%*	48.3%*	5.3%	1.7%	9.6%
Born in U.S.	28.4%*	65.0%*	4.8%	1.8%	90.4%

Gambling Behavior of Recreational, At-Risk, and Problem Gamblers

Not surprisingly, the weighted data from the ABS survey shows that the level of gambling involvement varies substantially as a function of gambling category as seen in Table 16. As can be seen, the range of gambling activities, the overall frequency of involvement, and average and median expenditure is highest among problem gamblers and lowest among recreational gamblers.

Table 16. Level of gambling involvement in past year as a function of gambling category

	Recreational Gambler	At-Risk Gambler	Problem Gambler
Average # of Types of Gambling (range of 1 to 10)	2.62 (1.5)	4.43 (2.4)	5.89 (2.4)
Total Frequency (range of 1 – 52)	4.21 (3.9)	11.27 (9.2)	18.12 (11.5)
Average Past Year Expenditure	$1,314 ($5,178)	$28,724 ($152,380)	$33,184 ($124,216)
Median Past Year Expenditure	$380	$4,398	$9,534

Note: figures in brackets are standard deviations

Motivations

Motivations for gambling also differ between type of gambler as seen in the table below using the ABS weighted data. As shown, people with gambling problems are much more likely to report their motivations for gambling to be to 'escape or relieve stress,' 'to compete or for the challenge,' because it 'makes me feel good about myself,' to 'win money,' and much less likely to gamble 'to support worthy causes.'

Table 17. Motivations for gambling as a function of type of gambler

	Recreational Gambler	At-Risk Gambler	Problem Gambler
For excitement/entertainment	48.5%	56.7%	55.1%
To win money	52.1%	71.7%	75.0%
To escape or relieve stress	5.3%	14.9%	38.2%
To socialize	20.7%	18.9%	27.1%
To support worthy causes	17.4%	5.6%	2.6%
To compete or for the challenge	7.1%	12.1%	21.0%
Makes me feel good about myself	0.7%	2.2%	27.9%
To develop my skills	2.6%	2.9%	8.7%
Other reason	10.9%	8.2%	2.0%

Most Problematic Types of Gambling

It is well established that continuous types of gambling (e.g., EGMs, casino table games) and gambling that is available 24 hours a day (i.e., online gambling) does tend to confer some additional risk of gambling-related harm (e.g., Allami et al., 2021; Gooding & Williams, 2023). However, people with gambling problems tend to be broadly involved in a large range of gambling formats and it is their high

level of involvement that is their primary risk factor (Gooding & Williams, 2023; Williams, Shaw et al., 2023). As further evidence of this, all 415 people classified as problem gamblers in the present study (ABS + OPS surveys combined; unweighted) were asked if there were particular types of gambling that contributed to their problems more than others, and if so, which ones. The majority said 'no' (53.2%). However, for the 46.8% who said 'yes,' a wide array of formats were identified as particularly problematic. Although certain types are endorsed more than others, this also closely parallels participation rates for each type:

- 34.7% scratch tickets (81.9% participation)
- 31.6% slot machines (73.1% land-based casino participation)
- 28.9% lottery tickets (88.9%)
- 28.9% sports betting (72.0% participation)
- 28.4% online gambling (77.6% participation)
- 22.1% casino table games (73.1% land-based casino participation)
- 15.3% keno (52.0% participation)
- 14.2% poker (73.1% land-based casino participation)
- 17.9% bingo (52.9% participation)
- 6.8% horse racing (15.9% participation)

Some key informants commented on problematic gambling formats:

- *Before the recent gambling expansion, the CCPG helpline got many calls about the lottery (more than about the casino or other forms of gambling) - normally about scratch tickets. (Goode)*
- *"From information supplied to us by CCPG, we know that online gambling was the #1 reason why people called the helpline in our region." (Hanley)*
- *After the recent expansion of gambling there was a spike in calls by sports and online gamblers (which has declined from its peak ~45 days prior to interview). The bulk of callers are online sports gamblers, but there were also online casino gamblers (EGMs and table games). (Sanford, Kirch, Hanley, Goode).*

Treatment for Problem Gambling

This issue will be dealt with in greater depth in the **CONNECTICUT PROBLEM GAMBLING PREVENTION & TREATMENT** review section. However, accessing treatment for problem gambling is a social and economic impact of gambling that also needs to be identified in the present section. Help-line calls and treatment numbers at government-funded agencies provide some idea of the magnitude of this impact, although these numbers only usually reflect the 'tip of the iceberg,' as most people with gambling problems do not seek formal treatment, and when they do, it is often not with these types of agencies (as seen in the table below).

Rather, the best indication of the degree to which treatment services are being accessed (and needed) are the population surveys. Thus, all people with gambling problems in the surveys were asked:

1. Whether they had made any attempts to cut down, control or stop their gambling in the past 12 months.
    - If so, whether they did this on their own or with help from others.
        - If they did it on their own, why did they choose to do it on their own.
2. Whether they wanted help for gambling problems in the past 12 months.
3. Whether they sought help for gambling problems in the past 12 months.

- If so, where did they seek this help from.
- How helpful this assistance was in reducing or stopping their gambling.

The results are presented in Table 18. The middle column is the weighted percentages for the 86 people classified as problem gamblers in the ABS survey and the right column is the unweighted percentages for the 415 people classified as problem gamblers combined from the ABS and OPS surveys. As can be seen, these figures show that the large majority of people with gambling problems do not want external help, preferring to try curbing their gambling on their own, although a minority are deterred from seeking help because of stigma, perceived costs, or being unaware of where to get help. The people who did seek help accessed a wide variety of sources, but with self-help materials, Voluntary Self Exclusion agreements, and support from family/friends being the most commonly accessed sources. As seen in the last row, the large majority of people who did seek external help found this assistance somewhat, quite or very helpful in controlling their gambling.

Table 18. Treatment seeking for problem gambling

Population Survey Question	CT PG (ABS; weighted)	CT PGs (Combined ABS+OPS; unweighted) (*n* = 415)
Attempted to cut down, control or stop gambling in past 12 months?	69.1% yes	69.2% yes
If yes, on your own or with help with others?	86.3% on own	76.7% on own
If on own, why? (check all that apply)		
Didn't believe would need help	68.3%	48.9%
Didn't believe treatment would work	27.2%	18.7%
Too ashamed to seek help	18.6%	32.9%
Unaware of where to get help	8.6%	17.4%
Didn't think I could afford it	13.3%	9.6%
Wanted help for gambling problems in past 12 months?	24.9% yes	37.2% yes
Sought help for gambling problems in past 12 months?	20.7% yes	29.5% yes
If yes, type of help received (check all that apply)		
Self-help	37.3%	32.2%
Individual counselling from counselor, psychologist, or psychiatrist	35.0%	31.4%
Casino or online Voluntary Self-Exclusion	32.9%	12.4%
Individual counselling from family doctor	23.1%	24.0%
Online or telephone support (e.g., GamTalk)	23.1%	12.4%
Group therapy or support (e.g., GA)	14.4%	19.8%
Support from friends/family	5.3%	33.1%
Medication	4.2%	9.1%
Family therapy or support (e.g., Gam-Anon)	0.6%	11.6%
Residential or inpatient treatment	0.6%	8.3%
Individual counseling from pastor, minister, priest, rabbi or other religious figure	0%	17.4%
Average & median # of different types of help received	1.7 & 1.0	2.1 & 1.0

Population Survey Question	CT PG (ABS; weighted)	CT PGs (Combined ABS+OPS; unweighted) (*n* = 415)
How helpful was this assistance?	41.4% somewhat helpful 51.2% quite or very helpful	52.1% somewhat helpful 39.7% quite or very helpful

The following table shows the demographic profile of people in the combined ABS+OPS unweighted sample who reported they did not seek help in the past year compared to people who reported they had sought help. As can be seen, the treatment-seeking rate is similar across demographic groups, albeit with below average treatment-seeking for people ages 65+, Whites, Blacks, people with middle or higher educational attainment, and non-immigrants.

Table 19. Demographic profile of PG help seekers

	PGs who did not seek help (*n* = 284)	PGs who did seek help (*n* = 119)
Male	71.2%	28.8%
Female	69.2%	30.8%
18-34	65.6%	34.4%
35-49	75.6%	24.4%
50-64	70.0%	30.0%
65+	88.0%	12.0%
White	74.2%	25.8%
Hispanic	58.3%	41.7%
Black	75.6%	24.4%
Asian	50.0%	50.0%
Other Race/Ethnicity	62.5%	37.5%
High School or Less	62.8%	37.2%
Some College or Assoc Degree	73.3%	26.7%
Bachelor's or Higher	73.8%	26.2%
HH Income <$60K	71.8%	28.2%
HH Income $60K-$119.9K	69.1%	30.9%
HH Income $120K+	70.3%	29.7%
Immigrant	61.5%	38.5%
Born in U.S.	71.5%	28.5%

The demographic profile of help-seekers is consistent with several key informant sentiments:

- *Younger individuals are coming to seek treatment (people in the 20-39 age group now constitute the second highest age group). (Fetta, Nelson, Wampler, Keen, Sanford, Zuckerman)*

- *"The scene has changed dramatically, and whereas years ago, when I went to GA initially, there was almost no one young in the group; now, when I do go, maybe a quarter of the people are 30 or under. They're young." (Zuckerman)*
- *Young couples are also accessing treatment more frequently. (Nelson)*
- *More people and younger people are presenting with gambling issues since the legalization of online and sports gambling. (Fetta, Nelson, Matos, Mautte, Nolan, Keen, Gillespie, Sanford, Hanley, Goode, Zuckerman, Genovese)*
- *"Definitely [gambling] is hitting our college kids the hardest. We used to say the [prototypical] problem gambler was a little old lady at the slot machine. Now it's a 20 something male betting on sports. That's the majority of the [helpline] calls that we're getting now, either from actual college students or their parents." (Goode)*
- *Other treatment providers mentioned that they see people of all income levels, and even more middle class or wealthy clients, or at both extremes of the income distribution. (Calvano, Kirch, Hatch, Zuckerman, Genovese)*
- *"The majority of calls received on the gambling helpline are firstly for young male sports bettors, and secondly for online casinos." (Goode)*

Financial Impacts

Financial harms are usually one of the most common negative impacts of excessive gambling. In the Connecticut population surveys they were the **second most reported impact** after mental health impacts.[27]

Thus:

- 2.4% (ABS, weighted) of gamblers reported 'significant financial concerns' or 'borrowing a significant amount of money' or 'selling possessions' because of their gambling, and
- 51.6% (ABS, weighted) to 71.1% (ABS+OPS, unweighted) of problem gamblers reported 'significant financial concerns' or 'borrowing a significant amount of money' or 'selling possessions' because of their gambling.

Bankruptcy

Bankruptcy is a discrete financial impact that research has found to be reliably associated with excessive gambling. In the present population surveys:

- 0.4% (ABS, weighted) of gamblers reported filing for bankruptcy because of their gambling and
- 13.5% (ABS, weighted) to 15.7% (ABS+OPS, unweighted) of problem gamblers reported filing for bankruptcy because of their gambling.

Actual bankruptcy filings over time were obtained through the U.S. Courts database as well as the American Bankruptcy Institute (ABI). Data from the U.S. Courts from 2013 to September 2022 for Connecticut and New London County are shown in Table 20 and data from the American Bankruptcy Institute (ABI) from 2010 - 2020 for Connecticut and the United States are shown in Table 21. (Note that

[27] In all cases the question asked whether the impact/harm occurred 'because of your gambling' or 'because of your involvement in gambling.' There were also stem questions about a harm in a general area (e.g., finances); if the person answered in the affirmative, they were asked follow-up questions about specific harms within that general area.

Chapter 7 bankruptcy involves liquidation of assets and Chapter 13 bankruptcy involves a reorganization of debt to facilitate repayment).

Table 20. Bankruptcy filings in CT and New London County from 2013 - 2022 (U.S. Courts)

Region	Year	Total Filings	Personal Bankruptcy %	Business Bankruptcy %
Connecticut	2013	7,154	95.7%	4.3%
	2014	6,968	95.7%	4.3%
	2015	6,294	96.0%	4.0%
	2016	5,864	96.1%	3.9%
	2017	5,595	96.8%	3.2%
	2018	6,077	96.8%	3.2%
	2019	6,148	96.9%	3.1%
	2020	4,194	97.3%	2.7%
	2021	3.018	97.6%	2.4%
	2022	2,536	97.2%	2.8%
New London County	2013	497	96.6%	3.4%
	2014	431	94.7%	5.3%
	2015	400	96.3%	3.8%
	2016	367	95.6%	4.4%
	2017	325	96.0%	4.0%
	2018	243	95.9%	4.1%
	2019	243	95.0%	5.0%
	2020	247	96.4%	3.6%
	2021	188	98.4%	1.6%
	2022	183	96.7%	3.3%

Table 21. Bankruptcy filings in CT and the U.S. from 2010 - 2020 (ABI)

Region	Year	Total Personal Filings	Chapter 7 %	Chapter 13 %
Connecticut	2010	11,397	89%	10%
	2011	9,485	89%	10%
	2012	8,191	86%	12%
	2013	7,050	85%	14%
	2014	6,863	83%	16%
	2015	6,163	81%	18%
	2016	5,753	79%	20%
	2017	5,498	79%	20%
	2018	5,923	81%	19%
	2019	5,986	80%	19%
	2020	4,014	88%	12%

Region	Year	Total Personal Filings	Chapter 7 %	Chapter 13 %
United States	2010	1,561,925	71%	27%
	2011	1,380,477	69%	29%
	2012	1,186,396	68%	30%
	2013	1,032,772	67%	31%
	2014	910,507	65%	33%
	2015	819,587	63%	36%
	2016	772,227	61%	37%
	2017	766,849	61%	37%
	2018	755,353	61%	37%
	2019	757,497	61%	37%
	2020	529,071	69%	28%

Thus, although bankruptcy is not an uncommonly reported consequence of problem gambling, Table 20 shows that bankruptcy filings in New London County have steadily *decreased since 2010*, following the same downward trend seen in Connecticut and the United States more generally. That said, it is worth noting that these steadily decreasing rates closely parallel the steadily decreasing gross gambling revenue in Connecticut (which peaked in 2007 and has been declining ever since; see

Figure 32). Furthermore, when examining data from 1991 to 2007, the previous analysis of bankruptcy filings in Connecticut conducted by Spectrum Gaming (2009) found that while bankruptcy filings have consistently been lower than national rates, bankruptcy filings in New London County did exceed the Connecticut bankruptcy rate in eight of the 12 years examined, with rates in 1997, 1998 and 1999 exceeding the statewide rate by about 10%.

Mental Health Impacts

Negative mental health impacts are also one of the most common negative impacts of excessive gambling. In the population surveys they were the **most commonly reported impact**. More specifically:

- 2.6% (ABS, weighted) of gamblers reported 'significant mental stress in the form of guilt, anxiety, or depression' because of their gambling, and
- 67.2% (ABS, weighted) to 69.9% (ABS+OPS, unweighted) of problem gamblers reported 'significant mental stress in the form of guilt, anxiety, or depression' because of their gambling.

Suicide

Suicidal ideation, suicide attempts, and actual suicides have also been reliably associated with excessive gambling in the research literature. In the present population surveys:

- 0.3% of gamblers reported suicidal ideation because of their gambling and 0.04% reported attempting suicide because of their gambling.
- 11.3% (ABS, weighted) to 16.9% (ABS+OPS, unweighted) of problem gamblers reported suicidal ideation because of their gambling, and 1.4% (ABS, weighted) to 8.4% (ABS+OPS, unweighted) reported attempting suicide because of their gambling.

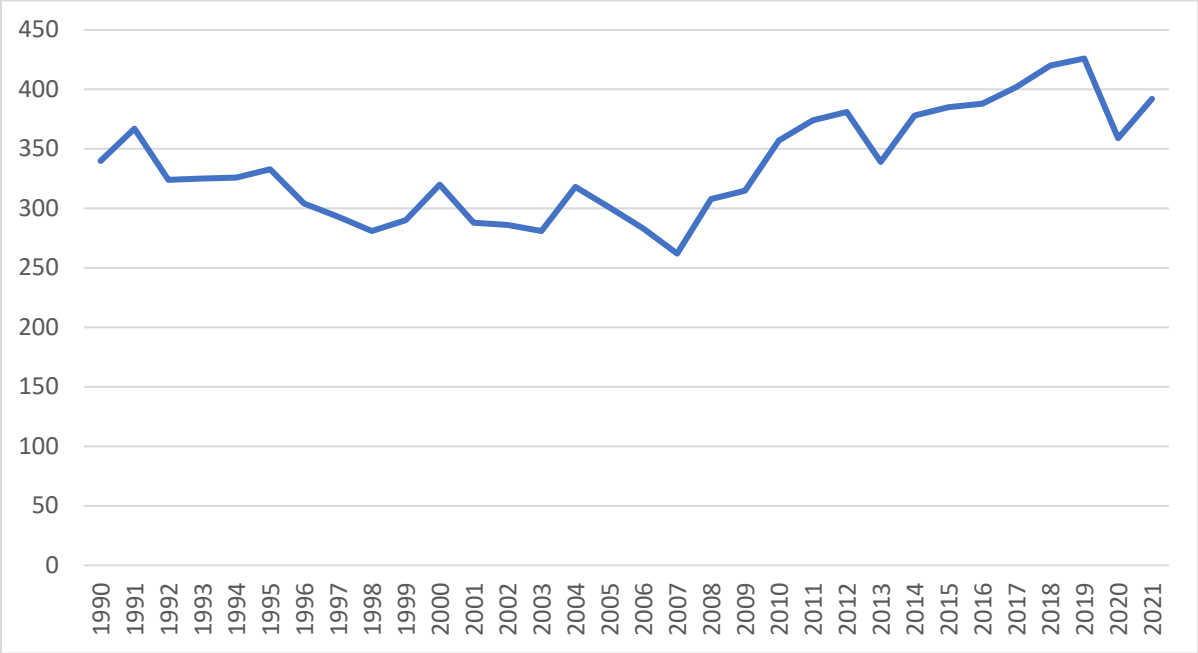
Recognizing that unambiguously identified suicides underestimate the true number of suicides, the figures in Table 22 report the number of suicides and the age-adjusted suicide rate[28] per 100,000 people at both a Connecticut and national level as tabulated by the Centers for Disease Control and Prevention. The Office of the Chief Medical Examiner (OCME) for CT also tabulates annual suicides, with the number of recorded suicides from 1990 to 2021 in Connecticut shown in Figure 17. Although these numbers do not correspond directly to the CDC counts, the trends are fairly similar.

Table 22. Suicides and suicide rate for CT and the U.S. from 2001 - 2020 (CDC)

	Connecticut		United States	
Year	Suicides	Age Adjusted Rate per 100K	Suicides	Age Adjusted Rate per 100K
2001	283	8.13	30,622	10.71
2002	260	7.28	31,655	10.95
2003	272	7.53	31,484	10.77
2004	294	8.19	32,439	10.97
2005	295	8.15	32,637	10.90
2006	292	7.99	33,300	10.97
2007	271	7.27	34,598	11.27
2008	315	8.48	36,035	11.60
2009	316	8.54	36,909	11.75
2010	353	9.33	38,364	12.08
2011	370	9.83	39,518	12.32
2012	368	9.88	40,600	12.54
2013	330	8.67	41,149	12.57
2014	379	9.71	42,773	12.96
2015	384	9.83	44,193	13.29
2016	397	10.01	44,965	13.43
2017	405	10.50	47,173	14.03
2018	419	10.53	48,344	14.23
2019	435	11.36	47,511	13.93
2020	364	9.33	45,979	13.48

[28] This is a rate that standardizes the age distributions across years.

Figure 17. Annual number of suicides in Connecticut from 1990 - 2021 (OCME)



In sum, there has been an increased rate of suicide in Connecticut since 2008. However, this trend is not specific to Connecticut, as there is a correlation of .91 between the CT rate and the U.S. rate. Furthermore, the association between annual Connecticut suicide rates and annual gross gambling revenue (Figure 32) from 1990 to 2021 is strongly *negative* (r = -.71, p < .001).

Relationship Impacts

Relationship impacts of gambling were the **third most reported** impact in the population surveys. More specifically:

- 1.1% (ABS, weighted) of gamblers reported 'serious problems in their relationship with their spouse/partner, or important friends or family because of their gambling' and 0.5% reported they 'repeatedly neglected their children or family' because of their gambling.
- 30.0% (ABS, weighted) to 46.7% (ABS+OPS, unweighted) of problem gamblers reported 'serious problems in their relationship with their spouse/partner, or important friends or family because of their gambling', and 16.3% (ABS, weighted) to 22.7% (ABS+OPS, unweighted) reported they 'repeatedly neglected their children or family' because of their gambling,

Family Impacts

Discrete relationship impacts of excessive gambling at the family level include domestic violence; divorce and separation; and child welfare involvement. In the population surveys:

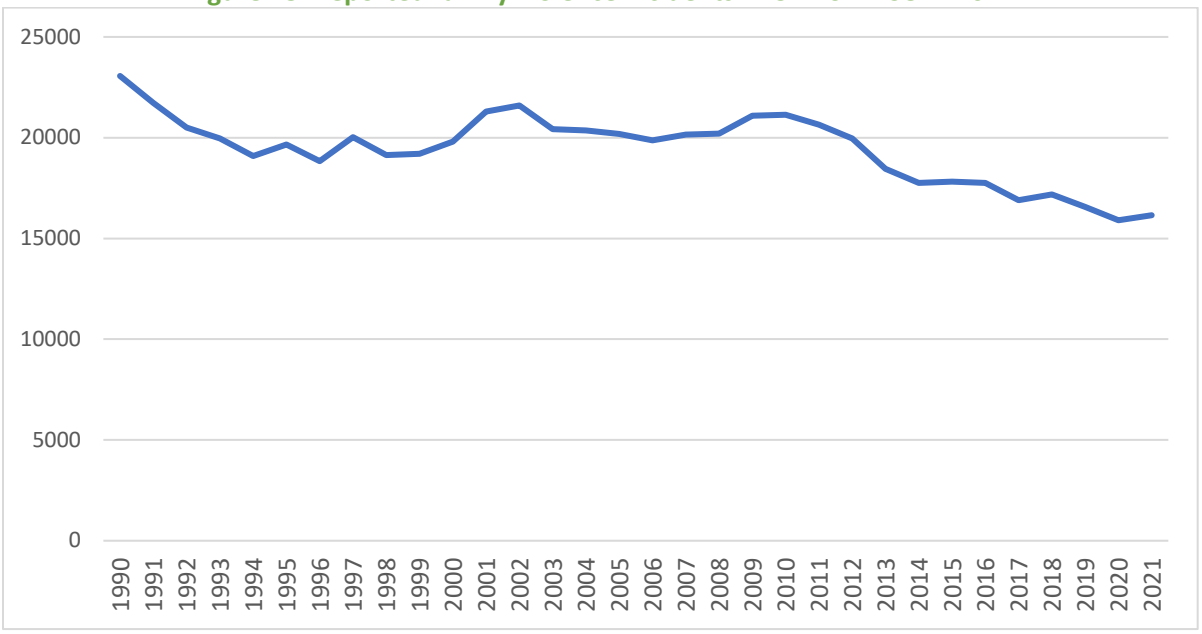
- 0.4% of gamblers reported domestic violence because of their gambling, 0.4% reported separation/ divorce because of gambling, and 0.3% reported child welfare involvement because of gambling.
- 14.0% (ABS, weighted) to 16.0% (ABS+OPS, unweighted) of problem gamblers reported domestic violence because of their gambling, 7.3% (ABS, weighted) to 14.3% (ABS+OPS, unweighted) reported

separation or divorce because of their gambling, and 8.5% (ABS, unweighted) to 16.5% (ABS+OPS, unweighted) reported child welfare involvement because of their gambling.

Data from the Connecticut Department of Emergency Services and Public Protection shows a declining number of reported family violence incidents from 1987 to 2021 as seen in Figure 18 below. There is no association between annual Connecticut family violence incidents and annual gross gambling revenue (

Figure 32) from 1990 to 2021 (r = -.06, p = .74).

Figure 18. Reported family violence incidents in CT from 1987 - 2021



The State of Connecticut Judicial Branch documents the annual number of protective and restraining orders, as shown in Table 23. There is no statistically significant association between annual number of protective/restraining orders and annual gross gambling revenue (Figure 32) from 1990 to 2021 (r = .43, p = .15).

Table 23. Protective/Restraining Orders in CT from 2010 - 2022

Year	Family Violence Protective Order	Standing Criminal Restraining Order	Total
2010	29,267	571	29,838
2011	28,923	635	29,558
2012	27,805	833	28,638
2013	25,922	1,002	26,924
2014	24,845	977	25,822
2015	28,094	1,293	29,387
2016	27,581	1,441	29,022
2017	26,245	1,512	27,757

Year	Family Violence Protective Order	Standing Criminal Restraining Order	Total
2018	26,975	1,695	28,670
2019	25,631	1,853	27,484
2020	25,170	827	25,997
2021	28,068	1,189	29,257
2022	27,828	1,613	29,441

Figure 19 shows the declining divorce rate (per 1,000 people living in the area) in Connecticut from 2000 - 2021 as reported by the U.S. National Vital Statistics System.

Figure 19. Divorce rates per 1000 in Connecticut from 2000 - 2021

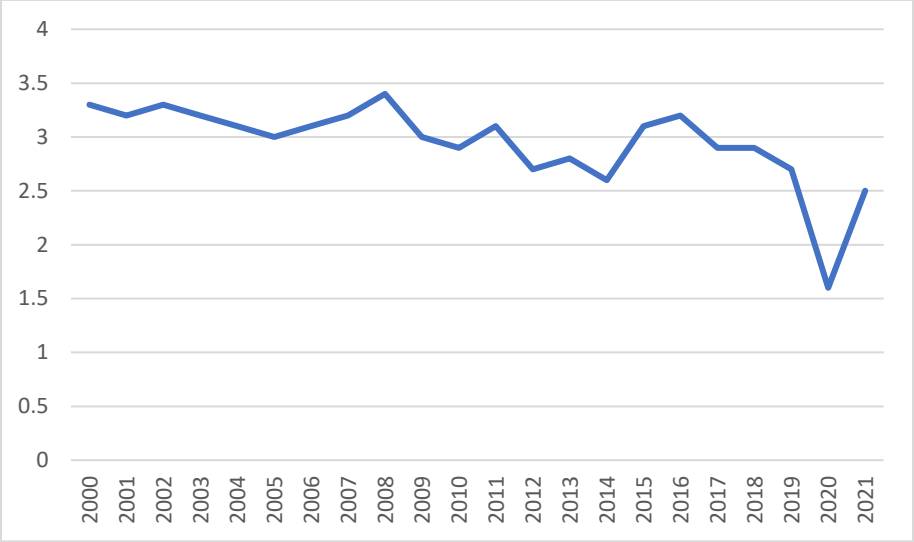
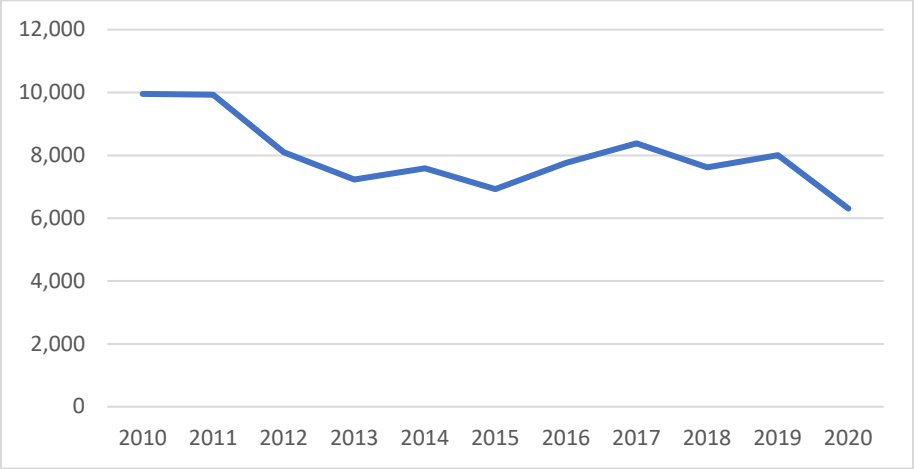


Figure 20 depicts the declining number of children who are victims of maltreatment in Connecticut from 2010 - 2020 as reported by KidsCount.

Figure 20. Number of children who are victims of maltreatment in CT from 2010 - 2020



There is a statistically significant association between these declining divorce and child abuse rates (r = .66, p < .001; r = .83, p < .001) with the declining gross gambling revenue over those time periods (Figure 32). However, the lack of significant variation in these variables in these relatively short time periods and the lack of corresponding associations between gambling revenue and domestic violence and restraining orders casts doubt on whether there is any causal association between gambling and these various family indices.

Work/School Impacts

Work or school impacts of gambling were the **fourth most reported** impact in the population surveys. More specifically:

- 0.7% (ABS, weighted) of gamblers reported work or school problems because of their gambling and 0.1% reported losing their job or having to quit school because of their gambling.
- 19.9% (ABS, weighted) to 31.3% (ABS+OPS, unweighted) of problem gamblers reported work or school problems because of their gambling and 4.0% (ABS, weighted) to 12.8% (ABS+OPS, unweighted) reported losing their job or quitting school because of their gambling.

Public Assistance

Receiving some type of public assistance due to financial hardship is another potential consequence of excessive gambling. In the population surveys:

- 0.4% (ABS, weighted) of gamblers reported receiving some type of financial public assistance because of their gambling.
- 11.4% (ABS, weighted) to 13.3% (ABS+OPS, unweighted) of problem gamblers reported receiving some type of financial public assistance because of their gambling.

The percentage of children under age 18 in families that received Supplemental Security Income (SSI), cash public assistance income, or Food Stamps/SNAP in the previous 12 months is reported below in Table 24 (data supplied by the Kids Count Data Center). As can be seen, this rate has trended upward, whereas gambling revenue has trended downward during this same time period. Furthermore, there is a correlation of .87 between the Connecticut percentages and the national U.S. percentages.

Table 24. Percentage of children in CT and U.S. families receiving public assistance from 2008 - 2021

	Connecticut	United States
2008	13%	19%
2009	NA	NA
2010	19%	27%
2011	NA	NA
2012	NA	NA
2013	22%	29%
2014	23%	28%
2015	21%	28%
2016	21%	27%
2017	19%	25%
2018	19%	24%
2019	20%	23%
2020	NA	NA
2021	23%	27%

Physical Health Impacts

Physical health problems because of excessive gambling were the **least commonly reported** impact in the population surveys. More specifically:

- 0.4% (ABS, weighted) of gamblers reported physical health problems because of their gambling, and 0.1% reported seeking medical help because of these gambling-related health problems.
- 10.0% (ABS, weighted) to 24.9% (ABS+OPS, unweighted) of problem gamblers reported physical health problems because of their gambling, and 1.4% (ABS, weighted) to 11.4% (ABS+OPS, unweighted) reported seeking medical help because of these gambling-related health problems.

Summary of Social Impacts from the Population Surveys

Table 25 identifies the overall profile of harms/problems reported by gamblers and people with gambling-related problems from the weighted NORC ABS survey and from the unweighted combined sample of problem gamblers from the NORC ABS and OPS surveys.

Table 25. Self-reported harms/impacts associated with gambling and problem gambling

Problems/harms attributed to gambling	All Gamblers (weighted)	Problem Gamblers (weighted)	Combined Problem Gamblers (unweighted) *n* = 415
Financial problems (PPGM1a or 1b)	2.4%	51.6%	71.1%
Bankruptcy (PPGM1c)	0.4%	13.5%	15.7%
Mental health problems (PPGM2a)	2.6%	67.2%	69.9%
Suicidal ideation (PPGM2b)	0.3%	11.3%	16.9%

Problems/harms attributed to gambling	All Gamblers (weighted)	Problem Gamblers (weighted)	Combined Problem Gamblers (unweighted) *n* = 415
Attempted suicide (PPGM2c)	0.04%	1.4%	8.4%
Relationship problems (PPGM3a)	1.1%	30.0%	46.7%
Child neglect (PPGM3b)	0.5%	16.3%	22.7%
Domestic violence (PPGM3c)	0.4%	14.0%	16.0%
Separation or divorce (PPGM3d)	0.4%	7.3%	14.3%
Child welfare involvement (PPGM3e)	0.3%	8.5%	16.4%
Work/school problems (PPGM5a)	0.8%	19.9%	31.3%
Lost job or quit school (PPGM5c)	0.1%	4.0%	12.8%
Received public assistance (PPGM5d)	0.4%	11.4%	13.3%
Physical health problems (PPGM4a)	0.4%	10.0%	24.9%
Medical help sought (PPGM4b)	0.1%	1.4%	11.4%

The designation beside each impact (e.g., PPGM1a) refers to the specific question in the survey (see Appendix B).

Crime

The financial hardship caused by excessive gambling can occasionally lead to crime to support one's habit. However, the introduction of legal gambling can influence crime rates in four additional ways:

- Certain forms of gambling (e.g., casinos) offer increased opportunities for illegal activity to occur (e.g., passing counterfeit money, money laundering, cheating-at-play, loan sharking).
- By the creation of venues that serve alcohol and thereby contribute to alcohol-related offences.
- Increasing the overall number of visitors to the area.
- Decreasing the rate of illegal gambling.

Problem Gambling Related Crime

The population surveys found that engaging in illegal behavior due to gambling was the **fifth most commonly reported** impact. More specifically:

- 0.5% (ABS, weighted) of gamblers reported engaging in illegal behavior because of their gambling, 0.1% reported being arrested, 0.1% reported being convicted, and 0.003% reported being incarcerated because of their gambling-induced illegal behavior.
- 16.7% (ABS, weighted) to 22.5% (ABS+OPS, unweighted) of problem gamblers reported engaging in illegal behavior because of their gambling, 5.6% (ABS, weighted) to 8.2% (ABS+OPS, unweighted) reported being arrested, 5.5% (ABS, weighted) to 2.9% (ABS+OPS, unweighted) being convicted, and 0.13% (ABS, weighted) to 2.4% (ABS+OPS, unweighted) reported being incarcerated because of their gambling-induced illegal behavior.

Several key informants commented on problem gambling related crime:

- *There are many crimes committed by people with problem gambling, including DUI, leaving a child or older adult unsupervised for extended periods of time, grand larceny, fraud, misappropriation and embezzlement. (Tebbetts, Smith, Gilbert, Mautte, Keen, McLaughlin, Calvano, Estrada, Zuckerman, Genovese)*

- *Gilman notes that when he worked at Foxwoods, most frequently crimes were committed by employees who had financial difficulties. This was much more common than crime committed by patrons. (Gilman)*
- *There are far fewer crimes at retail sports wagering facilities than expected, and these amount to theft of a winning ticket or something of that sort. (Gilman)*
- *There should be gambling courts similar to what happens with alcohol. (Leppard, Nelson, Matos, Nolan, Calvano, Kirch, Hin-McCormick, Hatch)*
- *There should be increased training and education for probation officers, bail commissioners, law enforcement officers to screen and manage people with gambling problems. (Calvano, Kirch, Wampler, Cooper)*

Overall Crime Rates

Uniform Crime Reporting Statistics for Connecticut for the total number of reported violent crimes as a function of different geographic regions is displayed in Table 26. This data is from the Connecticut Department of Public Safety. As can be seen, reports of violent crime have steadily decreased in Connecticut since the 1990s, with no apparent variation in the county or towns where the two casinos are located. Indeed, Table 27 shows very strong statistical associations in violent crime rates between each of the geographic areas. The only exceptions are the Mohegan Sun correlations, which are lower, largely due to an anomalously high report of violent crime in 2003 (when this one value is removed all the correlations increase to 0.72 or higher). It is also the case that the associations between violent crime rates and gross gambling revenue (Figure 32) from 1990 to 2021 are all strongly *negative*.

Table 26. Violent crime statistics for Connecticut from 1990 - 2022

	CT Violent Crime Total	New London County Violent Crime Total	Ledyard Violent Crime Total	Montville Violent Crime Total	Foxwoods Violent Crime Total	Mohegan Sun Violent Crime Total
1990	18,221	820	24	44		
1991	17,853	919	22	61		
1992	16,376	858	26	57		
1993	15,047	888	53	67		
1994	15,018	857	54	72		
1995	13,211	880	62	47		
1996	13,478	762	27	62	19	
1997	12,784	914	46	72	15	8
1998	12,007	826	31	61	18	7
1999	11,380	827	26	74	15	9
2000	11,260	764	26	53	16	7
2001	11,598	757	31	65	16	8
2002	10,630	725	29	63	12	9
2003	10,399	623	11	21	17	18
2004	10,254	655	12	19	4	6
2005	10,096	575	16	11	3	6
2006	10,525	530	13	25	2	1
2007	10,550	603	7	24	7	5
2008	10,768	601	10	18	7	3
2009	10,532	649	13	20	5	1

	CT Violent Crime Total	New London County Violent Crime Total	Ledyard Violent Crime Total	Montville Violent Crime Total	Foxwoods Violent Crime Total	Mohegan Sun Violent Crime Total
2010	10,077	631	9	12	3	4
2011	10,051	662	12	19	3	1
2012	10,361	670	7	17	2	5
2013	9,302	622	9	26	4	2
2014	8,566	547	11	20	1	3
2015	7,946	548	6	9	21 [a]	24 [b]
2016	8,163	531	6	15	20 [a]	15 [b]
2017	8,198	472	15	15	21 [a]	11 [b]
2018	7,453	411	8	15	23 [a]	10 [b]
2019	6,609		6	13	9 [a]	9 [b]
2020	6,548		8	14	16 [a]	14 [b]
2021	5,954		8	15	13 [a]	9 [b]
2022				12	2 [a]	3 [b]

[a]Data collected by Mashantucket Tribal Police Department
[b]Data collected by Mohegan Tribal Police Department

Table 27. Correlation matrix for violent crime

	Connecticut violent crime	New London County violent crime	Ledyard violent crime	Montville violent crime	Foxwoods violent crime [a]	Mohegan Sun violent crime [a]
Connecticut violent crime	1.00	0.84	0.64	0.72	0.79	0.36
New London County violent crime	0.84	1.00	0.79	0.86	0.76	0.38
Ledyard violent crime	0.64	0.79	1.00	0.81	0.74	0.36
Montville violent crime	0.72	0.86	0.81	1.00	0.82	0.39
Foxwoods violent crime	0.79	0.76	0.74	0.82	1.00	0.73
Mohegan Sun violent crime	0.36	0.38	0.36	0.39	0.73	1.00

[a] Excluding data from 2015 to 2022

Property crime tends to have a stronger association with gambling compared to violent crime. Thus, the Uniform Crime Reporting Statistics for Connecticut for total number of reported property crimes as a function of different geographic regions is displayed in Table 28. This data is also from the Connecticut Department of Public Safety. As can be seen, reports of property crime have also steadily decreased in Connecticut and New London County since the 1990s. There are also strong correlations between the property crime rates between each of the different geographic areas as seen in Table 29. The only exceptions to this are some of the Ledyard and Montville correlations. This is partly because of the anomalously high 1994 and 1995 Ledyard rates. However, it is also partly because the decrease in property crime in Ledyard and Montville has been much more modest compared to New London County and Connecticut. The associations between Connecticut property crime rates and gross gambling revenue (Figure 32) from 1990 to 2021 are all significantly *negative* (albeit with weaker correlations with

Ledyard and Montville): Connecticut property crime = -.71, $p < .001$; New London property crime = -.73, $p < .001$; Ledyard property crime = -.43, $p = .014$; Montville property crime = -.43, $p = .015$.

These more modest declines in property crime in the towns of Ledyard and Montville are consistent with sentiments expressed in the key informant interviews. Some concern with prostitution was also noted:

- *"Our policing needs have increased dramatically, whether its DWI, auto accidents or theft, crime has ramped up. Our police force grew in order to staff more patrols in the overnight hours. We believe there is a link between theft of personal property and gaming---people will steal property and pawn it in order to game. Our police department effectively doubled as well, we started with 12 officers and now we're at 23" (Host and Impacted Communities).*
- *"When the casinos first came in we had 14 constables, now we have 28 sworn in police officers. Our police needed to double in order to address the volume of crime in our community, and the population hasn't changed" (Host and Impacted Communities).*
- *"Embezzlement has also been a problem in Ledyard. Two previous tax collectors embezzled about $300,000 of taxpayer funds and gambled it at a casino. Our director of water utility embezzled about $150,000 and gambled it away as well. It is incredible to see how people will risk their careers to sustain a gambling addiction" (Host and Impacted Communities).*
- *"We are noticing a rise in sex trade activity that happens at casinos, some of it involving underage people. We have seen it impacting group homes. They intercepted 15 and 16 years olds leaving their homes to go to the casinos and sell their bodies" (Host and Impacted Communities).*
- *"There may be under-reporting of these social issues. Previously used to be a casino police unit (CT state police) but now it's internal tribal policing, so numbers pushed out may be underreported" (Host and Impacted Communities).*
- *"In the past 15 years, we've normalized a lot and nothing [crime-related] has really been spiking" (Host and Impacted Communities).*

Table 28. Property crime statistics for Connecticut from 1990 - 2021

	CT Property Crime Total	New London County Property Crime Total	Ledyard Property Crime Total	Montville Property Crime Total	Foxwoods Property Crime Total	Mohegan Sun Property Crime Total
1990	158,866	8,611	190	278		
1991	159,159	8,817	192	263		
1992	150,214	7,656	257	264		
1993	137,442	7,557	368	220		
1994	134,067	7,492	1,001	182		
1995	133,896	7,815	1,032	191		
1996	124,928	6,989	155	270	547	
1997	117,510	7,525	162	246	557	260
1998	111,981	6,951	115	172	757	304
1999	99,658	6,225	132	187	505	272
2000	99,038	6,519	150	230	578	453
2001	95,369	6,143	125	232	584	84
2002	93,743	6,049	139	214	457	123
2003	92,042	5,258	100	141	479	133
2004	94,197	5,430	97	121	381	114
2005	92,183	5,450	109	120	337	119
2006	90,627	5,417	209	250	53	52
2007	86,850	5,129	112	161	149	109

	CT Property Crime Total	New London County Property Crime Total	Ledyard Property Crime Total	Montville Property Crime Total	Foxwoods Property Crime Total	Mohegan Sun Property Crime Total
2008	87,442	5,166	120	186	163	130
2009	82,712	5,074	135	152	127	109
2010	78,519	4,845	144	118	115	103
2011	77,445	4,577	122	131	108	91
2012	77,101	4,860	123	229	89	79
2013	71,179	4,815	151	175	58	98
2014	69,565	4,497	141	151	9	35
2015	65,703	3,828	72	133	129 [a]	294 [b]
2016	64,167	4,074	79	117	147 [a]	305 [b]
2017	63,669	3,781	95	113	149 [a]	288 [b]
2018	59,973	2,994	53	124	214 [a]	260 [b]
2019	51,236		74	57	243 [a]	243 [b]
2020	56,141		72	75	105 [a]	133 [b]
2021	54,962		48	67	119 [a]	157 [b]

[a] Data collected by Mashantucket Tribal Police Department [b] Data collected by Mohegan Tribal Police Department

Table 29. Correlation matrix for property crime in Connecticut

	Connecticut property crime	New London County property crime	Ledyard property crime	Montville property crime	Foxwoods property crime [a]	Mohegan Sun property Crime [a]
Connecticut property crime	1.00	0.97	0.51	0.78	0.84	0.68
New London County property crime	0.97	1.00	0.48	0.76	0.87	0.74
Ledyard property crime	0.51	0.48	1.00	0.24	-0.19	0.02
Montville property crime	0.78	0.76	0.24	1.00	0.32	0.28
Foxwoods property crime	0.84	0.87	-0.19	0.32	1.00	0.71
Mohegan Sun property crime	0.68	0.74	0.02	0.28	0.71	1.00

[a] Excluding data from 2015 to 2022

Driving Under the Influence (DUIs)

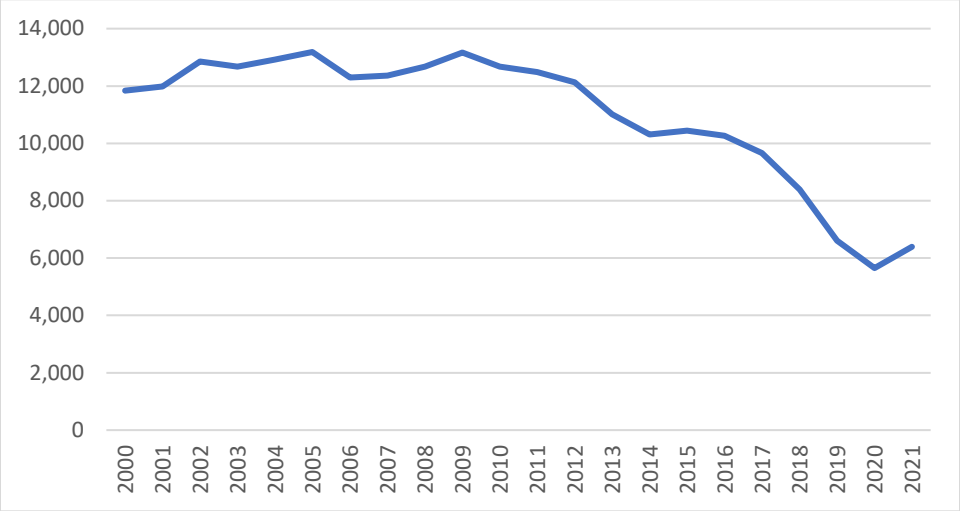
Arrests for Driving Under the Influence (DUI) are also pertinent to the impacts of legalized gambling. The data in Figure 21 (supplied by the State of Connecticut Judicial Branch) shows a stable number of DUI arrests in Connecticut from 2000 to 2010 and declining numbers since that time. (Note that a portion of these DUI arrests were subsequently dismissed, or the person was found not guilty.)

Data specific to the geographic areas surrounding the two casinos was not available. However, key informant interviews suggest there may be a local impact:

- *There is a lot of alcohol consumed around casinos and a lot of driving under the influence of alcohol in the surrounding areas. (Tebbetts, Smith, Gilbert, Mautte, McLaughlin, Zuckerman)*

- *Many people who seek treatment for PG have had DUIs or accidents as they leave the casino. (Nelson, Tebbetts, Mautte, Calvano, Sanford, Gilman, Genovese)*

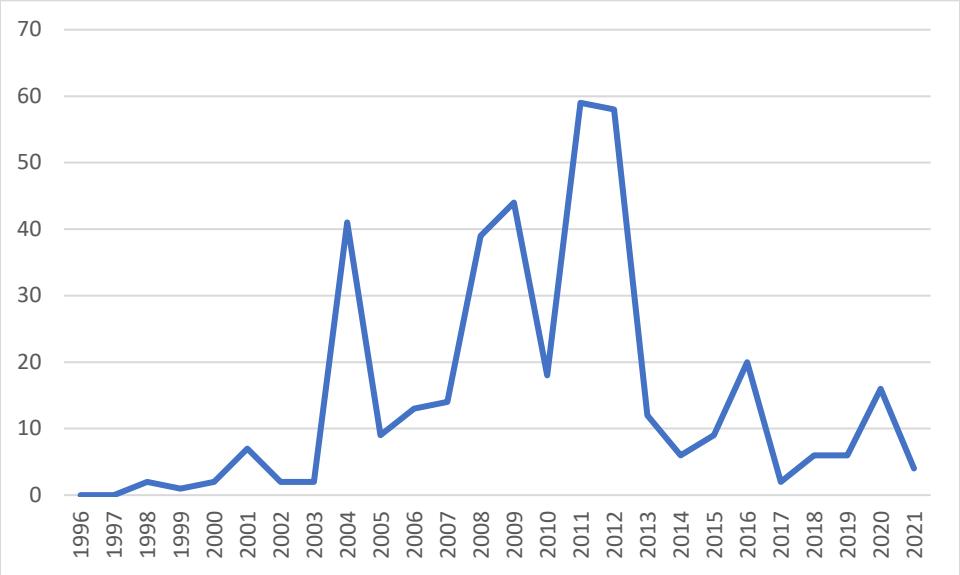
Figure 21. DUI arrests in Connecticut from 2000 - 2021



Illegal Gambling

Finally, one of the purposes of legalizing gambling is to reduce or eliminate illegal gambling, which tends to be a fairly reliable impact (e.g., Mackey-Simpkin et al., 2023). The number of reports of illegal gambling in Connecticut is shown in Figure 22 (data from the Connecticut Department of Public Safety). This involves things such as illegal betting/wagering; operating/promoting gambling; gambling equipment violations; and sports tampering. The main relevance of this figure concerns the very low total number of incidents, which is likely down considerably from more historical figures in the 1970s and 1980s when relatively few legal forms of gambling existed.

Figure 22. Number of reports of illegal gambling in Connecticut from 1996 - 2021



Some key informants agreed with the sentiment that illegal gambling has declined with legalization:

- *"What [legalizing online and sports betting has] done is reduce the amount of illegal gaming, and illegal gaming was a bigger problem… There was almost no protection or control [with illegal gambling]... to be protected in any way… what's happened now is if [people] spend more money than they have… [the] underworld isn't able to come after them for their house, and that's a good thing. It's definitely a positive that we've got this controlled licensed environment now, where there are myriad opportunities for customers to get help should they need it. And we promote that quite widely." (Ted Taylor, President of Sportech Venues)*

However, other key informants recognized that illegal gambling still exists to some degree:

- *Impact on illegal gambling may be small. The Connecticut Council on Problem Gambling organized a conversation with college students, and they said it was very easy to gamble online, if you're underage or to access offshore sites. Sports gambling in colleges was somewhat widespread before the recent legalization. (Brown, Nolan)*
- *"The big [illegal gaming activity] is an illegal sports book - and they still exist." (Ted Taylor, President of Sportech Venues)*
- *There is a lot of unregulated gambling that takes place in Hartford and Bridgeport. This is common in the Latino community, with numbers games at barber shops and also private poker games. This also occurs in the Black community, with card and dice games. Other forms of unsanctioned gambling include underground casinos, sports betting through bookies, and animal fights. (Velazco, Morris, Cooper)*
- *There may have been a decrease in illegal sports gambling after gambling expansion, but probably little effect on other types of gambling, including community based unregulated gambling. (Nelson, Tebbetts, Duhaime, Peplau, Keen, Sanford, Kirch, Gilman, Velazco, Hin-McCormick, Hatch, Kreyer, Morris, Genovese)*

The population surveys also support the contention that illegal gambling is relatively uncommon, but that it does continue to exist, particularly with respect to online gambling:

- Of the 18.5% of the Connecticut adult population who reported patronizing a land-based casino in the past year, 0.7% reported patronizing an illegal/underground Connecticut casino.
- Of the 10.2% of the Connecticut adult population who reporting betting on professional sports in the past year 7.5% reported betting at an illegal/underground Connecticut betting shop or with a bookmaker and 14.4% reported betting at an out-of-state online sports betting site. (Gambling on an online site not licensed by the State of Connecticut is illegal).
- Of the 7.2% of the Connecticut adult population who reported betting at an online casino in the past year, 18.1% reported patronizing an out-of-state online casino.

Other Social Indices

The creation of new casinos often has geographically localized impacts in four areas:

- Population, due to an influx of casino workers
- Housing and real estate
- Make-up of the local student body (potentially more non-English speaking students and students with disabilities)
- Traffic volume and accidents

Each of these areas is examined below:

Population

Some key informants reported a population impact from new casino employees:

- *Impact of casinos on Norwich and surrounding communities is large in terms of the demographic impact from employees and their families. (Rugle, McLaughlin)*

However, the census data is mixed. The following table documents the population and population change in Ledyard, Montville, Norwich (largest city in New London County), New London County, and Connecticut in 1990, 2000, 2010, and 2020. Data is from the Connecticut Department of Public Health. As seen, while Montville did have a marked increase in population from 1990 - 2010 relative to New London Country or Connecticut more generally, the gains in Norwich paralleled the gains in Connecticut, and Ledyard had an increase that was below the average state increase.

Table 30. Population changes from 1990 - 2020

	1990 Population	2000 Population	% Change From 1990	2010 Population	% Change From 1990	2020 Population	% Change From 1990
Ledyard	14,913	14,687	-1.5%	15,051	+0.9%	15,420	+3.4%
Montville	16,673	18,546	+11.2%	19,571	+17.4%	18,377	+10.2%
Norwich	37,391	36,177	-3.4%	40,493	+8.3%	40,152	+7.3%
New London County	254,957	259,326	+1.7%	274,365	+7.6%	268,450	+5.3%
Connecticut	3,287,116	3,405,565	+3.6%	3,574,097	+8.7%	3,603,448	+9.6%

Housing and Real Estate

Changes in population often have impacts on housing stock as well as real estate prices. Several key informants commented on this issue:

- *"In 1994-96 when casinos opened, there was a surge in housing. This has since leveled out, but now there is a lack of housing. A lot of Connecticut political messaging now targets the lack of housing. There are efforts to increase housing in different areas and develop new housing stock….We definitely have an ongoing and growing condition that we're going to have to stay attuned to and keep looking to create new and affordable housing stock" (Economic Development Corporation).*
- *"When the casinos came in, the housing market changed quite a bit. A lot of people were coming from New York, particularly from Chinatown, and were paying cash for houses within walking distance of the casinos" (Host and Impacted Communities).*
- *"We have a housing shortage; we have 89,000 unmet affordable housing units in demand. Many of the people who work at the casino are not highly compensated folks and where the casinos are developed there isn't a high-density concentration of housing. So, as they need more people, they're going to have to increase their wages, but they still don't have the housing inventory. And we're starting to see some of that get addressed. But it's a slow process" (Housing Advocacy Group; Economic Development Corporation).*
- *"There are houses with a large residential load, more than normal. There are 2-3 bedroom homes that will have 20 people living in them. That adds pressure to our utilities, infrastructure, health district and building department" (Host and Impacted Communities).*
- *"We call the house load increase 'Hot Bunking'. We once found 42 people in a single-family home listed as a 2 bedroom. These people are typically transient and will work 3-6 months, gain money, and send it back to NY and not spend it locally" (Host and Impacted Communities).*
- *"Regarding affordability of real estate, it's all relative. Definitely less expensive than Fairfield County and Boston – we did a study in 2018 where one in 29,000 and 108 that were also low income – this is pretty normal for NE United States – I wouldn't say it's worse in SE CT than anywhere else. Our real estate market never recovered after the 2008 recession – in 2010 there were properties still underwater even when other parts of the state recovered. Prices went up during Covid. There were a lot of people willing to invest more in homes because they were spending so much time there. Rents and prices have gone up – so it's causing a problem for Electric Boat to hire people" (Regional Council of Governments; Housing Advocacy Group).*
- *There is a large burden in terms of affordable housing and on the school systems around the areas where the casinos are located, because of the number of workers who come to work there. (Smith, Gilbert, Hin-McCormick)*

Schooling

The diverse racial/ethnic backgrounds of casino employees and their children can also have an impact on local schools. Three key informants commented on this issue:

- *"In Norwich public schools, they are proud that 34 different languages are spoken, that is not entirely because of casino employees, but it is part of it. We are providing employment and opportunities to a multi-cultural section of Connecticut and that's a good thing" (Economic Development Corporation).*
- *"There have been impacts on education budgets. We've had to hire so many English Second Language, teachers. In Norwich it was even worse, 40 different languages spoken" (Host and Impacted Community).*

- *"We've had to change our signage, like at the transfer station, to include all kinds of languages, like Cantonese, so people understand how we do things. It's been a continuous learning curve to get people to comply with our rules and regulations. A lot of the adults do not speak English, so we're relying on the children to translate to the parents" (Host and Impacted Communities).*

EdSight provided statistical data pertaining to the percentage of children who are English learners (Table 31) and the percentage in Special Education (Table 32) as a function of geography and time period. No data was available prior to 2006. The data from 2006 to the present is consistent with the contention that the Norwich school district has been disproportionately impacted by an increase in non-English speaking students, a portion of which will be the children of casino employees. To a much lesser extent Norwich, Ledyard, and Montville also have a slightly higher portion of students with disabilities.

Table 31. English learners as a percentage of the student body from FY07 – FY23

	Ledyard	Montville	Norwich	Connecticut
2006-07	0.85%	2.98%	8.38%	5.19%
2007-08	1.38%	3.94%	9.41%	5.23%
2008-09	1.23%	3.92%	9.92%	5.19%
2009-10	1.27%	3.78%	10.47%	5.31%
2010-11	1.21%	3.86%	11.25%	5.43%
2011-12	1.27%	3.92%	11.36%	5.43%
2012-13	0.92%	3.50%	11.50%	5.62%
2013-14	0.89%	3.60%	12.28%	5.75%
2014-15	0.87%	3.99%	13.12%	6.39%
2015-16	0.82%	3.46%	14.09%	6.49%
2016-17	0.79%	3.76%	15.47%	6.83%
2017-18	1.32%	3.81%	16.97%	7.17%
2018-19	1.40%	4.04%	17.45%	7.62%
2019-20	1.44%	4.60%	17.87%	8.25%
2020-21	1.35%	4.63%	18.30%	8.28%
2021-22	1.35%	4.45%	18.89%	8.81%
2022-23	1.57%	4.66%	20.79%	9.70%

Table 32. Students with disabilities as a percentage of the student body from FY07 – FY23

	Ledyard	Montville	Norwich	Connecticut
2006-07	11.83%	11.37%	15.64%	11.84%
2007-08	12.81%	11.84%	15.95%	11.96%
2008-09	12.10%	11.10%	15.66%	11.99%
2009-10	12.98%	10.45%	15.99%	12.03%
2010-11	13.58%	10.94%	15.58%	12.00%
2011-12	13.40%	11.15%	16.22%	12.16%
2012-13	14.22%	12.14%	17.27%	12.53%
2013-14	14.61%	12.03%	16.38%	12.81%
2014-15	15.43%	13.12%	17.00%	13.32%
2015-16	16.03%	14.98%	17.95%	13.75%

	Ledyard	Montville	Norwich	Connecticut
2016-17	17.37%	15.02%	19.91%	14.29%
2017-18	18.57%	15.69%	21.22%	14.81%
2018-19	19.79%	16.42%	20.77%	15.41%
2019-20	10.04%	18.12%	19.37%	15.99%
2020-21	18.53%	18.18%	20.02%	16.30%
2021-22	17.35%	19.06%	19.44%	16.65%
2022-23	18.30%	19.68%	19.92%	17.15%

Traffic and Accidents

Several key informants commented on the impacts of the casinos on transportation and traffic:

- *"The impacts of the casinos are very significant in our region's transportation network. There are impacts to communities around the casinos that are transportation related but also land use and community development related" (Regional Council of Governments; Housing Advocacy Group).*
- *Casinos contribute to increased traffic in surrounding areas, but largely due to events and the mall at the casino more than the gambling itself. (Duhaime, Matos, McLaughlin, Gilman, Hin-McCormick)*
- *"An additional impact – transportation costs; we run the bus service for employees back and forth to Foxwoods for free and Foxwoods doesn't compensate us for that at all and all other towns are subsidizing it. We want our employees to be able to get work and pay their taxes. Mohegan does share half of our expenses" (Host and Impacted Communities).*
- *"For the Mohegan and Mohegan Sun side of things, I was not living in this area when Mohegan Sun initially opened, and there's quite a bit of transportation infrastructure that was built around that time to accommodate casino traffic. When it first opened, there was a large increase in vehicle travel in our region to the casinos, and it was projected to continue growing at a very high rate, and those projections have not actually borne themselves out" (Regional Council of Governments; Housing Advocacy Group).*

It is reasonable to assume that there would be a significant increase in traffic volume subsequent to the Foxwoods and Mohegan Sun casino openings, although formal traffic volume data prior to 2008 is not available. What is available is the number of vehicle crashes and the number of DUI-related injuries recorded in the towns of Montville and Ledyard from 1995 - 2022, which can be compared to Connecticut more generally. This data is presented in

Table 33 and comes from Connecticut Crash Data Repository and the Connecticut Department of Transportation. What this data tends to show is that the number of vehicle crashes has increased slightly in Montville over time, but this parallels the general trend in Connecticut (there is a 0.74 correlation between the rates). By contrast, the Ledyard rates have remained fairly stable over time, with a marked decrease in recent years. It is perhaps notable that the number of DUI-injuries has tended to decline from 1995 - 2014, but that the very low local numbers in Ledyard and Montville have been fairly stable during this period. All of the associations with gross gambling revenue (Figure 32) were nonsignificant with the exception of a positive association with the annual number of Montville crashes (r = -.55, p = .003).

Table 33. Vehicle crashes and DUI-related injuries in CT from 1995 - 2022

	Ledyard		Montville		Connecticut	
	Crashes	DUI Injuries	Crashes	DUI Injuries	Crashes	DUI Injuries
1995	242	10	406	3	72,504	926
1996	267	4	384	6	78,348	897
1997	268	4	345	6	74,734	822
1998	230	8	343	2	72,555	759
1999	228	4	377	6	78,315	714
2000	242	3	461	7	82,777	702
2001	175	2	333	3	83,249	595
2002	198	2	354	6	78,673	661
2003	219	7	463	5	80,855	647
2004	246	6	508	6	81,726	647
2005	232	2	467	8	79,532	704
2006	223	5	431	5	71,723	630
2007	357	3	576	2	113,062	592
2008	263	0	492	1	104,187	633
2009	314	1	492	5	103,710	726
2010	259	2	511	6	101,621	699
2011	200	4	381	4	78,435	694
2012	271	0	480	5	95,452	725
2013	287	4	449	6	95,826	700
2014	254	8	446	3	96,574	707
2015	330	5	498	8	111,169[29]	1,176
2016	221	3	451	6	115,935	1,327
2017	193	2	472	7	115,648	1,281
2018	199	7	481	12	114,156	1,147
2019	183	1	413	8	112,610	1,206
2020	94	2	357	7	83,791	1,126
2021	116	0	379	9	101,139	1,213
2022	119	7	405	8	102,412	1,145

[29] In 2015 the State of Connecticut changed how police departments document motor vehicle collisions.

ECONOMIC AND FISCAL IMPACTS

Direct Economic Impacts

This section of the report presents all available public data related to the gambling industry in Connecticut. Some of these data are presented purely for informative purposes, but most of the 2022 data has also been used as inputs for our REMI economic impact analysis. This summary of direct economic impacts is organized into five sections based on the five main types of gambling in the state:

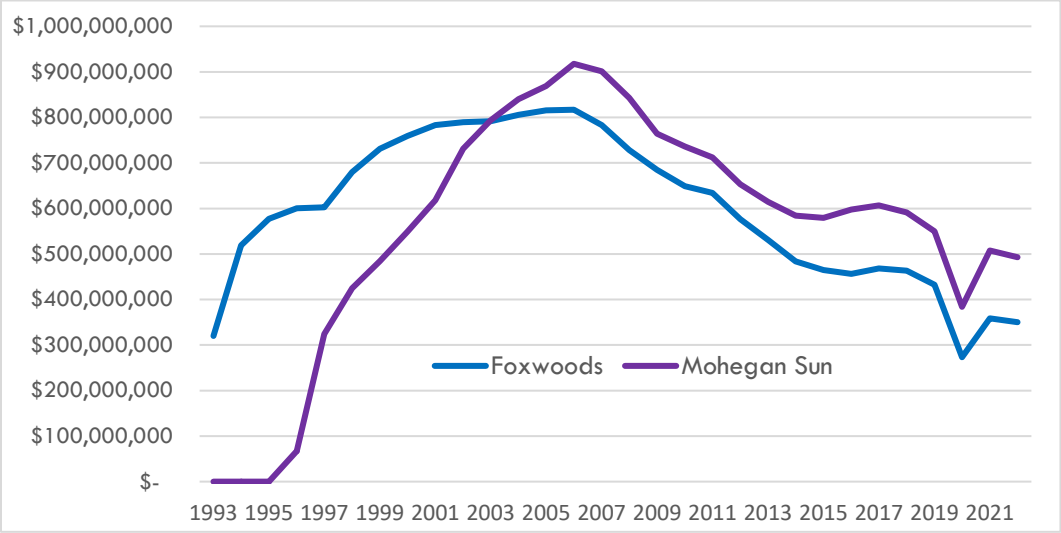
- Casinos
- Lottery
- Sports Betting and Online Casino Gambling
- Parimutuels and Off-Track Betting
- Charitable Gambling

Casinos

Casino Revenue

Connecticut has rich documentation on slot machine revenue at its two tribal casinos (data available from CT Department of Consumer Protection) as the compacts between CT and the tribes state that the tribes will pay 25% of slot machine revenue to the state's General Fund, which can be used to calculate total slot gross gambling revenue (GGR; revenue after winning/prizes paid out).[30] Total slot revenue is depicted in Figure 23. As seen, slot machine GGR in Connecticut peaked in 2006 and has since declined to almost half its peak level, likely due in part to the expansion of casino gambling in nearby states.

Figure 23. Casino gross slot machine revenue from 1993 - 2022



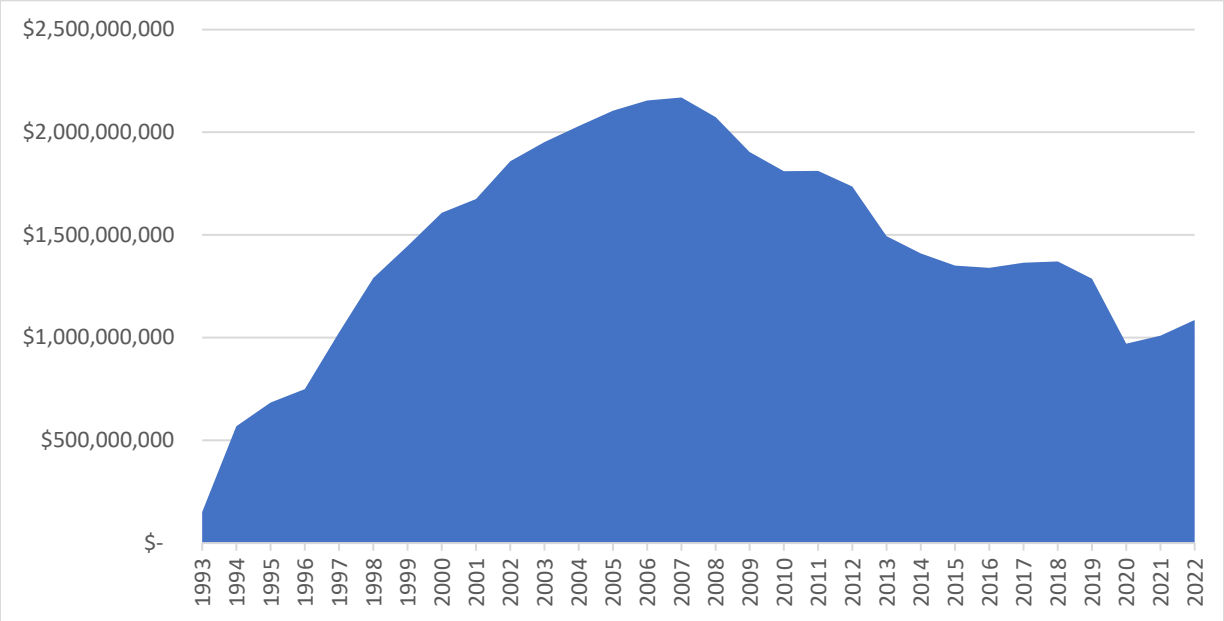
[30] Slot *handle*, or total amount wagered, is much higher, as the payout percentage for slots at both Foxwoods and Mohegan Sun averaged 91.85% in 2023.

Revenue from table games is harder to determine, as Connecticut does not receive any share of that revenue, and the tribal casinos do not report these revenues to the state. However, the Mohegan Tribal Gaming Authority (MTGA) has filed Securities and Exchange Commission (SEC) reports since 1996, and their 10-K submissions provide a comprehensive annual overview of the company's operations and financial situation. Relevant to the present investigation, these 10-K reports provide information on: (a) Mohegan Sun's net combined revenue from all gambling and non-gambling amenities (i.e., hotel, food, beverage, retail outlets, entertainment), and (b) MTGA's net revenue from all its properties with a breakdown of the percentage of revenue derived from gambling versus other amenities.[31] Applying this latter percentage to Mohegan Sun's total net revenue and then subtracting known slot revenue allows us to determine a rough estimate of Mohegan Sun table game revenue, which we estimate has averaged 26.1% of total gambling revenue from 2016 to 2022.

Foxwoods does not file with the SEC, so similar calculations cannot be made. However, Foxwoods is very comparable to Mohegan Sun in terms of the number of slots, table games, and amenities. Thus, it seems reasonable to assume that Foxwood's table game revenue percentage is of the same magnitude as Mohegan Sun's.

Thus, estimated total slot and table game revenue for both casinos combined is displayed in Figure 24. Paralleling the slot revenue figures, casino slot and table game revenue peaked in 2007 at approximately $2.2 billion and has declined sharply in the subsequent 15 years (to an estimated $1.1 billion in 2022).

Figure 24. Estimated total gross casino slot and table game revenue from 1993 - 2022



Despite the decline, casino gambling revenue is still considerably higher than any other type of gambling revenue in Connecticut (e.g., double the Lottery GGR). Key informants reflected on the importance of the casinos in providing revenue to the state and municipailities around Connecticut:

- *"[Fiscal] benefits are significant – 25% of slots revenue."* (Regional Council of Governments; Housing Advocacy Group)

[31] The percentage derived from gambling has varied from approximately 90% prior to 2012 down to 70.6% in 2022.

- *"The Mohegan Tribe has transferred over $4 billion to the State of Connecticut. It is important to note that our existing agreement is the highest percentage of revenue sharing of all Tribal-State compacts in the U.S. that exists today."* (A representative of the Mohegan Tribe at January 2023 session)
- *"Since 2008, Foxwoods Resort Casino and MPTN's online gaming operations have generated direct funding to the State of over $2 billion (over $9 billion since Foxwoods opened in 1992)."* (Mashantucket Pequot Tribal Nation)
- *"Over the past two years, the two casinos [operations] have generated upwards of $7 billion. That money goes into the Mohegan/Pequot fund and a portion goes back to state/municipal general fund. Gaming is an important benefit for all Connecticut municipalities but I'm not sure many people from Connecticut recognize that there is funding for their towns coming from the casinos every year."* (Economic Development Corporation)

Geographic Origin of Casino Revenue

The **AirSage Cell Phone Location** Analysis data were used to determine the geographic origin of Connecticut casino revenue. As seen in Table 34, AirSage detected 270,450 visitors to the two Connecticut casinos during the 14-day data collection period (January 16-29, 2023). Proportionally, most visitors (49.1%) were from Connecticut, followed by Massachusetts (MA) (20.8%), New York (NY) (12.3%), Rhode Island (RI) (9.8%), and other states (8.0%).

Visitation proportion does not directly translate into revenue proportion as expenditure per visitor differs between Mohegan Sun and Foxwoods. Total January 2023 slot revenue is $28,693,456 for Foxwoods ($7,173,364 x 4) and $40,466,966 for Mohegan Sun ($10,116,749 x 4). After adding in estimated table game revenue, total gambling GGR in January 2023 is estimated to be $36,153,755 at Foxwoods ($18,076,877 for two weeks) and $50,988,377 at Mohegan Sun ($25,494,189 for two weeks). Dividing the 2-week GGR by the total number of visitors in that time period produces an average expenditure per visitor of $134.70 for Foxwoods and $187.12 for Mohegan Sun. Multiplying these expenditures by the state origin of visitors produces the figures in the last rows of Table 34. Thus, **CT residents are estimated to account for slightly over half of the CT casino revenue, followed by MA, NY, RI, and other states.**[32] This estimate, and these relative proportions are very similar to the proportions estimated in 2015 contained in the Northeastern Casino Gaming Update which used license plate surveys to determine patron origin (by comparison, these authors estimated that in 1999 only 37% of Connecticut casino revenue came from Connecticut residents).

Table 34. Visitors to Connecticut casinos in a 2-week period in January 2023 by state origin

	CT	MA	NY	RI	Other	TOTAL
Foxwoods	54,637	34,892	11,357	20,737	12,582	134,205
Mohegan Sun	78,245	21,302	21,863	5,672	9,163	136,245
TOTAL Visitors	132,882	56,194	33,220	26,409	21,745	270,450
% of Visitors	49.1%	20.8%	12.3%	9.8%	8.0%	100.0%
TOTAL Visitor Spending	$22,000,604	$8,685,847	$5,620,751	$3,854,537	$3,409,327	$43,571,066
% of Spending	50.5%	19.9%	12.9%	8.8%	7.8%	100.0%

[32] This assumes equal expenditure regardless of visitor state origin, which is an uncertain assumption.

Table 35 shows the Connecticut county-specific origin of Connecticut casino visitors, with 36.2% of the visitors coming from New London County (where the two casinos are located), followed by New Haven and Hartford Counties. As shown, **New London[33] and Windham Counties have much higher patronage relative to their populations compared to the other Connecticut counties**.

Table 35. CT visitors to CT casinos as a function of county origin

CT County	Visitors	% of Total	% of 2022 CT Population
New London	48,124	36.2%	7.5%
New Haven	25,902	19.5%	24.0%
Hartford	23,141	17.4%	24.9%
Windham	10,996	8.3%	3.2%
Fairfield	10,807	8.1%	26.5%
Middlesex	6,850	5.2%	4.6%
Tolland	3,951	3.0%	4.2%
Litchfield	3,111	2.3%	5.1%
Total	132,882	100.0%	100.0%

A total of 15,882 Connecticut gamblers (8.1% of all casino gamblers from Connecticut) also visited out-of-state casinos in the three border states of Massachusetts, New York, and Rhode Island during the 2-week data collection period. As seen in Table 36, Massachusetts was the primary destination (67.7%), followed by Rhode Island (19.0%) and New York (13.2%). Using the reported casino revenues at these specific venues in this time period and assuming equal expenditure per visitor, an estimated $7,288,917 was spent at out-of-state casinos by Connecticut residents in this two-week period.

Table 36. Connecticut resident patronage of out-of-state casinos

	MA casinos	RI casinos	NY casinos	TOTAL
CT Visitors	10,757	3,022	2,103	15,882
% of Total	67.7%	19.0%	13.2%	100.0%
Revenue from CT	$4,944,947	$1,441,380	$902,590	$7,288,917

It should be noted that Connecticut patrons accounted for a very small percentage of visitors to most of these out-of-state venues. The exception to this was MGM Springfield in Massachusetts, where they accounted for 38.3% of visitors as shown in Table 37.

Table 37. Out-of-state casinos most often patronized by CT residents

	Visitors from CT	% of Casino's Patronage
MGM Springfield, MA	9,827	38.3%
Bally Twin River Lincoln, RI	2,965	6.9%
Empire City Casino Yonkers, NY	1,800	3.0%
Encore Boston Harbor, MA	930	1.9%
Resorts World New York City, NY	303	0.4%

[33] As a reminder, these figures do not include visits by employees of the casinos, many of which live in New London County (see AirSage **Methodology**).

	Visitors from CT	% of Casino's Patronage
Bally Twin River Tiverton, RI	57	0.3%
Plainridge Park Casino, MA	0	0.0%

Subtracting the $7,288,917 casino patronage outflow to other states from the $23,134,362 inflow from out-of-state patrons to Connecticut produces a net inflow to Connecticut of $15,845,445 during this 2-week period. However, this does not take into account casino patronage outflow to casinos *beyond 70 miles of the Connecticut border,* which were not included in the AirSage analysis. The population survey (ABS, weighted) provides some indication of the magnitude of these additional outflows. Among Connecticut adults who reported patronizing a land-based casino in the past year, a total of 88.3% reported patronizing Connecticut casinos (compared to 91.9% in the AirSage data), with Massachusetts casinos being the next most popular at 13.2%, and New York and Rhode Island casinos at 4.0% and 2.6% respectively. However, 5.3% also reported patronizing Nevada casinos, 3.5% New Jersey casinos, and 6.3% casinos in other states. If we assume that visitation to these more distant destinations might be half as frequent as casinos within 70 miles, then a reasonable estimate of the additional net outflow of revenue from Connecticut would be $2,779,360[34] every two weeks, for a total combined outflow of $10,068,277. Subtracting this from the $23,134,362 inflow results in a net inflow of $13,066,085 to Connecticut every two weeks. Projected over 52 weeks, the **estimated net casino revenue gain for Connecticut is approximately $340 million per year.**

The above results are consistent with the sentiments expressed by some of the key informants:

- *"In terms of the casinos, Connecticut had been like Las Vegas and Atlantic City for 30 years. At one point we had a huge share of the casino gambling market. We're not at saturation point yet, but there is a lot more casino availability around Connecticut: three in Massachusetts, several in Rhode Island and New York. Although the competition has increased, Mohegan Sun and Foxwoods are still getting their fair share of clients coming into their casinos."* (Morris)

Casino Employment

Both Mohegan Sun and Foxwoods Resort Casino are private companies. However, as mentioned, the Mohegan Tribal Gaming Authority (MTGA) has voluntarily participated in the Securities and Exchange Commission's (SEC) filing system and their 10-K submissions provide a comprehensive annual overview of the company's operations which includes employment numbers and wages. According to MTGA's September 2022 Form 10-K, in fiscal year 2022 Mohegan Sun had 5,180 employees.[35] MTGA reported that 70% of their Mohegan Sun employees were full-time workers and 30% were seasonal, part-time, and on-call employees. The median employee wage was reported to be $29,120.

Foxwoods Resort Casino has not participated in voluntary filing with SEC and therefore, actual employment numbers and wages are unavailable. Online resources, such as Zippia have estimated there are currently 2,200 Foxwoods employees with an average compensation of $34,374.[36] An Economic

[34] $7,288,917/(.132+.040+.026) = X/(.053+.035+.063)/2; X = $2,779,360

[35] Although the Mohegan Sun website states they have 8,000 employees, our key informant interviews lead us to believe this figure is inclusive of employees of leased outlets operating within the Mohegan Sun complex.

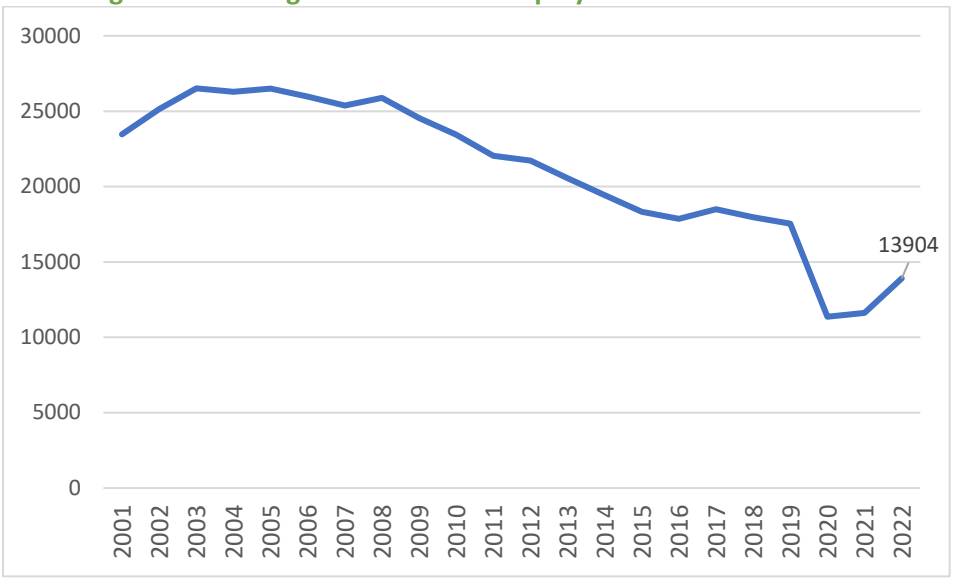
[36] The accuracy of this data is uncertain. The website states: "The employee data is based on information from people who have self-reported their past or current employment at Foxwoods Resort Casino. The data on this page is also based on data sources collected from public and open data sources on the Internet and other locations, as

Impact Report (Taylor, 2019) commissioned by Foxwoods stated that in October 2018 Foxwoods employed 6,772 people, but no mention was made of the percentage that were full-time or the average wages. It is also the case that these 2018 numbers do not capture any lingering impact of COVID-19 on Foxwoods employment, as most casino employees were laid off at both Foxwoods and Mohegan Sun in the spring of 2020. As a way of estimating this impact, MTGA's September 2019 10-K Form (i.e., pre-pandemic) reported Mohegan Sun having 6,500 employees, with 4,500 being full time and 2,000 being seasonal, part-time and on-call employees. This compares to 5,180 total employees in September 2022, which represents a 20.3% decrease from pre-pandemic numbers.

Neither Foxwoods or MGTA have reported any significant impacts on employment from the 2021 legalization of online casino gambling and sports betting, although MGTA has created a Mohegan Digital division for its online gambling.[37] It is difficult to identify the potential impacts of online gambling on employment because any employment increases may be hidden by the lingering effects of COVID-19. Thus, estimation is necessary to determine the total current number of Connecticut casino employees.

Fortunately, total current employment at the tribal casinos *can be estimated* with some degree of certainty through Connecticut's Quarterly Census of Employment and Wages (QCEW) data, which reports employment by industry, including government workers. Since tribal casino workers are classified as 'local government' workers, our estimation method assumes that all local government employees in the arts, entertainment and recreation, or accommodation and food service sectors are casino workers. As shown in Figure 25, the number of employees in these sectors has steadily declined since 2008, with a major decrease in 2020 as the COVID-19 pandemic hit. While the full year of 2022 data is not available, tribal casino employment had increased somewhat, from 11,642 in 2021 to **13,904 employees as of June 2022**.

Figure 25. Average annual casino employment from 2001 - 2022



well as proprietary data we licensed from other companies. Sources of data may include, but are not limited to, the BLS, company filings, estimates based on those filings, H1B filings, and other public and private datasets."

[37] Mohegan Tribal Gaming Authority (16 Dec. 2021).

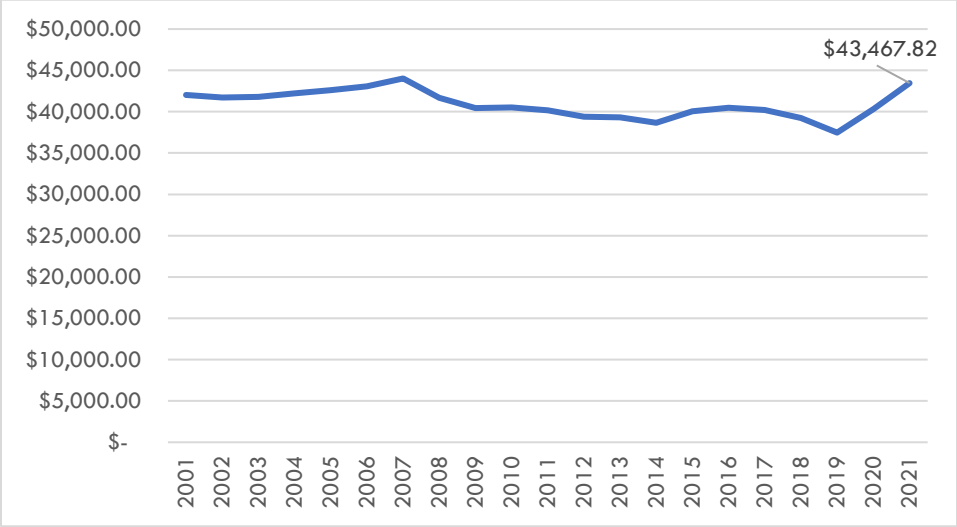
Key informants from host and impacted communities and the casinos have reflected on the importance of the casinos in providing employment to surrounding towns:

- *"Foxwoods has had a huge impact on bringing jobs to the area. When the economy bottomed out in late 2007 or 2008, Foxwoods had jobs readily available. The jobs provided a lower rate of pay than people were acclimated to, but they were jobs nonetheless."* (Host and Impacted Communities)
- *"The most important impact would be the jobs created and maintained by the casinos."* (Host and Impacted Communities)
- *"[Mashantucket Pequot Tribal Nation] provides employees with competitive benefits, including health care, and a 401(k) with employer match, disability insurance, childcare reimbursement, tuition reimbursement, paid meals, and other benefits."* (Mashantucket Pequot Tribal Nation)
- *"The Mohegan Tribe is the state's 5th largest employer with over 10,000 employees, providing approximately 24,000 jobs[38] in Connecticut...more than 90% of Mohegan's employees live in Connecticut, coming from 110 of the state's 169 towns. These employees want to be part of the Mohegan team because they are respected as part of our broader family, with wage and benefit packages that are nearly 30% higher than the hotel industry average."* (Mohegan Tribe)

Casino Wages

Annual average wages can also be estimated from the Connecticut's Quarterly Census of Employment and Wages (QCEW) data. While casino employment has fallen in Connecticut since 2007, average annual wages have largely kept pace with inflation, and have risen since the pandemic, as seen in Figure 26.

Figure 26. Average annual casino wages (adjusted for inflation) from 2001 - 2021



Key informants have reflected on the wages provided by casinos:

- *"The resort supported $364.7 million of wages, salaries, and benefits (including server tips) and 8,123 full-time and part-time jobs (including leased outlets)."* (Mohegan Tribe)

[38] This is assumed to be total direct, indirect, and induced employment impacts of the casinos.

- *"Through Foxwoods, other MPTN-owned enterprises and the tribal government, MPTN provides jobs for over 6,000 employees – approximately six times the MPTN tribal enrollment."* (Mashantucket Pequot Tribal Nation)
- *"A lot of the casino jobs are service jobs at minimum wage levels. There wasn't as big of a job boom as people thought, it's mostly seasonal work or people right out of college.*" (Statewide Municipal Government Association)
- *"All of the higher-paying, managerial jobs go to tribal members."* (Host and Impacted Communities)

Distribution of Casino Revenue

The primary recipient of slot and table game revenue from the two Connecticut casinos are the Mashantucket Pequot Tribe and the Mohegan Tribe. Some information about how this revenue is utilized and the overall economic impacts of these casinos on the local economy is contained in their recent economic impact reports: Foxwoods Economic Impact (Taylor, 2019) and Mohegan Sun Economic Impact (Oxford Economics, 2022).

The next major beneficiary of tribal casino revenue is the State of Connecticut, which receives 25% of gross slot revenue from the two casinos into its General Fund, which is utilized to fund the operations and programs of the state (e.g., education, human services, health care, corrections, etc.). In 2022, this amounted to just over $215 million.[39]

Out of this $215 million total, a portion ($51.4 million in recent years) is allocated to the Mashantucket Pequot and Mohegan Fund, a separate fund that the Connecticut legislature distributes to Connecticut municipalities. Host communities, which are closest to the casinos (i.e., Ledyard, Montville, Norwich, North Stonington, and Preston), are guaranteed annual payments of $750,000 in addition to the allocation determined by the legislature. The fund is also required to distribute $1.6 million to municipalities that are members of the Southeastern Connecticut Council of Governments, as well as to certain distressed municipalities.[40] The proportional allocation of the remaining monies is as follows:

- 35% distributed to 28 specific municipalities listed in statute;
- 28% according to a formula based on each municipality's: (a) equalized net grant list, (b) per capita income in relation to other municipalities, and (c) population;
- 16% to municipalities eligible for a state payment in lieu of taxes (PILOT) grant for state-owned real property and tribal reservation land, excluding property acquired for highways and bridges;
- 16% according to the distribution formula for PILOT grants for real property owned by private nonprofit colleges and nonprofit general hospitals;
- 4% distributed to 10 specific municipalities based on a formula

[39] As will be discussed later, the online casino games and sports betting that are now hosted by these two casinos are also subject to taxes at 18% and 13.75%, respectively. These two taxes contributed an additional $25.6 million and $7.4 million to the General Fund resulting in a total of over $248 million in tax revenue to the state in 2022.

[40] This includes any distressed municipality that is a member of the Northeastern Connecticut Council of Governments or the Windham Area Council of Governments. A distressed municipality is defined as the state's most fiscally and economically distressed municipalities and the designation is used by state agencies to target funds for needs which may include housing, insurance, open space, brownfield remediation and economic development programs, among others.

Municipalities have complained that progressively more of the fund has been allocated to the state's General Fund rather than distributed to municipalities. Furthermore, host communities have reported that amounts currently received are negligible. Thus, there was legislation introduced in the Connecticut 2023 General Assembly which would have increased the amount of the Mashantucket Pequot and Mohegan Fund and better ensured the fund was going to municipalities. Written testimonies in the January 2023 public hearings show support for the bill from the two tribes, the Connecticut Council of Small Towns, and a statewide municipal government association:

- *"The Mashantucket Pequot and Mohegan Fund provides municipalities with much-needed revenues to assist municipalities in funding the delivery of critical services, including education, public health, safety and infrastructure. Given rising inflation and increased costs associated with delivering municipal services and programs, additional municipal aid is necessary to mitigating property tax increases."* (Connecticut Council of Small Towns)
- *"We [the Mohegan Tribe] strongly support increasing the money distributed to Connecticut towns and encourage a higher percentage to be shared with our neighbors here in southeastern Connecticut."* (A representative of the Mohegan Tribe)
- "*On behalf of the Mashantucket Pequot Tribal Nation, today I write to lend our support for SB 1213…Likewise, we fully endorse the section that limits the ability of the fund to be reduced unless there are extenuating circumstances.*" (A representative of the Mashantucket Pequot Tribal Nation)

However, on June 29, 2023 Governor Lamont vetoed this bill, and on July 10, 2023 the legislature declined to override that veto.

Lottery

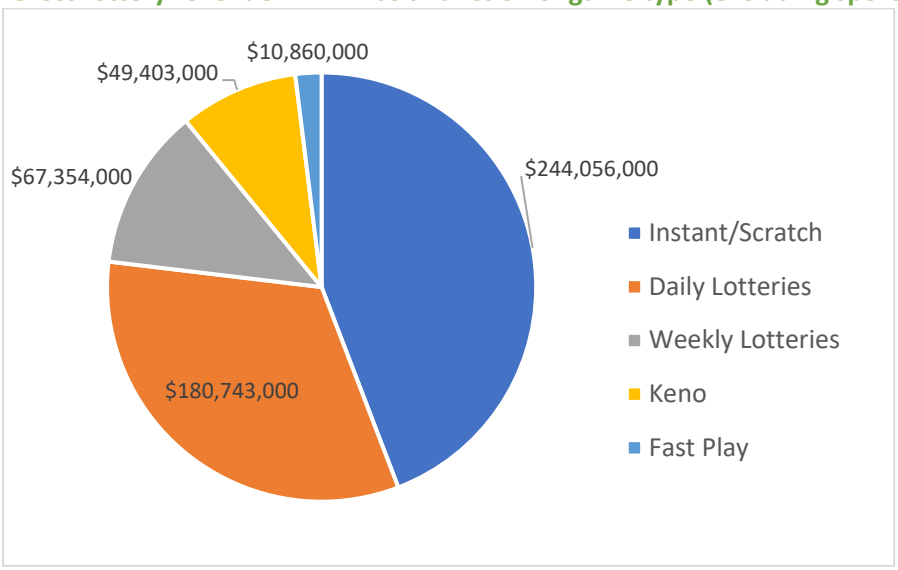
Lottery Revenue

The CT Lottery FY22 Annual Report shows that total consumer sales on all lottery products (*excluding sports betting*) totaled $1,452,047,000. The majority of this was returned as prizes.[41] The Lottery's gross gaming revenue (GGR) after prizes (excluding sports betting) totaled $552,416,000. Three important operating expenses that were incurred were: (a) $84 million to lottery vendors, (b) $40 million on gaming systems, marketing, and production expenses, and (c) $28 million on 'other' operating expenses. After these expenses, total net revenue was $410.0 million.

Revenue as a function of game type is illustrated in Figure 27. As shown, 44.2% of revenue comes from instant/scratch tickets, followed by 32.7% from daily lotteries (Play3, Play4, Cash5, Lucky for Life), 12.2% from weekly lotteries (Lotto!, Mega Millions, Powerball), 8.9% from Keno, and 2.0% from Fast Play.

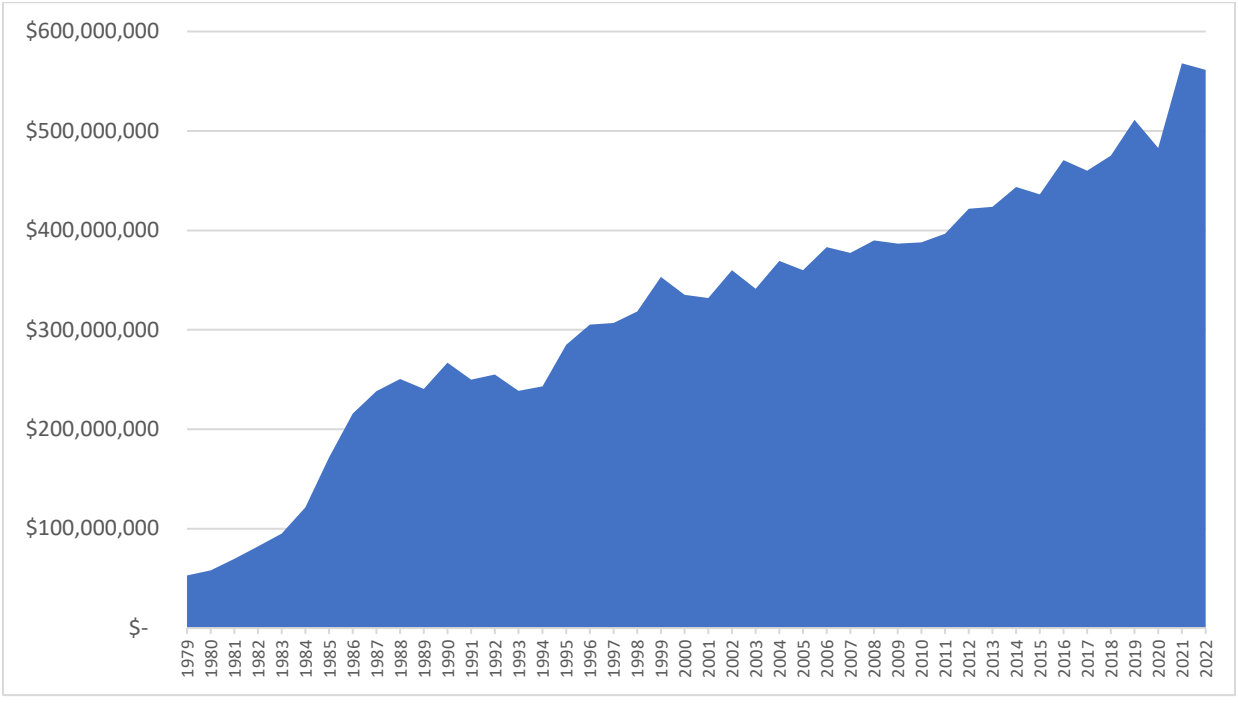
[41] The 'return to player' payback rate (prizes divided by sales) varies as a function of product: 71.9% for FastPlay, 69.5% for instant/scratch tickets, 65.1+% for Keno, 50.5% for weekly lotteries, 45.3% for daily lotteries.

Figure 27. Gross lottery revenue in FY22 as a function of game type (excluding sports betting)



The steady and continued growth of gross lottery revenue from 1979 to 2022 is displayed in Figure 28. Data are from the CT Department of Consumer Protection.

Figure 28. Gross lottery revenue from 1979 - 2022



Note: totals are not inflation adjusted.

Lottery Employment

The Connecticut Lottery Corporation is a quasi-public agency which produces detailed annual reports. Since 2019, their reported total number of employees has stayed level with an annual average of about

158 employees. The Lottery's employment was relatively consistent throughout the COVID-19 pandemic and employees' wages were paid in full. In addition to employing its own staff, the Lottery has employment impact by virtue of its partnership with approximately 2,800 lottery vendors, most of which are convenience, grocery and liquor stores. The average lottery vendor commission is approximately $25,000 - $30,000 per year, which helps with operating expenses, including paying employees.[42] The lottery has adopted an affirmative action hiring plan as well as activities to promote vendor diversification. A key informant from the Lottery reported:

- *"We have an affirmative plan, and in order to fulfill that goal we have workforce diversification efforts our Human Resources Department carries out whether that be attending job fairs geared towards minorities or under-represented people or working with specific vendors through our vendor diversification program to recruit business owned by minorities or under-represented people. It's something that we take very seriously, and we have increased our efforts in the past couple of years to fulfill our goal of diversifying our workforce and vendor network."* (Connecticut Lottery)

Distribution of Lottery Revenue

Most lottery revenue is deposited in Connecticut's General Fund utilized to fund state operations and programs. This revenue contribution was just over $402 million in FY22, around two-thirds of total current gambling revenue to the state.[43] In addition to the $402 million to the General Fund, $4.8 million was allocated to the Office of Policy and Management and $3.3 million to the Chronic Gamblers Treatment and Rehabilitation Fund.

Key informants from the Connecticut Lottery emphasized the importance of the revenue it provides to the state:

- *"Lottery revenue goes into a fund that is used by the state. Behind income tax and sales tax, this is one of the largest sources of revenue for the state."* (Connecticut Lottery)
- *"Lottery revenue has steadily increased. Since 2013, lottery revenue to the state has contributed more than casino slot revenue combined."* (Connecticut Lottery)

In addition to the Chronic Gamblers Fund, key informants from the Connecticut Lottery emphasized the Lottery's commitment to responsible gambling:

- *"On top of $3.3 million that goes towards the state's [Chronic Gamblers] rehabilitation fund, we spend an additional $1 million on our own responsible gaming efforts including bilingual website, radio, and TV commercials, and digital billboards."* (Connecticut Lottery)
- *"We have our own responsible gaming efforts that we carry out each year. For over 20 years, we've had a partnership called 'the Partnership for Responsible Gambling' with the Connecticut Council on Problem Gambling and the DMHAS. We meet quarterly, and sometimes more frequently than that, to discuss marketing, programming, and how we can support each other."* (Connecticut Lottery)
- *"As part of our programming, we provide responsible gaming messaging on almost all products and advertising, even though we are only obligated to do so for online gaming products. We have been doing this for years. Up until 2016, we used the GameSense branding then we transitioned into the state-wide marketing campaign known as 'Responsible Play the Connecticut Way', it's used by us, the casinos, and SportsTech."* (Connecticut Lottery)

[42] Interview with Chris Davis, Responsible Gaming Manager, Connecticut Lottery.
[43] Note that this transfer includes a small amount of gross revenue from lottery-operated sports betting, which amounted to only $226,156 after prizes and operating expenses.

Sports Betting and Online Casino Gambling

This section discusses direct impacts from sports betting (online and land-based, excluding betting on horse and dog racing) and online casino gambling, both of which were legalized in 2021.

The Connecticut Lottery and the two tribal casinos are the agencies legally authorized to provide sports betting and online casino gambling:

- Foxwoods has a land-based sportsbook at their casino that operates in partnership with DraftKings (DraftKings Sportsbook), as well as an online sportsbook also operated by DraftKings (DraftKings Online Sportsbook). The sportsbook was launched in September 2021 and online sports betting commenced in October 2021.
- Mohegan Sun has a land-based sportsbook at their casino that operates in partnership with FanDuel (FanDuel Sportsbook), as well as an online sportsbook also operated by FanDuel (FanDuel Online Sportsbook).
- The Connecticut Lottery has provided online sports betting in partnership with PlaySugarHouse (www.PlaySugarHouse.com). The lottery has also added self-service sports betting kiosks to almost all of the off-track horse/dog race betting parlors.

The two tribal casinos are the agencies legally authorized to provide online casino gambling via www.MoheganSunCasino.com and www.FoxPlay.com websites. FoxPlay operates in partnership with Wondr Nation and Ruby Seven Studios.

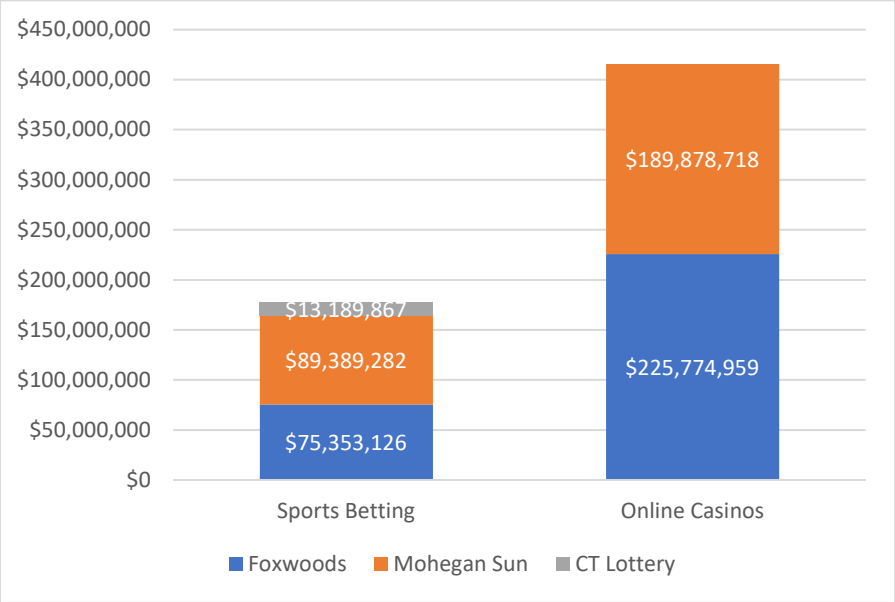
Sports Betting and Online Casino Revenue

Total sports betting and online casino GGR from October 2021 - June 2023 (21 months) is shown in Figure 29. Data is from the CT Department of Consumer Protection.

The total sports betting gross gambling revenue of $177,932,275 for these 21 months represents an average of $8,472,965 a month which would project to roughly **$102 million over a 12-month period**. (Sports betting GGR specifically for 2022 was $53,787,775).

The total online casino revenue of $415,653,677 for these 21 months represents an average of $19,792,032 a month which would project to roughly **$238 million over a 12-month period**. Online casino GGR specifically for 2022 was $142,480,583).

Figure 29. GGR from sports betting and online casinos from October 2021 - June 2023 (21 months)



Revenue from sports betting and online casino gambling is much smaller compared to revenue from traditional lottery products and traditional land-based casino games (i.e., slots and table games). This is partly due to the recent legal availability of these newer forms, which is also partly responsible for the comparatively lower participation rates as well as lower market capture, as established by the ABS weighted population survey:

- 10.2% of adults reported betting on sports in the past year, with 67.5% betting on a Connecticut online website, 15.5% betting in person at a Connecticut casino, *14.4% betting online on an out-of-state website*, 13.2% betting in person at a Connecticut sportsbook and *7.5% betting with an illegal/underground Connecticut betting shop/bookmaker*.
- 7.2% of adults reported gambling at an online casino in the past year, with 84.8% gambling at a Connecticut online casino and *18.1% gambling at an out-of-state online casino*.

These lower revenue figures compared to lottery products and land-based casinos are also because of lower profit margins. As an illustration of this, a total of $2,485,108,701 was wagered on sports betting in Connecticut in this 21-month period, with $2,219,419,272 returned as winnings, which is a 90.1% return to player. Profit margins are even smaller for online casino gambling, but the volume is much greater. A total of $17,705,850,197 was gambled on online casinos during this time period, with $17,182,049,954 returned in winnings, which is a 97.0% return to player.

Sports Betting and Online Casino Employment

It is difficult to estimate how employment in Connecticut has been impacted by the legalization of sports betting and online casino gambling, but some job creation is inevitable.[44] Mohegan Sun and the Connecticut Lottery have created new divisions/departments dedicated to online gambling and sports betting. It is also the case that the online gambling partners who provide the platforms for Connecticut

[44] In 2017, Oxford Economics released a report predicting the economic impacts of sports betting legalization in the U.S. The report predicted that the industry would represent $11 billion in total labor income and would create and support 216,671 jobs nationally.

sports betting and online casinos are very large international corporations with many employees. An example is Ruby Seven Studios, Inc. (currently contracting with Foxwoods), which employs hundreds of workers and is currently based in Reno, Nevada and Kochi, India. It is unclear to what degree these employee numbers have been expanded (if at all) to accommodate sports betting and online casino gambling in Connecticut.

One company with known Connecticut employees is Evolution, a supplier of gambling technology, and a live casino operator for digital platforms. The company's production studio produces streaming, live table games for Mohegan Sun and Foxwoods. In 2022, Evolution opened a studio with 140 employees in Fairfield and the business is in the process of doubling their floor space, anticipating a gradual expansion of employment to 400 employees.

Distribution of Sports Betting and Online Casino Revenue

The small amount of Connecticut Lottery revenue currently received from sports betting is deposited in Connecticut's General Fund.

The majority of the tribal sports betting and online casino revenue is kept by the tribes. However, the state taxes online sports betting at 13.75% of GGR and online casino gambling at 18% of GGR (which will increase to 20% in FY27). Thus, data from the CT Department of Consumer Protection shows that total online casino gambling payment from the tribes to the state's General Fund was $74,829,763 from October 2021 - June 2023. Total sports betting payments to the General Fund in this time period totaled $24,465,687.

Some key informants commented on the revenue from these new types of gambling:

- *"Sports betting is generating new, additional revenue for the state. Connecticut legalized sports betting at same time as casino-online and lottery for draw game. So the impact of sports betting adds to all of these. Their online sales that they started 18 months ago are strong and have remained stable."* (Connecticut Lottery)
- *"[Online] gaming has been supplemental to retail gaming, not cannibalistic. It has served as an additional source of revenue, and…a medium to cross-promote retail gaming and experiences."* (Mashantucket Pequot Tribal Nation)
- *"With gaming and sports betting, all of that revenue goes to the state. The only revenue portion we [municipals] get is a small, dedicated amount."* (Statewide Municipal Government Association)

Parimutuels and Off-Track Betting

Parimutuel betting on horse racing, dog racing and jai alai have a long history in Connecticut. However, by the mid-1990s all of these were in decline (potentially because of the 1992 and 1996 casino openings and expansion of lottery products) with live jai alai ending in 2001 and live greyhound racing ending in 2006 (live horse racing had ended in the 1960s). The decline of all live events likely helped off-track betting (OTB), which saw an increase in revenue for several years in the late 1990s and early 2000s.

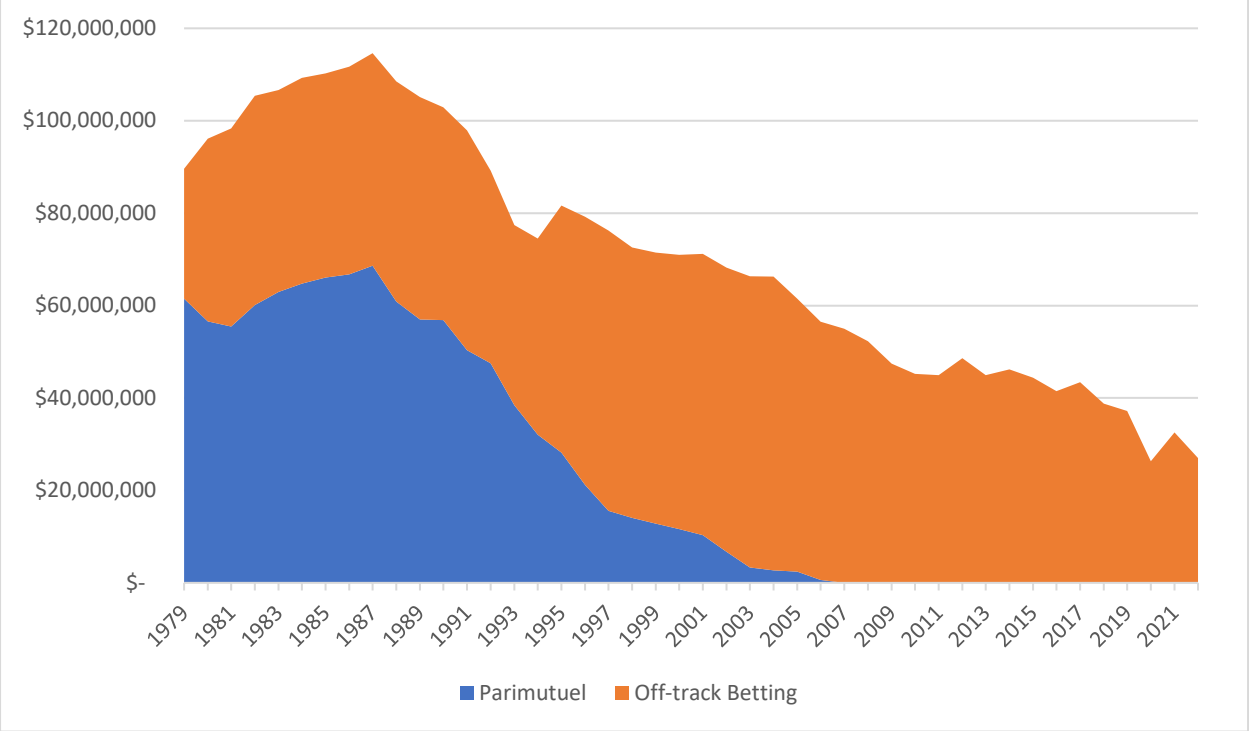
Currently, there are 13 off-track betting parlors/racebooks in Connecticut where people can bet on live simulcast thoroughbred races, harness racing, and greyhound racing occurring in other states and countries. Eleven of these are owned and operated by Sportech, one is at Mohegan Sun (the racebook is a separate area within the FanDuel Sportsbook), and one is at Foxwoods casino (the racebook is a

separate area within the DraftKings Sportsbook). The takeout rate (percentage of the betting pool that is retained by the racetrack) in Connecticut for OTB from 1998 to 2022 has averaged 23.8%, giving an average 'return to player' of 76.2%. The takeout rate for greyhound betting has averaged 22.8%, giving an average return to player of 77.2%. The takeout rate for jai alai has averaged 18.7%, giving an average return to player of 81.3% (CT Department of Consumer Protection).

Parimutuel and Off-Track Betting Gambling Revenue

Figure 30 shows gross gambling revenue for off-track betting and parimutuels (greyhound racing and jai alai). Parimutuel GGR peaked in 1987 at $68.7 million and OTB GGR peaked in 2004 at $63.5 million. Total combined parimutuel and off-track betting GGR peaked in 1987 at $114.6 million and has been declining ever since. In 2022, OTB GGR was only $27.0 million (CT Department of Consumer Protection).

Figure 30. Parimutuel and off-track betting revenue from 1976 - 2022[45]



Parimutuel and Off-Track Betting Employment

Horse/dog racing tend to have more total employment impacts than other types of gambling as it not only supports people in the racing sector, but also indirectly supports farmers who grow feed and those employed in breeding and raising horses/dogs (Williams, Rehm & Stevens, 2011). The actual number of people in Connecticut currently employed from OTB is unknown but is expected to be relatively small due to the small number of OTB venues and the relatively small OTB revenue relative to other types of gambling.

[45] Off-track betting was state-run from FY1979-1993. For that period, transfers represented the fund balance in excess of Division needs. The OTB system was sold to a private operator effective July 1, 1993 and since then transfers are based on a statutory parimutuel tax rate. The spike in 1993 is due to this change in calculation.

Distribution of Parimutuel and Off-Track Betting Revenue

Historically, the main beneficiary of parimutuel and off-track betting is the racetrack and/or simulcast venue that hosted the event and which kept between 18.7% and 23.8% of the total amount wagered. However, the state also receives a small amount. More specifically, the state receives 2% of the total amount wagered on OTB, resulting in a transfer to the Connecticut General Fund of just over $2.5 million in 2022. Advanced deposit wagering from currently unregulated off-track betting apps NYRA and TVG contributed an additional $1.25 million to the General Fund.

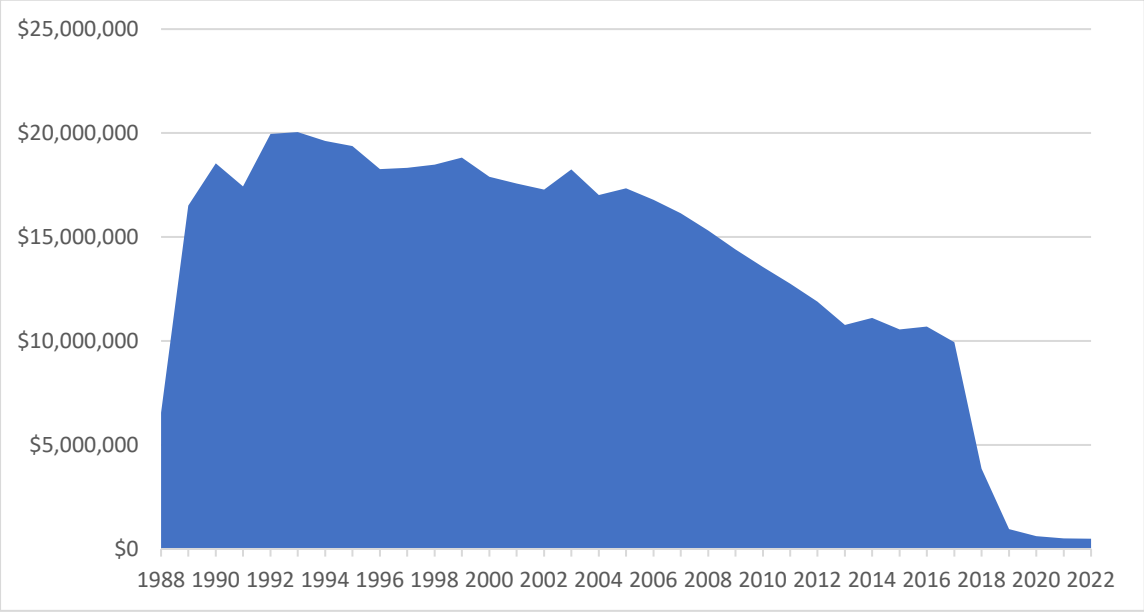
Charitable Gambling

'Charitable gambling' refers to the provision of bingo, a raffle, a bazaar, or sealed tickets/pull-tabs by a qualified: educational or charitable organization; civic, service, or social club; fraternal or fraternal benefit society; church or religious organization; veteran organization/association; volunteer fire company; or political party or town committee of the municipality in which the activity is to be held.

Charitable Gambling Revenue

As shown in the figure below, charitable games have also seen a steep decline in GGR, peaking at $20,047,318 in 1993 and down to only $495,121 in 2022. The steep decline in charitable gambling revenue in 2018 coincided with the introduction of Public Act 17-231, which made each municipality responsible for the permitting and enforcement of all bingo games, bazaars and raffles taking place in their town. (A review of why this impact happened and potentially how it might be mitigated is warranted).

Figure 31. Charitable gambling revenue from 1988 - 2022

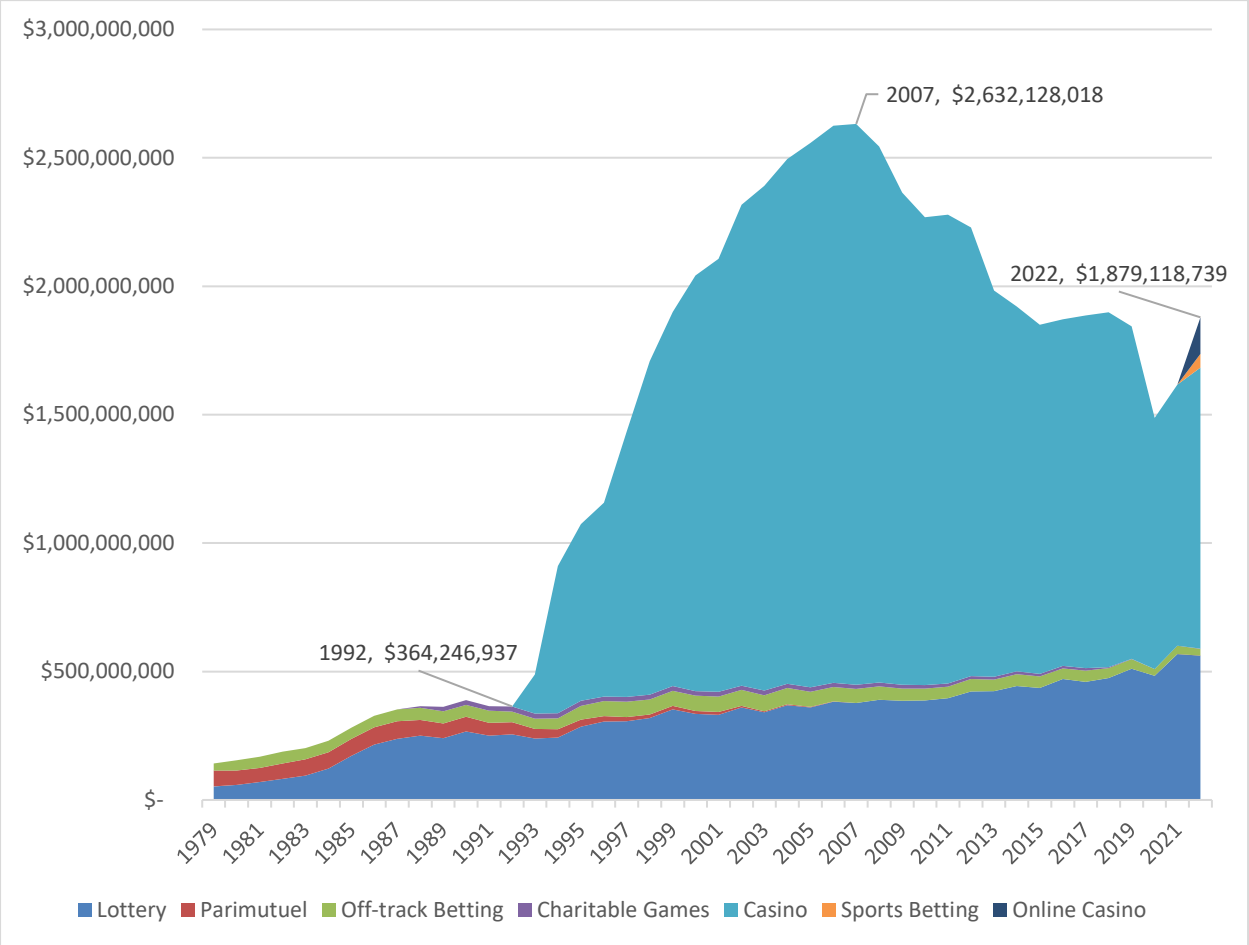


Total Gambling Revenue

Total gross Connecticut gambling revenue from FY1979 to FY2022 is shown in Figure 32 below. These are not precise estimates, as casino table game revenue had to be estimated (we used an average of 26% of slot revenue across all years) and OTB and greyhound racing GGR from FY1979 to FY1997 had to be estimated based on the known takeout rate from FY1998 to FY2022.

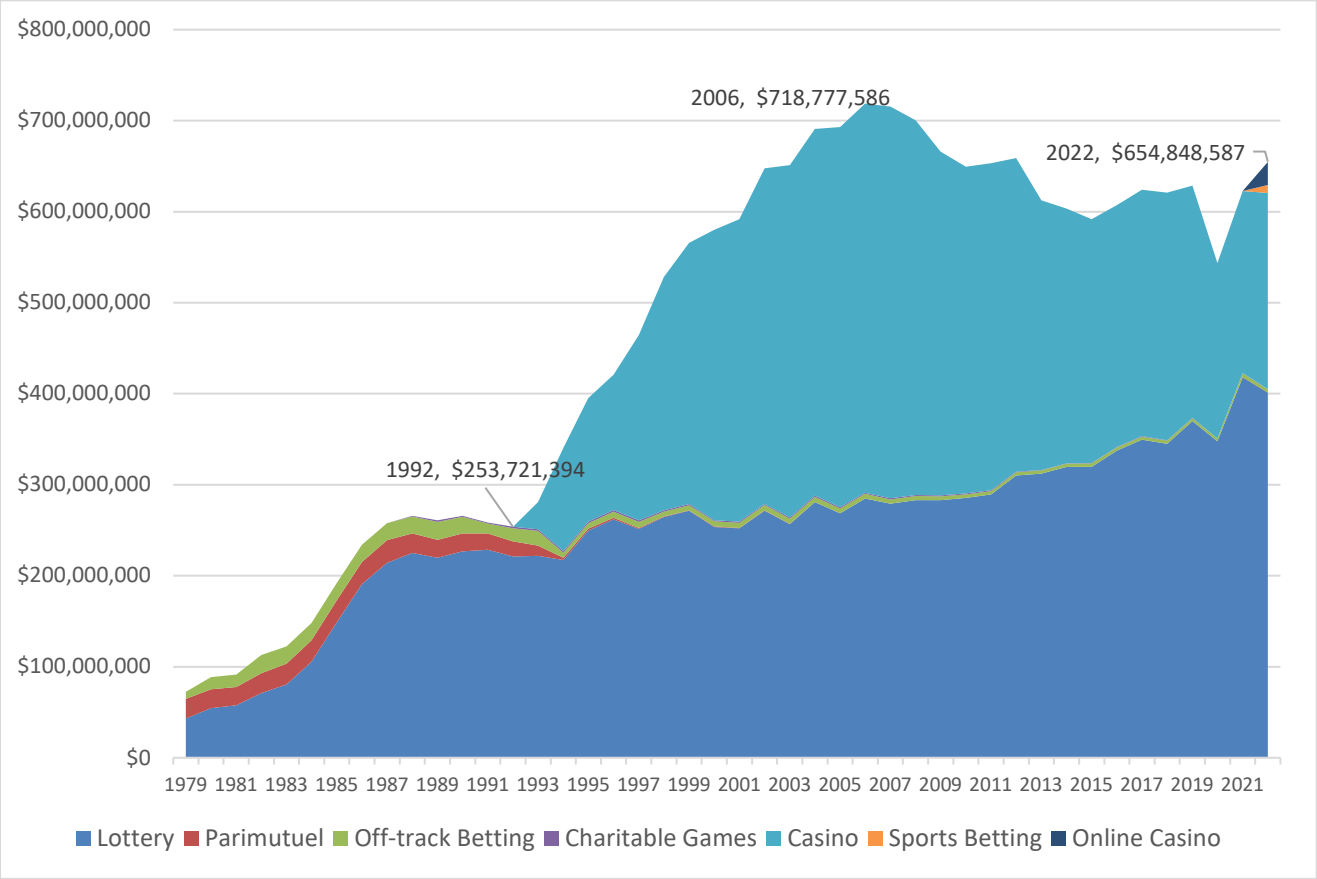
Figure 32Figure 32 illustrates a few important things: (a) casino and lottery revenue account for the vast majority of total Connecticut GGR; (b) overall Connecticut GGR peaked in FY2007 and has declined substantially since that time; (c) coming out of the pandemic years, there has been some resurgence in GGR in FY2022 with the advent of sports betting and online casinos.

Figure 32. CT gross gambling revenue from 1979 – 2022



Transfer of GGR by type of gambling to the Connecticut General Fund is shown in Figure 33 below. When observing the trend since 2007, the General Fund revenues have not dipped as much as gross gambling revenue. While overall casino revenue has declined sharply, it only contributes 25% of slot revenue to the General Fund, whereas lottery revenue has been steadily increasing over time and almost 100% of this is transferred to the General Fund. Prior to 1994, OTB was run by the Division of Special Revenue so, similar to the Lottery, nearly 100% of OTB GGR was transferred to the state between 1979-1993.

Figure 33. Transfers to the CT General Fund by type of gambling from 1990 - 2022



Demographic Origin of Connecticut Gambling Revenue

Thus far, the game type origin of Connecticut gambling revenue has been established along with the geographic origin of Connecticut casino revenue. The following table adds to this picture by identifying the demographic profile of the major contributors to current Connecticut gambling revenue. It is well established that a small minority of people contribute the large majority of gambling revenue across game types and jurisdictions (e.g., Fiedler et al., 2019; Lucas et al., 2002). This was also found in the present study where 75% of all reported gambling expenditure was accounted for by 5.1% of Connecticut gamblers (3.5% of Connecticut adults). Table 38 below shows the demographic profile of this 5.1% compared to all gamblers and to Connecticut adults more generally. What this table shows is that relative to their proportion in the general population, the following demographic groups make a disproportionately high contribution to Connecticut gambling revenue: males, ages 35-49, non-Whites (i.e., Blacks, Hispanics, Asians, and Other Ethnicity), and people with high school or lower educational attainment.

Table 38. Demographic profile of people currently contributing 75% of CT gambling revenue

	Gamblers contributing 75% of all reported spending (ABS, weighted)	Profile of all CT past year gamblers (ABS, weighted)	CT adults (ABS, weighted entire sample)
Male	61.5%	50.6%	48.4%
Female	37.0%	48.9%	50.9%
Other Gender	1.5%	0.5%	0.7%
18-34	23.9%	22.4%	25.7%
35-49	35.7%	24.5%	23.8%
50-64	26.9%	26.3%	23.8%
65+	13.5%	26.8%	26.8%
White	67.7%	80.0%	77.3%
Hispanic	20.8%	13.8%	15.4%
Black	12.2%	5.5%	5.8%
Asian	5.8%	2.8%	3.2%
Other Race/Ethnicity	6.2%	2.7%	3.3%
High School or Less	49.8%	34.5%	34.9%
Some College &/or Assoc Degree	24.6%	27.0%	25.7%
Bachelor's or Higher	25.6%	38.6%	39.3%
HH Income <$60K	41.5%	39.4%	43.4%
HH Income $60K-$119.9K	28.7%	31.9%	29.8%
HH Income $120K+	29.9%	28.7%	26.7%
Immigrant	10.3%	11.2%	14.1%
Born in U.S.	89.7%	88.8%	85.9%

Proportion of Revenue from Problem Gamblers

Another important consideration is the proportion of overall self-reported gambling expenditure that comes from the 1.8% of the adult population who are classified as problem gamblers. As seen in the table below, this proportion is estimated to range from 12.4% for lottery products to 51.0% for sports betting, with 21.5% from all legal forms of gambling. Twenty-one and one-half percent of all gross gambling revenue would represent approximately $400 million dollars in 2022. Equally concerning is the fact that 49.1% of all gross gambling revenue derives from At-Risk Gamblers who constitute only 4.9% of the adult population.

Table 39. Estimated proportion of CT gambling revenue currently derived from problem gamblers

All lottery products	12.4%
Online casinos	21.4%
Land-based casinos	36.6%
Sports betting	51.0%
All legalized gambling	21.5%

Indirect Economic Impacts

The previous section covered the best available data on the direct economic impacts of the gambling industry in Connecticut. This section uses those data as a foundation to calculate the total economic impact of casino gambling. This is accomplished using an eight-region REMI PI+ economic impact model. Economic impact models like REMI use documented relationships between industry sectors, regions, and types of economic activity to estimate the 'ripple effects' that an economic activity might have.

Summary of Direct Impacts

Casino Spending

As discussed earlier in this report, AirSage data was used to determine the flows of casino patrons in and out of Connecticut. Of the estimated $1.1 billion annually spent on gambling in Connecticut casinos, 50.5% ($552.3 million) was spent by Connecticut residents, with the remainder ($541.6 million) being spent by out-of-state casino visitors as shown in Table 40 (see Appendix G for more details). Most Connecticut gamblers kept their gambling local to the state, but just under one-third ($261.9 million) of the funds spent by Connecticut residents at casinos was spent at out-of-state establishments, primarily casinos in Massachusetts, New York, and Rhode Island.

Table 40. Flows of CT casino spending in 2023

Source	Amount
CT Residents Gambling at CT Casinos	$552,300,729
CT Residents Gambling at Out-of-State Casinos	$261,885,000
Out-of-State Residents Gambling at CT Casinos	$541,610,185

Overall Gambling Spending and Revenue

Not all gambling spending in Connecticut occurred at its casinos. Moreover, not all gambling spending is equal from an economic impact perspective. Not only are different types of gambling taxed at different rates, but they are also treated differently for modeling purposes. One of the most important considerations in estimating the economic impacts of a consumer activity such as gambling is the concept of **reallocation**. The presence of a new consumer activity often redirects spending toward this activity that would otherwise have been spent on other goods and services in the region. For this reason, while the gambling industry in Connecticut attracts some new spending into the state from out-of-state residents and retains the spending of patrons who would have otherwise gambled out of state, some of the funds spent on gambling have been reallocated from other Connecticut industries. For example, if legalized gambling did not exist, a portion of the money spent on gambling would be spent on other forms of entertainment, such as going to the movies, a concert, or a sporting event. From a macroeconomic perspective, this is spending that would occur anyway.

For the present study, we estimate that 37.7*% of spending by Connecticut residents at Connecticut casinos is reallocated*, while the remaining is '**new revenue**' derived from (a) out-of-state residents patronizing Connecticut casinos, and (b) Connecticut residents who would likely have gambled out-of-

state if not for the presence of in-state casinos.[46] The 37.3% reallocation figure is derived from analyses done at the two largest Massachusetts casinos (Encore Boston Harbor and MGM Springfield) where surveys of patrons concerning reallocation of spending have been conducted in recent years (Salame et al., 2020, 2023). In the absence of any data about the behavior patterns of other types of gambling, we used this same estimate for reallocation in other sectors.

Whether new or reallocated, funds spent on gambling in Connecticut generate revenue for the state government. All told, the State of Connecticut collected $654.9 million in revenue in fiscal 2022 (Figure 33 and Table 41), with 61% of this coming from the Lottery as shown in Table 41. These revenues collected from casinos and the Lottery are an important part of their economic impact, as they provide funding for various government activities and programs across the state.

Table 41. New and reallocated gambling spending in Connecticut in 2022

Type of Gambling	New Spending	Reallocated Spending	CT State Revenue
Casinos	$885,400,301	$208,682,485	$215,664,682
Lottery	$454,320,035	$107,079,965	$401,000,000
Sports Betting and Online Casinos	$144,214,847	$33,990,402	$33,551,342
OTB and Charitable	$17,157,087	$10,382,379	$674,342
Total	$1,528,007,034	$360,140,271	$653,591,839

Sources: Connecticut Department of Consumer Protection, Connecticut State Lottery.
Calculations of reallocated spending based in part on AirSage data. Rounded to nearest 100,000.

Inputs for Economic Modeling

A summary of the current direct impacts of legalized gambling is presented in Table 42. These figures are taken from Table 41 as well as earlier sections of this report. (Secondary data was utilized to estimate total casino wages).

Table 42. Summary of current direct economic impacts of legalized gambling

Measure	2022 Impacts
Casino Employment	13,904 jobs
Casino Wages	$565,800,000
Lottery Employment	161 jobs
Lottery Commissions to Lottery Vendors	$84,383,511
State Government Revenue	$653,591,839
Reallocated Consumer Spending	-$360,140,271

[46] In the present context the '37.5% reallocation' refers to the share of casino spending by CT residents that would have been spent at other CT businesses if not for the presence of CT casinos.

Estimated Indirect Economic Impacts

When these direct impacts are used as inputs to the REMI economic impact model, it produces an estimate of the total annual economic impact of the gambling industry in Connecticut as can be seen in Table 43. All told, the economic activity generated by its operation **supports approximately 22,832 jobs in Connecticut** through the combination of direct and spinoff effects in the economy,[47] 20,702 of which are estimated to be in the private sector. In addition, the industry supports an **estimated $3.7 billion in gross state output, $2.3 billion of which is estimated to be value added** (the portion of the output which is directly created by firms' capital goods and labor), **as well as $1.6 billion in personal income**. Nearly **all this economic activity originated and is concentrated in New London County,** the site of both of Connecticut's casinos.

Table 43. Summary of current overall economic impacts

CT County	Total Employment	Private Non-Farm Employment	Output	Value Added	Personal Income
Fairfield	244	183	$54,300,000	$32,300,000	$37,500,000
Hartford	731	355	$152,900,000	$87,500,000	$106,000,000
Litchfield	27	11	$7,100,000	$3,900,000	$7,100,000
Middlesex	226	179	$40,300,000	$23,200,000	$71,100,000
New Haven	-152	-274	$4,600,000	$2,900,000	$33,100,000
New London	21,379	20,136	$3,364,500,000	$2,061,700,000	$1,197,900,000
Tolland	263	60	$41,800,000	$25,200,000	$36,300,000
Windham	116	52	$35,900,000	$18,100,000	$86,000,000
Total	22,832	20,702	$3,701,600,000	$2,255,000,000	$1,575,200,000

Table 44 shows the casino industry's estimated employment impacts, broken out by the specific type of economic activity that generates demand for these jobs. We estimate that 90% of the jobs supported by the gambling industry are in the private sector and that 97% of those private sector jobs are located within New London County. Each of Connecticut's counties has jobs supported by the Lottery's operations and by state spending funded from gambling revenue. However, the economic activity generated by casino employees in New London County, the spending of those casinos, and the spending induced by the wages of workers, is by far the most significant source of overall employment. In some counties, the employment impact from some types of employment demand is negative. This indicates types of economic activity that would likely be stronger in those counties if not for consumer reallocation of spending towards gambling.

[47] This is not the same as the number of new jobs created, which will be a lower number.

Table 44. Employment impacts by source of employment demand in 2022

Employment Demand Source	Fairfield County	Hartford County	Litchfield County	Middlesex County	New Haven County	New London County	Tolland County	Windham County
Private Non-Farm	183	355	11	179	-274	20,136	60	52
Gambling Employment	167	173	33	30	158	13,952	18	19
Business to Business	-143	-377	-68	-144	-653	1,772	-77	-276
Induced	158	559	47	293	222	4,412	119	309
Consumption-Based	68	255	13	142	83	2,472	61	165
Other Induced	90	304	34	152	139	1,940	58	144
Government	61	376	15	47	121	1,244	203	63
Total	244	731	27	226	-152	21,379	263	116

Employment is heavily concentrated in a handful of industries, most notably the accommodation and amusement, gambling, and recreation industries which comprise the casino industry (see Table 45). The employment impact of these industries in other parts of Connecticut is largely negative due to consumer reallocation. The other industries most significantly represented are those industries which are heavily supported by consumer spending, such as construction and real estate. In other words, much of the economic activity in Southeastern Connecticut is in part supported by the spending of casino employees or employees of businesses that do business with the casinos.

Table 45. Employment impact by industry sector (top 10 industries) in 2022

Employment Impact by Industry Sector (Top Ten Industries)	Fairfield County	Hartford County	Litchfield County	Middlesex County	New Haven County	New London County	Tolland County	Windham County
Accommodation	-23	-79	-16	-39	-68	7,934	-5	-56
Amusement, gambling, and recreation industries	-54	-112	-18	-58	-140	5,553	-47	-101
Construction	29	92	17	93	18	1,800	26	59
Retail trade	159	162	27	50	80	930	26	35
Food services and drinking places	14	30	2	18	9	615	9	16
Real estate	22	55	3	19	10	580	12	11
Professional, scientific, and technical services	11	69	3	28	26	402	12	23
Ambulatory health care services	6	24	1	13	7	377	8	6
Administrative and support services	2	11	1	11	-33	356	6	6
Personal and laundry services	6	34	1	12	11	196	5	21
All other industries	11	70	-11	32	-193	1,395	8	32
Total Private Non-Farm Employment	183	355	11	179	-274	20,136	60	52

Source: Regional Economic Models, Inc., UMDI Calculation

Secondary Data

To further triangulate the above projections, the following tables and figure present secondary data trends in Connecticut pertaining to some of these same economic indices. Table 46 identifies the total number of business establishments and total employment in Connecticut and New London County from 1990 to 2020. Data is from the Census - Statistics of U.S. Businesses (SUSB) and the Census - County Business Patterns. As seen, both the number of businesses and employment numbers peaked in New London County and Connecticut between 2005 and 2007, coincident with peak casino revenue. The total number of employees in New London County in 2005-2007 was 19.1% higher than in 1990-1991 and the total number of businesses 4.4% higher, which compares to only a 2.0% increase in Connecticut businesses and a 6.4% increase in employees. While there has been some decline in New London employment since 2005-2007, (a) the number of employees in New London County in 2018-2019 (i.e., pre-pandemic) was still 14.9% higher than in 1990-1991 compared to only a 5.2% increase for Connecticut, and (b) the number of businesses was 2.4% higher compared to a 2.9% *decrease* for Connecticut.

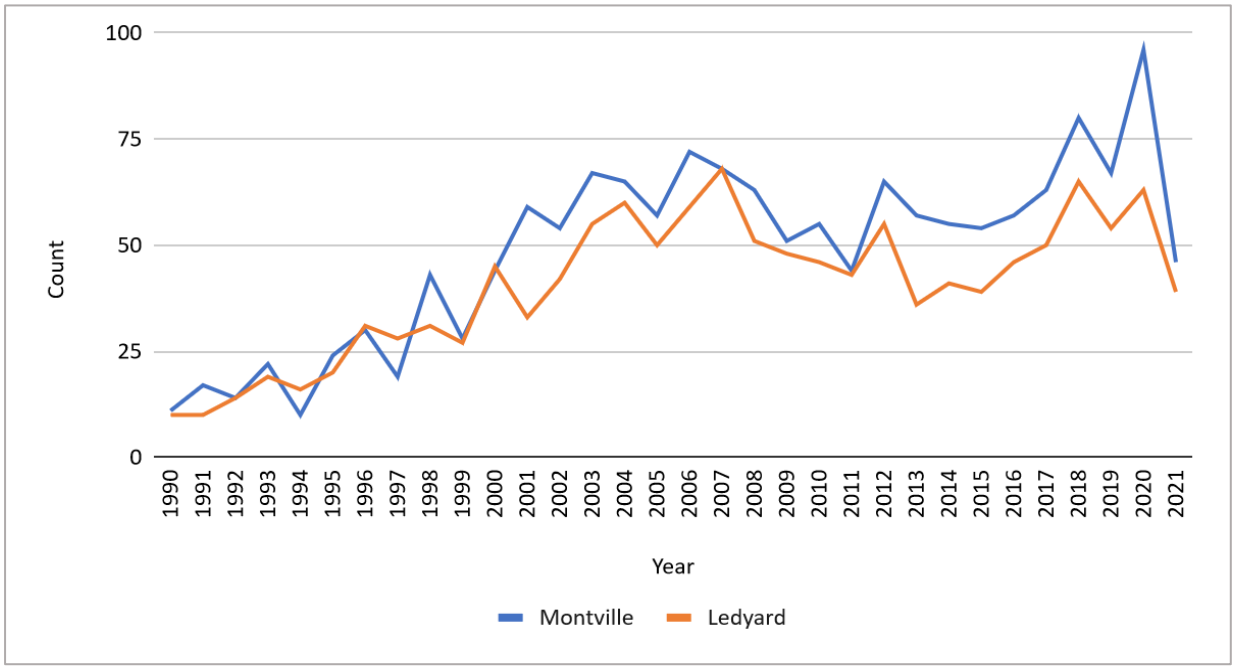
Table 46. Number of business establishments in CT and New London County from 1990 - 2020

	Connecticut		New London County	
Year	# of Business Establishments	Employment	# of Business Establishments	Employment
1990	92,816	1,482,023	5,848	94,678
1991	90,498	1,433,420	5,738	91,598
1992	90,238	1,411,923	5,717	89,016
1993	90,467	1,406,306	5,764	87,342
1994	90,789	1,385,484	5,742	87,469
1995	91,189	1,415,400	5,811	98,665
1996	91,925	1,433,673	5,856	99,501
1997	92,702	1,471,970	5,801	102,722
1998	92,362	1,493,964	5,715	103,413
1999	92,454	1,530,539	5,705	103,728
2000	92,436	1,546,250	5,729	105,770
2001	92,105	1,555,214	5,739	105,598
2002	92,375	1,555,595	5,891	110,111
2003	91,611	1,550,867	5,904	108,149
2004	93,011	1,537,461	6,005	111,683
2005	93,561	1,529,827	6,089	112,708
2006	93,421	1,585,843	6,027	112,446
2007	93,615	1,539,268	6,027	107,615
2008	92,597	1,551,305	6,016	108,604
2009	90,048	1,468,291	5,878	104,745
2010	89,234	1,436,992	5,791	107,017
2011	88,040	1,442,620	5,675	105,276
2012	88,210	1,463,732	5,706	104,801
2013	88,498	1,473,605	5,698	103,244

	Connecticut		New London County	
Year	# of Business Establishments	Employment	# of Business Establishments	Employment
2014	88,555	1,485,426	5,732	102,281
2015	89,232	1,503,102	5,805	102,909
2016	89,416	1,533,879	5,865	105,998
2017	89,574	1,536,858	5,907	105,456
2018	89,054	1,528,867	5,937	106,066
2019	88,916	1,538,341	5,924	107,959
2020	88,060	1,551,590	5,780	105,420

Connecticut Business Data shown in Figure 34 illustrates that the positive business impacts from 1990 to 2021 in the towns of Ledyard and Montville was even more pronounced than New London County more generally.

Figure 34. Number of business registrations in Montville and Ledyard from 1990 - 2021



In terms of unemployment rate, as seen in Table 47, data from the U.S. Bureau of Labor Statistics shows that since 1992, relative to the unemployment rate in Connecticut: New London County has had a lower unemployment rate in 17/31 years; Ledyard in 30/31 years; and Montville in 14/31 years. Employment peaked in Ledyard and Montville in 2006-2008, with these numbers in this time period being 10.1% higher in Ledyard and 20.0% higher in Montville compared to 1990-1991, albeit only marginally higher in 2022 compared to 1990-1991 (0.3% higher in Ledyard and 0.6% higher in Montville).

Table 47. CT employment numbers and unemployment rate from 1990 - 2021

	Connecticut	New London County	Ledyard		Montville	
Year	Unemploy rate	Unemploy rate	Employment	Unemploy rate	Employment	Unemploy rate
1990	4.9%	5.5%	7,531	3.7%	8,808	6.0%
1991	6.5%	6.6%	7,484	4.8%	8,710	7.0%
1992	7.3%	6.9%	7,633	5.6%	8,850	6.8%
1993	6.5%	6.1%	7,668	4.3%	9,091	6.1%
1994	5.6%	5.2%	7,748	3.8%	9,312	5.1%
1995	5.3%	5.1%	7,801	3.7%	9,418	5.3%
1996	5.2%	5.4%	7,792	4.1%	9,428	5.8%
1997	4.7%	5.2%	7,898	4.1%	9,544	5.4%
1998	3.2%	3.7%	7,788	2.8%	9,427	3.7%
1999	2.5%	2.6%	7,970	1.7%	9,596	2.5%
2000	2.1%	2.1%	7,589	1.7%	9,355	2.1%
2001	2.9%	2.6%	7,623	2.0%	9,819	2.4%
2002	4.4%	3.9%	7,878	3.0%	10,065	3.9%
2003	5.5%	4.9%	7,922	4.0%	10,133	4.8%
2004	5.1%	4.7%	7,921	3.8%	10,005	4.5%
2005	4.8%	4.4%	8,075	3.6%	10,180	4.3%
2006	4.4%	4.2%	8,239	3.5%	10,466	4.1%
2007	4.5%	4.2%	8,228	3.4%	10,495	4.2%
2008	5.6%	5.4%	8,330	4.5%	10,567	5.3%
2009	8.3%	7.8%	8,131	7.1%	10,407	7.3%
2010	9.6%	9.4%	7,643	8.1%	8,943	9.8%
2011	9.0%	9.1%	7,618	7.5%	8,938	9.4%
2012	8.4%	8.7%	7,467	7.7%	8,777	9.0%
2013	8.0%	8.3%	7,374	7.5%	8,667	8.3%
2014	6.6%	6.8%	7,494	5.7%	8,758	6.9%
2015	5.6%	5.8%	7,549	5.1%	8,769	6.1%
2016	4.8%	4.8%	7,621	4.0%	8,844	4.8%
2017	4.4%	4.2%	7,844	3.5%	9,110	4.3%
2018	3.9%	3.8%	7,876	3.2%	9,001	4.0%
2019	3.6%	3.4%	7,925	2.8%	9,029	3.5%
2020	7.9%	9.5%	7,056	9.1%	8,041	10.0%
2021	6.3%	6.9%	7,037	6.0%	8,020	6.5%
2022	4.2%	5.5%	7,531	3.7%	8,808	6.0%

Green shading indicates a lower rate than CT; pink shading indicates a higher rate than CT

Comparisons to Previous Economic Studies

In the course of this study, we reviewed several economic impact studies on the Connecticut gambling industry that had previously been conducted. In particular, we reviewed the 2019 Taylor Policy Group study of the economic impact of the Mashantucket Pequot Tribal Nation, the 2022 Oxford Economics study of the economic impact of several Mohegan casino properties, and the 2009 Spectrum Gaming report on the social and economic impacts of gambling in Connecticut. While each of these reports is informative, there are several important differences in scope and approach that make it difficult to compare the results of these studies to the results of our own.

The most important difference is the overall scope. Both the Taylor and Oxford studies were commissioned by one of Connecticut's tribes and focus on the economic impact of that specific tribe's operations. As a result, these researchers were provided with data on casino employment and operations in the years that those studies took place that were not made available to us. In the absence of those data, UMDI primarily used secondary data from state government to estimate employment, wages, and casino revenues. These data were reported at the industry level, rather than the firm level, and since the Taylor and Oxford studies occurred in different years and only featured data for a single casino, we were unable to effectively use them to validate the accuracy of the state government data, although this data did appear to be correct in its order of magnitude. For example, Taylor reports in 2019 that Foxwoods employed 6,772 workers, which seems plausible given the Connecticut QCEW data showing that 17,542 workers were employed in the amusement, gambling, and recreation and accommodation sectors within local government (which we assume to be casino employees) in the same year.

The Spectrum Gaming (2009) report, while not as recent, does cover a broader range of gambling activities in Connecticut, with sections addressing the casinos, Lottery, charitable gambling, and off-track betting. However, the economic impact section of the report focused exclusively on the operations *of the casinos*, as well as tribal construction projects funded by casino revenues. Since the Spectrum study did not cover the economic impacts of other important forms of gambling (e.g., CT Lottery), and since the gambling landscape of Connecticut was significantly different in 2009, there are some expected differences between our report and theirs, despite using the same REMI economic model. That said, the Spectrum team estimated the total employment impact for the operation of the two casinos in 2007 to be 32,510, higher than the UMDI estimate of 23,898 in 2023, but generally in line with the observed trend of declining casino employment and slots revenues from 2007 to 2023. Our study, focused as it was on measuring and modeling the impacts of all forms of legalized gambling, including casinos, estimated output (gross state product) of $4.86 billion, with a value-added portion of $2.97 billion. Our output is more than double the Oxford Economics 2022 finding for total impacts from Mohegan Sun, which makes sense because our model includes the Foxwoods casino as well as impacts from the Connecticut Lottery. Also, our model includes a calculation that reduces total impacts based on an estimate of reallocated spending by Connecticut patrons who would have spent on goods and services in other parts of the Connecticut economy had it not been for the availability of legalized gambling.

It is important to reiterate that the Spectrum report and the present report are different in their methods, and that the results of either study would have likely been different in substantial ways had one group used the other group's method. That said, given the major role that Connecticut casinos play in the overall gambling industry, it seems fair to state that the overall economic impact of gambling in Connecticut has fallen since 2007 in line with a reduction in direct impacts such as employment and revenues.

CONNECTICUT PROBLEM GAMBLING PREVENTION & TREATMENT REVIEW

The State of Connecticut was a pioneer in addressing the issue of problem gambling among its residents. Founded in 1981, the Connecticut Council on Problem Gambling (CCPG) was the first state affiliate of the National Council on Problem Gambling (NCPG). Treatment services in Connecticut were funded in 1982, just two years after 'pathological gambling' was added to the Diagnostic and Statistical Manual of Mental Disorders for the first time (American Psychiatric Association, 1980). The nation's first voluntary self-exclusion program was established at Foxwoods in 1994 and was soon followed by a similar program at Mohegan Sun. Between 1998 and 2018, two academic research and treatment programs for problem gambling were active in Connecticut: the Gambling Treatment and Research Center, led by Dr. Nancy Petry at the University of Connecticut School of Medicine and the Yale Center for Excellence in Gambling Research, led by Dr. Marc Potenza.[48]

The purpose of this section of the report is to evaluate the adequacy and effectiveness of current Connecticut problem gambling prevention and treatment initiatives in light of: (a) the evidence pertaining to these issues collected in the course of this study, and (b) international best practices. In this section, we review the full range of problem gambling services in Connecticut with a focus on funding, the types of services that are available, and how these services are administered. Using data from our population and online panel surveys, we examine attitudes and access to problem gambling services in Connecticut. We conclude with a brief review of best practices in problem gambling service provision internationally and recommendations to improve problem gambling services in Connecticut.

Methodology

Some information pertinent to this issue was collected for other purposes in the course of the project:

- Key Informant Interviews (e.g., with DMHAS, CCPG, treatment providers, and those with lived experience),
- Population surveys (i.e., demographic profile of people classified as problem gamblers, prevention and treatment awareness, help-seeking behavior and experiences), and
- Secondary data collection (Gambler's Anonymous chapters).

Additional historical data pertaining to prevention, responsible gambling, harm minimization, and treatment services in Connecticut was gathered from DMHAS and CCPG, including information on helpline contacts and treatment intakes. To compare problem gambling services in Connecticut with best practices internationally, we identified and reviewed an array of research publications and reports including a series of national surveys of publicly funded problem gambling services carried out between 2006 - 2021 that provided historical data on problem gambling services in Connecticut.

[48] The University of Connecticut center closed after Dr. Petry passed away in 2018. The Yale Center continues to be active with support from the International Center for Responsible Gaming.

Funding of Problem Gambling Services

Problem gambling services in Connecticut are funded by the state's legal gambling operators, including the Connecticut Lottery, the Mohegan Tribe and the Mashantucket Pequot Tribal Nation, and off-track betting and charitable gambling licensees through DCP's Gaming Division. Funds contributed by the Lottery, the parimutuels and charitable gambling flow annually to DMHAS's Problem Gambling Services unit via the Chronic Gamblers Treatment and Rehabilitation Fund. The largest source of funding for DMHAS is the Lottery whose mandated contribution increased from $1.3 million in 2006 to $2.3 million in 2016 (Marotta et al., 2017; Spectrum Gaming Group, 2009). The amount that DMHAS receives for problem gambling services from off-track betting and charitable gambling has varied but currently averages about $120,000 annually.[49]

The sports betting and online gambling legislation passed in 2021 increased the annual contribution of the Connecticut Lottery to DMHAS to $3.3 million and also required each of the tribes to contribute $500,000 for the prevention and treatment of problem gambling (Pazniokas, 2022). While the tribes are committed to continuing their voluntary contributions to CCPG, Mohegan Sun announced in mid-2022 that the additional funds would go to the Yale Center for Excellence in Gambling Research to develop a mobile app-based cognitive behavioral therapy program.[50] It is anticipated that the new app will be a resource to those affected by gambling who may be unwilling or unable to access in-person treatment in Connecticut and beyond. We were unable to obtain information on how Foxwoods intends to allocate the additional funds.

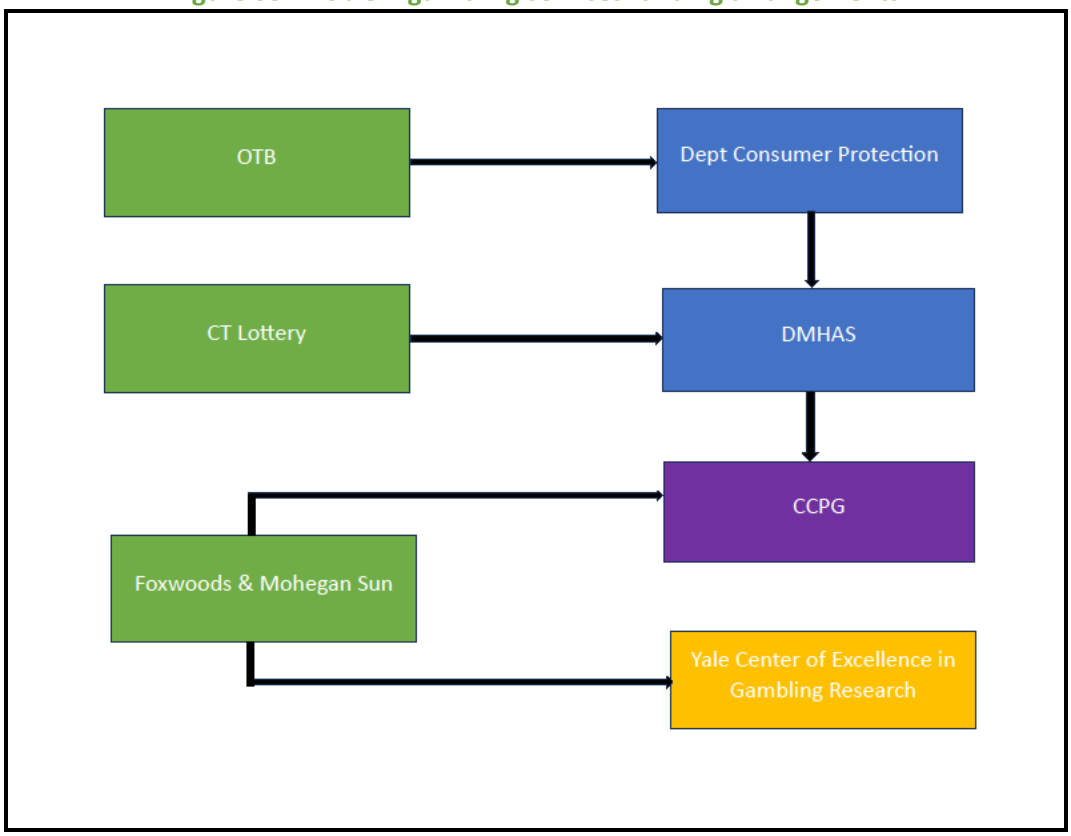
Funding for the Connecticut Council on Problem Gambling (CCPG) comes from the tribes and DMHAS. Foxwoods and Mohegan Sun are CCPG's largest source of annual funding and the tribes have funded the activities of the CCPG for many years.[51] DMHAS is the Council's other main source of funding since legislation passed in 1992 requires the agency to direct 5% of the amount that it receives annually from the Lottery and DCP to CCPG. According to CCPG, funding from DMHAS is on par with funding from the tribes. Figure 35 provides an overview of the flow of funding for problem gambling services in Connecticut.

[49] J. Wampler, personal communication, July 24, 2023.

[50] https://www.mohegan.nsn.us/resources/media/press-releases/2022/05/24/mohegan-tribe-and-yale-university-announce-major-initiative-to-combat-problem-gambling

[51] Based on review of CCPG's annual filings to the Internal Revenue Service from 2006 to 2021 (https://projects.propublica.org/nonprofits/organizations/222529245).

Figure 35. Problem gambling services funding arrangements

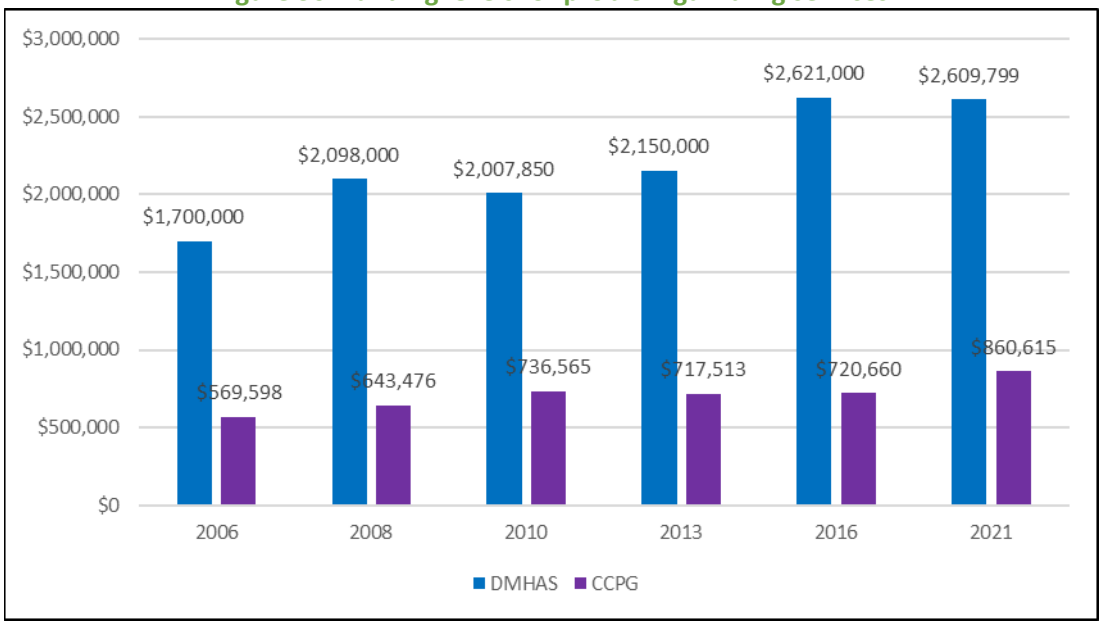


As noted above, historical information on **public funding** for problem gambling services in Connecticut was obtained from reports on surveys of publicly funded problem gambling services in the United States that have been carried out since 2006 by the Association of Problem Gambling Service Administrators (APGSA) (renamed National Association of Administrators for Disordered Gambling Services (NAADGS) in 2020).

Based on six surveys conducted between 2006 and 2021, public funds allocated to problem gambling services in Connecticut increased from $1.7 million in 2006[52] to approximately $2.6 million in 2021 (Marotta, Christensen, & Hynes, 2006; Marotta & Yamagata, 2022). In 2021, DMHAS received $2.3 million from the Connecticut Lottery as well as $90,675 from parimutuel and charitable gambling operators via DCP. The agency also provided an in-kind contribution of $219,124 to the Problem Gambling Services unit. Based on these amounts, total public funding for DMHAS increased 54% over the 15-year period. In 2006, CCPG received $399,000 from the tribes along with $170,000 from DMHAS for a total of $569,598 (Spectrum Gaming Group, 2009). In 2021, CCPG's annual revenues were $860,615, which represents a 51% increase over the 15-year period (see Figure 36).

[52] It is unclear why the amount allocated for problem gambling services in 2006 in the 2009 Spectrum report differs from the amount identified in the 2006 APGSA report.

Figure 36. Funding levels for problem gambling services



Source: APGSA/NAADGS survey reports for DMHAS; IRS Form 990 for CCPG.
Note: Funding for DMHAS is based on Fiscal Years; funding for CCPG is based on Calendar Years.

The 2013 survey of problem gambling services was the first in the series to attempt to capture information on both publicly funded services and services delivered by NCPG affiliates. The effort did not include problem gambling services provided by tribal governments, health insurers or community organizations such as Gamblers Anonymous (Marotta, Bahan, Reynolds, Vander Linden, & Whyte, 2014). The 2016 survey of problem gambling services was again a joint project of APGSA and NCPG and captured information about the funding and activities of both DMHAS and CCPG (Marotta et al., 2017). The most recent survey of problem gambling services was carried out in 2021 and again captured information on problem gambling services funded by the states as well as those provided by affiliates of the NCPG (Marotta & Yamagata, 2022).

As noted above, DMHAS received a total of $2.6 million for problem gambling services in 2021. Contributions of the tribes to CCPG in 2021 that were reported to NAADGS totaled $549,375 although CCPG reported to the IRS that the tribes contributed a total of $588,062 in 2021. The difference reflects a $40,000 pass-through from Mohegan Sun to the Yale Center of Excellence in Gambling Research to directly support research.[53] Additional contributions reported by CCPG to the IRS included $115,000 from DMHAS and $133,846 from the Small Business Administration.

A 2022 update to the 2021 NAADGS study collected budgetary information about problem gambling services budgets and expenditures in the first half of FY2022 in the 43 states that funded problem gambling services (Problem Gambling Solutions, 2023). This update captured information about the mandated increase in the Lottery's annual contribution to DMHAS and noted that Connecticut was among the 29% of states funding problem gambling services that experienced a budget increase of 5% or more between 2021 and 2022. The main reason for these nationwide increases was the legalization of sports betting.

[53] D. Goode, personal communication, September 20, 2023.

Table 48 summarizes per capita spending on problem gambling services in Connecticut since 2006 compared with average per capita spending in other states with problem gambling services.

Table 48. Per capita spending on problem gambling services

Year	CT per capita spending	Average per capita spending in states with PG services	CT rank
2006	$0.48	$0.24	9
2008	$0.60	N/A	9
2010	$0.59	N/A	7
2013	$0.60	$0.32	6
2016	$0.73	$0.37	8
2021	$0.72	$0.40	7
2022 (6 mos)	$0.90	$0.46	7

Note: N/A indicates information not available.

Organization of Problem Gambling Services

The NAADGS reports are organized around a useful typology of problem gambling services although the authors note that there is a striking lack of uniformity with respect to the types of problem gambling services that are funded in the United States. Helpline and media/public awareness campaigns are the most frequently funded services followed by treatment, counselor training, and prevention. Program evaluation, research and counselor certification are the services least likely to be funded (Marotta & Yamagata, 2022). We have chosen to use the same typology in presenting information about problem gambling services in Connecticut.

Prevention and Awareness Services

In contrast to prevention efforts to address alcohol, tobacco and other drugs, efforts to prevent problem gambling are relatively new and uninformed by an evidence base (Williams, West, & Simpson, 2012). Problem gambling prevention programs in the U.S. only started in the late 1990s. Early prevention efforts were mostly school-based and not typically delivered by prevention specialists. It was only in 2015 that a comprehensive framework for problem gambling prevention was articulated by the National Council on Problem Gambling (Marotta & Yamagata, 2022).

The 2021 NAADGS survey identified four main types of problem gambling prevention services nationally, including coalition building, parent education, school-based programming (including middle school, high school and college), and community readiness assessments. Specific population groups most likely to be targeted in these efforts include youth, people with addiction histories, college students and older adults. Other groups that were often targeted for problem gambling prevention include veterans as well as people with mental health and criminal justice histories. In addition to prevention services, the NAADGS survey assessed the provision of public awareness services that are intended to "increase awareness of problem gambling as a public health issue and to promote awareness among the public of the availability of [treatment] services" (Marotta & Yamagata, 2022, p. 35). In Connecticut, both DMHAS and CCPG provide extensive problem gambling prevention and awareness services.

Department of Mental Health and Addiction Services (DMHAS)

The DMHAS Problem Gambling Prevention webpage lists a range of prevention and awareness activities, including Regional Gambling Awareness Teams, a youth media project, the Asian American Pacific Islander (AAPI) Ambassador Initiative, and the Congregation Assistance and Community Awareness Program. The **Regional Gambling Awareness Teams** offer resources, trainings and workshops in each of the state's five regions in support of local communities with concerns about gambling. The **youth media** project is a partnership with CCPG and the Capitol Region Education Council which works with youth and adult advisors to create and disseminate gambling awareness messages. The **AAPI Ambassador Program** started in 2016 in Region 4 with that region's Regional Behavioral Health Action Organization (RBHAO), Amplify. The Ambassador Initiative trains representatives of AAPI communities in gambling awareness and provides technical assistance to engage members of these communities in conversations about gambling. This work has focused to date on Southeast Asian communities but there are plans to expand the initiative to other regions and other underserved populations in the state. The **Congregation Assistance and Community Awareness Program** seeks to educate people who work in lay ministries and non-clinical settings in how to connect people who may be experiencing substance use, mental health, or gambling problems with appropriate services in their communities.

The recent increase in funding for problem gambling services in Connecticut has allowed DMHAS to expand its prevention and awareness efforts. The division has had a fulltime Primary Prevention Services Coordinator for many years but now has an additional Primary Prevention Coordinator whose focus is on education and awareness to multicultural and special populations as well as integrating gambling into the existing substance use and addiction prevention landscape. DMHAS is working with CCPG on a **college initiative** on nine campuses around the state, that expands the existing youth media project, now fields a **resource van** that can be driven to public events, and has initiated a **statewide Strategic Prevention Framework training** led by Community Anti-Drug Coalitions of America (CADCA). Engagement with other Connecticut agencies, including the Court Support Services Division (CSSD), Department of Corrections (DOC), and the Department of Children and Families (DCF), has increased as has engagement with the Veterans Administration. The new prevention coordinator meets on a quarterly basis in each region with the Regional Gambling Awareness Teams as well as the college campus programs. These meetings typically include 12 to 16 people from DMHAS, CCPG, the RBHAOs and community organizations as well as the youth project coordinators and representatives from the Connecticut Community on Addiction Recovery.

Connecticut Council on Problem Gambling (CCPG)

The CCPG website notes that the organization conducts programs in advocacy, prevention, outreach and education serving students, veterans and other at-risk populations. The website provides access to numerous materials and resources related to problem gambling. This includes:

- helpline/chat/text that links visitors to local providers certified to provide treatment for problem gambling, and provides information and resources for specific groups such as youth, college students, older adults, veterans, and women,
- financial tools for people in recovery or concerned about their gambling,

- responsible gambling tips, including a link to the state's *Responsible Play – The CT Way* website,[54]
- links to voluntary self-exclusion programs operated by Foxwoods, Mohegan Sun and DCP,
- tips on how to delete gambling apps from a mobile phone,
- links to the youth problem gambling and gaming prevention initiative, and
- links to the Bettor Choice treatment programs.

CCPG received an increase in funding from the casinos in the wake of sports betting and online gambling legalization which allowed for the addition of two staff although several key informants commented on the challenges that CCPG nevertheless experienced, particularly in managing a large increase in calls to the helpline. Media coverage also suggests that the increase in funding was not enough to fully counter the impacts on CCPG of the most recent expansion of gambling in Connecticut (Moritz, 2022).

Responsible Gambling: Industry Contributions

The 2021 NAADGS report notes that problem gambling services in the U.S. are often funded with revenue generated from the industry; this is certainly the case in Connecticut (Marotta & Yamagata, 2022). The Lottery and both tribes provide funds for problem gambling services in the state as well as engaging in their own responsible gambling efforts.

CT Lottery

The Lottery has developed a responsible gambling portfolio that includes participating in the NASPL-NCPG responsible gambling standards verification program and engaging in a range of responsible gambling activities, including employee training, retailer training, player education, and stakeholder engagement. The Lottery, CCPG and DMHAS have cooperated on responsible gambling efforts for over 20 years and meet quarterly to discuss responsible gambling marketing and programming and to address issues collaboratively. Responsible gambling trainings for Lottery employees and retailers are offered in collaboration with CCPG and DMHAS.

In addition to contributing annually to DMHAS to support problem gambling prevention and treatment programs, the Lottery supports its own responsible gambling marketing and advertising campaigns. In 2022, the Lottery spent about $200,000 advertising the CCPG helpline on radio and billboards and about $300,000 on responsible gambling messaging on television, radio, billboards, and on its website. While the Lottery paid for responsible gambling advertising provided by GameSense for some years, the Lottery joined a partnership in 2016 including Foxwoods and Mohegan Sun, Sportech (the sports betting provider for the OTB venues), CCPG and DMHAS in developing a statewide responsible gambling marketing campaign (*Responsible Play – The CT Way)*. In 2023, the Lottery eliminated spending on GameSense in favor of supporting the Connecticut responsible gambling brand.

Responsible gambling advertising is displayed throughout the year on Keno monitors, retailer monitors and self-service vending machines. The Lottery participates annually in two responsible gambling campaigns; the *Gift Responsibly* campaign runs during the holiday season and encourages players not to

[54] This website was developed collaboratively by CCPG, DMHAS, the Connecticut Lottery, Foxwoods, Mohegan Sun, and Sportech. In addition to information about how to gamble responsibly, the website includes links to the responsible play pages for all of these organizations as well as a link to schedule visits by the Responsible Play resource van to community events.

use lottery tickets as gifts while *Problem Gambling Awareness Month* (conducted in March in cooperation with the NCPG's national campaign) is accompanied by increased responsible gambling advertising. The Lottery recently partnered with a non-profit organization (CUBFI) to offer financial literacy education as well as free advice from credit union financial counselors to lottery winners.

Foxwoods and Mohegan Sun

The compacts between the Mohegan Tribe, the Mashantucket Pequot Tribal Nation, and the State of Connecticut require the tribes to support problem gambling initiatives. The Mohegan Tribe has been a supporter of problem gambling initiatives since its inception and is an important contributor to the NCPG; senior executives from Mohegan Gaming and Entertainment have served on the NCPG's board of directors for over two decades. As already noted, Foxwoods was an early adopter of voluntary self-exclusion. Both Foxwoods and Mohegan Sun support in-kind responsible gambling activities such as employee training and posting of front- and back-of-house information about where to find help for a gambling problem. As noted previously, Mohegan Sun and Foxwoods are the primary funders of CCPG while the new sports betting and online gambling legislation increased the amount that each of the casinos is required to spend annually for problem gambling prevention and treatment to $500,000 (Pazniokas, 2022).

Voluntary Self-Exclusion and Gambling Limits

Both Foxwoods and Mohegan Sun have had voluntary self-exclusion programs for many years although these programs offer different exclusion periods to individuals who enroll. Foxwoods offers five-year and lifetime exclusion periods while Mohegan Sun offers one-year and five-year exclusion periods. The recent legislation required DCP to establish a new voluntary self-exclusion program for sports bettors and online gamblers separate from the programs operated by the casinos. The DCP self-exclusion program offers one-year, five-year and lifetime exclusion periods. The DCP self-exclusion list was activated in September 2021; as of September 9, 2023, there were 3,026 individuals on the self-exclusion list.[55] While the tribes have indicated that they are amenable to merging the three self-exclusion programs in Connecticut, this has not yet happened (Pazniokas, 2021). Instead, people who choose to exclude from sports betting and online gambling through DCP are provided with the option to add themselves to the casino self-exclusion lists separately. It is notable, that unlike many jurisdictions, self-excluders in Connecticut cannot revoke their exclusion until the ban has ended.

The new legislation also requires DCP to establish a limit-setting program. The limit-setting program prevents sports bettors and online casino gamblers from wagering once their lifetime deposits exceed $2,500 until they affirmatively acknowledge (a) that they have met the limit, (b) that they are capable of adopting responsible gambling limits or able to close their account, and (c) that they are aware of the state's problem gambling helpline. While these acknowledgements allow wagering to continue, subsequent acknowledgements are required every six months and a record of these acknowledgements is kept as part of each customer's account.[56]

Additionally, the online partners of the Lottery and the casinos offer a mix of voluntary limit-setting tools, including time limits, spending limits, deposit limits, and wager limits. In line with DCP's program

[55] K. Sinko, personal communication, September 13, 2023.
[56] M. Magnan, personal communication, September 20, 2023.

and as required by the legislation, these operators also temporarily freeze accounts for gamblers who exceed $2,500 in lifetime deposits until acknowledgements are provided (Graziano, 2022).

Problem Gambling Helpline

Nearly all states with legalized gambling support some type of problem gambling helpline. In recent years, problem gambling helplines have begun offering additional services such as 'warm transfers' of helpline callers to schedule appointments with treatment professionals as well as web-based chat and texting services. The majority of states operate a stand-alone problem gambling helpline but some embed problem gambling within helpline centers that field calls for other mental health and addiction issues (Marotta & Yamagata, 2022).

The CCPG operates the primary problem gambling helpline in Connecticut (888-789-7777) and the number is posted on the DCP, DMHAS, CT Lottery, Foxwoods and Mohegan Sun websites as well as included on all printed lottery products. The helpline is the major source of referrals to the Bettor Choice treatment programs funded by DMHAS. The CCPG helpline also refers callers seeking help for their own or a family member's gambling problem to Gamblers Anonymous and GamAnon; the DCP Gaming Division webpage also includes links to these organizations. There are additional telephone numbers posted for people seeking help for a gambling problem in Connecticut: one number to contact DMHAS Problem Gambling Services division directly (860-344-2244) and the NCPG's national helpline number (previously 800-522-4700[57] but changed to 800-GAMBLER in June 2022[58]).

Obtaining data on calls to the CCPG helpline proved challenging because the helpline has been managed by several different organizations since it was established. Prior to 2021, the Connecticut helpline (including text and chat functions) was managed by LifeWorks (previously Bensinger Dupont, then Morneau Shepell and now TELUS) which provided usage data to CCPG. Beginning in 2021, CCPG began developing internal systems to answer chats but did not take full responsibility for this function until April 2022. As of the time of writing, CCPG was still in the process of moving the text function fully over to its own systems.

The Senior Director of Programs and Services at CCPG, Kaitlin Brown, provided the research team with data on calls to the helpline from January 2021 - June 2023. Data for the period of 2018-2020 was obtained from LifeWorks and is not entirely comparable to the more recent usage data. Table 49 presents information about **average monthly activity** related to CCPG's helpline, including the text and chat functions. The table shows that there was an 88% increase in the monthly average number of calls (for oneself or an affected other) between 2020 and 2021 and a further 34% increase between 2021 and 2022. There was a 17% increase in the monthly average number of calls, chats and texts between 2019 and 2020 and a further 30% increase between 2020 and 2021. Finally, there was a very large 91% increase in all contacts to the helpline, including nuisance contacts, between 2021 and 2022.

[57] This number is posted on the DCP Gaming Division webpage and on the Mohegan Sun responsible gambling webpage for individuals from outside Connecticut seeking help.

[58] https://www.ncpgambling.org/programs-resources/helpline-modernization/helpline-faq/#:~:text=Number%20Harmonization,week%20of%20July%204th

Table 49. Monthly average activity for CCPG helpline

Year	Calls	Call/Text/Chat	All Visits
2018	21	---	---
2019	20	52	413
2020	17	61	513
2021	32	79	439
2022	43	74	837
2023 (6 mo)	43	49	805

CCPG provided the research team with Google Analytics data on activity on the organization's website. Google Analytics provides information about unique webpage visits that can be broken out into visits to the Get Help, Home and Chat webpages. Overall, there was a 59% increase in the monthly average number of unique webpage visits between 2020 and 2021 and another 47% increase between 2021 and 2022. While there was a decrease in monthly average visits to the Get Help webpage in both 2021 and 2022, there was an 84% increase in monthly average visits to the Chat webpage in 2021 and 55% in 2022. Between October 2021 and December 2022, calls, texts and chats increased by an average of 110% over the same month in the prior year.

Treatment Services

In 2009, Spectrum Gaming (2009) observed that Connecticut compared favorably with most states with respect to the level of funding for problem gambling services but did not perform as well as several other states with less funding. They were particularly critical of the lack of residential inpatient services for people with gambling problems in Connecticut[59] as well as the lack of spending to promote the state's problem gambling services. They did note that the outpatient treatment program in Connecticut was the oldest continuously operating program in the nation and had been administered by the Problem Gambling Services unit, in the Statewide Services Division at DMHAS since 1998.

In addition to the Bettor Choice programs which provided treatment at little or no cost, there were several other problem gambling treatment options in Connecticut in 2009, including for-profit counselors and the programs at Yale and the University of Connecticut. The Bettor Choice programs offered a range of outpatient services, including individual counseling, group therapy, peer counseling, financial recovery counseling, psychiatric consultation, treatment for co-occurring conditions, education of gamblers and their families, and marital and family therapy with the length of treatment ranging from two months to two years. One significant challenge for the Bettor Choice programs in 2009 was the lack of reliable client data to monitor enrollment levels and assess treatment effectiveness.

The 2021 NAADGS report noted with respect to problem gambling treatment that relatively few gamblers in need of assistance seek help. This view has been endorsed by numerous professionals in the gambling treatment and research fields in the U.S. and internationally. Marotta & Yamagata (2022) estimated that only about 0.5% of problem gamblers nationally received treatment in 2021, compared to 1.4% of people with substance use disorder who received treatment.

[59] The report did note that the Midwestern Connecticut Council on Alcoholism's McDonough House in Danbury provided a five-day inpatient residential program for people with gambling problems (Spectrum Gaming, 2009). However, this length of stay is generally considered respite care rather than a full residential rehabilitative program which usually lasts 30 days.

Nationally, the 2021 NAADGS report found that an average of 393 people with gambling problems per state received treatment in publicly funded treatment systems in the U.S. in 2021 and that the average wait time to enter treatment was 3.7 days. An average of about 6% of the population seeking gambling treatment obtained residential care in the nine states that offer publicly funded residential treatment services. In the 20 states that reported separately on the number of enrollments of gamblers and affected others, 12% of those obtaining treatment were affected others. The most frequently offered level of care across the 33 states that funded problem gambling treatment in 2021 was outpatient treatment; only 15 states offered intensive outpatient or residential treatment. Minimal interventions (structured programs that involve assessment, psychoeducation, telephone counseling and/or self-change guides) were available in 14 states that had publicly funded problem gambling services. The majority of contracts for problem gambling treatment were awarded to state licensed behavioral health agencies while about one third of the states contracted with individual practitioners or agencies. In reviewing reimbursement rates for problem gambling treatment, it is notable that Connecticut had the highest hourly reimbursement rates for both individual therapy ($170) and group therapy ($81) (Marotta & Yamagata, 2022). This is at least partly due to the high cost of living in Connecticut compared with other states.

Problem gambling treatment has been available in Connecticut for over two decades and continues to be offered through the Bettor Choice program which is integrated with mental health, substance use and recovery programs in Connecticut. Appointments to see a therapist can usually be made within 48 hours. The Bettor Choice programs are funded by DMHAS through state-licensed behavioral health agencies in each of the five regions of the state. The Bettor Choice programs offer a variety of outpatient services, including individual and group therapy, peer recovery support, medication and budget counseling for people experiencing gambling problems and affected loved ones.

In the past, funding to the state-licensed behavioral health agencies was weighted by the population of each region; currently each Bettor Choice treatment provider receives the same amount of funding. The procurement and selection process for the Bettor Choice programs is managed by the DMHAS Problem Gambling Services unit. In addition to providing treatment for people experiencing gambling problems and family members of such individuals, the Bettor Choice programs coordinate and work with the gambling awareness teams in each region as well as with youth. Treatment services are free to people experiencing gambling problems and their family members. While there are private practitioners providing problem gambling treatment outside of the Bettor Choice programs, their services are generally covered by private insurance rather than through the state program. A contact list for the Bettor Choice programs is maintained on the DMHAS website and updated regularly. Table 50 summarizes this information as of June 2023:

Table 50. Bettor Choice locations

DMHAS Region	Area of State	Location of Program	Name of Provider
1	Southwest	Norwalk Bridgeport	Connecticut Renaissance
2	South Central	Branford Ansonia Milford West Haven	Communicare BHcare Bridges Healthcare
3	Eastern	Norwich	United Community & Family Services
4	North Central	Hartford New Britain	Wheeler Clinic
5	Northwest	Waterbury Danbury New Milford Torrington	MCCA Inc.
5	Inpatient	Danbury	McDonough House

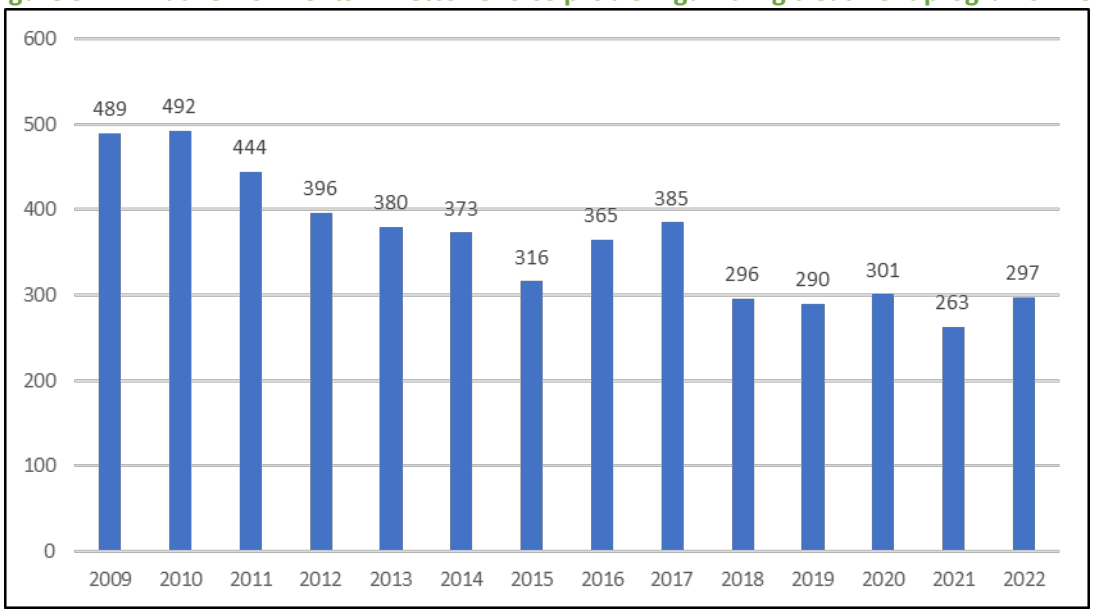
Based on interviews with key informants from the state licensed behavioral health agencies, the research team learned that the Bettor Choice program in Region 3 offers **bilingual services** (English and Spanish) for people experiencing gambling problems and their families while the Bettor Choice program in Region 5 runs four **problem gambling groups** including one for women experiencing gambling problems and one for affected family members. The recent increase in funding has enabled the Bettor Choice programs to offer intensive outpatient treatment for the first time. The only inpatient treatment for people experiencing gambling problems in Connecticut is located in Danbury and provides respite stays for up to five days.

Another expansion supported by the recent increase in funding is the **Disordered Gambling Integration (DiGIn)** project which aims to integrate problem gambling services within agencies in Connecticut that provide mental health and substance use services. The DiGIn project, which was established in 2009, focuses on enhancing and increasing gambling screening, assessment, intervention, recovery and health promotion efforts within existing mental health and substance use programs through readiness surveys, integration training, certification of key staff, developing integrated organizational processes, case consultations with DMHAS, and regular on-site evaluations.

Figure 37 presents information about annual enrollments in the Bettor Choice programs between 2009 and 2022. This information was provided to the research team by the DMHAS Problem Gambling Services unit. Although there is information about number of enrollments in the Bettor Choice programs from 1993-2009 (Spectrum Gaming, 2009), comparability is limited due to issues with closing client cases that were no longer active.[60]

[60] J. Wampler personal communication, June 26, 2023.

Figure 37. Annual enrollments in Bettor Choice problem gambling treatment programs in CT



The numbers above suggest that enrollments in problem gambling treatment in Connecticut have declined since 2009 with the exception of a two-year period (2016-2017) that followed the dramatic expansion of advertising for daily fantasy sports (DFS) betting that occurred in 2015 when DraftKings and FanDuel spent $206 million nationally to attract new customers to their start-up ventures (Drape & Belson, 2015). This specific type of sports betting does have an association with problem gambling (Nower, Caler, Pickering, & Blaszcynski, 2018) and advertising has been shown to be a precipitator for relapse in people with a prior history of gambling problems (Binde, 2009; Parke, Harris, Parke, Rigbye, & Blaszcynski, 2014; Planzer & Wardle, 2011). It is unclear if the increase in enrollments in 2016 and 2017 was due to people newly experiencing gambling problems or people with previous gambling problems experiencing relapse.

Population Survey Results

Earlier in the report the population surveys established that approximately 51,859 adults currently have gambling problems in Connecticut (Figure 16). It was also found (Table 18) that the large majority of these individuals (76.7% - 86.3%) endeavored to curb their gambling on their own, with only a minority wanting and/or receiving external help. As people who receive external help for mental health or substance use problems tend to have better outcomes compared to people who do not receive external help,[61] it is important to identify the reasons why people did not access help. By far the most common response (48.9% - 68.3%) was that they 'didn't believe they would need help,' indicating a preference for handling the problem themselves. This is not an unreasonable sentiment, as most people most of the time tend to solve their problems (of any sort) themselves. Seeking external help generally occurs after one's own efforts have failed. More concerning is the fact that Table 18 shows that a minority of people reported one or more barriers to seeking help: 18.7% - 27.2% didn't believe treatment would work; 18.6% - 32.9% reported being too ashamed to seek help; 8.6% - 17.4% were unaware of where to get help; and 9.6% - 13.3% did not think that they could afford treatment. Thus, continued efforts are

[61] This is illustrated by the last row of Table 18 which shows that the vast majority of people who did seek help found this help 'somewhat', 'quite', or 'very' helpful.

needed to reduce these psychological, knowledge, and financial barriers (although it is heartening that the large majority of people knew where to get help).

That said, Table 18 also illustrates that the large majority of people who wanted help for their gambling problems successfully obtained that help (i.e., 24.9% - 37.2% (~16,000) wanted help for their gambling problems and 20.7% - 29.5% (~13,000) actually sought out help). It is instructive to note that utilizing self-help materials was the most common source of help for people who did seek help, which again points to people's preference for utilizing their own resources to deal with their problems. Beyond self-help materials, people with gambling-related problems accessed a wide range of different treatment options (and often more than one). Thus, it is not surprising that the average number of people enrolled in the Bettor Choice problem gambling treatment programs in Connecticut in the past five years (*n*=289) represents a very small percentage of the total number of people who sought help.

This might improve with the recent increase in DMHAS funding, which has allowed them to hire a fulltime Problem Gambling Services Coordinator whose focus is primarily on underserved and minority populations. The Problem Gambling Services Coordinator is working with a national advertising agency to conduct focus groups among minority populations (e.g., AAPI, Black, Indigenous, Latino, LGBTQ+, veterans, college students) to understand how to effectively reach these communities with problem gambling prevention and treatment messages.

Recovery Services

The Bettor Choice programs offer recovery services for people who have experienced gambling problems in Connecticut. Several key informants told the research team that a growing number of treatment providers in Connecticut have trained as recovery specialists and that the number of people providing peer support for problem gambling through the Bettor Choice programs has increased. Beyond recovery services provided by the Bettor Choice programs, another important resource for people in recovery from gambling problems in Connecticut is Gamblers Anonymous (accessed by between 14.4% - 19.8% of people who sought out help for their gambling problems; Table 18). Gamblers Anonymous (GA) is a 12-step fellowship program modeled on Alcoholics Anonymous. Each GA group is self-governing and self-supporting and outside contributions are not accepted. To maintain anonymity, members do not speak to the press or publicize the organization in any way. GamAnon is an affiliated fellowship organization for family members and friends of GA members.

A search of the Gamblers Anonymous national website identified 19 meeting locations around Connecticut with meetings scheduled every day of the week except Sunday.[62] Two of the meetings (in Enfield and Seymour) are open meetings where family and friends of the gamblers are welcome to attend and observe. The remaining meetings are closed and only those with a desire to stop gambling are eligible to attend and participate. Two of the meetings (in Meriden and Waterford) are still listed as "temporarily closed due to the pandemic." There are an additional three Zoom meetings each week based in Guilford and Seymour. Finally, the GA website lists two GamAnon meetings in Connecticut, one on Wednesdays in Coventry and the other on Thursdays in Middletown. A separate website for the Connecticut and Western Massachusetts GA lists the same 19 meetings in Connecticut along with meetings in four towns or cities in Western Massachusetts, including Holyoke, Indian Orchard, Longmeadow and Northampton.

[62] In 2009, Spectrum reported that GA held 24 meetings a week at locations around the state.

Research and Evaluation

Although research and evaluation are considered essential components of a behavioral health service system, the surveys of publicly funded problem gambling services in the U.S. have consistently found that spending on problem gambling research and evaluation has been very low (Marotta & Yamagata, 2022). While 43 states reported publicly funded problem gambling services in 2021, only half of the states reported funding any research and/or evaluation activities and these activities represented an average of 4% of overall problem gambling services budgets in the 21 states that did fund such efforts. The most frequent research and evaluation activities included prevalence studies, risk behavior research and program evaluation. The authors conclude that "with critical direct service needs and few resources, state agencies appear to be finding little room in their budgets to support research and evaluation" (Marotta & Yamagata, 2022, p. 54).

Connecticut has a strong history of gambling research. In particular, teams led by Dr. Mark Potenza from Yale University and Dr. Nancy Petry from the University of Connecticut have published many articles on gambling among adolescents, refugees, gender differences in gambling, and substance use comorbidities among people with gambling disorders, with several of these studies being done in conjunction with members of DMHAS (see Appendix H). DMHAS itself has also spearheaded research on special populations (e.g., CT correctional population; Rodis et al., 2018). That said, the present study is the first time in 15 years that a study of the full array of impacts of legalized gambling has been carried out in Connecticut.

Awareness and Responsible Gambling in the Population Surveys

Respondents in both the ABS population survey and the online panel survey (OPS) were asked questions about their awareness of prevention and treatment services in Connecticut. As a reminder, while the ABS population survey results have been weighted and are generalizable to the adult population of the state, the size of the group of people identified as problem gamblers in the ABS population survey (n = 86) means that results for this group are associated with a wider margin of error. Thus, problem gamblers from both the ABS survey and the online panel survey were combined to create a group of 415 individuals. While this combined group is not weighted and cannot be reliably generalized to the population, the size of the group means the estimates are associated with a smaller margin of error.

Table 51 below presents information about awareness of certain prevention, treatment, and responsible gambling initiatives in Connecticut as well as actual responsible gambling behavior. Depending on the question, information is presented for: all Connecticut adults (including non-gamblers); just Connecticut adults who patronize land-based casinos and sportsbooks; just Connecticut adults who patronize online casino and sportsbooks; and problem gamblers with the above attributes.

Table 51. Population survey results related to prevention/treatment awareness and responsible gambling

Past Year Prevention/Treatment Awareness among CT Adults	CT Adults (ABS; weighted)	CT PG (ABS; weighted)	CT PGs (ABS+OPS; unweighted) (*n* = 415)
Have seen or heard advertising promoting gambling	74.0%	85.7%	74.9%
Have seen or heard media or public awareness campaigns to prevent PG	52.0%	49.5%	59.7%
Are aware of the Connecticut problem gambling helpline	51.8%	66.6%	67.5%
Are aware of the Connecticut voluntary self-exclusion programs	17.5%	48.1%	48.6%
Responsible Gambling	CT PY land-based casino & sports bettors at land-based venues (ABS; weighted)	CT PG PY land-based casino & sports bettors at land-based venues (ABS; weighted)	CT PG PY land-based casino & sports bettors at land-based venues (ABS+OPS; unweighted)
Member of a gambling rewards program	45.7%	70.6%	59.2%
Have borrowed money or played on credit	4.9%	39.3%	59.7%
Have accessed additional money from ATMs at the venue	16.3%	54.6%	67.6%
Have gambled at the venue between 3am – 9am	9.0%	44.0%	56.7%
Responsible Gambling	All CT PY online casino & sports bettors (ABS; weighted)	CT PG PY online casino & sports bettors (ABS; weighted)	CT PG PY online casino & sports bettors (ABS+OPS; unweighted)
Aware of online tools allowing limit setting or account suspension	38.5%	48.1%	52.2%
Used these tools	18.0% (6.9% overall)	55.7% (26.8% overall)	46.4% (24.2% overall)
These tools decreased spending	46.3% (3.6% overall)	60.4% (16.2% overall)	64.1% (15.5% overall)

Prevention/Treatment Awareness

The first section of Table 51 shows that 74.0% of all Connecticut adults have seen or heard advertising promoting gambling in the past year while 52.0% have seen or heard media or public awareness campaigns to prevent problem gambling. It is not surprising that awareness of advertising promoting gambling as well as advertising to prevent problem gambling is higher among people experiencing gambling problems in Connecticut (49.5% - 59.7%) since gambling is a salient issue for these individuals. It is reassuring that over half of Connecticut adults (51.8%), regardless of their gambling status, are aware of the state's problem gambling helpline while two-thirds of Connecticut problem gamblers (66.6% - 67.5%) are aware of the helpline. It is worrisome that only 17.5% of all Connecticut adults are aware of the voluntary self-exclusion programs in Connecticut although awareness is substantially higher among people experiencing gambling problems (48.1% - 48.6%).

Responsible Gambling

The second section of the table presents information on responses to questions about responsible gambling among Connecticut adults who gambled in the past year at land-based casinos and land-based sports betting venues, among who gambled at these venues in the past year and experienced problems, and among a combined group from the population and online panel surveys who experienced problems. Just under half (45.7%) of all land-based casino and sports bettors in Connecticut are members of a gambling rewards program; not surprisingly, the proportion of people experiencing gambling problems who are members of a rewards program is higher (59.2% - 70.6%). Only a small proportion of all land-based casino and sports bettors have accessed additional money to gamble from ATMs at the venue (16.3%), but this behavior is considerably higher for land-based casino and sports bettors experiencing gambling problems (44.6% - 67.4%). Similarly, while 9.0% of all land-based casino and sports bettors have gambled at these venues between 3am and 9am, between 44.0% - 56.7% of land-based casino and sports bettors experiencing gambling problems have gambled between these hours. Finally, while only 5.0% of all land-based casino and sports bettors have borrowed money or played on credit, between 39.3% and 59.7% of land-based casino and sports bettors experiencing gambling problems have done so.

The third section of the table presents information about awareness of online tools that allow limit setting or account suspension among past-year online casino and sports bettors. Over a third (38.5%) of all such gamblers indicated that they were aware compared to much higher rates (48.5% - 52.2%) among online casino and sports bettors classified as problem gamblers. While only 18.0% of online casino and sports bettors have used these tools, over half of online casino and sports bettors experiencing problems (55.7% - 64.1%) have used these tools with the majority agreeing that these tools helped them decrease their spending (60.4% - 64.1%). However, the overall impact of these tools in decreasing spending is quite low among the population of people who need them the most (15.5% - 16.2% of problem gamblers reported that these tools decreased their spending).

Review of Best Practices

In this section of the report, we review recent studies that focus on best practices in problem gambling prevention and treatment. As Williams, West, & Simpson (2012) noted in their comprehensive review of research on problem gambling prevention, most strategies to prevent gambling problems have been adopted because they were being used in other jurisdictions rather than having demonstrated efficacy or a foundation in effective prevention practices.

The 2012 report was an effort to identify research on effective problem gambling prevention efforts and looked at studies from the 1990s through 2011. The authors reviewed the literature on childhood interventions, information and awareness campaigns, responsible gambling information centers, statistical instruction and school-based prevention programs as well as policy restrictions on the availability of gambling, on who can gamble, and how gambling was provided. Based on this review, the researchers concluded that while a very large number of problem gambling prevention initiatives had been developed, the most commonly adopted measures tended to be among the least effective and, even when potentially effective initiatives were implemented, they were done in a perfunctory way that ensured a lack of impact. None of the 28 problem gambling prevention initiatives reviewed in the Williams, West, & Simpson (2012) report were rated to have ‘high’ effectiveness; but five were rated ‘moderately high’ and another five were rated ‘moderate.’

Recent comprehensive reviews of problem gambling prevention, treatment and responsible gambling initiatives were produced by Greo Evidence Insights as part of its work to support the current British national strategic assessment and Gambling Act review (Gambling Commission, 2023). The prevention and education review (Hilbrecht, 2021) consists of five separately authored chapters reviewing research on universal measures (regulatory restrictions, safer gambling/responsible gambling efforts), selective measures (targeted campaigns for children, youth and older adults) and indicated measures (brief interventions and limits to access) for problem gambling prevention. The treatment review was commissioned to provide an updated evidence base on treatment and support to inform future development of problem gambling treatment services in Britain (Greo, 2020). The responsible gambling resource initiative assembled links to numerous publications related to industry-based harm minimization efforts which are organized into specific areas and posted in Greo's Evidence Centre, an excellent source of up-to-date research on gambling, gambling problems and gambling harms.

Prevention and Education

While noting that research evidence is limited for many of the problem gambling prevention and education measures that have been utilized internationally, Hilbrecht (2021) argues that there are opportunities to advance evidence-based policy for effective gambling harm prevention. Evidence-supported universal measures include regulatory restrictions on gambling products and gambling advertising as well as restrictions on places where gambling is delivered. Based on an international series of case studies, the most effective regulations to prevent gambling harm were identified as smoking bans, caps on the supply of EGMs, separating gambling from the provision of food and alcohol, restricting cash payment of winnings, mandatory pre-commitment programs, and bans on some forms of gambling. Population-based safer gambling and responsible gambling efforts that were evidence-supported include safer gambling messaging for the general public and separate safer gambling messaging and gambling management tools for people who gamble.

The review of selective measures identified a reasonably well-developed evidence base for problem gambling prevention for children, adolescents and young adults but little research on prevention of gambling problems among adults aged 60 and over. While many of the studies had methodological limits such as lack of long-term follow-up, there was evidence that school-based prevention and education programs were effective. The review identified future areas of investigation to enhance program effectiveness, including more theory-driven and evidence-based content and involvement of families in school-based prevention programs.

A separate review of selective measures, focused on young adults (aged 18 to 25), concluded that many of the strategies used for problem gambling prevention among all adults have utility for young adults. There was good evidence that online approaches to problem gambling prevention and education were more accessible and acceptable to students as well as offering other benefits such as privacy and confidentiality. The review concluded, however, that research on young adults was almost entirely focused on college and university students and recommended that more research be conducted to identify effective prevention for young adults who are not enrolled in higher education.

A third review examined indicated problem gambling prevention measures for individuals already experiencing gambling problems. This review concluded that Personalized Normative Feedback (PNF) had efficacy in reducing gambling expenditures and frequency and was a low-cost, easily disseminated intervention that could be effective with all age groups. There was limited evidence that 'hard' barriers

such as self-exclusion are effective and the evidence that was identified was mixed. The review noted that self-exclusion programs are widely under-used and frequently breached but did find some evidence that self-exclusion was effective in reducing gambling frequency and gambling harms as well as problem gambling severity.

In a concluding chapter, Hilbrecht (2021) noted that advancing problem gambling prevention and education requires a broad scope of programs and activities, a comprehensive strategy, and participation from regulators, educators, social welfare agencies, and gambling operators. In designing effective programs, it is preferable to develop tailored approaches even at the universal level rather than taking a 'one size fits all' approach. Significantly, there was evidence that safer gambling messages and individualized reports that encourage people to appraise their behavior in comparison to others (PNF) are effective at the universal, selective and indicated levels.

Treatment

The treatment review covered the following key topic areas: (1) cognitive behavioral therapy (CBT), (2) motivational interventions, (3) remote and self-help interventions, (4) helplines, treatment involving family members of people experiencing gambling problems, (5) residential treatment, (6) pharmacological treatments, (7) brain stimulation, (8) Gamblers Anonymous, and (9) emerging treatment modalities (Greo, 2020). The review concluded that CBT continues to be the most effective treatment for problem gambling although there are major barriers to effectiveness, including low uptake and high dropout rates. Evidence supported the use of treatment modalities that increase uptake including motivational interventions, helplines and remote and self-help interventions. Patients with more complex diagnoses and comorbidities could benefit from efforts to address these other issues in treatment. Such individuals could also benefit from residential treatment options. Offering treatment that includes family members may help mitigate the gambling harms experienced by others besides the gambler. Finally, emerging treatment modalities, such as cognitive remediation, psychodynamic therapy, and arts-based treatment have shown promising results but more robust long-term research is needed before such modalities are widely disseminated.

Responsible Gambling (Industry-based)

Although we were unable to find a comprehensive review of industry-based harm minimization efforts, Greo has assembled links to numerous publications on this topic (Industry Harm Minimization). The materials are presented in six main areas and links are provided to full reports and publications as well as to 'Research Snapshots' which summarize results and implications of individual research studies. Recent selected resources related to behavioral tracking tools include synopses of research on designing better safe gambling tools using behavioral insights, evaluations of Playscan, GamTest and PlayMyWay, and a review of research on behavioral tracking to explore gambling behavior. Resources related to messaging and promotions include synopses of research evaluating responsible gambling campaigns for lottery play and online gambling as well as research on the utility of targeting responsible gambling messages. Under self-exclusion, Greo has assembled links to research on the effectiveness of self-exclusion in different gambling environments and for different individuals, and the overall utility of self-exclusion as a gambling harm minimization measure. The section on responsible gambling policies focuses on industry and operator policies and highlights the importance of an integrated approach to safer gambling. The section on responsible gambling training programs for staff summarizes research on casino employees' experiences, identifies criteria for effective staff training, and showcases several studies of employee

experiences with GameSense, MGM's U.S. based loyalty program. The section on game features related to responsible gambling summarizes research on framing information on online gambling platforms to enhance effectiveness, the efficacy of voluntary versus mandatory limit-setting systems, and research on the effectiveness of existing responsible gambling interventions and tools.

Recommendations for PG Prevention and Treatment in Connecticut

Based on all of the foregoing material, the research team has a number of recommendations for DMHAS and other stakeholders in Connecticut to consider as they work to improve problem gambling prevention and treatment services in the state. Overall, the research team concurs with several key informants as well as the authors of the recent problem gambling services survey (Marotta & Yamagata, 2022) that the **problem gambling prevention and treatment services in Connecticut have been very proactive, and their services provide a good model for the rest of the country**. Several important state regulations such as the age 21 requirement for casinos, sports betting, and online gambling; irrevocable self-exclusion bans; availability of lifetime bans; and automated online sports betting account freezes when the patron's lifetime deposits exceed $2,500 also represent 'best practices' that are often not present in other states and jurisdictions.

Evidence of the utility of current regulations and problem gambling services is seen in the fact that the current 1.8% rate of problem gambling in Connecticut is 'mid-range' relative to other states that have recently conducted prevalence studies and was previously mid-range among all U.S. states in the 2012 review by Williams, Volberg & Stevens (Table 20). However, an argument could be made that the current rate is actually fairly low considering the extensive array of legalized gambling currently available in Connecticut relative to other states as well as the much earlier introduction of casino gambling.

That said, there are two overarching areas of concern:

(1) Total funding for Connecticut prevention and treatment services represents a very small fraction of the approximately $400 million that is estimated to derive annually from people identified as problem gamblers.
(2) Following from this first point, while the prevalence rate of problem gambling in Connecticut is moderate, the revenue drawn from people with gambling problems and at-risk of gambling problems is much too high, albeit not fundamentally different than found in other jurisdictions (Fiedler et al., 2019; Volberg et al., 1998; Williams & Wood, 2004; Williams & Wood, 2007). Further efforts to minimize financial reliance on this vulnerable segment of the population are needed.

Specific recommendations are identified below:

Prevention and Awareness

1. Continue employing a wide array of educational and policy initiatives to address the multi-faceted biopsychosocial etiology of problem gambling. Evidence from allied fields demonstrates that effective prevention requires coordination between a wide range of effective educational strategies and effective policy measures targeting the same outcomes. Multiple prongs within a comprehensive and coordinated prevention strategy are often synergistic, with overlapping initiatives reinforcing

the message and power of individual components (Nation et al., 2003; Stockwell et al., 2005; Williams, West & Simpson, 2012; Winters et al., 2007).

2. Continue efforts to publicly promote responsible gambling. While existing efforts have been fairly successful, there are still many more people exposed to and aware of advertising promoting gambling relative to people aware of responsible gambling messaging.
3. Continue efforts to increase public awareness of available services. Here again, while current awareness is reasonably high, awareness of the Connecticut self-exclusion programs for casino and online gambling is low among Connecticut adults.
4. Continue efforts to increase prevention work with groups at higher risk of developing gambling-related problems:
    - More specifically, this includes: males, LGBTQ+, people younger than 65, people with lower educational attainment, and non-Whites (i.e., Blacks, Hispanics, Asians, and Other Ethnicity). In this latter regard, there is value in increasing multicultural efforts through outreach and delivery of services in languages other than English as well as geared to other cultures.
    - Prevention work should disseminate information pertaining to: risk factors for problem gambling; signs of problem gambling; countering gambling fallacies by clearly explaining how gambling works, the true odds, and the negative mathematical expectation. (It is notable that gambling 'to win money' was a particularly important motivation among people with gambling problems in Connecticut). Prevention work should also endeavor to teach more adaptive coping skills, as gambling to 'escape or relieve stress' and 'to feel good about myself' were disproportionately common motivations among at-risk and problem gamblers in Connecticut.

Responsible Gambling: Industry Contributions

1. Endeavor to reduce the industry's financial reliance on people with gambling problems and the segments of society that disproportionately contribute to Connecticut gambling revenue: males, ages 35-49, non-Whites (i.e., Blacks, Hispanics, Asians, and Other Ethnicity), and people with high school or lower educational attainment.
2. In this regard:
    - Consider sending automated alerts to people with Reward Cards and/or playing online when their gambling behavior escalates.
    - Consider changing the parameters of Reward Cards so that they reward responsible gambling (e.g., no points after a certain amount spent; extra points for taking a problem gambling screen, etc.), rather than rewarding people for total amount spent.
    - Consider restricting hours of service (both online and in-person), recognizing that people with gambling problems and people at risk for gambling problems disproportionately access services between 3am and 9am.
    - Consider restricting ATM access or withdrawal amounts, recognizing that ATMs in gambling venues are disproportionately utilized by people with gambling problems and people at risk for gambling problems.
    - Work with Foxwoods and Mohegan Sun as well as DCP and CCPG to better align the state's and tribes' responsible gambling and problem gambling services.

Voluntary Self-Exclusion and Gambling Limits

1. Merge the three separate self-exclusion lists in Connecticut and align the self-exclusion periods across the three self-exclusion programs in Connecticut.
2. Develop a strategy to create a regional self-exclusion program to allow people from all of the New England states to self-exclude from all of the venues and online gambling operators in the region.
3. Consider implementing mandatory pre-commitment of gambling limits, which has been shown to be much more effective than voluntary limits.

Problem Gambling Helpline

1. Add 'warm hand-off' functionality to the helpline.
2. Add follow-up with individual callers to helpline services.
3. Improve data collection for the helpline and establish a regular reporting schedule.

Treatment Services

1. Continue efforts to increase help-seeking among people with gambling-related problems, as people who receive help have better long-term outcomes compared to people who do not receive treatment (Ribeiro, Afonso & Morgado, 2021). In particular, ensure that self-help materials are freely and readily available online and at gambling venues, as it is clear that most people with gambling problems prefer to handle their problems themselves. Also, public awareness campaigns need to address the barriers to treatment identified in the present study. Specifically, they need to promote the fact that treatment works; that there are free publicly-funded types of treatment; that there is no shame in seeking help; and that there are locations where help is available. These efforts should be particularly targeted at:
    - Groups with the largest number of problem gamblers: Whites; males; ages 18-34; and non-immigrants; and
    - Groups with below average treatment-seeking propensities: ages 65+, Blacks, Whites, people with middle or higher educational attainment, and non-immigrants.
2. Improve awareness of how gambling impacts other public services such as domestic violence and the criminal justice system.
3. Increase education and training for probation officers, bail commissioners, and law enforcement officers.
4. Continue to integrate problem gambling services with mental health, substance use and behavioral health programs in Connecticut.
5. Provide training for students in the health professions as well as clinicians in diagnosing people experiencing gambling problems and referring them for help.
6. Expand the availability of bilingual treatment services.
7. Establish a requirement that treatment providers seeing people with substance use and mental health issues screen for gambling problems. A simple two item screen about average monthly frequency of gambling and expenditure would suffice (e.g., Rockloff, 2012), and would be less stigmatizing than asking about problem gambling symptomatology.
8. Establish gambling diversion programs within the judicial system like those that deal with people experiencing alcohol problems.

Recovery Services

1. Expand the availability of recovery services to prevent relapses, particularly in the wake of the recent legalization of sports betting and online gambling.

Research and Evaluation

1. Improve data collection on help-seeking and treatment access and establish a regular reporting schedule.
2. To monitor changes in problem gambling prevalence, conduct online panel surveys annually and add a validated module assessing gambling behavior and problems to the annual Brief Risk Factor Surveillance Survey (BRFSS) conducted jointly by the states and the U.S. Centers for Disease Control and Prevention.

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APPENDIX A: NORC ABS Invitation Letter

Person's Name
Person's Address 1
Person's Address 2
Person's City, Person's State, ZIP

CONN-ACTS
Connecticut Assessment of Consumer PasTimes Study

Dear_____

You have been invited to participate in a very important statewide survey about health and recreational behaviors in Connecticut. Results from this survey will be used by different government agencies and researchers to understand the health, leisure, and entertainment needs and interests of Connecticut residents.

Please have the **adult (18 years old or older) in your household who had the most recent birthday** complete this study online.

Your unique login information is:

Survey URL: https://ConnActs.norc.org
Your Personal Access Code: [PIN]

We have included $1 as a token of appreciation. If you are interested and complete the survey, we will offer you a $10 Amazon.com Gift Card[1], Target eGiftCard™[2] or Walmart eGift Card[3]. These gift codes can be used online or in stores.

Your participation is critical to make this study a success. We understand that not all topics in the survey will be of interest to you. We encourage your participation because it is important that we collect information that is representative of all of Connecticut. Taking part is up to you. Almost everyone will be able to finish the survey within 10 to 15 minutes.

If you have questions about the survey, please email us at ConnActs@norc.org or call toll-free at 1-877-390-3642. If you have any questions about your rights as a survey participant, you may call the NORC Institutional Review Board Administrator (toll-free) at 1-866-309-0542.

Thank you for your help with this important study!

Sincerely,

Dr. Rachel Volberg, PhD
Principal Investigator
President, Gemini Research, Inc

FREQUENTLY ASKED QUESTIONS

How was I selected to participate?
Your household was randomly selected to participate from a list of addresses in Connecticut.

How do I know this study is legitimate?
You may contact NORC toll free at 1-877-390-3642 or email at ConnActs@norc.org for more information.

How much will I be paid for participation?
For this survey you will receive $1 plus an additional $10 electronic Amazon.com Giftcard, Target eGiftCard™ or Walmart eGift Card if you are eligible and complete the survey. These gift codes can be used online or in stores.

Who should complete the study?
Please have the adult in your household (18 years or older) who had the most recent birthday complete this survey. We do not mean the oldest person. We mean the person who had a birthday last.

Why do you want to interview the adult with the most recent birthday?
Researchers want to interview a random adult in the household. Asking for the adult with the most recent birthday is a fast and scientific way to randomly select a person in your household.

What types of questions will you ask?
The survey asks about your health, leisure activities and hobbies, your opinions about various activities, and general information about you.

Who is NORC at the University of Chicago?
NORC at the University of Chicago (NORC) is an independent research organization that is conducting this study. Additional information on NORC can be found on its website (www.norc.org).

Who will see my answers?
Only a few people who work on the study ever see any personal information. Answers that could identify you in any way are separated from your other answers. Study findings are put into summary reports that contain no names or other information that identifies you.

Will my answers be safe online?
Yes. Information collected is encrypted at all times. Our secure servers use “HTTPS” to ensure encrypted transmission of your data between your browser and our servers. The survey link is also independently verified by Network Solutions as a secure website.

Will you ever sell my name, address, telephone number, or other information?
No. Your information is kept confidential, and your answers are used for research purposes only.

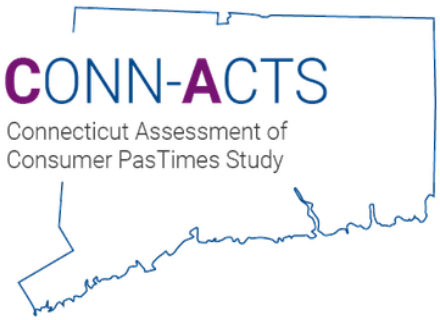
Why is my participation important?
As a Connecticut resident, your participation provides valuable insight concerning health and recreational behaviors specific to your community. We need to hear from all people to make sure we have an accurate and fair picture of people in Connecticut.

If I need to step away, can I return and complete the study online at a later time?
Yes. When returning to the study online, enter your unique log in information, and you can pick up where you left off.

APPENDIX B: Population Survey Questionnaire

NORC ABS INTRODUCTION

About the Study Español



You have been invited to participate in a very important statewide survey about health and recreational behaviors in Connecticut.
Taking part is up to you and you may skip any question you do not want to answer. The survey will take about 10-15 minutes for most people.

If you complete the survey, you will receive a $10 electronic gift code. We do not need to know your name and any contact information will be removed once data collection is complete.

Please have the adult (18 years old or older) in your household who had the most recent birthday complete this study. We do not mean the oldest person. We mean the person who had a birthday last.

The information you provide will be used by the research team for statistical purposes only. We will do our very best to protect the confidentiality of all the information we collect from you and we will not disclose your information to third parties. However, no one can guarantee complete confidentiality for data sent over the Internet. We have a Federal Certificate of Confidentiality that is designed to protect the confidentiality of your research data from a court order or subpoena. The data you provide will be stored in secure computers with password protections and only authorized members of the research team will have access to the data.

Enter your seven (7) digit Personal Access Code below and then click on the "Start Survey" button.

ABC002 Start Survey

If you experience technical issues, please email ConnActs@norc.org for assistance.

NORC at the University of Chicago
55 East Monroe Street, 19th Floor
Chicago, IL 60603
ConnActs@norc.org
Terms and Conditions | Privacy Policy

CENTIMENT OPS INTRODUCTION

This survey is on behalf of the State of Connecticut which wishes to obtain an updated profile of gambling and related behaviors in the state. The survey will take about 10-15 minutes for most people and your answers will be kept confidential. We do not need to know your name and any contact information will be removed once data collection is completed.

DEMOGRAPHICS (D) (2 questions)

D1. Are you male, female or other gender?
1: male
2: female
3: other

D2. In what year were you born? (drop-down menu from 1922 to 2005)

D3. Which Connecticut county do you live in? (this question is at the end of the NORC ABS survey)
1: Fairfield
2: Hartford
3: Litchfield
4: Middlesex
5: New Haven
6: New London
7: Tolland
8: Windham
9: Unsure, but my zipcode is __ __ __ __ __ (limit to valid U.S. zipcodes)
10: I do not have a residence in Connecticut (exclude and end survey)

COMORBIDITIES (C) (13 to 16 questions)

C1. How often have you used alcohol (beer, wine, liquor) in the past 12 months?
6: 4 or more times a week
5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all

C2. How often have you used tobacco (cigarettes, cigars, pipe tobacco, shisha tobacco, chewing tobacco, dipping tobacco, snuff) or e-cigarettes in the past 12 months?
6: 4 or more times a week
5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all

C3. How often have you used cannabis (marijuana, hashish, edibles, CBD oil, etc.) in the past 12 months?
6: 4 or more times a week
5: 2-3 times a week
4: Once a week

3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all

C4. How often have you used opiates or opioids in the past 12 months either recreationally or prescribed (opium, morphine, codeine, heroin, fentanyl, hydrocodone/Vicodin, oxycodone/Oxycontin/Percocet, etc.)?
6: 4 or more times a week
5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all

C5. How often have you used either benzodiazepines (e.g., Xanax, Valium); amphetamines (e.g., methamphetamine, Dexedrine); cocaine; or hallucinogens (LSD, psilocybin/mushrooms, ecstasy, mescaline, PCP, ketamine, ayahuasca, salvia) in the past 12 months either recreationally or prescribed?
6: 4 or more times a week
5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all

Go to C8 if scores < 2 on each of C1, C2, C3, C4, and C5

C6. In the past 12 months have you had difficulty controlling your use of alcohol, tobacco, cannabis, opiates/opioids, or other drugs that has led to significant negative consequences for you or other people?
0: No
1: Yes

C7. Have you sought professional help in the past 12 months to control your use of any of these drugs?
0: No
1: Yes

C8. Do you have any history of drug or alcohol problems *prior to* the past 12 months?
0: No
1: Yes

C9. In the past 12 months have you had difficulty controlling your involvement in any of the following activities that has led to significant negative consequences for you or other people? (check all that apply)
1: Social media
2: Sex/Pornography
3: Exercise
4: Internet
5: Gambling
6: Shopping
7: Video game
8: Other (food, plastic surgery, work, etc.)
0: I have had no problems with any of these in the past 12 months (if this is checked do not allow any of the other options to be checked)

C10. Have you had any of the following mental health problems in the past 12 months? (check all that apply)
1: Attention Deficit Disorder
2: Clinical Depression
3: Bipolar Disorder
4: Post-Traumatic Stress
5: Generalized Anxiety
6: Panic Disorder
7: Obsessive Compulsive Disorder
8: Bulimia or Anorexia
9: Schizophrenia
0: I have had none of these mental health problems in the past 12 months (if this is checked do not allow any of the other options to be checked)

Go to C12 if 0 on C10

C11. Have you received professional help (e.g., counseling, medication, etc.) in the past 12 months to deal with these mental health issues?
0: No
1: Yes

C12. Do you have any history of mental health problems *prior to* the past 12 months?
0: No
1: Yes

C13. Do you currently have any physical health problem that significantly limits your ability to move around, be self-sufficient, or to interact with people? (e.g., serious illness or disease, disability, etc.)?
0: No
1: Yes

C14. In the past 12 months how would you rate your overall level of physical health?
1: Very high
2: High
3: Moderate
4: Low
5: Very low

C15. In the past 12 months how would you rate your overall level of stress?
1: Very high
2: High
3: Moderate
4: Low
5: Very low

C16. In the past 12 months how would you rate your overall level of happiness?
1: Very high
2: High
3: Moderate
4: Low
5: Very low

GAMBLING ATTITUDES (A) (10 questions)

NORC ABS Survey: **The specific recreational activity that you have been selected to answer questions about is 'gambling'.**

The following questions are about gambling. Gambling is defined as betting money or material goods on an event with an uncertain outcome in the hopes of winning additional money or material goods. It includes things such as lottery and raffle tickets, scratch tickets, keno, bingo, slot machines, betting on sports, poker, etc.

A1. How important is gambling to you as a recreational activity?
3: Very important
2: Somewhat important
1: Not very important
0: Not at all important

A2. Which best describes your belief about the benefit or harm that gambling has for society?
1: The harm far outweighs the benefits
2: The harm somewhat outweighs the benefits
3: The benefits are about equal to the harm
4: The benefits somewhat outweigh the harm
5: The benefits far outweigh the harm

A3. Do you believe that gambling is morally or ethically wrong?
1: No
2: Somewhat
3: Yes

A4. Which best describes your opinion about legalized gambling?
1: All types of gambling should be legal
2: All types of gambling should be illegal
3: Some types of gambling should be legal and some should be illegal

A5. Which best describes your opinion about gambling opportunities in Connecticut?
1: Gambling is too widely available
2: The current availability of gambling is fine
3: Gambling is not available enough

A6. What do you believe has been the single most positive impact of legalized gambling for Connecticut?
(randomize response options 1-6 but 7 & 8 should always remain at end of list)
1: Employment
2: Spin-off benefits to other businesses
3: Financial and employment benefits to the local tribes
4: Increased government revenue
5: Retaining money that was leaving Connecticut
6: Increased recreational options
7: No positive impacts
8: Other

A7. What do you believe has been the single most negative impact of legalized gambling for Connecticut?
(randomize response options 1-4 but 5 & 6 should always remain at end of list)
1: Increased gambling addiction (and associated consequences: bankruptcy, suicide, divorce, etc.)
2: Negative impacts on other businesses
3: Increased crime

4: Increased traffic congestion or noise
5: No negative impacts
6: Other

A8. Who do you think has the responsibility for minimizing the harm associated with gambling?
1: The gambler
2: The provider of gambling
3: It is a shared responsibility between the gambler and the provider, but the gambler has the primary responsibility
4: It is a shared responsibility between the gambler and the provider, but the provider has the primary responsibility
5: It is a shared responsibility with both the gambler and the provider having equal responsibility

A9. How satisfied are you with the integrity and fairness of how gambling is provided in Connecticut?
1: Very satisfied
2: Somewhat satisfied
3: Neutral
4: Somewhat dissatisfied
5: Very dissatisfied

A10. How satisfied are you with Connecticut government and gambling provider efforts to minimize the harm associated with gambling?
1: Very satisfied
2: Somewhat satisfied
3: Neutral
4: Somewhat dissatisfied
5: Very dissatisfied

PREVENTION AWARENESS (P) (4 questions)

P1. In the past 12 months have you seen or heard any advertising promoting gambling?
0: No
1: Yes

P2. In the past 12 months have you seen or heard any media or public awareness campaigns to prevent problem gambling in Connecticut (e.g., on television, posters, radio, social media, billboards, etc.)?
0: No
1: Yes

P3. Are you aware of the Connecticut problem gambling helpline?
0: No
1: Yes

P4. Are you aware of the Voluntary Self-Exclusion programs offered by Mohegan Sun and Foxwoods casino as well as the state of Connecticut?
0: No
1: Yes

PAST YEAR GAMBLING PARTICIPATION (G) (11 to 26 questions)

G1a. In the past 12 months, how often have you purchased tickets for **weekly lotteries such as Powerball, Mega Millions, and Lotto**?
6: 4 or more times a week

5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all (go to G2a)

G1b. In the past 12 months, how much money do you estimate you have spent on weekly lotteries such as Powerball, Mega Millions, and Lotto in a typical month?
1: $0-9
2: $10-19
3: $20-49
4: $50-$99
5: $100-$199
6: $200-$499
7: $500-$999
8: $1000 or more, specify $_____ (limit to numerals with 1,000,000 max value)
0: I won more than I lost in the past 12 months on weekly lottery tickets

G2a. In the past 12 months, how often have you purchased tickets for **daily lotteries such as Play3, Play4, Cash5, and Lucky for Life**?
6: 4 or more times a week
5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all (go to G3a)

G2b. In the past 12 months, how much money do you estimate you have spent on daily lotteries such as Play3, Play4, Cash5, and Lucky for Life in a typical month?
1: $0-9
2: $10-19
3: $20-49
4: $50-$99
5: $100-$199
6: $200-$499
7: $500-$999
8: $1000 or more, specify $_____ (limit to numerals with 1,000,000 max value)
0: I won more than I lost in the past 12 months on daily lottery tickets

G3a. In the past 12 months, how often have you spent money on **keno?**
6: 4 or more times a week
5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all (go to G4a)

G3b. In the past 12 months, how much money do you estimate you have spent on keno in a typical month?
1: $0-9
2: $10-19

3: $20-49
4: $50-$99
5: $100-$199
6: $200-$499
7: $500-$999
8: $1000 or more, specify $_____ (limit to numerals with 1,000,000 max value)
0: I won more than I lost in the past 12 months on keno

G4a. In the past 12 months, how often have you purchased either **scratch tickets or played Fast Play games**?
6: 4 or more times a week
5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all (go to G5a)

G4b. In the past 12 months, how much money do you estimate you have spent on scratch tickets or Fast Play games in a typical month?
1: $0-9
2: $10-19
3: $20-49
4: $50-$99
5: $100-$199
6: $200-$499
7: $500-$999
8: $1000 or more, specify $_____ (limit to numerals with 1,000,000 max value)
0: I won more than I lost in the past 12 months on scratch tickets and/or Fast Play games

G5a. In the past 12 months how often have you purchased **charity tickets (i.e., 50/50 tickets, raffle tickets, sealed/pull-tab tickets**).
6: 4 or more times a week
5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all (go to G6a)

G5b. In the past 12 months, how much money do you estimate you have spent on charity tickets in a typical month?
1: $0-9
2: $10-19
3: $20-49
4: $50-$99
5: $100-$199
6: $200-$499
7: $500-$999
8: $1000 or more, specify $_____ (limit to numerals with 1,000,000 max value)
0: I won more than I lost in the past 12 months on charity tickets

G6a. In the past 12 months how often did you spend money on **bingo**?
6: 4 or more times a week

5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all (go to G7a)

G6b. In the past 12 months, how much money do you estimate you have spent on bingo in a typical month?
1: $0-9
2: $10-19
3: $20-49
4: $50-$99
5: $100-$199
6: $200-$499
7: $500-$999
8: $1000 or more, specify $_____ (limit to numerals with 1,000,000 max value)
0: I won more than I lost in the past 12 months on bingo

G7a. In the past 12 months, how often have you gambled at a **land-based casino**?
6: 4 or more times a week
5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all (go to G8a)

G7b. In the past 12 months, how much money do you estimate you have spent on gambling at land-based casinos in a typical month? (Note: this does not include food, travel or accommodation).
1: $0-9
2: $10-19
3: $20-49
4: $50-$99
5: $100-$199
6: $200-$499
7: $500-$999
8: $1000 or more, specify $_____ (limit to numerals with 1,000,000 max value)
0: I won more than I lost in the past 12 months at land-based casinos

G7c. Which game(s) did you spend your money on at land-based casinos? (check all that apply)
1: slot machines
2: casino table games
3: poker
4: bingo
5: keno
6: sports betting
7: horse racing

G7d. Which land-based casinos did you gamble at in the past 12 months? (check all that apply)
1: Foxwoods
2: Mohegan Sun
3: Massachusetts casinos
4: Rhode Island casinos

5: New York casinos
6: New Jersey casinos
7: Nevada casinos
8: An illegal/underground casino in Connecticut
9: Other casinos

G8a. In the past 12 months, how often have you gambled at an **online casino**?
6: 4 or more times a week
5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all (go to G9a)

G8b. In the past 12 months, how much money do you estimate you have spent on gambling at online casinos in a typical month?
1: $0-9
2: $10-19
3: $20-49
4: $50-$99
5: $100-$199
6: $200-$499
7: $500-$999
8: $1000 or more, specify $_____ (limit to numerals with 1,000,000 max value)
0: I won more than I lost in the past 12 months at online casinos

G8c. Which online casinos did you gamble at in the past 12 months (check all that apply)
1: At one of the two legal Connecticut online casinos (i.e., MoheganSunCasino.com, DraftKings Casino.com)
2: At an out-of-state online casino

G9a. In the past 12 months, how often have you **bet on professional sports** such as football, basketball, baseball, horse racing, boxing, motor racing, golf, e-sports and fantasy sports at either a sportsbook, casino or online site?
6: 4 or more times a week
5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all (go to G10a)

G9b. In the past 12 months, how much money do you estimate you have spent on sports betting in a typical month?
1: $0-9
2: $10-19
3: $20-49
4: $50-$99
5: $100-$199
6: $200-$499
7: $500-$999
8: $1000 or more, specify $_____ (limit to numerals with 1,000,000 max value)
0: I won more than I lost in the past 12 months betting on sports

G9c. What sports do you bet on? (check all that apply)
1: football
2: basketball
3: baseball
4: soccer
5: horse racing
6: ice hockey
7: boxing or mixed martial arts
8: motor racing
9: golf
10: e-sports
11: fantasy sports
12: other

G9d. Where did you bet on sports? (check all that apply)
1: At Mohegan Sun and/or Foxwoods casino
2: At a Connecticut land-based sportsbook or off-track betting site (e.g., Winners, Bobby V's Sports Bar)
3: At one of the three legal Connecticut online sportsbooks (i.e., FanDuel, DraftKings, SugarHouse)
4: At an out-of-state online sportsbook
5: At an illegal/underground land-based sports betting shop or bookmaker in Connecticut

G10a. In the past 12 months, how often have you **gambled with friends or colleagues** on things such as poker or other card, dice or board games; betting on games of skill such as pool, bowling, darts, etc.; betting between each other on professional sports or other events; etc.
6: 4 or more times a week
5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all (go to G11 section)

G10b. In the past 12 months, how much money do you estimate you have spent gambling with friends or colleagues in a typical month?
1: $0-9
2: $10-19
3: $20-49
4: $50-$99
5: $100-$199
6: $200-$499
7: $500-$999
8: $1000 or more, specify $_____ (limit to numerals with 1,000,000 max value)
0: I won more than I lost in the past 12 months gambling with friends or colleagues

G11. Considering all types of gambling combined, what is the largest amount of money you have lost to gambling on any single day in the past 12 months?
0: $0
1: $1-$199
2: $200-$499
3: $500-$999
4: $1000-$1999
5: $2000-$4999
6: $5000-$9999

7: $10000 or more

GAMBLER (0, 1). Score of 1 or higher on G1a, G2a, G3a, G4a, G5a, G6a, G7a, G8a, G9a, or G10a.
NONLOTTERY/CHARITY_GAMBLER (0, 1). Score of 1 or higher on G3a, G4a, G6a, G7a, G8a, G9a, or G10a.
MONTHLY_GAMBLER (0, 1). Score of 2 or higher on G1a, G2a, G3a, G4a, G5a, G6a, G7a, G8a, G9a, or G10a.
CASINO_SPORTS (0, 1). Score of 1 or higher on G7a, G8a, or G9a.
ONLINE_CASINO_SPORTS (0, 1). Score of 1 or higher on G8a or scored 3 or 4 on G9d.
GTYPES. Total number of different types of gambling engaged in within past 12 months (score of 0 – 10).
GFREQ. Total frequency reported on all types of gambling in past 12 months (score of 0 – 60).
GLOSS. Total loss on all types of gambling in past 12 months using mid-point value for each category (i.e., $5, $15, $25, $75, $150, $350, $750 + actual value reported for category 8) and multiplying total by 12.

SPECULATION (S) (1 to 3 questions)

S1a. In the past 12 months, how often have you engaged in any **speculative financial market activity**? This refers to things such as buying cryptocurrency (e.g., Bitcoin), penny stocks, options or futures; or day trading, shorting, or betting on the direction or future value of a financial index (e.g., Dow Jones Industrial Average).
6: 4 or more times a week
5: 2-3 times a week
4: Once a week
3: 2-3 times a month
2: Once a month
1: Less than once a month
0: Not at all (go to GAMBLING HISTORY section)

S1b. How much money do you estimate you are currently ahead or behind from these speculative financial market activities?
1: Behind by more than $10000, specify $_____ (limit to numerals with maximum value of 1,000,000)
2: Behind by between $5000 - $9999
3: Behind by between $2000 - $4999
4: Behind by between $1000 - $1999
5: Behind by between $1 - $1000
6: Neither behind or ahead
7: Ahead by between $1 - $1000
8: Ahead by between $1000 - $1999
9: Ahead by between $2000 - $4999
10: Ahead by between $5000 - $9999
11: Ahead by more than $10000, specify $_____ (limit to numerals with maximum value of 1,000,000)

S1c. Which specific activities did you engage in? (check all that apply)
1: buying or selling cryptocurrency
2: buying or selling penny stocks
3: buying or selling options or futures
4: day trading
5: shorting stocks or other assets
6: financial index betting

SPECULATOR (0, 1). Score of 1 – 6 on S1a.

GAMBLING HISTORY (H) (3 questions)

H1. Did you ever gamble with your parents, grandparents, brothers, or sisters prior to age 18?
0: No
1: Yes, occasionally
2: Yes, regularly

H2. Have you ever thought that you might have a gambling problem?
0: No
1: Yes, in the past 12 months
2: Yes, but not in the past 12 months
3: Yes, both in the past 12 months and prior to that

H3. Has anyone in your immediate family ever had a gambling problem?
0: No
1: Unsure
2: Yes

Only ask M1 if person is a GAMBLER

GAMBLING MOTIVATION (M) (1 question asked of Gamblers)

M1. Why do you gamble? (check all that apply)
1: For excitement/entertainment
2: To win money
3: To escape or relieve stress (NODS 5ab)
4: To socialize
5: To support worthy causes
6: To compete or for the challenge
7: Because it makes me feel good about myself
8: To develop my skills
9: Other reason

Following questions only asked of NONLOTTERY/CHARITY_GAMBLERS

GAMBLING CONTEXT (GC) (6 questions asked of Non-Lottery/Charity Gamblers)

GC1. In the past 12 months, how many of the people that you regularly socialize with have been heavy gamblers or problem gamblers?
0: None
1: One
2: A few of them
3: Many of them
4: All of them
5: Unsure

GC2. In the past 12 months have you typically gambled alone or with friends/family?
1: Always alone
2: Mostly alone
3: Sometimes alone and sometimes with friends/family
4: Mostly with friends/family
5: Always with friends/family

GC3. In the past 12 months how often did you drink alcohol when you gambled?
4: Always
3: Often
2: Sometimes
1: Rarely
0: Never

GC4. In the past 12 months how often did you smoke or use tobacco when you gambled?
4: Always
3: Often
2: Sometimes
1: Rarely
0: Never

GC5. In the past 12 months how often did you use cannabis when you gambled?
4: Always
3: Often
2: Sometimes
1: Rarely
0: Never

GC6. In the past 12 months how often did you use opiates/opioids, benzodiazepines, amphetamines, cocaine, hallucinogens, or other drugs when you gambled?
4: Always
3: Often
2: Sometimes
1: Rarely
0: Never

Go to GAMBLING PROBLEMS section unless person is CASINO_SPORTS gambler.

CASINO & SPORTS (CS) (4 questions asked of casino &/or sports gamblers)

CS1. Are you a member of any gambling Reward/Loyalty program (e.g., at Mohegan Sun, Foxwoods, one of the online CT sportsbooks, or elsewhere)?
0: No
1: Yes

CS2. In the past 12 months how often have you borrowed money or played on credit when you gambled?
0: Never
1: Occasionally
2: Most times that I gamble

CS3. In the past 12 months how often have you accessed additional money from automatic teller machines when you go gambling?
0: Never
1: Occasionally
2: Most times that I gamble

CS4. In the past 12 months have you ever gambled between the hours of 3am – 9am?
0: No
1: Yes

Go to GAMBLING PROBLEMS section unless person is an ONLINE_CASINO_SPORTS gambler.

ONLINE CASINO & SPORTS GAMBLING (O) (1-3 questions asked of online casino or sports gamblers)

O1a. For online gambling, are you aware of any tools on the websites that you use allowing you to set deposit, time, or spending limits or temporarily suspend your account?
0: No (go to GAMBLING PROBLEMS section)
1: Yes

O1b. Have you used any of these limit setting or account suspension tools?
0: No (go to GAMBLING PROBLEMS section)
1: Yes

O1c. What impact have these limit setting or account suspension tools had on your online gambling spending?
0: No impact
1: Decreased spending
2: Increased spending

GAMBLING PROBLEMS (GP) (17 to 41 questions asked of monthly gamblers)

Go to DEMOGRAPHICS section unless person is MONTHLY_GAMBLER or scores 1 or higher on H2.

PPGM1a_NODS10. Has your involvement in gambling caused you either to borrow a significant amount of money or sell some of your possessions in the past 12 months?
1: Yes
0: No

PPGM1b. Has your involvement in gambling caused significant **financial concerns** for you or someone close to you In the past 12 months?
1: Yes
0: No

go to PPGM2a unless person scores 1 for PPGM1a or PPGM1b.

PPGM1c. In the past 12 months, have you filed for bankruptcy because of gambling?
1: Yes
0: No

PPGM2a. Has your involvement in gambling caused significant **mental stress** in the form of guilt, anxiety, or depression for you or someone close to you in the past 12 months?
1: Yes
0: No go to PPGM3a

PPGM2b. In the past 12 months, have you thought of committing suicide because of gambling?
1: Yes -> phone 988 to access the Suicide & Crisis Lifeline 24/7
0: No go to PPGM3a

PPGM2c. In the past 12 months, have you attempted suicide because of gambling?
1: Yes
0: No

PPGM3a_NODS9a. Has your involvement in gambling caused serious problems in your **relationship** with your spouse/partner, or important friends or family in the past 12 months? (Note: Family is whomever you define as "family")
1: Yes
0: No

PPGM3b. Has your involvement in gambling caused you to repeatedly neglect your children or family in the past 12 months?
1: Yes
0: No

NODS7. In the past 12 months, have you lied to family members, friends, or others three or more times about how much you gamble or how much money you lost on gambling?
1: Yes
0: No

go to PPGM4a unless person scores 1 for PPGM3a or PPGM3b.

PPGM3c. In the past 12 months has your involvement in gambling caused an instance of domestic violence in your household?
1: Yes
0: No

PPGM3d. In the past 12 months, has your involvement in gambling resulted in separation or divorce?
1: Yes
0: No

PPGM3e. In the past 12 months, has child welfare services become involved because of your gambling?
1: Yes
0: No

PPGM4a. Has your involvement in gambling resulted in significant **health problems** or injury for you or someone close to you in the past 12 months?
1: Yes
0: No go to PPGM5a

PPGM4b. In the past 12 months have these health problems caused you to seek medical or psychological help?
1: Yes
0: No

PPGM5a_NODS9bc. Has your involvement in gambling caused significant **work or school problems** for you or someone close to you in the past 12 months or caused you to miss a significant amount of time off work or school?
1: Yes
0: No go to PPGM6a

PPGM5b. In the past 12 months, about how many work or school days have you lost due to gambling?
_____number of days (limit to numerals with minimum value of 0 and maximum value of 365)

PPGM5c. In the past 12 months, have you lost your job or had to quit school due to gambling?
1: Yes
0: No

PPGM5d. In the past 12 months, did anyone in this household receive any public assistance (food stamps, Temporary Assistance for Needy Families (TANF)) or any other welfare payments from the state or local welfare office as a result of losing your job because of gambling?
1: Yes
0: No

PPGM6a_NODS8. Has your involvement in gambling caused you or someone close to you to write bad cheques, take money that didn't belong to you or commit other **illegal acts** to support your gambling in the past 12 months?
1: Yes
0: No go to PPGM7

PPGM6b. In the past 12 months, about how much money have you illegally obtained in order to gamble?
$_____ (limit to positive numerals)

PPGM6c. In the past 12 months, has your gambling been a factor in your committing a crime for which you have been arrested?
1: Yes
0: No go to PPGM7

PPGM6d. Were you convicted for this crime?
1: Yes
0: No go to PPGM7

PPGM6e. Were you incarcerated for this crime?
1: Yes
0: No

PPGM7. Is there anyone else who would say that your involvement in gambling in the past 12 months has caused any significant problems regardless of whether you agree with them or not?
1: Yes
0: No

PPGM8. In the past 12 months, have you often gambled longer, with more money or more frequently than you intended to?
1: Yes
0: No

PPGM9_NODS6. In the past 12 months, have you often gone back to try and win back the money you lost?
1: Yes
0: No

PPGM10a_NODS3a. In the past 12 months, have you made any attempts to either cut down, control or stop your gambling?
1: Yes
0: No go to PPGM11

GP1. Did you do this primarily on your own or with help from other people?
1: Primarily on my own
2: Primarily with help from others go to PPGM10b_NODS4a

GP2. What are the reason(s) you chose to do this on your own rather than seek help? (check all that apply)
1: I did not believe I would need help
2: I was unaware of where to get help

3: I felt too ashamed to seek help
4: I did not believe that treatment would work for me
5: I did not think I could afford treatment

PPGM10b_NODS4a. Were you successful in these attempts to cut down, control or stop your gambling?
0: Yes go to PPGM11
1: No (Note the reverse scoring for this question)

NODS4b. Has this happened three or more times?
1: Yes
0: No

PPGM11. In the past 12 months, is there anyone else who would say that you have had difficulty controlling your gambling, regardless of whether you agreed with them or not?
1: Yes
0: No

PPGM12_NODS1ab. In the past 12 months, would you say you have been preoccupied with gambling?
1: Yes
0: No

PPGM13_NODS3b. In the past 12 months, when you were not gambling did you often experience irritability, restlessness or
strong cravings for it?
1: Yes
0: No

PPGM14_NODS2. In the past 12 months, did you find you needed to gamble with larger and larger amounts of money to achieve the same level of excitement?
1: Yes
0: No

PPGMHARM (Total of PPGM1a, 1b, 1c, 2a, 2b, 2c, 3a, 3b, 3c, 3d, 3e, 4a, 4b, 5a, 5c, 5d, 6a, 6c, 6d, 6e, 7)
PPGMCONTROL (Total of PPGM8, 9, 10a, 10b, 11)
PPGMOTHER (Total of PPGM 12, 13, 14)
PPGMCATEGORIES
NODSCATEGORIES

Go to DEMOGRAPHICS section unless person has PPGMHARM score of 1 or higher

GP3. Are there particular types of gambling that have contributed to your problems more than others?
1: Yes
0: No go to GP5

GP4. Which types of gambling have contributed most to your problems? (check all that apply)
1: Lottery tickets
2: Scratch tickets
3: Keno
4: Bingo
5: Slot machines
6: Casino table games
7: Poker
8: Sports betting

9: Horse racing
10: Speculative financial activities
11: Online gambling
12: Other types

GP5. Have you *wanted* help for gambling problems in the past 12 months?
1: Yes
0: No

GP6. Have you *sought* help for gambling problems in the past 12 months?
1: Yes
0: No go to DEMOGRAPHICS section

GP7. What sort of help did you seek? (check all that apply)
1: Self-help materials from books or online
2: Support and/or counseling from friends and/or family
3: Individual counseling from a counselor, psychologist, or psychiatrist
4: Individual counseling from family doctor
5: Individual counseling from pastor, minister, priest, rabbi or other religious figure
6: Family therapy or support (e.g., Gam-Anon)
7: Group therapy or support (e.g., Gamblers Anonymous)
7: Online or telephone support (e.g., GamTalk)
6: Medication from family doctor or psychiatrist
9: Residential or in-patient treatment
10: Casino or online voluntary self-exclusion
11: Other_____

GP8. How helpful was this assistance in reducing or stopping your gambling?
0: Not at all helpful
1: Somewhat helpful
2: Quite helpful
3: Very helpful

DEMOGRAPHICS (D) (9 questions)

We are almost at the end, just a few demographic questions left!

D4. Which of the following best describes your ethnic, cultural or racial group? (check all that apply)
1: White or Caucasian
2: Hispanic or Latino
3: Black or African American
4: Asian or Pacific Islander
5: Native American or Alaskan Native
6: Other

D5. What is your current marital status?
1: Single (never married and not living in a common-law relationship)
2: Married or living in a common-law relationship
3: Separated, divorced, or widowed

D6. How many children do you have (biological, stepchildren, or adopted)?
0: 0
1: 1

2: 2
3: 3
4: 4
5: 5
6: More than 5

D7. What is the highest degree or level of schooling you have completed?
1: Less than high school
2: High school diploma or GED
3: Some college courses
4: Associate degree or vocational, technical or trade school certificate
5: Bachelor's Degree
6: Master's Doctorate or Professional degree beyond Bachelor's

D8. Which category best describes your current employment situation?
1: Employed full-time
2: Employed part-time (includes people who may also be retired, or a homemaker, or student)
3: Sick leave, maternity leave, on strike, on disability
4: Unemployed
5: Homemaker and not working for money
6: Full-time student and not working for money
7: Retired and not working for money

D9. What is your approximate annual household income from all sources?
1: Less than $20,000
2: $20,000 – $39,999
3: $40,000 – $59,999
4: $60,000 - $79,999
5: $80,000 - $99,999
6: $100,000 - $119,999
7: $120,000 - $139,999
8: $140,000 - $199,999
9: $200,000 or higher

D10. Were you born in the United States?
0: No
1: Yes

D11. Have you ever served in the military?
0: No
1: Yes

END

Those are all the questions we have. I'd like to thank you on behalf of the state of Connecticut for the time and effort you've taken to answer these questions! (Centiment)

Congratulations, you are eligible for a $10 electronic gift code to one of the following stores. Please select one store to which you would like to receive your gift code. (NORC ABS Survey)

(Amazon.com Gift Card[1])

(Target eGiftCard[2])

(Walmart Gift Card[3])

Do not want a gift card

APPENDIX C: NODS

NORC DSM-IV PAST YEAR SCREEN (NODS)

NODS1a. In the past 12 months, have there been any periods lasting two weeks or longer when you spent a lot of time thinking about your gambling experiences or planning future gambling ventures or bets?

YES (score 1)
NO

NODS1b. In the past 12 months, have there been periods lasting two weeks or longer when you spent a lot of time thinking about ways of getting money to gamble with?

YES (score 1 unless already have a point for 1a)
NO

NODS2. In the past 12 months, have there been periods when you needed to gamble with increasing amounts of money or with larger bets than before in order to get the same feeling of excitement?

YES (score 1)
NO

NODS3a. In the past 12 months, have you tried to stop, cut down, or control your gambling?

YES
NO (go to NODS5)

NODS3b. In the past 12 months, on one or more of the times when you tried to stop, cut down, or control your gambling, were you restless or irritable?

YES (score 1)
NO

NODS4a. In the past 12 months, have you tried *but not* succeeded in stopping, cutting down, or controlling your gambling?

YES
NO

NODS4b. In the past 12 months, has this happened three or more times?

YES (score 1)
NO

NODS5a. In the past 12 months, have you gambled as a way to escape from personal problems?

YES (score 1)
NO

NODS5b. In the past 12 months, have you gambled to relieve uncomfortable feelings such as guilt, anxiety, helplessness, or depression?

YES (score 1 unless already have a point for NODS5a)
NO

NODS6. In the past 12 months, has there ever been a period when, if you lost money gambling on one day, you would often return another day to get even?

YES (score 1)
NO

NODS7a. In the past 12 months, have you more than once lied to family members, friends, or others about how much you gamble or how much money you lost on gambling?

YES
NO (go to NODS8)

NODS7b. Has this happened three or more times?

YES (score 1)
NO

NODS8. In the past 12 months, have you 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?

YES (score 1)
NO

NODS9a. In the past 12 months, has your gambling caused serious or repeated problems in your relationships with any of your family members or friends?

YES (score 1)
NO

NODS9b. In the past 12 months, has your gambling caused you any problems in school, such as missing classes or days of school or getting worse grades?

YES (score 1 unless already have a point for NODS9a)
NO

NODS9c. In the past 12 months, has your gambling caused you to lose a job, have trouble with your job, or miss out on an important job or career opportunity?

YES (score 1 unless already have a point for NODS9a or NODS9b)
NO

NODS10. In the past 12 months, have you needed to ask family members or anyone else to loan you money or otherwise bail you out of a desperate money situation that was largely caused by your gambling?

YES (score 1)
NO

NODS SCORING

0 = Type B gambler (non-problem gambler)
1 or 2 = Type C gambler (at-risk gambler)
3 or 4 = Type D gambler (problem gambler)
5+ = Type E gambler (pathological gambler)

APPENDIX D: PPGM

PROBLEM & PATHOLOGICAL GAMBLING MEASURE (PPGM)

1a. Has your involvement in gambling caused you either to borrow a significant[63] amount of money or sell some of your possessions in the past 12 months? (Yes=1; No=0).

1b. Has your involvement in gambling caused significant **financial concerns** for you or someone close to you in the past 12 months? (Yes=1; No=0). (Note: do not score 1 for 1b if 1 has already been scored for 1a).

1c. (Optional): In the past 12 months, have you filed for bankruptcy because of gambling? (1=yes; 0=no)

2a. Has your involvement in gambling caused significant **mental stress** in the form of guilt, anxiety, or depression for you or someone close to you in the past 12 months? (Yes=1; No=0).

2b. (Optional): In the past 12 months, have you thought of committing suicide because of gambling? (1=yes; 0=no)

2c. (Optional): In the past 12 months, have you attempted suicide because of your gambling? (1=yes; 0=no)

3a. Has your involvement in gambling caused serious problems[64] in your **relationship with your spouse/partner, or important friends or family** in the past 12 months? (Note: Family is whomever the person themselves defines as "family") (Yes=1; No=0).

3b. Has your involvement in gambling caused you to repeatedly neglect your children or family in the past 12 months? (Yes=1; No=0). (Note: do not score 1 for 3b if 1 has already been scored for 3a).

3c. (Optional): In the past 12 months has your involvement in gambling caused an instance of domestic violence in your household? (Yes=1; No=0).

3d. (Optional): In the past 12 months, has your involvement in gambling resulted in separation or divorce? (Yes=1; No=0).

3e. (Optional): In the past 12 months, has child welfare services become involved because of your gambling? (Yes=1; No=0).

4a. Has your involvement in gambling resulted in significant **health problems** or injury for you or someone close to you in the past 12 months? (Yes=1; No=0).

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[63] If people ask what 'significant' means, say 'significant means something that either you or someone else would say is considerable, important, or major', either because of its frequency or seriousness.

[64] If people ask what 'problem' means say 'a difficulty that needs to be fixed'.

4b. (Optional). In the past 12 months have these health problems caused you to seek medical or psychological help? (Yes=1; No=0).

5a. Has your involvement in gambling caused significant **work or school problems** for you or someone close to you in the past 12 months or caused you to miss a significant amount of time off work or school? (Yes=1; No=0).

5b. (Optional). In the past 12 months, about how many work or school days have you lost due to gambling?_____number of days

5c. (Optional). In the past 12 months, have you lost your job or had to quit school due to gambling? (Yes=1; No=0).

5d. (Optional). In the past 12 months, did anyone in this household receive any public assistance (food stamps, Temporary Assistance for Needy Families (TANF)) or any other welfare payments from the state or local welfare office as a result of losing your job because of gambling? (Yes=1; No=0).

6a. Has <u>your</u> involvement in gambling caused you or someone close to you to write bad cheques, take money that didn't belong to you or commit other **illegal acts** to support your gambling in the past 12 months? (Yes=1; No=0).

6b. (Optional). In the past 12 months, about how much money have you illegally obtained in order to gamble? $_____

6c. (Optional). In the past 12 months, has your gambling been a factor in your committing a crime for which you have been arrested? (Yes=1; No=0).

6d. (Optional). Were you convicted for this crime? (Yes=1; No=0).

6e. (Optional). Were you incarcerated for this crime (Yes=1; No =0)

7. Is there anyone else who would say that <u>your</u> involvement in gambling in the past 12 months has caused any significant problems regardless of whether you agree with them or not? (Yes=1; No=0).

PROBLEMS/HARM SCORE	**/7**

Do not score the optional questions

8. In the past 12 months, have you often gambled longer, with more money or more frequently than you intended to? (Yes=1; No=0).

9. In the past 12 months, have you often gone back to try and win back the money you lost? (Yes=1; No=0).

10a. In the past 12 months, have you made any attempts to either cut down, control or stop your gambling? (Yes/No). (go to 11 if 'no') (this item not scored)

10b. Were you successful in these attempts? (Yes=0; No=1). (Note the reverse scoring for this question)

11. In the past 12 months, is there anyone else who would say that you have had difficulty controlling your gambling, regardless of whether you agreed with them or not? (Yes=1; No=0).

IMPAIRED CONTROL SCORE	**/4**

12. In the past 12 months, would you say you have been preoccupied with gambling? (Yes=1; No=0).

13. In the past 12 months, when you were not gambling did you often experience irritability, restlessness or strong cravings for it? (Yes=1; No=0).

14. In the past 12 months, did you find you needed to gamble with larger and larger amounts of money to achieve the same level of excitement? (Yes=1; No=0).

OTHER ISSUES SCORE	**/3**

TOTAL SCORE	**/14**

PPGM SCORING & CLASSIFICATIONS

PATHOLOGICAL GAMBLER (4)

1. Problems Score of 1 or higher, plus
2. Impaired Control Score of 1 or higher, plus
3. Total Score of 5 or higher, plus
4. Reported gambling frequency of at least once a month on some form of gambling.

PROBLEM GAMBLER (3)

1. Problems Score of 1 or higher, plus
2. Impaired Control Score of 1 or higher, plus
3. Total Score of 2 to 4, plus
4. Reported gambling frequency of at least once a month on some form of gambling.

OR

1. Total Score of 3 or higher, plus
2. Frequency of gambling[65] AND average reported gambling loss[66] $\geq$ median for unambiguously identified Problem and Pathological Gamblers in the population (i.e., as established by the most recent population prevalence survey).

AT RISK GAMBLER (2) (this category also includes people who may be problem gamblers in denial)

1. Does not meet criteria for Problem or Pathological gambling, plus
2. Total Score of 1 or higher
3. Reported gambling frequency of at least once a month on some form of gambling.

OR

4. Frequency of gambling[3] AND average reported gambling loss[4] $\geq$ median for unambiguously identified Problem and Pathological Gamblers in the population (i.e., as established by the most recent population prevalence survey).

RECREATIONAL GAMBLER (1)

- Gambler who does not meet criteria for Pathological, Problem or At-Risk gambler.

NONGAMBLER (0)

- No reported gambling on any form in past year.

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[65] Simplest way of establishing this is by using the highest frequency of gambling reported for any individual form in the past year.

[66] Sometimes gambling expenditure is collected by asking about both losses on gambling and winning on gambling. In this situation it is best to use the reported losses figure rather than *net* losses figure, as it tends to be a more accurate estimate of true losses, especially among people with gambling problems. Note also that the scorer may choose not to apply the gambling loss criteria so as to designate someone as an 'At Risk Gambler' or 'Problem Gambler' in situations where the person's income and/or net worth is very high relative to the general population.

APPENDIX E: Prior CT Population Assessments of Gambling

1	Location	CONNECTICUT
Year Study Conducted		1977
Age		18+
Source(s)		Abrahamson, M. & Wright, J.N. (1977). *Gambling in Connecticut*. Storrs, CT: Connecticut State Commission on Special Revenue.
Sample Size		568
Sampling Strategy		Multi-stage probability sample; 169 towns in Connecticut were stratified into two categories according to whether or not they were part of a standard metropolitan area (as defined by the Census Bureau); total of 15 towns randomly selected corresponding with their share of the State's population; sections of towns randomly selected using a topographical grid and enumeration map; within each town 50 homes (or dwelling units) were selected and numbered 1 to 50 in each town; interviewer sought to interview males in all even numbered houses and females in all odd numbered houses; The demographic characteristics of the sample and those of the entire State are, in general, highly congruent.
Survey Description		"how people in Connecticut bet money."
Administration Method		residential face-to-face interview
Response Rate		Not stated
Weighting		no
Threshold for PG Questions		No threshold
Assessment Instrument		3-Questions Related to Gambling Debts & Excessive Gambling: (1) At times I have bet so much that I had to put off buying clothes; (2) I have never had to borrow money because of bets I have made; (3) People close to me sometimes criticize the amount of money that I bet. Agreement with statement (1) and (3), and disagreement with statement (2) can all be viewed as possibly indicative of excessive gambling.
Legal Gambling Availability		Bingo; bazaars; raffles; on or off-track betting on horse racing, dog racing, jai alai; weekly and daily lottery; scratch tickets
Past Year Gambling Prevalence		Figures only listed for 23 gambling formats. Most frequently engaged in was lottery -- "About one in five adults purchase a lottery ticket at least once a week, and nearly half participate monthly or more."
Problem Gambling Prevalence		10 persons out of 545 answered all three questions in a problem-suggestive manner. This implies that about 1.8% of the State's adults may potentially be compulsive gamblers.
Standardized Problem Gambling Prevalence		
Demographic Correlates of PG		young; separated or divorced; unskilled occupations
Game Correlates of PG		jai-alai, off-track betting, dog racing

2	Location	CONNECTICUT
Year Study Conducted		1986
Age		18+
Source(s)		Laventhol & Horwath, David Cwi & Associates, & Survey Research Associates, Inc. (1986). *The Effects of Legalized Gambling on the Citizens of the State of Connecticut.* Newington: State of Connecticut Division of Special Revenue.
Sample Size		1,224
Sampling Strategy		Randomly selected listed telephone numbers
Survey Description		
Administration Method		telephone interview
Response Rate		
Weighting		age, gender
Threshold for PG Questions		any past-year gambling
Assessment Instrument		DSM-III-L (DIS-III)
Gambling Availability		Bingo; bazaars; raffles; on or off-track betting on horse racing, dog racing, jai alai; weekly and daily lottery; scratch tickets; high stakes bingo
Past Year Gambling Prevalence		74%
Problem Gambling Prevalence		0.34% (endorsed first and two of remaining 3 questions)
Standardized Problem Gambling Prevalence		(0.34 * 2.6 * .60 * 1.44 * .76 = 0.6%)
Demographic Correlates of PG		None reported (only 4 respondents classified as pathological gamblers)
Game Correlates of PG		parimutuel bettors (jai alai, greyhound, horses at track, off-track betting or teletrack)
Comments		Results very tentative because of the unknown weighting factor that should be applied to the DIS-III and the fact that DIS only has 4 questions, whereas the DSM-III has 8 criteria.

3	Location	CONNECTICUT
Year Study Conducted		1991
Age		18+
Source(s)		Christiansen / Cummings Associates. (1992). *Legal Gambling in Connecticut: Assessment of Current Status and Options for the Future*. Report to the Connecticut Division of Special Revenue.
Sample Size		1,000
Sampling Strategy		Random digit dialing proportionate to the number of residents in each of the eight counties in the State; random selection within household.
Survey Description		"legalized gambling in the state"
Administration Method		telephone interview
Response Rate		
Weighting		no
Threshold for PG Questions		
Assessment Instrument		SOGS-L
Gambling Availability		Bingo; bazaars; raffles; on or off-track betting on horse racing, dog racing, jai alai; weekly and daily lottery; scratch tickets; high stakes bingo; sealed/pull-tabs
Past Year Gambling Prevalence		86%
Problem Gambling Prevalence		3.6% (3-4); 2.7% (5+); 6.3% combined
Standardized Problem Gambling Prevalence		6.3 * .72 *.60 * 1.59 * .74 = 3.2%
Demographic Correlates of PG		male; under age 35 years; unmarried; household income less than $25,000.
Game Correlates of PG		Off-track betting; casinos; pull=tabs; football pools; bet with a bookie on a sports event.
Comments		

4	Location	CONNECTICUT
Year Study Conducted		1996
Age		18+
Source(s)		WEFA Group. (1997, June). *A Study Concerning the Effects of Legalized Gambling on the Citizens of the State of Connecticut*. Prepared for: State of Connecticut Department of Revenue Services, Division of Special Revenue.
Sample Size		993
Sampling Strategy		Stratified, single-stage random digit dialing; random selection within household
Survey Description		"regarding leisure activities and hobbies"
Administration Method		telephone interview
Response Rate		
Weighting		gender, age, education, race
Threshold for PG Questions		gambled at least once in life
Assessment Instrument		SOGS-PY & SOGS-L
Gambling Availability		Bingo; bazaars; raffles; on or off-track betting on horse racing, dog racing, jai alai; weekly and daily lottery; scratch tickets; high stakes bingo; sealed/pull-tabs; Foxwoods casino (with EGMs); multi-state lottery
Past Year Gambling Prevalence		88%
Problem Gambling Prevalence		SOGS-PY: 2.2% (3-4); 0.6% (5+); 2.8% combined SOGS-L: 4.2% (3-4); 1.2% (5+); 5.4% combined
Standardized Problem Gambling Prevalence		SOGS-PY: 2.8 * .72 * 1.44 = 2.9%
Demographic Correlates of PG		Reported that data is not statistically significant. Demographic information available (Section 5-13).
Game Correlates of PG		Reported that data is not statistically significant. Gambling preferences information available (Section 5-14).
Comments		Prevalence study was one component of an overall study on socio-economic impacts of gambling.

5	Location	CONNECTICUT
Year Study Conducted		2008
Age		18+
Source(s)		Spectrum Gaming Group. (2009). *Gambling in Connecticut: Analyzing the Economic and Social Impacts*. Linwood, NJ: Author.
Sample Size		3,099 (2,298 Telephone + 801 Online Panel)
Sampling Strategy		Random digit dialing; random selection within household; an additional 801 people participated through a separate online-panel survey; English and Spanish versions available.
Survey Description		"survey for the State of Connecticut about people's attitudes toward gambling"
Administration Method		telephone interview; self-administered online (Online Panel)
Response Rate		Telephone: 35.6% (calculated using data from report using response rates calculations recommended by Williams & Volberg, 2011). Online Panel = 6%
Weighting		Gender, education, age, ethnicity
Threshold for PG Questions		unclear
Assessment Instrument		SOGS-PY & SOGS-L; DSM-IV-PY & DSM-IV-L (NODS)
Gambling Availability		Bingo; bazaars; raffles; on or off-track betting on horse racing, dog racing, jai alai; weekly and daily lottery; scratch tickets; high stakes bingo; sealed/pull-tabs; Foxwoods casino (with EGMs); multi-state lotteries; Mohegan Sun casino
Past Year Gambling Prevalence		70% (Past year participation in illegal gambling = 33.2%)
Problem Gambling Prevalence		Telephone SOGS-PY: 0.9% (3-4); 0.7% (5+); 1.6% combined SOGS-L: 2.2% (3-4); 1.5% (5+); 3.7% combined DSM-IV-PY (NODS): 0.8% (3-4); 0.6% (5+); 1.4% combined DSM-IV-L (NODS): 2.1% (3-4); 1.2% (5+); 3.3% combined Online Panel SOGS-PY: 3.5% (3-4); 3.8% (5+); 7.3% combined SOGS-L: 4.5% (3-4); 4.5% (5+); 9.0% combined DSM-IV-PY (NODS): 3.4% (3-4); 2.1% (5+); 5.5% combined DSM-IV-L (NODS): 5.0% (3-4); 2.9% (5+); 7.9% combined
Standardized Problem Gambling Prevalence		Telephone SOGS-PY: 1.6 * .72 * 1.44 * .53 = 0.9% Telephone DSM-IV-PY: 1.4 * 1.19 * 1.44 * .53 = 1.3%
Demographic Correlates of PG		male; 18-34 years old; some college education; urbanized counties of Hartford and New Haven
Game Correlates of PG		
Comments		Study is a socioeconomic impact investigation that included a prevalence study of gambling and problem gambling.

6	Location	CONNECTICUT
Year Study Conducted		2023
Age		18+
Source(s)		Gemini Research (2023). *Socioeconomic Impacts of Legalized Gambling in Connecticut.* Report commissioned by the Connecticut Department of Mental Health and Addiction Services (DMHAS).
Sample Size		5,259
Sampling Strategy		Mail-out address-based sampling (ABS) with online completion; random selection within household; English and Spanish versions available
Survey Description		"statewide survey about health and recreational behaviors in Connecticut"
Administration Method		self-administered online
Response Rate		11.75%
Weighting		Gender, age, race/ethnicity, education
Threshold for PG Questions		Gambling once/month or more on some type of gambling and/or a self-reported personal history of problem gambling
Assessment Instrument		DSM-IV-PY (NODS) & PPGM
Gambling Availability		Bingo; bazaars; raffles; on or off-track betting on horse racing, dog racing, jai alai; weekly and daily lottery; scratch tickets; high stakes bingo; sealed/pull-tabs; Foxwoods casino; multi-state lotteries; Mohegan Sun casino; keno; online and land-based sports betting; online casino gambling
Past Year Gambling Prevalence		69.2%
Problem Gambling Prevalence		DSM-IV-PY (NODS): 0.7% (3-4); 0.7% (5+); 1.4% combined PPGM: 0.8% (problem gambler); 1.0% (pathological gambler); 1.8% combined
Standardized Problem Gambling Prevalence		DSM-IV-PY (NODS): 1.4 * 1.19 * 1.00 * 1.00 = 1.7% PPGM: 1.8 * 1.00 * 1.00 * 1.00 = 1.8%
Demographic Correlates of PG		Males; people younger than 65+; non-Whites; and people with lower educational attainment
Game Correlates of PG		Not assessed
Comments		Study is a socioeconomic impact investigation that included a prevalence study of gambling and problem gambling.

APPENDIX F: AirSage Home County Adjustment

- AirSage counted 318,574 cell phones at the two CT casinos for the 14-day sample/collection period in January 2023, with 181,006 coming from CT residents (56.8%), and 96,248 of the CT cell phones being from New London County (53.2% of CT total). This was after excluding all cell phones that were present 18 or more days during the month of January in an attempt to eliminate casino employees from the counts.
- 18 days is a reasonable exclusionary criterion that should exclude most employees, but not exclude most heavy gamblers, as:
    - The large majority of full-time employees will likely have worked 20 days or more.
    - Only 0.6% of CT casino gamblers report gambling at a casino 4 or more times a week (in the representative NORC ABS survey data) (although 2.6% of casino gamblers report this in the Centiment OP survey data). Even so, half of these 'regular gamblers' report splitting their time between Foxwoods and Mohegan Sun and/or casinos in other states, so only a very small percentage (<1%) would be present 18 or more days.
- Unfortunately, however**, this exclusionary criterion does not effectively exclude part-time casino employees**. Although we do not have accurate current data for Connecticut, part-time employment is common in the casino industry. Furthermore, aggregated data from the three Massachusetts casinos (Encore Boston Harbor, MGM Springfield, and Plainridge Park Casino) where we do have comprehensive and accurate data shows that **36.2% of the 6,536 casino employees in 2023 are part-time** (personal communication from Thomas Peake, UMass Donahue Institute, July 2023).
- The total employment numbers for the two Connecticut casinos are somewhat uncertain as explained in the **Casino Employment** section. Our best estimate is that there are 13,953 employees. If we assume 13,953 total employees, with 36.2% of them being part-time, this would represent 5,051 individuals. If we assume these individuals might have been present an average of 7 days during the 14-day period (versus 10 days for the full-time people), then this would result in **35,357 additional counts that should have been excluded.**

- Prior research has established that the vast majority of Foxwood employees reside in New London County and to a lesser extent Windham County (Taylor, 2019; Figure 8), with the same pattern likely occurring for Mohegan Sun. More generally, local residency is also very common for most casinos employees, as is seen in Massachusetts (with the exception of Plainridge Park Casino):

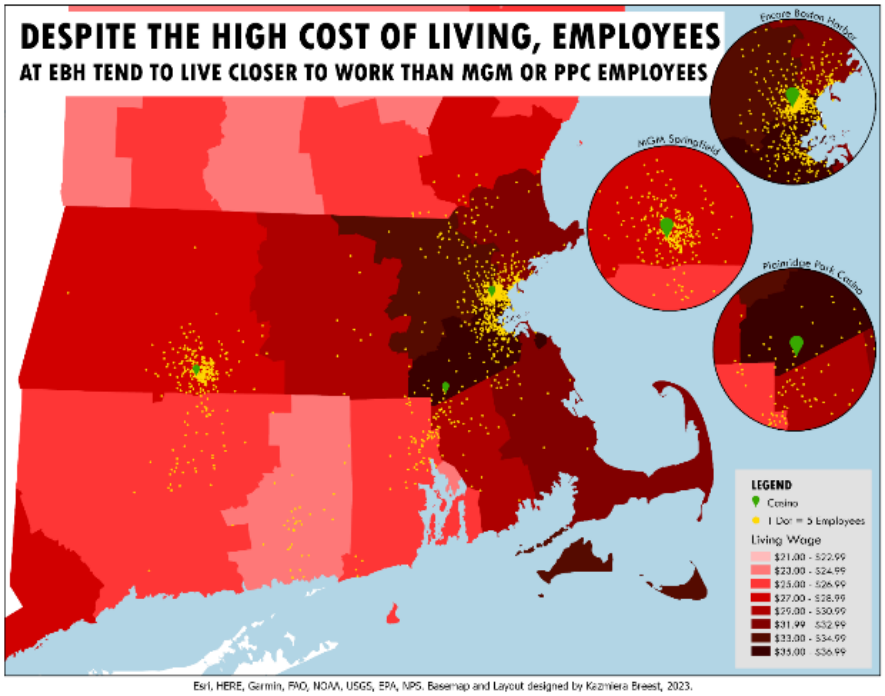

Figure supplied by Thomas Peake, UMass Donahue Institute

- Thus, it is clear that these **additional AirSage counts should be subtracted primarily from the New London County counts.**

- Consistent with this contention, the AirSage counts for New London County (and Windham County to a lesser extent) are considerably higher than self-reported Connecticut casino patronage by residents of those counties in both the NORC ABS and Centiment OPS population surveys (e.g., New London County AirSage count is 2.92 times higher that the NORC population survey indicates and 6.78 higher than the Centiment population survey indicates).

	AirSage Visitation Counts	Share of Total	NORC ABS weighted 14 day visitation total	Share of 14 day total	AirSage/ NORC share ratio	Centiment OPS unweighted 14 day visitation total	Share of 14 day total	AirSage/ Centiment share ratio
Fairfield County	10,807	6.0%	20,322	14.8%	0.40	108	19.1%	0.31
Hartford County	23,141	12.8%	32,625	23.8%	0.54	164	29.2%	0.44
Litchfield County	3,111	1.7%	18,009	13.2%	0.13	28	5.0%	0.35
Middlesex County	6,850	3.8%	4,528	3.3%	1.14	30	5.3%	0.72
New Haven County	25,902	14.3%	23,831	17.4%	0.82	155	27.5%	0.52
New London County	96,248	53.2%	24,909	18.2%	2.92	44	7.8%	6.78
Tolland County	3,951	2.2%	6,440	4.7%	0.46	10	1.7%	1.27
Windham County	10,996	6.1%	6,213	4.5%	1.34	24	4.3%	1.40
	181,006	100.0%	136,877	100.0%		563	100.0%	

- That said, it is also reasonable to assume that it is much more likely for local residents to visit the many restaurants, bars, spas, event centres, and other non-casino amenities that are available at these casinos (i.e., without gambling), and it is these visits that are partly responsible for the apparent inflated local county AirSage counts.

- *Taking everything into consideration, in an effort to correct these local overcounts, a 50% reduction has been made in the host casino(s) county AirSage count. In the case where there are two counties in close proximity to the casino(s), a 25% reduction has been made in each.*

APPENDIX G: Methodology for Assessing Indirect Economic Impacts

This estimate of economic impacts was generated from the data collected as part of the summary of direct economic impacts. In certain cases, assumptions needed to be made to account for missing data. This is often the case in assessments of economic impacts. The following are the assumptions made in order to generate the inputs for the model.

Gambling Spending and Casino Revenue

Since the casinos pay taxes on slots revenues, spending on slot machines can be easily deduced from that. Estimates of spending on other casino activities, such as table games or non-gaming revenue, needed to be estimated. In the case of table games, UMDI was able to use known slot revenue and reported gambling revenue from Mohegan Sun's financial reports to deduce an estimate there. Since a similar number was not available for Foxwoods, UMDI applied the ratio of slots to other gambling revenue to Foxwoods' slots spending.

Government Spending

While government revenue is easy to track, how that money is spent is very difficult to track, as government funds are generally fungible. Even in the case that funds are earmarked for that specific purpose, there is no way to know for sure whether that will result in greater spending for that purpose, or simply allow policymakers to divert funds which otherwise would have been needed to fund that purpose towards other departments or programs. In general, it is UMDI's practice to model all revenue to the state government as general state government spending. This money was spread proportionally across the state, based on each county's share of state government spending in 2022, according to the REMI model.

One exception to this rule is funds that were directly allocated to Connecticut municipalities through the Mashantucket Pequot and Mohegan Fund. These funds are modeled as local government spending.

Revenue to Lottery Vendors

UMDI was able to determine the total revenue to Lottery vendors through its annual reports. However, we were unable to determine the precise geographical disruption of these revenues. In order to model the activity, these funds were distributed based on each county's share of statewide retail trade sales, since most lottery vendors are retail trade establishments.

Consumer Reallocation

Our method for estimating the share of in-state spending which is estimated is documented above. In the REMI model, we modeled this spending as lost tourism spending from resident households, with those funds allocated based on each county's share of total casino visitors within the AirSage data.

APPENDIX H: Special Population Studies of Gambling in Connecticut

Farhat, L. C., Wampler, J., Steinberg, M. A., Krishnan-Sarin, S., Hoff, R. A., & Potenza, M. N. (2021). Excitement-seeking gambling in adolescents: Health correlates and gambling-related attitudes and behaviors. *Journal of gambling studies*, *37*(1), 43-57.

Motivational characteristics such as excitement-seeking are key components of models of addiction, including problem gambling. Previous studies have established associations between excitement-seeking and problem gambling in youth. However, these studies have employed dimensional psychological assessments which are unlikely to be routinely administered. Other approaches to conceptualize excitement-seeking could be of value. In the present study, we employed a single question (*What are the reasons that you gamble?*) to identify adolescents who reported excitement-seeking motivation for gambling. Cross-sectional data from 2030 adolescent gamblers who participated in a Connecticut high-school survey were examined. Gambling perceptions and correlates of problem-gambling severity were examined relative to excitement-seeking and non-excitement-seeking gambling. Gambling perceptions were more permissive and at-risk/problem gambling was more frequent among adolescents with excitement-seeking gambling versus non-excitement-seeking gambling. A weaker relationship between problem-gambling severity and moderate and heavy alcohol use was observed for excitement-seeking versus non-excitement-seeking gambling. Excitement-seeking gambling is associated with more permissive gambling-related attitudes and riskier gambling behaviors and may account for some variance in adolescent risk of heavy alcohol use. A single question may provide important information for identifying adolescents who are at elevated risk of problem gambling and associated negative outcomes, although the utility of the question in specific settings warrants direct examination, especially given the observed high prevalence of excitement-seeking motivations for gambling.

Farhat, L. C., Foster, D. W., Wampler, J., Krishnan-Sarin, S., Hoff, R. A., & Potenza, M. N. (2022). Casino gambling in adolescents: Gambling-related attitudes and behaviors and health and functioning relationships. *Journal of Gambling Studies*, *38*(3), 719-735.

Recreational and problem gambling have been linked with adverse health and functioning outcomes among adolescents. Youth may gamble and engage in other risk-taking behaviors in casinos. There are limited data available regarding casino gambling in high-school students, and factors linked to adolescent gambling in casinos have yet to be systematically investigated. To address this gap, we analyzed cross-sectional data from 2010 Connecticut high-school students with chi-square tests and logistic regression models to examine casino gambling in relation to at-risk/problem gambling (ARPG) with respect to sociodemographic characteristics, gambling perceptions & attitudes, health/functioning measures and gambling behaviors. Approximately 11 % of adolescents acknowledged gambling in casinos. ARPG was more frequent and gambling perceptions were more permissive among adolescents endorsing casino gambling. Stronger relationships between ARPG and heavy alcohol and drug use and weaker relationships between ARPG and engagement in extracurricular activities, gambling with friends, gambling with strangers and gambling for financial reasons were observed among adolescents endorsing casino gambling. In conclusion, gambling in casinos was endorsed by a sizable minority of adolescents who gamble, and prevention efforts should consider targeting permissive attitudes towards gambling, adolescent drinking and participation in extracurricular activities when addressing underage casino gambling.

Hammond, C. J., Pilver, C. E., Rugle, L., Steinberg, M. A., Mayes, L. C., Malison, R. T., ... & Potenza, M. N. (2014). An exploratory examination of marijuana use, problem-gambling severity, and health correlates among adolescents. *Journal of behavioral addictions*, *3*(2), 90-101.

Background and aims: Gambling is common in adolescents and at-risk and problem/pathological gambling (ARPG) is associated with adverse measures of health and functioning in this population. Although ARPG commonly co-occurs with marijuana use, little is known how marijuana use influences the relationship between problem-gambling severity and health- and gambling-related measures.
Methods: Survey data from 2,252 Connecticut high school students were analyzed using chi-square and logistic regression analyses.
Results: ARPG was found more frequently in adolescents with lifetime marijuana use than in adolescents denying marijuana use. Marijuana use was associated with more severe and a higher frequency of gambling-related behaviors and different motivations for gambling. Multiple health/functioning impairments were differentially associated with problem-gambling severity amongst adolescents with and without marijuana use. Significant marijuana-use-by-problem-gambling-severity-group interactions were observed for low-average grades (OR = 0.39, 95% CI = [0.20, 0.77]), cigarette smoking (OR = 0.38, 95% CI = [0.17, 0.83]), current alcohol use (OR = 0.36, 95% CI = [0.14, 0.91]), and gambling with friends (OR = 0.47, 95% CI = [0.28, 0.77]). In all cases, weaker associations between problem-gambling severity and health/functioning correlates were observed in the marijuana-use group as compared to the marijuana-non-use group.
Conclusions: Some academic, substance use, and social factors related to problem-gambling severity may be partially accounted for by a relationship with marijuana use. Identifying specific factors that underlie the relationships between specific attitudes and behaviors with gambling problems and marijuana use may help improve intervention strategies.

Petry, N. M. (2003). A comparison of treatment-seeking pathological gamblers based on preferred gambling activity. *Addiction*, *98*(5), 645-655.

Aims: To compare and contrast gamblers with different forms of problematic gambling activities.
Design, setting and measurements: Pathological gamblers completed the Addiction Severity Index (ASI) and gambling questionnaires when initiating out-patient treatment. Participants (n = 347) were categorized by their most problematic form of gambling activity: sports, horse/dog-races, cards, slots and scratch/lottery tickets. Differences in demographics, gambling variables, and ASI composite scores were compared across groups.
Findings: After controlling for demographic variables, the types of gamblers differed in severity of gambling, alcohol and psychiatric problems. Horse/dog-race gamblers were generally older, male and less educated; they began gambling regularly at a young age and spent relatively high amounts of money gambling. Sports gamblers were young males and had intermediary gambling problems; they had relatively high rates of current substance use but few psychiatric problems. Card players spent low to moderate amounts of time and money gambling, and they generally reported few alcohol problems and little psychiatric distress. Slot machine players were older and more likely to be female. Slot gamblers began gambling later in life, had high rates of bankruptcy and reported psychiatric difficulties. Scratch/lottery gamblers spent the least amount of money gambling, but they gambled the most frequently and had relatively severe alcohol and psychiatric symptoms.
Conclusions: Gambling patterns and severity of psychosocial problems vary by form of problematic gambling, and these differences may influence treatment recommendations and outcomes.

Petry, N. M., & Oncken, C. (2002). Cigarette smoking is associated with increased severity of gambling problems in treatment-seeking gamblers. *Addiction*, *97*(6), 745-753.

Aims: Cigarette smoking and gambling often co-occur, but very little is known about smoking or its correlates in disordered gamblers. This study compared gambling and psychosocial problems in treatment-seeking gamblers who smoke versus those who do not.
Methods: At intake to gambling treatment programs, gamblers completed the addiction severity index (ASI) and gambling questionnaires. Subjects were categorized into non-daily smokers (n = 107) and daily smokers (n = 210). Differences in demographics, gambling variables and ASI composite scores were compared between the groups.
Results: The daily smokers were more likely to have a history of treatment for a substance use disorder than the non-daily smokers. After controlling for substance abuse treatment histories, gender and age, the daily smokers

demonstrated more severe gambling, family/social and psychiatric problems. Compared to non-daily smokers, the daily smokers gambled on more days and spent more money gambling; they also 'craved' gambling more and had lower perceived control over their gambling. The daily smokers were more likely to be taking psychiatric medications, and they experienced psychiatric symptoms, especially anxiety symptoms, on a greater number of days than non-daily smokers.
Implications: Results from this study suggest that about two-thirds of treatment-seeking gamblers are current daily cigarette smokers, and smoking status is associated with more severe gambling and psychiatric symptoms. These results warrant further investigation of smoking in gamblers and whether smoking adversely affects the course of treatment or outcomes among gamblers.

Petry, N. M., Armentano, C., Kuoch, T., Norinth, T., & Smith, L. (2003). Gambling participation and problems among South East Asian refugees to the United States. *Psychiatric services*, *54*(8), 1142-1148.

OBJECTIVE: Gambling is common among South East Asian refugees, but no known studies have evaluated the prevalence of pathological gambling in these populations. The purpose of this study was to assess rates of gambling participation and gambling problems among South East Asian refugees. *METHODS:* Ninety-six immigrants to the United States from Laos, Cambodia, and Vietnam who attended community service organizations for these ethnic groups in Connecticut were asked to complete the South Oaks Gambling Screen (SOGS), which had been translated into their native languages. Demographic information as well as data on recent gambling activities were also obtained. *RESULTS:* The SOGS retained high internal consistency in the sample, with a Cronbach's alpha of .90. The lifetime prevalence of pathological gambling was 59 percent. Rates of gambling problems did not differ across the three ethnic groups. However, being male, divorced or separated, and younger were significant predictors of pathological gambling. More than half of all the respondents had gambled within two weeks of the interview, and 42 percent had wagered more than $500 in the previous two months. *CONCLUSIONS:* These data call for more research into the social, environmental, and cultural context of gambling among South East Asian refugees. Ethnically sensitive prevention and intervention strategies are needed to address the extraordinarily high rates of gambling problems in this population.

Potenza, M. N., Steinberg, M. A., McLaughlin, S. D., Wu, R., Rounsaville, B. J., & O'Malley, S. S. (2001). Gender-related differences in the characteristics of problem gamblers using a gambling helpline. *American Journal of Psychiatry*, *158*(9), 1500-1505.

OBJECTIVE: The characteristics of male and female gamblers utilizing a gambling helpline were examined to identify gender-related differences. *METHOD:* The authors performed logistic regression analyses on data obtained in 1998–1999 from callers to a gambling helpline serving southern New England (CT). *RESULTS:* Of the 562 phone calls used in the analyses, 349 (62.1%) were from male callers and 213 (37.9%) from female callers. Gender-related differences were observed in reported patterns of gambling, gambling-related problems, borrowing and indebtedness, legal problems, suicidality, and treatment for mental health and gambling problems. Male gamblers were more likely than female gamblers to report problems with strategic or "face-to-face" forms of gambling, e.g., blackjack or poker. Female gamblers were more likely to report problems with nonstrategic, less interpersonally interactive forms of gambling, e.g., slot machines or bingo. Female gamblers were more likely to report receiving nongambling-related mental health treatment. Male gamblers were more likely to report a drug problem or an arrest related to gambling. High rates of debt and psychiatric symptoms related to gambling, including anxiety and depression, were observed in both groups. *CONCLUSIONS:* Individuals with gambling disorders have gender-related differences in underlying motivations to gamble and in problems generated by excessive gambling. Different strategies may be necessary to maximize treatment efficacy for men and for women with gambling problems.

Potenza, M. N., Steinberg, M. A., & Wu, R. (2005). Characteristics of gambling helpline callers with self-reported gambling and alcohol use problems. *Journal of Gambling Studies*, *21*(3), 233-254.

The characteristics of problem gamblers calling the Connecticut Council on Problem Gambling (CCPG) gambling helpline during the years 2000–2001 (*n* = 960) were examined based on the presence or absence of self-reported alcohol use problems. A relatively low proportion of callers reported a problem with alcohol use (173/960 or 18.0%),

and of those acknowledging an alcohol use problem, the majority reported a past rather than current problem (143/173 or 82.7%). A logistic regression analysis found that, as compared with problem gamblers denying any alcohol use problems, those reporting past or current alcohol use problems were more likely to be male and more frequently acknowledged problems with more forms of gambling, suicide attempts related to gambling, arrests secondary to gambling, daily tobacco use, drug use problems, prior substance abuse treatment, and family histories positive for alcohol and drug use problems. The findings highlight the strong relationship between alcohol use problems and other substance use problems, and suggest that problem gamblers with as compared with those without alcohol use problems demonstrate greater problems in multiple areas (arrest, attempted suicide) linked by impaired impulse control.

Potenza, M. N., Steinberg, M. A., McLaughlin, S. D., Wu, R., Rounsaville, B. J., Krishnan-Sarin, S., ... & O'Malley, S. S. (2004). Characteristics of tobacco-smoking problem gamblers calling a gambling helpline. *American Journal on Addictions*, *13*(5), 471-493.

Few studies have examined the smoking behaviors of problem gamblers. A high proportion of problem gamblers calling a gambling helpline reported daily tobacco smoking (43.1%). Problem gamblers reporting daily tobacco smoking more frequently acknowledged depression and suicidality secondary to gambling, gambling-related arrests, alcohol and drug use problems, mental health treatment, and problems with casino slot machine gambling. The findings substantiate the relationship in problem gamblers between tobacco smoking and psychiatric symptomatology, particularly other substance use problems. The high proportion of callers reporting daily tobacco smoking highlights the need for enhanced smoking cessation efforts in problem gamblers.

Rahman, A. S., Balodis, I. M., Pilver, C. E., Leeman, R. F., Hoff, R. A., Steinberg, M. A., ... & Potenza, M. N. (2014). Adolescent alcohol-drinking frequency and problem-gambling severity: Adolescent perceptions regarding problem-gambling prevention and parental/adult behaviors and attitudes. *Substance abuse*, *35*(4), 426-434.

Background: The study examined in adolescents how alcohol-drinking frequency relates to gambling-related attitudes and behaviors and perceptions of both problem-gambling prevention strategies and adult (including parental) behaviors/attitudes. *Methods:* A survey assessing alcohol, gambling, and health and functioning measures in 1609 high school students. Students were stratified into low-frequency/nondrinking and high-frequency-drinking groups, and into low-risk and at-risk/problematic gambling groups. *Results:* High-frequency drinking was associated with at-risk/problematic gambling ($\chi^2(1,N = 1842) = 49.22$, $P < .0001$). High-frequency-drinking versus low-frequency/nondrinking adolescents exhibited more permissive attitudes towards gambling (e.g., less likely to report multiple problem-gambling prevention efforts to be important). At-risk problematic gamblers exhibited more severe drinking patterns and greater likelihood of acknowledging parental approval of drinking ($\chi^2(1, N = 1842) = 31.58$, $P < .0001$). Problem-gambling severity was more strongly related to gambling with adults among high-frequency-drinking adolescents (odds ratio [OR] = 3.17, 95% confidence interval [95% CI] = [1.97, 5.09]) versus low-frequency/nondrinking (OR = 1.86, 95% CI = [0.61, 2.68]) adolescents (interaction OR = 1.78, 95% CI = [1.05, 3.02]). *Conclusions:* Interrelationships between problematic drinking and gambling in youth may relate to more permissive attitudes across these domains. Stronger links between at-risk/problem gambling and gambling with adults in the high-frequency-drinking group raises the possibility that interventions targeting adults may help mitigate youth gambling and drinking.

Rahman, A. S., Pilver, C. E., Desai, R. A., Steinberg, M. A., Rugle, L., Krishnan-Sarin, S., & Potenza, M. N. (2012). The relationship between age of gambling onset and adolescent problematic gambling severity. *Journal of psychiatric research*, *46*(5), 675-683.

The aim of this study was to characterize the association between problem gambling severity and multiple health, functioning and gambling variables in adolescents aged 13–18 stratified by age of gambling onset. Survey data in 1624 Connecticut high school students stratified by age of gambling onset (≤11 years vs. ≥ 12 years) were analyzed in descriptive analyses and in logistic regression models. Earlier age of onset was associated with problem gambling severity as indexed by a higher frequency of at-risk/problem gambling (ARPG). Most health, functioning and gambling measures were similarly associated with problem gambling severity in the earlier- and later-age-of-gambling-onset groups with the exception of participation in non-strategic forms of gambling, which was more strongly associated with

ARPG in the earlier-onset (OR = 1.74, 95%CI = [1.26, 2.39]) as compared to later-onset (OR = 0.94, 95%CI = [0.60, 1.48]) group (Interaction OR = 1.91, 95%CI = [1.18, 3.26]). Post-hoc analysis revealed that earlier-onset ARPG was more strongly associated with multiple forms of non-strategic gambling including lottery (instant, traditional) and slot-machine gambling. The finding that problem gambling severity is more closely associated with multiple non-strategic forms of gambling amongst youth with earlier-onset gambling highlights the relevance of these types of youth gambling. The extent to which non-strategic forms of gambling may serve as a gateway to other forms of gambling or risk behaviors warrants additional study, and efforts targeting youth gambling should consider how best to address non-strategic gambling through education, prevention, treatment and policy efforts.

Slavin, M., Pilver, C. E., Hoff, R. A., Krishnan-Sarin, S., Steinberg, M. A., Rugle, L., & Potenza, M. N. (2013). Serious physical fighting and gambling-related attitudes and behaviors in adolescents. *Journal of behavioral addictions*, *2*(3), 167-178.

Background and aims: Physical fighting and gambling are common risk behaviors among adolescents. Prior studies have found associations among these behaviors in adolescents but have not examined systematically the health and gambling correlates of problem-gambling severity amongst youth stratified by fight involvement.
Methods: Survey data were used from 2,276 Connecticut high school adolescents regarding their physical fight involvement, gambling behaviors and perceptions, and health and functioning. Gambling perceptions and correlates of problem-gambling severity were examined in fighting and non-fighting adolescents.
Results: Gambling perceptions were more permissive and at-risk/problem gambling was more frequent amongst adolescents reporting serious fights versus those denying serious fights. A stronger relationship between problem-gambling severity and regular smoking was observed for adolescents involved in fights.
Discussion and conclusions: The more permissive gambling attitudes and heavier gambling associated with serious fights in high school students suggest that youth who engage in physical fights war rant enhanced prevention efforts related to gambling. The stronger relationship between tobacco smoking and problem-gambling severity amongst youth engaging in serious fights suggest that fighting youth who smoke might warrant particular screening for gambling problems and subsequent interventions.

Stefanovics, E. A., Gueorguieva, R., Zhai, Z. W., & Potenza, M. N. (2023). Gambling participation among Connecticut adolescents from 2007 to 2019: Potential risk and protective factors. *Journal of Behavioral Addictions*.

Background and aims: Gambling in adolescents is a public health concern. This study sought to examine patterns of gambling among Connecticut high-school students using seven representative samples covering a 12-year period.
Methods: Data were analyzed from *N* = 14,401 participants in cross-sectional surveys conducted every two years based on random sampling from schools in the state of Connecticut. Anonymous self-completed questionnaires included socio-demographic data, current substance use, social support, and traumatic experiences at school. Chi-square tests were used to compare socio-demographic characteristics between gambling and non-gambling groups. Logistic regressions were used to assess changes in the prevalence of gambling over time and effects of potential risk factors on the prevalence, adjusted for age, sex, and race.
Results: Overall, the prevalence of gambling largely decreased from 2007 to 2019, although the pattern was not linear. After steadily declining from 2007 to 2017, 2019 was associated with increased rates of gambling participation. Consistent statistical predictors of gambling were male gender, older age, alcohol and marijuana use, higher levels of traumatic experiences at school, depression, and low levels of social support.
Discussion and Conclusion: Among adolescents, older males may be particularly vulnerable to gambling that relates importantly to substance use, trauma, affective concerns, and poor support. Although gambling participation appears to have declined, the recent increase in 2019 that coincides with increased sports gambling advertisements, media coverage and availability warrants further study. Our findings suggest the importance of developing school-based social support programs that may help reduce adolescent gambling.

Yip, S. W., Desai, R. A., Steinberg, M. A., Rugle, L., Cavallo, D. A., Krishnan-Sarin, S., & Potenza, M. N. (2011). Health/functioning characteristics, gambling behaviors, and gambling-related motivations in adolescents stratified by gambling problem severity: Findings from a high school survey. *The American Journal on Addictions, 20*(6), 495-508.

In adults, different levels of gambling problem severity are differentially associated with measures of health and general functioning, gambling behaviors, and gambling-related motivations. Here we present data from a survey of 2,484 Connecticut high school students, and investigate the data stratifying by gambling problem severity based on DSM-IV criteria for pathological gambling. Problem/pathological gambling was associated with a range of negative functions; for example, poor academic performance, substance use, dysphoria/depression, and aggression. These findings suggest a need for improved interventions related to adolescent gambling and a need for additional research into the relationship (eg, mediating factors) between gambling and risk and protective behaviors.

Zhai, Z. W., Duenas, G. L., Wampler, J., & Potenza, M. N. (2020). Gambling, substance use and violence in male and female adolescents. *Journal of gambling studies*, *36*(4), 1301-1324.

The study systematically examined the link between history of gambling, and substance-use and violence-related measures in male and female adolescents, and compared association differences between genders in representative youth risk behavior surveillance data. An anonymous survey was administered to 2425 9th- to 12th-grade students in the state of Connecticut to assess risk behaviors that impact health. Reported past-12-months gambling was the independent variable of interest. Chi squares and adjusted odds-ratios were computed to determine gambling associations with demographic variables, substance-use, and violence-related measures, and whether associations were different between genders. Among students, 18.6% reported gambling. Reported gambling in males and females associated with lifetime use of any drugs, marijuana, cocaine, inhalants, heroin, methamphetamines, ecstasy, synthetic marijuana, non-medical pain-relievers, and injected drugs, in addition to past-30-days cigarette smoking, alcohol and heavy alcohol drinking, and marijuana use. Gambling associated with reported weapon-carrying, being threatened or injured with a weapon, forced sexual intercourse, bullying, and electronic bullying in males; physical dating violence in females; and physical fighting and sexual dating violence in both groups. Gambling and gender interaction terms did not associate with outcome measures except synthetic marijuana use, which trended towards significance ($P = 0.052$). Gambling in adolescence was similarly linked to risk behaviors involving substance-use in males and females, though gambling relationships with different violence-measures varied between genders. Assessing gambling behavior may be important for targeted preventions focused on adolescents at risk for substance-use disorder and physical violence.

APPENDIX I: Written Responses to Economic Impact Questions from Tribes

Connecticut Gambling Impacts Study
Economic Impact Questions
Response from the Mashantucket Pequot Tribal Nation
Regarding Foxwoods Resort Casino

OPERATING IMPACTS

Reflecting on the operations of the Foxwoods Resort Casino since the last study (fifteen years ago)

What do you consider the most important (top three) economic or fiscal impacts of Foxwoods Casino to the immediate Tribal community?

1. **Revenue for the Tribal Nation:** Foxwoods Resort Casino ("Foxwoods") as well as the Mashantucket Pequot Tribal Nation's ("MPTN") online gaming operations generate significant funding for the MPTN government. MPTN uses this funding to provide government services to its members and the community. Services funded by gaming revenue include:
    a. a tribal health clinic, pharmacy, and self-funded health plan
    b. education programs including an early education center, after-school programs, and scholarship program for primary, secondary, and post-secondary education
    c. full-time fire and police departments
    d. public works department providing road maintenance, snow removal, waste removal, landscaping, and other services
    e. utilities, including a water treatment facility
    f. social security programs, including a tribal disability program and elder benefits program
    g. tribal court handling trials, appeals, and probate matters
    h. housing department; and
    i. regulatory bodies overseeing building permitting, environmental permitting, historic preservation, zoning, food safety, and employee rights.

2. **Job Creation:** Foxwoods has created many job opportunities on and around the MPTN Reservation. Under MPTN's Tribal Preference Law, Tribal Members and their family receive preference for jobs if they meet the minimum qualifications, which has promoted hiring from within the MPTN community. These jobs then provide training that, over time, has resulted in Tribal Members taking on more leadership responsibilities at Foxwoods. Management positions held by Tribal Members include the Foxwoods Chief Executive Officer, Senior VP of Human Resources, and Senior VP of Gaming Operations. Revenue from Foxwoods also funds the services listed above, which generates additional employment opportunities on the MPTN Reservation. Finally, Foxwoods provides opportunities for Tribal Member businesses, which creates additional jobs. For example, Joshua's Limousine is a Tribal Member-owned business that has served many Foxwoods patrons. By creating economic opportunities in the region, Foxwoods has encouraged repatriation from Tribal Members who had previously moved away from Mashantucket in response to the limited economic development in the region.

3. **Third-Party Investment:** Foxwoods' success has encouraged $500 million in third-party investment at Mashantucket. For example, Tanger Outlet constructed a 300,000 square foot outlet mall that is connected to Foxwoods. Additionally, a Great Wolf Lodge 500,000 square foot hotel and indoor water park resort is currently under construction on the Reservation.

What do you consider the most important (top three) economic or fiscal impacts of Foxwoods Casino to the surrounding region in Connecticut or to the state as a whole?

1. **Direct Financial Contributions:** Since 2008, Foxwoods Resort Casino and MPTN's online gaming operations have generated direct funding to the State of over $2 billion (over $9 billion since Foxwoods opened in 1992). Alongside the Mohegan Tribe, tribal gaming contributions to the State significantly outpace the payments of any other taxpayer in Connecticut. Indeed, in a 2019 MPTN-commissioned economic impact study conducted by Taylor Policy Group, the two tribes' combined annual contributions to the State was determined to be almost a third the size of the $921 million that Connecticut realized annually in corporation tax revenue. Further, MPTN's 25% direct *payment* of $120 million in Connecticut fiscal year 2018 would nearly cover the cost of Connecticut's business exemption of sales taxes for machinery used in manufacturing, $101 million, and its research and experimentation tax credit, $21 million. Unlike other businesses in the State, these benefits have been generated without the provision of any State tax abatement, relocation incentive, tax exemption, or other Connecticut tax expenditure.

   Revenue to the State resulting from MPTN gaming has been distributed both to municipal governments and to the State's general fund. MPTN also owns various off-reservation properties that serve as amenities to Foxwoods, including the Lake of Isles golf club in North Stonington, CT, the Two Trees Inn in Ledyard, CT, and the Eagle Park office building in Stonington, CT. The taxes assessed on these off-reservation properties make MPTN among the largest taxpayer in each town.

2. **Local Partnerships:** Using funds from its gaming operations, Foxwoods and MPTN have collaborated with State and local governments and non-profit organizations to provide various services off-reservation. MPTN has funded various projects in the surrounding region, including a $67 million road construction project funded entirely by MPTN, which was completed in 2009. The project decreased traffic congestion, improved business opportunities, and increased tourism in Southeastern Connecticut. MPTN also funded the $18 million development of a first-class office building at the Mercantile Exchange Building, owned by the Norwich Community Development Corporation, in Norwich, CT. The MPTN Fire Department and MPTN Police Department also provide mutual aid to the region, as many of the surrounding municipalities have only part-time or voluntary fire and police departments. MPTN also supports various non-profit organizations in the region, including partnership with the United Way of Southeastern CT and sponsorship of the Mystic Aquarium.

3. **Economic Development:** Foxwoods has fostered significant economic development in Southeastern Connecticut, including by: creating jobs at Foxwoods, with the MPTN government, and at MPTN's other business enterprises; creating opportunities for local businesses to service Foxwoods, the MPTN government, and MPTN's other businesses; and increasing tourism to Southeastern Connecticut.

What changes in the gaming industry have been most notable over the past fifteen years and what has been the most significant economic impact related to those changes?

1. **Online Gaming:** The legalization of online gaming has had a significant impact in gaming markets across the United States since the repeal of the Professional and Amateur Sports Protection Act

in 2018. We have found online gaming has been supplemental to retail gaming, not cannibalistic. It has served as an additional source of revenue, and also presents a medium to cross-promote retail gaming and experiences at Foxwoods. It also allows MPTN, located in a remote corner of the state, to access more Connecticut players.

2. **Increased Competition:** There has been a significant increase in competition in the past 15 years, particularly with commercial (i.e., non-tribal) casinos. In this timeframe, multiple casinos have opened in each of the states surrounding Connecticut and several other New England states (Rhode Island – 2, Massachusetts – 3, New York – 12 (excluding tribal gaming), Pennsylvania – 17, Maine – 2), markets in which Foxwoods competes for customers. As a result of this increased gaming competition, Foxwoods has invested more heavily into non-gaming amenities and experiences for its guests to differentiate itself as a destination resort.

BUSINESS IMPACTS

When it comes to Foxwoods Casinos' subcontracting or supplier relationships, which Connecticut business sectors or industries are most heavily engaged with the casino?

1. Food and beverage
2. Waste removal
3. Energy

MPTN's 2019 economic impact study revealed that nearly one-fifth of MPTN's vendor purchasing was done with almost 900 Connecticut-based vendors, and over 40 percent of its vendor purchasing stayed in the New England region.

Does Foxwoods Casino have a program to strengthen supplier or sub-contractor diversity with minority-owned businesses, or women- or veteran-owned businesses?

Yes, Foxwoods follows the MPTN Supplier Diversity Initiative, available at: https://procurement.mptn-nsn.gov/supplier-diversity/. This policy promotes hiring Native American, minority, and women-owned businesses. Foxwoods has a Supplier Diversity Coordinator to help maintain a pool of diverse suppliers. Foxwoods' standard terms and conditions also require that 15% of all subcontract work be awarded to Native American, minority, and women-owned businesses.

EMPLOYMENT IMPACTS

To what degree has Foxwoods Casino provided jobs or increased employment opportunities for workers in your immediate area or for Connecticut workers generally?

MPTN is one of the largest employers in the state of Connecticut. Through Foxwoods, other MPTN-owned enterprises and the tribal government, MPTN provides jobs for over 6,000 employees – approximately six times the MPTN tribal enrollment. MPTN provides employees with competitive benefits, including health care, and a 401(k) with employer match, disability insurance, childcare reimbursement, tuition reimbursement, paid meals, and other benefits.

Connecticut Gambling Impacts Study
Economic Impact Questions
Response from the Mohegan Tribe
Regarding Mohegan Sun

OPERATING IMPACTS

Reflecting on the operations of the Mohegan Sun since the last study (fifteen years ago)

What do you consider the most important (top three) economic or fiscal impacts of Mohegan Sun* to the immediate Tribal community*?

Serving our Tribe's members begins with ensuring that their basic safety and social service needs are met. The Mohegan Tribe maintains a 24/7 fire and emergency department that provides Basic and Advanced Life Support (ALS) services, intercept, fire, and hazmat – not just for our Tribe but throughout our region of Connecticut, responding to 4,500 Fire & EMS calls from surrounding towns each year. The Tribe also ensures that safe, clean drinking water is available for the entire region, and regularly partners with Yale New Haven Health to ensure access high quality health care on reservation and beyond.

We also deeply value education. Our Tribe offers internship opportunities with local and regional colleges including Eastern Connecticut State University, University of Massachusetts, Nicholas College, UCONN, University of New Haven, Johnson & Wales, Mitchell College, and Three Rivers Community College. Additionally, our Tribe partners with Post University on an Education Partnership which offers a 20% tuition reduction to students who utilize the program. And finally, every summer Mohegan Sun brings on numerous paid tribal internships.

The Tribe also works tirelessly on behalf of its members to preserve our shared history. The Tantaquidgeon Museum was built in 1931 and is the oldest Native American owned and operated museum in the United States, sharing the Mohegan culture with surrounding communities and visitors who wish to experience and learn about the history of the Mohegan people.

What do you consider the most important (top three) economic or fiscal impacts of Mohegan Sun to the surrounding region in Connecticut or to the state as a whole?

The Mohegan Tribe continues to be one of the largest employers in the state, serving as a major economic driver in Southeastern Connecticut. We have approximately 5,000 employees, and we know that when our businesses succeed, Connecticut succeeds. The Mohegan corporate team, which has various Tribal members as well, is roughly an additional 200 team members.

We also contribute directly to Connecticut's state budget. From November 2022 to January 2023, Mohegan has contributed to the State of Connecticut a total of $30,232,992 from slot contributions, and $5,326,728 from online gaming contributions.

The strength of Mohegan Gaming across the world also advances our efforts here in Connecticut and in turn benefits Connecticut's economy. Mohegan Sun Connecticut will always be our flagship, as our Tribe's home, so as we grow stronger and gain recognition, so does our ability to invest here in Connecticut, including recently announced $15 million in investments in our Connecticut properties.

Mohegan Sun generated $1.1 billion in total property net revenue in 2019, which included $644.1 million in net gaming revenue and $478.3 million in non-gaming revenue (including leased outlet sales).

Beyond our businesses, the Tribe's charitable operations are a major, ongoing part of our partnership with Connecticut. We are proud to have contributed more than $11 million to regional charities and non-profits since 2008 across various local causes and groups including Mothers Against Drunk Drivers, the United Way, the Special Olympics, Connecticut FoodShare, and more. The Tribe also makes hundreds of thousands of dollars in educational grants to schools throughout the state to encourage Native American education, and also sponsors an annual "Connecticut Teacher of the Year" program.

What changes in the gaming industry have been most notable over the past fifteen years and what has been the most significant economic impact related to those changes?

Over the past 15 years, the biggest change to the US industry has been the ease of access for patrons and the expansion of gaming operations nationwide. Casino operations are now in almost every state, with nearly every major market having numerous options for residents. In recent years, the advent of online casino gaming and sports betting has made access to gaming even easier for patrons.

Due to these changes, the overall revenue pie from gaming has increased significantly, and the competition for patronage has increased dramatically as well. More operations targeting the same customer creates an environment of higher marketing spend to attract customers, resulting in lower operating margins for casino operations.

In a relatively tax-friendly environment such as Connecticut, you have two casino operators that have built substantial resorts and who continue to invest in property improvements with a strategy of focusing on non-gaming amenities. Contrast that to heavily taxed jurisdictions, and you will find operations that are much smaller in scale with less non-gaming attractions.

Additionally and like many other states, Connecticut has taken action in recent years to modernize its gaming laws. This has meant important changes in the areas of both i-gaming and sports wagering, both of which our Tribe continues to view as important growth opportunities for our industry.

We were appreciative that Connecticut remained competitive with neighboring markets, and there is no doubt that modernizing gaming has helped our business here in Connecticut and in the other markets in which we operate. That impact means that we will be able to share more revenue with the state of Connecticut – building on the $4.5 billion we have contributed since we opened our doors.

With this comes clear responsibility. We recognize our obligation to continue to refine how we invest in our efforts to combat problem gaming. It is our responsibility to be sensitive to our guests and our host community by proactively addressing problem gambling in new and innovative ways. We have been the major funder of the CT Council on Problem Gaming, and in 2022 began a major new initiative with Yale University aimed at combatting problem gambling. Under the partnership, the Mohegan Tribe is funding work at Yale that will result in the creation of new cognitive behavioral therapy-based intervention tools aimed at expanding treatment options for individuals suffering from problem gambling. We expect our work with Yale to only grow in this regard in the years ahead.

BUSINESS IMPACTS

When it comes to Mohegan Sun's subcontracting or supplier relationships, which Connecticut business sectors or industries are most heavily engaged with the casino?

The Mohegan Sun purchases more than $250 million in goods and services each year from more than 1,500 Connecticut Businesses, and those businesses are located in 158 of Connecticut's 169 towns. Further, each year the 11 million visitors to Mohegan Sun spend more than $275 million in Connecticut at non-Mohegan Sun businesses for food, lodging, entertainment and retail purchases.

Mohegan Sun welcomed 5.5 million visitors to the resort in 2019. These visitors spent $82.6 million at off-site establishments in the local economy. To further break this down, the 5.5 million visitors went to Mohegan Sun, 3.1 million or 57% of which traveled to Uncasville from outside Connecticut, such as from Boston or New York. Of the 3.1 million out-of-town visitors, an estimated 73% came for the day and 27% stayed overnight.

The 5.5 million visitors spent $82.6 million in Connecticut in 2019, including off-site spending at local restaurants, hotels, retailers, and recreation/entertainment venues. This spending occurred at establishments in a variety of sectors, including an estimated $35.4 million of spending in the food and beverage industry, $20.9 million in the lodging industry (excludes on-site lodging at Mohegan Sun), $13.2 million in the recreation and entertainment industry, $9.1 million in retail, and $4.1 million in local transportation.

Does Mohegan Sun have a program to strengthen supplier or sub-contractor diversity with minority-owned businesses, or women- or veteran-owned businesses?

To begin, Mohegan Sun is proud to offer military discounts across the Mohegan property.

In addition, in 2017 the Tribe founded Vets Rock Foundation, LLC, a non-profit organization which supports and benefits veterans, active and reserve military members, and their families. Vets Rock hosts an annual exposition-style event offering access to hiring and educational opportunities, Veteran Service Organizations, and other veteran-owned companies. Throughout the years, Save-A-Suit has been a loyal partner and has provided hundreds of professional attire for veterans and their families.

Finally, as an entirely minority owned company we actively support racial and gender diversity among our suppliers and subcontractors.

EMPLOYMENT IMPACTS

To what degree has Mohegan Sun provided or increased employment opportunities for Connecticut workers or workers in your region?

The Mohegan Tribe is the state's 5th largest employer with over 10,000 employees, providing approximately 24,000 jobs in Connecticut. A recent analysis found that Mohegan Sun adds about $1.43 billion a year to Connecticut's gross state product, and that Connecticut's personal income is about $1.34 billion higher each year as a result of the Mohegan Sun. Importantly for Connecticut, more than 90% of Mohegan's employees live in Connecticut, coming from 110 of the state's 169 towns. These employees

want to be part of the Mohegan team because they are respected as part of our broader family, with wage and benefit packages that are nearly 30% higher than the hotel industry average.

The resort supported $364.7 million of wages, salaries, and benefits (including server tips) and 8,123 full-time and part-time jobs (including leased outlets).